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Deborah M. Franco, Esq.
Director, Regulatory Affairs Counsel

March 13, 2020

Electronic Filing & Hand Delivery

Aida Camacho-Welch
Office of the Secretary
NJ Board of Public Utilities
44 South Clinton Avenue, 3rd Floor
P. O. Box 350
Trenton, NJ 08625-0350

Re: In the Matter of the Petition of South Jersey Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service, Changes to Depreciation Rates and Other Tariff Revisions
BPU Docket No. ____________

Dear Secretary Camacho-Welch:

Enclosed herewith for filing please find an original and four (4) copies of the Petition of South Jersey Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service, Changes to Depreciation Rates and Other Tariff Revisions, which has also been filed electronically today consistent with the Board's e-Filing rules. Also enclosed are four (4) flash drives that contain a full copy of the Petition.

Kindly stamp the attached copy of this transmittal letter as "Received" and return the same to our courier.

Respectfully submitted,

Deborah M. Franco

DMF:caj
Enclosures

cc: Service List

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR__________

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STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS	: : : : : :	**PETITION** **BPU DOCKET NO.**

CASE SUMMARY, PETITION, NOTICE AND EXHIBITS

Volume 1 of 3

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South Jersey Gas Company

March 13, 2020

INSERT TAB:

CASE SUMMARY

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS	: : : : : :	**CASE SUMMARY** **BPU DOCKET NO.**

This Petition presents the request of South Jersey Gas Company ("South Jersey" or "Company") for approval by the Board of Public Utilities ("Board") of an increase in base tariff rates, changes to depreciation rates, and other tariff revisions. Since South Jersey last filed a base rate case in 2017, the Company has made approximately $341 million of net plant additions not currently reflected in rates, and projects that an additional approximately $238 million will be added to its plant in service balance by December 31, 2020, exclusive of the Company's Storm Hardening and Reliability Program and Accelerated Infrastructure Replacement Program investments.

South Jersey is seeking to increase delivery rates for gas service designed to produce an increase in revenues of approximately $75.3 million or 12.2% above adjusted post test year revenues. The Petition is based upon a 12-month test period ending June 30, 2020, with certain adjustments to operating income and rate base projected beyond the test period. In order to achieve a reasonable return on investment for the Company's shareholders, the Company requests the Board to establish an overall return on invested capital of 7.34%, inclusive of a 10.4% return on common equity. The impact of this Petition on the bill of an average residential customer using 100 therms per month would be $19.85 or 13.7%. The actual percentage increase applicable to specific customers will vary according to the applicable rate schedule and the level of each customer's usage.

INSERT TAB:

PETITION

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS	: : : : : :	**PETITION** **BPU DOCKET NO.**

TO: THE HONORABLE COMMISSIONERS OF THE BOARD OF PUBLIC UTILITIES

South Jersey Gas Company (sometimes hereinafter referred to as "South Jersey," "Petitioner" or the "Company"), a public utility corporation of the State of New Jersey, with its principal office at One South Jersey Place, Atlantic City, New Jersey, hereby petitions this Honorable Board (sometimes hereinafter referred to as the "Board") for authority pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and N.J.A.C. 14:1-5.12 to increase its base tariff rates and charges for gas service, and to implement certain other tariff revisions. The Company also proposes to modify its existing depreciation rates pursuant to N.J.S.A. 48:2-18 and seeks such other relief as more fully described herein. In support thereof, Petitioner states as follows:

I. BACKGROUND

1. Petitioner is engaged in the transmission, distribution, transportation and sale of natural gas within its service territory within the State of New Jersey. The Company's service territory includes all or portions of the following counties: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem. Within its service territory, South Jersey serves approximately 398,000 customers.

2. Petitioner is a wholly owned subsidiary of SJI Utilities, Inc., which in turn is a wholly owned subsidiary of South Jersey Industries, Inc. ("SJI").

3. The rate schedules and other tariff provisions that South Jersey proposes to increase and modify by virtue of this filing are those currently effective rate schedules and tariff provisions now on file with the Board, designated "Tariff for Gas Service, B.P.U.N.J. No. 12 – Gas" (the "Existing Tariff"). The Existing Tariff was issued pursuant to Board Orders in Docket Nos. GR17010071, effective November 1, 2017; ER17090984, effective January 1, 2018; GR18030230, effective October 1, 2018; GR18060609, effective October 1, 2018; GR19010018, effective March 15, 2019, GR 18070832, effective May 1, 2019; GR19050679, effective October 1, 2019; GR19040528 and GR19040529, effective October 1, 2019; ER19060736, effective October 1, 2019; GR19060726, effective February 1, 2020; and GX01050304, effective February 1, 2020.

4. The proposed rate schedules and other tariff provisions that Petitioner seeks to make effective as a result of this filing are those contained in the tariff sheets, which are blacklined against the Existing Tariff to reflect proposed changes (the "Proposed Tariff"), a copy of which is attached to the Direct Testimony of Stefany M. Graham as Schedule SMG-31 and incorporated herein by reference. A clean copy of the Proposed Tariff is attached to the Direct Testimony of Ms. Graham as Schedule SMG-30 and is also incorporated herein by reference. It is requested that the Proposed Tariff be made effective April 13, 2020, a date which is no less than thirty (30) days from the date of this filing.

II. BASE RATES

5. Petitioner's projected operating revenues for the twelve-month test year period ending June 30, 2020 (utilizing six months' actual data and six months' estimated data) total $615,314,735. Inclusive of post-test year *pro forma* adjustments, the rates proposed in this Petition would yield additional operating revenues of $75,302,112, or approximately 12.2% above adjusted post-test year revenues.

6. The impact of this Petition on the bill of an average residential heat customer using 100 therms per month would be $19.85 or 13.7%. The actual percentage increase applicable to specific customers will vary according to the applicable rate schedule and the level of each customer's usage.

7. In accordance with N.J.A.C. 14:1-5.12(a)(4), the amount of operating revenue derived from intrastate service during the twelve months ended December 31, 2019 was $510,888,763.

8. The Company proposes to include a Cash Working Capital allowance in rate base of $88,851,116. This is based, in part, on a lead lag study addressed in the Direct Testimony of Timothy S. Lyons, attached to the Petition and marked as Exhibit P-8.

9. Further, the Company has calculated a consolidated tax adjustment of $0, as required by N.J.A.C. 14:1-5.12(a)(11) and discussed in the Direct Testimony of Alan D. Felsenthal. Therefore, no consolidated tax adjustment has been applied in this filing. After the execution of an Agreement of Non-Disclosure, a proposed version of which is included with this filing as Schedule C, a consolidated tax savings schedule calculated in accordance with N.J.A.C. 14:1-5.12(a)(11) will be provided to the parties.

10. Petitioner's test year ends June 30, 2020. Petitioner is proposing to reflect changes in certain capital expenditures through December 31, 2020 and changes in certain revenues and expenses through March 31, 2021.

11. Petitioner's filing in this case is based on six months of actual data, and six months of estimated data. During the processing of this case, South Jersey will update its Direct Testimony and Exhibits, as appropriate to reflect actual results. It is anticipated that by the conclusion of this case, the entire test year ending June 30, 2020 will reflect actual results.

III. NEED FOR RATE RELIEF

12. Since the conclusion of South Jersey's last base case -- the 2017 Base Rate Case[1] -- the Company has managed its business responsibly and effectively and continues to provide a high quality of service to its customers at reasonable rates. In order to effectuate this high level of service, the Company made significant and prudent investments to its transmission and distribution systems, all the while experiencing cost increases that impact its cost of service.

13. The 2017 Base Rate Case was resolved by the Board in BPU Docket No. GR17010071 on October 20, 2017 when the Board authorized Petitioner to increase its base rates by approximately 8.48%. In that proceeding, the Petitioner's post-test year end utility plant balance at February 28, 2018 was approximately $2.4 billion. Since that time, the Company has made approximately $341 million of net plant additions that are not currently reflected in rates, and projects that an additional approximately $238 million will be added to its plant in service balance by December 31, 2020, exclusive of Accelerated Infrastructure Replacement Program ("AIRP") and Storm Hardening and Reliability Program ("SHARP") investments. In making these needed investments, the Company follows a number of practices to ensure that its capital expenditures are reasonable, including competitive bidding, contractor quality assurance, and cost tracking, which includes budget variance analysis. For municipal projects, the Company endeavors to control costs by engaging with the municipalities before and during the project to minimize the costs associated with these projects and coordinating with other utility or municipal projects, where possible, in an effort to share costs.

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[1] *In the Matter of the Petition of South Jersey Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service and Other Tariff Revisions*, Docket Nos. BPU GR17010071 and OAL PUC 03261-17, "Order Approving Initial Decision and Stipulation" (October 20, 2017) ("2017 Base Rate Case").

14. The primary driver of the proposed rate increase in this case is to provide the Company a reasonable opportunity to earn a fair return on the investments made, so that it can continue to attract capital at reasonable rates and invest in the infrastructure necessary to continue providing safe and reliable service to its customers. South Jersey's request for rate relief is also driven by a need to recover greater depreciation expense, as well as increases to the operations and maintenance ("O&M") costs incurred by the Company since the 2017 Base Rate Case. Without appropriate rate relief in this proceeding, allowing a reasonable return of and return on these investments, South Jersey would earn a 6.26% return on equity ("ROE") for the test year ended June 30, 2020. This represents a significant under-earning relative to the 9.60% ROE authorized by the Board in the Company's last rate case, which may negatively impact South Jersey's ability to attract capital at reasonable rates.

15. As a result of the Company's investments, customers are receiving benefits through increased safety and overall system reliability.

16. The Company plans to engage in ongoing, necessary transmission and distribution system construction projects over the test year and post-test year period as further detailed in the Direct Testimony of Brent W. Schomber, attached hereto as Exhibit P-4. These major projects are necessary to improve South Jersey's transmission and distribution infrastructure and maintain safety and reliability. The Company is also planning a number of investments in its information technology ("IT") systems, as discussed in the Direct Testimony of Leonard Brinson, Jr., attached hereto as Exhibit P-5.

17. Since the resolution of the 2017 Base Rate Case, Petitioner has implemented revised distribution rates and a residential service charge to address the impact of the Federal Tax Cuts and Jobs Act of 2017 ("TCJA"), which was signed into law on December 22, 2017,

pursuant to the Board's September 17, 2018 Order in BPU Docket Nos. AX18010001 and GR18030230.[2] The rates approved by the Board in the September 17, 2018 Order went into effect on an interim basis on March 26, 2018 and were approved as final, effective October 1, 2018.[3] The revised distribution rates implemented pursuant to the September 17 Order have reduced revenues collected by Petitioner, and consequently, have negatively impacted Petitioner's cash flow. The impacts of the TCJA on the Company's operations, cash flows and the calculation of revenue requirements and cost of service is further discussed in the Direct Testimony of Alan D. Felsenthal, attached hereto as Exhibit P-9, and Robert Hevert, attached hereto as Exhibit P-7.

18. Despite the Company's efforts to effectively manage costs while continuing to provide customers with safe and reliable service, ongoing infrastructure investments and related capital expenditures, combined with other expenses, have necessitated this filing for rate relief. South Jersey intends to maintain its excellent quality of service while also having an opportunity to earn a reasonable return for its shareholders.

IV. TARIFF PROPOSALS

19. The Company proposes tariff changes as discussed in the Direct Testimony of Stefany M. Graham. The changes proposed by Ms. Graham are designed to streamline and clarify the tariff, update the amount of the turn on charge, and bring the tariff into closer conformity with the Board's regulations and the tariff of South Jersey's sister utility, Elizabethtown Gas Company, and other New Jersey utilities.

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[2] *In the Matter of the New Jersey Board of Public Utilities' Consideration of the Tax Cuts and Jobs Act of 2017*, Docket No. AX18010001, and *In the Matter of the Petition of South Jersey Gas Company for Approval of a Change in Rates, Customer Refund and Rider Associated with the Tax Cuts and Jobs Act of 2017*, Docket No. GR18030230, "Decision and Order Approving Stipulation" (September 17, 2018) ("September 17 Order").

[3] September 17 Order at 5.

V. <u>OTHER REQUESTED RELIEF</u>

20. As more fully discussed in the Direct Testimony of Dane A. Watson, attached hereto as Exhibit P-10, Petitioner proposes to modify its depreciation rates. Petitioner's proposed depreciation rates have been determined in a manner consistent with Board precedent. Petitioner's proposed depreciation rates are set forth in Exhibit P-10, Schedule DAW-1, Appendices A. A comparison of Petitioner's current and proposed depreciation rates is set forth in Schedule DAW-1, Appendices A & B to Exhibit P-10. The effect of the proposed depreciation rates on Petitioner's proposed revenue requirement is discussed by Company witnesses Watson (Exhibit P-10) and O'Brien (Exhibit P-6). Petitioner requests that its revised depreciation rates take effect simultaneously with the effective date of the new rates resulting from this proceeding.

21. As set forth in the Direct Testimonies of Stefany M. Graham (Exhibit P-3) and Brent W. Schomber (Exhibit P-4), Petitioner is proposing to establish a regulatory asset in which the incremental costs associated with a pipeline integrity management program incurred between rate cases will be tracked and deferred for later review and recovery in rates. These costs relate to the Company's Pipeline Integrity Management ("PIM") program, a federally mandated integrity management program for gas transmission pipelines and distribution systems required by 49 CFR 192.901, *et al.* Similar deferred accounting authority for PIM costs was approved by the Board in the Company's 2010, 2013 and 2017 base rate cases and the Company proposes to continue deferred treatment of PIM expenses going forward.

22. As further discussed in the Direct Testimonies of Ms. Graham and Mr. Schomber, the Company is proposing to establish a regulatory asset related to increased costs for the Company's Transmission Integrity Management Program ("TIMP") resulting from a new rule adopted by the Pipeline and Hazardous Materials Safety Administration in October 2019. The

rule will significantly impact costs related to the Company's TIMP. Because these costs are not reflected in the test year or post-test year O&M expenditures, the Company is proposing to establish a regulatory asset in which the incremental TIMP costs between rate cases will be tracked and deferred for later review and recovery in rates. In the event that the Board does not approve deferred treatment of TIMP expenses going forward, the Company proposes to include an estimated annual cost of $300,000 as a *pro forma* test year adjustment to its O&M expenses in this case.

23. As further explained in the Direct Testimony of Ms. Graham, South Jersey is proposing to establish a regulatory asset and amortize fifty percent of expenses related to this filing, including the projected costs of legal and consultant expenses, newspaper notices, court reporting, postage, and other miscellaneous expenses, over a three-year period in accordance with Board precedent.

24. As set forth in the Direct Testimonies of Ms. Graham, Mr. Schomber, and Mrs. O'Brien, the Company is seeking to establish a regulatory asset to permit it to recover costs incurred costs in connection with the development of a cancelled pipeline project that would have enabled the Company to provide gas service to BL England's electric generation facility and enhanced the reliability of service to the Company's customers in Atlantic and Cape May Counties. These costs were prudently and reasonably incurred to serve customers and the decision to cancel the project was prudently and reasonably arrived at in response to the decision of regulators.[4] The Company proposes to recover these costs in base rates by amortizing them

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[4] The Board has previously permitted utilities to amortize over a period of years the costs associated with projects that were prudently entered into and prudently cancelled or abandoned. *See e.g. Re Public Service Electric and Gas Company*, BPU Docket No. 8012-914 (March 4, 1982), *Re Atlantic City Electric Co.*, BPU Docket No. 822-116, 51 P.U.B. 4th 109 (January 13, 1983).

over a 10-year period. The Company is not proposing to include the unamortized balance in rate base or otherwise accrue any carrying charges on the unamortized balance.

25. As discussed in the Direct Testimonies of Ms. Graham and Mrs. O'Brien, the Company proposes to establish a regulatory asset and amortize the costs related to its Early Retirement Incentive Plan ("ERIP") offered to employees in 2018-2019 over a three-year period. The Company is not proposing to include the unamortized balance of its ERIP costs in rate base or otherwise accrue carrying costs on that balance. The ERIP produced annual savings that are reflected in the revenue requirement in this proceeding and outweigh its costs over the proposed three-year amortization period.

VI. PROPOSED PROCEDURAL SCHEDULE

26. South Jersey respectfully proposes the following Procedural Schedule for the conduct of this proceeding:

March 13, 2020	Petition filed (6 Months Actuals/6 Months *Pro Forma*)
April 17, 2020	Discovery served by Rate Counsel/Staff
May 1, 2020	Company responses to discovery due on or before
May 11, 2020	Discovery Conference
May 15, 2020	Petitioner issues 9-3 Update
May 15, 2020	Public Hearings
May 22, 2020	All second-round discovery served on or before
June 3, 2020	Company responses to second-round discovery due on or before
June 8, 2020	Initial Settlement Meeting
June 20, 2020	Rate Counsel and Intervenor Direct Testimony due on or before
June 29-July 2nd	Settlement Meetings (if required)
July 2, 2020	Discovery on Rate Counsel and Intervenor Direct Testimony due on or before
July 6-10th	Settlement Meetings (if required)

July 17, 2020	Rate Counsel and Intervenor responses to discovery due on or before
July 27, 2020	Petitioner issues 12-0 Update
August 3, 2020	Petitioner and Intervenor Rebuttal Testimony due
August 8, 2020	Serve discovery on Rebuttal Testimony on or before
August 15, 2020	Responses to discovery on Rebuttal Testimony due on or before
Week of August 22	Evidentiary Hearings
2 weeks from conclusion of Evidentiary Hearings	Initial Briefs due
2 weeks from filing of Initial Briefs	Reply Briefs due on or before

VII. MISCELLANEOUS

27. South Jersey submits herewith, and incorporates as part hereof, all documents and exhibits required to accompany this Petition pursuant to N.J.A.C. 14:1-5.12, 14:1-4.1 and 14:1-5.1. Likewise, attached hereto and incorporated herein by reference, are the Direct Testimony (Exhibits) and Schedules submitted on behalf of the following witnesses:

a. David Robbins, Jr., President, South Jersey Gas Company, whose testimony includes an overview of the Company and the primary issues driving the Company's filing in this case (Exhibit P-2);

b. Stefany M. Graham, Director, Rates and Regulatory Affairs, SJI Utilities, Inc., whose testimony supports the Company's revenue requirement calculation and tariff in this proceeding (Exhibit P-3);

c. Brent W. Schomber, Vice President, Operations, South Jersey Gas Company, whose testimony addresses the capital expenditures made by the Company (Exhibit P-4);

d. Leonard Brinson, Jr., Vice President and Chief Information Officer, South Jersey Industries, Inc., whose testimony discusses IT initiatives and investments by the Company (Exhibit P-5);

e. Brenda J. O'Brien, Vice President, Accounting, South Jersey Industries, Inc., whose testimony sponsors certain accounting and related information (Exhibit P-6);

f. Robert B. Hevert of Scott Madden, Inc, whose testimony discusses cost of capital issues including the proposed return on equity, capital structure and overall cost of capital (Exhibit P-7);

g. Timothy S. Lyons of Scott Madden, Inc., whose testimony supports the Company's cash working capital request using a lead lag study methodology (Exhibit P-8);

h. Alan D. Felsenthal of PricewaterhouseCoopers LLP whose testimony addresses certain tax issues (Exhibit P-9);

i. Dane A. Watson of Alliance Consulting Group whose testimony presents the Company's depreciation proposals (Exhibit P-10);

j. Daniel P. Yardley, Principal, Yardley & Associates, whose testimony includes a cost of service study and rate design based on the Company's revenue requirement (Exhibit P-11).

28. Notice of this filing and two (2) copies of the filing have been served on Stefanie A. Brand, Director, Division of Rate Counsel, 140 East Front Street, 4th Floor, P.O. Box 003, Trenton, New Jersey 08625.

29. Notice of this filing and two (2) copies of the filing have been served on the Department of Law and Public Safety, 124 Halsey Street, P.O. Box 45029, Newark, NJ 07102.

30. Notice of this filing, and the effect thereof will be served by mail upon the clerks of the respective municipalities and counties within Petitioner's service area at least twenty (20) days prior to the date set for the initial hearing, which notice shall include and specify the time and place of said hearing. A list of said municipalities and counties is contained in Schedule SMG-30 of Ms. Graham's Direct Testimony. A copy of the form of notice is included herewith as Schedule B.

31. Customers will be notified of this filing and the effect thereof as well as the time and place of the initial hearing, by publication, at least twenty (20) days prior to the date set for the initial hearing, in newspapers of general circulation within the Petitioner's service territory. A copy of the form of notice is included herewith as Schedule A.

32. The reasons for the proposed rate increase and other relief requested by Petitioner in this Petition are as follows:

a. To be allowed a reasonable opportunity to earn its requested return on investments made in facilities required to provide safe, adequate and proper service to existing and new customers of the Petitioner, which have been put into service since February 28, 2018, the end of the post-test year utilized in the Company's last base rate case. These investments are not currently included in rate base and Petitioner currently bears carrying charges and depreciation expense associated with these facilities.

b. To recover increased costs, not previously recovered in rates.

c. To permit South Jersey to earn an adequate rate of return on its current net investment in used and useful utility property.

d. To establish rates which are sufficient to enable South Jersey, under efficient and economical operation, to maintain and support its financial integrity and to raise and maintain such additional capital as may be necessary at a reasonable cost for the proper discharge of its public duty.

e. To offset such increases as may occur in operating expenses and to maintain adequate levels of cash flow.

f. To enable Petitioner to continue to furnish safe, adequate and proper service, to maintain existing facilities, and to provide such additional facilities as may be necessary to discharge its public duties.

33. Petitioner respectfully submits that the rates, tariff modifications and other relief requested by it are in all respects just and reasonable.

VIII. CONCLUSION

WHEREFORE, Petitioner respectfully requests the Board find and determine as follows:

a. that the proposed rates, including the proposed depreciation rates, sought herein are just and reasonable and should be made effective; and

b. that Petitioner have such other and further relief as the Board may deem just, reasonable and proper under the circumstances presented to it in this case.

Respectfully submitted,

SOUTH JERSEY GAS COMPANY

By:__________________________
Deborah M. Franco
Director, Regulatory Affairs Counsel
SJI Utilities, Inc.

Dated: March 13, 2020

Communications addressed to
the Petitioner in this case should
be sent to:

Deborah M. Franco
Director, Regulatory Affairs Counsel
SJI Utilities, Inc.
520 Green Lane
Union, New Jersey 07083
dfranco@sjindustries.com

Kenneth T. Maloney
Cullen and Dykman, LLP
1101 Fourteenth Street, N.W., Suite 750
Washington, D.C. 20005
(202) 223-8890
kmaloney@cullenanddykman.com

Exhibit P-1

VERIFICATION

I, David Robbins, Jr., of full age, being duly sworn according to law, upon my oath, depose and say:

1. I am the President of South Jersey Gas Company ("Company") and I am authorized to make this verification on behalf of the Company.

2. I have reviewed the within petition and the information contained therein is true according to the best of my knowledge, information and belief.

David Robbins, Jr.
David Robbins, Jr.
President
South Jersey Gas Company

Sworn to and subscribed
before me this 13th day
of March 2020

Carolyn A. Jacobs
CAROLYN A. JACOBS
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires October 28, 2023

INSERT TAB:

SCHEDULE A

Exhibit P-1
Schedule A

NOTICE OF FILING OF PETITION AND PUBLIC HEARING

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20______

OAL DOCKET NO. PUC ______-2020 N

NOTICE IS HEREBY GIVEN that on March 13, 2020, South Jersey Gas Company ("South Jersey" or the "Company") filed a Petition with the New Jersey Board of Public Utilities (the "Board") in Docket No. GR20____, together with revised tariff sheets seeking to increase rates for gas service, change depreciation rates and implement other Tariff revisions. These changes were proposed to become effective for service rendered on or after April 13, 2020, or at such later date as the Board may determine. Based on the Company's total projected operating revenues for the twelve months ending June 30, 2020, the new rates proposed herein will yield additional operating revenues of approximately $75.3 million or 12.2% (after giving effect to: (1) the roll-in of the Company's Conservation Incentive Program ("CIP") revenues; and (2) the roll-ins to base rates for the Company's Storm Hardening and Reliability Program ("SHARP II") and Accelerated Infrastructure Replacement Program ("AIRP II") to take place on October 1, 2020, outside of this base rate case).

The actual percent increase to specific customers will vary according to the applicable rate schedule and the level of the customer's usage. The rate changes proposed in the Petition will result in a rate increase for a typical residential customer using 100 therms of gas per month of $19.85 or 13.7%. The typical commercial customer using 500 therms of gas per month would receive a decrease of $11.25 or 1.8%. Moreover, any rate relief found by the Board to be just and reasonable may be allocated by the Board and applied by the Company to any class or classes of customers or any rate schedule or rate schedules as the Board may determine so that final rates approved by the Board in this proceeding for any specific customer class or rate schedule may be higher or lower than those set forth herein.

The chart below demonstrates the impact of the proposed rates on select customer classes experiencing rate changes to which an allocation of base revenue has been proposed. The below assumes that rates will be adjusted October 1, 2020, after giving effect to the Company's CIP, SHARP II and AIRP II roll-ins in accordance with the Board Orders approving these programs, prior to this rate change implementation:

Exhibit P-1
Schedule A

		Rates		Change	
Customer Class	**Therm Level**	**Oct. 1, 2020**	**Proposed**	**Amount**	**Percentage**
Residential Heat	100	$145.14	$164.99	$19.85	13.7%
General Service	500	$639.12	627.87	($11.25)	-1.8%

In addition to actual rate changes, the Company is proposing other changes and additions to its Tariff. These changes include changes to the Terms and Conditions regarding extensions of mains and services and the charge in the amount for a turn on charge.

Copies of the Company's filing are available for inspection at the Company's offices located at One South Jersey Place, Atlantic City, New Jersey 08401, or at the Board of Public Utilities, 44 South Clinton Avenue, 3rd floor, Trenton, New Jersey 08625-0350. The Company's filing may also be found on the South Jersey website at www.southjerseygas.com.

PLEASE TAKE FURTHER NOTICE that the BPU will conduct public hearings for the purpose of receiving comments from the public regarding the Petition. Public hearings will be held at the following times and location:

_____________, 2020 at 4:30 p.m. and 5:30 p.m.
Voorhees Township, Municipal Court
Voorhees Town Center
Voorhees, New Jersey 08043
(located directly across from Township Library at 203 Laurel Road)

The public is invited to attend and interested persons will be permitted to testify and/or make a statement of their views on the proposed increases. In order to encourage full participation in this opportunity for public comment, please submit any requests for needed accommodations, including interpreter, listening devices or mobility assistance, 48 hours prior to these hearings. In addition, members of the public may submit written comments concerning the petition to the BPU regardless of whether they attend a hearing by addressing them to: Honorable Aida Camacho-Welch, Secretary, Board of Public Utilities, 44 S. Clinton Avenue, Trenton, New Jersey 08625.

SOUTH JERSEY GAS COMPANY

BY: DAVID ROBBINS, JR., PRESIDENT

INSERT TAB:

SCHEDULE B

Exhibit P-1
Schedule B

(add date)

To: County Clerk, Municipal Clerk and County Administrator

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS	: : : : : :	**BPU DOCKET NO. ______** **OAL DOCKET NO. _______**

Pursuant to law, South Jersey Gas Company ("South Jersey" or the "Company") is providing you with notice of a filing made on March 13, 2020 with the New Jersey Board of Public Utilities for an increase in base rates, changes in the Board approved depreciation rates and changes to the South Jersey tariff. You may download the filing from the Company's website at www.southjerseygas.com.

A public hearing related to this request has been scheduled for **(add date)** and South Jersey hereby serves upon you the notice of that hearing related to the above referenced matter. As noted on the attached copy of the public notice, the subject hearings are scheduled for **(add date)** in (**add location**), New Jersey and for **(add date)** in (**add location**), New Jersey.

Hard copies of the filing are available for review at the Company's Customer Service Offices and at the New Jersey Board of Public Utilities, 44 South Clinton Street, 3rd Floor, Suite 314, P.O. Box 350 Trenton, New Jersey 08450-0350.

Very truly yours,

Deborah M. Franco
Director, Regulatory Affairs Counsel

Enclosure

INSERT TAB:

SCHEDULE C

Exhibit P-1
Schedule C

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS	: : : : :	**BPU DOCKET NO.** **AGREEMENT OF NON-DISCLOSURE OF INFORMATION CLAIMED TO BE CONFIDENTIAL**

It is hereby AGREED, as of the ___ day of March 2020, by and among South Jersey Gas Company ("South Jersey" or "Petitioner"), the Staff of the New Jersey Board of Public Utilities ("Board Staff') and Division of Rate Counsel ("Rate Counsel") (collectively, the "Parties"), who have agreed to execute this Agreement of Non-Disclosure of Information Claimed to be Confidential ("Agreement") and to be bound thereby, that:

WHEREAS, in connection with the above-captioned proceeding before the Board of Public Utilities (the "Board"), Petitioner and/or another party ("Producing Party") may be requested or required to provide petitions, pre-filed testimony, other documents, analyses and/or other data or information regarding the subject matter of this proceeding that the Producing Party may claim constitutes or contains confidential, proprietary or trade secret information, or which otherwise may be claimed by the Producing Party to be of a market-sensitive, competitive, confidential or proprietary nature (hereinafter sometimes referred to as "Confidential Information" or "Information Claimed to be Confidential"); and

WHEREAS, the Parties wish to enter into this Agreement to facilitate the exchange of information while recognizing that under Board regulations at N.J.A.C. 14:1-12.1 to -12.18, a request for confidential treatment shall be submitted to the Custodian who is to rule on requests made pursuant to the Open Public Records Act ("OPRA"), N.J.S.A. 47:1A-1 to -13, unless such information is to be kept confidential pursuant to court or administrative order (including, but not limited to, an Order by an Administrative Law Judge sealing the record or a portion thereof pursuant to N.J.A.C. 1:1-14,1, and the parties acknowledge that an Order by an Administrative Law Judge to seal the record is subject to modification by the Board), and also recognizing that a request may be made to designate any such purportedly confidential information as public through the course of this administrative proceeding; and

WHEREAS, the Parties acknowledge that unfiled discovery materials are not subject to public access under OPRA; and

WHEREAS, the Parties acknowledge that, despite each Party's best efforts to conduct a thorough pre-production review of all documents and electronically stored information ("ESI"), some work product material and/or privileged material ("protected material") may be inadvertently disclosed to another Party during the course of this proceeding; and

WHEREAS, the undersigned Parties desire to establish a mechanism to avoid waiver of privilege or any other applicable protective evidentiary doctrine as a result of the inadvertent disclosure of protected material;

NOW, THEREFORE, the Parties hereto, intending to be legally bound thereby, DO HEREBY AGREE as follows:

1. The inadvertent disclosure of any document or ESI which is subject to a legitimate claim that the document or ESI should have been withheld from disclosure as protected material shall not waive any privilege or other applicable protective doctrine for that document or ESI or for the subject matter of the inadvertently disclosed document or ESI if the Producing Party, upon becoming aware of the disclosure, promptly requests its return and takes reasonable precautions to avoid such inadvertent disclosure.

2. Except in the event that the receiving party or parties disputes the claim, any documents or ESI which the Producing Party deems to contain inadvertently disclosed protected material shall be, upon written request, promptly returned to the Producing Party or destroyed at the Producing Party's option. This includes all copies, electronic or otherwise, of any such documents or ESI. In the event that the Producing Party requests destruction, the receiving party shall provide written confirmation of compliance within thirty (30) days of such written request. In the event that the receiving party disputes the Producing Party's claim as to the protected nature of the inadvertently disclosed material, a single set of copies may be sequestered and retained by and under the control of the receiving party until such time as the Producing Party has received final determination of the issue by the Board of Public Utilities or an Administrative Law Judge, provided that the Board has not modified or rejected an order by the Administrative Law Judge.

3. Any such protected material inadvertently disclosed by the Producing Party to the receiving party pursuant to this Agreement shall be and remain the property of the Producing Party.

4. Any Information Claimed to be Confidential that the Producing Party produces to any of the other Parties in connection with the above-captioned proceeding and pursuant to the terms of this Agreement shall be specifically identified and marked by the Producing Party as Confidential Information when provided hereunder. If only portions of a document are claimed to be confidential, the producing party shall specifically identify which portions of that document are claimed to be confidential. Additionally, any such Information Claimed to be Confidential shall be provided in the form and manner prescribed by the Board's regulations at N.J.A.C. 14:1-12.1 to -12.18, unless such information is to be kept confidential

pursuant to court or administrative order. However, nothing in this Agreement shall require the Producing Party to file a request with the Board's Custodian of Records for a confidentiality determination under N.J.A.C. 14:1-12.1 to -12.18 with respect to any Information Claimed to be Confidential that is provided in discovery and not filed with the Board.

5. With respect to documents identified and marked as Confidential Information, if the Producing Party's intention is that not all of the information contained therein should be given protected status, the Producing Party shall indicate which portions of such documents contain the Confidential Information in accordance with the Board's regulations at N.J.A.C. 14:1-12.2 and 12.3. Additionally, the Producing Party shall provide to all signatories of this Agreement full and complete copies of both the proposed public version and the proposed confidential version of any information for which confidential status is sought.

6. With respect to all Information Claimed to be Confidential, it is further agreed that:

(a) Access to the documents designated as Confidential Information, and to the information contained therein, shall be limited to the Party signatories to this Agreement and their identified attorneys, employees, and consultants whose examination of the Information Claimed to be Confidential is required for the conduct of this particular proceeding.

(b) Recipients of Confidential Information shall not disclose the contents of the documents produced pursuant to this Agreement to any persons) other than their identified employees and any identified experts and consultants whom they may retain in connection with this proceeding, irrespective of whether any such expert is retained specially and is not expected to testify, or is called to testify in this proceeding. All consultants or experts of any Party to this Agreement who are to receive copies of documents produced pursuant to this

Agreement shall have previously executed a copy of the Acknowledgement of Agreement attached hereto as "Attachment 1," which executed Acknowledgement of Agreement shall be forthwith provided to counsel for the Producing Party, with copies to counsel for Board Staff and the Rate Counsel.

(c) No other disclosure of Information Claimed to be Confidential shall be made to any person or entity except with the express written consent of the Producing Party or their counsel, or upon further determination by the Custodian, or order of the Board, the Government Records Council or of any court of competent jurisdiction that may review these matters.

7. The undersigned Parties have executed this Agreement for the exchange of Information Claimed to be Confidential only to the extent that it does not contradict or in any way restrict any applicable Agency Custodian, the Government Records Council, an Administrative Law Judge of the State of New Jersey, the Board, or any court of competent jurisdiction from conducting appropriate analysis and making a determination as to the confidential nature of said information, where a request is made pursuant to OPRA, N.J.S.A. 47:1 A-1 to -13 . Absent a determination by any applicable Custodian, Government Records Council, an Administrative Law Judge, the Board, or any court of competent jurisdiction that a documents) is to be made public, the treatment of the documents exchanged during the course of this proceeding and any subsequent appeals is to be governed by the terms of this Agreement.

8. In the absence of a decision by the Custodian, Government Records Council, an Administrative Law Judge, or any court of competent jurisdiction, the acceptance by the undersigned Parties of information which the Producing Party has identified and marked as Confidential Information shall not serve to create a presumption that the material is in fact entitled

to any special status in these or any other proceedings. Likewise, the affidavits submitted pursuant to N.J.A.C. 14:1-12.8 shall not alone be presumed to constitute adequate proof that the Producing Party is entitled to a protective order for any of the information provided hereunder.

9. In the event that any Party seeks to use the Information Claimed to be Confidential in the course of any hearings or as part of the record of this proceeding, the Parties shall seek a determination by the trier of fact as to whether the portion of the record containing the Information Claimed to be Confidential should be placed under seal. Furthermore, if any Party wishes to challenge the Producing Party's designation of the material as Confidential Information, such Party shall provide reasonable notice to all other Parties of such challenge and the Producing Party may make a motion seeking a protective order. In the event of such challenge to the designation of material as Confidential Information, the Producing Party, as the provider of the Information Claimed to be Confidential, shall have the burden of proving that the material is entitled to protected status. However, all Parties shall continue to treat the material as Confidential Information in accordance with the terms of this Agreement, pending resolution of the dispute as to its status by the trier of fact.

10. Confidential Information that is placed on the record of this proceeding under seal pursuant to a protective order issued by the Board, an Administrative Law Judge, provided that the Board has not modified or rejected an order by the Administrative Law Judge, or any court of competent jurisdiction shall remain with the Board under seal after the conclusion of this proceeding. If such Confidential Information is provided to appellate courts for the purposes of an appeals from this proceeding, such information shall be provided, and shall continue to remain, under seal.

11. This Agreement shall not:

(a) Operate as an admission for any purpose that any documents or information produced pursuant to this Agreement are admissible or inadmissible in any proceeding;

(b) Prejudice in any way the right of the Parties, at any time, on notice given in accordance with the rules of the Board, to seek appropriate relief in the exercise of discretion by the Board for violations of any provision of this Agreement.

12. Within forty five (45) days of the final Board Order resolving the above-referenced proceeding, all documents, materials and other information designated as "Confidential Information," regardless of format, shall be destroyed or returned to counsel for the Producing Party. In the event that such Board Order is appealed, the documents and materials designated as "Confidential Information" shall be returned to counsel for the Producing Party or destroyed within forty-five (45) days of the conclusion of the appeal.

Notwithstanding the above return requirement, Board Staff and Rate Counsel may maintain in their files copies of all pleadings, briefs, transcripts, discovery and other documents, materials and information designated as "Confidential Information," regardless of format, exchanged or otherwise produced during these proceedings, provided that all such information and/or materials that contain Information Claimed to be Confidential shall remain subject to the terms of this Agreement. The Producing Party may request consultants who received Confidential Information who have not returned such material to counsel for the Producing Party as required above to certify in writing to counsel for the Producing Party that the terms of this Agreement have been met upon resolution of the proceeding.

13. The execution of this Agreement shall not prejudice the rights of any Party to seek relief from discovery under any applicable law providing relief from discovery.

14. The Parties agree that one original of this Agreement shall be created for each of the signatory parties for the convenience of all. The signature pages of each original shall be executed by the recipient and transmitted to counsel of record for the Petitioner, who shall send a copy of the fully executed document to all counsel of record. The multiple signature pages shall be regarded as, and given the same effect as, a single page executed by all Parties.

IN WITNESS THEREOF, the undersigned Parties do HEREBY AGREE to the form and execution of this Agreement.

SOUTH JERSEY GAS COMPANY

By: ______________________________
Deborah M. Franco
Director, Regulatory Affairs Counsel

GURBIR S. GREWAL
ATTORNEY GENERAL
OF NEW JERSEY
Attorney for the Staff of the
New Jersey Board of Public Utilities

By: ______________________________

Deputy Attorney General

STEFANIE BRAND, ESQ.
DIRECTOR
NEW JERSEY
DIVISION OF RATE COUNSEL

By: ______________________________

Assistant Deputy Rate Counsel

Exhibit P-1
Schedule C

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF	:	
SOUTH JERSEY GAS COMPANY FOR	:	**PETITION**
APPROVAL OF INCREASED BASE TARIFF	:	
RATES AND CHARGES FOR GAS SERVICE	:	**DOCKET NO.**
AND OTHER TARIFF REVISIONS	:	

ACKNOWLEDGMENT OF AGREEMENT

The undersigned is an attorney, employee, consultant and/or expert witness for the Division of Rate Counsel or an intervenor who has received, or is expected to receive, Confidential Information provided by South Jersey or by another party ("Producing Party") which has been identified and marked by the Producing Party as "Confidential Information." The undersigned acknowledges receipt of the Agreement of Non-Disclosure of Information Claimed to be Confidential and agrees to be bound by the terms of the Agreement.

Dated: By: ________________________________

(Name, Title and Affiliation)

Company Name:

INSERT TAB:

D. ROBBINS

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20__________

DIRECT TESTIMONY

OF

DAVID ROBBINS, JR.

President
South Jersey Gas Company

On Behalf Of
South Jersey Gas Company

Exhibit P-2

March 13, 2020

TABLE OF CONTENTS

Exhibit P-2

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
DAVID ROBBINS, JR.

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David Robbins, Jr., and my business address is 1 South Jersey Place, Atlantic City, New Jersey 08401.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am the President of South Jersey Gas Company ("South Jersey," "SJG," or the "Company") and, in that position, I am responsible for the overall executive leadership of SJG.

Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND INDUSTRY RELATED EXPERIENCE.

A. I am a 1984 graduate of Old Dominion University, where I earned my undergraduate degree in accounting. I joined South Jersey Industries ("SJI") in 1997 as a Staff Accountant and have held various management and officer positions of increasing responsibility in SJI and its various subsidiaries, including, but not limited to, South Jersey Resources Group ("SJRG"), Marina Energy, South Jersey Energy ("SJE"), South Jersey Energy Services ("SJES") and South Jersey Energy Service Plus ("SJESP"). These positions included Supervisor, Financial Reporting (SJI) from 1998-2001, Manager, Financial Reporting (SJI) from 2001-2005, and various Treasurer and Secretary positions from 2002-2013. I was elected Senior Vice President and Chief Operating Officer for SJE, SJES and SJESP in 2013. Thereafter, in 2014, I became President of SJES. I was appointed as Senior Vice President, Strategy and Corporate Development of

SJI in 2016. In that role, I had strategic leadership responsibility over the sales and marketing functions at SJG. In January 2017, I was appointed to my current position as President of SJG.

In addition, I hold several positions outside of the SJG organization. I currently serve on the Board of Directors of the American Gas Association ("AGA"), the Board of Directors of the New Jersey Utilities Association and the Board of Directors of the Greater Atlantic City Chamber of Commerce. I also serve as Board Chair of the Chelsea Economic Development Corporation. I formerly served as a member of the Inspira Health Network Board of Directors, a member of the Millville Savings and Loan Board of Directors, a member of the Northeast Gas Association Board of Directors and a member of the United Way of Cumberland County Board of Directors.

Q. HAVE YOU PREVIOUSLY TESTIFIED OR SUBMITTED TESTIMONY BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES OR OTHER REGULATORY COMMISSION?

A. Yes. Most recently I submitted testimony before the New Jersey Board of Public Utilities ("BPU" or "Board") in BPU Docket No. GR17010071, SJG's most recent base rate case ("2017 Base Rate Case"), as well as BPU Docket No. GM17121309, regarding the Board's approval of SJI's acquisition of Elizabethtown Gas Company. I have also testified before the Maryland Public Service Commission in Case No. 9475, regarding SJI's acquisition of Elkton Gas Company.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my direct testimony in this proceeding is to provide an overview of SJG's filing with the Board seeking authority to increase the Company's base rates, modify its existing depreciation rates, and implement other tariff changes. Specifically, I will:

(i) provide a general summary of the Company's base rate filing and explain why the Company is seeking to increase base rates at this time;

(ii) discuss the SJI corporate structure and the position of South Jersey and its direct parent, SJI Utilities, Inc. ("SJIU"), within the SJI family of companies;

(iii) explain SJI's philosophy for managing utility operations and how the SJI family of companies is assisting, and will continue to assist, South Jersey in providing safe, reliable utility service at just and reasonable rates;

(iv) discuss actions the Company has taken to increase the safety and reliability of its transmission and distribution system with its Accelerated Infrastructure Replacement Program ("AIRP") and Storm Hardening and Reliability Program ("SHARP");

(v) discuss SJI's ongoing efforts to improve the customer experience and its operational performance and to invest in the local communities that South Jersey serves;

(vi) address the Company's efforts to promote energy efficiency and its commitment to support programs that facilitate New Jersey's environmental goals, including those set forth in the New Jersey Clean Energy Act of 2018 ("CEA") and the Energy Master Plan ("EMP"); and

(vii) introduce the other witnesses who are sponsoring testimony in this proceeding.

III. RATE CASE AND CORPORATE OVERVIEW

Q. WHY IS SJG SEEKING TO INCREASE ITS BASE RATES AT THIS TIME?

A. This filing is primarily driven by the significant capital investments that the Company has made and will continue to make since its last base rate proceeding. Since the Company's last base rate case in 2017, SJG has made approximately $341 million of net plant additions that are not currently reflected in rates, and projects that an additional approximately $238 million will be added to its plant in service balance by December 31, 2020, exclusive of our SHARP and AIRP investments. These capital investments have been and will be made to enhance the safety, reliability and resiliency of SJG's distribution system, support customer needs, and enhance customer service. Our continuing investments play a significant role in contributing to maintaining employment, job creation and growth in the economy of the State. The Company seeks to establish rates that will afford it a reasonable opportunity to earn a fair return on the investments it makes to ensure it can continue to attract the necessary capital to support further investments that enable it to provide safe and reliable service to its customers.

Q. DOES THE COMPANY HAVE A REGULATORY OBLIGATION TO FILE A BASE RATE CASE?

A. Yes. The Board's orders approving South Jersey's AIRP II and SHARP II programs require the Company to file a base rate case on or before November 2020. This requirement was initially established in the Board's October 31, 2016 Order in BPU

Docket No. GR16020175, which required the Company to file a base rate case no later than three years after the order setting rates in the 2017 Base Rate Case.[1] The requirement was also acknowledged in recent Board orders in the Company's AIRP II and SHARP II proceedings.[2]

Q. PLEASE BRIEFLY DESCRIBE SJG'S FILING IN THIS PROCEEDING.

A. SJG is seeking to increase its base delivery rates by approximately $75.3 million annually or approximately 12.2 percent above adjusted post-test year revenues. This request is based on a proposed rate of return on invested capital of 7.34 percent, with a capital structure that includes a common equity component of 54.18 percent and a return on common equity of 10.4 percent. The proposed base rate increase will provide the Company with the opportunity to recover its reasonable cost of service and earn a fair return on the capital invested in SJG's distribution system. SJG and its parent companies, SJI and SJIU, are fully committed to continued investment in the Company's utility operations in a manner and at a level that will allow it to continue to provide its customers with safe and reliable service.

As these infrastructure investments have been made, the Company has had the opportunity to deliver low cost natural gas available from domestically produced resources, particularly in the neighboring Marcellus Shale region, to our customers,

---

[1] *In the Matter of the Petition of South Jersey Gas Company to Continue its Accelerated Infrastructure Replacement Program ("AIRP") Pursuant to N.J.S.A. 48:2-21 And N.J.S.A. 48:2-21.1 and for Approval of a Base Rate Adjustment to Reflect AIRP Investments in Base Rates*, Docket No. BPU GR16020175 (October 31, 2016) ("October 31 Order") at 5.

[2] *See In the Matter of the Petition South Jersey Gas Company for Approval of Base Rate Adjustments Pursuant to the Accelerated Infrastructure Replacement Program ("AIRP II")*, Docket No. BPU GR19040528, "Decision and Order" (Sept. 27, 2019) at 3; *In the Matter of the Petition of South Jersey Gas Company for Approval of Base Rate Adjustments Pursuant to the Storm Hardening and Reliability Program ("SHARP II")*, BPU Docket No. GR19040529, "Decision and Order Approving Stipulation" (Sept. 27, 2019) at 3.

mitigating the bill impact of the infrastructure investments needed to provide safe and reliable service. The Company will continue to focus on delivering the lowest cost gas possible to its customers, while also improving the safety and reliability of its system and embracing the clean energy goals of the State.

Despite our concerted efforts to effectively manage costs, we believe an increase in base rates is necessary at this time so that we can continue to make the capital investments necessary to maintain our excellent quality of natural gas service, while also having an opportunity to earn a reasonable return for our shareholders. The Company makes significant annual investments to maintain a safe gas delivery system; however, further investments will be required in the immediate future to replace aging infrastructure, to comply with federal transmission and distribution pipeline integrity management regulations, to protect our distribution system from future major storm events like Superstorm Sandy and facilitate the energy efficiency and clean energy goals of the State. These investments will create the need for additional external financing and the ability to attract capital.

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE COMPANY AND ITS MISSION.

A. South Jersey is one of the four natural gas local distribution companies in New Jersey and serves approximately 398,000 customers within seven counties covering over 2,500 square miles in southern New Jersey. South Jersey provides a vital service to its customers and is committed to performing this service in a safe, reliable manner at a reasonable price.

Q. PLEASE DESCRIBE SJG'S POSITION WITHIN THE SJI FAMILY OF COMPANIES.

A. SJG is a wholly owned subsidiary of SJIU, which in turn is a wholly owned subsidiary of SJI. SJI is a publicly traded energy services holding company. SJIU is the direct parent of SJG as well as SJI's other regulated utilities, Elizabethtown Gas Company and Elkton Gas Company. SJG is the largest company within the SJI corporate structure and employs approximately 450 people.

Q. PLEASE DESCRIBE SJG's AVERAGE ANNUAL CAPITAL EXPENDITURES OVER THE LAST FEW YEARS.

A. From 2017 through 2019, SJG's average annual capital expenditures were approximately $255.7 million, including AIRP and SHARP investments. Capital expenditures during 2020 are anticipated to total approximately $294.8 million, including AIRP and SHARP investments. Our operations play a significant role in contributing to maintaining employment, job creation and the economic growth of the State and the South Jersey region. We are well aware of our important role and the Company is continually committed to support the State in its energy policy and initiatives.

Q. PLEASE DESCRIBE SJI'S PHILOSOPHY FOR MANAGING ITS UTILITY OPERATIONS, INCLUDING THOSE OF SJG.

A. SJI is committed to providing its customers with superior, reliable utility service while contributing to New Jersey's social needs and environmental objectives as most recently articulated in the CEA and the EMP. In managing its utility businesses, SJI acts to ensure that its individual utilities are focused on three core values: (1) the consistent provision of safe and reliable service at just and reasonable rates; (2) robust investment in utility infrastructure to ensure safety, reliability and resiliency and facilitation of the State's clean energy and energy efficiency goals; and (3) an overriding commitment to excellent customer service. SJI believes that the best way to promote this focus is to afford its individual utilities the ability to make local operational decisions, including preparing their own capital and operations and maintenance expense budgets. SJI's role is to offer strategic direction and assistance, whether financial, operational or otherwise, to ensure that each of its utilities performs in a consistently excellent manner.

Q. WHAT IS SJG'S OPERATIONAL FOCUS?

A. The three core values I just mentioned guide SJG's operational focus. Consistent with this focus, over the past several years, the Company has undertaken a number of accelerated infrastructure replacement projects with the cooperation and approval of the Board to ensure the continued safe and reliable operation of the Company's distribution system. The Company proposes to continue these efforts through the investments discussed in this filing.

Q. PLEASE DESCRIBE THE COMPANY'S EFFORTS TO CONTAIN COSTS AND MITIGATE THE RATE CHANGE REQUESTED.

A. South Jersey is committed to continuing to provide safe, adequate, and proper service to customers, while effectively managing the costs it incurs and the potential bill impacts on customers. South Jersey endeavors to continuously identify efficiencies and opportunities for savings that allow the Company to effectively and affordably manage its system. Examples of these cost savings efforts include the Early Retirement Incentive Plan, as discussed in the Direct Testimony of Brenda J. O'Brien, and the competitive bidding process the Company follows for capital investments, as discussed in the Direct

Testimony of Brent W. Schomber. At the same time, we have maintained a culture that encourages our utilities to achieve operational excellence.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW SJI ENCOURAGES ITS UTILITIES TO ACHIEVE OPERATIONAL EXCELLENCE?

A. SJG's parent, SJIU, participates in the AGA Best Practices Benchmarking Program which provides a means for gas utilities to survey other members on specific operational issues and evaluate themselves internally. SJIU also participates in the AGA Peer Review Program, which is a voluntary peer-to-peer safety and operational practices review program that allows local natural gas utilities throughout the nation to observe their peers, implement best practices and identify opportunities to better serve their customers and communities. As part of the Peer Review Program, subject matter experts from peer companies evaluate other participating companies with the objective of gaining an understanding of the utility's practices, procedures and standards in an effort to identify strengths and leading indicators, as well as to identify areas that could be improved where appropriate.

In addition to providing excellent service to our customers, South Jersey strives to be a good corporate citizen and has adopted planning concepts that are directed toward balancing the interests of all stakeholders, including our customers, shareholders and policy makers. Recognizing and developing opportunities to balance the interests of all is something we at South Jersey work tirelessly to achieve. An example of our accomplishments in this area is the establishment of our Conservation Incentive Program ("CIP") in 2006, which is now in its fourteenth year of operation. Through innovation, South Jersey and our regulators developed a program that redesigned our business philosophy and aligned the interests of our customers, shareholders and policy makers. The CIP enabled South Jersey to assist our customers in saving money on their gas bills while we continue to maintain our financial integrity, including a strong capital structure, which allows us to attract capital at reasonable rates. Our capital structure and cost of capital are further discussed in the Direct Testimony of Mr. Robert Hevert. The CIP, along with our energy efficiency programs, which I discuss below, demonstrate our dedication to supporting programs that support the State's energy efficiency and clean energy goals. We appreciate the key role we play in achieving these goals and are fully committed to embracing the objectives of the CEA and the EMP.

South Jersey recognizes that, as a public utility, it has unique responsibilities to the State and the areas it serves, and it takes those responsibilities seriously. A true measure of a company's success is the extent that a company can prosper in the marketplace and at the same time make positive contributions to the public good. South Jersey has long held the belief that business success and corporate social responsibility need not be mutually exclusive. The result is a strong focus on environmental stewardship, social investment, customer and employee safety, diversity and corporate governance. The Company has implemented a number of measures to respond to and align our operations with the initiatives of our regulators and State policy makers, which are discussed below.

IV. SIGNIFICANT EFFORTS BY THE COMPANY TO IMPROVE RELIABILITY, RESILIENCE, THE CUSTOMER EXPERIENCE, AND THE ENVIRONMENT

Q. PLEASE DESCRIBE RELIABILITY AND RESILIENCE EFFORTS BY THE COMPANY.

A. In April 2009, SJG received approval from the Board for significant infrastructure investment through its Capital Investment Recovery Tracker ("CIRT"). In February 2013, the Company received approval from the Board to continue making these incremental investments in replacing aging cast iron and bare steel infrastructure over a four-year period with the approval of the AIRP. Most recently in October 2016, South Jersey received approval from the Board to continue its AIRP ("AIRP II") for a period of five years. Under this renewed program, South Jersey anticipates it will replace all remaining cast iron and unprotected steel in its distribution system by 2021. The replacement of at-risk vintage pipe is the single most important thing the Company can do to minimize methane emissions and help the State achieve its environmental goals.

In August 2014, South Jersey received approval from the Board to institute its SHARP, pursuant to the Board's March 20, 2013 Order (Docket No. AX13030197) which initiated a generic proceeding in response to Superstorm Sandy, seeking proposals for infrastructure upgrades designed to protect New Jersey infrastructure from future "Major Storm Events." The SHARP enabled South Jersey to upgrade its low pressure distribution systems along the barrier islands to high pressure, in an effort to harden the Company's distribution system and make it less susceptible to storm damage and customer outages caused by water intrusion during Major Storm Events. In May 2018, the Board approved a second phase of the SHARP ("SHARP II") for a three year period, designed to continue improving the resiliency of, and restoration times for, the Company's distribution system. The program includes four system enhancement projects within the coastal regions, including installation of Excess Flow Valves ("EFVs") and three redundancy projects: the Absecon Island loop, Ocean City loop, and Brigantine Bridge project.

All told, as of December 31, 2019 South Jersey has invested approximately $707.3 million in system improvements and created approximately 2,334 jobs with its CIRT, AIRP, and SHARP programs, while eliminating hundreds of leaks from its distribution system and improving safety and reliability for our customers. The success of these programs is due to the recognition by both the Board and Rate Counsel that these investments are necessary and require innovative regulatory treatment for the Company to attract capital at reasonable rates. The infrastructure programs are discussed further in the Direct Testimony of Mr. Schomber.

Q. WHAT EFFORTS HAS THE COMPANY UNDERTAKEN TO IMPROVE ITS OVERALL CUSTOMER EXPERIENCE?

A. Since its last rate case in 2017, South Jersey has undertaken an enhanced commitment to the customer experience. The Company conducted a comprehensive campaign to inform customers of the redesign of its bills, ensuring a communication to customers that was clear and concise, seeking to best educate consumers around their natural gas usage. This redesign also supported the bridge to an improved online experience for customers who prefer to receive communications about their account electronically. In 2019, South Jersey activated its *My Account* portal—unveiling a comprehensive, safe and secure online solution to support a user-friendly approach to customer service, billing and inquiries. As portal use continues to grow, we continue seeking opportunities to use this technology to optimize the customer experience and create efficiency within our business. In response to customers' demands for walk-in service support, South Jersey also opened a Customer Service Center at its Atlantic City headquarters in 2018.

Investments in customer service have also focused on the design of the work environment from which our employees support customers, including improvements in the accessibility and comfort of other service centers within the territory, white noise machines to minimize disruptions to customers being served by phone, and increased training in the MAGIC (Make A Great Impression on Customers) of best serving of customers. Each of these investments helps ensure that the representatives of our organization can live out our customers promise every day - "As your trusted energy provider, we are committed to delivering safe, reliable and consistent service in a timely manner. We will employ professional, well-trained and knowledgeable staff. We will treat you with courtesy and respect. Our commitment to you as a customer is to be there, ready to serve you, when you need us."

South Jersey has made investments in growing its customer service team and created dedicated teams to best serve customers, including: the Customer Outreach team that maximizes energy assistance funds for customers; a Quality Assurance team charged with training and measuring quality; an escalated Care Team that helps engineer solutions to the most challenging customer inquiries; a Reporting and Workforce Management team to optimize the contributions of each customer representative on behalf of our customers; and a Voice of the Customer team that gathers and analyzes feedback daily to ensure that we are making data driven decisions to best support customer needs.

Q. HOW DOES SJI SUPPORT SJG'S ACTIVE ROLE IN THE COMMUNITIES IT SERVICES?

A. SJI recognizes that local natural gas utilities such as SJG have a unique responsibility to their customers, employees, communities and the public. SJI believes in commitment to the community and has provided significant financial support to local nonprofit, civic, and business and commerce organizations. Since 2017, SJI and SJG, have provided over $2.35 million dollars in support to these types of organizations. A culture based on safety, reliability, customer service and giving back to the community is woven throughout SJG and the rest of the SJI family of companies. This culture is exemplified by the substantial investments that have been and will be made to modernize and improve the safety, reliability and resiliency of SJG's natural gas distribution system. This culture is further exemplified by SJI and SJG's continued involvement in, and financial contributions to the communities we serve. Each year SJG engages in many community activities, including Coats for Kids, Adopt-A-Road clean ups, community Food Bank service days, Martin Luther King, Jr. Service days, the American Heart Association of Southern NJ Heart Walk, and more.

Q. DOES SJG PROVIDE SUPPORT TO LOW INCOME CUSTOMERS?

A. Yes, SJG partners with providers to promote financial assistance to those in need through low income assistance programs, including the Low-Income Home Energy Assistance Program ("LIHEAP"), Payment Assistance for Gas and Electric ("PAGE"), Lifeline, Comfort Partners and NJ SHARES, as well as other grants and relief funds administered by our State and Federal agency partners. These programs provided over 35,000 eligible households served by SJG with nearly $10 million dollars in 2019, which represents a 21 percent increase in low income assistance relative to 2018. In addition, as of December 31, 2019, South Jersey had 68,158 customers enrolled in its Budget Billing program. In 2017, South Jersey formed its Energy Assistance Team, tasked with taking a more proactive approach to connecting customers with assistance programs available to them. Team members organized and attended 270 outreach events in the South Jersey service area. Representatives also attended the New Jersey Energy Assistance Summit in 2018 and 2019.

Q. WHAT ARE SOME NOTABLE ACHIEVEMENTS AND AWARDS RELATED TO SJG'S OPERATIONAL PERFORMANCE?

A. South Jersey's commitment to providing our customers with exceptional service while contributing to New Jersey's social and environmental needs has resulted in the Company and SJI receiving a number of recent industry and community awards.

Specifically, SJI received the Corporate Board Gender Diversity Award in 2019 from the Executive Women of New Jersey ("EWNJ") for leading the way in boardroom gender diversity. In 2019, the Forum of Executive Women recognized SJI as a Champion of Board Diversity where women directors comprise at least 30 percent of the Board. Additionally, SJI was named a Top 100 public company having females on board seats, female executives, and female top earners.

SJI is also a proud member of the BPU Supplier Diversity Development Council ("SDDC"), which is dedicated to forging effective working relationships between diverse businesses and New Jersey utilities. SDDC looks to build these effective working relationships between minority, service-disabled veteran, and women-owned businesses, New Jersey public utilities and the BPU on matters related to methods of reporting, measuring, and assessing the development of these relationships.

In 2019, SJI was awarded the Distinguished Service Award from the SDDC in recognition of leadership, contributions and unwavering support in forging effective business relations with diverse businesses, New Jersey regulated companies, and the BPU. Also in 2019, SJI received the Advocate Award in appreciation of unwavering support of the SDDC, its mission and legacy of advocating opportunities to diverse businesses with the regulated companies in the State of New Jersey.

Q. HAS THE QUALITY OF SJG'S OPERATIONAL PERFORMANCE BEEN ACKNOWLEDGED BY ITS PEERS?

A. South Jersey has performed above average in its east midsize utility peer group JD Power scores for each of the last three years. Additionally, Overall Customer Satisfaction Index scores have increased year over year since 2017. Driving this overall increase, scores for Safety & Reliability, Billing & Payment, Corporate Citizenship, Communications and Customer service have all increased since 2017. Our focus on Customer Experience remains a high priority across SJG, and we will continue to live our Customer Promise as we work to increase our scores across the board.

Additionally, in 2019 SJG hosted an AGA Peer Review Program, a voluntary peer-to-peer safety and operational practices review program that allowed local natural gas utilities throughout the nation to observe our operations, leading practices and service to customers and communities. Highlights from the review include the acknowledgment of SJG's positive safety culture, damage prevention programs, professionalism and talent of our employees, innovative use of technology, and effective contractor management.

Q. WHAT ARE SOME OTHER INDICATORS OF SJG'S CUSTOMER SERVICE PERFORMANCE?

A. SJG has consistently performed well in the area of reading meters in a timely manner, with an average of 96.7% of actual meter reads verses non-reads. Additionally, the response to leak calls has also improved to be at or near a 98% benchmark since the Company's last rate case. We have also shortened our average speed of answer to under two minutes and currently answer approximately 70% of all calls within 30 seconds, with efforts afoot to continue improving. Customer service appointments are met consistently, with an average rate of 88.4% over the last three years. Overall customer service agent quality scores, which are based on 19 customer service and functional expertise criteria, have also been at high levels and continue to improve. Most notably, since we started doing extensive customer surveying in 2017, South Jersey has achieved a 78% satisfaction rating for the statement, "South Jersey makes me feel like a valued customer." Further, the company has achieved a net promoter score ("NPS") that increased from 35.0 in 2017 to 49.1 in 2019—positioning the company to achieve a top quartile NPS rating.

Q. PLEASE DESCRIBE THE COMPANY'S ENERGY EFFICIENCY AND ENVIRONMENTAL INITIATIVES.

A. SJG management and its Board of Directors believe that businesses are responsible for achieving sustainable environmental practices and operating in a sustainable manner. This belief is exemplified through our commitment to reduce our environmental footprint. Our role as stewards of the environment is core to our business strategy and operating methods. We embrace the objectives of the CEA and EMP and are dedicated to making investments that will facilitate the State's goals.

Our commitment to providing the most environmentally friendly energy supplies and encouraging customers to implement energy efficient equipment and measures is evident in the CIP and our Energy Efficiency Programs ("EEP"). We have promoted energy efficiency to our customers through various programs, beginning as far back as the 1980s. These efforts have included rebates, efficiency audits and financing incentives. The overall result is a decrease in greenhouse gases and a reduction in the reliance upon foreign oil.

With the Board's cooperation, and in partnership with the New Jersey Clean Energy Program, we have also provided our customers with financing and rebates under our EEP program that have allowed them to upgrade to high efficiency equipment and conserve energy, while driving the New Jersey economy through the creation of green jobs. In 2018, South Jersey received approval from the Board to continue its EEPs for three years. Since the EEPs were initially implemented in 2009, SJG has invested $117.7 million in promoting energy efficiency under the programs and has issued loans or rebates to 10,245 residential and commercial customers. South Jersey has committed over $81.3 million for investment through 2021. As part of SJG's EEP IV Extension Program, which was approved by the Board on October 29, 2018 in Docket No. GO18030350, the Company expanded its portfolio of energy efficiency residential and commercial programs to include energy audits, an online efficient product marketplace, moderate income weatherization program and commercial engineered solution program. Further, from its inception through December 2019, the CIP has helped SJG's customers reduce natural gas usage by a total of 101.3 billion cubic feet, enabling them to save $915.9 million in energy costs. The Company is pleased to participate in this program that will assist South Jersey in providing additional services to our customers while supporting the energy efficiency goals of the State. Building on this commitment, the Company is fully dedicated to supporting future investments that will support the objectives of the CEA and EMP in a manner that will enable customers to reduce energy consumption and save money on their gas bills, reduce greenhouse gas emissions and generate job growth.

Q. PLEASE EXPLAIN THE COMPANY'S ACHIEVEMENTS IN REDUCING EMISSIONS AND SUPPORTING OBJECTIVES OF THE CEA AND EMP THROUGH ITS INFRASTRUCTURE REPLACEMENT EFFORTS.

A. We are proud of achievements in reducing emissions and supporting the State's environmental goals through our proactive infrastructure replacement efforts. In 2016, SJG joined the U.S. Environmental Protection Agency's ("EPA") Natural Gas STAR Methane Challenge Program as a Founding Partner. The program is designed to provide a transparent platform for utilities to make, track and communicate commitments to reduce methane emissions. SJG is reducing emissions by replacing its aging bare steel and cast iron infrastructure and, with the Board's approval in October 2016 to continue its AIRP program, SJG is accelerating the elimination of its most at-risk pipe and will replace all remaining cast iron and unprotected steel in its distribution system by 2021. As I mentioned previously, the replacement of vintage, at-risk pipe represents the single most important step SJG can take to reduce methane emissions and support the environmental objectives of the CEA and EMP. Through its infrastructure replacement effort, the Company has achieved emissions reductions of 1,100 metric tons since joining the EPA's STAR Methane Challenge Program.[3]

Q. PLEASE INTRODUCE THE OTHER WITNESSES PROVIDING TESTIMONY IN SUPPORT OF SJG'S FILING IN THIS PROCEEDING.

A. The other witnesses and the subjects addressed in their testimony are as follows:

- Stefany M. Graham, Director, Rates and Regulatory Affairs, SJIU, addresses revenue requirement and related items, as well as the Company's tariff;
- Brent W. Schomber, Vice President, Operations, SJG, addresses capital expenditures;
- Leonard Brinson, Jr., Vice President and Chief Information Officer, SJI, discusses IT initiatives and investments by the Company;
- Brenda O'Brien, Vice President, Accounting, SJI, sponsors certain accounting and related information;
- Robert B. Hevert of ScottMadden, Inc. discusses cost of capital issues including the proposed return on equity, capital structure and overall cost of capital;
- Timothy S. Lyons of ScottMadden, Inc. sponsors the Company's lead/lag study;
- Alan D. Felsenthal of PricewaterhouseCoopers LLP addresses certain tax issues;
- Dane A. Watson of Alliance Consulting Group presents the Company's depreciation proposals; and
- Daniel P. Yardley of Yardley and Associates presents the Company's embedded cost of service study and proposed rate design.

[3] EPA, South Jersey Gas Methane Challenge Partner Profile, https://www.epa.gov/natural-gas-star-program/south-jersey-gas-methane-challenge-partner-profile.

IV. CONCLUSION

Q. DO YOU HAVE ANY CONCLUDING REMARKS?

A. Yes. SJG has managed, and continues to manage, its operations responsibly and effectively to uphold its commitment to provide superior service to our customers at reasonable rates. We must now be afforded the opportunity to earn a reasonable return on investments made since the Company's last base rate case proceeding. The Company has made significant and prudent investments to our system, which will ensure ongoing reliable natural gas service to our customers. I respectfully request that the Board provide the Company with the opportunity to earn a fair return on its investments and grant our requested rate relief at this time.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes. It does.

INSERT TAB:

S. GRAHAM

**IN THE MATTER OF THE PETITION OF
SOUTH JERSEY GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS**

BPU DOCKET NO. GR20_______

DIRECT TESTIMONY

OF

STEFANY M. GRAHAM

**Director, Rates and Regulatory Affairs
SJI Utilities, Inc.**

**On Behalf of
South Jersey Gas Company**

Exhibit P-3

March 13, 2020

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SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
STEFANY M. GRAHAM

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, AFFILIATION AND BUSINESS ADDRESS.

A. My name is Stefany M. Graham and I am Director, Rates and Regulatory Affairs for SJI Utilities ("SJIU"). My business address is One South Jersey Place, Atlantic City, NJ 08401.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND INDUSTRY RELATED EXPERIENCE.

A. I received a Bachelor of Science Degree in Accounting from Pennsylvania State University in 2011 and obtained a Masters in Business Administration Degree with a concentration in Finance from Drexel University in 2015. In October 2014, I joined the Internal Audit Department at South Jersey Industries, Inc. ("SJI"), and subsequently accepted the role of Senior Rate Analyst in the Rates and Revenue Requirement Department in May 2015. In December 2017, I was promoted to Manager, Rates and Regulatory Initiatives for South Jersey Gas Company ("SJG" or the "Company") and most recently appointed to my current role as Director, Rates and Regulatory Affairs for SJIU overseeing Rates and Regulatory Affairs for SJG and its sister New Jersey public utility, Elizabethtown Gas Company as well as Elkton Gas Company in Maryland.

In my current role, I manage the Company's Rate Department activities, including the preparation and coordination of all rate case, revenue-related and other filings before the New Jersey Board of Public Utilities ("BPU" or the "Board"). Prior to my employment at SJI, I worked for the Big Four public accounting firm of Deloitte, LLP as an auditor for a diverse client base, as well as in the Internal Audit Department at Virtua Health. I am a member of the American Gas Association ("AGA") and the New Jersey Utilities Association ("NJUA"), where I serve on the Finance and Regulations Committee.

Q. HAVE YOU PREVIOUSLY TESTIFIED OR SUBMITTED TESTIMONY BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILTIES?

A. Yes. I have submitted testimony before the BPU in various proceedings, including most recently, Elizabethtown Gas Company's base rate case in BPU Docket No. GR19040486, SJG's 2019 annual cost roll-in filing under its Accelerated Infrastructure Replacement Program ("AIRP II") and Storm Hardening And Reliability Program ("SHARP") in BPU Docket Nos. GR19040529 and GR19040528, and SJG's energy efficiency program extension filing in Docket No. GO18030350.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to support the Company's revenue requirement calculation in this case, which is based on a test year ending June 30, 2020, including *pro forma* adjustments to the test year Income Statement and Statement of Rate Base. In support of the revenue requirement, I explain *pro forma* adjustments to test year revenues, cost of gas and operations and maintenance ("O&M") expense, as well as the rate base calculation. Additionally, my testimony discusses proposed changes to the Company's existing tariff.

Q. DO YOU SPONSOR ANY SCHEDULES IN YOUR DIRECT TESTIMONY?

A. Yes. I am sponsoring the following Schedules, which were prepared or compiled under my direction and supervision, and which support the Company's calculation of its revenue requirement and rate base:

- Schedule SMG-1 – Revenue Requirement;
- Schedule SMG-2 – Statement of Rate Base;
- Schedule SMG-3 – Operating Income Statement;
- Schedule SMG-4 – Summary of *Pro Forma* Adjustments to Operating Income; and
- Schedule SMG-5 – Derivation of Revenue Expansion Factor.

The *pro forma* adjustments to the test year income statement and statement of rate base are also reflected on my Schedules as follows:

- Schedule SMG-6 – Summary of Revenue and Cost of Gas Adjustments;
- Schedule SMG-7 – EET Rider Adjustment;
- Schedule SMG-8 – SHARP II/AIRP II Revenue Annualization Adjustment;
- Schedule SMG-9 – Interruptible/Off-System Sales/Storage Incentive Adjustment;
- Schedule SMG-10 – Customer Annualization;
- Schedule SMG-11 – Customer Counts;
- Schedule SMG-12 – Sales From Post Test Year Utility Plant Additions;
- Schedule SMG-13 – New Customers from Post Test Year Utility Plant Additions;
- Schedule SMG-14 – Contract Changes;
- Schedule SMG-15 – Miscellaneous Service Charges;
- Schedule SMG-16 – Summary of O&M Adjustments;

- Schedule SMG-17 – Payroll Expense;
- Schedule SMG-18 – Employee Benefits Expense;
- Schedule SMG-19 – Allocated Service Company Salaries and Benefits Expense;
- Schedule SMG-20 – Mark Out Expense Annualization;
- Schedule SMG-21 – Compression Project Expense;
- Schedule SMG-22 – Rate Case Expense;
- Schedule SMG-23 – Pipeline Integrity Management Expense Amortization;
- Schedule SMG-24 – Amortization Expense Adjustment;
- Schedule SMG-25 – O&M Inflation Adjustment;
- Schedule SMG-26 – Customer Deposits;
- Schedule SMG-27.1 – Revenue Taxes;
- Schedule SMG-27.2 – PUA Expense Adjustment;
- Schedule SMG-28.1 – Cash Working Capital (Test Year);
- Schedule SMG-28.2 – Cash Working Capital (Post-Test Year); and
- Schedule SMG-29 – Inventories.

Finally, the Company's proposed N.J.B.P.U. Tariff for Gas Service No. 13 is included in my Schedules as follows:

- Schedule SMG-30 – Proposed Tariff for Gas Service No. 13 (Clean);
- Schedule SMG-31 – Proposed Tariff for Gas Service No. 13 (Redlined Changes); and
- Schedule SMG-32 – List of Proposed Substantive Tariff Changes.

III. TEST YEAR

Q. WHAT TEST YEAR PERIOD IS SOUTH JERSEY USING TO DETERMINE THE REVENUE REQUIREMENT IN THIS PROCEEDING?

A. SJG's test year is the twelve months ending June 30, 2020. This filing utilizes six months of actual data ending December 31, 2019 and six months of estimated data through June 30, 2020. The actual data has been obtained from the Company's books and records. Generally, the estimated data has been extracted from the Company's operating and capital budgets and forecasts. The estimated data will be replaced with actual data as the case progresses, ultimately containing all actual results in the 12-month update.

Q. HAS SJG INCLUDED ANY POST-TEST YEAR ADJUSTMENTS IN THE DETERMINATION OF THE PROPOSED REVENUE REQUIREMENT?

A. Yes. SJG is proposing to reflect changes in certain capital expenditures through December 31, 2020 and changes in certain revenues and expenses through March 31, 2021, as described later in my testimony as well as in the Direct Testimony of Mr. Brent W. Schomber (Exhibit P-4). Including these post-test year adjustments is consistent with standards previously adopted by the Board and provides for an annualization and/or adjustment of revenues, expenses and capital expenditures through the time period in which rates are expected to be in effect. Specifically, the Board's policy concerning post-test year adjustments, as set forth in its order *Re Elizabethtown Water Company*, Docket No. WR8504330, is that utilities are afforded an opportunity to make a record concerning known and measurable changes to expenses and revenues that are nine months beyond the test year and for changes in rate base items that are six months beyond the test year. The post-test year adjustments included in this case are within these parameters. The post-test year adjustments to rate base and operating income are provided in Schedules SMG-2 and SMG-3, respectively.

IV. REVENUE REQUIREMENT

Q. HOW HAVE YOU CALCULATED THE REVENUE REQUIREMENT AND THE ASSOCIATED REVENUE DEFICIENCY?

A. Schedule SMG-1, attached hereto, reflects the calculation of SJG's requested additional operating revenue of $75,302,112, as supported by Company witnesses in this case.

Schedule SMG-1, Line 1, reflects the adjusted rate base of $2,183,729,657, which is calculated on Schedule SMG-2. Schedule SMG-2 reflects the adjustments made to specific rate base elements and provides a reference to the Schedules sponsored by each witness supporting the adjustment. The proposed rate of return on rate base of 7.34% is sponsored by Mr. Robert B. Hevert (Exhibit P-7).

Schedule SMG-1, Line 4, reflects the adjusted net operating income of $111,370,829, which is calculated on Schedule SMG-3. Schedule SMG-4 summarizes the *pro forma* adjustments to net operating income, including references for each adjustment as sponsored by a Company witness in this case.

Schedule SMG-1, Line 5, shows an income deficiency of $49,008,046, which is grossed up for taxes by a revenue expansion factor of 1.418291, shown in line 6, resulting in net operating revenue requirement increase of $69,507,688, shown in line 7.

Schedule SMG-1, lines 9 and 10, reflect a reduction to the total revenue requirement to account for the Accelerated Infrastructure Replacement Program ("AIRP II") and Storm Hardening and Reliability Program ("SHARP II") revenue adjustments that will occur on

October 1, 2020 pursuant to the schedules set forth in the respective Board Orders approving those programs. These revenue adjustments are discussed further in Section V of my testimony. Schedule SMG-1, line 11, reflects the roll-in of the Conservation Incentive Program ("CIP"), similar to the roll-ins that have occurred in the Company's last three base rate cases. After giving consideration to the roll-in of AIRP II, SHARP II and CIP, we show the need for a net operating revenue requirement increase of $75,302,112, line 12.

Q. HOW IS THE REVENUE EXPANSION FACTOR CALCULATED?

A. Schedule SMG-5 depicts the derivation of the revenue expansion factor of 1.418291 used to convert the income deficiency into the revenue requirement. The revenue factor includes adjustments for BPU and Rate Counsel ("RC") Assessments, bad debt allowance ("Uncollectibles"), State Income Tax, and Federal Income Tax. Each of these components must be reflected in this factor in order for the Company to recover each incremental dollar of income from the required revenue increase.

V. <u>ADJUSTMENT FOR OCTOBER 2020 AIRP II AND SHARP II RATE CHANGES</u>

Q. PLEASE EXPLAIN THE REVENUE REQUIREMENT ADJUSTMENTS MADE FOR AIRP II AND SHARP II ON SCHEDULE SMG-1.

A. The rate base balance reflected on SMG-1, Line 1, includes capital expenditures associated with AIRP II and SHARP II investments through June 30, 2020, as discussed in Mr. Schomber's Direct Testimony (Exhibit P-4) and reflected in Schedule BWS-2. Pursuant to the Board's Orders approving the AIRP II and SHARP II, dated October 31, 2016 (Docket No. GR16020175) and May 22, 2018 (Docket No. GO17111130) , respectively, investments made under both programs through June 30, 2020 will be reflected in a base rate adjustment to be effective October 1, 2020. Because such capital will be recovered outside of this base rate case filing, we have made an adjustment on Schedule SMG-1, Lines 9 and 10, to reduce the revenue requirement by the projected annualized revenue requirements associated with the AIRP II and SHARP II rate adjustments that will occur on October 1, 2020. The Annual AIRP II and SHARP II filings will occur on April 30, 2020 based on actual data as of March 31, 2020 and projected data through June 2020, to be replaced with 12 months of actual data in a subsequent update filing by July 15, 2020. As such, the revenue requirement reduction reflected on SMG-1 will be updated as this case proceeds.

VI. OPERATING INCOME

Q. PLEASE OUTLINE AND EXPLAIN THE REVENUE AND COST OF GAS ADJUSTMENTS THE COMPANY IS PROPOSING TO MAKE IN THIS FILING.

A. ***Pro Forma Revenue and Cost of Gas Adjustments:*** Schedule SMG-6 summarizes the *pro forma* revenue and cost of gas adjustments supported by various witnesses in this case and provides a reference to the schedules sponsored by each witness. The sum of the revenue adjustments, ($13,146,635), is reflected in line 1 of Schedule SMG-3 (Operating Income Statement). The sum of the cost of gas adjustments, ($934,151), is reflected in line 5 of Schedule SMG-3.

EET Rider Adjustment: Schedule SMG-7 reflects the adjustment to revenues, O&M and amortization for the Company's Energy Efficiency Program ("EEP"). This program and the associated Rider EET are designed to be adjusted outside of a base rate case. As such, we have removed the revenue and cost of gas associated with this rider from the *pro forma* income statement in this case. The revenue adjustment of ($10,204,400) is summarized on Schedule SMG-6. The O&M adjustment of ($2,711,500) and the amortization adjustment of ($2,150,300) are summarized on Schedule SMG-16.

SHARP II/AIRP II Revenue Adjustment: Schedule SMG-8 reflects two adjustments that have been made to annualize the test year revenues for SHARP II and AIRP II rate adjustments that occurred during the test year. The first adjustment annualizes the impact of the October 1, 2019 SHARP II base rate adjustment that was approved by the Board by Order dated September 27, 2019 (Docket No. GR19040529). In that proceeding, the Board authorized the Company to roll into base rates, effective October 1, 2019, an annual revenue requirement of $3.1 million, including Sales and Use Tax ("SUT"), associated with approximately $27.5 million of SHARP II investments made during the period of July 1, 2018 through June 30, 2019. On Schedule SMG-8, Line 1, a *pro forma* adjustment is made to capture three months of test year revenues for July through September 2019 related to the approved base rate roll-in rate adjustments.

The second adjustment, SMG-8, Line 2, annualizes test year revenues for the October 1, 2019 AIRP II base rate adjustment that was approved by the Board by Order dated September 27, 2019 (Docket No. GR19040528). In that proceeding, the Board authorized the Company to roll into base rates, effective October 1, 2019, an annual revenue requirement of $7.1 million (including SUT) associated with approximately $65.3 million of AIRP II investments made during the period of July 1, 2018 through June 30, 2019. On Schedule SMG-8, Line 2, a *pro forma* adjustment is made to capture three months of test year revenues for July through September 2019 related to the approved base rate roll-in rate adjustments. The SHARP II and AIRP II revenue adjustments are summarized on Schedule SMG-6.

Incentive Mechanisms: Schedule SMG-9 reflects the adjustment to revenue and cost of gas to eliminate the impact of shared profits from interruptible and off-system sales, as well as the Storage Incentive Mechanism during the test year. Since these items are incentive mechanisms, and are not firm revenues, the effects of interruptible sales are removed from the firm revenue requirement in base rate cases. Test year revenue is therefore, adjusted to remove the Company's share of the margin received. For the period of July 2019 through September 2019, the Company's share of the off-system sales was 15%. Effective October 1, 2019, the Company's share of this margin is set at 7% pursuant to the Board's Order dated May 8, 2019 in Docket No. GR18060609. The Company's share of the interruptible margin is 15% for the entire test year period. The balance of the margin received, or the customers' share, flows through to the Basic Gas Supply Service ("BGSS") clause, reducing overall gas costs. The adjustments to revenue and cost of gas are summarized on Schedule SMG-6 and flow to Schedule SMG-3 (Income Statement).

Customer Annualization: Schedule SMG-10 reflects an adjustment to annualize the number of Residential and General Service firm sales and transportation customers. The purpose of annualization is to reflect the trends of increasing or decreasing customers to determine the appropriate base level of customers for each class. The base level is the level of customers anticipated to be on the Company's system at the time rates from this proceeding will go into effect. The result of this annualization is an increase in revenue of $3,628,543 and an increase in the cost of gas of $1,257,330.

For this adjustment, the classes were analyzed to properly capture the growth trend in the customer classes. In each case, the annualization was calculated by multiplying the monthly level of annualized customers by temperature normalized sales volumes in Dekatherms ("Dt") per customer, which resulted in either an increase or decrease in total sales volumes. The sales volumes were then multiplied by revenue and gas costs per Dt to derive the annualized revenue and cost of gas for each class. In order to reflect a proper base level in each class, each month is adjusted to the June 2020 base level. In this way, the test year is annualized for customer fluctuations to the projected customer level on the Company's system when rates from this proceeding go into effect. The annualization of all customer classes, utilizing actual customers per rate class, will be updated as the information becomes available to the Company. This adjustment is summarized on Schedule SMG-6.

Schedule SMG-11 identifies the Company's month end customer counts during the test year utilized to perform the customer annualization in Schedule SMG-10. This monthly customer data represents "net" customer counts (*i.e.*, customers added minus customers lost). This schedule includes six months of actual data and six months of projected data. The projected data will be updated with actual data through the course of the rate proceeding.

<u>New Business Utility Plant</u>: Schedule SMG-12 contains the post-test year adjustment to the Income Statement for sales from utility plant additions. This adjustment gives recognition to incremental sales which will be generated by the "new business" utility plant supported by Mr. Schomber's Direct Testimony. Schedule SMG-13 reflects the projected post-test year gross customer additions as a result of the plant that will be added in the six

(6) months following the test year. The Company's forecast of customer additions for the post-test year period was used as a surrogate to calculate the resultant annual increase in sales, revenue and gas costs for each new customer. This calculation results in an incremental $6,957,547 increase in revenues, and a $2,912,713 increase in cost of gas. This customer growth information will be updated with actual data during the course of the rate case proceeding. This adjustment is summarized on Schedule SMG-6.

Large Customer Contract Changes: Schedule SMG-14 details the contract changes associated with a customer migrating from Large Volume Service ("LVS") to Comprehensive Transportation Service ("CTS"). The result of this contract change is a revenue increase of $27,366 and no change to the associated cost of gas. The financial impact of this increase in throughput is reflected as an adjustment in Schedule SMG-6.

Miscellaneous Charges Adjustment: Schedule SMG-15 reflects SJG's proposal to modify an existing service charge. The Company is proposing to increase the charges related to a meter turn on from $20.00 to $45.00. The proposed tariff change is an attempt to recover the actual cost of providing these services to customers. The Company has performed a transactional cost analysis and used the results as a guideline to increase these charges. This *pro forma* revenue adjustment of $627,183 for miscellaneous service charges is summarized on Schedule SMG-6.

Rental Income Adjustment: This rental income adjustment of $634,148 reflects the annualization of test year rental income associated with the Folsom Facility. This adjustment is supported by Mrs. O'Brien's Direct Testimony, as well as Schedule BJO-10.

Q. PLEASE OUTLINE AND EXPLAIN THE O&M ADJUSTMENTS THE COMPANY IS PROPOSING TO MAKE IN THIS FILING.

A. ***Summary of Pro Forma O&M Expense Adjustments:*** Schedule SMG-16 provides a summary of *pro forma* O&M expense adjustments, as well as associated Schedule references. The sum of the O&M expense adjustments, $10,610,513, is reflected on line 7 of Schedule SMG-3 (Operating Income Statement).

Payroll Expense: Schedule SMG-17 identifies the Company's *pro forma* adjustments for employee payroll changes and employee annualization. The resulting increase to fixed compensation expense based on anticipated additions and separations during the test year period, as well as projected post-test year wage increases, totals $1,821,219 and is summarized on Schedule SMG-16. The payroll expense for all non-union and union employees of SJG is expected to increase by three percent. The payroll tax adjustment of $163,910 reflected on Schedule SMG-17, line 7, is included in Taxes other than Income shown on Schedule SMG-3, line 11.

Employee Benefits Expense: Schedule SMG-18 reflects the *pro forma* adjustment to annualize healthcare benefits based on the anticipated net additions and separations identified in the payroll expense adjustment discussed above. The total employee benefit expense adjustment of $432,682 is summarized on Schedule SMG-16.

Allocated Service Company Expense: Schedule SMG-19 identifies the Company's *pro forma* adjustment to annualize salaries and benefits allocated directly from the service company, SJI. The resulting increase to allocated expense based on anticipated additions and separations during the test year period, as well as projected post-test year wage increases, totals $1,726,199 and is summarized on Schedule SMG-16. The payroll expense for all employees of SJI reflects a three (3) percent increase.

Mark Out Expense Annualization: Schedule SMG-20 reflects the *pro forma* adjustment of $205,563 to annualize mark out expenses during the test year due to a change in contract pricing occurring January 2020.

Compression Project Expense: Schedule SMG-21 establishes the *pro forma* adjustment of $2,280,000 to annualize O&M expenses for the New Sentury Compression Project, which is projected to be placed in service in December 2020. Further discussion on this project is reflected in Mr. Schomber's Direct Testimony.

Rate Case Expense: Schedule SMG-22 reflects the *pro forma* adjustment made for expenses related to this proceeding. This adjustment includes the projected costs of legal and consultant expenses, newspaper notices, court reporting, postage and other miscellaneous expenses. These expenses are projected to total $1,518,000. Consistent with Board policy, the Company proposes to include in rates fifty percent of these expenses, or $759,000, to be amortized over a three-year period. This adjustment equates to $253,000 and is summarized on Schedule SMG-16.

Pipeline Integrity Management: Schedule SMG-23 reflects the *pro forma* adjustment for deferred and projected expenses related to Pipeline Integrity Management ("PIM"), a federally mandated integrity management program for gas transmission pipelines and distribution systems required by 49 CFR 192.901, *et al.* The Company's PIM activities are described in more detail in Mr. Schomber's Direct Testimony. Deferred accounting treatment of PIM programs was approved in the Company's 2010, 2013 and 2017 base rate cases and the Company proposes to continue deferred treatment of PIM expenses going forward. Line 1 of Schedule SMG-23 identifies the projected costs incurred and deferred as of June 30, 2020. The Company proposes to amortize these costs over three (3) years, consistent with the amortization period approved in the Company's last three base rate cases. Line 2 of Schedule SMG-23 identifies the annual amortization expense of $1,878,473 and flows to Schedule SMG-16. In the event that the Board does not approve deferred treatment of PIM expenses going forward, the Company proposes to include an estimated annual cost of $2,510,673 as a *pro forma* test year adjustment to its O&M expenses in this case.

Amortization Expense Adjustment: Schedule SMG-24 reflects adjustments made to remove test year expenses for amortizations approved in the Company's last base rate case. The Board's Order approving the Company's last base rate case (Docket No. GR17010071) approved a three (3) year amortization of expenses related to rate case expense and PIM costs. The three year amortization period will be completed on October 31, 2020, thus it is necessary to adjust test year expenses to remove these amortizations to avoid double recovery. These adjustments totaling ($1,853,102) are summarized on Schedule SMG-16.

Facility Expense Adjustment: As discussed in the Direct Testimony of Mrs. O'Brien and shown on Schedule BJO-10, the Company is proposing an increase in expenses related to the Folsom Facility. The total increase for Facility O&M Expense is $403,019 as summarized on Schedule SMG-16.

Pension & OPEB Adjustment: Pursuant to the Company's most recent base rate case approval, the Company was authorized to defer incremental pension and postretirement healthcare expenses resulting from the ability to capitalize only service costs, resulting from the Accounting Standards Update ("ASU") change effective December 15, 2017. The

Company projects a total deferral of $3,485,947 as of test year end June 30, 2020, as shown on Schedule BJO-11. The Company proposes to amortize these costs over three (3) years, or $1,161,982 per year, consistent with the amortization period of other regulatory assets proposed in the Company's rate case such as Rate Case Expense and Pipeline Integrity Management. In addition to the recovery of prior deferred expenses through a three year amortization, the Company proposes a *pro forma* adjustment to O&M expenses to recover the costs of ongoing Pension/OPEB costs that are currently being deferred. The projected annual amount of $49,503 is also calculated on Schedule BJO-11. Both of these pension & OPEB adjustments are summarized on Schedule SMG-16.

Early Retirement Incentive Plan (ERIP) Amortization Adjustment: As discussed in the Direct Testimony of Mrs. O'Brien, the Company deferred a total of $5,073,202 of costs associated with an Early Retirement Incentive Plan implemented in 2019. As shown on Schedule BJO-12, the Company proposes to recover these costs over a three (3) year amortization period. The details associated with the adjustment, including a discussion of the cost benefit of this expense is provided in the testimony of Company witness O'Brien. The adjustment equates to $1,691,067 and is summarized on Schedule SMG-16.

BL England Adjustment: As discussed in the Direct Testimony of Mrs. O'Brien, the Company is seeking to recover approximately $10.1 million of costs associated with the cancelled BL England pipeline project. As shown on Schedule BJO-13, the Company is proposing to recover these costs over a ten year period. The adjustment equates to $1,011,992 and is summarized on Schedule SMG-16.

Inflation Adjustment: Schedule SMG-25 reflects a *pro forma* adjustment for inflation on residual O&M expenses. The residual amount of O&M expense is calculated as the total post-test year O&M expense, less expenses that are subsequently adjusted for known and measurable items or that otherwise are not subject to inflation, such as uncollectibles expense. The resulting residual O&M expense was multiplied by an inflation factor of three (3) percent to develop the known and measurable inflation allowance. The inflation factor was developed based on the Energy Information Administration's average projected Gross Domestic Product-Price Index ("GDP-PI") for the end of the post test year period compared to the GDP-PI at the mid-point of the test year. The total inflation adjustment is $4,410,715 and is summarized on Schedule SMG-16.

Q. PLEASE DESCRIBE THE DEPRECIATION ADJUSTMENTS THE COMPANY IS PROPOSING TO MAKE IN THIS FILING.

A. The *pro forma* adjustments to depreciation expense, Schedule SMG-3 line 9, and accumulated depreciation and amortization, Schedule SMG-2 line 2, are set forth on Schedule BJO-5 and discussed in further detail in the Direct Testimony of Mrs. Brenda O'Brien. The changes to depreciation rates reflected in the proposed depreciation expense are based on the results of a study prepared by Company witness Mr. Dane Watson (Exhibit P-10).

Q. PLEASE OUTLINE AND EXPLAIN THE TAXES OTHER THAN INCOME TAX ADJUSTMENTS THE COMPANY IS PROPOSING TO MAKE IN THIS FILING.

A. The sum of the Taxes Other Than Income Tax adjustment, $235,805, is reflected on line 11 of Schedule SMG-3 (Operating Income Statement) and described in more detail below.

Payroll Taxes: As discussed above, Schedule SMG-17 calculates the projected increase in payroll taxes based on anticipated employee payroll changes and employee annualization. The total adjustment is $163,910.

Revenue Taxes: Schedule SMG-27.1 reflects the Public Utility Assessment ("PUA") tax adjustments as a result of revenue adjustments related to the EET Rider adjustment, SHARP II/AIRP II revenue adjustment, interruptible sales. customer annualization, sales from post test year plant additions, contract changes and CIP revenue adjustment, which are summarized in Schedule SMG-6. The total proposed revenue adjustment is multiplied by the proposed PUA assessment rate of $0.002736, which is the sum of the BPU and RC assessments reflected in the revenue expansion factor shown on Schedule SMG-5. The total adjustment is an increase of $45,286 to Taxes Other than Income.

PUA Expense Adjustment: Schedule SMG-27.2 reflects adjustments to the income statement for a PUA rate change. In accordance with *N.J.S.A.* 48:2-60 and *N.J.S.A.* 52:27EE-52, the Company provides funding to the State of New Jersey associated with the operations of the Board (BPU Assessment) and Rate Counsel (Public Advocate Assessment). These assessments are predicated on rates established by the State of New Jersey and are applied to each gross intrastate revenue dollar recorded by the Company for the preceding year. The current assessment rates, which were last revised in the Company's 2017 base rate case, are 0.203396% for the Board and 0.047099% for Rate Counsel. These current rates are not adequate to recover the Company's funding obligation; therefore, the Company is proposing to utilize a 3 year average of PUA assessments to update these rates to 0.220453% for the Board and 0.053099% for Rate Counsel. By applying these updated rates to year-end 2017 intrastate operating revenues, the Company has estimated its funding obligation for the Board and Rate Counsel at approximately $1.14 million. The adjustment of $26,610 increases the test year operating expenses to that level and is reflected on Schedule SMG-3, Line 11. The adjustment recognizes test year expense for this item at a level that the Company will incur while the new assessment rates are in effect. This assumes stability of the assessment rate and, therefore, is appropriate to be adopted in this proceeding.

Q. PLEASE EXPLAIN THE EXCESS DEFERRED TAX AMORTIZATION ADJUSTMENTS REFLECTED ON SCHEDULE SMG-3.

A. The Excess Deferred Tax Amortization shown on Schedule SMG-3, line 13, reflects the Company's refund of excess deferred taxes resulting from the 2017 Tax Cuts and Jobs Act. The excess deferred tax balance and related amortizations are discussed in further detail in the Direct Testimony of Company witness Mr. Alan Felsenthal.

Q. PLEASE EXPLAIN THE FEDERAL AND STATE INCOME TAX ADJUSTMENTS REFLECTED ON SCHEDULE SMG-3.

A. The *pro forma* adjustment to Federal and State Income Tax expense, Schedule SMG-3 line 15, includes an interest synchronization adjustment as well as the income tax effect on all *pro forma* adjustments identified previously and reflected on Schedule SMG-4. The interest synchronization adjustment is calculated on Schedule BJO-9 and discussed in further detail by Company witness Mrs. O'Brien.

Q. PLEASE EXPLAIN THE RATEMAKING ADJUSTMENT FOR INTEREST ON CUSTOMER DEPOSITS.

A. The adjustment for interest on customer deposits is detailed on Schedule SMG-26. Interest expense, in accordance with Generally Accepted Accounting Principles, is booked below the line, but interest on customer deposits has been moved above the line for ratemaking purposes. This adjustment is appropriate when customer deposits are used to reduce rate base as a customer supplied source of capital, as we have done in this case. The projected test year interest to be paid to customers is $149,531, based on a 1.87% 2019 interest rate and a 2.33% 2020 interest rate. These rates are contained in the current Board regulations *N.J.A.C.* 14:3-3.5(d). Based on the anticipated customer deposits at post-test year end March 2021, and utilizing the interest rate of 2.33%, the projected annualized interest on customer deposits is $163,179, as reflected on Schedule SMG-26, line 30. When compared to the test year projected interest, as summarized on Lines 36-40, a *pro forma* adjustment in the amount of $13,647 is necessary and included on Schedule SMG-3, line 22.

VII. RATE BASE

Q. PLEASE OUTLINE AND EXPLAIN THE RATE BASE ADJUSTMENTS THE COMPANY IS PROPOSING TO MAKE IN THIS FILING.

A. Schedule SMG-2 summarizes the *pro forma* rate base adjustments supported by all witnesses in this case and provides a reference to the schedules sponsored by each witness.

Utility Plant in Service ("UPIS"): The balance for UPIS was calculated starting with the actual balance as of December 31, 2019. Forecast plant additions for the period January 2020 through June 2020 were then added and estimates for plant retirements for the same time period were deducted to develop the estimated test year ending balance as of June 30, 2020. The Company also included forecast plant additions, reduced for plant retirements, for the six-month post-test year period ending December 2020. The forecast plant additions are discussed in further detail in the Direct Testimony of Company witness Mr. Schomber (Exhibit P-4) and Company witness Mr. Leonard Brinson (Exhibit P-5) and summarized on Schedules BWS-1 through BWS-4.

Accumulated Depreciation & Amortization: The balance for accumulated depreciation and amortization was calculated starting with the actual balance as of December 31, 2019. The balance was then adjusted by adding estimated depreciation expense and subtracting estimated plant retirements and cost of removal for the period January 2020 through June 2020 to develop the estimated test year ending balance as of June 30, 2020. The Company also included a post test year period adjustment to reflect estimated depreciation expense, less projected plant retirements and cost of removal related to the post test year capital expenditures included in UPIS for the period July 2020 through December 2020. The *pro forma* post test year accumulated depreciation adjustment is calculated on Schedule BJO-5 and discussed in further detail by Company witness Mrs. O'Brien.

Cash Working Capital: The test year and post-test year cash working capital balances are calculated on Schedules SMG-28.1 and SMG-28.2, respectively, based on the lead-lag study sponsored by Mr. Timothy Lyons.

Inventories: A 13-month average of natural gas stored, liquefied natural gas inventory, and materials and supplies is set forth on Schedule SMG-29 and reflected on SMG-2, lines 8 through 11. Utilizing a 13-month average for inventories allows the Company to include a full year of activity and appropriately reflect seasonal fluctuations in the account balance.

Customer Deposits: Schedule SMG-2, line 13, reflects the Company's projected 13-month average customer deposits for test year and post-test year periods. Projected customer deposits are the product of the average deposit per customer and the number of customers with deposits. Customer deposit adjustments are also summarized on Schedule SMG-26 lines 36-40 and are shown as a reduction to rate base on Schedule SMG-2, line 13.

Deferred Income Taxes: The test year deferred income tax balances were estimated using the actual balances as of December 31, 2019 and then projected through June 30, 2020 for changes to the components of the deferred income tax balances. Schedules BJO-7 and BJO-8, sponsored by Company witness Mrs. O'Brien, reflect the post test year rate base adjustment to capture the increase in Federal and State deferred taxes for the period through December 31, 2020. The Company has also included the Excess Deferred Income Tax balance reflected on its books through December 31, 2020, as described by Company witness Mr. Felsenthal. Deferred income tax adjustments are discussed in further detail in the Direct Testimony of Company witness Mrs. O'Brien.

Consolidated Tax Adjustment ("CTA"): The Company's proposed statement of rate base reflects a CTA of $0 as described in further detail in the Direct Testimony of Mr. Felsenthal.

VIII. REGULATORY ASSETS

Q. IS THE COMPANY PROPOSING TO ESTABLISH ANY NEW REGULATORY ASSETS IN THIS FILING THAT ARE NOT REFLECTED IN THE TEST YEAR?

A. Yes. As set forth in the Direct Testimony of Mr. Schomber, there are currently certain federal pipeline safety regulations that may significantly impact gas distribution operating costs involving transmission integrity management. The Company estimates it will incur an additional $300,000 O&M costs annually as a result of the new regulations. Because these costs are not reflected in the test year or post test year O&M expenditures, we are proposing to establish a regulatory asset in which the incremental costs associated with our transmission integrity management program ("TIMP") between rate cases will be tracked and deferred for later review and recovery in rates. In the event that the Board does not approve deferred treatment of TIMP expenses going forward, the Company proposes to include an estimated annual cost of $300,000 as a *pro forma* test year adjustment to its O&M expenses in this case.

The Company is also proposing to establish regulatory assets to permit it to recover rate case expense and PIM expense as I discussed prior, and the costs of its Early Retirement Incentive Plan and costs associated with the cancelled BL England pipeline project. These regulatory assets are discussed by Mrs. O'Brien.

IX. PROPOSED TARIFF

Q. PLEASE EXPLAIN THE COMPANY'S PROPOSED SUBSTANTIVE CHANGES TO ITS TARIFF.

A. In addition to the Schedules supported by my testimony in this proceeding, the following summarizes and supports proposed substantive changes to the Company's tariff. Schedule SMG-30 provides the proposed South Jersey Gas Company Tariff for Gas Service No. 13 ("Proposed Tariff") and Schedule SMG-31 reflects tracked changes from South Jersey's currently effective Tariff No. 12 on file with the Board. Schedules SMG-30 and SMG-31 also reflect certain housekeeping changes. Schedule SMG-32 provides a list of the proposed substantive tariff changes.

Extensions of Mains and/or Service Lines at Original Tariff Sheet No. 112

Section 4.3.1 has been revised to add a provision that permits the Company to provide up to 200 feet of normal residential facilities at no cost to the customer. Sections 4.3 and 4.4 have also been revised to include a waiver of the deposit requirement for residential, non-residential and new developments where the excess cost is $3,000 or less. The proposed language is consistent with the Board approved tariff for Elizabethtown Gas, as well as the other gas companies in New Jersey.

General Terms and Conditions at Original Tariff Sheet No. 121

Section 10.1 has been updated to reflect the change in the amount for a turn on charge from $20.00 to $45.00. Further discussion on this change is included above in Section VI, *Miscellaneous Services Adjustment*.

X. CONCLUSION

Q. PLEASE SUMMARIZE THE PRIMARY REASONS FOR SJG'S ANNUAL REVENUE DEFICIENCY.

A. Since the Company's last base rate case, we have invested approximately $341 million in net plant additions that are not currently reflected in rates and are projecting that approximately $238 million will be added to the plant in service balance by December 31, 2020 to ensure that our customers continue to receive safe and reliable natural gas service. A primary driver for rate relief in this proceeding is the value of SJG's investments in our infrastructure and the Company's ability to earn a reasonable return on those investments. Additionally, an increase in depreciation expense associated with a change in depreciation rates as recommended by Company witness Mr. Watson contributes to the incremental revenues requested herein. The Company's proposals in this case are just and reasonable and should be adopted by the Board. Doing so will send a proper signal to the financial community regarding New Jersey's regulatory environment and the financial health and stability of the Company.

Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?

A. Yes, it does.

SOUTH JERSEY GAS COMPANY
REVENUE REQUIREMENT

Line No.			REFERENCE
1	Adjusted Rate base	2,183,729,657	SMG-2
2	Rate of Return	7.34%	
3	Required Operating Income	160,378,875	
4	Adjusted Net Operating Income	111,370,829	SMG-3
5	Income Deficiency	49,008,046	
6	Revenue Factor	1.418291	SMG-5
7	Revenue Requirement	$69,507,688	
8	Revenue Requirement Rolled-In From:		
9	Accelerated Infrastructure Replacement Program (AIRP II)	($6,267,208)	
10	Storm Hardening & Reliability Program (SHARP II)	($3,377,993)	
11	Conservation Incentive Program (CIP)	$15,439,625	DPY-3
12	Requested Additional Operating Revenue	$75,302,112	

SOUTH JERSEY GAS COMPANY
STATEMENT OF RATE BASE

Line No.		ACTUAL RATE BASE December-19	ADJUSTMENT January 20 - June 20	PROJECTED RATE BASE June-20	PRO FORMA ADJUSTMENT	ADJUSTED RATE BASE December-20	REFERENCE TO RATEMAKING ADJUSTMENTS
1	Utility Plant In Service	$2,971,973,300	$ 121,808,217	$3,093,781,517	$ 149,870,840	$3,243,652,358	BWS-1
2	Accumulated Depreciation & Amortization	(543,232,082)	(24,740,127)	($567,972,209)	(30,337,349)	($598,309,558)	BJO-5
3	Non-Legal ARO	(16,333,134)	364,803	($15,968,332)	228,822	($15,739,509)	BJO-6
4							
5	Net Utility Plant	2,412,408,084	97,432,893	2,509,840,977	119,762,313	2,629,603,290	
6							
7							
8	Materials & Supplies [1]	624,938	0	624,938	0	$624,938	SMG-29
9	Gas Inventory: [1]						
10	Natural Gas Inventory	10,865,389	(433,188)	10,432,201	(751,113)	$9,681,088	SMG-29
11	LNG Inventory	2,828,069	(275,260)	2,552,809	8,393	$2,561,202	SMG-29
12	Cash Working Capital	0	0	78,338,924	10,512,192	$88,851,116	SMG-28.1,28.2
13	Customer Deposits [1]	(6,949,827)	20,367	(6,929,460)	(13,573)	($6,943,033)	SMG-26
14	Customer Advances [1]	(1,468,289)	0	(1,468,289)	0	($1,468,289)	
15	Deferred Income Taxes:						
16	Excess Protected ADIT	(486,067)	12,176	(473,891)	36,529	(437,361)	
17	Excess ADIT (2017 TCJA)	(149,470,704)	0	(149,470,704)	3,214,439	(146,256,265)	ADF-3
19	Federal Income Tax	(257,767,828)	(14,389,044)	(272,156,872)	(23,409,417)	(295,566,289)	BJO-7
20	NJ CBT	(91,343,022)	(3,360,216)	(94,703,238)	(2,217,501)	($96,920,739)	BJO-8
21	Consolidated Tax Adjustment	0	0	0	0	$0	ADF-2
22							
23	Total Rate Base	$1,919,240,743	$79,007,728	$2,076,587,396	$107,142,262	$2,183,729,657	

[1] Represents Thirteen Month Averages of Account Balances

SOUTH JERSEY GAS COMPANY
OPERATING INCOME STATEMENT

Line No.		6 MONTHS ACTUAL DATA	6 MONTHS PROJECTED DATA	TEST YEAR ENDED 6/30/2020	PRO FORMA ADJUSTMENTS	ADJUSTED TEST YEAR ENDED 6/30/2020	REVENUE DEFICIENCY	PRO FORMA POST TEST YEAR ENDED 6/30/2020
1	**Operating Revenues**	$ 234,760,100	$ 367,408,000	$ 602,168,100	$ 13,146,635	$ 615,314,735	$69,507,688	$ 684,822,423
2								
3	**Operating Expenses:**							
4								
5	**Purchased Gas**	$ 89,810,000	$ 141,190,500	$ 231,000,500	$ 934,151	$ 231,934,651	$ -	$ 231,934,651
6								
7	**Operation & Maintenance Exps.**	$ 72,345,502	$ 79,357,650	$ 151,703,152	$ 10,610,513	$ 162,313,664	$ 1,146,668	$ 163,460,333
8								
9	**Depreciation Expense**	$ 33,028,000	$ 33,875,500	$ 66,903,500	$ 11,731,060	$ 78,634,560	$ -	$ 78,634,560
10								
11	**Taxes Other Than Income Taxes**	$ 2,237,600	$ 2,577,900	$ 4,815,500	$ 235,805	$ 5,051,305	$ 190,140	$ 5,241,445
12								
13	**Excess Deferred Tax Amortization**	$ -	$ -	$ -	$ (2,223,581)	$ (2,223,581)	$ -	$ (2,223,581)
14								
15	**Federal Income Taxes & NJ CBT**	$ 5,210,413	$ 25,368,128	$ 30,578,541	$ (2,508,414)	$ 28,070,127	$ 19,162,834	$ 47,232,961
16								
17	**Total Operating Expenses**	$ 202,631,515	$ 282,369,678	$ 485,001,192	$ 18,779,535	$ 503,780,727	$ 20,499,642	$ 524,280,369
18								
19	**Net Operating Income**	$ 32,128,585	$ 85,038,322	$ 117,166,908	$ (5,632,900)	$ 111,534,008	$ 49,008,046	$ 160,542,054
20								
21	**Ratemaking Adjustment:**							
22	**Interest on Customer Deposits**	$68,999	$80,532	$ 149,531	$ 13,647	$ 163,179	$ -	$ 163,179
23								
24								
25	**Adjusted Net Operating Income**	$ 32,059,586	$ 84,957,790	$ 117,017,376	$ (5,646,547)	$ 111,370,829	$ 49,008,046	$ 160,378,875
26								
27	**Total Rate Base**			$ 2,076,587,396		$ 2,183,729,657		$ 2,183,729,657
28								
29	**Return on Rate Base**			5.64%		5.10%		7.34%
30								
31	**Adjusted Net Income**			$ 81,517,197		$ 74,039,006		$ 123,047,051
32								
33	**Return on Equity**			7.25%		6.26%		10.40%

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME

		Pro Forma Adjustments
1. Operating Revenues (SMG-6)		
(a) EET Rider Adjustment (SMG-7)	$	(10,204,400)
(b) SHARP/AIRP Revenue Adjustment (SMG-8)	$	752,613
(c) Interruptible, Off-System Sales & SIM Adjustment (SMG-9)	$	(4,715,990)
(d) Customer Annualization (SMG-10)	$	3,628,543
(e) Sales from Post Test Year Plant Additions (SMG-12)	$	6,957,547
(f) Contract Changes (SMG-14)	$	27,366
(g) Miscellaneous Services Charges (SMG-15)	$	627,183
(h) Rental Income Adjustment (BJO-10)	$	634,148
(i) CIP Revenue Adjustment (DPY-3)	$	15,439,625
		$13,146,635
2. Purchased Gas Costs (SMG-6)		
(a) Adjust Purchased Gas Cost to Annualized Post Test Year (SMG-6)	$	934,151
		934,151
3. Operation and Maintenance Expenses (SMG-16)		
(a) Remove EET Rider Expense (SMG-7)	$	(2,711,500)
(b) Remove EET Rider Amortization (SMG-7)	$	(2,150,300)
(c) Payroll Expense Adjustment (SMG-17)	$	1,821,219
(d) Benefits Expense Adjustment (SMG-18)	$	432,682
(e) Allocated Service Company Expense Adjustment (SMG-19)	$	1,726,199
(f) Mark Out Expense Adjustment (SMG-20)	$	205,563
(g) Compression Project Expense Adjustment (SMG-21)	$	2,280,000
(h) Amortization of Rate Case Expenses (SMG-22)	$	253,000
(i) Pipeline Integrity Management (SMG-23)	$	1,878,473
(j) Remove 2017 Rate Case Amortizations (SMG-24)	$	(1,853,102)
(k) Facility Expense Adjustment (BJO-10)	$	403,019
(l) Pension/OPEB Amortization (BJO-11)	$	1,161,982
(m) Pension/OPEB Expense (BJO-11)	$	49,503
(n) Amortization of Deferred ERIP Expenses (BJO-12)	$	1,691,067
(o) Amortization of B. L. England Expenses (BJO-13)	$	1,011,992
(p) O&M Inflation Adjustment (SMG-25)	$	4,410,715
		10,610,513
4. Depreciation Expense (BJO-5)		
(a) Annualize Test Year Depreciation Expense as of 6/30/2020 with proposed depreciation rates	$	3,107,510
(b) Annualize Post Test Year Depreciation Expense as of 12/31/2020 with proposed depreciation expense	$	5,759,758
(c) Adjustment due to Increase in Proposed Annual Net Negative Salvage Allowance	$	2,591,831
(d) Adjustment due to Decrease in Non-Legal Asset Retirement Obligation (ARO) Credit	$	271,960
		11,731,060
5. Taxes Other Than Income		
(a) Payroll Tax Adjustment (SMG-17)	$	163,910
(b) Adjustment for PUA (SMG-27.1 & SMG-27.2)	$	71,896
		235,805
6. Interest (SMG-26)		
(a) Adjust Interest on Customer Deposits by Average Yield on 6 month Treasury Bill	$	13,647
		13,647
7. Taxes - Income - Current		
(a) Interest Synchronization (BJO-9)	$	408,994
(b) Income Tax effect of adjustments 1 - 6	$	(2,917,408)
		(2,508,414)

Schedule SMG-5
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SOUTH JERSEY GAS COMPANY
DERIVATION OF REVENUE EXPANSION FACTOR

Line No.			
1	Additional Required Revenue Percentage		100.000%
2			
3	Percentage Adjustment for Uncollectibles		1.649700%
4	BPU Assessments		0.220453%
5	Rate Counsel Assessments		0.053099%
6			
7	Percentage of Income Before State Income Tax		98.07675%
8			
9	State Income Tax Percentage	9%	8.8269%
10			
11	Percentage of Income Before Federal Income Tax		89.2498%
12			
13	Federal Income Tax Percentage	21%	18.742%
14			
15	Revenue Expansion Factor - Percent		70.5074%
16			
17	Revenue Expansion Factor - Whole Number		**1.418291**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
SUMMARY OF REVENUE & COST OF GAS ADJUSTMENTS

Line No.		Therm Adjustments	Revenue Adjustments	Cost of Gas Adjustments	Reference
1	EET Rider Adjustment	N/A	$ (10,204,400)	N/A	SMG-7
2	SHARP II/AIRP II Revenue Adjustment	N/A	$ 752,613	N/A	SMG-8
3	Interruptible, Off-System Sales & SIM Adjustment	N/A	$ (4,715,990)	$ (3,235,892)	SMG-9
4	Customer Annualization	311,467	$ 3,628,543	$ 1,257,330	SMG-10
5	Sales from Post Test Year Plant Additions	522,390	$ 6,957,547	$ 2,912,713	SMG-12
6	Contract Changes	0	$ 27,366	$ -	SMG-14
7	Miscellaneous Service Charges	N/A	$ 627,183	N/A	SMG-15
8	Rental Income Adjustment	N/A	$ 634,148	N/A	BJO-10
9	CIP Revenue Adjustment	2,567,072	$ 15,439,625	N/A	DPY-3
10	**Total Firm Revenue and Cost of Gas Adjustments**	**3,400,929**	**$ 13,146,635**	**$ 934,151**	

Schedule SMG-7
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SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
EET RIDER ADJUSTMENT

Line No.		2019 Actual July	2019 Actual August	2019 Actual September	2019 Actual October	2019 Actual November	2020 Actual December	2020 Projected January	2020 Projected February	2020 Projected March	2020 Projected April	2020 Projected May	2020 Projected June	TOTAL
1	EET Revenue Adjustment	$ 586,500	$ 823,200	$ 741,600	$ 977,100	$ 730,600	$ 870,100	$ 814,800	$ 856,600	$ 914,500	$ 906,200	$ 979,500	$ 1,003,700	$ 10,204,400
2	EET O&M Expenses Adjustment	$ 119,200	$ 264,200	$ 262,300	$ 291,300	$ 122,300	$ 225,000	$ 175,300	$ 198,700	$ 234,800	$ 225,800	$ 294,500	$ 298,100	$ 2,711,500
3	EET Amortization Adjustment	$ 112,200	$ 123,500	$ 141,700	$ 152,200	$ 161,200	$ 183,100	$ 188,100	$ 209,800	$ 213,200	$ 215,600	$ 222,100	$ 227,600	$ 2,150,300

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
SHARP II & AIRP II REVENUE ADJUSTMENT

Line No.		2019 Actual July	2019 Actual August	2019 Actual September	TOTAL
1	SHARP II Roll In Revenue	$ 75,058	$ 77,927	$ 77,165	$ 230,150
2	AIRP II Roll In Revenue	$ 170,389	$ 176,903	$ 175,172	$ 522,464
3	Total Revenue Adjustment	$ 245,447	$ 254,831	$ 252,336	$ 752,613

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
TEST YEAR INTERRUPTIBLE AND OFF-SYSTEM SALES, AND STORAGE INCENTIVE MECHANISM

Line No.		Test Year Ending 6/30/2020	Pro Forma Adjustment (Company Margin Share)	Revenue in Test Year
1	**Revenue**			
2	Interruptible	$311,075	($46,661)	$264,414
3	Off-System Sales	$57,718,564	($4,669,329)	$53,049,235
4	**Total Revenues**	$58,029,639	($4,715,990)	$53,313,649
5				
6	**Cost of Gas**			
7	Interruptible	5,812	(872)	4,940
8	Off-System Sales	34,989,589	(2,815,728)	32,173,861
9	SIM	0	(419,292)	(419,292)
10	**Total Cost of Gas**	$34,995,401	($3,235,892)	$31,759,509
11				

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
CUSTOMER ANNUALIZATION

Line No.		Annualized		
		Dt	**Revenue**	**Cost of Gas**
1	**Residential (RSG)**			
2	Heating Sales Service (480.11)	127,569	$1,879,751	$729,048
3	Non-Heating Sales Service (480.12)	4,247	$68,906	$19,846
4	**Sub-Total**	**131,816**	**$1,948,657**	**$748,894**
5	**General Service (GSG)**			
6	Commercial Non-Heating Sales Service (481.21)	766	$9,232	$4,021
7	Commercial Heating Sales Service (481.31)	65,967	$839,225	$372,281
8	Industrial Heating Sales Service (481.32)	(2,048)	($23,609)	($11,529)
9	Transportation Commercial Non-Heating (489.821)	(333)	($2,473)	($324)
10	Transportation Commercial Heating (489.831)	114,323	$850,426	$142,769
11	Transportation Industrial Heating (489.832)	976	$7,085	$1,218
12	**Sub-Total**	**179,651**	**$1,679,886**	**$508,436**
13	**Total Adjustment**	**311,467**	**$3,628,543**	**$1,257,330**

SOUTH JERSEY GAS COMPANY
CUSTOMER COUNTS
JULY 2019 - JUNE 2020

		Actual Jul-19	Actual Aug-19	Actual Sep-19	Actual Oct-19	Actual Nov-19	Actual Dec-19	Projected Jan-20	Projected Feb-20	Projected Mar-20	Projected Apr-20	Projected May-20	Projected Jun-20
480.11 RES SERV SALES - HSE HTG	RSG Heat	340,098	340,065	340,388	341,175	342,586	344,046	344,235	345,021	345,477	345,736	345,888	345,891
480.12 RES SERV SALES W/O HSE HTG	RSG Non-Heat	10,897	10,894	10,883	10,842	10,841	10,835	10,936	10,965	11,008	11,048	11,082	11,122
490.21 RTS HSE HTG	RSG Trans Heat	15,504	15,436	15,389	15,263	15,228	15,177	15,263	15,263	15,263	15,263	15,263	15,263
490.22 RTS W/O HSE HTG	RSG Trans Non-Heat	667	659	655	647	639	631	647	647	647	647	647	647
481.31 BLDG HTG & COOL COMMERCIAL	Commercial Heat	18,229	18,141	18,140	18,252	18,535	18,710	18,507	18,562	18,614	18,661	18,702	18,745
481.21 GEN SERV SALES COMMERCIAL	Commercial Non-Heat	1,488	1,489	1,487	1,479	1,462	1,443	1,479	1,479	1,479	1,479	1,479	1,479
481.32 BLDG HTG & COOL INDUSTRIAL	Industrial Heat	264	261	258	258	261	264	258	258	258	258	258	258
481.22 GEN SERV SALES INDUSTRIAL	Industrial Non-Heat	8	8	8	8	7	7	8	8	8	8	8	8
489.831 COMM BLDG HTG & COOL	Commercial Trans Heat	5,214	5,199	5,197	5,212	5,212	5,254	5,484	5,559	5,661	5,658	5,627	5,587
489.821 COMM GEN SERV	Commercial Trans Non-Heat	342	338	339	335	330	337	335	335	335	335	335	335
489.832 IND BLDG HTG & COOL	Industrial Trans Heat	65	65	65	68	66	66	68	68	68	68	68	68
489.822 IND GEN SERV	Industrial Trans Non-Heat	4	4	4	1	2	2	1	1	1	1	1	1
481.63 GSG-LV COMMERCIAL HEAT	Commercial LV Heat	42	42	41	40	40	39	59	59	59	59	59	59
481.61 GSG-LV COMMERCIAL	Commercial LV Non-Heat	2	2	2	2	2	2	2	2	2	2	2	2
481.64 GSG-LV INDUSTRIAL HEAT	Industrial LV Heat	-	-	-	-	-	-	-	-	-	-	-	-
481.62 GSG-LV INDUSTRIAL	Industrial LV Non-Heat	1	1	1	1	1	1	1	1	1	1	1	1
489.867 GSG-LV FT COMMERCIAL HEAT	Comm LV Trans Heat	114	115	115	116	116	117	99	99	99	99	99	99
489.865 GSG-LV FT COMMERCIAL	Comm LV Trans Non-Heat	-	-	-	-	-	-	1	1	1	1	1	1
489.868 GSG-LV FT INDUSTRIAL HEAT	Ind LV Trans Heat	10	10	10	10	10	10	10	10	10	10	10	10
489.866 GSG-LV FT INDUSTRIAL	Ind LV Trans Non-Heat	1	1	1	1	1	1	-	-	-	-	-	-

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
SALES FROM POST TEST YEAR UTILITY PLANT ADDITIONS

Line No.		Dt	Revenue	Cost of Gas
1	Residential Heat (480.11)	333,576.2	$4,649,342	$1,872,486
2	Residential Non-Heat (480.12)	4,826.8	$79,860	$22,282
3	Gen. Serv. Comm Heat (481.31)	183,986.9	$2,228,345	$1,017,944
4	**Pro-Forma Adjustment**	**522,389.8**	**$6,957,547**	**$2,912,713**

Schedule SMG-13
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SOUTH JERSEY GAS COMPANY
REVENUE PRODUCING UTILITY PLANT
JULY 2020 - DECEMBER 2020

Projected Post Test Year Gross Customer Additions

	2020 Jul	2020 Aug	2020 Sep	2020 Oct	2020 Nov	2020 Dec	6 Months Total	Dts Per Customer	Annualized Dts
Residential Heat	567	655	741	848	795	850	4,456	74.86	333,576.2
Residential Non-Heat	32	34	30	35	43	41	215	22.45	4,826.8
General Service Gas	52	47	52	97	95	119	462	398.24	183,986.9

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 2020 OPERATING INCOME
CONTRACT CHANGES

		Annual Dt Sales			Annual Revenue			
Line No.	Customer I.D.	Test Year	After Contract Change	Adjustment	Test Year	After Contract Change	Adjustment	Cost of Gas Adjustment
1	**CTS Customers**							
2	Customer A	177,616	177,616	0	$317,698	$345,063	$27,366	$0
3	**Pro Forma Adjustment**			**0**			**$27,366**	**$0**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
MISCELLANEOUS SERVICE CHARGES

Line No.		Current	Proposed	Proposed	Annual	Pro Forma
1	Section 10 of the Tariff	Amount	Amount	Increase	Transactions	Revenue Adjustment
2						
3	10.1 Turn On Charge	$20.00	$45.00	$25.00	25,087	$627,183.33
4						
5	Total					$627,183.33

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
SUMMARY OF O&M ADJUSTMENTS

Line No.			Amount	Reference
1	EET O&M Expenses Adjustment	$	(2,711,500)	SMG-7
2	EET Amortization Adjustment	$	(2,150,300)	SMG-7
3	Payroll Expense Adjustment	$	1,821,219	SMG-17
4	Employee Benefits Expense Adjustment	$	432,682	SMG-18
5	Allocated Service Company Costs	$	1,726,199	SMG-19
6	Mark Out Expense Adjustment	$	205,563	SMG-20
7	Compression Project Expense Adjustment	$	2,280,000	SMG-21
8	Rate Case Expense Adjustment	$	253,000	SMG-22
9	Pipeline Integrity Management	$	1,878,473	SMG-23
10	2017 Rate Case Amortization Adjustment	$	(1,853,102)	SMG-24
11	Facility Expense Adjustment	$	403,019	BJO-10
12	Pension/OPEB Amortization	$	1,161,982	BJO-11
13	Pension/OPEB Expense	$	49,503	BJO-11
14	ERIP Amortization	$	1,691,067	BJO-12
15	BL England Amortization	$	1,011,992	BJO-13
16	Inflation Adjustment	$	4,410,715	SMG-25
17	**Total O&M Adjustments**	**$**	**10,610,513**	

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
PAYROLL EXPENSE

Line No.			
1	Payroll Expenses:		
2	Annualized Payroll Expenses	$ 23,925,095	
3	Post Test Year Payroll Increase (3%)	$ 717,753	
4	Total Adjusted Payroll Expenses	$ 24,642,848	
5	Less: Test Year Payroll Expenses	$ 22,821,629	
6	Pro Forma Payroll Adjustment		$ 1,821,219
7	Payroll Tax Adjustment (9%)		163,910
8	**Total Pro Forma Payroll Adjustment**		**$ 1,985,129**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
EMPLOYEE BENEFITS EXPENSE

Line No.			
1	Employee Benefits Expenses:		
2	Annualized Test Year Employee Benefits Expense	$ 6,417,394	
3	Post Test Year Employee Benefits Adjustment	$ 215,990	
4	Total Adjusted Employee Benefits Expense	$ 6,633,385	
5	Less: Test Year Employee Benefits Expense	$ 6,200,703	
6	**Pro Forma Benefits Adjustment**		**$ 432,682**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENT TO JUNE 30, 2020 OPERATING INCOME
ALLOCATED SERVICE COMPANY SALARIES & BENEFITS EXPENSE

Line No.			
1	Allocated Service Company Salaries & Benefits Expenses:		
2	Annualized Test Year Expenses	$ 5,457,153	
3	Post Test Year Adjustment	$ 288,569	
4	Total Adjusted Expense	$ 5,745,722	
5	Less: Test Year Expenses	$ 4,019,522	
6	**Pro Forma Allocated Expense Adjustment**		**$ 1,726,199**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
MARK OUT EXPENSES

Line No.			
1	Mark Out Expenses:		
2	Annualized Mark Out Expense	$ 3,068,308	
3	Less: Test Year Expense	$ 2,862,744	
4	**Pro-Forma Adjustment**		**$ 205,563**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
COMPRESSION PROJECT EXPENSES

Line No.			
1	New Sentury Compression Project Expenses:		
2	Annualized Expense	$ 2,280,000	
3	Less: Test Year Expense	$ -	
4	**Pro-Forma Adjustment**		**$ 2,280,000**

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SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
RATE CASE EXPENSES

Line No.	**Category**		**Expense**	
1	Legal Expenses		$	800,000
2	Consultant Expenses		$	392,000
3	Newspaper Notices		$	11,000
4	Court Reporting		$	1,000
5	Postage		$	5,000
6	Office Supplies		$	5,000
7	Miscellaneous Expenses		$	4,000
8	Contingency/Rebuttal Witnesses		$	300,000
9	Total Rate Case Expenses		$	1,518,000
10		50%	$	759,000
11	**Pro Forma Adjustment - Three Year Amortization**		**$**	**253,000**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
INTEGRITY MANAGEMENT EXPENSE

Line No.		Expense
1	Pipeline Integrity Management Deferred Balance at June 30, 2020	$ 5,635,418
2	**Pro-Forma Adjustment - Three Year Amortization of Deferred Expense**	**$ 1,878,473**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
AMORTIZATION EXPENSE

Line No.	Category		Expense
1	Rate Case Expense Amortization - 2017 Rate Case	$	(156,347)
2	PIM Expense & Carrying Cost - 2017 Rate Case	$	(1,696,756)
3	**Pro Forma Adjustment**	**$**	**(1,853,102)**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
O&M INFLATION ADJUSTMENT

Line No.	Description		Index
1	Calculation of Inflation Rate		
2			
3	GDPIPD Index Value at the Midpoint of the Test Year:		
4	December 2019 Index-GDP		113.3
5	January 2020 Index-GDP		113.6
6	December 31, 2019 Index-GDP (Midpoint)		113.5
7			
8	GDPIPD Index Value at the End of the Post-Test Year:		
9	March 2021 Index-GDP		116.7
10	April 2021 Index-GDP		117.0
11	March 31, 2021 Index-GDP (Midpoint)		116.9
12			
13	Projected Inflation Rate		3.00%
14			
15	Calculation of O&M Inflation Adjustment		
16			
17	Post-Test Year Total O&M Expenses	$	162,313,664
18			
19	Less: Normalizing Adjustments		
20	(a) Annualization of Payroll	$	1,821,219
21	(b) Annualization of Benefits	$	432,682
22	(c) Annualization of Allocated Service Company Costs	$	1,726,199
23	(d) Amortization of Rate Case expenses		96,653
24	Total Normalizing Adjustments	$	4,076,753
25			
26	Less: Items Not Subject to Inflation		
27	(a) PIM Amortization		181,717
28	(b) ERIP Amortization		1,691,067
29	(c) Pension/OPEB Amortization		1,161,982
30	(d) B.L. England Amortization		1,011,992
31	(e) Pension / OBEP Expense		2,050,600
32	(f) Uncollectibles		4,964,368
33	Total Items Not Subject to Inflation	$	11,061,727
34			
35	Residual O&M Expenses	$	147,175,184
36			
37	Inflation Rate		3.00%
38			
39	**Pro Forma Adjustment to O&M Expense**	**$**	**4,410,715**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO OPERATING INCOME AND RATE BASE
CUSTOMER DEPOSITS

Line No.	Month	Actual and Projected Data	Number of Customers	Number of Customers with Deposits	Percentage of Customers with Deposits	Average Deposit Per Customer	Rate Base for Customer Deposits	Current Interest Rate	Monthly Interest
4									
5	Jun-19	Actual	393,227	33,570	8.54%	$209	$7,017,656	1.87%	$3,231
6	Jul-19	Actual	393,071	33,047	8.41%	$211	$6,967,063	1.87%	$11,976
7	Aug-19	Actual	392,851	32,824	8.36%	$210	$6,898,841	1.87%	$11,834
8	Sep-19	Actual	393,104	32,644	8.30%	$211	$6,879,563	1.87%	$11,860
9	Oct-19	Actual	393,831	32,607	8.28%	$212	$6,907,744	1.87%	$11,450
10	Nov-19	Actual	395,460	32,731	8.28%	$211	$6,920,749	1.87%	$9,967
11	Dec-19	Actual	397,063	32,296	8.13%	$214	$6,901,582	1.87%	$11,913
12	Jan-20	Projected	397,507	32,317	8.13%	$214	$6,906,137	2.33%	$13,667
13	Feb-20	Projected	398,452	32,394	8.13%	$214	$6,922,555	2.33%	$12,815
14	Mar-20	Projected	399,105	32,447	8.13%	$214	$6,933,900	2.33%	$13,722
15	Apr-20	Projected	399,448	32,475	8.13%	$214	$6,939,859	2.33%	$13,290
16	May-20	Projected	399,644	32,491	8.13%	$214	$6,943,264	2.33%	$13,740
17	Jun-20	Projected	399,690	32,495	8.13%	$214	$6,944,063	2.33%	$13,298
18	Jul-20	Projected	399,594	32,487	8.13%	$214	$6,942,396	2.33%	$13,738
19	Aug-20	Projected	399,562	32,484	8.13%	$214	$6,941,840	2.33%	$13,737
20	Sep-20	Projected	399,845	32,507	8.13%	$214	$6,946,756	2.33%	$13,304
21	Oct-20	Projected	400,462	32,558	8.13%	$214	$6,957,476	2.33%	$13,768
22	Nov-20	Projected	401,541	32,645	8.13%	$214	$6,976,222	2.33%	$13,360
23	Dec-20	Projected	403,104	32,772	8.13%	$214	$7,003,377	2.33%	$13,859
24	Jan-21	Projected	403,104	32,772	8.13%	$214	$7,003,377	2.33%	$13,859
25	Feb-21	Projected	403,104	32,772	8.13%	$214	$7,003,377	2.33%	$12,518
26	Mar-21	Projected	403,104	32,772	8.13%	$214	$7,003,377	2.33%	$13,859
27									
28	**Post-Test Year Annualization of Interest**								
29									
30	Mar-21	Projected	403,104	32,772	8.13%	$214	$7,003,377	2.33%	$163,179
31									
32									

Line No.	Rate Base Test Year Adjustment		Rate Base PTY Pro-Forma Adjustment		Income Statement Interest Pro-Forma Adjustment	
33	**Rate Base Test Year Adjustment**		**Rate Base PTY Pro-Forma Adjustment**		**Income Statement Interest Pro-Forma Adjustment**	
34						
35		*13 mo average*		*13 mo average*		
36	Actual Ending December 31, 2019	$6,949,827	Projected ending June 30, 2020	$6,929,460	Projected Test Year Interest	$149,531
37						
38	Projected ending June 30, 2020	$6,929,460	Projected Ending December 31, 2020	$6,943,033	Post Test Year Annualized Interest	$163,179
39						
40	**Test Year Adjustment**	**($20,367)**	**Pro-Forma PTY Adjustment**	**$13,573**	**Pro-Forma Adjustment**	**$13,647**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
OTHER EXPENSES - REVENUE TAXES

Line No.			
	PUA Adjustments		
1	EET Rider Adjustment	$	(10,204,400)
2	SHARP II/AIRP II Revenue Adjustment	$	752,613
3	Interruptible Sales Revenue Adjustment	$	(46,661)
4	Customer Annualization	$	3,628,543
5	Sales from Post Test Year Plant Additions	$	6,957,547
6	Contract Changes	$	27,366
7	CIP Revenue Adjustment	$	15,439,625
8	Total Revenue Adjustment	$	16,554,634
9	PUA Tax Rate		0.002736
10	**Pro Forma Adjustment to PUA Taxes**	**$**	**45,286**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
OTHER EXPENSES - PUA EXPENSE ADJUSTMENT

Line No.		BPU Assessment	Public Advocate Assessment	Total
1	Year 2017 Intrastate Revenues	$ 417,182,066	$ 417,182,066	
2	Estimated Assessment Rate	$ 0.002205	$ 0.000531	$ 0.002736
3				
4	Estimated Assessment	$ 919,689	$ 221,521	$ 1,141,210
5				
6	Less: Assessment included in Test Year Operating Expenses	$ 894,400	$ 220,200	$ 1,114,600
7				
8	**Pro Forma Adjustment to PUA Taxes**	**$ 25,289**	**$ 1,321**	**$ 26,610**

SOUTH JERSEY GAS COMPANY
Lead-Lag Study
Working Capital Requirement
Test Year

Line	Description	Test Year Expenses	Average Daily Expenses	Revenue Lag	Expense Lag	Net (Lead)/Lag Days	Working Capital Requirement
1	Operations and Maintenance Expenses						
2	Purchased Gas Costs	$ 231,000,500	632,878	66.29	(36.51)	29.77	$ 18,843,833
3	Regular Payroll	$ 22,821,629	62,525	66.29	(11.92)	54.36	3,399,110
4	Variable Compensation	$ 683,228	1,872	66.29	(238.97)	(172.68)	(323,234)
5	Pension	$ 2,050,600	5,618	66.29	31.44	97.73	549,030
6	Employee Benefits	$ 6,200,703	16,988	66.29	(33.53)	32.76	556,532
7	Uncollectible Expense	$ 3,817,700	10,459	66.29	(653.47)	(587.18)	(6,141,590)
8	Outside Services Employed	$ 27,351,599	74,936	66.29	(42.86)	23.43	1,755,387
9	New Jersey Clean Energy Program	$ 11,496,700	31,498	66.29	(67.15)	(0.86)	(27,149)
10	Materials & Supplies Issues	$ 378,692	1,038	66.29	0.00	66.29	68,774
11	Membership Dues	$ 218,063	597	66.29	(23.46)	42.83	25,586
12	Utility Location Markout Services	$ 3,067,200	8,403	66.29	(41.60)	24.69	207,476
13	Bank Service Fees	$ 1,541,200	4,222	66.29	(36.04)	30.25	127,716
14	Motor Vehicle	$ 3,669,638	10,054	66.29	(18.18)	48.10	483,614
15	Outside Services (Audit)	$ 1,257,303	3,445	66.29	(39.99)	26.29	90,571
16	Meter Reading Services	$ 3,201,230	8,770	66.29	(37.06)	29.23	256,339
17	Insurance	$ 1,888,018	5,173	66.29	0.00	66.29	342,880
18	Other O&M Expenses	$ 62,059,651	170,026	66.29	(51.14)	15.14	2,574,846
19	Total O&M Expenses	$ 382,703,652					$ 22,789,722
20	Income Taxes						
21	Excess Deferred Tax Amortization	$ -	-	66.29	0.00	66.29	-
22	Federal Income Taxes	20,788,186	56,954	66.29	(37.00)	29.29	1,668,014
23	State Income Tax	9,790,355	26,823	66.29	47.25	113.54	3,045,393
24	Total Federal Income Taxes	$ 30,578,541					$ 4,713,407
25	Taxes Other Than Income Taxes						
26	PUA and Ratepayer Advocate	$ 1,114,600	3,054	66.29	(394.50)	(328.21)	$ (1,002,263)
27	Other Taxes Other Than Income Taxes	3,700,900	10,139	66.29	(18.36)	47.92	485,917
28	Taxes Other Than Income Taxes	$ 4,815,500					$ (516,347)
29	Depreciation and Amortization Expense	$ 66,903,500	$ 183,297	66.29	0.00	66.29	$ 12,150,240
30	Interest Expense						
31	Interest on Long-Term Debt	$ 32,936,700	90,238	66.29	(59.51)	6.77	$ 611,219
32	Interest on Short-Term Debt	-	-	66.29	(6.91)	59.38	$ -
33	Interest on Customer Deposits	149,531	410	66.29	(246.39)	(180.10)	$ (73,784)
34	Total Interest Expense	$ 33,086,231					$ 537,435
38	Return	$ 84,080,676	230,358	66.29	0.00	66.29	$ 15,269,760
39	Other Working Capital Requirements / (Sources)						
40	Employee Deductions						$ (1,000,161)
41	Cash Balance						290,164
42	Working Funds						$ 301,750
43	General Prepayments						$ 4,706,834
44	Prepaid Energy Sales and Use Tax						$ 10,536,917
45	USF/Lifeline Reserve						$ 755,201
46	Prepaid Pension						$ 35,641,494
47	Prepaid Postretirement Healthcare						$ 8,215,471
48	Accrued Invoiced Related to Plant						$ (31,831,110)
49	Accrued Payroll Related to Plant						$ (1,107,153)
50	Vacation Accrual Reserve						$ (1,127,898)
51	Uninsured Risk Reserve						$ (718,226)
52	Marketer Payment Reserve						$ (1,268,576)
53	Total Other Working Capital						$ 23,394,706
54							
55							
56	Total	$ 602,168,100					**$ 78,338,924**

SOUTH JERSEY GAS COMPANY
Lead-Lag Study
Working Capital Requirement
Post Test Year

Line	Description		Adjusted Test Year Expenses	Average Daily Expenses	Revenue Lag	Expense Lag	Net (Lead)/Lag Days		Working Capital Requirement
1	Operations and Maintenance Expenses								
2	Purchased Gas Costs	$	231,934,651	635,437	66.29	(36.51)	29.77	$	18,920,037
3	Regular Payroll		24,642,848	67,515	66.29	(11.92)	54.36		3,670,367
4	Variable Compensation		683,228	1,872	66.29	(238.97)	(172.68)		(323,234)
5	Pension		3,262,085	8,937	66.29	31.44	97.73		873,395
6	Employee Benefits		6,633,385	18,174	66.29	(33.53)	32.76		595,367
7	Uncollectible Expense		4,964,368	13,601	66.29	(653.47)	(587.18)		(7,986,252)
8	Outside Services Employed		29,077,798	79,665	66.29	(42.86)	23.43		1,866,172
9	New Jersey Clean Energy Program		11,496,700	31,498	66.29	(67.15)	(0.86)		(27,149)
10	Materials & Supplies Issues		378,692	1,038	66.29	0.00	66.29		68,774
11	Membership Dues		218,063	597	66.29	(23.46)	42.83		25,586
12	Utility Location Markout Services		3,272,763	8,966	66.29	(41.60)	24.69		221,382
13	Bank Service Fees		1,541,200	4,222	66.29	(36.04)	30.25		127,716
14	Motor Vehicle		3,669,638	10,054	66.29	(18.18)	48.10		483,614
15	Outside Services (Audit)		1,257,303	3,445	66.29	(39.99)	26.29		90,571
16	Meter Reading Services		3,201,230	8,770	66.29	(37.06)	29.23		256,339
17	Insurance		1,888,018	5,173	66.29	0.00	66.29		342,880
18	Other O&M Expenses		67,273,015	184,310	66.29	(51.14)	15.14		2,791,147
19	Total O&M Expenses	$	395,394,984					$	21,996,711
20	Income Taxes								
21	Excess Deferred Tax Amortization	$	(2,223,581)	(6,092)	66.29	0.00	66.29		(403,821)
22	Federal Income Taxes	$	32,110,348	87,974	66.29	(37.00)	29.29		2,576,489
23	State Income Tax		15,122,613	41,432	66.29	47.25	113.54		4,704,047
24	Total Federal Income Taxes	$	45,009,380					$	6,876,715
28	Taxes Other Than Income Taxes								
29	PUA and Ratepayer Advocate		$1,304,740	3,575	66.29	(394.50)	(328.21)		(1,173,239)
30	Other Taxes Other Than Income Taxes		3,936,705	10,785	66.29	(18.36)	47.92		516,877
31	Taxes Other Than Income Taxes	$	5,241,445					$	(656,362)
32	Depreciation and Amortization Expense	$	78,634,560	215,437	66.29	0.00	66.29	$	14,280,700
33	Interest Expense								
34	Interest on Long-Term Debt	$	37,331,824	102,279	66.29	(59.51)	6.77	$	692,781
35	Interest on Short-Term Debt		-	-	66.29	(6.91)	59.38		-
36	Interest on Customer Deposits		163,179	447	66.29	(246.39)	(180.10)		(80,518)
37	Total Interest Expense	$	37,495,003					$	612,263
38	Return	$	123,047,051	337,115	66.29	0.00	66.29	$	22,346,383
39	Other Working Capital Requirements / (Sources)								
40	Employee Deductions							$	(1,000,161)
41	Cash Balance							$	290,164
42	Working Funds							$	301,750
43	General Prepayments							$	4,706,834
44	Prepaid Energy Sales and Use Tax							$	10,536,917
45	USF/Lifeline Reserve							$	755,201
46	Prepaid Pension							$	35,641,494
47	Prepaid Postretirement Healthcare							$	8,215,471
48	Accrued Invoiced Related to Plant							$	(31,831,110)
49	Accrued Payroll Related to Plant							$	(1,107,153)
50	Vacation Accrual Reserve							$	(1,127,898)
51	Uninsured Risk Reserve							$	(718,226)
52	Marketer Payment Reserve							$	(1,268,576)
53	Total Other Working Capital							$	23,394,706
54	Total	$	684,822,423					$	88,851,116

SOUTH JERSEY GAS COMPANY
CASH WORKING CAPITAL
INVENTORIES AND MATERIALS & SUPPLIES

Line															
1	**Natural Gas**														
2		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	13 Month
3		Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	AVERAGE
4	Actual - As of December 2019	$13,212,811	$9,138,458	$4,456,468	$1,475,458	$3,928,955	$7,702,917	$10,332,392	$12,821,096	15,325,218	17,307,911	18,234,715	15,515,382	11,798,273	**10,865,389**
5															
6		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	13 Month
7		Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	AVERAGE
8	Forecast - TY End June 2020	10,332,392	12,821,096	15,325,218	17,307,911	18,234,715	15,515,382	11,798,273	8,214,958	4,376,256	2,436,418	4,347,373	6,428,919	8,479,703	**10,432,201**
9															
10		Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	13 Month
11		Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	AVERAGE
12	Forecast - PTY End Dec 2020	11,798,273	8,214,958	4,376,256	2,436,418	4,347,373	6,428,919	8,479,703	10,623,860	12,670,127	14,421,743	15,675,670	14,455,882	11,924,958	**9,681,088**
13															
14															
15	**Liquefied Natural gas**	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	13 Month
16		Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	AVERAGE
17	Actual - As of December 2019	$3,122,890	$2,284,515	$2,193,204	$2,029,022	$2,847,815	$2,855,842	$2,937,442	$2,976,135	$2,940,584	$2,924,383	3,316,052	3,296,606	3,040,412	**2,828,069**
18															
19		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	13 Month
20		Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	AVERAGE
21	Forecast - TY End June 2020	2,937,442	2,976,135	2,940,584	2,924,383	3,316,052	3,296,606	3,040,412	2,333,084	1,665,817	1,527,280	1,790,219	2,070,549	2,367,956	**2,552,809**
22															
23		Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	13 Month
24		Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	AVERAGE
25	Forecast - PTY End Dec 2020	3,040,412	2,333,084	1,665,817	1,527,280	1,790,219	2,070,549	2,367,956	2,643,739	2,914,310	3,209,786	3,354,775	3,343,752	3,033,945	**2,561,202**
26															
27	**Materials and Supplies***														
28		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	13 Month
29		Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	AVERAGE
30	Actual - As of December 2019	619,103	619,103	619,103	619,103	619,103	618,809	618,809	631,843	631,844	631,844	631,844	631,844	631,844	**624,938**
31															
32	*No Forecast														
33															
34															
35								**Total Actual Inventories as of:**			**Dec-19**				**14,318,396**
36															
37								**Total Projected Inventories as of:**			**Jun-20**	**- Test Year Ending**			**13,609,948**
38															
39								**Total Projected Inventories as of:**			**Dec-20**	**- Post Test Year Ending**			**12,867,228**

SOUTH JERSEY GAS COMPANY

TARIFF FOR GAS SERVICE

Filed With

State of New Jersey

Board of Public Utilities

SOUTH JERSEY GAS COMPANY

One South Jersey Place

Atlantic City, NJ 08401

SOUTH JERSEY GAS COMPANY

TABLE OF CONTENTS

SOUTH JERSEY GAS COMPANY

LIST OF COMMUNITIES SERVED

ATLANTIC COUNTY

Absecon, City of
Atlantic City
Brigantine City
Buena Boro
Buena Vista Township
Egg Harbor City
Egg Harbor Township
Estell Manor, City of
Folsom Boro
Galloway Township
Hamilton Township
Hammonton, Town of
Linwood, City of
Longport Boro
Margate City
Mullica Township
Northfield, City of
Pleasantville, City of
Port Republic, City of
Somers Point, City of
Ventnor City
Weymouth Township

BURLINGTON COUNTY

Evesham Township
Medford Lakes Boro
Medford Township
Shamong Township
Southampton Township
Tabernacle Township
Woodland Township

CAMDEN COUNTY

Barrington Boro
Berlin Boro
Berlin Township
Cherry Hill Township
Chesilhurst Boro
Clementon Boro
Gibbsboro Boro
Gloucester Township
Hi-Nella Boro
Laurel Springs Boro
Lawnside Boro
Lindenwold Boro
Magnolia Boro
Pine Hill Boro
Runnemede Boro
Somerdale Boro
Stratford Boro
Voorhees Township
Waterford Township
Winslow Township

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 4**

LIST OF COMMUNITIES SERVED
(Continued)

CAPE MAY COUNTY

Avalon Boro
Cape May City
Cape May Point Boro
Dennis Township
Lower Township
Middle Township
North Wildwood City
Ocean City
Sea Isle City
Stone Harbor Boro
Upper Township
West Cape May Boro
West Wildwood Boro
Wildwood City
Wildwood Crest Boro
Woodbine Boro

CUMBERLAND COUNTY

Bridgeton, City of
Commercial Township
Deerfield Township
Downe Township
Fairfield Township
Greenwich Township
Hopewell Township
Lawrence Township
Maurice River Township
Millville, City of
Shiloh Boro
Stow Creek Township
Upper Deerfield Township
Vineland, City of

GLOUCESTER COUNTY

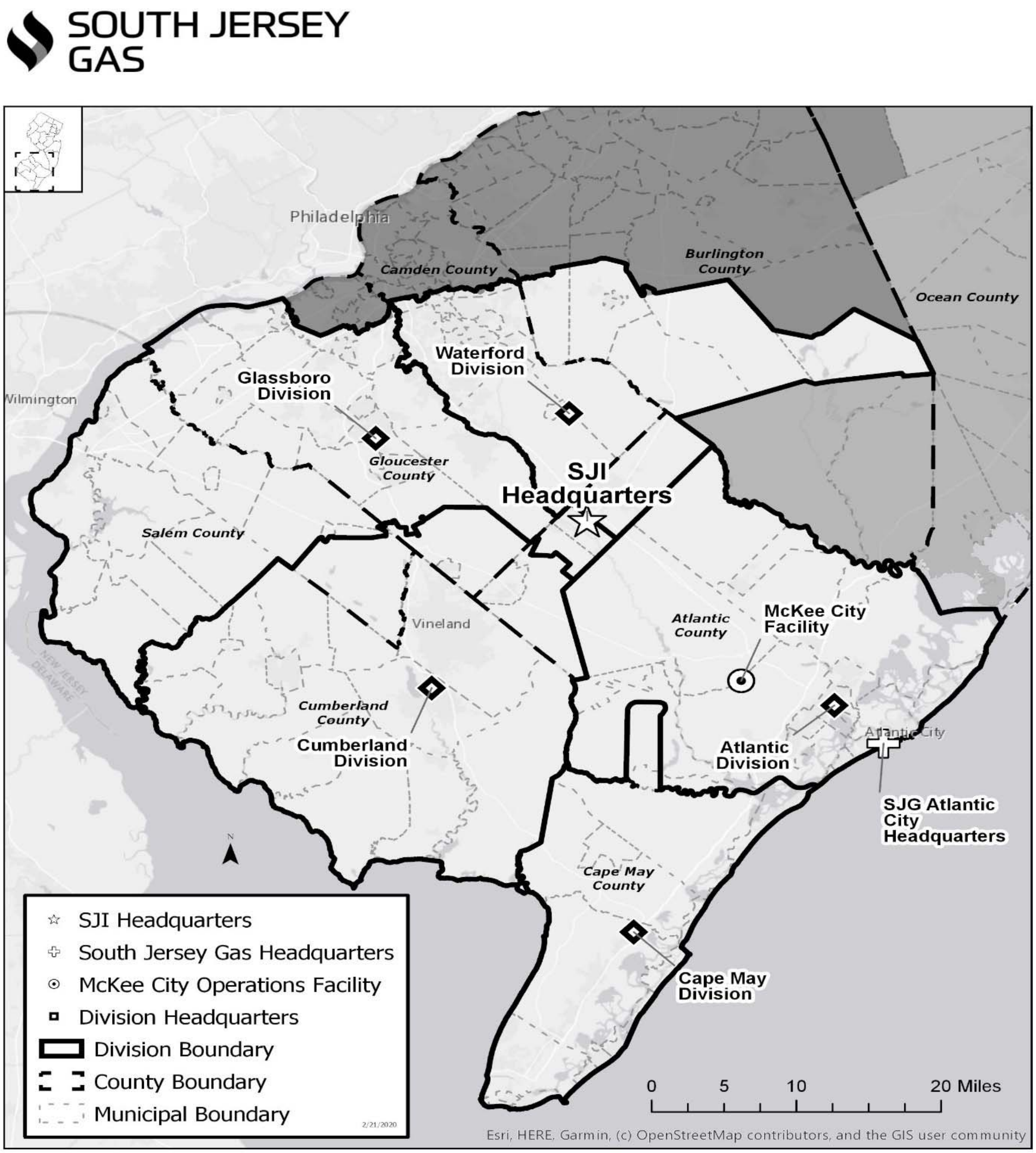
Clayton Boro
Deptford Township
East Greenwich Township
Elk Township
Franklin Township
Glassboro Boro
Greenwich Township
Harrison Township
Logan Township
Mantua Township
Monroe Township
Newfield Boro
Paulsboro Boro
Pitman Boro
South Harrison Township
Swedesboro Township
Washington Township
Wenonah Boro
West Deptford Township
Woodbury, City of
Woodbury Heights Boro
Woolwich Township

SALEM COUNTY

Alloway Township
Carneys Point Township
Elmer Boro
Elsinboro Township
Mannington Township
Oldmans Township
Penns Grove Boro
Pennsville Township
Pilesgrove Township
Pittsgrove Township
Quinton Township
Salem, City of
Upper Pittsgrove
Woodstown Boro

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 5**



SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 6**

RESIDENTIAL SERVICE (RSG)

APPLICABLE TO USE OF SERVICE FOR:

All residential purposes. Customer may elect Firm Sales Service or Firm Transportation Service. To be eligible for Firm Transportation Service RSG, a customer must hold clear and marketable title to gas that is made available for delivery to the customer's residence on the Company's system.

CHARACTER OF SERVICE Firm Sales Service and Firm Transportation Service.

MONTHLY RATE: (1)

Customer Charge:		$13.594688 per month
Delivery Charge:		
(a)	Residential Non-Heating Customers Firm Sales Service and Firm Transportation Service	$.959928 per therm
(b)	Residential Heating Customers Firm Sales Service and Firm Transportation Service	$1.066224 per therm
Basic Gas Supply Service ("BGSS") Charge:		
	All consumption for customers who elect Firm Sales Service.	See Rider "A" of this Tariff.

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff.
Transportation Initiation Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "C" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
Temperature Adjustment Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "F" of this Tariff.

(1) Please refer to Appendix A for components of Monthly Rates and Price to Compare

SOUTH JERSEY GAS COMPANY

RESIDENTIAL SERVICE (RSG)
(Continued)

2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “H” of this Tariff.
Balancing Service Clause	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “J” of this Tariff.
Conservation Incentive Program	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “M” of this Tariff.
Energy Efficiency Tracker	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “N” of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company’s designated office within fifteen (15) days of the billing date.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (l).

TERM:

Customer must provide Company with adequate notice to discontinue service.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SPECIAL PROVISIONS:

(a) A customer receiving service under this rate schedule may use natural gas to heat water for recreational and therapeutic equipment (including but not limited to swimming pools, hot tubs or similar equipment), subject to the Board’s policy regarding such use.

(b) To be eligible for Firm Transportation Service under this Rate Schedule RSG a Firm Transportation Service customer must be part of an aggregated group (“Aggregated Group”) of customers, utilizing the services of an Aggregator/Marketer pursuant to an executed Aggregator/Marketer’s Agreement.

(c) The Company will not accept gas for the account of a Firm Transportation Service customer for delivery that will: (1) adversely impact the Company’s rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

SOUTH JERSEY GAS COMPANY

RESIDENTIAL SERVICE (RSG)
(Continued)

(d) The Aggregator/Marketer for a Firm Transportation Service customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in connection with the initiation and rendering of service under this Rate Schedule RSG. If the Company has accepted gas for delivery under this Rate Schedule RSG and as a result thereof it incurs any financial or burdensome administrative obligation, the Company may impose a surcharge upon the Aggregator/Marketer therefore.

(e) For Firm Transportation Service customers, the Company may waive any charges associated with imbalances, in its sole reasonable discretion, if the Aggregator/Marketer demonstrates good cause for such imbalances, if the Aggregator/Marketer presents a plan for eliminating such imbalances, and such plan will not adversely impact service to other customers. The Company may require that such plan be implemented in full, and completed, within a time period specified by the Company in order for such a waiver to take place.

(f) An Aggregator/Marketer for Firm Transportation Service customers must execute an Aggregator/Marketer agreement prior to the Company's providing service to an aggregated group represented by said Aggregator/Marketer.

(g) Firm Transportation Service customers being served under this Rate Schedule RSG may switch to Firm Sales Service under Rate Schedule RSG. In order to bring about such a switch, the customer must notify the Company on or before the tenth (10th) day of the calendar month preceding the month during which the customer wishes to switch to Firm Sales Service under this Rate Schedule RSG. Provided, however, that nothing in this Special Provision (g) concerning customer's exercise of a right to switch to Firm Sales Service under this Rate Schedule RSG shall change or nullify any contractual obligation of the customer to an Aggregator/Marketer.

(h) An Aggregator/Marketer for Firm Transportation Service customers may determine that it wishes to cease service to a customer under this Rate Schedule RSG. In such case the Aggregator/Marketer must notify the Company on or before the tenth (10th) day of the calendar month preceding the calendar month during which said Aggregator/Marketer's service shall cease. In such case, the customer will switch to Firm Sales Service under Rate Schedule RSG, effective during the month following receipt of notice. Until such time, the Aggregator/Marketer must continue to provide service. In such event any Excess Imbalances or Deficiency Imbalances pursuant to Rider "J" of this Tariff, associated with the customer, will remain the responsibility of the Aggregator/Marketer. Provided, however, that nothing in this Special Provision (h) concerning Aggregator/Marketer's cessation of service shall change or nullify any contractual obligation of the Aggregator/Marketer to the customer.

(i) For Firm Transportation Service customers, all charges under Rider "J" of this Tariff as well as the Aggregator/Marketer's Fee, but excluding the BS-1 Volumetric Charge, will be invoiced to the Aggregator/Marketer, in accordance with the Aggregator/Marketer's Agreement. The BS-1 Volumetric Charge will be invoiced directly to the customer.

SOUTH JERSEY GAS COMPANY

RESIDENTIAL SERVICE (RSG)
(Continued)

(j) If a customer contacts the Company inquiring about Firm Transportation Service under this Rate Schedule RSG, the Company will supply the customer with a letter explaining the nature of Firm Transportation Service under this Rate Schedule RSG. That letter, in turn, will enclose: (a) a list of natural gas Aggregators/Marketers; and (b) a letter provided by the Board of Public Utilities related to residential transportation service.

(k) To be eligible to provide Aggregator/Marketer services under this Rate Schedule RSG, each Aggregator/Marketer for Firm Transportation Service customers must comply with all Board approved Marketer Standards, and all other rules and regulations of the Board applicable to Aggregator/Marketers.

(l) For Firm Transportation Service customers the receipt of gas by the Company for transportation under this Rate Schedule RSG shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 10**

GENERAL SERVICE (GSG)

APPLICABLE TO USE OF SERVICE FOR:

All Commercial and Industrial Customers who would not qualify for any other Rate Schedule. A customer qualifying for service under Rate Schedule GSG may elect either Firm Sales Service or Firm Transportation Service. To be eligible for Firm Transportation Service under this Rate Schedule GSG, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service or Firm Transportation Service.

MONTHLY RATE: (1)

Customer Charge:

$37.052188 per month

Delivery Charges:

Firm Sales Service and Firm Transportation Service	$.733878 per therm

Basic Gas Supply Service ("BGSS") Charge:

All consumption for customers who elect Firm Sales Service	See Rider "A" of this Tariff.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (o).

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff.
Transportation Initiation Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "C" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
Temperature Adjustment Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "F" of this Tariff.

(1) Please refer to Appendix A for components of Monthly Rates and Price to Compare.

SOUTH JERSEY GAS COMPANY

GENERAL SERVICE (GSG)
(Continued)

2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “H” of this Tariff.
Balancing Service Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “J” of this Tariff.
Conservation Incentive Program	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “M” of this Tariff.
Energy Efficiency Tracker	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “N” of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the terms of the Company’s Standard Gas Service Agreement (GS), if applicable, otherwise, in order to effectuate a termination, customer must provide adequate notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SPECIAL PROVISIONS:

(a) The Company may require, as a condition precedent to the receipt of service under this Rate Schedule GSG, that an eligible customer execute a Standard Gas Service Agreement (GS), to indicate, among other things, the customer's minimum and maximum capability to utilize gas used under Rate Schedule GSG, and the levels of firm and interruptible service provided.

SOUTH JERSEY GAS COMPANY

GENERAL SERVICE (GSG)
(Continued)

(b) Due to system constraints, the Company may instruct some or all GSG Firm Sales Service or Firm Transportation Service customers not to exceed the stated Maximum Capability in the Standard Gas Service Agreement (GS) during a given twenty-four (24) hour period. Said instruction may be given orally or in writing. Any customer who then uses in excess of its Maximum Capability may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule GSG). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(c) If during any month a Firm Sales Service or Firm Transportation Service customer having Alternate Fuel Capability utilizes gas in excess of the stated Maximum Capability in the Standard Gas Service Agreement (GSG), multiplied by the number of days in that month, or if applicable, a larger amount authorized by the Company, such excess shall be deemed utilized for interruptible uses, and may be billed pursuant to Rate Schedule IGS or ITS, as applicable.

(d) If during any month a Firm Sales Service or Firm Transportation Service customer without Alternate Fuel Capability utilizes gas in excess of the stated Maximum Capability in the Standard Gas Service Agreement (GSG), multiplied by the number of days in that month, or if applicable, a larger amount authorized by the Company, such customer may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule GSG). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.", multiplied by the number of days in that month. This daily charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(e) A customer receiving service under this rate schedule may use natural gas to heat water for recreational and therapeutic equipment (including but not limited to swimming pools, hot tubs or similar equipment), subject to the Board's policy regarding such use.

(f) The Company will not accept gas for delivery to Firm Transportation Service customers that will: (1) adversely impact the Company's rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

SOUTH JERSEY GAS COMPANY

GENERAL SERVICE (GSG)
(Continued)

(g) The Firm Transportation Service customer bears sole responsibility for costs incurred to deliver customer owned gas to the Company's City Gate Station and to provide interstate pipeline capacity.

(h) The Firm Transportation Service customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in any financial or burdensome administrative obligation; the Company may impose a surcharge therefore.

(i) RESERVED FOR FUTURE USE.

(j) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff to record the customer's consumption patterns required for billing purposes. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

(k) Firm Transportation Service customers may not arrange for delivery to the Company, on any day, of gas volumes in excess of customer's then applicable daily DCQ unless authorized to do so by the Company; provided, however, that said excess deliveries may be authorized by the Company to cure a Deficiency Imbalance.

(l) For Firm Transportation Service customers, the existence of imbalances as defined in Rider "J" will be determined each day. If at the beginning of a day a customer has an imbalance, the gas to fulfill that customer's daily DCQ for that day will be the first gas through the City Gate Station for the customer's account on that day. Gas to correct existing imbalances will be considered as the last gas coming through the City Gas Station for that customer's account on that day.

(m) RESERVED FOR FUTURE USE.

(n) A Firm Transportation Service customer scheduling gas for delivery may not schedule less than one dekatherm of gas for delivery under this Rate Schedule GSG on any day. All scheduling must be done in whole number dekatherms and not in fractions thereof.

(o) For Firm Transportation Service customers the receipt of gas by the Company for transportation under this Rate Schedule GSG shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

(p) **Veterans' Organization Service:** Pursuant to N.J.S.A 48:2-21.41, when natural gas service is supplied to a customer that is a Veterans' Organization, serving the needs of veterans of the armed forces, the customer may apply and be eligible for billing under this Special Provision (p).

Each customer shall be eligible for billing under this Special Provision upon submitting an Application for Veterans' Organization Service under this rate schedule and by qualifying as a "Veterans Organization". N.J.S.A. 48:2-21.41 defines a Veterans Organization that qualifies for this Special Provision as "an organization dedicated to serving the needs of veterans of the armed forces that: is

SOUTH JERSEY GAS COMPANY

GENERAL SERVICE (GSG)
(Continued)

chartered under federal law, qualifies as a tax exempt organization under paragraph (19) of subsection (c) of section 501 of the federal Internal Revenue Code of 1986, 26 U.S.C. s.501(c)(19), or that is organized as a corporation under the 'New Jersey Nonprofit Corporation Act,' N.J.S.A. 15A:1-1 et seq." Under N.J.S.A. 48:2-21.41, a qualified Veterans Organization shall be charged the residential rate for service delivered to the property where the Veterans Organization primarily operates, if the residential rate is lower than the commercial rate for service at that property.

The customer shall furnish satisfactory proof of eligibility of service under this Special Provision to the Company. Once proof of eligibility is determined by the Company, service under this Special Provision shall begin with the next billing cycle following receipt of the Application.

At least once annually, the Company shall review eligible customers' charges for service delivered, defined to include Customer Charge and Delivery Charge, of this service classification for all relevant periods. If these comparable charges for service delivered under the Residential Service (RSG) classification are lower than the charges under this classification a credit in the amount of the difference shall be applied to the customer's next bill.

SOUTH JERSEY GAS COMPANY

GENERAL SERVICE – LARGE VOLUME (GSG-LV)

APPLICABLE TO USE OF SERVICE FOR:

All Commercial and Industrial Customers who would not qualify for any other Rate Schedule (other than Rate Schedule GSG), and who has an annualized usage of 100,000 therms or more. A customer qualifying for service under Rate Schedule GSG-LV may elect either Firm Sales Service or Firm Transportation Service. To be eligible for Firm Transportation Service under this Rate Schedule GSG-LV, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service or Firm Transportation Service.

MONTHLY RATE: [1]

Customer Charge:

$239.906250 per month

Delivery Charges:

Firm Sales Service and Firm Transportation Service[2]

Demand Charge:
D-1FT: $13.061563 per Mcf of Contract Demand

Volumetric Charge:
$.513585 per therm

Basic Gas Supply Service ("BGSS") Charge:

All consumption for customers who elect Firm Sales Service — See Rider "A" of this Tariff.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (o).

[1] Please refer to Appendix A for components of Monthly Rates and Price to Compare.
[2] See Special Provision (p) of this Rate Schedule GSG-LV, regarding appropriate balancing charges.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 – GAS **Original Sheet No. 15**

GENERAL SERVICE – LARGE VOLUME (GSG-LV)
(Continued)

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff.
Transportation Initiation Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "C" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
Temperature Adjustment Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "F" of this Tariff.
2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "H" of this Tariff.
Balancing Service Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "J" of this Tariff. However, see also Special Provision (l) regarding Rider "I".
Conservation Incentive Program	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "M" of this Tariff.
Energy Efficiency Tracker	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "N" of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the terms of the Company's Standard Gas Service Agreement (GS), if applicable; otherwise, in order to effectuate a termination, customer must provide adequate notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SOUTH JERSEY GAS COMPANY

GENERAL SERVICE – LARGE VOLUME (GSG-LV)
(Continued)

SPECIAL PROVISIONS:

(a) The Company may require, as a condition precedent to the receipt of service under this Rate Schedule GSG-LV, that an eligible customer execute a Standard Gas Service Agreement (GS), to indicate, among other things, the customer’s minimum and maximum capability to utilize gas under Rate Schedule GSG-LV; the levels of firm and interruptible service; and the customer’s Contract Demand.

(b) Due to system constraints, the Company may instruct some or all GSG Firm Sales Service or Firm Transportation Service customers not to exceed the stated Contract Demand in the Standard Gas Service Agreement (GS) during a given twenty-four (24) hour period. Said instruction may be given orally or in writing. Any customer who then uses in excess of its Contract Demand may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule GSG-LV). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table “Daily Price Survey” for delivery to “Transco, zone 6 non-N.Y.”. This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(c) If during any month a Firm Sales Service or Firm Transportation Service customer having Alternate Fuel Capability utilizes gas in excess of the stated Contract Demand in the Standard Gas Service Agreement (GS), multiplied by the number of days in that month, or if applicable, a larger amount authorized by the Company, such excess shall be deemed utilized for interruptible uses, and may be billed pursuant to Rate Schedule IGS or ITS, as applicable.

(d) If during any month a GSG-LV customer having no Alternate Fuel Capability utilizes gas in excess of its Contract Demand multiplied by the number of days in the month, then in addition to the Customer Charge, Volumetric Charges, and Applicable Riders set forth in the Monthly Rate Section of this Rate Schedule GSG-LV: the customer’s average daily gas consumption for the month shall be utilized until such time as the Company adjusts the Contract Demand during its annual review.

(e) Beginning with the effective date of this Rate Schedule GSG-LV, a customer’s Contract Demand shall be determined based upon the customer’s average daily usage for the month of the highest monthly usage during the preceding twelve months, subject to normalization if appropriate. Estimated data may be used as a surrogate when actual data is not available. The average daily usage shall be determined for each billing month based upon usage divided by the number of days in the billing month. The customer’s Contract Demand shall be reviewed and adjusted no less frequently than annually. When the Company adjusts the Contract Demand, it shall be adjusted to the nearest Mcf. Contract Demand may be incorporated into a Standard Gas Service Agreement (GS). However, the Contract Demand shall be effective irrespective of whether it is incorporated into a Standard Gas Service Agreement (GS).

(f) A customer receiving service under this rate schedule may use natural gas to heat water for recreational and therapeutic equipment (including but not limited to swimming pools, hot tubs or similar equipment), subject to the Board’s policy regarding such use.

GENERAL SERVICE – LARGE VOLUME (GSG-LV)
(Continued)

(g) The Company will not accept gas for delivery to Firm Transportation Service customers that will: (1) adversely impact the Company's rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

(h) The Firm Transportation Service customer bears sole responsibility for costs incurred to deliver customer owned gas to the Company's City Gate Station and to provide interstate pipeline capacity.

(i) The Firm Transportation Service customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in any financial or burdensome administrative obligation; the Company may impose a surcharge therefore.

(j) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

(k) Firm Transportation Service customers may not arrange for delivery to the Company, on any day, of gas volumes in excess of customer's then applicable DCQ (or the quantity of gas burned daily if the Rider "I" customer has no DCQ) unless authorized to do so by the Company; provided, however, that said excess deliveries may be authorized by the Company to cure a Deficiency Imbalance.

(l) For Firm Transportation Service customers, the existence of imbalances as defined in Rider "I" or Rider "J" will be determined each day. If at the beginning of a day a customer has an imbalance, the gas to fulfill that customer's DCQ (or the quantity of gas burned on that day for a Rider "I" customer who has no DCQ) for that day will be the first gas through the City Gate Station for the customer's account on that day. Gas to correct existing imbalances will be considered as the last gas coming through the City Gas Station for that customer's account on that day.

(m) RESERVED FOR FUTURE USE.

(n) A Firm Transportation Service customer scheduling gas for delivery may not schedule less than one dekatherm of gas for delivery under this Rate Schedule GSG-LV on any day. All scheduling must be done in whole number dekatherms and not in fractions thereof.

(o) For Firm Transportation Service customers the receipt of gas by the Company for transportation under this Rate Schedule GSG-LV shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

(p) The rates set forth in the Delivery Charge section of this Rate Schedule GSG-LV assume that the customer receives balancing service under Rider "J" to this Tariff. If the customer selects balancing service under Rider "I" of this Tariff, then the Delivery Charges will be adjusted to reflect the Rider "I" Charges.

SOUTH JERSEY GAS COMPANY

COMPREHENSIVE TRANSPORTATION SERVICE (CTS)

APPLICABLE TO USE OF SERVICE FOR:

All customers having a Firm Contract Demand, and an average annual daily Firm usage of 100 Mcf per day or more. To be eligible for service under this Rate Schedule CTS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system. Provided, however, that any customer receiving service under this Rate Schedule CTS prior to August 29, 2003 shall continue to be eligible to receive service under this Rate Schedule CTS, notwithstanding the foregoing, if said customers continues to have a Firm Contract Demand of 100 Mcf per day or more. Further provided, however, that if a customer ceases to receive service under this Rate Schedule CTS, and seeks to return to service under this Rate Schedule CTS, said customer must meet all requirements for eligibility as though applying for service in the first instance.

CHARACTER OF SERVICE:

Firm Transportation Service and Limited Firm Transportation Service

MONTHLY RATE: [(1)]

Firm:

Customer Charge: $799.687500 per month

Delivery Charges:

Demand Charge: D-1FT: $33.853438 per Mcf of Contract Demand

Volumetric Charges:

All consumption for customers who elected to transfer from Sales Service to Firm Transportation Service $.170517 per therm

Limited Firm:

Customer Charge: $106.625000 per month

Delivery Charges:

Volumetric Charges:

All consumption for customers who elected to transfer from Sales Service to Firm Transportation Service $.138658 per therm

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[(1)] Please refer to Appendix A for components of Monthly Rates.

SOUTH JERSEY GAS COMPANY

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COMPREHENSIVE TRANSPORTATION SERVICE (CTS)
(Continued)

APPLICABLE RIDERS:

Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "H" of this Tariff.
Balancing Service Clause:	All gas delivered to Customers under this Rate Schedule CTS is subject to Rider "I" of this Tariff
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "N" of this Tariff.

LINE LOSS:

Line loss shall be 1.43% as provided in Special Provision (p).

MINIMUM BILL:

Sum of monthly customer charge and monthly demand charge, irrespective of use.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the conditions of the Company's Standard Gas Service Agreement (LV).

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

Issued March 13, 2020 **Effective with service rendered**
by South Jersey Gas Company, **on and after April 13, 2020**
D. Robbins, Jr., President
Filed pursuant to Order in Docket No. ________________ of the Board of
Public Utilities, State of New Jersey, dated _________________

SOUTH JERSEY GAS COMPANY

COMPREHENSIVE TRANSPORTATION SERVICE (CTS)
(Continued)

DEFINITIONS:

(1) "Gas Consumption" means the volume of gas, utilized by the customer, as measured at the customer's meter. Gas Consumption will be displayed on the Third Party Marketer Portal (the "Portal"). However, the responsibility for balancing shall remain with the customer even if the Portal is inoperative.

(2) On any day during which gas receipts for a customer's account exceed Gas Consumption, after adjustment to reflect line loss and sales authorized by the Company for this customer, a daily "Excess Imbalance" results.

(3) On any day during which Gas Consumption exceeds gas receipts for a customer's account, after adjustment to reflect line loss and sales authorized by the Company, a daily "Deficiency Imbalance" results.

(4) Daily Deficiency Imbalances and Daily Excess Imbalances may be collectively referred to as "Daily Imbalances".

(5) "Net Monthly Imbalance" means the net of a customer's Daily Imbalances, if any, during a month. If monthly Gas Consumption exceeds monthly gas receipts for a customer's account, a Monthly Deficiency Imbalance results and if monthly gas receipts exceed monthly Gas Consumption, a Monthly Excess Imbalance results.

(6) Upon termination of service under this Rate Schedule CTS, the Company shall review the status of customer's account. In the event that customer's account has a negative balance, the customer shall have thirty days to pay back such negative balance. If any negative balance remains after thirty days, the customer will be charged the GSG-LV Monthly BGSS rate multiplied by each therm of negative balance. If customer's account has a positive balance, the Company will purchase such gas at the Buy-Out Price.

(7) As used in this Rate Schedule CTS, "Buy-Out Price" shall mean a price equal to the lowest price of gas delivered to the Company's system during the month the positive balance or an Excess Imbalance occurs.

(8) As used in this Rate Schedule CTS, "CTS Year" shall mean a twelve (12) month period commencing November 1 and ending October 31.

SPECIAL PROVISIONS:

(a) Customer shall contract for service under the Company's Standard Gas Service Agreement (LV). A customer electing Limited Firm service under this Rate Schedule CTS must execute a Standard Gas Service Agreement (LV) for an initial term of at least twelve (12) months. A CTS Firm customer taking Limited Firm service may not reduce its Firm Contract Demand.

SOUTH JERSEY GAS COMPANY

COMPREHENSIVE TRANSPORTATION SERVICE (CTS)
(Continued)

(b) Due to system constraints, the Company may instruct some or all Firm Transportation Service customers not to exceed Firm Contract Demand during a given twenty-four (24) hour period. Such instructions may be given orally or in writing. Any customer who then uses gas in excess of its Firm Contract Demand may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule CTS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service. Provided, however, that as to customers who have elected to take the Limited Firm service, such instruction will not be given more than ten (10) days during any CTS Year as to such Limited Firm service.

Due to system constraints, the Company may instruct some or all Firm Transportation Service customers not to exceed their nominated amounts of gas during a given twenty-four (24) hour period. Such instructions may be given orally or in writing. Any customer who then uses gas in excess of its nominated amount may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule CTS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customerdemonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service. Provided, however, that as to customers who have elected to take the Limited Firm service, such instruction will not be given more than ten (10) days during any CTS Year as to such Limited Firm service.

(c) If during any month a CTS customer having no Alternate Fuel Capability, and who has not elected Limited Firm service utilizes gas in excess of its Firm Contract Demand as stated in the Standard Gas Service Agreement (LV), multiplied by the number of days in that month, or if applicable, a larger amount authorized by the Company, such customer may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate section of this Rate Schedule CTS): Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This daily charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

COMPREHENSIVE TRANSPORTATION SERVICE (CTS)
(Continued)

(d) Except as provided in Special Provision (c) above, if during any month a customer with interruptible capability that utilizes gas in excess of that customer's aggregate daily Firm Contract Demand for said month, or if applicable, a larger amount authorized by the Company, such usage may be deemed to be utilized for either: (1) interruptible charges billed upon Rate Schedule ITS at the service charge and the transportation charge set forth under Rate Schedule ITS, Paragraph (a); or (2) Limited Firm charges set forth in the Monthly Rate section of this Rate Schedule CTS, whichever is applicable. An election to utilize Limited Firm service must be made for a period of at least twelve (12) months.

(e) Customers shall use their best efforts to ensure that the daily volumes of gas scheduled for delivery into the Company's system for the customer's account, adjusted to reflect line loss and sales authorized by the Company, equal the volumes of daily Gas Consumption by the customer.

(f) Customers shall be responsible for maintaining a balance between volumes of daily deliveries into the Company's system and daily Gas Consumption, adjusted to reflect line loss.

(g) Certain levels of Daily Imbalances will be subject to a corrective plan, as provided in Paragraph (g) of this Rate Schedule CTS. Daily Imbalances of this level will be referred to as "Imbalances Requiring Action" or "IRA". An Excess Imbalance will become an IRA during the winter season if daily receipts exceed daily Gas Consumption by five (5%) percent, and during the summer season if daily receipts exceed daily Gas Consumption by seven and one half (7.5%) percent. A Deficiency Imbalance will become an IRA during the winter season if daily Gas Consumption exceeds daily receipts by five (5%) percent, and during the summer season if daily Gas Consumption exceeds daily receipts by seven and one half (7.5%) percent. The winter season, as used herein, is from November 1 through March 31. The summer season is from April 1 to October 31. Generally, the existence of an IRA will be determined for each customer, on an individual customer basis. However, for those customers who execute an Aggregation Agreement, acceptable to the Company, IRAs will be determined in the aggregate for all members of the Aggregation Group.

(h) If a customer has an IRA as demonstrated on the Portal, the customer must present a plan within forty-eight (48) hours of such demonstration to eliminate the IRA. Such plan must not, inter alia, adversely impact service to other customers, affect system integrity, or affect the Company's gas supply planning. If the plan presented by the customer is unacceptable to the Company, the Company will present an alternative plan. If the customer fails to present, within 48 hours after such demonstration, a plan to eliminate such IRA or fails to comply with a plan accepted by or offered by the Company, the customer shall be subject either to (a) billing for volumes of Gas Consumption in excess of receipts at a rate equal to five (5) times the Net Monthly Deficiency Imbalance Cash-Out Charge within Rider "I" of this Tariff, assuming a System Impact Charge of one (1.0); or (b) a buyout of the excess of receipts over volumes of Gas Consumption at a rate equal to one-fifth (1/5) of the Net Monthly Excess Imbalance Cash-Out Credit within Rider "I" of this Tariff, assuming a System Impact Charge of one (1.0). Imbalances at month end will be treated no differently than imbalances during the month in that the applicable 48 hour correction period may continue into a subsequent month.

SOUTH JERSEY GAS COMPANY

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COMPREHENSIVE TRANSPORTATION SERVICE (CTS)
(Continued)

(i) Notwithstanding any other provision of this Rate Schedule CTS, if the Company determines in its sole reasonable discretion that it is necessary to do so to alleviate operating conditions which may threaten the integrity of its system, the Company may issue an Operational Flow Order ("OFO") to some or all customers subject to this Rate Schedule CTS. The Company shall provide customers and their Aggregator/ Marketer's with notice of an OFO by posting the same on the Portal, and by facsimile transmission. Alternatively, the Company may provide notice by telephone or otherwise of said OFO. Such notice shall be effective within twenty-four hours of posting unless exigent circumstances require shorter notice, which shorter notice shall be specified in the posting. The OFO may direct, inter alia, the cessation of the creation of Deficiency Imbalances or of Excess Imbalances and that customers make a good faith effort to eliminate existing Deficiency Imbalances or Excess Imbalances. For purposes of this paragraph (i) of this Rate Schedule CTS, if a customer is a member of a Customer Group pursuant to an Aggregator/Marketer's Agreement, Deficiency Imbalances and Excess Imbalances for that customer and for all members of the Customer Group shall be aggregated. Failure to comply with an OFO shall result in the creation of an OFO Deficiency Imbalance or for an OFO Excess Imbalance. The customer may be invoiced for any OFO Deficiency Imbalance or for any OFO Excess Imbalance at a rate of Fifty Dollars ($50.00) per Mcf of such OFO Deficiency Imbalance or OFO Excess Imbalance for each day that said OFO Deficiency Imbalance or OFO Excess Imbalance remains in effect. In addition, after the Company has taken the steps set forth in this paragraph (i), any customer failing to adhere to an OFO shall be subject to immediate termination of all gas service.

(j) Any customer receiving service subject to this Rate Schedule CTS must maintain computer capability necessary to access the Portal directly or through an Aggregator and/or Marketer pursuant to an Aggregator's/Marketer's Agreement acceptable to the Company.

(k) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

(l) Any customer receiving service subject to this Rate Schedule CTS must balance its CTS Firm Load, and if applicable, its ITS and CTS Limited Firm load pursuant to the terms of this Rate Schedule CTS.

(m) A customer scheduling gas for delivery may not schedule less than one dekatherm of gas for delivery under this Rate Schedule CTS on any day. All scheduling must be done in whole number dekatherms and not in fractions thereof.

(n) Customer shall contract for service under the Company's Standard Gas Service Agreement (LV).

(o) In the event that, during any month the sum of the month-to-date Deficiency Imbalances or Excess Imbalances, for non-Force Majeure reasons, for an Aggregator/Marketer exceeds three (3) times the ACD, the Company will immediately notify the Aggregator/Marketer via telephone, facsimile or similar means. If Deficiency Imbalances or Excess Imbalances reach five (5) times the ACD, the following will occur: (1) the Aggregator/Marketer is no longer eligible to function as an Aggregator/Marketer on the Company's system until the conditions set forth in this paragraph (m) are satisfied, but not before the first (1st) day of the following month; and (2) for the balance of the current month and for future months, the affected Aggregator /Marketer's customers will be supplied natural gas by the Company and will be billed on a prorated basis pursuant to the Rate Schedule GSG-LV Monthly BGSS rate. Such customers will be charged on a prorated basis upon this Rate Schedule CTS, including all Special

SOUTH JERSEY GAS COMPANY

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COMPREHENSIVE TRANSPORTATION SERVICE (CTS)
(Continued)

Provisions of this Rate Schedule CTS for gas delivered, including gas deliveries resulting in imbalances, prior to the implementation of the Rate Schedule GSG-LV Monthly BGSS rate.

In order to be reinstated as an eligible Aggregator/Marketer, following termination of aggregator/ Marketer status for Deficiency Imbalances or Excess Imbalances as set forth above, the Aggregator/Marketer in addition to meeting all other applicable requirements must post and maintain for one (1) year security in a credit facility satisfactory to the Company in an amount equal to two (2) times that which would otherwise be required by the Company. At the conclusion of that year and assuming no additional occurrence of Deficiency Imbalances or Excess Imbalances as described above, the Aggregator/Marketer will be released from its obligation to provide security in excess of that otherwise required by the Company. If an additional Deficiency Imbalance or Excess Imbalance as described above occurs during that one-year period, the Aggregator/Marketer will be disqualified as an Aggregator/Marketer upon the Company's system for an additional one (1) year period. As used in this Paragraph (m), ACD shall mean the aggregate of all Contract Demands, expressed in dekatherms, of all customers served by an Aggregator/Marketer under this Rate Schedule CTS.

(p) The receipt of gas by the Company for transportation under this Rate Schedule CTS shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will by the Company-wide line loss percentage.

(q) Customers subscribing to this Rate Schedule CTS may elect the “opt-out” provision provided for in the Standard Gas Service Agreement (LV). Such an “opt-out” customer will have no right or entitlement to have base load gas provided by the Company. Provided, however, that a customer electing the “opt-out” provision shall be eligible to receive balancing services from the Company pursuant to appropriate rate schedules and riders. In the case that an “opt-out” customer cannot provide for its capacity, gas supply, or both, the customer must either discontinue the use of base load gas or have it provided by South Jersey at the incremental price. The incremental price charged to an “opt-out” customer shall be the sum of: (1) the highest commodity cost of gas paid by the Company during the month in which the “opt-out” customer uses “Company” gas; and (2) the higher of the cost of incremental capacity needed to serve the returning “opt-out” customer or the system weighted average cost of capacity, plus other charges which must be paid by customers eligible for South Jersey’s Monthly BGSS charge. The incremental price will be charged to the customer until the effective date of a new Standard Gas Service Agreement.

(r) An “opt-out” customer will become eligible to purchase base load gas from the Company or transport gas without “opt-out” status, upon six months’ notice to the Company of intention to no longer be an “opt-out” customer, provided that prior to the expiration of the six month notice period, the customer shall have entered into a new Standard Gas Service Agreement which includes the customer’s agreement to purchase base load gas or transport without an “opt-out” status for a term of not less than one year. Upon the effective date of the new Standard Gas Service Agreement, which shall be no sooner than the end of the six month period in said notice, the customer shall no longer be obligated to pay the incremental prices set forth above. However, said customer will then be obligated to pay the higher balancing charge of $0.87115 per Dt, including taxes. The Company will not have the right to waive this six month notice requirement.

SOUTH JERSEY GAS COMPANY

LARGE VOLUME SERVICE (LVS)

APPLICABLE TO USE OF SERVICE FOR:

Firm Sales Service and Firm Transportation Service pursuant to this Rate Schedule LVS, shall be available to all Industrial Customers with a Contract Demand and a minimum annualized average use of 200 Mcf per day. To be eligible for Firm Transportation Service under this Rate Schedule LVS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service, Limited Firm Sales Service, Firm Transportation Service, and Limited Firm Transportation Service.

MONTHLY RATE: (1)

Firm:

Customer Charge:

$1,119.562500 per month

Delivery Charge:

Firm Sales Service and Firm Trasnportation Service

Demand Charge:
D-1FT: $21.058438 per Mcf of Contract Demand

Volumetric Charge:
$.150357 per therm

Basic Gas Supply Service ("BGSS") Charge:

Demand Charge:
D-2: $19.623062 per Mcf of Contract Demand.

Volumetric Charge:
See Rider "A" of this Tariff.

(1) Please refer to Appendix A for components of Monthly Rates.

LARGE VOLUME SERVICE (LVS)
(Continued)

Limited Firm:

Customer Charge:

$106.625000 per month

Delivery Charge:

Firm Sales Service and Firm Transportation

Volumetric Charge:
$.256248 per therm

Basic Gas Supply Service ("BGSS") Charge:

Applicable to customers who elect Firm Sales Service

Volumetric Charge:
See Rider "A" of this Tariff.

PRICE TO COMPARE:

The Company will provide the Price to Compare for an LVS customer, at said customer's request.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (h).

MINIMUM BILL:

Sum of monthly Customer Charge and monthly Demand Charges, irrespective of use.

SOUTH JERSEY GAS COMPANY

LARGE VOLUME SERVICE (LVS)
(Continued)

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	The rate is depicted in Rider “A” of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “E” of this Tariff.
2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “H” of this Tariff.
Balancing Service Clause:	All gas delivered to Customers under this Rate Schedule LVS is subject to Rider “I”, of this Tariff.
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “N” of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the conditions of the Company's Standard Gas Service Agreement (LV).

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SOUTH JERSEY GAS COMPANY

LARGE VOLUME SERVICE (LVS)
(Continued)

SPECIAL PROVISIONS:

(a) Customer shall contract for service under the Company's Standard Gas Service Agreement (LV). A customer electing Limited Firm service under this Rate Schedule LVS must execute a Standard Gas Service Agreement (LV) for an initial term of at least twelve (12) months. An LVS Firm customer taking Limited Firm service may not reduce its Firm Contract Demand.

(b) Due to system constraints, the Company may instruct some or all Firm Sales Service or Firm Transportation Service customers not to exceed the stated Contract Demand in the Standard Gas Service Agreement (LV) during a given twenty-four (24) hour period. Said instruction may be given orally or in writing. Any customer who then uses in excess of its Contract Demand may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule LVS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

Due to system constraints, the Company may instruct some or all Firm Transportation Service customers not to exceed their nominated amounts of gas during a given twenty-four (24) hour period. Such instructions may be given orally or in writing. Any customer who then uses gas in excess of its nominated amount may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule LVS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y." This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service. Provided, however, that as to customers who have elected to take the Limited Firm service, such instruction will not be given more than ten (10) days during any LVS Year as to such Limited Firm service. As used in this Rate Schedule LVS, "LVS Year" shall mean a twelve (12) month period commencing November 1 and ending October 31.

Due to system constraints, the Company may instruct some or all Limited Firm sales customers or Limited Firm transportation customers to cease utilizing any gas service. Such instruction may not be given on more than ten (10) days during any Winter Season.

(c) If during any month a Firm Sales Service or Firm Transportation Service customer having Alternate Fuel Capability utilizes gas in excess of the stated Contract Demand in the Standard Gas Service Agreement (LV), multiplied by the number of days in that month, or if applicable, a larger amount authorized by the Company, such excess usage may be deemed to be utilized for either: (i) interruptible service to be billed upon Rate Schedule ITS at the service charge and the transportation charge set forth under Rate Schedule ITS, Paragraph (a); or (ii) Limited Firm charges set forth in the Monthly Rate Section of this Rate Schedule (LVS) whichever is applicable. An election to utilize Limited Firm transportation service or Limited Firm sales service must be made for a period of at least twelve (12) months.

SOUTH JERSEY GAS COMPANY

LARGE VOLUME SERVICE (LVS)
(Continued)

(d) If during any month a Firm Sales Service or Firm Transportation Service customer without Alternate Fuel Capability utilizes gas in excess of the stated Contract Demand in the Standard Gas Service Agreement (LV), multiplied by the number of days in that month, or if applicable, a larger amount authorized by the Company, such customer may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule LVS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table “Daily Price Survey” for delivery to “Transco, zone 6 non-N.Y.”. This daily charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company’s right to interrupt or curtail this service.

(e) The Company will not accept gas for delivery from a Firm Transportation Service customer that will: (1) adversely impact the Company’s rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

(f) The Firm Transportation Service customer bears sole responsibility for costs incurred to deliver customer owned gas to the Company’s City Gate Station and to provide interstate pipeline capacity.

(g) The Firm Transportation Service customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in connection with the initiation and rendering of service under this Rate Schedule LVS. If the Company has accepted gas for delivery under this Rate Schedule and as a result thereof it incurs any financial or burdensome administrative obligation, the Company may impose a surcharge therefore.

(h) The receipt of gas by the Company for Firm Transportation Service customers under this Rate Schedule LVS shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

(i) Firm Transportation Service customers may not arrange for delivery to the Company, on any day, of gas volumes in excess of customer’s then applicable daily Contract Demand unless authorized to do so by the Company; provided, however, that said excess deliveries may be authorized by the Company to cure a Deficiency Imbalance.

(j) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The Company shall provide technical assistance in order to minimize the customer’s expense for such installation.

(k) The existence of imbalances as defined in Rider “I” will be determined each day. If at the beginning of a day a Firm Transportation Service customer has an imbalance, the gas to fulfill that customer’s daily Contract Demand for that day will be the first gas through the City Gate Station for the customer's account on that day. Gas to correct existing imbalances will be considered as the last gas coming through the City Gas Station for that customer’s account on that day.

SOUTH JERSEY GAS COMPANY

LARGE VOLUME SERVICE (LVS)
(Continued)

(l) A Firm Transportation Service customer scheduling gas for delivery may not schedule less than one dekatherm of gas for delivery under this Rate Schedule LVS on any day. All scheduling must be done in whole number dekatherms and not in fractions thereof.

(m) The BGSS D-2 Demand Charge will equal the Company's system weighted average interstate pipeline demand charge plus the system weighted average gas reservation charge both as of October 1 of each year. The BGSS D-2 Demand Charge is subject to annual adjustment, to be made in the same proceeding in which the Company's annual Periodic BGSS Rate is established for the BGSS Year pursuant to Rider "A" of this Tariff. The BGSS D-2 Demand Charge shall not be less than the sum of the following: (1) the demand charge invoiced by Transcontinental Gas Pipe Line Corporation for its FT service; (2) the Pipeline Capacity Factor; and (3) one dollar ($1.00) per Dt.

(n) The Pipeline Capacity Factor will recover the difference between the Company's system weighted average pipeline demand cost and the demand cost of Transcontinental Gas Pipe Line Corporation's FT charge.

(o) Customers subscribing to this Rate Schedule LVS may elect the "opt-out" provision provided for in the Standard Gas Service Agreement (LV). Such an "opt-out" customer will have no right or entitlement to have base load gas provided by the Company. Provided, however, that a customer electing the "opt-out" provision shall be eligible to receive balancing services from the Company pursuant to appropriate rate schedules and riders. In the case that an "opt-out" customer cannot provide for its capacity, gas supply, or both, the customer must either discontinue the use of base load gas or have it provided by South Jersey at the incremental price. The incremental price charged to an "opt-out" customer shall be the sum of: (1) the highest commodity cost of gas paid by the Company during the month in which the "opt-out" customer uses "Company" gas; and (2) the higher of the cost of incremental capacity needed to serve the returning "opt-out" customer or the system weighted average cost of capacity, plus other charges which must be paid by customers eligible for South Jersey's Monthly BGSS charge. The incremental price will be charged to the customer until the effective date of a new Standard Gas Service Agreement.

(p) An "opt-out" customer will become eligible to purchase base load gas from the Company, or transport gas without "opt-out" status, upon six months' notice to the Company of intention to no longer be an "opt-out" customer, provided that prior to the expiration of the six month notice period, the customer shall have entered into a new Standard Gas Service Agreement which includes the customer's agreement to purchase base load gas or transport without an "opt-out" status for a term of not less than one year. Upon the effective date of the six month period in said notice, the customer shall no longer be obligated to pay the incremental prices set forth above. However, said customer will then be obligated to pay the higher balancing charge of $0.87115 per Dt, including taxes. The Company will not have the right to waive this six month notice requirement.

SOUTH JERSEY GAS COMPANY

FIRM ELECTRIC SERVICE (FES)

APPLICABLE TO USE OF SERVICE FOR:

All gas that is purchased or transported to generate electricity. Provided, however, that in order to qualify for this Rate Schedule FES, a customer must have a Winter Daily Contract Demand of 1,000 Mcf per day or more, or a Summer Daily Contract Demand of 2,000 Mcf per day or more, or both. To be eligible for Firm Transportation Service under this Rate Schedule FES, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service and Firm Transportation Service.

MONTHLY RATE [(1)] [(2)]

WINTER (November – March):

Demand Charge:

D-1 $3.089100 per Mcf of Winter Daily Contract Demand
D-2 $9.811531 per Mcf of Daily Billing Determinant or $0 for Firm Transportation customers

Volumetric Charge:

C-1: $.089401 per therm of consumption
C-2: FES Monthly Commodity Rate, pursuant to Rider "A" and Special Provision (x), OR Customer Owned Gas Clause, Rider "D"
C-3: $.173700 per therm of consumption
C-4: Escalator Rate – Charge may change monthly pursuant to Standard Gas Service Addendum.

Minimum Bill: The monthly D-1 and D-2 charges, irrespective of use.

SUMMER (April – October):

Demand Charge:

D-1 $3.089100 per Mcf of Summer Daily Contract Demand
D-2 $9.811531per Mcf of Daily Billing Determinant or $0 for Firm Transportation customers

Volumetric Charge:

C-1: $.089401 per therm of consumption
C-2: FES Monthly Commodity Rate, pursuant to Rider "A" and Special Provision (x), OR Customer Owned Gas Clause, Rider "D"
C-3: $.173700 per therm of consumption
C-4: Escalator Rate – Charge may change monthly pursuant to Standard Gas Service Addendum.

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(1) Please refer to Appendix A for components of Monthly Rates.
(2) Please refer to Special Provision (p)

FIRM ELECTRIC SERVICE (FES)
(Continued)

MINIMUM BILL: The monthly D-1 and D-2 charge, irrespective of use.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (d).

APPLICABLE RIDERS:

Basic Gas Supply Clause:	The C-2 Rate is depicted on Rider A to this tariff, and is subject to adjustment pursuant to Special Provision (x) of this Rate Schedule.
Customer Owned Gas Clause:	The C-2 Volumetric Charge is subject to adjustment, pursuant to Rider "D" of this Tariff, if the customer so requests in an executed Standard Gas Service Agreement (FES).
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "N" of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a non-business day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the conditions of the Company's Standard Gas Service Agreement (FES).

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SOUTH JERSEY GAS COMPANY

FIRM ELECTRIC SERVICE (FES)
(Continued)

SPECIAL PROVISIONS:

(a) Customer shall contract for service under the Company's Standard Gas Service Agreement (FES), specifying a Winter Daily Contract Demand, a Summer Daily Contract Demand, an Annual Billing Determinant (ABD) and Daily Billing Determinant. In any given calendar year, should an FES customer not consume its ABD, the customer shall be billed the C-3 Charge for the difference in therms between the ABD and actual consumption.

(b) On any day during the Winter Season, an FES customer may request service above its Winter Daily Contract Demand, and the Company may provide such service in the Company's sole reasonable discretion. If the FES customer requests such service, and such request is granted by the Company, (in addition to charges set forth in the Monthly Rate Section of this Rate Schedule FES) the customer will be charged 1.5 times the 100% load factor equivalent of the Winter D-1 and one times the D-2 Charge for the difference between the amount authorized by the Company for that day and the customer's Winter Daily Contract Demand, irrespective of whether the customer consumes this amount. Any consumption under this Special Provision (b) shall not be applied to meet the customer's requirement to consume its ABD pursuant to Special Provision (a).

(c) During the Winter Season an FES Firm Sales Service or Firm Transportation Service customer may not exceed the stated Winter Daily Contract Demand in the Standard Gas Service Agreement (FES) during a twenty-four (24) hour period without authorization from the Company. Any customer who uses in excess of its Winter Daily Contract Demand without authorization, or if applicable, a larger amount authorized by the Company (excess usage), may be subject to an additional charge (in addition to charges set forth in the Monthly Rate Section of this Rate Schedule FES), for such excess use. Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, Zone 6 Non-N.Y.". This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. The customer shall also be charged 1.5 times the 100% load factor equivalent of the Winter D-1 Charge for all excess usage. Provided, however, that the Company may waive such charges if customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(d) For Firm Transportation Service customers, the receipt of gas by the Company for transportation under this Rate Schedule FES shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

(e) In the Standard Gas Service Agreement (FES) customer shall designate the facility (or facilities) at which service will be received under this Rate Schedule (FES) ("FES Facility").

(f) RESERVED FOR FUTURE USE

(g) RESERVED FOR FUTURE USE

SOUTH JERSEY GAS COMPANY

FIRM ELECTRIC SERVICE (FES)
(Continued)

(h) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

(i) Service pursuant to this Rate Schedule FES shall be provided within the existing limitations of Company's system, and Company shall not be required to expand or alter the said system. Should Company, prior to the institution of service under this Rate Schedule FES in its sole reasonable discretion, elect to expand or alter its system in order to provide service pursuant to this Rate Schedule FES, the Company may require the customer to make a payment towards all or a part of the cost of the said expansion or alteration as Company shall determine in Company's discretion. Provided, however, that before making such expansion or alteration, Company shall provide an estimate in writing of the cost of such expansion or alteration to customer. Provided, however, that the making of such a payment shall give the customer no interest in the Company's system. All rights, including the rights of ownership and possession, shall be vested exclusively in the Company.

(j) The Company may, at its sole reasonable discretion, offer a Winter and Summer D-1 Demand Charge and a C-3 Volumetric Charge on a negotiated basis. The D-1 charges, in conjunction with the C-3 charge, may not be lower than an amount sufficient to generate a reasonable return on capital investments made by the Company to provide service under this Rate Schedule FES and recovery of marginal and embedded costs, including depreciation. Such an offer shall be based upon cost of service and value of service considerations, including but not limited to such factors as: (1) proximity of customer to the Company's transmission lines; (2) whether the customer will utilize the Company's interstate pipeline capacity; (3) whether the customer will provide its own gas supply; (4) level of interruption elected by the customer pursuant to Special Provision (r) of this Rate Schedule; and (5) other pertinent factors. Such negotiated rates shall be set forth in the Standard Gas Service Agreement (FES) and filed with the Board within thirty (30) days of execution, for approval. Service Agreements containing the Benchmark Rates shown in the Monthly Rate section of this Rate Schedule (FES) shall not require filing with the Board. All agreements submitted to the Board for approval with a term of greater than five (5) years, must be accompanied by a justification for the extended term. The Company, the customer, the Board and its Staff shall treat any Standard Gas Service Agreement (FES) filed or to be filed with the Board, any petition related thereto, supporting documentation or any discovery related thereto as proprietary and trade secrets of the Company. As such, the contents of such material shall not be disclosed to any party, unless that party executes a confidentiality agreement acceptable to the Company.

(k) The D-2 Charge set forth above is subject to an annual adjustment, which shall be made in the same proceeding in which the Company's Basic Gas Supply Service rates are established pursuant to Rider "A" of this Tariff. The D-2 Charge shall equal one half (1/2) the weighted average of all interstate pipeline demand charges imposed upon the Company, applicable October 1 of each year, plus applicable taxes. Said D-2 Charge will recover any pipeline demand charges, gas inventory charges, gas reservation charges, direct bill take-or-pay surcharges and similar charges. The C-2 Charge includes all commodity cost of gas to the Company other than the commodity cost of liquefied natural gas plus applicable taxes.

SOUTH JERSEY GAS COMPANY

FIRM ELECTRIC SERVICE (FES)
(Continued)

(l) On or before the twentieth day of each calendar month the customer shall provide to the Company, on a form to be provided by the Company, a Notice of Intent relative to Rider D. On said form customer shall advise Company as to whether it will only provide its own gas for delivery under Rider D, including potential peak day usage, or purchase some amount of the Company's gas under this Rate Schedule FES for the month succeeding delivery of said form. If during the month succeeding delivery of said form the customer requires gas supplies from the Company, over and above those so designated on the Notice of Intent, the Company will provide such supplies assuming availability of said supplies and interstate pipeline capacity. The Company's offer to provide such supplies shall include a rate for such gas which is no lower than the C-2 rate set forth in the Monthly Rate section of this Rate Schedule FES. If the FES customer accepts the rate so offered by the Company, the Company will give adequate notice of said offer and acceptance to the Board.

(m) An FES customer who holds clear and marketable title to gas and who provides its own firm interstate pipeline capacity to the Company's City Gate Station may request authorization from the Company for discount of the Firm D-2 charge as set forth in the Monthly Rate Section of this Rate Schedule FES; provided, however, that said D-2 charges shall in no event be discounted for direct bill take-or-pay surcharges and similar charges.

(n) Any charges imposed pursuant to the above Special Provisions of this Rate Schedule FES shall be in addition to other charges imposed pursuant to this Rate Schedule FES.

(o) A Customer generating electricity, that qualifies pursuant to the provisions of N.J.S.A. 54:30A 50(c) shall be entitled to an appropriate rate reduction, to reflect the tax exemption.

(p) Notwithstanding any other provisions of this Rate Schedule FES, customers who have previously executed a Standard Gas Service Agreement (LVCS) shall continue, from and after the date of acceptance of this Rate Schedule FES, for as long as such previously executed Standard Gas Service Agreement (LVCS) shall remain in effect, to be charged in accordance with the terms of the existing Standard Gas Service Agreement (LVCS). In this regard, such customers shall continue to be charged the LVCS D-1 and C-3 rates now charged by the Company, pursuant to existing Standard Gas Service Agreements (LVCS), until such customers no longer receive service pursuant to such Standard Gas Service Agreements (LVCS). This Special Provision (q) shall be applicable to those Standard Gas Service Agreements (LVCS) in existence prior to August 29, 2003.

SOUTH JERSEY GAS COMPANY

FIRM ELECTRIC SERVICE (FES)
(Continued)

(q) The customer shall indicate in the Standard Gas Service Agreement (FES) the maximum number of days during the Winter Season during which some or all of the customer's Winter Daily Contract Demand shall be interrupted. Due to system constraints, the Company may instruct one or all FES customer's to limit all or a portion of the customer's Winter Daily Contract Demand during a given twenty-four (24) hour period. Such instructions may be given orally or in writing but may be given no more then the number of days of permissible interruption specified in the Standard Gas Service Agreement (FES). Any customer who uses gas in excess of the amount to which the customer is interrupted during a given twenty-four (24) hour period may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule FES). Such additional charge shall be equal to ten (10) times the highest price of the daily ranges for that month that are published in Gas Daily in the table "Daily Price Survey" for delivery to "Transco, Zone 6 non-N.Y.". This charge shall not be lower then the maximum penalty charge for unauthorized daily overruns as provided in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(r) Pursuant to this Rate Schedule FES, when it is appropriate to charge a customer the 100% load factor equivalent of a Demand Charge, the same shall be calculated by dividing the Demand Charge by (30.4 x Therm Factor x 10).

(s) The D-1 and C-3 rates set forth in the Monthly Rate section of this Rate Schedule FES are "Benchmark" Rates. Unless different rates are offered and accepted pursuant to Special Provision (j) the Benchmark Rates will be applicable.

(t) If the Benchmark Rates are applicable, the Customer will be subject to all future rate changes to such Benchmark Rates approved by the Board. Provided, however, that if negotiated rates are applicable, those negotiated rates will be subject to the same percentage changes that the Benchmark Rates are subject to through appropriate base rate proceedings. Provided, however, that agreements for negotiated rates may provide that the same percentage changes will not apply, if the Company provides justification for such non-applicability, and the Board finds it to be reasonable.

(u) For all customers who become customers under this Rate Schedule FES after July 1, 2004, any increases or decreases to Rider "B", Rider "E", and Rider "I" shall be applicable to the Benchmark Rates, as well as negotiated rates.

SOUTH JERSEY GAS COMPANY

FIRM ELECTRIC SERVICE (FES)
(Continued)

(v) As of July 6, 2004, only one customer was receiving service under this Rate Schedule FES. Notwithstanding any other provision of this Rate Schedule FES, that customer's existing Standard Gas Service Agreement ("FES"), and amendments and addenda thereto (the "Existing Agreement") will continue in effect without modification to its terms or the rates paid. The Existing Agreement will only remain in effect if on or before August 16, 2004, the Company files a new Standard Gas Service Agreement ("FES") (the "Replacement Agreement") for approval by the Board. If the Replacement Agreement is not filed on or before August 16, 2004, then the FES customer will be invoiced at the Benchmark rates contained in this Rate Schedule FES. If the Replacement Agreement is filed on or before August 16, 2004, then the Existing Agreement will remain in effect, until the Board acts upon the Replacement Agreement.

(w) The FES Monthly Commodity rate shall be calculated each month pursuant to the Monthly BGSS Subrider of the Basic Gas Supply Service Clause to this Tariff, except that paragraph (3) of the Monthly Formula in the Monthly BGSS Subrider shall not apply to FES customers At any time during the month after the FES Monthly Commodity rate has been established, the Company may file a higher or lower rate to reflect changes or anticipated changes in gas costs. Such change may be made at the sole option of the Company after 3 hours advance notice, by telephone or otherwise, has been given to the Board and affected consumers.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 38**

ELECTRIC GENERATION SERVICE (EGS)

APPLICABLE TO USE OF SERVICE FOR:

Residential, commercial and industrial uses for electric generation facilities (excluding back-up generator equipment); all Prime Movers; and all engine driven equipment (whether or not used for electric generation). Provided, however, that in order to be eligible for this Rate Schedule EGS, a customer must have a Firm Daily Contract Demand of less than 200 Mcf per day; provided, however, that a residential EGS customer will have no Firm Daily Contract Demand. To be eligible for Firm Transportation Service under this Rate Schedule EGS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service and Firm Transportation Service

MONTHLY RATE: (1)(2)

Residential Customer Charge:

$13.594688 per month

Residential Delivery Charge

Residential Volumetric Charge: $.306440 per therm

Commercial and Industrial Customer Charge:

$84.233750 per month

Commercial and Industrial Delivery Charge:

Commercial and Industrial Demand Charge:

D-1 Charge: $8.796563 per Mcf of contract

Volumetric Charges:

Winter Season (effective during billing months of November through March):

All Consumption for Firm Sales Service and Firm Transportation Service

$.329681 per therm

(1) Please refer to Appendix A for components of Monthly Rates.
(2) See Special Provision (k) of this Rate Schedule EGS, regarding appropriate balancing charges.

Issued March 13, 2020 **Effective with service rendered**
by South Jersey Gas Company, **on and after April 13, 2020**
D. Robbins, Jr., President
Filed pursuant to Order in Docket No. ______________ of the Board of
Public Utilities, State of New Jersey, dated _____________

SOUTH JERSEY GAS COMPANY

ELECTRIC GENERATION SERVICE (EGS)
(Continued)

Summer Season (effective during billing months of April through October):

All Consumption for Firm Sales Service and Firm Transportation Service

$.297694 per therm

Basic Gas Supply Service ("BGSS") Charge:

Applicable to customers who elect Firm Sales Service

See Rider "A" of this Tariff.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (o).

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "H" of this Tariff.
Balancing Service Clause	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "J" of this Tariff. However, also see Special Provision (k) regarding Rider "I".
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "N" of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a non-business day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

SOUTH JERSEY GAS COMPANY

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ELECTRIC GENERATION SERVICE (EGS)
(Continued)

TERM:

The Company may offer service to a customer provided that the customer and the Company contract for service under the Company's Standard Gas Service Agreement (EGS). The Company shall be obligated to offer the customer a contract under this Rate Schedule EGS for service for a minimum of a 12 month period.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SPECIAL PROVISIONS:

(a) EGS equipment must be metered and billed separately from all other gas equipment that may be used in a customer’s facility.

(b) The Company will not accept gas for delivery to Firm Transportation Service customers that will: (1) adversely impact the Company’s rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

(c) The Firm Transportation Service customer bears sole responsibility for costs incurred to deliver customer owned gas to the Company’s City Gate Station and to provide interstate pipeline capacity.

(d) The Firm Transportation Service customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in any financial or burdensome administrative obligation, the Company may impose a surcharge therefore.

(e) Firm Transportation Service customers may not arrange for delivery to the Company, on any day, of gas volumes in excess of customer’s then applicable Daily Contract Quantity (“DCQ”) (or the quantity of gas burned daily if the Rider “I” customer has no DCQ) unless authorized to do so by the Company; provided, however, that said excess deliveries may be authorized by the Company to cure a Deficiency Imbalance.

(f) For Firm Transportation Service customers, the existence of imbalances as defined in Rider “I” or Rider “J” will be determined each day. If at the beginning of a day a customer has an imbalance, the gas to fulfill that customer’s Daily Contract Quantity (“DCQ”) (or the quantity of gas burned on that day for a Rider “I” customer who has no DCQ) for that day will be the first gas through the City Gate Station for the customer’s account on that day. Gas to correct existing imbalances will be considered as the last gas coming through the City Gas Station for that customer’s account on that day.

SOUTH JERSEY GAS COMPANY

ELECTRIC GENERATION SERVICE (EGS)
(Continued)

(g) Due to system constraints, the Company may instruct some or all EGS Firm Sales Service or Firm Transportation Service customers not to exceed the stated Firm Daily Contract Demand in the Standard Gas Service Agreement (EGS) during a given twenty-four (24) hour period. Said instruction may be given orally or in writing. Any customer who then uses in excess of its Firm Daily Contract Demand may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule EGS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(h) If during any month a Firm Sales Service or Firm Transportation Service customer having Alternate Fuel Capability utilizes gas in excess of the stated Firm Daily Contract Demand in the Standard Gas Service Agreement (EGS), multiplied by the number of days in that month, or if applicable, a larger amount authorized by the Company, such excess shall be deemed utilized for interruptible uses, and may be billed pursuant to Rate Schedule IGS or ITS, as applicable.

(i) If during any month a Firm Sales Service or Firm Transportation Service customer without Alternate Fuel Capability utilizes gas in excess of the stated Firm Daily Contract Demand in the Standard Gas Service Agreement (EGS), or if applicable, a larger amount authorized by the Company, such customer may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule EGS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.", multiplied by the number of days in that month. This daily charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(j) The rates set forth in the Delivery Charge section of this Rate Schedule EGS assume that the customer receives balancing service under Rider "J" to this Tariff. If the customer selects balancing service under Rider "I" of this Tariff, then the Delivery Charges will be adjusted to reflect the Rider "I" Charges.

(k) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

SOUTH JERSEY GAS COMPANY

ELECTRIC GENERATION SERVICE (EGS)
(Continued)

(l) To be eligible for Firm Transportation Service under this Rate Schedule EGS, a customer must hold clear and marketable title to gas that is made available for delivery to the customer's facility on the Company's system.

(m) A Customer generating electricity, that qualifies pursuant to the provisions of N.J.S.A. 54:30A-50(c) shall be entitled to an appropriate rate reduction, to reflect the tax exemption.

(n) A Firm Transportation Service customer scheduling gas for delivery may not schedule less than one dekatherm of gas for delivery under this Rate Schedule EGS on any day. All scheduling must be done in whole number dekatherms.

(o) For Firm Transportation Service customers, the receipt of gas by the Company for transportation under this Rate Schedule EGS shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

SOUTH JERSEY GAS COMPANY

ELECTRIC GENERATION SERVICE – LARGE VOLUME (EGS-LV)

APPLICABLE TO USE OF SERVICE FOR:

All commercial and industrial electric generation facilities; all Prime Movers and all engine driven equipment (whether or not used for electric generation). Provided, however, that in order to be eligible for this Rate Schedule EGS-LV, a customer must have a Firm Daily Contract Demand of 200 Mcf per day or more. To be eligible for Firm Transportation Service under this Rate Schedule EGS-LVS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service, Firm Transportation Service, Limited Firm Sales Service and Limited Firm Transportation Service.

MONTHLY RATE: [(1)]

Customer Charge:

$799.687500 per month

FIRM:

Demand Charges: [(2)]

D-1 $31.001519 per Mcf of Firm Daily Contract Demand.

D-2 $21.238498 per Mcf of Firm Daily Contract Demand or $0 for Firm Transportation customers.

Volumetric Charge:

C-1: $.076358 per therm of consumption

C-2: As depicted in the Monthly BGSS Subrider of Rider "A" of this Tariff, OR Customer Owned Gas Clause, Rider "D"

Minimum Bill: Monthly D-1 and D-2 charges, irrespective of use.

LIMITED FIRM:

Demand Charge:

D-2 $9.811531 per Mcf of Limited Firm Daily Contract Demand or $0 for Limited Firm Transportation customers

Volumetric Charge: [(2)]

C-1: $.076358 per therm of consumption

C-2: As depicted in the Monthly BGSS Subrider of Rider "A" of this Tariff, OR Customer Owned Gas Clause, Rider "D"

C-3 $.173700 per therm for all consumption within Limited Firm Contract Demand level.[1]

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(1) Please refer to Appendix A for components of Monthly Rates.
(2) Please refer to Special Provision (j).

SOUTH JERSEY GAS COMPANY

ELECTRIC GENERATION SERVICE – LARGE VOLUME (EGS-LV)
(Continued)

Minimum Bill: Monthly D-2 charge, irrespective of use.

LINE LOSS

Line Loss shall be 1.43% as provided in Special Provision (i).

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	The C-2 rate is depicted in Rider "A" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
Customer Owned Gas Clause:	The Firm and Limited Firm C-2 Volumetric Charges are subject to adjustment, pursuant to Rider "D" of this Tariff, if so elected in an executed Standard Gas Service Agreement (EGS-LV).
2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "H" of this Tariff.
Balancing Service Clause:	All gas delivered to customers under this Rate Schedule EGS-LV is subject to Rider "I" of this Tariff.
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "N" of this Tariff.

All rates, except for the Firm and Limited Firm C-2 Volumetric Charges, are subject to Special Provision (e) of this Rate Schedule (EGS-LV).

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the conditions of the Company's Standard Gas Service Agreement (EGS-LV). The Company will continue service, and take all steps it deems reasonable to provide such service during the term specified in the Standard Gas Service Agreement (EGS-LV). Provided, however, that each year effective November 1 such agreement is subject to revision by the Company to reflect its ability to continue service at Standard Gas Service Agreement (EGS-LV) levels. No change in service level shall be effective unless the Company notifies the customer on or before May 1 of any year. Based upon such review, the Company may advise the customer that the Company cannot provide service

SOUTH JERSEY GAS COMPANY

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ELECTRIC GENERATION SERVICE – LARGE VOLUME (EGS-LV)
(Continued)

at such levels for the ensuing 12 month period, and further advise the customer as to what levels of service the Company can provide for such period. The customer shall have thirty (30) days from such notice to accept the revised levels of service, or terminate the Standard Gas Service Agreement (EGS-LV) effective the following November 1. If the customer does not so notify the Company of termination, in writing, the Standard Gas Service Agreement (EGS-LV) will be deemed revised to reflect the new levels of service, and in all other respects will remain in full force and effect. The Company will determine that a revision to levels of service specified in the Standard Gas Service Agreement (EGS-LV) is necessary, if not making such revisions would impact the Company's ability to provide service under Rate Schedules RSG, GSG, LVS, YLS, SLS or successor rate schedules.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SPECIAL PROVISIONS:

(a) Equipment served under this Rate Schedule EGS-LV must be metered separately from all other gas that may be used in a customer's facility. At the Company's request, the Company will be provided with all engineering drawings related to the flow of fuel within the customer's facility and will be provided with physical access to the customer's facility to confirm conformity with this Special Provision (a).

(b) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

(c) It is contemplated that service pursuant to this Rate Schedule EGS-LV shall be provided within the existing limitations of Company's system, and Company shall not be required to expand or alter the said system. Should Company, prior to the institution of service under this Rate Schedule EGS-LV in its sole reasonable discretion, elect to expand or alter its system in order to provide service pursuant to this Rate Schedule EGS-LV, Company may require the customer to make a payment towards all or a part of the cost of the said expansion or alteration as Company shall determine in Company's sole reasonable discretion. Provided, however, that before making such expansion or alteration, Company shall provide an estimate in writing of the cost of such expansion or alteration to customer. Provided, however, that the making of such a payment shall give the customer no interest in the Company's system. All rights, including the rights of ownership and possession, shall be vested exclusively in the Company.

(d) Due to system constraints, the Company may instruct any one or all EGS-LV customers to limit all or any portion of customer's EGS-LV Limited Firm Daily Contract Demand usage during a given twenty-four (24) hour period. Said instructions may be given orally or in writing but may be given on a maximum of sixty (60) days in any Winter Season. As used in this Rate Schedule EGS-LV "Winter Season" shall mean a period embracing the months of November through March, running consecutively. Such instructions shall only be given if, in the Company's sole reasonable discretion, service to its RSG, GSG, GSG-LV, LVS, EGS, YLS, SLS (or successor rate schedules) customers may be impacted if not given. Any customer who then uses gas in excess of the level instructed may be invoiced at an additional charge (in addition to the

SOUTH JERSEY GAS COMPANY

ELECTRIC GENERATION SERVICE – LARGE VOLUME (EGS-LV)
(Continued)

charges set forth in the Monthly Rate section of this Rate Schedule EGS-LV). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in Gas Daily in the table "Daily Price Survey" for delivery to "d), zone 6 non-N.Y.". This rate shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation.

(e) The Company may, at its sole reasonable discretion, offer a D-1 Demand Charge and a C-3 Commodity Charge on a negotiated basis. The D-1 charge, taken in combination with the Limited Firm C-3 charge, if applicable, may not be lower than an amount sufficient to generate a reasonable return on capital investments made by the Company and recovery of marginal and embedded costs, including depreciation, to provide service under this Rate Schedule EGS-LV. If such an offer is made it shall be based upon cost of service and value of service considerations, including but not limited to such factors as: (1) proximity of customer to the Company's transmission lines; (2) whether the customer will utilize the Company's interstate pipeline capacity; (3) whether the customer will provide its own gas supply; and (4) other pertinent factors. Such negotiated percentages and resultant rates shall be set forth in the Standard Gas Service Agreement (EGS-LV) and filed with the Board within thirty (30) days of execution, for approval. Service Agreements providing that the customer will pay the Benchmark Rates shown in the Monthly Rate section of this Rate Schedule (EGS-LV) shall not require filing with the Board. The Benchmark Rates contained in service agreements shall be subject to modification as provided by Special Provision (m) of this Rate Schedule EGS-LV. All agreements submitted to the Board shall contain an explanation regarding the term of the agreement. The Company, the customer, the Board and its Staff shall treat any Standard Gas Service Agreement (EGS-LV) filed or to be filed with the Board, any petition related thereto, supporting documentation or any discovery related thereto as proprietary and trade secrets of the Company. As such, the contents of such material shall not be disclosed to any party, unless that party executes a confidentiality agreement acceptable to the Company.

(f) The Firm and Limited Firm D-2 charges, and Firm and Limited Firm C-2 charge set forth above are subject to adjustment pursuant to Rider "A" of this Tariff. The Firm D-2 charge includes the highest interstate pipeline contract demand charge applicable to the Company at October 1 of each year, which will include, but not be limited to, pipeline demand charges, reservation fees, gas inventory charges and direct bill take-or-pay surcharges, plus applicable taxes. The Limited Firm D-2 charge shall equal one-half (1/2) the weighted average of all interstate pipeline demand charges applicable to the Company at October 1 of each year which will include, but not be limited to, pipeline demand charges, reservation fees, gas inventory charges and direct bill take-or-pay surcharges, plus applicable taxes. The Firm and Limited Firm D-2 charges will also recover all appropriate charges pursuant to Rider "G", of this Tariff.

(g) If during any month a customer utilizes gas in excess of that customer's aggregate Firm Daily Contract Demand for said month, or if applicable, a larger amount authorized by the Company, such usage may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate section of this Rate Schedule EGS-LV). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in <u>Gas Daily</u> in the table "Daily Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This rate shall not be

SOUTH JERSEY GAS COMPANY

ELECTRIC GENERATION SERVICE – LARGE VOLUME (EGS-LV)
(Continued)

lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation.

(h) A Customer generating electricity that qualifies pursuant to the provisions of N.J.S.A. 54:30A-50(c) shall be entitled to an appropriate rate reduction, to reflect the tax exemption.

(i) For Firm Transportation Service customers, the receipt of gas by the Company for transportation under this Rate Schedule EGS-LV shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

(j) Notwithstanding any other provisions of this Rate Schedule EGS-LV, customers who have previously executed a Standard Gas Service Agreement (LVCS) shall continue, from and after June 30, 2004, and for as long as such previously executed Standard Gas Service Agreement (LVCS) shall remain in effect, to be charged in accordance with the terms of the existing Standard Gas Service Agreement (LVCS), and any addenda or amendments thereto. In this regard, such customers shall continue to be charged the LVCS D-1 and C-3 rates now charged by the Company, pursuant to the existing Standard Gas Service Agreements (LVCS), and any addenda or amendments thereto, until such customers no longer receive service pursuant to such Standard Gas Service Agreements (LVCS), and any addenda or amendments thereto. This Special Provision (k) shall be applicable to those Standard Gas Service Agreements (LVCS), and any addenda or amendments thereto in existence prior to August 29, 2003.

(k) The D-1 and C-3 rates set forth in the Monthly Rate section of this Rate Schedule EGS-LV are “Benchmark” Rates. Unless different rates are offered and accepted pursuant to Special Provision (e) the Benchmark Rates will be applicable.

(l) If the Benchmark Rates are applicable, the Customer will be subject to all future rate changes to such Benchmark Rates approved by the Board. Provided, however, that if negotiated rates are applicable, those negotiated rates will be subject to the same percentage changes that the Benchmark Rates are subject to through appropriate base rate proceedings. Provided, however, that agreements for negotiated rates may provide that the same percentage changes will not apply, if the Company provides justification for such non-applicability, and the Board finds it to be reasonable.

(m) For all customers who become customers under this Rate Schedule EGS-LV after July 1, 2004, any increases or decreases to Rider “E” and Rider “I” shall be applicable to the Benchmark Rates, as well as negotiated rates.

(n) Customers subscribing to this Rate Schedule EGS-LV may elect the “opt-out” provision provided for in the Standard Gas Service Agreement (EGS). Such an “opt-out” customer will have no right or entitlement to have base load gas provided by the Company. Provided, however, that a customer electing the “opt-out” provision shall be eligible to receive balancing services from the Company pursuant to appropriate rate schedules and riders. In the case that an “opt-out” customer can not provide for its capacity, gas supply, or both, the customer must either discontinue the use of

ELECTRIC GENERATION SERVICE – LARGE VOLUME (EGS-LV)
(Continued)

base load gas or have it provided by South Jersey at the incremental price. The incremental price charged to an “opt-out” customer shall be the sum of: (1) the highest commodity cost of gas paid by the Company during the month in which the “opt-out” customer uses “Company” gas; and (2) the higher of the cost of incremental capacity needed to serve the returning “opt-out” customer or the system weighted average cost of capacity, plus other charges which must be paid by customers eligible for South Jersey’s Monthly BGSS charge.

(o) An “opt-out” customer will become eligible to purchase base load gas from the Company, or transport gas without “opt-out” status upon six months’ notice to the Company of intention to no longer be an “opt-out” customer. It will not be necessary for an EGS-LV “opt-out” customer to execute a new Standard Gas Service Agreement in order to purchase base load gas from the Company or transport gas without “opt-out” status. However, the customer must commit to purchase base load gas or transport gas without “opt-out” status for a minimum of one year. At the end of the six month period specified in said notice, the customer shall no longer be obligated to pay the incremental prices set forth above. However, said customer will then be obligated to pay the higher balancing charge of $0.87115 per Dt, including taxes. The Company will not have the right to waive this six month notice requirement.

(p) Customer shall contract for service under the Company’s Standard Gas Service Agreement (EGS).

SOUTH JERSEY GAS COMPANY

YARD LIGHTING SERVICE (YLS)

APPLICABLE TO USE OF SERVICE FOR:

Gas yard lighting where service is supplied through an installation furnished by the customer and approved by the Company. Each installation shall contain 1 upright mantle or 2 inverted mantles.

This rate is available only to an existing customer receiving service under this Rate Schedule, YLS, and not having other metered Service at the customer's present location as of the effective date of this Tariff.

CHARACTER OF SERVICE:

Firm Sales Service.

MONTHLY RATE:

The monthly charge shall be $16.834831 per month for each installation.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date.

TERM:

Customer may discontinue service upon adequate written notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SOUTH JERSEY GAS COMPANY

STREET LIGHTING SERVICE (SLS)

APPLICABLE TO USE OF SERVICE FOR:

Gas Street lighting where service is supplied through an installation approved by the Company. Each installation shall contain three (3) inverted mantles.

This rate is available only to an existing customer receiving service under this Rate Schedule, SLS, and not having other metered service at the customer's present location as of the effective date of this Tariff.

CHARACTER OF SERVICE:

Firm Sales Service.

MONTHLY RATE:

The Monthly Rate shall be $20.234486 per month for each installation.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date.

TERM:

Customer may discontinue service upon adequate written notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SOUTH JERSEY GAS COMPANY

INTERRUPTIBLE GAS SERVICE (IGS)

APPLICABLE TO USE OF SERVICE FOR:

Interruptible uses of gas by all customers.

CHARACTER OF SERVICE:

Interruptible Sales Service.

Service will be provided when the Company in its sole reasonable discretion deems sufficient gas supplies to be available for said service. Service may be interrupted or curtailed at the sole option of the Company after not less than three (3) hours advanced notice by telephone or otherwise. During periods of interruption, the Company may permit the continued use of gas for pilots. When permitted, such usage shall not be subject to the terms of Special Provision (b) of this rate schedule.

MONTHLY RATE:

(a) The rate per therm of gas under this Rate Schedule, IGS, shall be designed to yield at least a profit of $.01 per therm, after consideration of Costs Applicable.

(i) For a customer that certifies that it has, or is capable of having, an Alternate Fuel Capability of No. 6 oil, the appropriate price shall be that of No. 6 oil; or

(ii) For a customer that does not certify that it has, or is capable of having, an Alternate Fuel Capability of No. 6 oil, the appropriate price shall be that of No. 2 oil.

(iii) For a Rate Schedule FES customer, the appropriate price shall be price at which said customer certifies that it is able to purchase fuels.

(b) RESERVED FOR FUTURE USE.

(c) The rate set under this Rate Schedule shall be established on or about the 27th day of each calendar month for the month succeeding said calendar month. Provided, however, that such rate shall be filed with the Board at least three (3) business days prior to its effective date.

APPLICABLE RIDERS:

Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “E” of this Tariff.
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider “N” of this Tariff.

INTERRUPTIBLE GAS SERVICE (IGS)
(Continued)

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may terminate service upon written notice to the Company, pursuant to the conditions of the Company's Standard Gas Service Agreement (IGS), if applicable; otherwise, in order to effectuate a termination, customer must provide adequate notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this Rate Schedule and this Rate Schedule shall be interpreted in accordance therewith.

SPECIAL PROVISIONS:

(a) On or about the 27th day of each calendar month during months when the Company believes it is necessary to do so, the Company shall notify customers under this Rate Schedule of the volumes of gas to be allotted to each customer during the forthcoming month. Within five (5) days of receipt of such notice the customer must notify the Company in writing whether it will purchase all, some specific portion, or none of the allotted gas. The customer shall be obligated to purchase at least fifty percent (50%) of the amount which customer indicates it will purchase during the month. If the customer purchases less than fifty percent (50%), the customer will be billed for the difference between actual consumption and seventy-five percent (75%) at a rate equal to the Monthly BGSS charge. If the customer purchases more than 100% of the amount customer indicates it will purchase, or a greater amount if the customer is authorized to utilize a greater amount by the Company, the amount in excess of 100% will be deemed unauthorized and be subject to the charge in Special Provision (c) of this rate schedule. Provided, however, that the amount which the customer indicates it will purchase during the month shall be reduced to the extent that any unforeseen failure of equipment during such month results in reduced gas consumption by said customer.

Further provided, that if service under rate schedule IGS is interrupted during any month, the amount nominated by the customer to be purchased during the month will be reduced by multiplying said amount by a fraction: (1) the numerator of which is the number of days in the month less the number of days during the month in which the Company could not serve any interruptible gas to the customer; and (2) the denominator of which is the number of days in the month.

SOUTH JERSEY GAS COMPANY

INTERRUPTIBLE GAS SERVICE (IGS)
(Continued)

On any day that the Company does not offer to the customer at least fifty percent (50%) of the customer's daily nominated amount of IGS gas, the customer will receive credit for having used fifty percent (50%) of the daily nominated amount, when determining the purchase obligation under this Special Provision (a) provided that the customer uses some IGS gas on that day.

(b) Any customer who does not accept gas offered under this Rate Schedule within the period of time allotted by the Company shall be deemed to have rejected such offer and waived all entitlements to the offered gas.

(c) Due to system constraints, the Company may instruct any one or all IGS customers not to consume in excess of a Stated Amount of gas during a given twenty-four (24) hour period. Said instruction may be given orally or in writing. Any customer who then uses in excess of the Stated Amount may be invoiced for an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule IGS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table “Daily Price Survey” for delivery to “Transco, zone 6 non-N.Y.”. This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service.

(d) At any time prior to the inception of billing of a filed rate for a given month, the Company may file a lower rate for that month to reflect market conditions. Any customer who accepts the Company's offer to use gas under this Rate Schedule within the period of time allotted by the Company shall be allowed the benefit of any rate decreases the Company may file pursuant to this provision.

(e) Cogeneration equipment must be metered separately from all other gas that may be used in a customer's facility.

(f) The Company may, in its reasonable discretion invoice a customer for the costs associated with metering cogeneration consumption.

(g) As a condition precedent to service under this Rate Schedule IGS, written application will be required by the customer on either of the following, as appropriate: (1) Standard Gas Service Agreement (IGS); (2) Standard Gas Service Agreement (LV); (3) Standard Gas Service Agreement (GS); (4) Standard Gas Service Agreement (EGS); or (5) Standard Gas Service Agreement (ITS).

(h) Any time during the month after a filed rate has been established and after adequate notice has been given to the Board and said customers, the Company may file a higher or lower rate. Any increase or decrease pursuant to this provision shall take place as necessary during any month, and then only upon three (3) hours' advance notice to customers by telephone or otherwise.

(i) RESERVED FOR FUTURE USE.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 54**

INTERRUPTIBLE GAS SERVICE (IGS)
(Continued)

(j) If a customer receives service under this rate schedule, and has propane facilities on its premises, the customer shall receive no benefit or priority of entitlement to gas allocations from the Company, unless said benefit or priority is provided by applicable State or Federal laws or regulations.

(k) During a month the Company may determine that service rendered under this Rate Schedule IGS will not, on a monthly or seasonal basis (the winter season being December, January or February, and all else being the summer season) experience at least $.01 profit per therm. In said event, the Company may determine that a deficit accounting balance exists and may impose a surcharge upon customers purchasing gas under this Rate Schedule IGS. The surcharge shall be assessed against customers purchasing gas under this Rate Schedule IGS, based upon volumes consumed during the month or months in which said deficit accounting imbalance arose.

(l) As of November 1 of each year, customers purchasing gas pursuant to this Rate Schedule IGS whose alternate fuels are No. 2 oil, jet fuel or kerosene are required to have seven (7) days of Alternate Fuel Capability, or, if that customer's on-site Alternate Fuel Capability storage capacity is less than seven (7) days, then that customer must have its Alternate Fuel Capability filled to capacity, and must have an additional firm contractual alternate fuel supply arrangement, so that when the firm contractual alternate fuel supply arrangement is taken together with that customer's Alternate Fuel Capability on hand, the sum total shall equal seven (7) days. No customer shall be required to acquire or construct additional Alternate Fuel Capability storage capacity, in order to meet the terms of this Special Provision (l).

(m) On or before November 1 of each year, each customer receiving gas pursuant to this Rate Schedule IGS must supply a Certification to the Company, certifying that the customer has met the requirements of Special Provision (l).

(n) All customers receiving gas service pursuant to this Rate Schedule IGS, whose alternate fuel is not either No. 2 oil, jet fuel or kerosene, and all such customers who agree to suspend operations during an interruption of Rate Schedule IGS service, are not required to maintain Alternate Fuel Capability in accordance with Special Provision (l). However, all such customers must file a Certification with the Company, indicating the customer's alternate fuel, or indicating the customer's agreement to discontinue operations during an interruption of Rate Schedule IGS service.

(o) Wholesale electric generators, including cogeneration customers, are exempt from the requirements of Special Provisions (l), (m) and (n) of this Rate Schedule IGS.

(p) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff.

(q) Any charges imposed pursuant to the above Special Provisions of this Rate Schedule IGS shall be in addition to other charges imposed pursuant to this Rate Schedule IGS.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS Original Sheet No. 55

INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)

APPLICABLE TO USE OF SERVICE FOR:

Interruptible uses of gas to customers who hold clear and marketable title to gas that is made available for transportation service on the Company's system. Pursuant to this Rate Schedule ITS, the Company shall transport gas made available for transportation from the Company's City Gate Station to a designated point of delivery.

CHARACTER OF SERVICE:

Interruptible Transportation Service.

MONTHLY RATE:

Service Charge:

$106.625000 per month

Billable for the duration of the Standard Gas Service Agreement (ITS). The Service Charge will not be prorated.

Transportation Charge:

(a) For transportation of gas by customers served under Rate Schedules CTS, LVS, FES, or EGS-LV or industrial customers who have an annualized average interruptible use of 200 Mcf or more per day:

$.030300 per therm

(b) For transportation of gas by customers served under Rate Schedules GSG or GSG-LV that certify that they have an Alternate Fuel Capability of No. 6 oil.

$.099400 per therm

(c) For transportation of gas not qualified for delivery under Paragraph (a) or (b) of this Transportation Charge:

$.163300 per therm

Line Loss:

Line Loss shall be 1.43% as provided in Special Provision (m).

SOUTH JERSEY GAS COMPANY

INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(Continued)

APPLICABLE RIDERS:

Societal Benefits Clause:	All gas consumed under this Rate Schedule ITS is subject to adjustment pursuant to Rider "E" of this Tariff.
Balancing Service Clause:	All gas transported under this Rate Schedule ITS is subject to balancing requirements pursuant to Rate Schedule CTS, Rider "I" or Rider "J" of this Tariff.
Energy Efficiency Tracker:	All gas consumed under this Rate Schedule ITS is subject to adjustment pursuant to Rider "N" of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the conditions of the Company's Standard Gas Service Agreement (ITS).

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SPECIAL PROVISIONS:

(a) Customer shall contract for ITS service with Company and designate a Scheduled Daily Delivery on the prescribed Standard Gas Service Agreement (ITS). For a period concurrent with the term of the Standard Gas Service Agreement (ITS), the customer must have executed at least one of the following: a Standard Gas Service Agreement (GS); a Standard Gas Service Agreement (LV); a Standard Gas Service Agreement (EGS); a Standard Gas Service Agreement (FES); or, a Standard Gas Service Agreement (IGS).

(b) Gas transported under this Rate Schedule ITS shall be utilized solely in equipment for which the customer has, or is capable of having, an Alternate Fuel Capability.

(c) The Company will not accept gas for delivery that will: (1) adversely impact the Company's rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

SOUTH JERSEY GAS COMPANY

INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(Continued)

(d) The customer bears sole responsibility for costs incurred to deliver transportation gas to the Company's city gate station.

(e) Customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in connection with the initiation and rendering of service under this Rate Schedule ITS. If the Company has accepted gas for delivery under this Rate Schedule and as a result thereof it incurs any financial or burdensome administrative obligation, the Company may impose a surcharge therefore.

(f) It is contemplated that service pursuant to this Rate Schedule ITS shall be provided within the existing limitations of Company's system, and Company shall not be required to expand or alter the said system.

(g) Should Company, in its sole discretion, elect to expand or alter its system in order to provide service pursuant to this Rate Schedule ITS, Company may require the customer to make a payment towards all or a part of the cost of the said expansion or alteration as Company shall determine in Company's discretion. Provided, however, that before making such expansion or alteration, Company shall provide an estimate in writing of the cost of such expansion or alteration to customer. Customer shall then have the option of terminating the Transportation Service Agreement within ninety (90) days of the receipt of such estimate by written notice of termination. If customer does not so terminate, customer shall be required to make the payment required by this Special Provision (g). Further, provided, however, that the making of such a payment shall give the customer no interest in the Company's system. All rights, including the rights of ownership and possession, shall be vested exclusively in the Company.

(h) Company retains sole reasonable discretion as to whether or not a particular customer or particular customers shall receive service pursuant to this Rate Schedule ITS.

(i) Transportation Service may be curtailed or discontinued at the sole option of the Company after not less than three (3) hours, advance notice by telephone or otherwise. However, the customer shall continue to hold title to any gas (less line loss) received by Company and not delivered to customer prior to such curtailment or discontinuance.

(j) The customer who anticipates a need for gas in excess of its daily firm requirements and designated Scheduled Daily Delivery for transportation, must nominate the excess level required, by advising the Company of its request to use such gas by no later than 9:00 AM of the day preceding such use. If the Company agrees to supply such nominated gas, it will do so pursuant to the provisions of its IGS Rate Schedule.

(k) Gas consumption in excess of the nominated quantities described in Special Provision (k) of this Rate Schedule may be deemed unauthorized consumption and subject to the charges provided for in Special Provision (o) of this Rate Schedule. Provided, however, that the Company may waive such additional charge, in its sole reasonable discretion, if the customer demonstrates good cause for such consumption, and, such consumption does not adversely impact service to other customers. Further provided, however, that on any day during which gas receipts for a customer's account exceed gas utilized by the customer, after adjustment for line loss and sales authorized by the Company, such excess receipts will be subject to applicable balancing provisions of this Tariff.

SOUTH JERSEY GAS COMPANY

INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(Continued)

(l) For the purpose of calculating monthly bills, all firm gas requirements (gas deemed purchased, Firm Transportation Service gas, or customer owned gas delivered under rate schedules CTS, GSG, GSG-LV, LVS, EGS, EGS-LV or FES, or Riders thereto) shall be deemed "first through the meter" and will be billed before any volumes will have been deemed to be delivered under this Rate Schedule ITS. Gas consumed in excess of firm gas and the Scheduled Daily Delivery pursuant to this Rate Schedule ITS will be billed upon Rate Schedule IGS.

(m) The receipt of gas by the Company for transportation under this Rate Schedule ITS shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

(n) If gas is consumed for more than three (3) hours after a notice to discontinue or curtail service, and gas is not being simultaneously offered to the customer by the Company on an applicable interruptible sales rate schedule, such gas consumed shall be deemed as unauthorized use gas owned by the Company. If gas is being simultaneously offered to the customer by the Company on an applicable interruptible rate schedule, the customer shall be billed for such gas consumed on said rate schedule.

(o) Due to system constraints, the Company may instruct some or all ITS customers not to exceed the stated Scheduled Daily Delivery in the Standard Gas Service Agreement (ITS) during a given twenty-four (24) hour period. Said instruction may be given orally or in writing. Any customer who then uses in excess of its Scheduled Daily Delivery may be subject to an additional charge (in addition to the charges set forth in the Monthly Rate Section of this Rate Schedule ITS). Such additional charge shall equal ten (10) times the highest price of the daily ranges for that month that are published in the Gas Daily in the table "Gas Price Survey" for delivery to "Transco, zone 6 non-N.Y.". This charge shall not be lower than the maximum penalty charge for unauthorized daily overruns as provided for in the FERC-approved gas tariffs of Transcontinental Gas Pipe Line Corporation. Provided, however, that the Company may waive such charges if a customer demonstrates extenuating circumstances. The imposition of such additional charges shall not restrict the Company's right to interrupt or curtail this service. This charge shall also be applicable to unauthorized use gas.

(p) If a customer receives service under this rate schedule, and has propane facilities on its premises, the customer shall receive no benefit or priority of entitlement to gas allocations from the Company, unless said benefit or priority is provided by applicable State and Federal laws or regulations.

(q) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

(r) A customer scheduling gas for delivery may not schedule less than one dekatherm of gas for delivery under this Rate Schedule ITS on any day. All scheduling must be done in whole number dekatherms and not in fractions thereof.

SOUTH JERSEY GAS COMPANY

INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(Continued)

(s) As of November 1 each year, customers transporting gas pursuant to this Rate Schedule ITS whose alternate fuels are No. 2 oil, jet fuel or kerosene are required to have seven (7) days of Alternate Fuel Capability, or, if that customer's on-site Alternate Fuel Capability is less than seven (7) days, then that customer must have an additional firm contractual alternate fuel supply arrangement, so that when the firm contractual alternate fuel supply arrangement is taken together with that customer's Alternate Fuel Capability on hand, the sum total shall equal seven (7) days. No customer shall be required to acquire or construct additional Alternate Fuel Capability storage capacity, in order to meet the terms of this Special Provision (t).

(t) On or before November 1 of each year, each customer transporting gas pursuant to this Rate Schedule ITS must supply a Certification to the Company, certifying that the customer has met the requirements of Special Provision (t).

(u) All customers transporting gas pursuant to this Rate Schedule ITS, whose alternate fuel is not either No. 2 oil, jet fuel or kerosene, and all such customers who agree to suspend operations during an interruption of Rate Schedule ITS service, are not required to maintain Alternate Fuel Capability in accordance with Special Provision (t). However, all such customers must file a Certification with the Company, indicating the customer's alternate fuel, or indicating the customer's agreement to discontinue operations during an interruption of Rate Schedule ITS service.

(v) Wholesale electric generators, including cogeneration customers, are exempt from the requirements of Special Provisions (t) and (u) of this Rate Schedule ITS.

(w) Any charges imposed pursuant to the above Special Provisions of this Rate Schedule ITS shall be in addition to other charges imposed pursuant to this Rate Schedule ITS.

SOUTH JERSEY GAS COMPANY

NATURAL GAS VEHICLE (NGV)

APPLICABLE TO:

This service will be available to Commercial and Industrial customers who will utilize natural gas, for the purpose of providing vehicle fuel at Company-operated fueling stations or at separately metered customer-operated fueling stations.

CHARACTER OF SERVICE:

Firm Sales Service or Firm Transportation Service

COMPRESSED NATURAL GAS VEHICLE SERVICE AT COMPANY OPERATED FUELING STATIONS

This part of the service is available for refueling vehicles with compressed natural gas to customers who refuel at Company operated fueling stations. All service at Company operated fueling stations shall be Firm Sales Service. Provided, however, that in the Company's sole discretion, it may allow for Firm Transportation service for a Customer-specific dedicated dispenser or time fill system (separately metered) at a Company operated fueling station.

Rate for Monthly Consumption

Volumetric Charge

C-1: $0.076358 per therm ($0.095448 GGE*)

Distribution Charge: $0.275096 per therm ($0.343870 GGE*)

Compression Charge: $0.745274 per therm ($0.931593 GGE*)

Commodity Charges

All consumption for customers who elected Firm Sales Service

Basic Gas Supply Service ("BGSS") Charge:

See Rider "A" of this Tariff.
BGSS rate * GGE Factor 1.25 = GGE

GGE indicates Gasoline Gallon Equivalent. The gasoline gallon equivalent shall be determined in accordance with local standards. The point of sale price to the Customer shall be displayed in gasoline gallon equivalents at public access dispensers at Company operated fueling stations, and shall be calculated as C-1 + Distribution Charge + Compression Charge + New Jersey Motor Vehicle Fuel Tax + Federal Excise Tax + BGSS.

Commodity charges do not include State of New Jersey Motor vehicle fuel tax and Federal Excise Tax. As of January 1, 2020 these taxes were $0.105 and $0.184 per gallon, respectively and shall be charged at the prevailing rate when applicable. The Company is under no obligation to determine if a customer is exempt from taxation.

SOUTH JERSEY GAS COMPANY

NATURAL GAS VEHICLE (NGV)
(Continued)

NATURAL GAS VEHICLE SERVICE AT CUSTOMER OPERATED FUELING STATIONS

This part of the service is available for the sale of separately metered uncompressed gas for the use of the customer solely as a vehicle fuel as follows:

The customer agrees to obtain and maintain, at its expense, all necessary certificates, licenses and regulatory approvals and pay all taxes levied on the gas compressed for refueling the customer's vehicles;

If the customer provides natural gas for resale as a motor fuel, the customer will be responsible for collecting and paying all applicable taxes on the gas compressed for resale and on the sale thereof and for the metering of such sale in accordance with local standards and regulations; and

The customer must execute a Standard Gas Service Agreement (NGV) for not less than 12 months and must produce evidence of Land Rights.

Rate for Monthly Consumption

Monthly Customer Charge

The monthly customer charge shall be determined in accordance with the maximum delivery capability requested by the customer.

0-999 Cf/hour	$39.984400
1,000-4,999 Cf/hour	$79.968800
5,000-24,999 Cf/hour	$234.575000
25,000 and greater Cf/hour	$986.281250

Volumetric Charges

C-1: $0.076358 per therm ($0.095448 GGE)

Distribution Charge: $0.275096 per therm ($0.343870 GGE)

Basic Gas Supply Service ("BGSS") Charge:

All consumption for customers who elect Firm Sales Service See Rider "A" of this Tariff.

Facilities Charge

All consumption for Customers that elect to have the Company construct Compressed Natural Gas ("CNG") fueling facilities located on Customer's property:

C-2: $0.318911 ($0.398639 GGE)

The customer shall pay all related motor vehicle taxes directly to the taxing entity. Such taxes shall be incremental to charges paid to the Company for the cost of receiving service under this rate schedule.

SOUTH JERSEY GAS COMPANY

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NATURAL GAS VEHICLE (NGV)
(Continued)

DELIVERY SERVICE FOR NATURAL GAS VEHICLES

This part of service is available for delivery of customer owned natural gas for use in compression and dispensing equipment at the Customer's premises, as follows:

The customer must purchase under a contract with an initial term of not less than one year an adequate supply of natural gas of a quality acceptable to the Company, and must make arrangements by which such volumes of natural gas can be delivered into the Company's distribution system at the Customer's expense.

By taking service under this part, the Customer warrants that it has good and legal title to all gas supplied to the Company, and agrees to indemnify, defend and hold the Company harmless from any loss, claims or damages in regard to such title.

Rate for Delivery Service

Monthly Customer Charge

The monthly customer charge shall be determined in accordance with the maximum delivery capability requested by the customer.

0-999 Cf/hour	$39.984400
1,000-4,999 Cf/hour	$79.968800
5,000-24,999 Cf/hour	$234.575000
25,000 and greater Cf/hour	$986.281250

Volumetric Charge

C-1**:** $0.076358 per therm ($0.095448 GGE)

Distribution Charge**:** $0.275096 per therm ($0.343870 GGE)

Facilities Charge

All consumption for Customers that elect to have the Company construct CNG fueling facilities located on Customer's property:

C-2: $0.318911 per therm ($0.398639 GGE)

Sales taxes are not included in the above basic charges. The Company is under no obligation to determine if a customer is exempt from taxation. Customers seeking tax exemption must file verification with the Company.

SOUTH JERSEY GAS COMPANY

NATURAL GAS VEHICLE (NGV)
(Continued)

APPLICABLE RIDERS FOR COMPANY OWNED AND CUSTOMER OWNED STATIONS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff for Firm Sales Service.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "H" of this Tariff.
Balancing Service Clause:	All gas transported under this Rate Schedule NGV is subject to balancing requirements pursuant to Rider "I" or Rider "J" of this Tariff.
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "N" of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on a State, county or municipal government entities.

TERM:

Customer may discontinue service upon written notice to the Company, pursuant to the terms of the Company's Standard Gas Service Agreement (NGV), if applicable, otherwise, in order to effectuate a termination, customer must provide adequate notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

In addition, the term Land Rights shall mean such easements, licenses, consents or similar documents, in recordable form, that the Company deems reasonably sufficient to secure its rights to install equipment necessary to provide NGV service at the Customer's premises.

SPECIAL PROVISIONS:

a) The Company will require, as a condition precedent to the receipt of service under this Rate Schedule NGV, that an eligible customer execute a Standard Gas Service Agreement (NGV), to indicate, among other things, the customer's minimum and maximum capability to utilize gas under Rate Schedule NGV; the level of service; and the customer's Contract Demand.

SOUTH JERSEY GAS COMPANY

NATURAL GAS VEHICLE (NGV)
(Continued)

b) For customers that elect to have the Company construct CNG fueling facilities located on Customer's property, the Company may require in addition to the C-2 Facilities Charge, that a customer agree to pay a Minimum Annual Facilities Charge ("MAFC"), provided that the MACF must be sufficient to enable the Company to fully recover the applicable revenue requirements of all such Company constructed facilities over a negotiated period as set forth in the Standard Gas Service Agreement (NGV). The MACF may be revised or omitted at the expiration of the term of the Standard Gas Service Agreement (NGV). In its sole reasonable discretion, the Company may also require a cash deposit, letter of credit or other security to assure payment of the MAFC.

c) Customer may request that the Company operate and/or maintain CNG fueling facilities located on Customer's property. Dispensing of compressed natural gas into vehicles shall be the sole responsibility of the Customer. Any Company responsibility for operating and/or maintaining CNG fueling facilities shall be delineated in the Standard Service Agreement (NGV). The costs associated with all operation and/or maintenance of CNG fueling facilities located on Customer's property by the Company shall be charged to the Customer as a pass through of actual costs incurred by the Company. The Company may require separate electric metering in instances where the Customer requests that the Company be responsible for contracting of electric supply for the CNG fueling facilities, and the Company agrees to do so.

d) The Company will not accept gas for delivery to Firm Transportation Service customers that will: (1) adversely impact the Company's rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

e) The Firm Transportation Service customer bears sole responsibility for costs incurred to deliver customer owned gas to the Company's City Gate Station and to provide interstate pipeline capacity.

f) The Firm Transportation Service customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in any financial or burdensome administrative obligation; the Company may impose a surcharge therefore.

g) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff. The customer shall furnish an electrical supply and phone line for the operation of the device, in an area acceptable to the Company. The Company shall provide technical assistance in order to minimize the customer's expense for such installation.

h) The rates set forth in the Delivery Charge section of this Rate Schedule NGV assume that the customer receives balancing service under Rider "J" to this Tariff. If the customer selects balancing service under Rider "I" of this Tariff, then the Delivery Charges will be adjusted to reflect the Rider "I" Charges.

SOUTH JERSEY GAS COMPANY

RIDER "A"
BASIC GAS SUPPLY SERVICE CLAUSE ("BGSSC")

APPLICABLE TO:

Rate Schedule RSG	-	Residential Service
Rate Schedule GSG	-	General Service
Rate Schedule GSG-LV	-	General Service – Large Volume
Rate Schedule LVS	-	Large Volume Service
Rate Schedule FES	-	Firm Electric Service
Rate Schedule EGS	-	Electric Generation Service
Rate Schedule EGS-LV	-	Electric Generation Service - Large Volume
Rate Schedule NGV	-	Natural Gas Vehicle

APPLICABLE RATES:

Periodic BGSS Subrider (Effective October 1, 2019)[1]:

Rate Schedule	BGSS Rate Before Taxes (per therm)	BGSS Rate With Taxes (per therm)
RSG	$0.418898	$0.447769
GSG (under 5,000 therms)	$0.418898	$0.447769

Monthly BGSS Subrider (Effective March 1, 2020):

Rate Schedule	BGSS Rate Before Taxes (per therm)	BGSS Rate With Taxes (per therm)
LVS C-2	$0.245289	$0.262194
FES	$0.172434	$0.184318
EGS	$0.303634	$0.324561
EGS-LV Firm C-2	$0.240485	$0.257059
EGS-LV Limited Firm C-2	$0.274461	$0.293378
GSG-LV	$0.303634	$0.324561
GSG (5,000 therms or greater)	$0.303634	$0.324561
NGV	$0.303634	$0.324561

The above Periodic and Monthly BGSS rates shall include the BGSS cost savings established in Rider "M" to this Tariff.

FILING:

This Subrider shall be applicable to all customers served under Rate Schedules RSG, and those GSG customers who do not meet the "Monthly Threshhold". This Periodic BGSS Subrider shall recover gas costs associated with service to customers served under this Subrider.

[1] Reflects currently approved Total BGSS Rate.

SOUTH JERSEY GAS COMPANY

RIDER "A"
BASIC GAS SUPPLY SERVICE CLAUSE ("BGSSC")
(Continued)

PERIODIC BGSS SUBRIDER

The Company shall make an annual Periodic BGSS rate filing by no later than June 1st of each year, proposing a Periodic BGSS rate to be effective on or about the following October 1st. The Company shall have the discretion to file for two self-implementing rate increases, effective December 1st and February 1st, to its Periodic BGSS rate approved in the same BGSS Year. The purpose of each Periodic BGSS filing, shall be to recover gas costs pursuant to this Rider "A" and to achieve a zero or near-zero deferred balance by the following September 30.

Each self-implementing rate increase will be subject to a cap which will limit the increase so that the benchmark residential bill, using 100 therms, will not increase by more than five percent (5%). The self-implementing rate increases shall be pre-conditioned upon written notice by the Company to the BPU Staff and to the Division of Rate Counsel, given no later than November 1 and January 1, of the intention to implement a self-implementing rate increase on or about December 1 and February 1, respectively. The Company shall provide in its written notice the approximate amount of the self-implementing rate increase, based upon then current market data.
The Company shall have the discretion to implement a bill credit or a refund at any time during the BGSS Year with five (5) days notice to the BPU Staff and the Division of Rate Counsel. The Company shall have the discretion to file a self-implementing rate reduction without a cap at any time during the BGSS Year with two (2) weeks notice to the BPU Staff and the Division of Rate Counsel.

The notice of filing and of public hearing in the annual BGSS proceedings shall include the specific rate change proposed to be implemented on October 1st and a paragraph indicating that such proposed rates may be subject to self-implementing rate increases on or about the next December 1st and February 1st, subject to the 5% maximum caps for each of the two self-implementing increases. The notice shall also include the impact of such potential increases on a benchmark 100 therm residential bill.

The annual Periodic BGSS filing shall contain, but not be limited to, the following:

(1) A reconciliation of actual versus estimated costs and revenues from the last Board approved rate change for commodity costs, storage costs, and interstate transportation costs, including the costs and results of any supplies set by hedges;

(2) Projected rates supported by projected volumes, revenues, and commodity costs, transportation costs, storage costs and transaction costs, including the cost of supplies set by hedges;

(3) Deferred balances and the timeframe over which they are proposed to be collected or returned;

(4) A written explanation of the circumstances that caused the deferred balances in (3) above; and

(5) A written explanation of any significant activities or trends which may affect costs for the prospective period.

(6) Updated tariff sheets to reflect any change to the Periodic BGSS rate.

SOUTH JERSEY GAS COMPANY

RIDER "A"
BASIC GAS SUPPLY SERVICE CLAUSE ("BGSSC")
(Continued)

PERIODIC FORMULA:

The formula for determining the annual and self-implementing Periodic BGSS rates shall be the sum of the following:

(1) A Commodity Cost which will be the sum of the weighted average prices including applicable transaction costs of the following categories of gas. Weighted average prices will be calculated based upon projected monthly volumes.

(a) an estimate of the cost of flowing gas, which will be equal to the arithmetic average of

(i) the NYMEX Henry Hub monthly prices as recorded on the close of trading for the forward contract month, estimated for the remaining BGSS Year; and

(ii) the weighted average of the estimated Index Prices, for the respective locations at which the Company purchases its gas, to be published in Inside FERC's Gas Market Report for the remaining BGSS Year; and

(b) any supplies whose price was previously set by hedges or other financial instruments; and

(c) supplies of gas withdrawn from storage.

(2) An estimate of the variable costs of transportation and fuel and line loss shall be made for the remaining BGSS Year, to the extent not included in (1), above.

(3) The Company shall estimate the total Firm Sales to be made during the remaining BGSS Year to customers served under this Subrider. The costs developed in Paragraphs (1) and (2) above shall be divided by such Firm Sales, in order to determine the per therm commodity cost recovery rate.

(4) A Non-Commodity Cost component that includes gas costs other than the Commodity Cost of Gas, including but not limited to all fixed pipeline costs, fixed supplier costs, fixed storage costs, pipeline refunds and similar credits, and other credits directed by the Board. The Non-Commodity Cost component shall be calculated on an equal per-therm basis for the BGSS Year.

(5) A deferred balance that will be returned to or recovered from customers over some future period.

MONTHLY BGSS SUBRIDER

FILING:

This Subrider shall be applicable to all customers served under Rate Schedules LVS, FES, EGS, EGS-LV GSG-LV, NGV and those customers served under Rate Schedule GSG who meet the Monthly Threshold. This Monthly BGSS Subrider shall recover gas costs associated with service to customers served under this Subrider.

SOUTH JERSEY GAS COMPANY

RIDER "A"
BASIC GAS SUPPLY SERVICE CLAUSE ("BGSSC")
(Continued)

The Company will file self-implementing Monthly BGSS rates on the second day following the close of trading of the NYMEX Henry Hub gas contracts for each month. Within each monthly filing, the Company will provide the following:

(1) Documentation regarding the NYMEX Henry Hub close;

(2) Supporting schedules that document the actual/projected costs and sales volumes used to derive the monthly gas cost factor; and

MONTHLY FORMULA:

The formula for determining the Monthly BGSS rate shall be the sum of the following:

(1) The Company will calculate a Commodity Cost which will be comprised of the sum of arithmetic average of

(i) the closing price of the NYMEX Henry Hub gas contract for the following month and

(ii) the weighted average of the estimated Index Prices, for the respective locations at which the Company purchases its gas, to be published in Inside FERC's Gas Market Report for the remaining BGSS Year. Further, the calculation will not include hedging.

(2) An estimate shall be made of the variable costs of transportation and fuel and line loss for the subject month, to the extent not included in (1), above

(3) A Non-Commodity Cost component that includes gas costs other than the Commodity Cost of Gas, including but not limited to all fixed pipeline costs, fixed supplier costs, fixed storage costs, pipeline refunds and similar credits, and other credits directed by the Board. The Non-Commodity Cost component shall be calculated on an equal per-therm basis for the entire BGSS Year. This subparagraph (3) is not applicable to FES customers.

The result of the calculation from the Monthly Formula above shall be adjusted for Rate Schedules LVS and EGS-LV (Firm and Limited Firm) to derive the Monthly BGSS Rates by deducting therefrom the volumetric equivalent of the D-2 charges within the respective Rates Schedules. Said deductions shall be as follows:

Rate Schedule	D-2 Deduction Including Taxes
LVS	$.062367
EGS-LV Firm	$.067501
EGS-LV Limited Firm	$.031183

SOUTH JERSEY GAS COMPANY

RIDER "A"
BASIC GAS SUPPLY SERVICE CLAUSE ("BGSSC")
(Continued)

SPECIAL PROVISIONS:

(1) The self-implementing Periodic BGSS and Monthly BGSS rate filings will be self-implementing compliance filings. The implementation of the rates will not require any further Order of the Board.

(2) Each self-implementing BGSS rate change will be posted on the Company's website within four (4) working days of its submission to the Board. Each other BGSS rate change will be posted on the Company's website within four (4) working days of receipt of a written order from the Board, approving such rate change.

(3) Updated tariff sheets to reflect any change to the Monthly BGSS rate.

(4) Interest shall be passed on to customers through the Periodic BGSS rate at the beginning of each BGSS Year succeeding any BGSS Year in which any monthly gas cost overrecovery has taken place. Any debit or credit balance in the separate deferred revenue or cost of gas accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior months' ending cumulative deferred revenue or cost of gas balances. Interest on such gas costs shall be calculated utilizing the Company's Board-allowed overall rate of return as the same shall be in effect from time to time.

(5) For the transition to the Monthly BGSS, the Company will estimate its net deferred balance as of March 1, 2003. Any underrecovery balance associated with Monthly BGSS customers will be collected over a period of up to twelve months based upon the estimated Firm Sales for the period. At the end of this period, if there is a remaining deferred cost balance to be recovered from the Monthly BGSS customers, the rate component used to recover such balance in the prior twelve month period shall be continued into future months until the deferred balance becomes positive as an overrecovery, which then will be transferred to the Periodic BGSS mechanism.

(6) Gas costs and related recoveries from the Monthly BGSS will flow to the deferred balance in the Periodic BGSS mechanism.

(7) As used in this Tariff, BGSS Year shall mean a twelve (12) month period commencing October 1 and ending September 30.

(8) "Left blank intentionally."

(9) As used in this Rider "A" the term "Monthly Threshold" shall mean an annualized usage of 5,000 therms or more. A customer has the right to request a review for reclassification from monthly back to Periodic BGSS pricing. The Company shall review, once each year, Rate Schedule GSG customers' usage and anytime at the request of an individual customer, for the most recent calendar year to determine which customer(s) meet the Monthly Threshold. If appropriate, the customer will be returned to Periodic BGSS billing.

SOUTH JERSEY GAS COMPANY

RIDER "B"

RESERVED FOR FUTURE USE

SOUTH JERSEY GAS COMPANY

RIDER "C"
TRANSPORTATION INITIATION CLAUSE (TIC)

APPLICABLE TO:

Rate Schedule RSG	-	Residential Service
Rate Schedule GSG	-	General Service

This Rider "C" shall be known as the Transportation Initiation Clause (TIC) and will be charged to all RSG and GSG customers.

PURPOSE OF RIDER "C":

The purpose of the TIC is to enable the Company to recover both capital expenditures and operating costs associated with Electronic Data Interchange (EDI), including consulting costs and transaction costs.

ANNUAL TIC FILING:

On or about July 31 of each year, to be effective the next succeeding November 1, the Company shall file with the Board a proposed TIC rate. The TIC filing will be based upon the costs and expenditures incurred during the previous August 1 through July 31. The costs proposed for recovery will be subject to review for reasonableness, and to assure that they are costs associated with EDI, and not costs which would have been spent for computer upgrades, irrespective of the implementation of EDI.

TIC costs shall be calculated by utilizing the total capital expenditures and operating costs associated with the EDI process, including consulting and transaction costs, net of the TIC over or underrecovery balance, applying monthly carrying costs to the resulting amount using the interest rate applicable to the Company's SBC underrecoveries and overrecoveries. The resulting TIC costs shall be divided by the annual forecasted volumes for the rate classes set forth above. The resulting rate shall be adjusted for all applicable taxes and assessments.

The TIC shall be collected on a per therm basis and shall remain in effect until changed by order of the Board. The TIC charge will be:

$0.002066 per therm

The TIC will be recovered through the Delivery Charge of each of the rate schedules referred to above, and will subject to deferred accounting.

SOUTH JERSEY GAS COMPANY

RIDER "D"
CUSTOMER OWNED GAS CLAUSE (COGC)

APPLICABLE TO:

Rate Schedule EGS-LV	-	Electric Generation Service - Large Volume
Rate Schedule FES	-	Firm Electric Service

This Rider "D" shall be known as the Customer Owned Gas Clause (COGC) and may be offered by the Company, in the Company's sole reasonable discretion to all EGS-LV and FES customers, who hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system. Pursuant to this Rider "D" the Company shall deliver gas made available at the Company's City Gate Station to a designated point of delivery. The character of service under this Rider "D" is Firm Transportation Service.

(1) Customers receiving gas under this Rider "D" shall not pay the C-2 portion of the Volumetric Rate but shall pay all other rates, charges and fees of the applicable Rate Schedule.

(2) The receipt of gas by the Company for transportation under this Rider "D" shall equal the delivery of said gas to the customer on a daily basis, less a percentage for line loss. The line loss factor to be utilized will be the Company-wide line loss percentage.

(3) Any gas delivered by the Company under this Rider "D" shall be deemed gas purchased by a customer under the applicable rate schedule. The terms and conditions of said rate schedule shall be applicable thereto.

(4) The Company will not accept gas for delivery that will: (1) adversely impact the Company's rights to current or future supply or transportation allocations; or (2) impose any financial or burdensome administrative obligation on the Company that would not have existed without acceptance of such delivery by the Company.

(5) The customer bears sole responsibility for costs incurred to deliver customer owned gas to the Company's city gate station.

(6) Customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in connection with the initiation and rendering of service under this Rider D. If the Company has accepted gas for delivery under this Rate Schedule and as a result thereof it incurs any financial or burdensome administrative obligation, the Company may impose a surcharge therefor.

(7) Company retains sole discretion as to whether or not a particular customer or particular customers shall receive service pursuant to this Rider D.

(8) The Company may install an electronic data collection system pursuant to Section 6.1 of the General Terms and Conditions of this Tariff.

SOUTH JERSEY GAS COMPANY

RIDER "D"
CUSTOMER OWNED GAS CLAUSE (COGC)
(Continued)

(9) The existence of imbalances will be determined each day. If at the beginning of a day a customer has an imbalance, the gas to fulfill that customer's daily Contract Demand for that day will be the first gas through the meter on that day.

(10) The Company may waive any charges associated with imbalances, in its sole reasonable discretion, if the customer demonstrates good cause for such imbalances, if the customer presents a plan for eliminating such imbalances, and such plan will not adversely impact service to other customers. The Company may require that such plan be implemented in full, and completed, within a time period specified by the Company in order for such a waiver to take place.

(11) A customer may supply its own interstate pipeline capacity, upon authorization by the Company. The Company may grant such authorization in its sole, reasonable discretion. Should an FES or EGS-LV customer supply its own interstate pipeline capacity, gas delivered to the Company's City Gate Station within that capacity may result in a credit against the D-2 charge. The D-2 charge shall be reduced by a credit which is equal to the amount which the customer pays to the interstate pipeline for such capacity. Provided, however, that no credit shall take place in the event that the interstate pipeline capacity supplied by the customer, has been acquired from sources other than the Company. For FES or EGS-LV customers the credit will be calculated as a demand charge per Mcf. The credits provided for by this Paragraph (11) will not affect any other applicable charges referred to in Paragraphs (1) and (2) of this Rider "D".

(12) A customer scheduling gas for delivery may not schedule less than one dekatherm of gas for delivery under this Rider "D" on any day. All scheduling must be done in whole number dekatherms and not in fractions thereof.

BALANCING SERVICE CLAUSE:

All customer owned gas delivered pursuant to this Rider "D" is also subject to Rider "I" of this Tariff.

SOUTH JERSEY GAS COMPANY

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RIDER "E"
SOCIETAL BENEFITS CLAUSE (SBC)

APPLICABLE TO:

Rate Schedule RSG	-	Residential
Rate Schedule GSG	-	General Service
Rate Schedule GSG-LV	-	General Service – Large Volume
Rate Schedule CTS	-	Comprehensive Transportation Service
Rate Schedule LVS	-	Large Volume Service
Rate Schedule FES	-	Firm Electric Service
Rate Schedule EGS	-	Electric Generation Service
Rate Schedule EGS-LV	-	Electric Generation Service - Large Volume
Rate Schedule IGS	-	Interruptible Gas Service
Rate Schedule ITS	-	Interruptible Transportation Service
Rate Scheduel NGV	-	Natural Gas Vehicle

This Rider "E" shall be known as the Societal Benefits Clause (SBC). The SBC is established pursuant to the provisions of Section 12 of the "Electric Discount and Energy Competition Act", P.L. 1999, c.23. The SBC shall recover: (1) the costs of the Company's Clean Energy Program; and (2) the costs which the Company incurs in connection with manufactured gas plant remediation; and (3) the cost incurred for the statewide Universal Service Fund ("USF") Permanent and Lifeline Credits and Tenants Assistance Program established by Board Order dated July 16, 2003 in docket No. EX000200091; and (4) other costs determined by the Board to be recoverable through the SBC.

With the exception of the Universal Service Fund, interest on SBC underrecoveries and overrecoveries will be calculated at an interest rate ("Interest Rate") which will be adjusted each August 31, and will be based upon seven year constant maturity treasuries as shown in the Federal Reserve Statistical Release on or closest to August 31 of each year, plus sixty (60) basis points. In addition, the Company recovers Manufactured Gas Plant ("MGP") Environmental Remediation Costs through Rider "G" of this Tariff. These Remediation Costs are recovered over periods of seven years, and the Company shall recover interest on resulting unamortized balances at the Interest Rate. The Universal Service Fund section of this Rider "E" contains the calculation of the USF interest rate.

A petition to establish the Societal Benefits Clause will be filed with the Board on or about July 31, of each year.

REMEDIATION ADJUSTMENT CLAUSE AND CLEAN ENERGY PROGRAM CLAUSE:
The Remediation Adjustment Clause ("RAC") shall be calculated in accordance with the provisions of Rider "G" of this Tariff and the Clean Energy Program ("CLEP") Clause shall be calculated in accordance with the provisions of Rider "K" of this Tariff. The charges developed pursuant to Riders "G" and "K" shall be recovered through, and as part of, the SBC. All gas consumed or transported under Rate Schedules RSG, GSG, GSG-LV,EGS, EGS-LV, CTS, LVS, FES, IGS, ITS and NGV shall recover the RAC, in accordance with this Rider "E". All gas consumed or transported under Rate Schedules RSG, GSG, GSG-LV, CTS , LVS, FES, EGS, EGS-LV, ITS and NGV shall recover the CLEP, in accordance with this Rider "E".

OTHER RECOVERABLE EXPENSES:
Other expenses as the Board shall determine to be appropriate for recovery pursuant to the SBC shall be recovered through, and as part of the SBC. All gas consumed or transported under Rate Schedules RSG, GSG, GSG-LV, EGS, CTS and ITS shall recover expenses as the Board shall determine to be appropriate for recovery pursuant to the SBC.

SOUTH JERSEY GAS COMPANY

RIDER "E"
SOCIETAL BENEFITS CLAUSE (SBC)
(Continued)

UNIVERSAL SERVICE FUND:

Pursuant to the "Electric Discount and Energy Competition Act", N.J.S.A. 48:3-49, the Board established the Permanent Universal Service Fund ("USF") and the Lifeline Credit and Tenants Assistance Program ("Lifeline") both of which will be collected from Rate Schedules RSG, GSG, GSG-LV, EGS, EGS-LV, CTS, LVS, FES, IGS, ITS and NGV. The USF and Lifeline factors established in this Rider "E" were set forth by the Board.

Pursuant to Section 12b of the "Electric Discount and Energy Competition Act", N.J.S.A. 48:3-60b, the Board established an Interim Universal Service Fund. All gas consumed under Rate Schedules RSG, GSG, GSG-LV, EGS, EGS-LV, CTS, LVS and FES shall recover the Company's contributions toward the Universal Service Fund (over a twelve month period on a forecasted basis in accordance with this Rider "E").

Pursuant to Section 12b of the "Electric Discount and Energy Competition Act", N.J.S.A. 48:3-60.1, electric generators that use natural gas and/or natural gas delivery service to generate electricity that is sold for resale are to be exempt from paying the societal benefit charge on the throughput used to generate electricity that is sold for resale. In order to determine the percentage of the throughput exmpt from the SBC, a customer must provide a form of Annual Certification which will provide the percentage of the customer's throughput that will be exempt from the SBC. South Jersey Gas will forward the forms to the customer in December to be updated for each subsequent calendar year's actual experience. If the customer does not return the completed forms by January 15, then the SBC will be assessed on all of the customer's usage. If the customer returns the forms on or before January 15, then adjustments to the customer's bills will be made on a prospective basis beginning in February of the subsequent year.That is, commencing in February, the customer's SBC charge will be adjusted based on the percentage of the customer's throughtput from the prior calendar year used to generate electricity that was sold for resale.

The interest rate on USF under and over recoveries shall be the interest rate based on a two-year constant maturity Treasuries as published in the Federal Reserve Statistical Release on the first day of each month (or the closest day thereafter on which the rates are published), plus sixty basis points, but shall not exceed the Company's overall rate of return as authorized by the Board.

Rates subject to this Rider have been adjusted to recover the following Societal Benefit Charges:

Rate Schedule and Appropriate Rate		RAC	CLEP	USF (Including Lifeline)	SBC
Rate Schedule RSG	Delivery	.035278	.025203	.012100	.072581
Rate Schedule GSG	Delivery	.035278	.025203	.012100	.072581
Rate Schedule GSG-LV	Delivery	.035278	.025203	.012100	.072581
Rate Schedule EGS	Delivery	.035278	.025203	.012100	.072581

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RIDER "E"
SOCIETAL BENEFITS CLAUSE (SBC)
(Continued)

Rate Schedule and Appropriate Rate		RAC	CLEP	USF (Including Lifeline)	SBC
Rate Schedule EGS-LV	C-1	.035278	.025203	.012100 [1]	.072581
Rate Schedule CTS	C-1FT	.035278	.025203	.012100	.072581
Rate Schedule LVS	C-1/C-1FT	.035278	.025203	.012100	.072581
Rate Schedule FES	C-1FT	.035278	.025203	.012100	.072581
Rate Schedule IGS	Monthly Rate	.035278	N/A	.012100	.047378
Rate Schedule ITS	Monthly Rate	.035278	.025203	.012100	.072581
Rate Schedule NGV	Delivery	.035278	.025203	.012100	.072581

[1] This element of the Societal Benefits Charge will not be applicable to those customers with special existing contracts limiting their rate exposure, until the expiration of those contracts, in accordance with the Orders of the Board of Public Utilities in Docket No. EX00020091.

SOUTH JERSEY GAS COMPANY

RIDER “F”
TEMPERATURE ADJUSTMENT CLAUSE (TAC)

APPLICABLE TO:

Rate Schedule RSG	-	Residential Service
Rate Schedule GSG	-	General Service
Rate Schedule GSG-LV	-	General Service – Large Volume

(a) This Rider “F” shall be known as the Temperature Adjustment Clause (TAC). It shall be utilized to adjust the Company’s revenues in cases wherein temperatures experienced during a Base Year yield more or less degree days than were experienced on a twenty-year normal basis, plus or minus one-half (1/2%) percent of the sum of the Cumulative Normal Degree Days, for the twenty-year period utilized in the Company's then most recent base rate case. This adjustment will be effectuated through a credit or surcharge applied to customers' bills during the year succeeding the Base Year, which succeeding year shall be known as the Adjustment Year. The credit or surcharge will also be adjusted to reflect Base Year under recoveries or over recoveries pursuant to this TAC.

(b) Each Base Year, and each Adjustment Year shall begin on October 1 and end on May 31 and shall include only the months of October, November, December, January, February, March, April and May.

(c) The Company will determine on a monthly basis, Degree Days, Cumulative Degree Days, Normal Degree Days, Cumulative Normal Degree Days, Deadband Degree Days and Cumulative Deadband Degree Days for each month during the Base Year. Cumulative Deadband Degree Days will be added to or subtracted from Cumulative Normal Degree Days to yield an Upper Level or Lower Level Degree Day Threshold. If the experienced cumulative Degree Days at the end of a Base Year month is higher than the Upper Level of the Degree Day Threshold, or lower than the Lower Level, a Degree Day Adjustment will be made. The factors for use in this TAC are based on the 20-year average calculated in Docket No.GR17010071, and are based upon information obtained from the National Oceanic and Atmospheric Administration (“NOAA”), and will be adjusted in future base rate proceedings. Should a NOAA station utilized by the Company be abandoned, become inoperable, or otherwise become unusable, the Company may substitute data from a nearby NOAA station. When this becomes necessary, the Company will promptly notify the Staff of the Board and the Division of the Ratepayer Advocate. The factors for the TAC are as follows:

	Normal Degree Days	Cumulative Normal Degree Days	Deadband Degree Days	Cumulative Deadband Degree Days
Oct.	243	243	1	1
Nov.	512	755	3	4
Dec.	805	1,560	4	8
Jan.	974	2,534	5	13
Feb.	819	3,353	4	17
Mar.	668	4,021	3	20
Apr.	341	4,362	2	22
May	117	4,479	1	23
TOTAL	4,479		23	

SOUTH JERSEY GAS COMPANY

RIDER "F"
TEMPERATURE ADJUSTMENT CLAUSE (TAC)
(Continued)

Degree Day Threshold

	Upper Level	Lower Level
Oct.	244	242
Nov.	759	751
Dec.	1,568	1,552
Jan.	2,547	2,521
Feb.	3,370	3,336
Mar.	4,041	4,001
Apr.	4,384	4,340
May	4,502	4,456

(d) The Degree Day Adjustment will be multiplied by a Degree Day Consumption Factor to derive the Therm Adjustment. The Degree Day Consumption Factor will be determined by first determining a factor for actual heat sensitive use per degree day per customer, for Rate Schedule RSG, and Rate Schedules GSG and GSG-LV heating load based upon actual usage on a cumulative basis through the end of each Base Year.

(e) The Therm Adjustment will be multiplied by the margin in the respective rate classes resulting in the adjustment to revenue. The margin is then calculated by adjusting out gas costs and associated revenue taxes. This calculation will take place only after Base Year months when the cumulative number of degree days at the end of the Base Year month is higher than the Upper Level of the Degree Day Threshold, or lower than the Lower Level.

(f) On or before August 31 of each Base Year, the Company will file in a petition with the Board, a proposed adjustment factor ("TAC Factor") to be effective in the Adjustment Year following the then current Base Year. The proposed factor shall be the same for each rate schedule and shall be derived based upon the outstanding adjustment after May of each Base Year as developed in Paragraph (e), divided by the projected sales and transportation volumes for both rate schedules. The TAC Factor will be expressed as a rate per unit of sale. The TAC Factor will be effectuated through a credit or surcharge applied to customers' bills during the Adjustment Year. The credit or surcharge will also be adjusted to reflect over or under recoveries from the previous TAC year. The TAC Factor will be effective with the commencement of the Adjustment Year. At the end of the Adjustment Year, the TAC factor will terminate and the Company will file tariff pages with the Board reflecting this termination. It is subject to an earnings review analysis set forth in the Stipulation accepted by the Board in Docket No. GR91071243J.

SOUTH JERSEY GAS COMPANY

RIDER "F"
TEMPERATURE ADJUSTMENT CLAUSE (TAC)
(Continued)

The TAC Factor shall apply to all gas sold and transported under Rate Schedules RSG, GSG and GSG-LV.

The charge will be applied to the Rate Schedule RSG, GSG and GSG-LV Delivery Charges as follows:

	Per Therm
TAC Factor per therm	$0.0000
Applicable Revenue Tax Factor	1.002736
TAC Factor Per Therm	$0.0000
Applicable NJ Sales Tax Factor	1.066250
TAC Factor Per Therm with NJ Sales Tax	$0.0000

(g) The Temperature Adjustment Clause shall not operate to cause the Company to earn in excess of its allowed rate of return on common equity of 10.4% for any twelve month period ending October 31; any revenue which is not recovered will not be deferred. For purposes of this paragraph (g), the Company's rate of return on common equity shall be calculated by dividing the Company's net income for such annual period by the Company's average 13 month common equity balance for such annual period, all data as reflected in the Company's monthly reports to the Board of Public Utilities. The Company's net income shall be calculated by subtracting from total net income the Company's share of margins from: (1) Interruptible Sales; (2) Interruptible Transportation; (3) On-System Capacity Release; (4) Off-System Sales and Capacity Release; and (5) the Storage Incentive Mechanism.

(h) As used in this Rider "F", the following terms shall have the meanings ascribed to them herein:

(i) **"DEGREE DAYS"** is the difference between 65F and the daily mean temperature, on days when the daily mean temperature is below 65F. The daily mean temperature is the simple average of the 24 hourly temperature observations for a day taken at each of the National Oceanic and Atmospheric Administration Measuring points used by the Company. The sum of these differences for every day of the month is total degree days for that month.

RIDER "F"
TEMPERATURE ADJUSTMENT CLAUSE (TAC)
(Continued)

(ii) **"CUMULATIVE DEGREE DAYS"** is the accumulation of total degree days for each month in the Base Year.

(iii) **"NORMAL DEGREE DAYS"** is the level of calendar month degree days to which test year sales volumes were normalized in the base rate proceeding that established the current base rates for the service classifications to which this clause applies.

(iv) **"CUMULATIVE NORMAL DEGREE DAYS"** is the accumulation of normal degree days for each month in the Base Year.

(v) **"DEADBAND DEGREE DAYS"** shall be one-half (1/2%) percent of the Normal Degree Days.

(vi) **"CUMULATIVE DEADBAND DEGREE DAYS"** shall be one-half (1/2%) percent of the Cumulative Normal Degree Days.

Note: Sections (a) through (e) shall be utilized only to calculate the value of the weather-related changes in customer usage. The deadband degree days shall not be included in the calculation. For all other purposes, sections (a) through (e), and section (g), shall be suspended as of October 1, 2006. Section (f) above shall be suspended upon completion of recovery of the TAC Margin Excess and Deficiency for the 2004-2005 and 2005-2006 Base Years, respectively. Such suspensions shall remain in effect for the duration of the Conservation Incentive Program Mechanism, Rider "M".

SOUTH JERSEY GAS COMPANY

RIDER "G"
REMEDIATION ADJUSTMENT CLAUSE (RAC)

APPLICABLE TO:

Rider "E" - Societal Benefits Clause

Ninety days prior to November 1 of each year, the Company shall file with the Board of Public Utilities a Remediation Adjustment Clause (RAC) factor based on remediation costs and third party expenses/claims in the preceding Remediation Year. The RAC factor shall be recovered through, and as part of, the Societal Benefits Clause, Rider "E" to this Tariff.

The RAC Factor will be determined as follows:

I. Definition of Terms Used Herein

1. "Remediation Costs" are defined as all investigations, testing, land acquisition if appropriate, remediation and/or litigation costs/expenses or other liabilities excluding personal injury claims and specifically relating to gas manufacturing facility sites, disposal sites, or sites to which material may have migrated, as a result of the operation or decommissioning of gas manufacturing facilities.

2. "Recovery Year" is defined as each November 1 to October 31 period on a going forward basis, and is the time period over which annual amortizations shall be recovered from customers pursuant to this Rider "G".

3. "Remediation Year" is defined as each August 1 to July 31 period on a going forward basis, and is the time period over which the Remediation Costs are incurred.

4. "Third Party Claims" are all claims brought by the Company against any entity, including insurance companies, from which recoveries of costs may be received and will be charged through the RAC Factor as follows:

a) Fifty percent (50%) of the reasonable transaction costs and expenses in pursuing Third Party Claims shall be included as Remediation Costs and shall be recovered as part of the Remediation Adjustment Clause. The remaining 50% shall be deferred without carrying costs until such time as the specific claim is resolved.

b) In the event that the Company is successful in obtaining a recovery from a Third Party Claim, the Company shall be permitted to retain the deferred 50% share of the reasonable transaction costs and expenses from the recovery associated with that Third Party Claim. The balance of the recovery, if any, shall be applied against the current year's Remediation Costs to be recovered from or credited to ratepayers through the next amortization calculation.

5. "Before Tax Cost Rate" (BTCR) shall be equal to the Before Tax Cost of Capital rate allowed in the Company's most recent base rate case

6. "Deferred Tax Benefit" (DTB) shall be returned to ratepayers during each Recovery Year in an amount equal to those given by the formula:

SOUTH JERSEY GAS COMPANY

RIDER "G"
REMEDIATION ADJUSTMENT CLAUSE (RAC)
(Continued)

$DTB_{n,YR} = ARC_n * [(7-X)/7] * TR_{YR} * IR$

Where:

DTB = The amount of the Deferred Tax Benefit in Recovery Year YR that is to be subtracted from one seventh the amount of the Remediation Costs incurred in Remediation Year n and which is to be recovered in Recovery Year YR.

ARCn = The amount of the Actual Remediation Costs incurred in remediation year n.

X = The number of years that the Actual Remediation Costs incurred in remediation year n have been subject to amortization (X = 1, 2, 3... 6).

TRYR = The effective combined Federal and State income tax rate.

IR = The seven year constant maturity treasuries rate as shown in the Federal Reserve Statistical Release, plus sixty (60) basis points.

7. Sale of Property

a) Generally - Should the Company sell a former manufactured gas plant site, any proceeds of such sale, exclusive of all reasonable expenses associated with such sale and taxes directly related to the sale, but not delinquent real estate taxes, up to the total costs incurred in remediating the specific site, shall be applied against the current year's Remediation Costs to be recovered from or credited to ratepayers. In the event that any proceeds are available above the total Remediation Costs of the site, the balance of the proceeds shall then be shared equally between the Company and the ratepayers.

b) Atlantic Avenue - In the event that the Company sells its property at Atlantic Avenue (and Michigan Avenue), the Company and its ratepayers shall each be entitled to a fifty percent (50%) share of the net proceeds of sale. As to the Atlantic Avenue, net proceeds shall equal gross proceeds less the sum of (1) net book cost as of the closing of sale; (2) costs of sale including professional fees, real estate commissions, taxes and title insurance; and (3) Remediation Costs previously paid by ratepayers relative to Atlantic Avenue.

The gross proceeds of sale shall be first applied to net book cost of the property, then to costs of sale. The Environmental Response costs shall be shared as provided in a), Generally, above. Any excess over Remediation Costs recovered at Atlantic Avenue shall then be shared equally between the Company and its ratepayers as provided in a), Generally, above. Any Remediation Costs incurred after a sale of Atlantic Avenue Property shall be treated as Remediation Costs.

SOUTH JERSEY GAS COMPANY

RIDER "G"
REMEDIATION ADJUSTMENT CLAUSE (RAC)
(Continued)

c) If the Company intends to sell a former manufactured gas plant site, it shall notify and provide the Board with details of any proposed sale at least sixty (60) days prior to any such sale.

II. Determination of the Remediation Adjustment

At least ninety (90) days prior to the commencement of each Recovery Year, the Company shall, among other material, file with the Board and serve upon Rate Counsel, and such other Parties as shall request the same, all bills and receipts relating to as well as a schedule depicting the particular purpose for the expenditure of the amount of any Remediation Costs incurred in the preceding Remediation Year for which it seeks to begin recovery in the upcoming Recovery Year, for each remediation site and a calculation of the proposed Remediation Adjustment Clause level. In that same filing, the Company shall include similar material and information to support any costs/expenses and/or recoveries resulting from Third Party Claims or sales of remediated gas manufacturing sites. The Company shall also submit in its annual filing a projection of Remediation Costs for the following Remediation Year. In addition, the Company will include a listing and status of applicable insurance policies for each site.

The RAC factor shall be calculated by taking one seventh of the Actual Remediation Costs plus applicable Third Party Claims and Sale of Property allocations incurred each year, until fully amortized, less the Deferred Tax Benefit plus the prior years' RAC remediation adjustment. This amount is then divided by the Company's total volume of prospective sales for the upcoming recovery year.

All gas consumed under Rate Schedules RSG, GSG, GSG-LV, CTS, LVS, FES, EGS, EGS-LV, IGS, ITS and NGVshall recover Remediation Costs. The charge brought forward to Rider "E" for these Rate Schedules is as follows:

	RSG, GSG, GSG-LV, EGS, EGS-LV, LVS, FES CTS, IGS, ITS and NGV
Average Cost per therm	$.033003
Applicable Revenue Tax Factor	1.002505
RAC Per Therm	$.033086
Applicable NJ Sales Tax Factor	1.066250
RAC Per Therm with NJ Sales Tax	$.035278 =======

Issued March 13, 2020 **Effective with service rendered**
by South Jersey Gas Company, **on and after April 13, 2020**
D. Robbins, Jr., President
Filed pursuant to Order in Docket No. ___________ of the Board of
Public Utilities, State of New Jersey, dated _____________

SOUTH JERSEY GAS COMPANY

RIDER "G"
REMEDIATION ADJUSTMENT CLAUSE (RAC)
(Continued)

The total annual charge to the Company's ratepayers for Remediation Costs during any Recovery Year shall not exceed five (5) percent of the Company's total revenues from firm gas sales and firm transportation during the preceding Remediation Year. In the event that the total annual charge to the Company's ratepayers for Remediation Costs during any Recovery Year exceeds 5% of the Company's total revenues from firm gas sales and firm transportation during the preceding Remediation Year, the Parties agree that, upon the request of any Party, the Board may reopen consideration of the instant mechanism. If no reopening occurs, and in the event that this limitation results in the Company recovering less than the amount that would otherwise be recovered in a particular Recovery Year, beginning with the date upon which the annual charge would have been effective, carrying costs shall accrue to the Company upon the amount by which the total annual charge to its ratepayers is less than that otherwise allowable.

Carrying costs shall accrue through the Recovery Year in which such amount, together with any accumulated carrying costs, is actually recovered by the Company from its ratepayers and shall accrue at the Before Tax Cost Rate allowed in the Company's most recent base rate case.

III. Tracking the Operation of the Remediation Adjustment Clause

The revenues billed, net of taxes and assessments through the application of the Remediation Adjustment factor shall be accumulated for each month and be applied against the total amortized Remediation Costs calculated for that year. The Remediation Adjustment Clause shall be reconciled annually, with the amount of any projected over- or under-collection to be debited or credited to the total annual Remediation Adjustment Clause level for the following Recovery Year. The over- or under-collection will be based on 10 months actual data and 2 months projected data for the Recovery Year.

SOUTH JERSEY GAS COMPANY

RIDER "H"
2017 TAX ACT

APPLICABLE TO:

Rate Schedule RSG - Residential Service
Rate Schedule GSG - General Service
Rate Schedule GSG-LV - General Service – Large Volume
Rate Schedule CTS – Comprehensive Firm Transportation Service
Rate Schedule LVS - Large Volume Service
Rate Schedule EGS - Electric Generation Service
Rate Schedule EGS-LV - Electric Generation Service - Large Volume
Rate Schedule NGV - Natural Gas Vehicle Service

This Rider "H" shall be known as the 2017 Tax Act Clause. On December 22, 2017, the President signed into law the Tax Cuts and Jobs Act of 2017 (the "Tax Act"). In response thereto, on January 31, 2018, the Board directed utilities to defer with interest the effects of the Tax Act on the books and records of each company effective January 1, 2018. *In the Matter of the New Jersey Board of Public Utilities' Consideration of the Tax Cuts and Jobs Act of 2017*, BPU Docket No. AX18010001 (Order dated January 31, 2018) (the "Board Order").

PURPOSE:

The 2017 Tax Act Clause shall be utilized to refund to customers the "Unprotected" excess deferred income tax balance related to the change in the Federal corporate tax rate from 35% to 21%, resulting from the Tax Act effective January 1, 2018. The total "Unprotected" excess deferred income tax balance shall be refunded to customers over a 5-year period, with interest at the Company's monthly short-term debt rate. This refund will be effectuated through a credit rate applied to customers' bills during the Adjustment Period. The credit rate will also be adjusted to reflect prior year under recoveries or over recoveries pursuant to this 2017 Tax Act Clause.

ANNUAL FILING:

The 2017 Tax Act rate will be effectuated through a volumetric rate applied to customers' bills. The Company shall make an annual true-up filing June 1 of each year, with the rate to be effective the succeeding October 1. The 2017 Tax Act credit will be:

($0.013043) per therm

The 2017 Tax Act Clause will remain in effect until the Company's next base rate case, or until such time as the Board, upon petition by any interested party, shall issue an order terminating the 2017 Tax Act Clause.

SOUTH JERSEY GAS COMPANY

RIDER "I"
BALANCING SERVICE CLAUSE - LARGE VOLUME (BSC-LV)

APPLICABLE TO:

Rate Schedule GSG-LV	-	General Service-Large Volume
Rate Schedule LVS	-	Large Volume Service
Rate Schedule FES	-	Firm Electric Service
Rate Schedule EGS	-	Electric Generation Service
Rate Schedule EGS-LV	-	Electric Generation Service – Large Volume
Rate Schedule ITS	-	Interruptible Transportation Service
Rate Schedule CTS	-	Comprehensive Transportation Service
Rate Schedule NGV	-	Natural Gas Vehicle

This Rider "I" shall be known as the Balancing Service Clause - Large Volume (BSC-LV) and will be applicable to all EGS-LV and FES customers who utilize Rider “D” to this Tariff, and to all LVS and EGS-LV Firm Transportation Service, and ITS customers. This Rider "I" will also be applicable to all Rate Schedule GSG-LV Firm Transportation Service and NGV Firm Transporation customers who have installed electronic meter reading equipment, pursuant to the provisions of Section 6.1 of the General Terms and Conditions of this Tariff and who elect to take their balancing service under this Rider "I", rather than under Rider "J". The Volumetric Charge, under the monthly Rate Section shall be the only element in this Rider applicable to Firm Sales Service customers subscribing to Rate Schedules LVS and EGS-LV.

MONTHLY RATE:

Volumetric Charge:

BS-1: $0.002747 per therm for all gas delivered under Rate Schedules LVS, EGS-LV, FES, NGV and CTS who “opt-out” as provided for in the Standard Gas Service Agreements (LV), (FES) and (EGS).

BS-1: $0.087115 per therm for all gas delivered under Rate Schedules GSG-LV, EGS, and under Rate Schedules LVS, EGS-LV, FES, NGV and CTS who do not “opt-out”, including Firm Sales Service customers

Cash-Out Charges and Credits:

To be determined monthly in accordance with the methodology set forth in Paragraphs (12), (13) and (14) of this Rider "I".

DEFINITIONS:

(1) "Gas Consumption" means the volume of gas utilized by the customer, as measured at the customer's meter. Gas Consumption will be displayed on the Third Party Marketer Portal (the "Portal"). However, the responsibility for balancing shall remain with the customer even if the Portal is inoperative.

(2) On any day during which gas receipts for a customer's account exceed Gas Consumption, after adjustment to reflect line loss and sales authorized by the Company for this customer, a daily "Excess Imbalance" results. Provided, however, that as to those ITS customers, who had an annualized average use of 27 Mcf per day or less of gas, Daily Excess Imbalances shall be computed on a monthly basis.

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RIDER "I"
BALANCING SERVICE CLAUSE - LARGE VOLUME (BSC-LV)
(Continued)

(3) On any day during which Gas Consumption exceeds gas receipts for a customer's account, after adjustment to reflect line loss and sales authorized by the Company, a daily "Deficiency Imbalance" results. Provided, however, that as to those ITS customers, who had an annualized average use of 27 Mcf per day or less of gas, Daily Deficiency Imbalances shall be computed on a monthly basis.

(4) Daily Deficiency Imbalances and Daily Excess Imbalances may be collectively referred to as "Daily Imbalances".

(5) "Net Monthly Imbalance" means the net of a customers Daily Imbalances, if any, during a month. If monthly Gas Consumption exceeds monthly gas receipts for a customer's account, a Monthly Deficiency Imbalance results and if monthly gas receipts exceed monthly Gas Consumption, a Monthly Excess Imbalance results.

BALANCING:

(6) Customers shall use their best efforts to ensure that the daily volumes of gas scheduled for delivery into the Company's system for the customer's account, adjusted to reflect line loss and sales authorized by the Company, equal the volumes of daily Gas Consumption by the customer.

(7) Customers shall be responsible for maintaining a balance between volumes of daily deliveries into the Company's system and daily Gas Consumption, adjusted to reflect line loss and sales authorized by the Company. Customers may maintain a balance through a combination of deliveries for their account and sales authorized by the Company.

(8) Certain levels of Daily Imbalances will be subject to a corrective plan, as provided in Paragraph 9 of this Rider "I". Daily Imbalances of this level will be referred to as "Imbalances Requiring Action" or "IRA". An Excess Imbalance will become an IRA during the winter season if daily receipts exceed daily Gas Consumption by five (5%) percent, and during the summer season if daily receipts exceed daily Gas Consumption by seven and one half (7.5%) percent. A Deficiency Imbalance will become an IRA during the winter season if daily Gas Consumption exceeds daily receipts by five (5%) percent, and during the summer season if daily Gas Consumption exceeds daily receipts by seven and one half (7.5%) percent. The winter season, as used herein, is from November 1 through March 31. The summer season is from April 1 to October 31.

Generally, the existence of an IRA will be determined for each customer, on an individual customer basis. However, for those customers who execute an Aggregation Agreement, acceptable to the Company, IRAs will be determined in the aggregate for all members of the Aggregation Group.

(9) If a customer has an IRA as demonstrated on the Portal, the customer must present a plan within forty-eight (48) hours of such demonstration to eliminate the IRA. Such plan must not, inter alia, adversely impact service to other customers, affect system integrity, or affect the Company's gas supply planning. If the plan presented by the customer is unacceptable to the Company, the Company will present an alternative plan. If the customer fails to present, within 48 hours after such demonstration, a plan to eliminate

SOUTH JERSEY GAS COMPANY

RIDER "I"
BALANCING SERVICE CLAUSE - LARGE VOLUME - (BSC-LV)
(Continued)

such IRA or fails to comply with a plan accepted by or offered by the Company, the customer shall be subject either to (a) billing for volumes of Gas Consumption in excess of receipts at a rate equal to five (5) times the Net Monthly Deficiency Imbalance Cash-Out Charge within this Rider "I", assuming a System Impact Charge of one (1.0); or (b) a buyout of the excess of receipts over volumes of Gas Consumption at a rate equal to one-fifth (1/5) of the Net Monthly Excess Imbalance Cash-Out Credit within this Rider "I", assuming a System Impact Charge of one (1.0).

(10) Notwithstanding any other provision of this Rider "I", if the Company determines in its sole reasonable discretion that it is necessary to do so to alleviate operating conditions which may threaten the integrity of its system, the Company may issue an Operational Flow Order ("OFO") to some or all customers subject to this Rider "I". The Company shall provide customers and their Aggregator/Marketers with notice of an OFO by posting the same on the Portal, and by facsimile transmission. In addition, the Company may provide notice by telephone or otherwise of said OFO. Such notice shall be effective within twenty-four hours of posting unless exigent circumstances require shorter notice, which shorter notice shall be specified in the posting. The OFO may direct, inter alia, the cessation of the creation of Deficiency Imbalances or of Excess Imbalances and that customers make a good faith effort to eliminate existing Deficiency Imbalances or Excess Imbalances. For purposes of this paragraph (10) of this Rider "I" if a customer is a member of a Customer Group pursuant to an Aggregator/Marketer's Agreement, Deficiency Imbalances and Excess Imbalances for that customer and for all members of the Customer Group shall be aggregated. Failure to comply with an OFO Imbalance shall result in the creation of an OFO Deficiency Imbalance or of an OFO Excess Imbalance. The customer may be invoiced for any OFO Deficiency Imbalance or any OFO Excess Imbalance at a rate of $50.00 per Mcf for each day that said OFO Deficiency Imbalance or OFO Excess Imbalance remains in effect. In addition, after the Company has taken the steps set forth in this paragraph (10), any customer failing to adhere to an OFO shall be subject to immediate termination of all gas service.

(11) Any customer receiving service subject to this Rider "I" must maintain computer capability necessary to access the Portal directly or through an Aggregator and/or Marketer pursuant to an Aggregator's/Marketer's Agreement acceptable to the Company. Provided, however, that ITS customers with an annualized average use of 27 Mcf per day or less are exempted from the provisions of this Paragraph (11) of this Rider "I".

CASH-OUT CHARGES AND CREDITS:

(12) A customer or an Aggregator/Marketer authorized to act on a customer's behalf may exchange an imbalance with another customer or Aggregator/Marketer authorized to act on a customer's behalf. In the exchange, a Monthly Deficiency Imbalance may be exchanged for a Monthly Excess Imbalance of equal quantity. The Company will notify the Aggregators/Marketers and customers not represented by an Aggregator/Marketer each month of all outstanding imbalances and shall allow five (5) days to complete exchanges and notify the Company of all exchanges upon a prescribed form

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RIDER " I "
BALANCING SERVICE CLAUSE - LARGE VOLUME (BSC-LV)
(Continued)

(13) Each month, the Company shall "cash out" Net Monthly Deficiency Imbalances as follows:

(a) Customers with a Net Monthly Deficiency Imbalance shall be charged on their bills, for service provided during such month, an amount equal to the product of (i) the Net Monthly Imbalance quantity times (ii) one hundred ten percent (110%) of the simple average of daily postings of Transcontinental Gas Pipe Line Corporation's (Transco's) Zone 6 Daily Midpoint reported each day during the month in which the Deficiency Imbalance occurred, in the Daily Price Survey in the Gas Daily; times (iii) a System Impact Charge ("SIC").

(b) In the case of Monthly Deficiency Imbalance, if:

(i) Monthly Gas Consumption exceeds monthly receipts by seven and one-half (7.5%) percent of Gas Consumption or less, the SIC will be one (1);

(ii) Monthly Gas Consumption exceeds monthly receipts by more than seven and one-half (7.5%) percent but less than fifteen (15%) percent, the SIC will be one and three tenths (1.3);

(iii) Monthly Gas Consumption exceeds monthly receipts by fifteen (15%) percent or more, the SIC will be two (2).

(c) All cash out charges under this Paragraph (12) shall be adjusted by multiplying them by 1.07 to reflect New Jersey Sales and Use Tax.

(14) Each month, the Company shall "cash out" Net Monthly Excess Imbalances as follows:

(a) Customers with a Net Monthly Excess Imbalance shall receive on their bills, for service provided during such month, a credit equal to the product of (i) the Net Monthly Imbalance quantity times (ii) ninety percent (90%) of the simple average of daily postings of Transco's Zone 6 Daily Midpoint reported each day during the month in which the Excess Imbalance occurred, in the Daily Price Survey in the Gas Daily; less (iii) a capacity charge factor of $.0050 per therm; times (iv) a System Impact Charge ("SIC").

(b) In the case of a Monthly Excess Imbalance, if:

(i) Monthly receipts exceed monthly Gas Consumption by seven and one-half (7.5%) percent of Gas Consumption or less, the SIC will be one (1);

(ii) Monthly receipts exceed monthly Gas Consumption by more than seven and one-half (7.5%) percent but less than fifteen (15%) percent, the SIC will be two-thirds (2/3);

(iii) Monthly receipts exceed monthly Gas Consumption by fifteen (15%) percent or more, the SIC will be one-half (1/2).

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RIDER "I"
BALANCING SERVICE CLAUSE - LARGE VOLUME - (BSC-LV)
(Continued)

(15) For purposes of the cash out provisions of this Rider "I", generally, determinations will be made for each customer on an individual customer basis. However, for those customers who execute an Aggregator/Marketer Agreement, acceptable to the Company, "cash out" calculations will be determined in the aggregate for all members of the Aggregate Group.

OTHER PROVISIONS:

(16) All charges under this Rider "I" of this Tariff, as well as charges under Rate Schedules EGS-LV, FES, LVS, ITS, NGV or GSG-LV (if the customer has elected to have transportation charges invoiced by the Aggregator/Marketer), as well as the Aggregator/Marketer's Fee will be invoiced to the Aggregator/Marketer, in accordance with the Aggregator/Marketer's Agreement. Otherwise, charges will be billed to the customer. Payment of all invoices to the Aggregator/Marketer or to the customer must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided, however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the Aggregator/ Marketer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal.

(17) All charges under Rate Schedules GSG-LV, NGV, EGS-LV, FES, LVS or ITS will be invoiced to the individual customers, who shall be solely responsible for these charges, as well as these Rider "I" charges when a customer has no Aggregator/Marketer.

(18) In the event that, during any month the sum of the month-to-date Deficiency Imbalances or Excess Imbalances, for non-Force Majeure reasons, for an Aggregator/Marketer exceeds three (3) times the ACD, the Company will immediately notify the Aggregator /Marketer via telephone, e-mail, facsimile or similar means. If Deficiency Imbalances or Excess Imbalances reach five (5) times the ACD, the following will occur: (1) the Aggregator /Marketer is no longer eligible to function as an Aggregate/Marketer on the Company's system until the conditions set forth in this paragraph (18) are satisfied, but not before the first (1st) day of the following month; and (2) for the balance of the current month and for future months, the affected Aggregator /Marketer's customers will be supplied natural gas by the Company and will be billed on a prorated basis according to the following schedule:

Rate Schedule	Billing Charge
GSG-LV	Monthly BGSS Rate
LVS	Monthly BGSS Rate
FES	Firm Market Volumetric Charge
EGS	Monthly BGSS Rate
EGS-LV	Monthly BGSS Rate
ITS	Monthly Rate pursuant to Rate Schedule IGS
CTS	Monthly BGSS Rate
NGV	Monthly BGSS Rate

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RIDER "I"
BALANCING SERVICE CLAUSE - LARGE VOLUME - (BSC-LV)
(Continued)

Such customers will be charged on a prorated basis upon the appropriate Rate Schedule, including all Special Provisions of the appropriate Rate Schedule for gas delivered, including gas deliveries resulting in imbalances, prior to the implementation of the revised billing rate.

In order to be reinstated as an eligible Aggregator/Marketer, following termination of Aggregator/Marketer status for Deficiency Imbalances or Excess Imbalances as set forth above, the Aggregator/Marketer in addition to meeting all other applicable requirements must post and maintain for one (1) year security in a credit facility satisfactory to the Company in an amount equal to two (2) times that which would otherwise be required by the Company. At the conclusion of that year and assuming no additional occurrence of Deficiency Imbalances or Excess Imbalances as described above, the Aggregator/Marketer will be released from its obligation to provide security in excess of that otherwise required by the Company. If an additional Deficiency Imbalance or Excess Imbalance as described above occurs during that one-year period, the Aggregator/Marketer will be disqualified as an Aggregator/Marketer upon the Company's system for an additional one (1) year period.

As used in this Paragraph (18), ACD shall mean the aggregate of all Contract Demands, expressed in dekatherms, of all customers served by an Aggregator /Marketer under an applicable Rate Schedule. For a customer who does not have a Contract Demand, the Company shall supply a quantity to be used in lieu thereof.

(19) The BS-1 Charge within Volumetric Charge portion of this Rider "I" shall not be applicable to: (i) customers receiving deliveries of gas pursuant to Rate Schedule ITS; and (ii) customers receiving deliveries of gas pursuant to Rate Schedule FES and who utilize Rider "D" to this Tariff.

(20) Any charges imposed pursuant to the above Paragraphs of this Rider "I" shall be in addition to other charges imposed pursuant to this Rider "I".

SOUTH JERSEY GAS COMPANY

RIDER "J"
BALANCING SERVICE CLAUSE - GENERAL SERVICE (BSC-GS)

APPLICABLE TO:

Rate Schedule RSG	-	Residential Service Gas
Rate Schedule GSG	-	General Service Gas
Rate Schedule GSG-LV	-	General Service Gas – Large Volume
Rate Schedule EGS	-	Electric Generation Service
Rate Schedule NGV	-	Natural Gas Vehicle

This Rider "J" shall be known as the Balancing Service Clause - General Service (BSC-GS) and will be applicable to all RSG Firm Transportation Service customers and GSG Firm Transportation Service customers. This Rider “J” will also be applicable to GSG-LV, NGV and EGS Firm Transportation customers who elect to take balancing service under this Rider “J”. Provided, however, that pursuant to the terms of Rider "I" certain GSG-LV, NGV and EGS Firm Transportation Service customers may elect to take balancing service pursuant to Rider "I". The Volumetric Charge, under the Monthly Rate Section, shall be the only element in this Rider applicable to Firm Sales Service customers subscribing to Rate Schedules RSG,GSG, GSG-LV, NGV and EGS.

MONTHLY RATE:

Volumetric Charge:

BS-1: $.087115 per therm for all gas delivered under the applicable rate schedules in addition to the following:

DCQ AND BUY-OUT CHARGE:

(1) "Daily Contract Quantity" (DCQ) for all customers except for Rate Schedule RSG Firm Transportation Service customers shall mean a quantity of gas determined annually by the company. The DCQ shall be determined for each of the forthcoming twelve (12) months by dividing the customer's weather-normalized usage for each of the most recent twelve (12) months by the total number of days in each month. The Company may adjust the customer's DCQ during any twelve (12) month period, due to changes in the customer’s gas equipment or pattern of usage or other acceptable information provided by the customer. For New Customers, the customer's initial DCQ will be estimated by the Company, based upon the rating of the customer's gas equipment and expected utilization of the equipment. Customer will be obligated to deliver or cause to be delivered to the Company's city gate station the customer's DCQ each day for the customer's account.

The DCQ for Rate Schedule RSG Firm Transportation Service customers shall mean a quantity of gas determined by the Company. The DCQ shall be determined separately for Rate Schedule RSG Firm Transportation Service customers who are heating customers, and for those who are non-heating customers (“Heating Group” and “Non-Heating Group”). The DCQ for both the Heating Group and the Non-Heating Group shall be determined on a Company system-wide, weather normalized basis. The Company will determine the DCQ for each customer in the Heating Group, which will be the same for all members of the Heating Group, and for each customer in the Non-Heating Group, which will be the same for all members of the Non-Heating Group, each month. The Aggregator/Marketer will be obligated to deliver or cause to be delivered to the Company’s City Gate Station, each day, the DCQ for each customer within that Aggregator/Marketer’s Aggregated Group.

A review of service provided to Rate Schedule RSG Firm Transportation Service customers shall be performed after twelve (12) months service, and every twelve (12) months thereafter. Upon such review, in the

SOUTH JERSEY GAS COMPANY

RIDER “J”
BALANCING SERVICE CLAUSE - GENERAL SERVICE (BSC-GS)
(Continued)

event that a customer’s account has a negative balance, the Aggregator/Marketer shall have thirty (30) days to pay back such negative balance. Prior to making such pay-back, the Aggregator/Marketer must get approval to do so from the Company, which may, at its sole reasonable discretion, extend the pay-back period. If a negative balance remains after thirty (30) days, the Aggregator/Marketer will be charged the Rate Schedule RSG Firm Sales Service customer rates multiplied by each therm of negative balance. If the customer’s account has a positive balance, the Company will purchase such gas at the Buy-Out Price provided for in this Rider “J”.

(a) At the end of each Winter Season, and at the end of each Summer Season, the Company will calculate the difference between the customer's actual usage and actual deliveries, and will adjust the DCQ beginning with the second month succeeding the end of each Winter Season and each Summer Season by said difference divided by the total number of days remaining in the Winter Season or the Summer Season. Provided that such an adjustment will not decrease any month's adjusted DCQ to a level less than zero. Any such adjustments that result in a particular month's DCQ being less than zero will be carried to a future month.

(b) Upon termination of transportation service under the applicable rate schedules the Company shall review the status of customer's account. In the event that customer's account has a negative balance, the customer shall have thirty days to pay back such negative balance. If any negative balance remains after thirty days, the customer will be charged the Rate Schedule GSG Firm Sales Service rates multiplied by each therm of negative balance. If customer's account has a positive balance, the Company will purchase such gas at the Buy-Out Price.

(2) As used in this Rider "J" “Buy-Out Price”, shall mean a price equal to the lowest price of gas delivered to the Company’s system during the month the positive balance or an Excess Imbalance occurs.

BALANCING:

(3) On any day during which gas receipts for a customer's account exceed DCQ, after adjustment to reflect line loss and sales authorized by the Company for the customer, a daily "Excess Imbalance" results.

(4) On any day during which DCQ exceeds gas receipts for a customer's account, after adjustment to reflect line loss and sales authorized by the Company for the customer, a daily "Deficiency Imbalance" results.

(5) Customers shall use their best efforts to ensure that the daily volumes of gas scheduled for delivery into the Company's system for the customer's account, adjusted to reflect line loss and sales authorized by the Company, are equal to the customers' DCQ.

(6) Each customer shall be responsible for maintaining a balance between volumes of daily deliveries into the Company's system adjusted to reflect line loss and sales authorized by the Company for the customer and the customer's DCQ. Each customer may maintain a balance through a combination of deliveries for its account and sales authorized by the Company.

(7) If, on any day, an Excess Imbalance exists for the account of a customer, the excess may be bought by the Company at one third of the Buy Out Price. Moreover, an Excess Imbalance may not be utilized to discharge a

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RIDER "J"
BALANCING SERVICE CLAUSE - GENERAL SERVICE (BSC-GS)
(Continued)

Deficiency Imbalance or in any other way be utilized by the customer to discharge transportation obligations.

(8) If, on any day, a Deficiency Imbalance up to and including five percent (5%) exists for the account of a customer, the customer may be billed for such Deficiency Imbalance at a rate equal to five (5) times the applicable sales rate under Rate Schedules RSG Firm Sales Service, GSG Firm Sales Service, GSG-LV Firm Sales Service, NGV Firm Sales Service or EGS Firm Sales Service. If, on any day, a Deficiency Imbalance of greater than five percent (5%) exists for a customer's account, the customer may be billed a charge equal to ten (10) times the applicable sales rate under Rate Schedules RSG Firm Sales Service, GSG Firm Sales Service, GSG-LV Firm Sales Service, NGV Firm Sales Service or EGS Firm Sales Service.

(9) Notwithstanding any other provision of this Rider "J", if the Company determines in its sole reasonable discretion that it is necessary to do so to alleviate operating conditions which may threaten the integrity of its system, the Company may issue an Operational Flow Order ("OFO") to some or all customers subject to this Rider "J". The Company shall provide customers and their Aggregator/Marketers with notice of an OFO by posting the same on the Portal, and by facsimile transmission. Alternatively, the Company may provide notice by telephone or otherwise of said OFO. Such notice shall be effective within twenty-four hours of posting unless exigent circumstances require shorter notice, which shorter notice shall be specified in the posting. The OFO may direct, inter alia, the cessation of the creation of Deficiency Imbalances or of Excess Imbalances and that customers make a good faith effort to eliminate existing Deficiency Imbalances or Excess Imbalances. For purposes of this paragraph (9) of this Rider "J" if a customer is a member of a Customer Group pursuant to an Aggregator/Marketer's Agreement, Deficiency Imbalances and Excess Imbalances for that customer and for all members of the Customer Group shall be aggregated. Failure to comply with an OFO shall result in the creation of an OFO Deficiency Imbalance or of an OFO Excess Imbalance. The customer may be invoiced for any OFO Deficiency Imbalance or for any OFO Excess Imbalance at a rate of $50.00 per Mcf of such OFO Deficiency Imbalance or OFO Excess Imbalance for each day that said OFO Deficiency Imbalance or OFO Excess Imbalance remains in effect. In addition, after the Company has taken the steps set forth in this paragraph (9), any customer failing to adhere to an OFO shall be subject to immediate termination of all gas service.

(10) Any customer receiving service subject to this Rider "J" must maintain computer capability necessary to access the Portal directly or through an Aggregator and/or Marketer pursuant to an Aggregator's/Marketer's Agreement acceptable to the Company.

OTHER PROVISIONS:

(11) Under no circumstances shall the Company be obligated to deliver more than the customer's DCQ for the customer's account. Provided, however, that nothing in this paragraph (11) of this Rider "J" shall affect the customer's ability to consume gas in excess of the DCQ. Moreover, if the DCQ shall prove insufficient or excessive in any respect for the customer's needs, the Company shall not assume any responsibility or liability of any kind for such excess or insufficiency.

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RIDER "J"
BALANCING SERVICE CLAUSE - GENERAL SERVICE (BSC-GS)
(Continued)

(12) All charges under this Rider "J" of this Tariff, as well as charges under Rate Schedules RSG Firm Transportation Service, GSG Firm Transportation Service, GSG-LV Firm Transportation Services, NGV Firm Transportation Service or EGS Firm Transportation Service as well as the Aggregator/Marketer's Fee will be invoiced to the Aggregator/Marketer, in accordance with the Aggregator's/Marketer's Agreement. Otherwise, charges will be billed to the customer. Payment of all invoices to the Aggregator/Marketer or to the customer must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided, however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the Aggregator/Marketer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal.

(13) When a customer has no Aggregator/Marketer, all charges under Rate Schedule GSG Firm Transportation Service will be invoiced to the individual customers, who shall be solely responsible for these charges, as well as these Rider "J" charges.

(14) In the event that, during any month the sum of the month-to-date Deficiency Imbalances or Excess Imbalances, for non-Force Majeure reasons, for an Aggregator/Marketer exceeds three (3) times the ADCQ, the Company will immediately notify the Aggregator /Marketer via the telephone, facsimile or similar means. If Deficiency Imbalances or Excess Imbalances reach five (5) times the ADCQ, the following will occur: (1) the Aggregator/Marketer is no longer eligible to function as an Aggregator/Marketer on the Company's system until the conditions set forth in this paragraph (14) are satisfied, but not before the first (1st) day of the following month; and (2) for the balance of the current month and for future months, the affected Aggregator/Marketer's customers will be supplied natural gas by the Company and will be billed on a prorated basis according to the following schedule:

Rate Schedule	Billing Charges
RSG Firm Transportation Service	GSG Monthly BGSS Rate
GSG Firm Transportation Service	GSG Monthly BGSS Rate
GSG-LV Firm Transportation Service	GSG Monthly BGSS Rate
EGS Firm Transportation Service	GSG Monthly BGSS Rate
NVG Firm Transportation Service	GSG Monthly BGSS Rate

Such customers will be charged on a prorated basis upon the appropriate Rate Schedule, including all Special Provisions of the appropriate Rate Schedule for gas delivered, including gas deliveries resulting in imbalances, prior to the implementation of the revised billing rate.

In order to be reinstated as an eligible Aggregator/Marketer, following termination of Aggregator/Marketer status for Deficiency Imbalances or Excess Imbalances as set forth above, the Aggregator/Marketer in addition to meeting all other applicable requirements must post and maintain for one (1) year security in a credit facility satisfactory to the Company in an amount equal to two (2) times that which would otherwise be required by the Company. At the conclusion of that year and assuming no additional occurrence of Deficiency Imbalances or Excess Imbalances as described above, the Aggregator/Marketer will be released from its obligation to provide

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RIDER "J"
BALANCING SERVICE CLAUSE - GENERAL SERVICE (BSC-GS)
(Continued)

security in excess of that otherwise required by the Company. If an additional Deficiency Imbalance or Excess Imbalance as described above occurs during that one-year period, the Aggregator/Marketer will be disqualified as an Aggregator/Marketer upon the Company's system for an additional one (1) year period. As used in this Paragraph (14), ADCQ shall mean the aggregate of all Daily Contract Quantities, expressed in dekatherms, of all customers served by an Aggregator/Marketer under the applicable Rate Schedule.

(15) If an Aggregator/Marketer account is out of balance by more than 25% of the total amount transported in the prior month, the Aggregator/Marketer may be required to modify its deliveries for the following month. In addition, the Company reserves the right to require additional volumes to be delivered for the following month for any volumes owed to the Company.

(16) Any charges imposed pursuant to the above Paragraphs (1) through (14) of this Rider "J" shall be in addition to other charges imposed pursuant to this Rider "J".

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RIDER "K"
CLEAN ENERGY PROGRAM CLAUSE (CLEP)

APPLICABLE TO:

Rider "E" - Societal Benefits Clause

In its annual Societal Benefits Clause Petition, the Company will include data necessary to compute its CLEP factor for the upcoming CLEP Year. The Company's CLEP Plan Year will be the 12 month period ended October 31 of each year.

The CLEP factor set forth in this Rider "K" is calculated annually based upon the projected CLEP costs and an amount that accounts for revenue erosion divided by the projected therm sales. Any difference between the preceding year's costs and recoveries will be added to or deducted from the succeeding year's computation.

The charge brought forward to Rider "E" is as follows:

	RSG, GSG, GSG-LV, CTS Firm, EGS, EGS-LV, FES, LVS, ITS and NGV
Average Cost per Therm	$.023578
Applicable Revenue Tax Factor	1.002505
CLEP per Therm	$.023637
Applicable NJ Sales Tax Factor	1.066250
CLEP per Therm with NJ Sales Tax	$.025203 =======

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RIDER "K"
CLEAN ENERGY PROGRAM CLAUSE (CLEP)
(Continued)

The formula for calculating the CLEP rate is as follows:

$$\frac{CB + RE + [+ RB]}{AS}$$

where:

CB = Approved CLEP costs.

RE = Cumulative annual revenue erosion from the date of effectiveness of the plan until the time that new base rates take effect. Annual erosion is determined by multiplying the projected measured annual decrease in firm sales attributable to implementation of the CLEP by the net margin revenue associated with that decrease in each affected service classification.

RB = Prior year recovery balance.

AS = Projected annual sales for all firm customers except YLS/SLS.

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RIDER "L"
SUT CLAUSE ("SUTC")

APPLICABLE TO:

This Rider "L" is applicable to all Rate Schedules.

In accordance with P .L. 1997, c. 162 (the "Energy Tax Reform Act"), provision for the New Jersey Sales and Use Tax ("SUT") has been included in all rates within the Rate Schedules of this tariff by multiplying the charges that would have applied before application of SUT by the factor 1.066250.

ENERGY TAX REFORM ACT EXEMPTIONS:

A. The Energy Tax Reform Act exempts the following customers from the SUT provision, and when billed to such customers, the charges otherwise applicable under this tariff shall be reduced by the provision for the SUT included therein:

1. Franchised providers of utility services (gas, electricity, water, waste water and telecommunications services provided by local exchange carriers) within the State of New Jersey.

2. Cogenerators in operation, or which have filed an application for an operating permit or a construction permit and a certificate of operation in order to comply with air quality standards under P.L 1954, c. 212 (C.26:2C-1 et seq.) with the New Jersey Department of Environmental Protection, on or before March 10, 1997.

3. Special contract customers for which a customer-specific tax classification was approved by a written Order of the New Jersey Board of Public Utilities prior to January 1, 1998.

4. Agencies or instrumentalities of the federal government.

5. International organizations of which the United States of America is a member.

BUSINESS RETENTION AND RELOCATION ASSISTANCE ACT EXEMPTIONS:

B. The Business Retention and Relocation Assistance Act (P .L. 2004, c. 65) and susbsequent amendment (P.L. 2005, c. 374) exempts the following customers from the SUT provision, and when billed to such customers, the charges otherwise applicable shall be reduced by the provision for the SUT included therein:

1. A qualified business that employs at least 250 people within an enterprise zone, at least 50% of whom are directly employed in a manufacturing process, for the exclusive use or consumption of such business within an enterprise zone, and

2. A group of two or more persons: (a) each of which is a qualified business that are all located within a single redevelopment area adopted pursuant to the "Local Redevelopment and Housing Law," P.L.1992, c.79 (C.40A:12A-1 et seq.); (b) that collectively employ at least 250 people within an enterprise zone, at least 50% of whom are directly employed in a manufacturing process; (c) are each engaged in a vertically

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RIDER "L"
SUT CLAUSE ("SUTC")
(Continued)

integrated business, evidenced by the manufacture and distribution of a product or family of products that, when taken together, are primarily used, packaged and sold as a single product; and (d) collectively use the energy and utility service for the exclusive use or consumption of each of the persons that comprise a group within an enterprise zone.

3. A business facility located within a county that is designated for the 50% tax exemption under section 1 of P.L. 1993, c.373 (C.54:32B-8.45) provided that the business certifies that it employs at least 50 people at that facility, at least 50% of whom are directly employed in a manufacturing process, and provided that the energy and utility services are consumed exclusively at that facility.

A business that meets the requirements in B.1, B.2 or B.3 above shall not be provided the exemption described in this section until it has complied with such requirements for obtaining the exemption as may be provided pursuant to P.L. 1983, c.303 (C.52:27H-60 et seq.) and P.L.1966, c.30 (C.54:32B-1 et seq.) and the Company has received a sales tax exemption letter issued by the New Jersey Department of Treasury, Division of Taxation.

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RIDER "M"
CONSERVATION INCENTIVE PROGRAM ("CIP")

APPLICABLE TO:

Rate Schedule RSG - Residential Service
Rate Schedule GSG - General Service
Rate Schedule GSG-LV - General Service – Large Volume

(a) This Rider "M" shall be known as the Conservation Incentive Program ("CIP"). It shall be utilized to adjust the Company's revenues in cases wherein Actual Usage per Customer experienced during an Annual Period varies from the Baseline Usage per Customer ("BUC"). This adjustment will be effectuated through a credit or surcharge applied to customers' bills during the Adjustment Period. The credit or surcharge will also be adjusted to reflect prior year under recoveries or over recoveries pursuant to this CIP.

(b) The BUC in therms for each Customer Class Group by month is as follows:

Month	Group I: RSG Non-Heating	Group II: RSG Heating	Group III: GSG	Group IV: GSG-LV
Oct.	13.2	34.6	211.2	12,339.4
Nov.	23.2	70.0	341.7	16,681.5
Dec.	40.7	124.2	584.7	24,558.7
Jan.	27.0	157.1	647.1	31,113.3
Feb.	27.5	132.4	675.8	26,681.1
Mar.	24.5	100.3	579.3	22,350.0
Apr.	16.2	50.5	366.4	14,338.3
May	12.4	24.2	338.3	6,984.4
Jun.	10.7	14.7	269.7	6,979.1
Jul.	9.7	13.3	112.8	4,920.5
Aug.	8.7	14.3	125.3	6,053.3
Sep.	9.9	13.5	119.3	5,394.7
Total Annual	223.7	749.1	4,371.6	178,394.3

The BUC shall be reset each time new base rates are placed into effect as the result of a base rate case proceeding.

(c) At the end of the Annual Period, a calculation shall be made that determines for each Customer Class Group the deficiency ("Deficiency") or excess ("Excess") to be surcharged or credited to customers pursuant to the CIP

SOUTH JERSEY GAS COMPANY

RIDER “M”
CONSERVATION INCENTIVE PROGRAM
(Continued)

mechanism. The Deficiency or Excess shall be calculated each month by multiplying the result obtained from subtracting the Baseline Usage per Customer from the Actual Usage per Customer by the actual number of customers, and then multiplying the resulting therms by the Margin Revenue Factor.

(d) Recovery of any Deficiency in accordance with Paragraph (c), above, associated with non-weather related changes in customer usage will be limited to the level of BGSS savings achieved as provided for in the 2014 Order of the Board of Public Utilities in Docket No. GR13030185. The value of the weather-related changes in customer usage shall be calculated in accordance with Rider F to this tariff.

(e) Except as limited by Paragraph (d), above, the amount to be surcharged or credited to the Customer Class Group shall equal the aggregate Deficiency or Excess for all months during the Annual Period determined in accordance with the provisions herein, divided by the FAU for the Customer Class Group.

(f) The currently effective CIP Factor by Customer Class Group are as follows:

	Group I: RSG Non-Heating	Group II: RSG Heating	Group III: GSG	Group IV: GSG-LV
CIP Factors Per Therm	($0.111064)	($0.011621)	($0.019668)	$0.012806
Applicable Revenue Tax Factor	1.002505	1.002505	1.002505	1.002505
CIP Factors Per Therm	($0.111342)	($0.011650)	($0.019717)	$0.012838
Applicable NJ Sales Tax Factor	1.066250	1.066250	1.066250	1.066250
CIP Factors Per Therm with NJ Sales Tax	**($0.118718)**	**($0.012422)**	**($0.021023)**	**$0.013689**

(g) The CIP shall not operate to cause the Company to earn in excess of its allowed rate of return on common equity of 10.4% for any twelve month period ending September 30; any revenue which is not recovered will not be deferred. For purposes of this paragraph (g), the Company's rate of return on common equity shall be calculated by dividing the Company's net income for such annual period by the Company's average 13 month common equity balance for such annual period, all data as reflected in the Company's monthly reports to the Board of Public Utilities. The Company's net income shall be calculated by subtracting from total net income the Company’s share of margins from: (1) Interruptible Sales; (2) Interruptible Transportation; (3) On-System Capacity Release; (4) Off-System Sales and Capacity Release; (5) the Storage Incentive Mechanism, (6) the Energy Efficiency Tracker, (7) the Accelerated Infrastructure Replacement Program and (8) the Storm Hardening and Reliability Program.

(h) As used in this Rider “M”, the following terms shall have the meanings ascribed to them herein:

SOUTH JERSEY GAS COMPANY

RIDER "M"
CONSERVATION INCENTIVE PROGRAM (CIP)
(Continued)

(i) **Actual Number of Customers – t**he Actual Number of Customers ("ANC") shall be determined on a monthly basis for each of the Customer Class Groups to which the CIP Clause applies. The ANC shall equal the aggregate actual booked number of customers for the month as recorded on the Company's books, plus any Incremental Large Customer Count Adjustment for the Customer Class Group.

(ii) **Actual Usage per Customer –** the Actual Usage per Customer ("AUC") shall be determined in therms on a monthly basis for each of the Customer Class Groups to which the CIP applies. The AUC shall equal the aggregate actual booked sales for the month as recorded on the Company's books divided by the Actual Number of Customers for the corresponding month.

(iii) **Adjustment Period –** shall be the calendar year beginning immediately following the conclusion of the Annual Period.

(iv) **Annual Period –** shall be the twelve consecutive months from October 1 of one calendar year through September 30 of the following calendar year.

(v) **Baseline Usage per Customer –** the Baseline Usage per Customer ("BUC") shall be the average normalized consumption per customer by month derived from the Company's most recent base rate case, and stated in therms on a monthly basis for each Customer Class Group to which the CIP applies. The BUC shall be rounded to the nearest one tenth of one therm.

(vi) **Customer Class Group –** For purposes of determining and applying the CIP, customers shall be aggregated into four separate recovery class groups. The Customer Class Groups shall be as follows:

Group I:	RSG (non-heating customers only)
Group II:	RSG (heating customers only)
Group III:	GSG customers
Group IV:	GSG-LV customers

(vii) **Forecast Annual Usage** – the Forecast Annual Usage ("FAU") shall be the projected total annual throughput for all customers within the applicable Customer Class Group. The FAU shall be estimated based on normal weather.

(viii) **Incremental Large Customer Count Adjustment –** the Company shall maintain a list of incremental commercial and industrial customers added to its system on or after September 1, 2017 whose connected load is greater than that typical for the Company's average commercial and industrial customer in the GSG or GSG-LV rate schedules. For purposes of the CIP, large incremental customers shall be those GSG customers whose connected load exceeds 1,200 cubic feet per hour ("CFH") and those GSG-LV customers whose connected load exceeds 50,000 CFH. A new customer at an existing location previously connected to the Company's facilities shall not be considered an incremental customer. The Actual Number of Customers for the Customer Class Group shall be adjusted to reflect the impact of all such incremental commercial or industrial customers. Specifically, the Incremental Large Customer Count Adjustment for the GSG customer class for the applicable month shall equal the aggregate connected load for all new active customers that exceed the 1,200 CFH threshold divided by 600 CFH,

RIDER "M"
CONSERVATION INCENTIVE PROGRAM (CIP)
(Continued)

rounded to the nearest whole number. Similarly, the Incremental Large Customer Count Adjustment for the GSG-LV customer class for the applicable month shall equal the aggregate connected load for all new active customers that exceed the 50,000 CFH threshold divided by 25,000 CFH, rounded to the nearest whole number.

(ix) **Margin Revenue Factor –** the Margin Revenue Factor ("MRF") shall be the base rate, as reflected in Appendix A to this Tariff, applicable to the Customer Class Groups to which the CIP applies, net of any applicable Riders, including taxes. The MRFs by Customer Class Group are as follows:

Group I (RSG non-heating):	$0.856372 per therm
Group II (RSG heating):	$0.856372 per therm
Group III (GSG):	$0.552743 per therm
Group IV (GSG-LV):	$0.313582 per therm

(i) The annual filing for the adjustment to the CIP rate shall be concurrent with the annual filing for BGSS. The CIP factor shall be credited/collected on a per therm basis within the Delivery Charge for all service classifications stated above. The level of BGSS savings referenced in Special Provision (d) to this Rider "M" shall be identified in the annual CIP filing, and serve as an offset to the non-weather related portion of the CIP charge provided in Special Provision (g) to this Rider "M". The Periodic and Monthly BGSS rates identified in Rider "A" to this tariff shall include the BGSS savings, as applicable.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 105**

RIDER "N"
ENERGY EFFICIENCY TRACKER ("EET")

APPLICABLE TO:

Rate Schedule RSG	-	Residential
Rate Schedule GSG	-	General Service
Rate Schedule GSG-LV	-	General Service- Large Volume
Rate Schedule CTS	-	Comprehensive Transportation Service
Rate Schedule LVS	-	Large Volume Service
Rate Schedule FES	-	Firm Electric Service
Rate Schedule EGS	-	Electric Generation Service
Rate Schedule EGS-LV	-	Electric Generation Service- Large Volume
Rate Schedule IGS	-	Interruptible Gas Service
Rate Schedule ITS	-	Interruptible Transportation Service
Rate Schedule NGV	-	Natural Gas Vehicle

This Rider "N" shall be known as the Energy Efficiency Tracker ("EET"). For financial accounting purposes the Company shall record a return on and a return of investments in energy efficiency programs, as approved by the Board at Docket No. GO09010059, in an Order dated July 24, 2009, Docket No. GO12050363, in an Order dated June 21, 2003, Docket No. GR15010090, in an Order dated August 19, 2015 and Docket No. GO18030350, in an Order dated October 29, 2018 and recover all incremental operating and maintenance expenses of the programs, subject to the EET. The calculation will use the weighted average cost of capital as identified in the respective Orders referenced above.

The EET rate will be calculated annually using projected data and subject to a true-up at the end of the EET year (September 30th) with simple interest on net over/under recoveries. Interest associated with over recoveries will be credited against the EET, while interest associated with under recoveries will be charged to the EET. The interest on monthly EET under and over recoveries shall be the interest rate based on the Company's weighted interest rate for the corresponding month obtained on its commercial paper and bank credit lines but shall not exceed the Company's weighted average cost of capital utilized to set rates in its most recent base rate case.

This EET will be effectuated through a volumetric rate applied to customers' bills. The Company shall make an annual EET rate filing in June of each year with a proposed implementation of the revised EET rate in October. Included in the filing will be a list of efficiency programs offered and eligible for recovery under the EET.

The Company shall have the discretion to implement a bill credit or a refund at any time during the EET Year with five (5) days notice to the BPU Staff and the Division of Rate Counsel. The Company shall have the discretion to file a self-implementing EET rate reduction at any time with two (2) weeks notice to the BPU Staff and the Division of Rate Counsel.

Rate Schedules subject to this Rider will be charged the following volumetric rate:

	Tariff Rate
EET Rate per therm	$0.015736
Applicable Revenue Tax	$0.000039
Total EET Rate per therm	$0.015775
Applicable NJ Sales Tax	$0.001045
EET Rate per therm with NJ Sales Tax	$0.016820

Issued March 13, 2020 **Effective with service rendered**
by South Jersey Gas Company, **on and after April 13, 2020**
D. Robbins, Jr., President
Filed pursuant to Order in Docket No. ______________ of the Board of
Public Utilities, State of New Jersey, dated ____________

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS - INDEX

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS - INDEX
(Continued)

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS

1. **GENERAL**

1.1 **FILING AND POSTING OF TARIFF:** A copy of this Tariff is filed with the Board and copies are posted and open to inspection at the offices of the Company. A copy of this Tariff is also available on the Company's website at www.southjerseygas.com.

1.2 **APPLICATION OF TARIFF:** These General Terms and Conditions govern all rate schedules to the extent applicable and are made part of all Standard Gas Service Agreements for the supply of gas service unless specifically modified by the terms of a particular rate schedule or by special terms written in and made a part of a Standard Gas Service Agreement. Failure by the Company to enforce any provisions, terms or conditions set forth in this Tariff shall not be deemed a waiver thereof. If any terms and conditions contained in this Tariff are in conflict with the New Jersey Administrative Code, the New Jersey Administrative Code shall prevail. The Tariff will not be construed to be in conflict with the New Jersey Administrative Code if the Tariff provides for a more liberal treatment of customers than that provided for in the New Jersey Administrative Code.

1.3 **STATEMENTS BY AGENTS:** No representative of the Company has the authority to modify any provisions contained in this Tariff or to bind the Company by any promise or representation contrary hereto.

No modification of the terms and provisions of any Standard Gas Service Agreement shall be effective except by execution of a new Standard Service Agreement.

1.4 **REVISION OF TARIFF:** The Tariff is subject to the lawful orders of the Board. The Company reserves the right at any time and in any manner permitted by law, and the applicable rules and regulations of the Board, to terminate, or to change or modify by revision, amendment, supplement, or otherwise, this Tariff or any part thereof, or any revision or amendment thereof or supplement thereto. All Standard Gas Service Agreements are accepted subject to the above reservations.

2. **OBTAINING SERVICE**

2.1 **APPLICATION FOR SERVICE:** Application for gas service may be made at any office of the Company in person, by telephone, or by mail. Applicant shall indicate conditions under which service will be required and Applicant may be required to sign a Standard Gas Service Agreement covering conditions under which service will be supplied.

2.2 **EXTENSION OF GAS SERVICE:**

2.2.1 **CHARGES**: In addition to the charges set forth in Rate Schedules and Riders included elsewhere in this Tariff, the Company may require additional monthly charges, up-front contributions, or deposits, pursuant to N.J.A.C. 14:3-8.1, *et seq.* These charges shall be increased for any tax consequences to the Company.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

2.2.2 **REFUNDS:** Deposits that are received from customers pursuant to Sections 4 – Extensions of Mains and Services and 5 – Service Connections of the General Terms and Conditions of this Tariff, shall be refunded without interest in accordance with the applicable formula contained in N.J.A.C. 14:3-8.10 and N.J.A.C. 14:3-8.11. In no event shall the Company refund more than the total deposit amount received from the Customer. Any deposit amount not refunded within ten (10) years from the date service was initiated, shall remain with the Company and shall constitute a contribution in aid of construction (“CIAC”).

Deposits that are received from customers pursuant to Section 2 – Obtaining Service of the General Terms and Conditions of this Tariff, shall be refunded in accordance with N.J.A.C. 14:3-3.5.

2.3 **SELECTION OF RATE SCHEDULE:** Company will, upon request, assist the Applicant in selection of the applicable rate. The Company shall determine which rate schedule or rate schedules are available to an Applicant. The Company shall make such determination based upon information supplied by the Applicant or by inspection, at the Company's election. Where more than one rate schedule is available to a particular Applicant , the Company shall have at all times the duty to assist such Applicant in a selection of the rate schedule most favorable for his individual requirements and to make every reasonable effort to insure that such Applicant is served under the most advantageous schedule.

2.3.1 **CHANGE OF RATE SCHEDULE:** Subsequent to initial selection of a rate schedule, customer shall notify Company in writing of any change in the character or use of service which might affect the selection of a rate schedule or provision within a rate schedule. If the change in character or use warrants a change in schedule or provision, said change may commence with the next month's bill.

2.4 **DEPOSIT AND GUARANTEE:** A reasonable deposit or other guarantee satisfactory to the Company may be required from any new or existing customer who has not established credit with the Company or where the credit of such customer has become impaired. For the purposes of requesting a deposit or other guarantee: (1) the credit of a customer is considered impaired if any bills rendered were not paid before the preparation of the customer's immediately succeeding month's bill; and (2) the credit of a customer is considered established if all bills rendered for the last twelve monthly billing periods were paid before the preparation of the customer's immediately succeeding months' bills or as to a New Customer, who provides the Company with a letter of reference from another utility or source acceptable to the Company.

The initial deposit required will be of an amount equal to two times the average monthly charge for the service for a 12-month service period. Such deposit is required as security for the payment of future and final bills and may be required to be paid before the Company will commence or continue to render service. All deposits shall bear such interest as is allowed by the Board, payable at the time that the deposit is refunded or applied to the customer’s account

If a customer's service has been terminated for non-payment of bills, the Company may not condition restoration of service on payment of a deposit. Instead, the Company shall bill the customer for the deposit, and shall allow the customer at least 15 days after the billing for payment of the deposit, or shall make other reasonable payment arrangements with the customer.

GENERAL TERMS AND CONDITIONS
(Continued)

Retention by the Company, prior to final settlement of said deposit, is not a payment or part payment of any bill for service. The Company shall review an RSG customer's account at least once every year and a non-residential customer's account at least once every two years and if such review indicates that the customer has established credit satisfactory to the Company, then the outstanding deposit shall be refunded to the customer. The Company shall afford the customer the option of having the deposit refund applied to the customer's account in the form of a credit or of having the deposit refunded by separate check in a period not to exceed one billing cycle. Notwithstanding a residential customer's credit status, the Company shall credit all accrued interest at least once during each 12 month period, pursuant to N.J.A.C. 14:3-3.5.

The Company also reserves the right to apply a deposit against unpaid bills for service. If such action is taken, the customer will be required to restore the deposit to its original amount. On discontinuance of service, the Company reserves the right to apply said deposit against unpaid bills for service and only the remaining balance of the deposit will be refunded. The Company shall have a reasonable time in which to read the meter and to ascertain that the obligations of the customer have been fully performed before being required to return any deposit.

Deposits may be waived where the circumstances warrant such waiver.

2.5 **LIQUIDATION OF PRIOR DEBTS:** Service will not be supplied by the Company to former customers until such time as any and all indebtedness to the Company for previous service has been paid or otherwise discharged, or until such time as a reasonable deferred payment arrangement acceptable to the Company is established to liquidate such debt.

2.6 **MAIN EXTENSIONS AND SERVICE CONNECTIONS:** An Applicant may be required to make a payment (deposit or contribution in aid of construction) toward the cost of extending gas service to its facility as set forth in Sections 4 and 5 of these General Terms and Conditions.

2.7 **PERMITS AND CERTIFICATES:** The Company, where necessary, will make application for any permits necessary to extend its main and install service connections and shall not be required to furnish service until after such permits are granted. The Applicant may be required to pay the charge, if any, for said permits. The Company may require the Applicant to obtain on the Company's behalf, all necessary instruments providing for easements or rights of way and may require the Applicant to properly record or register such documents with the appropriate authorities. Also, the Company may require the Applicant to obtain permits, consents, and certificates necessary for the introduction of service.

When the Applicant is not the owner of the premises or of intervening property between the premises and the Company's mains, the Applicant may be required to obtain from the proper owner, or owners, the necessary consent to the installation and maintenance in such premises and in or about such intervening property of all necessary equipment for supplying gas.

GENERAL TERMS AND CONDITIONS
(Continued)

2.8 **INTERRUPTIBLE SALES AND TRANSPORTATION SERVICE**: The Company may require a customer who has transferred from a Firm Sales Service or Firm Transportation Service rate schedule to an Interruptible Transportation Service or Interruptible Sales Service Rate Schedule to make a deposit up to the cost of the facilities which the Company installed to provide service under the Firm Rate Schedule. The Company will refund one-half of all revenues received from the customer under the Interruptible Sales Service or Interruptible Transportation Service, less applicable taxes and Applicable Riders, for a period up to eight years. In no event shall more than the original deposit be returned to the customer nor shall any part of the deposit remaining after eight years from the date of the original deposit be returned. The making of a payment shall not give the customer any interest in the facilities, the ownership being vested exclusively in the Company.

3. **CHARACTERISTICS OF SERVICE**

3.1 **CONTINUITY OF SERVICE:** The Company will use reasonable diligence to provide a regular and uninterrupted supply of service, but should the supply be suspended, curtailed or discontinued by the Company for any of the reasons set forth in Section 9 of these General Terms and Conditions, or should the supply of service be interrupted, curtailed, deficient, defective or fail by reason of force majeure or otherwise, the Company shall not be liable for any loss or damage, direct or consequential, resulting from any such suspension, discontinuance, defect, interruption, curtailment, deficiency or failure.

3.2 **EMERGENCIES:** The Company may curtail or interrupt service to any customer or customers, irrespective of rate schedule under which said service is received, in the event of an emergency threatening the integrity of its system if, in its sole judgment, such action will prevent or ameliorate the emergency condition.

3.3 **LIMITATIONS:** The Company reserves the right to place limitations on the amount and character of gas service it will supply; to refuse service to New Customers or to existing customers for additional load if unable to obtain sufficient supply for such service; to reject applications for service or additional service where such service is not available or where such service might affect the supply of gas to other customers or for other good and sufficient reasons.

The Company reserves the right to curtail or discontinue the supply of gas service to the customer in the event of force majeure.

3.4 **NO STANDBY:** Service shall not be provided for standby uses under any rate schedule.

4. **EXTENSIONS OF MAINS AND SERVICES.**

4.1 **INCORPORATION OF N.J.A.C. 14:3-8.1, *et seq.***: Except where otherwise noted in this Tariff, the provisions and definitions within N.J.A.C. 14:3-8.1, *et seq.*, shall be applicable.

4.2 **GENERAL:** The construction of main extensions will be subject to the regulations at N.J.A.C. 14:3-8.1, *et seq.* The Company may construct and will own, and maintain distribution mains located on streets, highways, and right of way, used or usable as a part of its distribution system. The making of a deposit or contribution by the customer, shall not give the customer any interest in the facilities, the ownership being vested exclusively in the Company.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

4.3 **EXTENSIONS REQUESTED BY INDIVIDUAL CUSTOMERS**

4.3.1. **RESIDENTIAL:** The Company will extend its gas mains and services to serve an individual residential customer at no charge where the Extension Cost does not exceed ten (10) times the annual Distribution Revenue at the BUC for the customer's respective Conservation Incentive Program (CIP) Customer Class Group as set forth in Rider "M" to this tariff. The Company may require a deposit equal to the Extension Costs in excess of ten (10) times the annual Distribution Revenue at the BUC for the customer's respective Customer Class Group and shall include any tax consequences to the Company. If the Company accepts an application for an extension, the Company may furnish and place, at no cost to the Customer, up to 200 feet of normal residential facilities. The Company will waive the deposit requirement where the excess cost is $3,000 or less.

4.3.2 **NON-RESIDENTIAL:** The Company will extend its gas mains and services to an individual firm commercial or industrial customer and may require a deposit equal to the Extension Costs, increased by any tax consequences to the Company. The Company will waive the deposit requirement where the excess cost is $3,000 or less. In lieu of a deposit for Extension Costs, the Company and the Customer may agree upon a satisfactory revenue guarantee.

4.4. **EXTENSION OF SERVICE TO MULTI-UNIT RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT**

4.4.1. ALL MULTI-UNIT CUSTOMERS: The Company may require a deposit for an Extension subject to this Section, in an amount no greater than the Extension Cost required to serve the development. The deposit shall be increased by any tax consequences to the Company. The Company will waive the deposit requirement where the excess cost is $3,000 or less. In lieu of a deposit for Extension Costs, the Company and the Customer may agree upon a satisfactory revenue guarantee.

5. **SERVICE CONNECTIONS**

5.1 **GENERAL:** If the Company accepts an application for an Extension, normal residential service connections shall be measured at right angles from the nearest curb line to the Applicant's building, at the point of service entrance designated by the Company. Meters and regulators will be furnished and installed by the Company. The costs of meters and regulators (including the installation) may be waived by the Company.

The Applicant shall consult the Company as to the exact point at which the service pipe will enter the building before installing interior gas piping or starting any other work dependent upon the location of the service pipe. The Company will determine the location of the service pipe depending upon physical constraints in the street and other practical considerations.

Gas service will be supplied to a Applicant 's premises through a single service pipe except where, in the judgment of the Company, its economic considerations; conditions on its distribution system; improvement of service conditions; or volume of the customer's requirements, make it desirable to the Company to install more than one service pipe.

5.2 **CHANGE IN EXISTING INSTALLATIONS:** Change in the existing service pipe and/or metering facilities requested by the customer or Applicant must be approved by the Company and shall be made at the expense of the customer or Applicant.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

6. **METERING AND MEASURING EQUIPMENT**

6.1 **GENERAL:** Company may, at its discretion, install and maintain a single meter or measuring device for service upon each rate schedule under which the customer receives service. Whenever possible, the meter shall be located outside. If the meter cannot be located outside, the meter may be set so it can be read from outside the building, by a remote meter reading device.

When requested by a customer, remote meter reading equipment which transmits the reading on a meter to a repeating register located on the outside of a building, shall be installed, if feasible. However, the Company must be permitted access to the interior meter at all reasonable times. The cost of installation may be borne by the customer. The payment shall not give the customer any interest in the installed equipment, the ownership being vested exclusively in the Company.

If permitted under the applicable rate schedule, the Company may install an electronic data collection system for use in conjunction with the metering of service, and may assess the customer for the cost of said data collection system and the installation thereof. If the Company so elects, the customer shall arrange for or provide, at no cost to the Company, adequate electrical service for the data collection system, a location for the data collection system acceptable to the Company, and a dedicated means of telemetry (telephone, cellular, etc.) for use in connection with the data collection system. The customer shall be responsible for monthly telemetric data charges (telephone, cellular, etc.) for use in connection with the data collection system when electronic data collection is required by the Company.

The Company's equipment shall be replaced whenever deemed necessary and may be removed by the Company at any reasonable time after the discontinuance of service.

The Company will select the type and make of metering equipment and may, from time to time, change or alter such equipment; its sole obligation is to supply meters that will accurately and adequately furnish records for billing purposes.

6.2 **CUSTOMER'S RESPONSIBILITY:** Customer shall furnish and maintain a suitable space for the meter and associated equipment. Such space shall be as near as practicable to the point of service entrance and which shall be adequately ventilated, dry and free of corrosive vapors, not subject to extreme temperatures and shall be readily accessible to employees of the Company. Customer shall not tamper with or remove meters or other equipment, nor permit access thereto except by the Company's authorized employees. In case of loss or damage to the Company's property from the act or negligence of the customer or his agents or servants, or of failure to return equipment supplied by the Company, customer shall pay to the Company the amount of such loss or damage to the property.

A charge may be made for excessive maintenance caused by vandalism and/or repeated damages.

6.3 **ACCESS TO CUSTOMER'S PREMISES:** The Company, or duly authorized government employees, shall have the right of reasonable access to customer's premises, and to all property furnished by the Company, at all reasonable times for the purpose of inspection of customer's premises incident to the rendering of service, reading meters or inspecting, testing, or repairing its facilities used in connection with supplying the service, or for the removal of its property.

GENERAL TERMS AND CONDITONS
(Continued)

6.4 **AUTHORIZATION TO TURN ON GAS:** Only duly authorized employees or agents of the Company shall be permitted to turn on gas into any new system, or into any old system, of piping from which the use of gas service has been discontinued. This pertains to both Company facilities, such as mains and services, and customer house lines.

6.5 **SUBMETERING:** Submetering is the practice in which a customer buys gas pursuant to the Company's rate schedules and resells it through some metering device at a profit. Submetering is specifically prohibited.

6.6 **CHECK METERING**

6.6.1 **GENERAL:** Check metering is the practice in which a customer, through the use of a gas check meter, monitors or evaluates his own consumption or the consumption of a tenant for accounting or conservation purposes.

Check meters are equipment for the measurement of volumes of gas consumption. Check meter may be utilized by a customer to resell gas. If the customer charges the tenant for the usage incurred by the tenant, reasonable administrative expenses may be included, which charges shall not exceed the amount the Company would have charged such tenant if the tenant had been served and billed by the Company directly.

Check metering, as defined above, is permitted in new or existing buildings or premises where the basic characteristic of use is industrial or commercial. Check metering is not permitted in new or existing buildings or premises where the basic characteristic of use is residential except for condominiums or cooperative housing, or where such buildings or premises are publicly financed or government owned or are eleemosynary in nature.

If a customer is permitted to utilize check metering, then all gas consuming devices within any dwelling unit at customer's location must be metered through a single check meter.

6.6.2 **INSTALLATION OF CHECK METERING EQUIPMENT:** The customer acting jointly with the Company may install, maintain and operate, at customer's expense, such check metering equipment as desired, provided that such equipment shall be so installed as not to interfere with the operations of Company's measuring equipment at or near the point of delivery.

6.6.3 **CUSTOMER'S RESPONSIBILITY:** Prior to installing any check metering equipment a customer is required to contact the Company, so that the Company may determine whether a proposed check metering installation may result in a pressure drop to the customer's premises. If the Company believes it necessary for such a determination, the Company may require the customer to submit detailed plans and specifications related to the proposed installation. If the Company believes that a significant pressure drop may occur, the Company will reject the proposed installation.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITONS
(Continued)

6.6.4 **HOLD HARMLESS:** The ownership of all check metering devices is that of the customer, and customer shall be responsible for all incidents in connection with said ownership, including accuracy of the equipment, meter reading and billing, liability arising from the presence, installation and operation of the equipment and the maintenance and repair of the equipment. Any additional costs which may result from and are attributable to the presence, installation and operation of check metering shall be borne by the customer.

This hold harmless provision shall include, but not be limited to, claims for damages caused by an unsafe presence, installation or operation of said device by the customer, claims of improper invoicing by the customer, attorney's fees and related costs.

6.7 **RESERVED FOR FUTURE USE.**

6.8 **INSTALLATION OF MEASURING EQUIPMENT:** All installations of measuring equipment applying to or affecting deliveries hereunder shall be made in such manner as to permit an accurate determination of the quantity of gas delivered and ready verification of the accuracy of measurement. Care should be exercised by customer in the installation, maintenance, and operation of pressure regulating equipment so as to prevent any inaccuracy in the determination of the volume of gas delivered hereunder.

6.9 **ADJUSTMENT AND MAINTENANCE OF MEASURING EQUIPMENT:** Each party shall have the right to be present at the time of installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with measuring equipment involved in billing and used in measuring or checking the measurement of deliveries hereunder. The records from such measuring equipment shall remain the property of their owner, but upon request, each will submit to the other its records and charts, together with calculations therefrom for inspection and verification, subject to return within ten (10) days after the receipt thereof.

6.10 **TEST OF METERING AND MEASURING EQUIPMENT:** The accuracy of Company's meters and measuring equipment shall be verified by Company at reasonable intervals, and, if requested, in the presence of representatives of customer. In the event that the customer requests a special test of any equipment, the parties shall cooperate to secure a prompt verification of the accuracy of such equipment. The expense of such special tests shall be borne by customer if the request for such tests is made more frequently than once every 12 months.

6.11 **TEST AND ADJUSTMENT OF METERING AND MEASURING EQUIPMENT:** If, upon testing, any metering or measuring equipment, including recording calorimeter, is found to be in error of not more than two percent (2%), previous recordings of such equipment shall be considered accurate in computing deliveries hereunder, but such equipment shall be adjusted to record correctly. If, upon test, any metering or measuring equipment shall be found to be inaccurate by an amount of two percent (2%) or more fast or slow, the equipment shall be adjusted to record correctly, and the volume of gas delivered hereunder may be corrected to zero error.

6.11.1 **BILLING ADJUSTMENT:** If, upon test, any metering or measuring equipment is found to be two percent (2%) or more fast, a billing adjustment will be made to the customer's account in the following manner: (1) If the date when the

GENERAL TERMS AND CONDITIONS
(Continued)

meter had first become inaccurate can be definitely ascertained, then the adjustment shall be such percentage as the meter is found to be in error at the time of test adjustment to 100 percent on the amount of the bills covering the entire period that the meter registered inaccurately. (2) In all other cases the adjustment shall be such percentage as the meter is found to be in error at the time of test on one-half of the total amount of the billing affected by the fast meter adjusted to 100 percent since the previous test, but not to exceed a period of 6 years for meters subject to testing by an approved scientific sampling technique. (3) No adjustment shall be made for a meter that is found to be registering less than 100 percent except in the case of meter tampering, nonregistering meters or in circumstances in which the customer should reasonably have known that his bill did not reflect customer usage.

6.12 **TAMPERING:** In the event it is established that the Company's services, meters, regulators, or other equipment on the customer's premises have been tampered with, the responsible party shall be required to bear all of the costs incurred by the Company including, but not limited to, the following: (a) investigations, (b) inspections, (c) cost of criminal prosecution or civil litigation, (d) legal fees, and (e) installation of any protective equipment deemed necessary by the Company. The responsible party shall be the party who either tampered with or caused the tampering with a meter or other equipment or knowingly received the benefit of tampering caused by another.

Furthermore, when tampering with the Company's or customer's facilities results in incorrect measurement or the omission of measurement of the service supplied, the customer shall pay for such service, as the Company may estimate from available information, to have been used.

6.12.1 **DIVERSION OF SERVICE:** When tampering is identified as affecting a tenant-customer's consumption, as a result of service being used by a beneficiary other than the tenant-customer of record without his or her knowledge or cooperation, then the Board's regulation pursuant to N.J.A.C. 14:3-7.8 shall apply. A tenant-customer is considered to be the residential customer of record, who rents a dwelling unit in a multi-family building or owns a condominium. The beneficiary is considered to be the person, corporation or other entity financially benefiting from tampering resulting in a diversion of service.

6.13 **SEALS AND LOCKS:** The Company shall seal and may lock all meters or enclosures containing meters and associated metering equipment. No person except a duly authorized employee of the Company shall break or remove a Company seal or lock.

6.14 **PRIORITY OF BILLING:** As between gas purchased or delivered on any firm rate schedule and gas purchased or transported on any interruptible rate schedule, the firm gas will be first through the meter. As between any gas transported on Rate Schedule ITS or delivered under Rider “D” of this Tariff, on the one hand, and, gas purchased under any rate schedule, on the other, the transported or delivered gas will be first through the meter.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

7. **CUSTOMER'S INSTALLATION**

7.1 **GENERAL:** The customer is responsible for protecting and maintaining the Company's facilities on the customer's premises.

No material change in the size, total capacity, or method of operation of customer's equipment shall be made without previous written notice to the Company.

The Company gives no warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structure, equipment, wires, pipes, appliances or devices used by the customer.

7.2 **PIPING AND EQUIPMENT:** All gas equipment shall have the approval of the duly constituted authorities having jurisdiction. All gas piping and equipment shall be installed and maintained by the customer in conformance with the Company's rules and regulations available in booklet form on request, and in conformance with all lawful requirements of municipal or other properly constituted public authorities.

7.3 **ADEQUACY AND SAFETY OF CUSTOMER'S INSTALLATION:** The Company shall not be required to supply gas service until the customer's installation shall have been approved by the authorities having jurisdiction. The Company further reserves the right to withhold its service, or to discontinue its service, whenever such installation or part thereof is deemed by the Company to be unsafe, inadequate, or unsuitable for receiving service, or to interfere with or impair the continuity or quality of service to the customer or to others. In all cases, no final connection between the Company's equipment and the Customer's installation shall be made without final inspection from the Department of Community Affairs or its designee.

Customer's appliances, piping and installation shall be made and maintained in accordance with the specifications set forth in the Fuel Gas Subcode of the Uniform Construction Code and such other regulations as may be determined from time to time by any governmental agency having jurisdiction over customer's installation.

7.4 **BACK PRESSURE AND SUCTION:** When the nature of the customer's gas equipment is such that it may cause back pressure or suction in the piping system, meters, or other associated equipment of the Company, suitable protective devices, subject to approval by the Company, shall be furnished, installed, and maintained by the customer.

7.5 **MAINTENANCE OF CUSTOMER'S INSTALLATION:** Customer's entire installation shall be maintained by the customer in the condition required by the municipal or other public authorities having jurisdiction and by the Company.

7.6 **COMPANY INSPECTION:** The Company reserves the right to inspect the customer's premises from time to time to ensure compliance with the General Terms and Conditions and the applicable rate schedule of this Tariff.

7.7 **LEAKAGE:** Customer shall immediately give notice to the Company at its office of any escape of gas in or about the customer's premises.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

7.8 **CUSTOMER RELEASE OR INDEMNITY:** Customer releases and shall indemnify and save harmless the Company from all loss, cost, expense, or liability for personal injuries or loss of life, or for damages, direct or consequential, which may arise out of, or result from, the use of gas service on customer's premises, or from the presence upon such premises, of any of the equipment of the Company, except for general or direct damages that follow from the Company's negligence, recklessness, or willful misconduct.

8. **METER READING AND BILLING**

8.1 **EVIDENCE OF CONSUMPTION:** The quantity of gas measured by the Company's meter shall be final and conclusive for billing purposes, unless adjustment thereof is appropriate pursuant to these General Terms and Conditions and N.J.A.C 14:3-4.5.

8.2 **DETERMINATION OF GAS VOLUMES DELIVERED:** The volume of gas delivered in the billing period is the consumption recorded on standard metering devices.

Where applicable, these volumes will be converted for any or all of the following conditions:

(1) The temperature of the gas passing the meters described herein shall be determined by means of a continuously indicating meter of standard manufacture so installed that it may properly indicate the temperature of gas flowing through the meter or meters. The arithmetic average of the twenty-four (24) hour record, or of so much of the twenty-four (24) hours as gas has been passing if gas had not been passing during the entire period, from the indicating thermometer, shall be deemed to be the gas temperature for the day and shall be used in computing gas volume.

(2) The specific gravity of gas shall be determined for any one day by the use of the continuous recording gravitometer used by Company's Supplier to determine the specific gravity of gas delivered to Company. The arithmetic average of the specific gravity recorded each day shall be used in computing the volumes of gas delivered. During such time or times as the said gravitometer shall not be in service, the specific gravity of the gas delivered shall be determined by the use of an approved specific gravity balance with such reasonable frequency as is found expedient in practice, but not less frequently than once each month.

(3) The unit of volume for the purpose of measurement as referred to herein shall be one (1) cubic foot of gas at a temperature of 60 degrees Fahrenheit and at an absolute atmospheric pressure of fourteen and seventy-three hundredths (14.73) pounds per square inch. The average absolute atmospheric pressure shall be assumed to be fourteen and seventy-three hundredths (14.73) pounds per square inch, irrespective of actual elevation of location of the point of delivery above sea level of variations in such atmospheric pressure from time to time.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

(4) The deviation of the natural gas from Boyle's Law as described hereunder, shall be determined by periodic tests. The apparatus and the method to be used in making such tests shall be in accordance with the recommendations of the National Bureau of Standards of the Department of Commerce, or of the U.S. Bureau of Mines of the Department of the Interior, or any other method or methods mutually agreed upon. The results of such tests shall be used in computing the volume of gas delivered hereunder.

8.3 **DETERMINATION OF BILLING UNIT:** The billing unit of the gas deliverable hereunder shall be therms, and the number of therms delivered shall be determined by multiplying the number of cubic feet of gas delivered by the therm factor.

8.4 **DETERMINATION OF THERM FACTOR:** The average total therm factor of the gas per cubic foot referred to herein shall be determined by means of Company's recording calorimeter and corrected for a water vapor free basis. The arithmetic average of the twenty-four (24) hour period, or so much of the twenty-four (24) hours as gas has been passing if gas has not been passed during the entire period, from the recording calorimeter, shall be deemed to be the total therm factor of the gas for that day.

The billing month's therm factor is the month's average of daily therm factors, computed at the end of the preceding billing month.

8.5 **TURN ON READING:** Any customer initiating the use of gas in violation of these General Terms and Conditions without making application for service and enabling the Company to read the meter, will be held liable for service supplied to the premises from the last meter reading immediately preceding customer's occupancy, as shown by the records of the Company.

8.6 **FINAL READING:** A customer requesting to discontinue service must give adequate notice as provided for in the applicable rate schedule in order to allow the Company to secure a final reading during normal business hours. Where such notice is not received by the Company, customer shall be liable for service until final reading of the meter is taken. Notice to discontinue service will not relieve a customer from any contractual obligations, including any minimum or guaranteed payment under any contract or rate schedule.

8.7 **METER READING:** Meters will be read on a monthly basis.

8.8 **COMBINED BILLING:** Where service through more than one meter to a single customer on a given rate is permitted by the Company, the use determined by the individual meters will be combined for billing purposes.

8.9 **ESTIMATED BILLS:** When the Company is unable to read the meter, Company may estimate the amount of gas supplied and submit an estimated bill, so marked. Adjustment of such estimated use to actual use will be made when an actual meter reading is obtained.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

8.10 **BILLING PERIOD:** Bills for service furnished will be normally rendered monthly and shall be due and payable within fifteen (15) days of the mailing date.

8.11 **PRORATION OF BILLS:** When the billing month is greater or less than thirty (30) days, customer bills will be computed by prorating the Applicable rates in all rate schedules and customer charges in Rate Schedules RSG, GSG, GSG-LV, and EGS on the basis of the relationship between the number of days covered by the billing period and thirty (30) days, except as provided for in a specific rate schedule.

8.12 **EQUAL PAYMENT PLAN:** The Company will provide to customers, on request, an equal payment plan in conformity with N.J.A.C. 14:3-7.5. Further, there shall be at least one comparison of actual bills, based on meter readings to the monthly budget amount, and if this comparison reveals an increase or decrease of 25 percent or more of the monthly budget amount, the monthly budget amount will be adjusted upwards or downwards, as the case may be, for the balance of the budget plan year.

The Company will give the customer a written notice of the revised budget figure at least 10 working days before the due date of the initial bill of the next budget plan year.

8.13 **BILLING ADJUSTMENTS:** Except as provided in Sections 6.11 and 6.12 of these General Terms and Conditions, when for any reason a meter fails to register the full use of gas, or fails to register within the limits of accuracy prescribed by the Board, customer's use of gas will be estimated by Company on the basis of available data and charges will be adjusted accordingly. The maximum time to pay for the charge will be equal to the length of time that the meter failed to register.

9. CAUSES FOR DISCONTINUANCE OF SERVICE

9.1 **BY THE COMPANY:** Company shall have the right to suspend or discontinue its service for any of the following reasons:

(1) To make repairs, changes, or improvements to any part of its system;

(2) For compliance in good faith with any governmental order or directive; whether Federal, State, municipal, or otherwise, notwithstanding such order or directive subsequently may be held to be invalid;

(3) Non-payment of any bill for service furnished at the present or a previous location, or place of business; However, non-payment for business service shall not be a reason for discontinuance of customer's residential service except in cases of diversion of service pursuant to N.J.A.C. 14:3-7.8;

(4) Tampering with any pipe, meter, or other facility of the Company;

(5) Fraudulent representation in relation to use of gas service;

(6) Failure of the customer to comply with any of these General Terms and Conditions;

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

(7) Delivering gas service to others without the Company's approval, except as permitted under Section 6.6 CHECK METERING.

(8) Failure to make or increase an advance payment or deposit when requested by the Company, provided that the customer had advance notice of the request for said advance payment of deposit;

(9) Refusal to contract for service;

(10) If in the judgment of the Company, customer's installation has become dangerous or defective;

(11) If customer's equipment or use thereof injuriously affects the quality of Company's service to other customers;

(12) Unauthorized increases in the size or total capacity of customer's equipment;

(13) In the event Company is prevented access to its meter or other service facilities, or in the event access thereto is obstructed or hazardous, or for other violation of Company's rules and regulations;

(14) Refusal of a customer receiving interruptible service, to discontinue the use of gas after proper notification;

9.2 **NON-WAIVERS:** Should gas service be terminated for any of the above reasons, such termination shall not be deemed a waiver of any other remedy available to the Company. Failure of the Company to exercise its right to terminate, or any other right, shall not be deemed a waiver of such right.

9.3 **RESTORATION OF SERVICE:** The Company shall restore service upon a proper application by a customer when the conditions under which service was discontinued are corrected, and upon the payment of all proper charges due from the customer provided for in this Tariff, or if the Board so directs when a complaint involving such matter is pending before the Board.

10. **MISCELLANEOUS SERVICE CHARGES**

10.1 **TURN ON CHARGE:** A turn on charge of $45.00 may be made for each activation of service whether for initial service (by meter turn-on or meter reading in the case of a service transfer) or reactivation of service where Company personnel are required to travel to the service location.

10.2 **RETURNED BANK ITEM:** A charge of $19.00 may be made to reimburse the Company for the expense of processing items returned by the bank as uncollectible on customer's account.

10.3 **TRANSFER OF SERVICE CHARGE:** A charge of $7.00 may be made to transfer service between customers when the customer calls in a meter reading to the Company or exercises other

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

alternatives offered to the customer by the Company to transfer service when no Company personnel are required to travel to the service location.

10.4 **FIELD COLLECTION FEE:** A charge of $12.00 may be made for each visit Company personnel make to a customer's location in an effort to collect overdue payments.

10.5 **APPLICATION FEE:** The Company may charge customers $15.00 to process applications for service which require the installation of a new Service Connection.

10.6 **TRANSPORTATION INITIATION FEE:** Except for customers receiving Firm Transportation Service under Rate Schedule RSG, and customers receiving Firm Transportation Service under Rate Schedule GSG, and consuming on average less than 3,000 Dts per year, the Company may charge customers $50.00 to initiate transportation of gas for the customer's account under any Rate Schedule or Rider in this Tariff, or may charge $50.00 if a customer changes its Aggregator/Marketer.

10.7 **ADJUSTMENT AND REPAIR OF APPLIANCES:** Company will provide free service as follows:
Meter turn off
Appliance light up at time of meter turn on
Original adjustment on appliances
Normal pilot adjustment or cleaning (except during September and October)
Normal adjustment of gas burners (except during September and October)
Investigation for gas leaks and other safety related calls

Other services are provided at a charge.

11. **CONDITIONS UNDER WHICH RATE DISCOUNTS SHALL BE CONSIDERED**
The following General Terms and Conditions are applicable to all customers seeking a rate discount, including EGS-LV and FES customers.

11.1 **CUSTOMERS WITH THE ABILITY TO BYPASS**
Customers requesting a discounted rate due to the ability to bypass the Company's facilities need to supply the following minimum requirements; (i) a statement from the interstate pipeline that the proposed interconnection is operationally viable, that sufficient capacity is available and the pipeline would serve the party if requested; (ii) maps or flow diagrams identifing the route of the pipeline from the interconnection with the pipeline and the customer's site, the size of the connecting pipeline and any other appurtenant facilities required; (iii) engineering studies related to the estimated costs to complete construction; and (iv) status of all reliability and environmental permits from State and Federal agencies. Any individually negotiated rates agreed to pursuant to this tariff provision are subject to prior approval by the New Jersey Board of Public Utilities.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

11.2 **CUSTOMERS WITH CIRCUMSTANCES OTHER THAN THE ABILITY TO PHYSICALLY BYPASS**

Customers may request a discounted rate for reasons other than physical bypass of the Company's facilities. In this situation, the application for such discounted rates submitted to the Board of Public Utilities shall explain the reasons for the request and provide ample support for the request, including but not limited to whether the discounted rate is in the public interest, how the discounted rate would spur economic development, and/or how the discounted rate would benefit the Company's ratepayers. Any individually negotiated rates agreed to pursuant to this tariff provision are subject to prior approval by the New Jersey Board of Public Utilities.

12. **DEFINITIONS**

"AGGREGATOR/MARKETER" is used herein to mean a business entity transacting business as an Aggregator of gas or as a Marketer of gas.

"**AFFILIATE**" is used herein to mean an entity controlled by or under common control with the entity with which it is affiliated.

"ALTERNATE FUEL CAPABILITY" is used herein to mean situations where an alternate fuel is installed and can be utilized in customer's equipment: provided, however, where the use of natural gas is for plant protection, feedstock, or process uses and the only alternate fuel is propane or other gaseous fuel, then the customer will be treated as having no Alternate Fuel Capability.

"APPLICANT FOR AN EXTENSION" is used herein to mean a person or entity that has applied to the Company for construction of an Extension, hereinafter referred to as Applicant.

"BASE PERIOD BILLING" is used herein to mean the number of therms billed to a customer at the qualifying existing facility during the corresponding billing month of the twelve months immediately preceding the billing month to which the customer first applied for service.

"BASIC GAS SUPPLY SERVICE" is used herein to mean gas supply service that is provided to any customer that has not chosen an alternative gas supplier, whether or not the customer has received offers as to competitive supply options, including, but not limited to, any customer than can not obtain service from an alternative supplier for any reason, including non-payment for services. It is the gas supply component in certain Rate Schedules for Firm Sales Service customers.

"BILLING MONTH" is used herein to designate a period which begins with the first cycle in any month and ends with the last cycle.

"BOARD" is used herein to designate the New Jersey Board of Public Utilities, its predecessors or successors.

"BRITISH THERMAL UNIT" is used herein to designate the amount of heat required to raise the temperature of one (1) pound of water one (1) degree Fahrenheit at sixty (60) degrees Fahrenheit.

SOUTH JERSEY GAS COMPANY

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(Continued)

"CITY GATE STATION" is used herein to mean a location at which Company receives gas from a pipeline company.

"COGENERATION" is used herein to mean the process by which natural gas is burned in equipment to generate electricity and recover the by-product heat from the generation process for use in industrial processes or space heating or both.

"COMMERCIAL CUSTOMER" is used herein to be a customer, whose facility at which service is received hereunder is engaged primarily in providing a service or the sale of goods or services. This would include, but not be limited to, wholesale or retail trade, local, state and federal government agencies, agriculture, warehouses, schools, forestry, transportation, communication, sanitary services, finance, insurance, clubs, hotels, and service to three or more dwelling units through a single meter. A customer who is neither Industrial nor Residential is a Commercial Customer.

"COMPANY" as referred to herein is used to designate South Jersey Gas Company which furnishes gas service under these General Terms and Conditions.

"COSTS APPLICABLE" is used herein to mean any and all costs per therm involved in acquiring the gas sold under an applicable rate schedule. Provided, however, that "Costs Applicable" shall not include demand charges paid by the Company for gas sold under said rate schedule. As used herein, "Costs Applicable" shall include but not be limited to, costs of acquisition of gas; costs of transportation of gas; costs of storage of gas; costs of compression; interstate pipeline loss and compressor fuel; line loss on the Company's system; and Taxes.

"CUSTOMER" is used herein to designate any person, firm, organization, partnership or corporation applying for or using gas service supplied by the Company at one specific location.

"CUSTOMER CHARGE" is the minimum fixed monthly charge. Where service is taken for less than one month, the minmum charge will be prorated.

"CUSTOMER GROUP" is used herein to mean a group of customers served under a single rate schedule by a single Aggregator/Marketer.

"CYCLE" is used herein to designate a geographical grouping of customers each having the same meter reading and billing schedules.

"DAY" is used herein to designate a period of twenty-four (24) consecutive hours beginning at 10:00 a.m.

"DAILY PRICE SURVEY" is used herein to mean a column published in the publication "Platts Gas Daily", published by The McGraw Hill Companies. Should the "Transco, zone 6 non-N.Y." prices no longer be available in the "Daily price survey" for an reason, the Company may substitute a substantially equivalent index or calculation.

"DISTRIBUTION MAINS" is used herein to designate the network of distribution piping to which customer's service connections are made.

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GENERAL TERMS AND CONDITIONS
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"DISTRIBUTION REVENUE" is used herein to mean total revenue plus related Sales and Use Tax, collected by the Company from a customer, minus the Basic Gas Supply Service charges, plus related Sales and Use Tax on the Basic Gas Supply Service, assessed in accordance with the Company's tariff.

"DOMESTIC PURPOSES" is used herein to mean such uses of gas as are typical of a household. Such purposes include, but are not limited to cooking, water heating, clothes drying, house heating, and air conditioning.

"DWELLING UNIT" is used herein to mean apartments, flats or rooming or boarding house bedrooms.

"EXISTING FACILITY" is used herein to mean a facility at which the Company is currently supplying or has previously supplied service under an applicable rate schedule at some time during the preceding twelve (12) months.

"EXTENSION" is used herein to mean the construction or installation of plant by the Company to convey a regulated service from existing or new plant to one or more new Customers, and also means the plant itself. This term includes all plant for transmission or distribution, whether located on a public street or right of way, or on a private property or private right of way, including the pipe used to convey regulated service from existing plant to each unit or structure to be served. An Extension begins at the existing infrastructure and ends at the meter and includes the meter.

"EXTENSION COST" is used herein to mean expenses incurred, calculated by using unitized costs for material and labor (internal and external) employed in the design, purchase, construction, and/or installation of the Extension, including overhead directly attributable to the work.

"FACILITY" is used herein to means all buildings and equipment located at the same geographic site which are commonly considered to be part of one plant, mill, refinery, or other industrial complex.

"FIRM" as used herein refers to a character of service offered to customers under applicable rate schedules or contracts which anticipate no interruption, except in the event of an emergency.

"FIRST GAS THROUGH THE METER" is used herein to establish a billing priority among rate schedules. When a customer purchases, transports, or secures delivery of gas on more than one rate schedule on a given day, the Company must, for billing purposes, apportion gas purchased to the rate schedules. In a case in which a particular rate schedule is deemed first through the meter, all of a customer's obligations under that rate schedule must be met, for billing purposes, before gas is billed pursuant to any other rate schedule.

"FORCE MAJEURE" as employed herein shall mean Acts of God, strikes, lockouts, or other labor disturbances, acts of the public enemy, acts in the public interest, wars, blockades, insurrection, riots, epidemics, landslides, lightning, earthquakes, fires hurricanes, storms floods, washouts, arrests, the order of any court or government authority having jurisdiction while the same is in effect, civil disturbances, explosions, breakage, accidents to machinery, or lines of pipe, freezing of wells or lines of pipe, temporary failure of gas supply, inability to obtain or unavoidable delay in obtaining necessary gas supplies or material and equipment, and any other cause whether of the kind herein enumerated or otherwise beyond the control of the party claiming suspension.

"GAS ACQUISITION COSTS" is used herein to mean Costs Applicable less Taxes.

SOUTH JERSEY GAS COMPANY

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(Continued)

"INDIVIDUALLY METERED SERVICE" is used herein to mean service through a single meter for two or less dwelling units within a single building and appurtenant outbuildings.

"INDUSTRIAL CUSTOMER" is used herein to be a customer, whose facility at which service is received hereunder is engaged primarily in the processing or changing of raw or unfinished materials into another form or product. Sand and thermal energy plants are included within this term.

"INTERRUPTIBLE" as used herein refers to a character of service under applicable rate schedules or contracts which anticipate and permit interruption on three (3) hours, notice.

"INTERRUPTIBLE MARGIN" is used herein to mean net income from Rate Schedules ITS, LMS-LV, LMS-GS and IGS multiplied by a factor to reflect Revenue Taxes and Federal Income Taxes.

"INTERRUPTIBLE USES OF GAS" is used herein to mean uses which are subject to termination on notice by the Company as provided in the applicable rate schedule, and for which the customer has, or is capable of having, an alternate fuel capability.

"MAJOR GROUP" is used herein to mean the first two digits of the Federal North American Industry Classification System (NAICS) code, as defined for the Applicant at the time service is initiated.

"MCF" is used herein to designate one thousand (1,000) cubic feet of gas.

"MONTH" is used herein to designate the period between any two consecutive regularly scheduled meter readings for billing purposes.

"NEW FACILITY" is used herein to mean a newly constructed facility or a facility at which the Company is not currently supplying and has not supplied service under an applicable rate schedule during the preceding twelve (12) months.

"OPERATING CONDITIONS" is used herein to describe lack of sufficient gas supplies at the customer's location, lack of sufficient pressure at the customer's location, or similar operating conditions which will render the Company unable to offer service at a given level requested by the customer for a 12 month period.

"OUT-OF-POCKET EXPENSES" is used herein to mean any additional costs incurred by the Company relating to the initiation and rendering of service to a specific customer; such expense shall include, but not be limited to legal expense and travel expense.

"PRICE TO COMPARE" is used herein to mean for any Rate Schedule, the difference between the total charges to be paid by a Firm Sales Service customer under that Rate Schedule, and the total charges to be paid by a Firm Transportation Service customer under that same Rate Schedule.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

"PRIME MOVER" is used herein to mean the engine, turbine, water wheel, or similar machine that drives an electric generator; or a device that converts energy to electricity directly (e.g., photovoltaic solar and fuel cells).

"RESIDENCE" is used herein to mean a location at which Residential gas consumption occurs.

"RESIDENTIAL" is used herein to mean Individually metered Service for Domestic Purposes. Provided, however, that if a customer receives individually metered service for both domestic and non-domestic purposes said service shall be deemed Commercial or Industrial, as is appropriate, if fifty (50) percent or more of gas volume consumption during any month is for other than domestic purposes.

"REVENUE TAXES" is used herein to mean all taxes applicable to revenues from the sale of natural gas. Revenue Taxes shall include, but not be limited to, New Jersey Sales and Use Tax, New Jersey Corporation Business Tax and Public Utility Assessment Taxes.

"SALES SERVICE" as used herein refers to a character of service offered to customers under applicable rate schedules or contracts pursuant to which the Company offers to sell the natural gas commodity.

"SERVICE CONNECTIONS" is used herein to designate the pipe which carries gas from the distribution or transmission main to the customer's meter.

"STANDBY USES" is used herein to mean the provision of gas service for use in an appliance or device for which gas supplied by the Company is not the primary fuel.

"SUMMER SEASON" is used herein to designate the period from April 1 through October 31 of each year.

"TAXES" is used herein to mean all taxes applicable to the sale of natural gas. "Taxes" shall include, but not be limited to, Gross Receipts and Franchise Taxes; Federal Income Taxes; and Public Utility Assessment Taxes.

"THERM" is used herein to designate a unit of heating value equivalent to 100,000 Btu (British Thermal Units).

"Third Party Marketer Portal (the "Portal") formally known as the Electronic Bulletin Board ("EBB").

"TOTAL HEATING VALUE" is used herein to designate the number of British Thermal Units produced by the combustion in a recording calorimeter or chromograph, at constant pressure, of the amount of gas which would occupy a volume of one (1) cubic foot at a temperature of 60 degrees Fahrenheit if saturated with water vapor, and under an assumed absolute atmospheric pressure of 14.73 pounds per square inch with air of the same temperature and pressure as the gas when the products of combustion are cooled to the initial temperature of gas and air, and when the water formed by combustion is condensed to liquid state, corrected for a water vapor free basis.

"TRANSPORTATION SERVICE" as used herein refers to a character of service offered to customers under applicable rate schedules or contracts pursuant to which the Company offers to transport and deliver to a customer's facility or residence the natural gas commodity as to which the customer holds clear and marketable title.

"WINTER SEASON" is used herein to designate the period from November 1 through March 31 of each year.

"YEAR" is used herein to designate a period of twelve consecutive "months".

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (GS)

This Agreement entered into this______________day of ___________________ , 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Seller" or "Company" and ____ , hereinafter referred to as "Buyer."

WITNESSETH:

Subject to the terms and conditions contained herein, Seller agrees to sell and deliver and Buyer agrees to purchase and pay for services required by Buyer under Rate Schedule GSG Firm Sales Service☐, Rate Schedule GSG-LV Firm Sales Service ☐, Rate Schedule GSG Firm Transportation Service☐, Rate Schedule GSG-LV Firm Transportation Service ☐ , and Rate Schedule IGS ☐at ____, as follows:

ARTICLE I
Term of Agreement

This Agreement shall commence ____ and be effective from the date hereof and the sale and purchase of services hereunder shall continue until ___________ , a date which is at least twelve (12) months from the commencement, and subject to Seller's possession of an adequate supply of gas as to Rate Schedules GSG Firm Sales Service; GSG-LV Firm Sales Service; and IGS, and subject to Seller’s possession of adequate system capacity as to Rate Schedules GSG Firm Transportation Service and GSG-LV Firm Transportation Service, shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other, at least six (6) months prior to the end of any yearly term.

ARTICLE II
Duly Constituted Authorities

The rates of Seller, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulations of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey, or successor agencies.

ARTICLE III
Tariff For Gas Service

All terms and conditions set forth in Seller's Tariff For Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All sales are subject to the General Terms and Conditions of Seller's Tariff For Gas Service and more specifically by the conditions contained in the Rate Schedule or Rate Schedules contracted for herein.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (GS)
(Continued)

ARTICLE IV
Service Volumes

1. For service rendered under Rate Schedule GSG:
For the purpose of providing criteria for the proration of available supplies, Buyer hereby indicates its Minimum and Maximum Capability of accepting GSG Service:

   a. Minimum Capability_____________________Mcf per day.
   b. Maximum Capability _____________________ Mcf per day.

2. For service rendered under Rate Schedule IGS:
For the purpose of providing criteria for the proration of available supplies, Buyer hereby indicates its Minimum and Maximum Capability of accepting IGS Service:

   a. Minimum Capability_____________________Mcf per day.
   b. Maximum Capability_____________________Mcf per day.

Customer certifies that its alternate fuel capability is____.

3. For service rendered under Rate Schedule GSG-LV Firm Sales Service, Seller hereby agrees to sell and deliver to Buyer and Buyer agrees to pay for in accordance with the provisions of the Tariff a Contract Demand of ____ Mcf per day. This will serve as Buyer's initial Contract Demand. The Contract Demand may be adjusted by the Company from time to time, but no less than annually. The adjustments to the Contract Demand shall be based upon the Buyer's average daily usage for the month of highest usage during the preceding twelve month period, subject to normalization, if appropriate. The Buyer may then elect, in writing, a higher Contract Demand.

4. For service rendered under Rate Schedule GSG-LV Firm Transportation Service, the Company agrees to transport and deliver to the Buyer at the Buyer's facility designated on the first page of this Agreement such quantity of gas that Buyer makes available from time to time; provided, however, Company shall not be obligated to transport and deliver more than ____ Mcf per day which will be Buyer's Contract Demand.

5. It is understood by Buyer and Seller, that by electing to take delivery of gas under Rate Schedule GSG Firm Transportation Service or Rates Schedule GSG-LV Firm Transportation Service, Buyer forgoes any right or entitlement to purchase the Company's firm system gas, during the term of this Agreement. After the term of this Agreement, if Buyer requests that the Company sell firm system gas to the Buyer, the Buyer shall be treated as a new applicant for service, with no greater entitlement to firm gas sales service than is had by any other New Customer.

6. By checking the box at the end of this sentence, customer elects to take balancing service under Rider "I", rather than under Rider "J" . ☐

7. The customer's Daily Contract Quantity ("DCQ") will be established pursuant to the terms of Rider "J" to this Tariff. Under no circumstances shall the Company be obligated to deliver more than the customer's DCQ for the

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (GS)
(Continued)

customer's account. Moreover, if the DCQ shall prove insufficient or excessive in any respect for the customer's needs, the Company shall not assume any responsibility or liability of any kind for such excess or insufficiency.

ARTICLE V
Force Majeure

In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other party within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall so far as possible be remedied with all reasonable dispatch.

Neither party shall be liable in damages to the other for any act, omission, or circumstances occasioned by, or in consequence of force majeure, as defined in Company's Tariff For Gas Service, B.P.U.N.J. No. 12 - Gas.

Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party hereunder relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve either party from its obligation to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (GS)
(Continued)

ARTICLE VI
Miscellaneous

This Agreement supersedes and cancels as of the effective date hereof all prior contracts and supplemental agreements, oral or written, between the parties hereto for the sale of gas by the Seller to the Buyer.

No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults. whether of a like or a different character.

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Buyer without the consent in writing of Seller first obtained.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

By: ____
(Name)
____

____

____
(Title)

SELLER

ATTEST:

____
(Name - Company)

____

By: ____
(Name)

____
(Title)

BUYER

STANDARD GAS SERVICE AGREEMENT (LV)

This Agreement entered into this _________________ day of _____________ , 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Seller" or "Company" and ____hereinafter referred to as "Buyer."

WITNESSETH:

Subject to the terms and conditions contained herein, Seller agrees to sell and deliver and Buyer agrees to purchase and pay for services required by Buyer under Rate Schedule(s)_______________________________ at ____________________________as follows:

ARTICLE I
Term of Agreement

This Agreement shall commence____ and be effective from the date hereof and the sale and purchase of services hereunder shall continue until__________________________, a date which is at least twelve (12) months from the commencement, and subject to Seller's possession of an adequate supply of gas as to Rate Schedules LVS and IGS, and subject to Seller's possession of adequate system capacity as to Rate Schedules LVS Firm Transportation Service, LVS Limited Firm Transportation and CTS shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other, at least six (6) months prior to the end of any yearly term.

ARTICLE II
Duly Constituted Authorities

The rates of Seller, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulation of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey, or successor agencies.

ARTICLE III
Tariff For Gas Service

All terms and conditions set forth in Seller's Tariff For Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All sales are subject to the General Terms and Conditions of Seller's Tariff For Gas Service and more specifically by the conditions contained in the Rate Schedule or Rate Schedules contracted for herein.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (LV)
(Continued)

ARTICLE IV
Service Volumes

1. For service rendered under Rate Schedule LVS, Firm Sales Service_________ Firm Transportation Service __________or CTS _________(check appropriate space):

   Seller hereby agrees to sell and deliver to Buyer and Buyer agrees to pay for in accordance with provisions of the tariff a Contract Demand of ______________ Mcf per day; provided, however, the Company shall not be obligated to transport and deliver more thanBuyer's Contract Demand.

2. For service rendered under Rate Schedule LVS Limited Firm Sales Service __________ LVS Limited Firm Transportation Service _____________or CTS Limited Firm ____________:

   The Company agrees to transport and deliver to the Buyer at the Buyer’s facility designated on the first page of this Agreement such quantity of gas that Buyer makes available from time to time; provided, however, Company shall not be obligated to transport and deliver more than ____________ Mcf per day which will be Buyer’s Limited Firm Contract Demand.

3. For service rendered under Rate Schedule IGS:
   For the purpose of providing criteria for the proration of available supplies, Buyer hereby indicates its minimum and maximum capability of accepting IGS Service:
   a. Minimum capability ________________Mcf per day.
   b. Maximum capability ________________Mcf per day.

   Customer certifies that its alternate fuel capability is___________________________________.

ARTICLE V
Opt-Out Provision

It is understood by Buyer and Seller, that by electing to take delivery of gas under Rate Schedules LVS Firm Transportation Service, LVS Limited Firm Transportation Service or CTS, Buyer forgoes any right or entitlement to purchase the Company's firm system gas, during the term of this Agreement. After the term of this Agreement, if Buyer requests that the Company sell firm system gas to the Buyer, the Buyer shall be treated as a new applicant for service, with no greater entitlement to firm gas sales service than is had by any other New Customer.

Buyer hereby elects, by initialing in the space provided, for a term co-extensive with the Term of Agreement set forth in Article I, to provide its own interstate pipeline capacity and gas supply to Seller’s

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (LV)
(Continued)

City Gate Station. By making such election, Seller becomes eligible to pay the lower BS-1 Volumetric Charge pursuant to Rate Schedule CTS or Rider "I" as applicable. If Buyer does not make this election, Buyer will pay the higher BS-1 Volumetric Charge, pursuant to Rate Schedule CTS or Rider "I" as applicable. Buyer will be subject to the "opt-out" provision provided for in the Company's tariff.

____
Initials

ARTICLE VI
Force Majeure

In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other party within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall so far as possible be remedied with all reasonable dispatch.

Neither party shall be liable in damages to the other for any act, omission, or circumstances occasioned by, or in consequence of force majeure, as defined in the Company's Tariff For Gas Service, B.P.U.N.J. No. 12 - Gas. Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party hereunder relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve either party from its obligation to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

ARTICLE VII
Miscellaneous

This Agreement supersedes and cancels as of the effective date hereof all prior contracts and supplemental agreements, oral or written, between the parties hereto for the sale of gas by the Seller to the Buyer.

No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults, whether of a like or a different character.

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Buyer without the consent in writing of Seller first obtained.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 – GAS Original Sheet No. 135

STANDARD GAS SERVICE AGREEMENT (LV)
(Continued)

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

By: ______________________________
(Name)

____

____
(Title)

Seller

ATTEST:

____
(Name - Company)

____

By: ______________________________
(Name)

____
(Title)

Buyer

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (ITS)

This Agreement entered into this __________________ day of___________________________ , 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Company" and

______________________________hereinafter referred to as "Customer."

WITNESSETH

WHEREAS, Company's Tariff for Gas Service contains a Rate Schedule designated as Interruptible Transportation Service (ITS); and

WHEREAS, Customer has arranged to have gas, to which Customer has clear and marketable title, made available for transportation service on the Company's system and the Customer has provided evidence of such title to the Company as required by the ITS Rate Schedule; and

WHEREAS, Customer has requested Company to transport said gas under Rate Schedule ITS, from Company's city gate station(s) located at____
____
____
____
____

ARTICLE I
Term of Agreement

NOW, THEREFORE, Company and Customer agree as follows:

This Agreement shall commence on ____and be effective from the date hereof and continue for a term of (one month minimum term) and continue thereafter from month to month until terminated by either Company or Customer by written notice at least thirty (30) days prior to the beginning of any one month term.

ARTICLE II
Duly Constituted Authorities

The Company's rates, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulations of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey, or successor agencies.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (ITS)
(Continued)

ARTICLE III
Tariff For Gas Service

All terms and conditions set forth in Company's Tariff for Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All services are subject to the General Terms and Conditions of Company's Tariff for Gas Service and more specifically the provisions set forth in the Interruptible Transportation Service (ITS) Rate Schedule.

ARTICLE IV
Service Volumes

The Company agrees to transport such quantity of gas that Customer makes available from time to time; provided, however, that Company shall not be obligated to transport and deliver more than___________________DT per day, the Scheduled Daily Delivery.

ARTICLE V
No Priority

Customer and Company recognize and agree that the provision of service under Rate Schedule ITS by the Company shall not afford the Customer any benefit or priority of entitlement to service under any other rate schedule of the Company. Should the Customer apply for service under any other rate schedule of the Company, the Customer will be treated no differently from any other applicant for service similarly situated under similar conditions.

ARTICLE VI
Alternate Fuel Capability

Customer certifies that its alternate fuel capability is____ .

ARTICLE VII
Force Majeure

In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other party within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall so far as possible be remedied with all reasonable dispatch.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (ITS)
(Continued)

Neither party shall be liable in damages to the other for any act, omission, or circumstances occasioned by, or in consequence of force majeure, as defined in Company's Tariff for Gas Service, B.P.U.N.J. No. 12 - Gas.

Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party here-under relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve customer from its obligation to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

ARTICLE VII
Miscellaneous

This Agreement supersedes and cancels as of the effective date hereof all prior contracts and supplemental agreements, oral or written, between the parties hereto solely for the transportation of gas by the Company to the Customer.

No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any further default or defaults, whether of a like or a different character.

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Customer without the Consent in writing of Company first obtained.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (ITS)
(Continued)

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

_______________________________ By: ______________________________
(Name)

____
(Title)

Company

____
(Name of Customer)

ATTEST:

_______________________________ By: ______________________________
(Name)

____
(Title)

Customer

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (IGS)

This Agreement entered into this _______________ day of ________________________ , 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Seller" or "Company" and___________ ____ hereinafter referred to as “Buyer.”

WITNESSETH:

Subject to the terms and conditions contained herein, Seller agrees to sell and deliver and Buyer agrees to purchase and pay for services required by Buyer under Rate Schedule(s)_______________________________________ _________ at ____ , as follows:

ARTICLE I
Term of Agreement

This Agreement shall commence ____ and be effective from the date hereof and the sale and purchase of gas hereunder shall continue until ________________ , a date which is at least twelve (12) months from the commencement, and subject to Seller's possession of an adequate supply of gas, shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other at least six (6) months prior to the end of any yearly term.

ARTICLE II
Duly Constituted Authorities

The rates of Seller, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulations of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey, or successor agencies.

ARTICLE III
Tariff For Gas Service

All terms and conditions set forth in Seller's Tariff For Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All sales are subject to the General Terms and Conditions of Seller's Tariff For Gas Service and more specifically by the conditions contained in the Rate Schedule contracted for herein.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (IGS)
(Continued)

ARTICLE IV
Service Volumes

For service rendered under Rate Schedule IGS:
For the purpose of providing criteria for the proration of available supplies, Buyer hereby indicates its minimum and maximum capability of accepting IGS Service:

a. Minimum capability ___________ Mcf per day.
b. Maximum capability ___________Mcf per day.

Customer certifies that the alternate fuel capability is____ .

ARTICLE V
Force Majeure

In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other party within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall so far as possible be remedied with all reasonable dispatch.

Neither party shall be liable in damages to the other for any act, omission, or circumstances occasioned by or in consequence of force majeure, as defined in Company's Tariff For Gas Service, B.P.U.N.J. No. 12 - Gas.

Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party hereunder relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve either party from its obligation to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (IGS)
(Continued)

ARTICLE VI
Miscellaneous

This Agreement supersedes and cancels as of the effective date hereof all prior contracts and supplemental agreements, oral or written, between the parties hereto for the sale of gas by the Seller to the Buyer.

No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults, whether of a like or a different character.

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Buyer without the consent in writing of Seller first obtained.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

By: ____
(Name)

____

____
(Title)

SELLER

ATTEST:

____
(Name - Company)

____

By: ____
(Name)

____
(Title)

BUYER

STANDARD GAS SERVICE AGREEMENT (EGS)

This Agreement entered into this________________day of ____________________, 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Seller" or "Company" and __________ ____ , hereinafter referred to as “Buyer.”

WITNESSETH:

Subject to the terms and conditions contained herein, Seller agrees to sell and deliver and Buyer agrees to purchase and pay for services required by Buyer under Rate Schedule EGS ☐; or Rate Schedule EGS-LV ☐: at_________________________________as follows:

ARTICLE I
Term of Agreement

This Agreement shall be effective from the date of execution. The sale and purchase of gas hereunder shall commence on ______________________ and continue until____________________________________ , and subject to Seller's possession of an adequate supply of gas (except for Rate Schedule EGS-LV customers electing Rider “D” and Rate Schedule EGS Firm Transportation customers), shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other, at least six (6) months prior to the end of any yearly term, or the initial term.

ARTICLE II
Facilities Charge

In consideration for Seller's agreement to provide service as described in this agreement, Buyer agrees to pay a facilities charge of $_____________________ , at the time of execution of Standard Gas Service Agreement (EGS), which represents the initial estimate of the capital cost of providing service to the Buyer's facility or some agreed upon portion thereof. This payment will be refunded or credited against the customer security deposit, after the first month of the provision of gas service to the customer. If the Buyer terminates this agreement or fails to initiate service hereunder, or fails to make any deposit required by Article III, this sum shall be retained by the Seller.

ARTICLE III
Commitment Fee

Each potential payment obligation of Buyer under this Article III, shall be deposited with the Company twelve (12) months in advance, without interest, if gas service commences more than twelve (12) months from the effective date of this agreement, the Buyer shall pay to Seller, a nonrefundable commitment fee of $________________________ , which shall be equal to one month's minimum bill, and shall pay an equal amount on each anniversary date of the effective date of this Standard Gas Service Agreement (EGS), until gas service commences.

Pursuant to this Article III, Buyer hereby deposits with the Company, and the Company hereby acknowledges a deposit of $______________________ .

STANDARD GAS SERVICE AGREEMENT (EGS)
(Continued)

ARTICLE IV
Buyer Security Deposit

Seller may require from Buyer a security deposit which will be due before the commencement of gas service. This deposit will be equal to the estimated amount of two (2) monthly billings for Buyers served under Rate Schedule EGS-LV and intending to utilize Rider D and for Rate Schedule EGS Firm Transportation customers and three (3) monthly billings for Buyers intending to utilize the Company's gas supply.

ARTICLE V
Duly Constituted Authorities

The rates of Seller, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulations of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey, or successor agencies.

ARTICLE VI
Tariff for Gas Service

All terms and conditions set forth in Seller's Tariff for Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All sales are subject to the General Terms and Conditions of Seller's Tariff for Gas Service and more specifically by the conditions contained in the Rate Schedule contracted for herein.

ARTICLE VII
Service Volumes

1. For service rendered under Rate Schedule EGS-LV, customer's Firm and Limited Firm Daily Contract Demands shall be:

   a. Firm - __________ Mcf per day, to be the first gas through the meter each day.

   b. Limited Firm - __________ Mcf per day, to be the next gas through the meter each day.

2. Buyer hereby elects, by signing in the space below to provide its own gas pursuant to Rider D. All or any portion of Buyer's Firm Daily Contract Demand and Limited Firm Daily Contract Demand, pursuant to this Article VII of the Standard Gas Service Agreement (EGS), may be met through Rider D, and Seller has no obligation to sell gas to Buyer under any other article, paragraph or provision of Rate Schedule EGS-LV or the Standard Gas Service Agreement (EGS).

   Buyer hereby elects Rider D______________________________ .

   For service rendered under Rate Schedule EGS-LV, customer's Firm and Limited Firm Daily Contract Demand levels provided pursuant to Rider D shall be:

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (EGS)
(Continued)

a. Firm - ______________ Mcf per day.

b. Limited Firm - ___________ Mcf per day.

3. For service rendered under Rate Schedule EGS, customer's Firm Daily Contract Demand shall be:

__________ Mcf per day, to be the first gas through the meter each day.

4. For service rendered under Rate Schedule EGS Firm Transportation Service:
The Company agrees to transport and deliver to the Buyer at the Buyer's facility designated on the first page of this Agreement such quantity of gas that Buyer makes available from time to time; provided, however, Company shall not be obligated to transport and deliver more than________________________Mcf per day which will be Buyer's Contract Demand.

It is understood by Buyer and Seller, that by electing to take delivery of gas under Rate Schedule EGS Firm Transportation Service, Buyer forgoes any right or entitlement to purchase the Company's firm system gas, during the term of this Agreement. After the term of this Agreement, if Buyer requests that the Company sell firm system gas to the Buyer, the Buyer shall be treated as a new applicant for service, with no greater entitlement to firm gas sales service than is had by any other New Customer.

ARTICLE VIII
Rates

As provided in the Monthly Rate section of Rate Schedule EGS or EGS-LV; or

Negotiated rates pursuant to Special Provision (e) of Rate Schedule EGS-LV:

D-1 charge will be _______________.

Limited Firm:

C-3 charge will be ________ . **ALL CUSTOMERS MUST COMPLETE.**

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (EGS)
(Continued)

ARTICLE IX
Election

By checking the box at the end of this sentence, customer elects to take balancing service under Rider “I”, rather than under Rider “J” to this Tariff. ☐

ARTICLE X
Opt-Out Provision

Buyer (a Rate Schedule EGS-LV customer) hereby elects, by initialing in the space provided, for a term co-extensive with the Term of Agreement set forth in Article I, to provide its own interstate pipeline capacity and gas supply to Seller’s City Gate Station. By making such election, Seller becomes eligible to pay the lower BS-1 Volumetric Charge pursuant to Rider “I”. If Buyer does not make this election, Buyer will pay the higher BS-1 Volumetric Charge, pursuant to Rider “I”. Buyer will be subject to the opt-out provisions provided for in the Company’s tariff.

____
Initials

ARTICLE XI
Force Majeure

In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other party within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall so far as possible be remedied with all reasonable dispatch.

Neither party shall be liable in damages to the other for any act, omission, or circumstances occasioned by, or in consequence of force majeure, as defined in Company's Tariff for Gas Service, B.P.U.N.J. No. 12 - Gas.

Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party hereunder relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve either party from its obligation to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

ARTICLE XII
Miscellaneous

This Agreement supersedes and cancels as of the effective date hereof all prior contracts and supplemental agreements, oral or written, between the parties hereto for the sale of gas by the Seller to the Buyer.

No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults, whether of a like or a different character.

STANDARD GAS SERVICE AGREEMENT (EGS)
(Continued)

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Buyer without the consent in writing of Seller first obtained.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

_______________________________ By: _______________________________
(Name)

____
(Title)

SELLER

ATTEST:

____
(Name - Company)

_______________________________ _______________________________
(Name)

____
(Title)

BUYER

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (FES)

This Agreement entered into this____________________ day of _________________________ , 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Seller" or "Company" and ____ and hereinafter referred to as "Buyer."

WITNESSETH:

Subject to the terms and conditions contained herein, Seller agrees to sell and deliver and Buyer agrees to purchase and pay for services required by Buyer under Rate Schedule FES ______________________________________ at ____ , which is Buyer's FES Facility, as follows:

ARTICLE I
Term of Agreement

This Agreement shall commence____and be effective from the date hereof and the sale and purchase of gas hereunder shall continue until_______________________________ , and subject to Seller's possession of an adequate supply of gas, shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other, at least six (6) months prior to the end of the initial term or any yearly term.

ARTICLE II
Duly Constituted Authorities

The rates of Seller, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulation of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey.

ARTICLE III
Tariff For Gas Service

All terms and conditions set forth in Seller's Tariff For Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All sales are subject to the General Terms and Conditions of Seller's Tariff For Gas Service and more specifically by the conditions contained in the rate schedules contracted for herein.

ARTICLE IV
Service Volumes

Firm:

Seller hereby agrees to sell and deliver to Buyer and Buyer agrees to pay for in accordance with provisions of the tariff:

(1) a Winter Daily Contract Demand of _____________ Mcf per day;
(2) a Summer Daily Contract Demand of _______________ MCF per day.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (FES)
(Continued)

Billing Determinants:

(1) Customer shall have a Annual Billing Determinant ("ABD") of ________________ MCF .

(2) Customer shall have a Daily Billing Determinant of ________________ MCF . (ABD/365)

ARTICLE V
Rates

Negotiated rates pursuant to Special Provision (j) of the Rate Schedule FES are as follows:

Winter Rates:

D-1 Charge will be ____________.

C-3 Charge will be ____________.

Summer Rates:

D-1 Charge will be ____________.

C-3 Charge will be ____________.

ARTICLE VI
Winter Season Interruption

Buyer and Seller agree that Buyer's service under Rate Schedule FES may be partially or totally interrupted on ____ days during a Winter Season pursuant to Special Provision (r) of Rate Schedule FES

ARTICLE VII
Customer Owned Gas

Customer has requested Company to deliver said gas under Rate Schedule FES, Rider "D" from Company's city gate station(s) located at
____
____
____
____

STANDARD GAS SERVICE AGREEMENT (FES)
(Continued)

The Company agrees to deliver such quantity of gas that Customer makes available from time to time: provided, however, Company shall not be obligated on a daily basis to deliver more than customer's Winter Daily Contract Demand or Summer Daily Contract Demand for the then applicable season.

ARTICLE VIII
Opt-Out Provision

Buyer (a Rate Schedule FES customer) hereby elects, by initialing in the space provided, for a term co-extensive with the Term of Agreement set forth in Article I, to provide its own interstate pipeline capacity and gas supply to Seller's City Gate Station. By making such election, Seller becomes eligible to pay the lower BS-1 Volumetric Charge pursuant to Rider "I". If Buyer does not make this election, Buyer will pay the higher BS-1 Volumetric Charge, pursuant to Rider "I". Buyer will be subject to the opt-out provisions provided for in the Company's tariff.

____
Initials

ARTICLE IX
Force Majeure

In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other party within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall so far as possible be remedied with all reasonable dispatch.

Neither party shall be liable in damages to the other for any act, omission, or circumstances occasioned by, or in consequence of force majeure, as defined in Company's Tariff For Gas Service, B.P.U.N.J. No. 12 - Gas.

Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party hereunder relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve either party from its obligation to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

ARTICLE X
Miscellaneous

This Agreement supersedes and cancels as of the effective date hereof all prior contracts and supplemental agreements for firm service, oral or written, between the parties hereto for the sale of gas by the Seller to the Buyer.

No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults, whether of a like or a different character.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (FES)
(Continued)

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Buyer without the consent in writing of Seller first obtained.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

By: ____
(Name)

____

____
(Title)

SELLER

____
(Name - Company)

ATTEST:

____

By: ____
(Name)

____
(Title)

BUYER

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (NGV)

This Agreement entered into this_____________day of _________________ , 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Seller" or "Company" and
____ , hereinafter referred to as "Buyer" or "Customer".

WITNESSETH:

Subject to the terms and conditions contained herein, Seller agrees to sell and deliver and Buyer agrees to purchase and pay for services required by Buyer under Rate Schedule Natural Gas Vehicle (NGV) Firm Sales Service ☐ Rate Schedule Natural Gas Vehicle (NGV) Firm Transportation Service ☐
at____, as follows:

ARTICLE I
Term of Agreement

This Agreement shall commence ____ and be effective from the date hereof and the sale and purchase of services hereunder shall continue until ___________ , a date which is at least twelve (12) months from the commencement, and subject to Seller's possession of an adequate supply of gas as to Firm Sales Service; and subject to Seller's possession of adequate system capacity as to Firm Transportation Service, shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other, at least six (6) months prior to the end of any yearly term.

ARTICLE II
Duly Constituted Authorities

The rates of Seller, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulations of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey, or successor agencies.

ARTICLE III
Tariff For Gas Service

All terms and conditions set forth in Seller's Tariff For Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All sales are subject to the General Terms and Conditions of Seller's Tariff For Gas Service and more specifically by the conditions contained in Rate Schedule Natural Gas Vehicle (NGV).

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 153**

STANDARD GAS SERVICE AGREEMENT (NGV)
(Continued)

ARTICLE IV
Service Volumes

1. By checking the box at the end of this sentence, customer elects to take balancing service under Rider “I”, rather than under Rider “J” . ☐

2. The customer’s Daily Contract Quantity (“DCQ”) will be established pursuant to the terms of Rider “J” to this Tariff. Under no circumstances shall the Company be obligated to deliver more than the customer's DCQ for the customer's account. Moreover, if the DCQ shall prove insufficient or excessive in any respect for the customer's needs, the Company shall not assume any responsibility or liability of any kind for such excess or insufficiency.

3. For service rendered under Rate Schedule NGV for compressed natural gas vehicle service at Company owned stations, by checking the box at the end of this sentence ☐.
   a. Minimum Capability _______________ MCF per day.
   b. Maximum Capability _______________MCF per day.

4. By checking the box a the end of this sentence and for the appropriate maximum delivery capability for service rendered under Rate Schedule NGV for compressed natural gas vehicle service at customer operated fueling stations ☐.
   a. Maximum delivery capability 0 – 999 CFH ☐.
   b. Maximum delivery capability 1,000 – 4,999 CFH ☐.
   c. Maximum delivery capability 5,000 – 24,999 CFH ☐.
   d. Maximum delivery capability 25,000 or greater CFH ☐.

ARTICLE V
Facilities Charge

By checking the box at the end of this sentence, Customer elects to have the Company Construct CNG fueling facilities located on customer’s property, pursuant to Special Provision (b) of Rate Schedule NGV☐.
As such, the following Facilities Charge shall apply:

C-2: $0.346463 ($0.433079 GGE)
MACF $______________ ($______________GGE)

ARTICLE VI
O&M Charges

By checking the box at the end of this sentence, Customer elects to have Company operate and maintain the CNG fueling facilies located on Customer’s property, pursuant to Special Provision (c) of Rate Schedule NGV☐. The costs associated with all operation and/or maintenance of the CNG fueiling facilities located on Customer’s property by the Company shall be charged to Customer as a pass through of all actual costs incurred by the Company.

STANDARD GAS SERVICE AGREEMENT (NGV)
(Continued)

ARTICLE VII
Force Majeure

In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other party within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall so far as possible be remedied with all reasonable dispatch.

Neither party shall be liable in damages to the other for any act, omission, or circumstances occasioned by, or in consequence of force majeure, as defined in Company's Tariff For Gas Service, B.P.U.N.J. No. 12 - Gas.

Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party hereunder relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve either party from its obligation to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (NGV)
(Continued)

ARTICLE VIII
Miscellaneous

This Agreement supersedes and cancels as of the effective date hereof all prior contracts and supplemental agreements, oral or written, between the parties hereto for the sale of gas by the Seller to the Buyer.

No waiver by either party of any one or more defaults by the other in the performance of any provisions of this Agreement shall operate or be construed as a waiver of any future default or defaults. whether of a like or a different character.

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Buyer without the consent in writing of Seller first obtained.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

By: ____
(Name)
____

____

____
(Title)

SELLER

ATTEST:

____
(Name - Company)

____

By: ____
(Name)

____
(Title)

BUYER/CUSTOMER

SOUTH JERSEY GAS COMPANY

AGREEMENT NO. :

AGGREGATOR/MARKETER'S AGREEMENT (A/M)

This Aggregator/Marketer (A/M) Agreement ("A/M Agreement") entered into this ______________ day of ____, 20__, by and between South Jersey Gas Company, a New Jersey corporation, sometimes hereinafter referred to as "Seller", "South Jersey" or the "Company" and ____ ____, a __________________________________corporation whose principal place of business is located at____ , and who transacts business as an Aggregator of gas or as a Marketer of gas, sometimes collectively hereinafter referred to as "Aggregator/Marketer". South Jersey and the Aggregator/Marketer are parties to this Agreement, and are sometimes hereinafter referred to as "Parties."

WHEREAS, South Jersey is a regulated public utility of the State of New Jersey under the jurisdiction of the New Jersey Board of Public Utilities (the "Board"), and is engaged in the sale, distribution and transportation of gas in intrastate commerce within said State; and

WHEREAS, the Aggregator/Marketer has arranged for the delivery of gas to a City Gate Station of South Jersey, on behalf of certain customers ("Customers") identified on Appendix A to this A/M Agreement. A customer group is defined as either a group of customers served under a single Rate Schedule or a group of customers served pursuant to Rider "I" Balancing Service Clause - Large Volume; and

WHEREAS, each Customer Group will consist of Customers served pursuant to a single Rate Schedule of the South Jersey's Board approved Tariff for Gas Service, B.P.U.N.J. No. 12 - Gas ("Tariff for Gas Service") and will be designated on Appendix A by reference to that Rate Schedule;

WHEREAS, the Customers who constitute the members of the Customer Groups have requested that South Jersey transport gas for the Customers on an aggregated basis, as part of said Customer Groups; and

WHEREAS, the Company has agreed to perform such transportation of gas, subject to the terms of this A/M Agreement.

NOW, THEREFORE, the Parties, intending to be legally bound hereby, in exchange for the mutual promises contained herein; agree as follows:

1. **Term.** The term of this A/M Agreement shall be one year from the date of this A/M Agreement, and shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other at least thirty (30) days prior to the effective date of any termination.

2. **Aggregation.** Attached hereto as Appendix A is a list of those Customers comprising the initial Customer Groups pursuant to the terms of this A/M Agreement, if such groups exist. On or before the tenth (10th) day of each calendar month, the Aggregator/Marketer shall provide the Company with a revised Appendix A in which the Aggregator/Marketer will designate those Customers who will be members of the Customer Groups for the immediately following calendar month. This list will be furnished on a preliminary basis. The Company may then advise the Aggregator/Marketer of any members of the Customer Groups who have been removed from the Customer Groups for cause pursuant to the terms of this A/M Agreement, as well as any Customers who have advised the Company that they have "opted out" of

SOUTH JERSEY GAS COMPANY

AGGREGATOR/MARKETER'S AGREEMENT (A/M)
(Continued)

the Customer Groups. On or before the twentieth (20th) day of said calendar month, the Aggregator/Marketer will provide the Company with a final Appendix A for the immediately following calendar month. Then all of the volumes transported for that Customer Group under the terms of this A/M Agreement shall be aggregated as to that single customer Group for the purposes of Rider "I", the Balancing Service Clause - Large Volume, of the Tariff for Gas Service, or Rider "J", the Balancing Service Clause - General Service of the Tariff for Gas Service.

3. **Liability for Tariff Charges.** Each month, South Jersey will render an invoice to the Aggregator/Marketer for tariff charges pursuant to Rider "I" or Rider "J" to the Tariff for Gas Service on an aggregated basis for the Customer Group, as well as for the monthly Aggregator/Marketer's Fee, but excluding the BS-1 Volumetric Charges. This invoice shall be payable pursuant to the applicable Terms of Payment provisions of the applicable rider of South Jersey's Tariff for Gas Service. The Aggregator/Marketer shall be responsible for the payment of all charges pursuant to this paragraph. South Jersey will invoice the customer directly for charges for transportation pursuant to the applicable Rate Schedule, and for the BS-1 Volumetric Charges.

4. RESERVED FOR FUTURE USE

5. **Aggregator's/Marketer's Fee.** The monthly fee for the provision of aggregation services by the Company and for access by the Aggregator/Marketer to the Third Party Marketer Portal (the "Portal") will be One Hundred Dollars ($100.00) ("Aggregator/Marketer's Fee") per Aggregator/Marketer. In addition, the Company may provide additional services to the Aggregator/Marketer at an agreed upon charge or charges. Such charge or charges shall be included on the invoice for the monthly fee. Such charge or charges may include both a POR Fee and a Bill Presentation and Mailing Fee per bill per month negotiated by South Jersey and the Aggregator/Marketer, for South Jersey to invoice the customer for the natural gas commodity.

6. **Removal for Cause.** All members of a Customer Group must qualify for service under Rate Schedule of the Seller's Tariff for Gas Service applicable to the Customer Group, and aggregation pursuant to this A/M Agreement will be performed only for Customers within a single Customer Group. If South Jersey determines that a Customer no longer qualifies for service under the Rate Schedule applicable to the appropriate Customer Group, it shall remove that Customer from the Customer Group, and such action shall be Removal for Cause.

Removal for Cause shall also be permitted: (1) if any Customer fails to meet any financial obligation imposed by this A/M Agreement or by the Tariff for Gas Service or violates the terms of any Operational Flow Order issued pursuant to said Tariff for Gas Service; or (2) conducts business with the Seller in a manner which jeopardizes South Jersey's ability to serve customers of equal or higher priority to the Customer under N.J.A.C. 14:29-3.2(a), irrespective of whether N.J.A.C. 14:29-3.2(a) is actually invoked; or (3) pursues any other conduct detrimental to the Company's system integrity.

If Removal for Cause is invoked by the Company, it shall be done upon at least twenty-four hours notice, orally or in writing, which notice shall specify the effective date and reasons for such removal. Removal for cause shall not relieve the Customer of any responsibility or liability incurred before the effective date of the Removal for Cause.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 158**

AGGREGATOR/MARKETER'S AGREEMENT (A/M)
(Continued)

7. **Customer Opt Out.** Any member of a Customer Group may elect to opt out of the Customer Group. Notice of such election must be provided to the Company, orally or in writing, on or before the tenth day of the calendar month during which such election shall be effective. The election to opt out of the Customer Group shall be effective until the end of the term of this A/M Agreement. Provided, however, that the election to opt out of the Customer Group shall not relieve the Customer of any responsibility or liability incurred under this A/M Agreement, the Tariff for Gas Service, or otherwise, for periods of time prior to the time that such election became effective.

8. **Provision of Data**. In order for South Jersey to provide gas consumption history and billing data relative to a member of a Customer Group such member must authorize South Jersey to provide to the Aggregator/Marketer, such data upon a form entitled "Authorization to Release Account Information".

9. **Computer Capability.** Aggregator/Marketer agrees that throughout the Term of this A/M Agreement, Aggregator/Marketer will maintain computer capability necessary to access the Portal.

10. **Aggregator/Marketer Creditworthiness Standards.** As a condition precedent to this A/M Agreement, the Aggregator/Marketer must meet creditworthiness standards acceptable to the Seller, throughout the Term of this A/M Agreement. In addition, upon the execution of this A/M Agreement, and thereafter, the Company may perform an evaluation of the Customer's creditworthiness. If South Jersey, at any time, deems that Aggregator/Marketer has not met Seller's creditworthiness standards, the Company may require that the Aggregator/Marketer post a cash deposit, letter of credit, performance bond or similar credit facility or other collateral, satisfactory to South Jersey as a condition precedent to this A/M Agreement. In order to assist South Jersey in making its determinations, Aggregator/Marketer agrees to supply such information as the Company will reasonably require to make creditworthiness determinations. Should the Aggregator/Marketer fail to provide such information, Seller may refuse to proceed or continue with this A/M Agreement.

11. **Termination for Conduct of Aggregator/Marketer.** South Jersey may terminate this A/M Agreement if the Aggregator/Marketer engages in certain prohibited conduct ("Prohibited Conduct"). The Prohibited Conduct shall include: (1) the failure to meet any financial obligation imposed by this A/M Agreement, or by the Tariff for Gas Service; (2) the conduct of business with the Seller which jeopardizes South Jersey's ability to serve customers of equal or higher priority to the members of the Customer Group under N.J.A.C. 14:29-3.2(a), irrespective of whether N.J.A.C. 14:29-3.2(a) is actually invoked; (3) the pursuit of any other conduct detrimental to the Company's system integrity; (4) failure of the Aggregator/Marketer to comply with South Jersey's "Transportation Operating Procedures and Protocols"; or (5) failure to comply with the Company's Tariff for Gas Service.

At least twenty-four hours notice of termination for Prohibited Conduct shall be given by the Company to the Aggregator/Marketer and the Customer Group, orally or in writing. Such notice shall specify the effective date of termination and the Prohibited Conduct which is the basis of termination. Termination for Prohibited Conduct shall not relieve the Aggregator/Marketer or members of the Customer Group of any responsibility or liability incurred prior to the effective date of the termination for Prohibited Conduct.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 – GAS **Original Sheet No. 159**

AGGREGATOR/MARKETER'S AGREEMENT (A/M)
(Continued)

12. **Force Majeure.** In the event of either party being rendered unable wholly or in part, by force majeure to carry out its obligations, other than the obligations to make payment of amounts accrued and due hereunder at the time thereof, it is agreed that on such party's giving notice and full particulars of such force majeure in writing or by e-mail to the other parties within a reasonable time after the occurrence of the cause relied on, the obligations of both parties, so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period. Such cause shall so far as possible be remedied with all reasonable dispatch.

No party shall be liable in damages to the other for any act, omission, or circumstances occasioned by, or in consequence of force majeure, as defined in the Company's Tariff for Gas Service.

Such causes or contingencies affecting the performance by either party, however, shall not relieve it of liability unless such party shall give notice and full particulars of such cause or contingency in writing or by e-mail to the other party as soon as possible after the occurrence relied upon, nor shall such causes or contingencies affecting the performance by either party hereunder relieve it of liability in the event of its failure to use due diligence to remedy the situation, nor shall such causes or contingencies affecting the performance hereunder relieve the Aggregator/Marketer, Customer or Customer Group from their obligations to make payments of amounts then due hereunder in respect of all gas theretofore delivered.

13. **No Agency.** South Jersey will in no respect be deemed to be either the Aggregator's/Marketer's agent or representative nor any Customer's nor the Customer Group's agent or representative, for any purposes, and South Jersey shall not be responsible for making or carrying out any contracts or agreements for or related to this A/M Agreement on behalf of the Aggregator/Marketer, or of a Customer or Customer Group.

14. **Hold Harmless.** Aggregator/Marketer and Customers agree to hold South Jersey harmless and indemnify Seller, its officers and directors, from any cost, disbursement, charge or liability (including attorneys' fees), or any claims, suits, judgments, demands, actions or liability, arising directly or indirectly from Aggregator/Marketer's acts or omissions under this A/M Agreement or from the use of the Company's system by Aggregator/Marketer or a Customer or the Customer Group.

15. **Law to Govern and Forum.** This A/M Agreement shall be interpreted in accordance with the laws of the State of New Jersey. Any dispute arising under this A/M Agreement shall be subject to the jurisdiction of the Superior Courts of the State of New Jersey or federal courts within the State of New Jersey. South Jersey and Aggregator/Marketer agree that the Superior Courts of the State of New Jersey have personal jurisdiction over the parties and subject matter jurisdiction of this A/M Agreement. Moreover, South Jersey and Aggregator/Marketer agree that as to actions in the Superior Court, venue is appropriate in Atlantic County New Jersey.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 160**

AGGREGATOR/MARKETER'S AGREEMENT (A/M)
(Continued)

16. **Binding Effect.** This A/M Agreement shall be binding upon the parties hereto, and their agents, successors and assigns.

17. **No Modification.** This A/M Agreement supersedes and cancels any other agreement dealing with the same subject matter. This A/M Agreement may not be modified, altered, or amended except by a written agreement, signed by the parties hereto.

18. **No Assignment.** This A/M Agreement shall not be assigned or be assignable by the Aggregator/Marketer or a Customer or Customers without the consent in writing of the Company first obtained.

19. **Marketer Standards.** Notwithstanding any other requirements of this A/M Agreement, in order to operate as a Aggregator/Marketer on the Company's system, an Aggregator/Marketer must comply with all Board approved Marketer Standards.

SOUTH JERSEY GAS COMPANY

ATTEST:

______________________________ By: ______________________________
(Name)

____
(Title)

SELLER/COMPANY

ATTEST:

(NAME OF AGGREGATOR/MARKETER)

______________________________ By: ______________________________
(Name)

____
(Title)

AGGREGATOR/MARKETER

SOUTH JERSEY GAS COMPANY

AGGREGATOR/MARKETER'S AGREEMENT (A/M)
(Continued)

APPENDIX A

This Appendix A is incorporated in and made part of that certain A/M Agreement dated _______________ , Agreement No.____________ , to which it is appended, and the same Agreement is incorporated into this Appendix A and made a part of this Appendix A. This Appendix A is dated____________________________ .

____________________________ (Name of Customer)	____________________________ (Customer Account Number)
____________________________ (Name of Customer)	____________________________ (Customer Account Number)
____________________________ (Name of Customer)	____________________________ (Customer Account Number)
____________________________ (Name of Customer)	____________________________ (Customer Account Number)
____________________________ (Name of Customer)	____________________________ (Customer Account Number)
____________________________ (Name of Customer)	____________________________ (Customer Account Number)
____________________________ (Name of Customer)	____________________________ (Customer Account Number)

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

RESIDENTIAL GAS SERVICE (RSG) - NONHEAT CUSTOMER	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		12.750000		0.844688	**13.594688**
DELIVERY CHARGE (per therm):					
Base Rate		0.856372		0.056735	0.913107
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	(0.111064)	(0.000278)	(0.007376)	(0.118718)
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
TOTAL DELIVERY CHARGE		0.900254	0.000081	0.059593	**0.959928**
BGSS: (Applicable To Sales Customers Only)	A	0.418898	0.001049	0.027822	**0.447769**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

RESIDENTIAL GAS SERVICE (RSG) - HEAT CUSTOMER	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		12.750000		0.844688	**13.594688**
DELIVERY CHARGE (per therm):					
Base Rate		0.856372		0.056735	0.913107
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	(0.011621)	(0.000029)	(0.000772)	(0.012422)
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
Total Delivery Charge		0.999697	0.000330	0.066197	**1.066224**
BGSS: (Applicable To Sales Customers Only)	A 0.324561	0.418898	0.001049	0.027822	**0.447769**

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GENERAL SERVICE (GSG)	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		34.750000		2.302188	**37.052188**
DELIVERY CHARGE (per therm):					
Base Rate		0.552743		0.036619	0.589362
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	0.324561	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	(0.019668)	(0.000049)	(0.001306)	(0.021023)
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
Total Delivery Charge		0.688021	0.000310	0.045547	**0.733878**
BGSS: (Applicable To Sales Customers Only using less than 5,000 therms annually)	A	0.418898	0.001049	0.027822	**0.447769**
BGSS: (Applicable To Sales Customers Only using 5,000 therms annually or greater)	A				**RATE SET MONTHLY**

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GENERAL SERVICE-LV (GSG-LV)	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		225.000000		14.906250	**239.906250**
D-1 Demand Charge (Mcf)		12.250000		0.811563	**13.061563**
DELIVERY CHARGE (per therm):					
Base Rate		0.313582		0.020775	0.334357
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	0.012806	0.000032	0.000851	0.013689
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
Total Delivery Charge		0.481334	0.000391	0.031860	**0.513585**
BGSS: (Applicable Sales Customers Only)	A				**RATE SET MONTHLY**

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COMPREHENSIVE TRANSPORTATION SERVICE (CTS)

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
FIRM					
CUSTOMER CHARGE		750.000000		49.687500	**799.687500**
D-1 Demand Charge (Mcf)		31.750000		2.103438	**33.853438**
DELIVERY CHARGE (per therm):					
Base Rate		0.088309		0.005850	0.094159
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.159824	0.000150	0.010543	**0.170517**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
BUY-OUT PRICE					RATE SET MONTHLY
LIMITED FIRM					
CUSTOMER CHARGE		100.000000		6.625000	**106.625000**
DELIVERY CHARGE (per therm):					
Base Rate		0.058400		0.003900	0.062300
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.129915	0.000150	0.008593	**0.138658**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
BUY-OUT PRICE					RATE SET MONTHLY

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LARGE VOLUME SERVICE (LVS)	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
FIRM					
CUSTOMER CHARGE		1,050.000000		69.562500	**1,119.562500**
D-1 Demand Charge (Mcf)		19.750000		1.308438	**21.058438**
D-2 DEMAND BGSS(Applicable to Sales Customers Only)	A	18.357823	0.045986	1.219252	**19.623062**
DELIVERY CHARGE (per therm):					
Base Rate		0.069401		0.004598	0.073999
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.140916	0.000150	0.009291	**0.150357**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable to Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable Transportaton Customers Only)	I				RATE SET MONTHLY
BGSS: (Applicable Sales Customers Only)	A				**RATE SET MONTHLY**
LIMITED FIRM					
CUSTOMER CHARGE		100.000000		6.625000	**106.625000**
DELIVERY CHARGE (per therm):					
Base Rate		0.168713		0.011177	0.179890
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.240228	0.000150	0.015870	**0.256248**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable to Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
BUY-OUT PRICE	I				RATE SET MONTHLY

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FIRM ELECTRIC SALES (FES)	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
WINTER					
D-1 DEMAND (MCF) (Rate is negotiated. Shown here is the benchmark rate.)		2.897200		0.191900	**3.089100**
D-2 DEMAND BGSS(MCF) (Applicable to Sales Customers Only)	A	9.178912	0.022993	0.609626	**9.811531**
DELIVERY CHARGE (per therm):					
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
Total Delivery Charge		0.083717	0.000181	0.005503	**0.089401**
C-3 All Therms (Rate is negotiated. Shown here is the benchmark rate.)		0.162900		0.010800	**0.173700**
C-4 Escalator Rate (To be determined as prescribed in the Company's Tariff)					**RATE SET MONTHLY**
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only)	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
SUMMER					
D-1 DEMAND (MCF) (Rate is negotiated. Shown here is the benchmark rate.)		2.897200		0.191900	**3.089100**
D-2 DEMAND BGSS(MCF) (Applicable to Sales Customers Only)	A	9.178912	0.022993	0.609626	**9.811531**
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
EET	N	0.015736	0.000039	0.001045	0.016820
Total Delivery Charge		0.083717	0.000181	0.005503	**0.089401**
C-3 All Therms (Rate is negotiated. Shown here is the benchmark rate.)		0.162900		0.010800	**0.173700**
C-4 Escalator Rate (To be determined as prescribed in the Company's Tariff)					**RATE SET MONTHLY**
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only)	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**

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ELECTRIC GENERATION SERVICE (EGS) - RESIDENTIAL	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		12.750000		0.844688	**13.594688**
DELIVERY CHARGE (per therm):					
Base Rate		0.134084		0.008883	0.142967
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Total Delivery Charge		0.287097	0.000354	0.018989	**0.306440**
BGSS: (Applicable To Sales Customers Only)	A	0.418898	0.001049	0.027822	**0.447769**

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ELECTRIC GENERATION SERVICE (EGS) - COMMERCIAL/INDUSTRIAL	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		79.000000		5.233750	**84.233750**
D-1 DEMAND (MCF)		8.250000		0.546563	**8.796563**
DELIVERY CHARGE (per therm):					
Base Rate - Winter Season (Nov - Mar)		0.155881		0.010327	0.166208
Base Rate - Summer Season (Apr - Oct)		0.125881		0.008340	0.134221
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Total Delivery Charge - Winter Season		0.308894	0.000354	0.020433	**0.329681**
Total Delivery Charge - Summer Season		0.278894	0.000354	0.018446	**0.297694**
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**

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ELECTRIC GENERATION SERVICE-LV (EGS-LV)	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
FIRM					
CUSTOMER CHARGE		750.000000		49.687500	**799.687500**
D-1 DEMAND (MCF) (Rate is negotiated. Shown here is the benchmark rate.)		29.075282		1.926237	**31.001519**
D-2 DEMAND BGSS (MCF) (Applicable to Sales Customers Only)	A	19.869101	0.049772	1.319625	**21.238498**
DELIVERY CHARGE (per therm):					
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
LIMITED FIRM					
D-2 DEMAND BGSS(MCF) (Applicable to Sales Customers Only)	A	9.178912	0.022993	0.609626	**9.811531**
DELIVERY CHARGE (per therm):					
SBC:					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
CLEP	E, G	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
C-3 (Rate is negotiated. Shown here is the benchmark rate.)		0.162900		0.010800	**0.173700**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**

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	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
YARD LIGHTING SERVICE (YLS)					
MONTHLY CHARGE / INSTALL		15.788822		1.046009	**16.834831**
STREET LIGHTING SERVICE (SLS)					
MONTHLY CHARGE / INSTALL		18.977244		1.257242	**20.234486**
INTERRUPTIBLE GAS SALES (IGS)					
Commodity					Rate Set Monthly
SBC:					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC:		0.044403	0.000083	0.002892	0.047378
EET	N	0.015736	0.000039	0.001045	0.016820

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INTERRUPTIBLE TRANSPORTATION (ITS)		RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE			**100.000000**		**6.625000**	**106.625000**
TRANSPORTATION CHARGE A			**0.028400**		**0.001900**	**0.030300**
SBC:						
RAC		E, K	0.033003	0.000083	0.002192	0.035278
CLEP		E, G	0.023578	0.000059	0.001566	0.025203
USF		E	0.011400	0.000000	0.000700	0.012100
	Total SBC:		0.067981	0.000142	0.004458	0.072581
EET		N	0.015736	0.000039	0.001045	0.016820
TRANSPORTATION CHARGE B			**0.093200**		**0.006200**	**0.099400**
SBC:						
RAC		E, K	0.033003	0.000083	0.002192	0.035278
CLEP		E, G	0.023578	0.000059	0.001566	0.025203
USF		E	0.011400	0.000000	0.000700	0.012100
	Total SBC:		0.067981	0.000142	0.004458	0.072581
EET		N	0.015736	0.000039	0.001045	0.016820
TRANSPORTATION CHARGE C			**0.153200**		**0.010100**	**0.163300**
SBC:						
RAC		E, K	0.033003	0.000083	0.002192	0.035278
CLEP		E, G	0.023578	0.000059	0.001566	0.025203
USF		E	0.011400	0.000000	0.000700	0.012100
	Total SBC:		0.067981	0.000142	0.004458	0.072581
EET		N	0.015736	0.000039	0.001045	0.016820

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NATURAL GAS VEHICLE (NGV)		RATE	PUA	NJ SALES TAX	TARIFF RATE
COMPANY OPERATED FUELING STATIONS					
DELIVERY CHARGE (per therm):					
SBC					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
CLEP	E, G	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC:		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
DISTRIBUTION CHARGE		0.257299	0.000704	0.0170930	**0.275096**
COMPRESSION CHARGE		0.697060	0.001907	0.046307	**0.745274**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable for Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
CUSTOMER OPERATED FUELING STATIONS					
CUSTOMER CHARGE					
0 - 999 CF/hour		37.500000		2.484400	**39.984400**
1,000 - 4,999 CF/hour		75.000000		4.968800	**79.968800**
5,000 - 24,999 CF/hour		220.000000		14.575000	**234.575000**
25,000 or Greater CF/hour		925.000000		61.281250	**986.281250**
DELIVERY CHARGE (per therm):					
SBC					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
CLEP	E, G	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC:		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
DISTRIBUTION CHARGE		0.257299	0.000704	0.017093	**0.275096**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable for Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
Facilities Charge (Applicable only to Customers that elect the Company construct Compressed Natural Gas ("CNG") fueling Facilities located on Customer's property)		0.299096		0.019815	**0.318911**

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Heat Residential Rate Schedule:

	RSG FSS	*RSG-FTS*	*Difference*
BGSS	0.447769	0.000000	0.447769
Base Rate	0.913107	0.913107	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
CIP	(0.012422)	(0.012422)	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.513993	1.066224	0.447769

NonHeat Residential Rate Schedule:

	RSG FSS	*RSG-FTS*	*Difference*
BGSS	0.447769	0.000000	0.447769
CIP	(0.118718)	(0.118718)	0.000000
Base Rate	0.913107	0.913107	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.407697	0.959928	0.447769

GSG
(Under 5,000 therms annually)

	GSG FSS	*GSG-FTS*	*Difference*
BGSS	0.447769	0.000000	0.447769
CIP	(0.021023)	(0.021023)	0.000000
Base Rates	0.589362	0.589362	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.181647	0.733878	0.447769

GSG
(5,000 therms annually or greater)

	GSG FSS	*GSG-FTS*	*Difference*
BGSS	0.324561	0.000000	0.324561
CIP	(0.021023)	(0.021023)	0.000000
Base Rates	0.589362	0.589362	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.058439	0.733878	0.324561

GSG-LV

	Prior to 7/15/97		
	GSG-LV FSS	*GSG-LV-FTS*	*Difference*
BGSS	0.324561	0.000000	0.324561
CIP	0.013689	0.013689	0.000000
Base Rates	0.334357	0.334357	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	0.838146	0.513585	0.324561

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Appendix B- Original Sheet No. 1**

APPLIANCE REPAIR SERVICE (ARS)

APPLICABLE TO USE OF SERVICE FOR:

Service pursuant to this Rate Schedule ARS, shall be available to all persons or other entities.

CHARACTER OF SERVICE:

Repair and servicing of appliances.

FLOOR RATES:

Competitive Services:

Standard Rates:	\$85.36 per hour (minimum charge - \$28.45)
Non-Standard Rates:	\$128.04 per hour (minimum charge - \$42.68)

Non-Competitive Services:

Standard Rates:	\$83.00 per hour (minimum charge - \$28.00)
Non-Standard Rates:	\$124.50 per hour (minimum charge - \$42.00)

PRICES:

Competitive Services:

Standard Rates:	\$124.95 per hour (minimum charge - \$59.00)
Non-Standard Rates:	\$187.43 per hour (minimum charge - \$88.50)

Non-Competitive Services:

Standard Rates:	\$83.00 per hour (minimum charge - \$28.00)
Non-Standard Rates:	\$124.50 per hour (minimum charge - \$42.00)

SALES AND USE TAX:

All charges pursuant to this Rate Schedule ARS shall be adjusted to reflect appropriate New Jersey Sales and Use Taxes.

FREE SERVICES:

Upon a customer's request, the Company will provide, without charge, certain services designated as Free Services, as set forth in Special Provision (d).

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided, however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a nonbusiness day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company

SOUTH JERSEY GAS COMPANY

APPLIANCE REPAIR SERVICE (ARS)
(continued)

may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. Service to State, county or municipal government entities will not be subject to a late payment charge.

LIMITS OF COVERAGE:

All equipment must be manufactured, installed and maintained in accordance with the National Fuel Gas Code; certified by the American Gas Association, the Underwriters Laboratories or similar natural gas industry trade organizations; installed in accordance with local, state, and federal law; and satisfy both manufacturer's and the Company's requirements for safe and proper installation. Our response time shall be determined by scheduling priorities that consider public safety, health and welfare, existing work loads, nature or science, and prevailing weather conditions.

SPECIAL PROVISIONS:

(a) The Non-Standard Rates will be charged on weekends, holidays and other than normal working hours (8:00 a.m. to 4:30 p.m.). The Standard Rates will be charged at all other times.

(b) The following list shall constitute Competitive Services

Repair of Hot Water Heater
Repair of House Heater

(c) The following list shall constitute Non-Competitive Services:

Changed Location of Facilities
Changed Location of Meter
Changed Location of Service
Installed Remote Meter Device

(d) The following list shall constitute Free Services:

1. Investigate appliance flashbacks.
2. Inspecting new appliance and/or installation.
3. Meter changes.
4. Advisory service to assure safe operation of gas appliances.
5. Turning on or turning off gas heaters when work is performed in conjunction with meter set orders, turn on order or turn off orders.
6. Instructing customers in the proper use, operation and maintenance of appliances. Instructing heating customers in the procedure of turning on house heater.
7. Any call made to place an appliance in a safe condition. A safe condition will result if a valve is shut off and/or the appliance is disconnected.
8. Investigating gas leaks and odors.
9. Meter turn offs.
10. New equipment startup.

SOUTH JERSEY GAS COMPANY

APPLIANCE REPAIR SERVICE (ARS)
(continued)

11. Preliminary investigation for appliance installation.
12. Reported no gas or poor pressure.
13. Gas leak repairs at meter and upstream piping.
14. A service order which is canceled before the service person arrives or if it is canceled by the Company.
15. Carbon monoxide services.
16. Pilot light up services from November 1 through August 31 of each year.

(e) The Company may not charge less than the Floor Rates set forth in the Floor Rates section of this Rate Schedule ARS, plus New Jersey Sales and Use Taxes.

(f) The charges set forth in this Rate Schedule ARS are for labor only, and not for appliance repair parts. Repair parts associated with services under this Rate Schedule ARS shall not be priced below cost to the Company.

SOUTH JERSEY GAS COMPANY

TARIFF FOR GAS SERVICE

Filed With

State of New Jersey

Board of Public Utilities

SOUTH JERSEY GAS COMPANY

~~**GENERAL OFFICES**~~

~~**Number**~~ **One South Jersey Place**~~**Plaza**~~

Atlantic City~~**Folsom**~~**, NJ 08401**~~**037**~~

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 6**

RESIDENTIAL SERVICE (RSG)

APPLICABLE TO USE OF SERVICE FOR:

All residential purposes. Customer may elect Firm Sales Service or Firm Transportation Service. To be eligible for Firm Transportation Service RSG, a customer must hold clear and marketable title to gas that is made available for delivery to the customer's residence on the Company's system.

CHARACTER OF SERVICE Firm Sales Service and Firm Transportation Service.

MONTHLY RATE: (1)

Customer Charge:		$13.594688~~10.129375~~ per month
Delivery Charge:		
(a)	Residential Non-Heating Customers Firm Sales Service and Firm Transportation Service	$.959928~~769793~~ per therm
(b)	Residential Heating Customers Firm Sales Service and Firm Transportation Service	$1.066224~~876089~~ per therm
Basic Gas Supply Service ("BGSS") Charge:		
	All consumption for customers who elect Firm Sales Service.	See Rider "A" of this Tariff.

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff.
Transportation Initiation Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "C" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
Temperature Adjustment Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "F" of this Tariff.

(1) Please refer to Appendix A for components of Monthly Rates and Price to Compare

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 10**

GENERAL SERVICE (GSG)

APPLICABLE TO USE OF SERVICE FOR:

All Commercial and Industrial Customers who would not qualify for any other Rate Schedule. A customer qualifying for service under Rate Schedule GSG may elect either Firm Sales Service or Firm Transportation Service. To be eligible for Firm Transportation Service under this Rate Schedule GSG, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service or Firm Transportation Service.

MONTHLY RATE: [(1)]

Customer Charge:

$37.052188~~31.955513~~ per month

Delivery Charges:

Firm Sales Service and Firm Transportation Service	$.733878~~748346~~ per therm

Basic Gas Supply Service ("BGSS") Charge:

All consumption for customers who elect Firm Sales Service	See Rider "A" of this Tariff.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (o).

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff.
Transportation Initiation Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "C" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
Temperature Adjustment Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "F" of this Tariff.

[(1)] Please refer to Appendix A for components of Monthly Rates and Price to Compare.

Issued March 13, 2020 **Effective with service rendered**
by South Jersey Gas Company, **on and after April 13, 2020**
D. Robbins, Jr., President
Filed pursuant to Order in Docket No. _______________ of the Board of Public Utilities,
State of New Jersey, dated ______________

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 14**

GENERAL SERVICE – LARGE VOLUME (GSG-LV)

APPLICABLE TO USE OF SERVICE FOR:

All Commercial and Industrial Customers who would not qualify for any other Rate Schedule (other than Rate Schedule GSG), and who has an annualized usage of 100,000 therms or more~~,~~. A customer qualifying for service under Rate Schedule GSG-LV may elect either Firm Sales Service or Firm Transportation Service. To be eligible for Firm Transportation Service under this Rate Schedule GSG-LV, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service or Firm Transportation Service.

MONTHLY RATE: (1)

Customer Charge:

$239.906250~~159.937500~~ per month

Delivery Charges:

Firm Sales Service and Firm Transportation Service(2)

Demand Charge:

D-1FT: $13.061563~~10.245170~~ per Mcf of Contract Demand

Volumetric Charge:

$.513585~~481544~~ per therm

Basic Gas Supply Service ("BGSS") Charge:

All consumption for customers who elect Firm Sales Service — See Rider "A" of this Tariff.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (o).

(1) Please refer to Appendix A for components of Monthly Rates and Price to Compare.
(2) See Special Provision (p) of this Rate Schedule GSG-LV, regarding appropriate balancing charges.

Issued March 13, 2020
by South Jersey Gas Company,
D. Robbins, Jr., President

Effective with service rendered
on and after April 13, 2020

Filed pursuant to Order in Docket No. ________________ of the Board of Public Utilities, State of New Jersey, dated _______________

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 18**

COMPREHENSIVE TRANSPORTATION SERVICE (CTS)

APPLICABLE TO USE OF SERVICE FOR:

All customers having a Firm Contract Demand, and an average annual daily Firm usage of 100 Mcf per day or more. To be eligible for service under this Rate Schedule CTS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system. Provided, however, that any customer receiving service under this Rate Schedule CTS prior to August 29, 2003 shall continue to be eligible to receive service under this Rate Schedule CTS, notwithstanding the foregoing, if said customers continues to have a Firm Contract Demand of 100 Mcf per day or more. Further provided, however, that if a customer ceases to receive service under this Rate Schedule CTS, and seeks to return to service under this Rate Schedule CTS, said customer must meet all requirements for eligibility as though applying for service in the first instance.

CHARACTER OF SERVICE:

Firm Transportation Service and Limited Firm Transportation Service

MONTHLY RATE: (1)

Firm:

Customer Charge: $799.687500~~639.750000~~ per month

Delivery Charges:

Demand Charge: D-1FT: $33.853438~~30.553927~~ per Mcf of Contract Demand

Volumetric Charges:

All consumption for customers who elected to transfer from Sales Service to Firm Transportation Service per therm — $.170517~~149687~~

Limited Firm:

Customer Charge: $106.625000 per month

Delivery Charges:

Volumetric Charges:

All consumption for customers who elected to transfer from Sales Service to Firm Transportation Service — $.138658 per therm

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(1) Please refer to Appendix A for components of Monthly Rates.

Issued March 13, 2020
by South Jersey Gas Company,
D. Robbins, Jr., President

Effective with service rendered
on and after April 13, 2020

Filed pursuant to Order in Docket No. _______________ of the Board of
Public Utilities, State of New Jersey, dated _____________

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 25**

LARGE VOLUME SERVICE (LVS)

APPLICABLE TO USE OF SERVICE FOR:

Firm Sales Service and Firm Transportation Service pursuant to this Rate Schedule LVS, shall be available to all Industrial Customers with a Contract Demand and a minimum annualized average use of 200 Mcf per day. To be eligible for Firm Transportation Service under this Rate Schedule LVS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service, Limited Firm Sales Service, Firm Transportation Service, and Limited Firm Transportation Service.

MONTHLY RATE: (1)

Firm:

Customer Charge:

$1,119.562500~~959.625000~~ per month

Delivery Charge:

Firm Sales Service and Firm Trasnportation Service

Demand Charge:
D-1FT: $21.058438~~17.016071~~ per Mcf of Contract Demand

Volumetric Charge:
$.150357~~.130792~~ per therm

Basic Gas Supply Service ("BGSS") Charge:

Demand Charge:
D-2: $19.623062 per Mcf of Contract Demand.

Volumetric Charge:
See Rider "A" of this Tariff.

(1) Please refer to Appendix A for components of Monthly Rates.

SOUTH JERSEY GAS COMPANY

LARGE VOLUME SERVICE (LVS)
(Continued)

Limited Firm:

Customer Charge:

$106.625000 per month

Delivery Charge:

Firm Sales Service and Firm Transportation

Volumetric Charge:

$.256248~~206626~~ per therm

Basic Gas Supply Service ("BGSS") Charge:

Applicable to customers who elect Firm Sales Service

Volumetric Charge:

See Rider "A" of this Tariff.

PRICE TO COMPARE:

The Company will provide the Price to Compare for an LVS customer, at said customer's request.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (h).

MINIMUM BILL:

Sum of monthly Customer Charge and monthly Demand Charges, irrespective of use.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 38**

ELECTRIC GENERATION SERVICE (EGS)

APPLICABLE TO USE OF SERVICE FOR:

Residential, commercial and industrial uses for electric generation facilities (excluding back-up generator equipment); all Prime Movers; and all engine driven equipment (whether or not used for electric generation). Provided, however, that in order to be eligible for this Rate Schedule EGS, a customer must have a Firm Daily Contract Demand of less than 200 Mcf per day; provided, however, that a residential EGS customer will have no Firm Daily Contract Demand. To be eligible for Firm Transportation Service under this Rate Schedule EGS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service and Firm Transportation Service

MONTHLY RATE: (1)(2)

Residential Customer Charge:

$13.594688~~10.662500~~ per month

Residential Delivery Charge

Residential Volumetric Charge: $.306440 per therm

Commercial and Industrial Customer Charge:

$84.233750~~67.578925~~ per month

Commercial and Industrial Delivery Charge:

Commercial and Industrial Demand Charge:

D-1 Charge: $8.796563~~8.362812~~ per Mcf of contract

Volumetric Charges:

Winter Season (effective during billing months of November through March):

All Consumption for Firm Sales Service and Firm Transportation Service

$.329681~~307591~~ per therm

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(1) Please refer to Appendix A for components of Monthly Rates.
(2) See Special Provision (k) of this Rate Schedule EGS, regarding appropriate balancing charges.

Issued March 13, 2020 **Effective with service rendered**
by South Jersey Gas Company, **on and after April 13, 2020**
D. Robbins, Jr., President
Filed pursuant to Order in Docket No. ______________ of the Board of Public Utilities, State of New Jersey, dated _____________

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 39**

ELECTRIC GENERATION SERVICE (EGS)
(Continued)

Summer Season (effective during billing months of April through October):

All Consumption for Firm Sales Service and Firm Transportation Service

$.297694~~275603~~ per therm

Basic Gas Supply Service ("BGSS") Charge:

Applicable to customers who elect Firm Sales Service
See Rider "A" of this Tariff.

LINE LOSS:

Line Loss shall be 1.43% as provided in Special Provision (o~~p~~).

APPLICABLE RIDERS:

Basic Gas Supply Service Clause:	BGSS charges are depicted in Rider "A" of this Tariff.
Societal Benefits Clause:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "E" of this Tariff.
2017 Tax Act	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "H" of this Tariff.
Balancing Service Clause	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "J" of this Tariff. However, also see Special Provision (k) regarding Rider "I".
Energy Efficiency Tracker:	The rates set forth above have been adjusted, as is appropriate, pursuant to Rider "N" of this Tariff.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date; provided however, the Company shall take into account any postal service delays of which the Company is advised. If the fifteenth (15th) day falls on a non-business day, the due date shall be extended to the next business day. Should the customer fail to make payment as specified, the Company may, beginning on the twenty-sixth (26th) day, assess simple interest at a rate equal to the prime rate as published in the Money Rates column in The Wall Street Journal. A late payment charge shall not be assessed on a residential customer, or on State, county or municipal government entities.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 43**

ELECTRIC GENERATION SERVICE – LARGE VOLUME (EGS-LV)

APPLICABLE TO USE OF SERVICE FOR:

All commercial and industrial electric generation facilities; all Prime Movers and all engine driven equipment (whether or not used for electric generation). Provided, however, that in order to be eligible for this Rate Schedule EGS-LV, a customer must have a Firm Daily Contract Demand of 200 Mcf per day or more. To be eligible for Firm Transportation Service under this Rate Schedule EGS-LVS, a customer must hold clear and marketable title to gas that is made available for delivery to customer's facility on the Company's system.

CHARACTER OF SERVICE:

Firm Sales Service, Firm Transportation Service, Limited Firm Sales Service and Limited Firm Transportation Service.

MONTHLY RATE: (1)

Customer Charge:

$799.687500~~456.696200~~ per month

FIRM:

Demand Charges: (2)

D-1 $31.001519~~24.772951~~ per Mcf of Firm Daily Contract Demand.

D-2 $21.238498 per Mcf of Firm Daily Contract Demand or $0 for Firm Transportation customers.

Volumetric Charge:

C-1: $.076358 per therm of consumption

C-2: As depicted in the Monthly BGSS Subrider of Rider "A" of this Tariff, OR Customer Owned Gas Clause, Rider "D"

Minimum Bill: Monthly D-1 and D-2 charges, irrespective of use.

LIMITED FIRM:

Demand Charge:

D-2 $9.811531 per Mcf of Limited Firm Daily Contract Demand or $0 for Limited Firm Transportation customers

Volumetric Charge: (2)

C-1: $.076358 per therm of consumption

C-2: As depicted in the Monthly BGSS Subrider of Rider "A" of this Tariff, OR Customer Owned Gas Clause, Rider "D"

C-3 $.173700 per therm for all consumption within Limited Firm Contract Demand level.[1]

(1) Please refer to Appendix A for components of Monthly Rates.
(2) Please refer to Special Provision (j).

Issued March 13, 2020 **Effective with service rendered**
by South Jersey Gas Company, **on and after April 13, 2020**
D. Robbins, President

Filed pursuant to Order in Docket No. ______________ of the Board of Public Utilities, State of New Jersey, dated _______________

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 49**

YARD LIGHTING SERVICE (YLS)

APPLICABLE TO USE OF SERVICE FOR:

Gas yard lighting where service is supplied through an installation furnished by the customer and approved by the Company. Each installation shall contain 1 upright mantle or 2 inverted mantles.

This rate is available only to an existing customer receiving service under this Rate Schedule, YLS, and not having other metered Service at the customer's present location as of the effective date of this Tariff.

CHARACTER OF SERVICE:

Firm Sales Service.

MONTHLY RATE:

The monthly charge shall be $16.834831~~14.346739~~ per month for each installation.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date.

TERM:

Customer may discontinue service upon adequate written notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SOUTH JERSEY GAS COMPANY

STREET LIGHTING SERVICE (SLS)

APPLICABLE TO USE OF SERVICE FOR:

Gas Street lighting where service is supplied through an installation approved by the Company. Each installation shall contain three (3) inverted mantles.

This rate is available only to an existing customer receiving service under this Rate Schedule, SLS, and not having other metered service at the customer's present location as of the effective date of this Tariff.

CHARACTER OF SERVICE:

Firm Sales Service.

MONTHLY RATE:

The Monthly Rate shall be $20.234486~~17.552287~~ per month for each installation.

TERMS OF PAYMENT:

Payment of all bills must be received in full at the Company's designated office within fifteen (15) days of the billing date.

TERM:

Customer may discontinue service upon adequate written notice to the Company.

TERMS AND CONDITIONS:

The General Terms and Conditions of this Tariff are incorporated into this rate schedule and this rate schedule shall be interpreted in accordance therewith.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 57**

INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(Continued)

(d) The customer bears sole responsibility for costs incurred to deliver transportation gas to the Company's city gate station.

(e) Customer shall be required to reimburse the Company for any out-of-pocket expenses incurred in connection with the initiation and rendering of service under this Rate Schedule ITS. If the Company has accepted gas for delivery under this Rate Schedule and as a result thereof it incurs any financial or burdensome administrative obligation, the Company may impose a surcharge therefore.

(f) It is contemplated that service pursuant to this Rate Schedule ITS shall be provided within the existing limitations of Company's system, and Company shall not be required to expand or alter the said system.

(g) Should Company, in its sole discretion, elect to expand or alter its system in order to provide service pursuant to this Rate Schedule ITS, Company may require the customer to make a payment towards all or a part of the cost of the said expansion or alteration as Company shall determine in Company's discretion. Provided, however, that before making such expansion or alteration, Company shall provide an estimate in writing of the cost of such expansion or alteration to customer. Customer shall then have the option of terminating the Transportation Service Agreement within ninety (90) days of the receipt of such estimate by written notice of termination. If customer does not so terminate, customer shall be required to make the payment required by this Special Provision (g~~h~~). Further, provided, however, that the making of such a payment shall give the customer no interest in the Company's system. All rights, including the rights of ownership and possession, shall be vested exclusively in the Company.

(h) Company retains sole reasonable discretion as to whether or not a particular customer or particular customers shall receive service pursuant to this Rate Schedule ITS.

(i) Transportation Service may be curtailed or discontinued at the sole option of the Company after not less than three (3) hours, advance notice by telephone or otherwise. However, the customer shall continue to hold title to any gas (less line loss) received by Company and not delivered to customer prior to such curtailment or discontinuance.

(j) The customer who anticipates a need for gas in excess of its daily firm requirements and designated Scheduled Daily Delivery for transportation, must nominate the excess level required, by advising the Company of its request to use such gas by no later than 9:00 AM of the day preceding such use. If the Company agrees to supply such nominated gas, it will do so pursuant to the provisions of its IGS Rate Schedule.

(k) Gas consumption in excess of the nominated quantities described in Special Provision (k) of this Rate Schedule may be deemed unauthorized consumption and subject to the charges provided for in Special Provision (o) of this Rate Schedule. Provided, however, that the Company may waive such additional charge, in its sole reasonable discretion, if the customer demonstrates good cause for such consumption, and, such consumption does not adversely impact service to other customers. Further provided, however, that on any day during which gas receipts for a customer's account exceed gas utilized by the customer, after adjustment for line loss and sales authorized by the Company, such excess receipts will be subject to applicable balancing provisions of this Tariff.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 – GAS **Original Sheet No. 59**

INTERRUPTIBLE TRANSPORTATION SERVICE (ITS)
(Continued)

(s) As of November 1 each year, customers transporting gas pursuant to this Rate Schedule ITS whose alternate fuels are No. 2 oil, jet fuel or kerosene are required to have seven (7) days of Alternate Fuel Capability, or, if that customer's on-site Alternate Fuel Capability is less than seven (7) days, then that customer must have an additional firm contractual alternate fuel supply arrangement, so that when the firm contractual alternate fuel supply arrangement is taken together with that customer's Alternate Fuel Capability on hand, the sum total shall equal seven (7) days. No customer shall be required to acquire or construct additional Alternate Fuel Capability storage capacity, in order to meet the terms of this Special Provision (t).

(t) On or before November 1 of each year, each customer transporting gas pursuant to this Rate Schedule ITS must supply a Certification to the Company, certifying that the customer has met the requirements of Special Provision (t).

(u) All customers transporting gas pursuant to this Rate Schedule ITS, whose alternate fuel is not either No. 2 oil, jet fuel or kerosene, and all such customers who agree to suspend operations during an interruption of Rate Schedule ITS service, are not required to maintain Alternate Fuel Capability in accordance with Special Provision (t). However, all such customers must file a Certification with the Company, indicating the customer's alternate fuel, or indicating the customer's agreement to discontinue operations during an interruption of Rate Schedule ITS service.

(v) Wholesale electric generators, including cogeneration customers, are exempt from the requirements of Special Provisions (t) and~~,~~ (u)~~ and (v)~~ of this Rate Schedule ITS.

(w) Any charges imposed pursuant to the above Special Provisions of this Rate Schedule ITS shall be in addition to other charges imposed pursuant to this Rate Schedule ITS.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 60**

NATURAL GAS VEHICLE (NGV)

APPLICABLE TO:

This service will be available to Commercial and Industrial customers who will utilize natural gas, for the purpose of providing vehicle fuel at Company-operated fueling stations or at separately metered customer-operated fueling stations.

CHARACTER OF SERVICE:

Firm Sales Service or Firm Transportation Service

COMPRESSED NATURAL GAS VEHICLE SERVICE AT COMPANY OPERATED FUELING STATIONS

This part of the service is available for refueling vehicles with compressed natural gas to customers who refuel at Company operated fueling stations. All service at Company operated fueling stations shall be Firm Sales Service. Provided, however, that in the Company's sole discretion, it may allow for Firm Transportation service for a Customer-specific dedicated dispenser or time fill system (separately metered) at a Company operated fueling station.

Rate for Monthly Consumption

Volumetric Charge

C-1: $0.076358 per therm ($0.095448 GGE*)

Distribution Charge: $0.275096~~210015~~ per therm ($0.343870~~262519~~ GGE*)

Compression Charge: $0.745274~~586530~~ per therm ($0.931593~~733163~~ GGE*)

Commodity Charges

All consumption for customers who elected Firm Sales Service

Basic Gas Supply Service ("BGSS") Charge:

See Rider "A" of this Tariff.
BGSS rate * GGE Factor 1.25 = GGE

GGE indicates Gasoline Gallon Equivalent. The gasoline gallon equivalent shall be determined in accordance with local standards. The point of sale price to the Customer shall be displayed in gasoline gallon equivalents at public access dispensers at Company operated fueling stations, and shall be calculated as C-1 + Distribution Charge + Compression Charge + New Jersey Motor Vehicle Fuel Tax + Federal Excise Tax + BGSS.

Commodity charges do not include State of New Jersey Motor vehicle fuel tax and Federal Excise Tax. As of January 1, 2020~~July 1, 2011~~ these taxes were $0.105~~0.0525~~ and $0.18~~43~~ per gallon, respectively and shall be charged at the prevailing rate when applicable. The Company is under no obligation to determine if a customer is exempt from taxation.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS | **Original Sheet No. 61**

NATURAL GAS VEHICLE (NGV)
(Continued)

NATURAL GAS VEHICLE SERVICE AT CUSTOMER OPERATED FUELING STATIONS

This part of the service is available for the sale of separately metered uncompressed gas for the use of the customer solely as a vehicle fuel as follows:

The customer agrees to obtain and maintain, at its expense, all necessary certificates, licenses and regulatory approvals and pay all taxes levied on the gas compressed for refueling the customer's vehicles;

If the customer provides natural gas for resale as a motor fuel, the customer will be responsible for collecting and paying all applicable taxes on the gas compressed for resale and on the sale thereof and for the metering of such sale in accordance with local standards and regulations; and

The customer must execute a Standard Gas Service Agreement (NGV) for not less than 12 months and must produce evidence of Land Rights.

Rate for Monthly Consumption

Monthly Customer Charge

The monthly customer charge shall be determined in accordance with the maximum delivery capability requested by the customer.

0-999 Cf/hour	$39.984400
1,000-4,999 Cf/hour	$79.968800
5,000-24,999 Cf/hour	$234.575000~~213.250000~~
25,000 and greater Cf/hour	$986.281250~~750.074888~~

Volumetric Charges

C-1: $0.076358 per therm ($0.095448 GGE)

Distribution Charge: $0.275096~~210015~~ per therm ($0.343870~~262519~~ GGE)

Basic Gas Supply Service ("BGSS") Charge:

All consumption for customers who elect Firm Sales Service See Rider "A" of this Tariff.

Facilities Charge

All consumption for Customers that elect to have the Company construct Compressed Natural Gas ("CNG") fueling facilities located on Customer's property:

C-2: $0.318911~~345653~~ ($0.398639~~432066~~ GGE)

The customer shall pay all related motor vehicle taxes directly to the taxing entity. Such taxes shall be incremental to charges paid to the Company for the cost of receiving service under this rate schedule.

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by South Jersey Gas Company, | **on and after April 13, 2020**
D. Robbins, Jr., President

Filed pursuant to Order in Docket No. ____________ of the Board of Public Utilities, State of New Jersey, dated ____________

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 – GAS **Original Sheet No. 62**

NATURAL GAS VEHICLE (NGV)
(Continued)

DELIVERY SERVICE FOR NATURAL GAS VEHICLES

This part of service is available for delivery of customer owned natural gas for use in compression and dispensing equipment at the Customer's premises, as follows:

The customer must purchase under a contract with an initial term of not less than one year an adequate supply of natural gas of a quality acceptable to the Company, and must make arrangements by which such volumes of natural gas can be delivered into the Company's distribution system at the Customer's expense.

By taking service under this part, the Customer warrants that it has good and legal title to all gas supplied to the Company, and agrees to indemnify, defend and hold the Company harmless from any loss, claims or damages in regard to such title.

Rate for Delivery Service

Monthly Customer Charge

The monthly customer charge shall be determined in accordance with the maximum delivery capability requested by the customer.

0-999 Cf/hour	$39.984400
1,000-4,999 Cf/hour	$79.968800
5,000-24,999 Cf/hour	$234.575000~~213.250000~~
25,000 and greater Cf/hour	$986.281250~~750.074888~~

Volumetric Charge

C-1**:** $0.076358 per therm ($0.095448 GGE)

Distribution Charge**:** $0.275096~~210015~~ per therm ($0.343870~~262519~~ GGE)

Facilities Charge

All consumption for Customers that elect to have the Company construct CNG fueling facilities located on Customer's property:

C-2: $0.318911~~345653~~ per therm ($0.398639~~432066~~ GGE)

Sales taxes are not included in the above basic charges. The Company is under no obligation to determine if a customer is exempt from taxation. Customers seeking tax exemption must file verification with the Company.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 77**

RIDER "F"
TEMPERATURE ADJUSTMENT CLAUSE (TAC)

APPLICABLE TO:

Rate Schedule RSG	-	Residential Service
Rate Schedule GSG	-	General Service
Rate Schedule GSG-LV	-	General Service – Large Volume

(a) This Rider "F" shall be known as the Temperature Adjustment Clause (TAC). It shall be utilized to adjust the Company's revenues in cases wherein temperatures experienced during a Base Year yield more or less degree days than were experienced on a twenty-year normal basis, plus or minus one-half (1/2%) percent of the sum of the Cumulative Normal Degree Days, for the twenty-year period utilized in the Company's then most recent base rate case. This adjustment will be effectuated through a credit or surcharge applied to customers' bills during the year succeeding the Base Year, which succeeding year shall be known as the Adjustment Year. The credit or surcharge will also be adjusted to reflect Base Year under recoveries or over recoveries pursuant to this TAC.

(b) Each Base Year, and each Adjustment Year shall begin on October 1 and end on May 31 and shall include only the months of October, November, December, January, February, March, April and May.

(c) The Company will determine on a monthly basis, Degree Days, Cumulative Degree Days, Normal Degree Days, Cumulative Normal Degree Days, Deadband Degree Days and Cumulative Deadband Degree Days for each month during the Base Year. Cumulative Deadband Degree Days will be added to or subtracted from Cumulative Normal Degree Days to yield an Upper Level or Lower Level Degree Day Threshold. If the experienced cumulative Degree Days at the end of a Base Year month is higher than the Upper Level of the Degree Day Threshold, or lower than the Lower Level, a Degree Day Adjustment will be made. The factors for use in this TAC are based on the 20-year average calculated in Docket No.~~GR17010071~~____________, and are based upon information obtained from the National Oceanic and Atmospheric Administration ("NOAA"), and will be adjusted in future base rate proceedings. Should a NOAA station utilized by the Company be abandoned, become inoperable, or otherwise become unusable, the Company may substitute data from a nearby NOAA station. When this becomes necessary, the Company will promptly notify the Staff of the Board and the Division of the Ratepayer Advocate. The factors for the TAC are as follows:

	Normal Degree Days	Cumulative Normal Degree Days	Deadband Degree Days	Cumulative Deadband Degree Days
Oct.	243~~255~~	243~~255~~	1	1
Nov.	512~~525~~	755~~780~~	3	4
Dec.	805~~797~~	1,560~~1,577~~	4	8
Jan.	974~~966~~	2,534~~2,543~~	5	13
Feb.	819~~825~~	3,353~~3,368~~	4	17
Mar.	668~~658~~	4,021~~4,026~~	3	20
Apr.	341~~353~~	4,362~~4,379~~	2	22
May	117~~124~~	4,479~~4,503~~	1	23
TOTAL	4,479~~503~~		23	

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D. Robbins, Jr., President
Filed pursuant to Order in Docket No. _____________ of the Board of
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SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 78**

RIDER "F"
TEMPERATURE ADJUSTMENT CLAUSE (TAC)
(Continued)

Degree Day Threshold

	Upper Level	Lower Level
Oct.	244~~256~~	242~~254~~
Nov.	759~~784~~	751~~776~~
Dec.	1,568~~1,585~~	1,552~~1,569~~
Jan.	2,547~~2,556~~	2,521~~2,530~~
Feb.	3,370~~3,385~~	3,336~~3,351~~
Mar.	4,041~~4,046~~	4,001~~4,006~~
Apr.	4,384~~4,401~~	4,340~~4,357~~
May	4,502~~4,526~~	4,456~~4,480~~

(d) The Degree Day Adjustment will be multiplied by a Degree Day Consumption Factor to derive the Therm Adjustment. The Degree Day Consumption Factor will be determined by first determining a factor for actual heat sensitive use per degree day per customer, for Rate Schedule RSG, and Rate Schedules GSG and GSG-LV heating load based upon actual usage on a cumulative basis through the end of each Base Year.

(e) The Therm Adjustment will be multiplied by the margin in the respective rate classes resulting in the adjustment to revenue. The margin is then calculated by adjusting out gas costs and associated revenue taxes. This calculation will take place only after Base Year months when the cumulative number of degree days at the end of the Base Year month is higher than the Upper Level of the Degree Day Threshold, or lower than the Lower Level.

(f) On or before August 31 of each Base Year, the Company will file in a petition with the Board, a proposed adjustment factor (“TAC Factor”) to be effective in the Adjustment Year following the then current Base Year. The proposed factor shall be the same for each rate schedule and shall be derived based upon the outstanding adjustment after May of each Base Year as developed in Paragraph (e), divided by the projected sales and transportation volumes for both rate schedules. The TAC Factor will be expressed as a rate per unit of sale. The TAC Factor will be effectuated through a credit or surcharge applied to customers' bills during the Adjustment Year. The credit or surcharge will also be adjusted to reflect over or under recoveries from the previous TAC year. The TAC Factor will be effective with the commencement of the Adjustment Year. At the end of the Adjustment Year, the TAC factor will terminate and the Company will file tariff pages with the Board reflecting this termination. It is subject to an earnings review analysis set forth in the Stipulation accepted by the Board in Docket No. GR91071243J.

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SOUTH JERSEY GAS COMPANY

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RIDER "F"
TEMPERATURE ADJUSTMENT CLAUSE (TAC)
(Continued)

The TAC Factor shall apply to all gas sold and transported under Rate Schedules RSG, GSG and GSG-LV.

The charge will be applied to the Rate Schedule RSG, GSG and GSG-LV Delivery Charges as follows:

	Per Therm
TAC Factor per therm	$0.0000
Applicable Revenue Tax Factor	1.0027362~~2505~~
TAC Factor Per Therm	$0.0000
Applicable NJ Sales Tax Factor	1.066250
TAC Factor Per Therm with NJ Sales Tax	$0.0000

(g) The Temperature Adjustment Clause shall not operate to cause the Company to earn in excess of its allowed rate of return on common equity of ~~9.60~~10.4% for any twelve month period ending October 31; any revenue which is not recovered will not be deferred. For purposes of this paragraph (g), the Company's rate of return on common equity shall be calculated by dividing the Company's net income for such annual period by the Company's average 13 month common equity balance for such annual period, all data as reflected in the Company's monthly reports to the Board of Public Utilities. The Company's net income shall be calculated by subtracting from total net income the Company's share of margins from: (1) Interruptible Sales; (2) Interruptible Transportation; (3) On-System Capacity Release; (4) Off-System Sales and Capacity Release; and (5) the Storage Incentive Mechanism.

(h) As used in this Rider "F", the following terms shall have the meanings ascribed to them herein:

(i) **"DEGREE DAYS"** is the difference between 65F and the daily mean temperature, on days when the daily mean temperature is below 65F. The daily mean temperature is the simple average of the 24 hourly temperature observations for a day taken at each of the National Oceanic and Atmospheric Administration Measuring points used by the Company. The sum of these differences for every day of the month is total degree days for that month.

SOUTH JERSEY GAS COMPANY

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RIDER "I"
BALANCING SERVICE CLAUSE - LARGE VOLUME - (BSC-LV)
(Continued)

Such customers will be charged on a prorated basis upon the appropriate Rate Schedule, including all Special Provisions of the appropriate Rate Schedule for gas delivered, including gas deliveries resulting in imbalances, prior to the implementation of the revised billing rate.

In order to be reinstated as an eligible Aggregator/Marketer, following termination of Aggregator/Marketer status for Deficiency Imbalances or Excess Imbalances as set forth above, the Aggregator/Marketer in addition to meeting all other applicable requirements must post and maintain for one (1) year security in a credit facility satisfactory to the Company in an amount equal to two (2) times that which would otherwise be required by the Company. At the conclusion of that year and assuming no additional occurrence of Deficiency Imbalances or Excess Imbalances as described above, the Aggregator/Marketer will be released from its obligation to provide security in excess of that otherwise required by the Company. If an additional Deficiency Imbalance or Excess Imbalance as described above occurs during that one-year period, the Aggregator/Marketer will be disqualified as an Aggregator/Marketer upon the Company's system for an additional one (1) year period.

As used in this Paragraph (18), ACD shall mean the aggregate of all Contract Demands, expressed in dekatherms, of all customers served by an Aggregator /Marketer under an applicable Rate Schedule. For a customer who does not have a Contract Demand, the Company shall supply a quantity to be used in lieu thereof.

(19) The BS-1 Charge within Volumetric Charge portion of this Rider "I" shall not be applicable to: (i) customers receiving deliveries of gas pursuant to Rate Schedule ITS; and (ii) customers receiving deliveries of gas pursuant to Rate Schedule FES and who utilize Rider "D" to this Tariff.

(20) Any charges imposed pursuant to the above Paragraphs ~~(1) through (21)~~ of this Rider "I" shall be in addition to other charges imposed pursuant to this Rider "I".

SOUTH JERSEY GAS COMPANY

RIDER "M"
CONSERVATION INCENTIVE PROGRAM ("CIP")

APPLICABLE TO:

Rate Schedule RSG	-	Residential Service
Rate Schedule GSG	-	General Service
Rate Schedule GSG-LV	-	General Service – Large Volume

(a) This Rider "M" shall be known as the Conservation Incentive Program ("CIP"). It shall be utilized to adjust the Company's revenues in cases wherein Actual Usage per Customer experienced during an Annual Period varies from the Baseline Usage per Customer ("BUC"). This adjustment will be effectuated through a credit or surcharge applied to customers' bills during the Adjustment Period. The credit or surcharge will also be adjusted to reflect prior year under recoveries or over recoveries pursuant to this CIP.

(b) The BUC in therms for each Customer Class Group by month is as follows:

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Month	Group I: RSG Non-Heating	Group II: RSG Heating	Group III: GSG	Group IV: GSG-LV
Oct.	13.2~~9.8~~	34.6~~17.4~~	211.2~~98.3~~	12,339.4~~8,357.0~~
Nov.	23.2~~17.6~~	70.0~~72.8~~	341.7~~334.4~~	16,681.5~~19,088.4~~
Dec.	40.7~~30.8~~	124.2~~125.4~~	584.7~~572.2~~	24,558.7~~23,786.5~~
Jan.	27.0~~29.9~~	157.1~~151.6~~	647.1~~668.9~~	31,113.3~~33,867.6~~
Feb.	27.5~~30.8~~	132.4~~129.7~~	675.8~~553.2~~	26,681.1~~26,589.0~~
Mar.	24.5~~24.1~~	100.3~~102.8~~	579.3~~509.6~~	22,350.0~~24,561.7~~
Apr.	16.2	50.5~~54.4~~	366.4~~262.5~~	14,338.3~~12,840.3~~
May	12.4~~10.9~~	24.2~~22.6~~	338.3~~160.0~~	6,984.4~~9,454.9~~
Jun.	10.7~~11.9~~	14.7~~12.3~~	269.7~~117.2~~	6,979.1~~5,214.4~~
Jul.	9.7~~10.5~~	13.3~~13.5~~	112.8~~107.9~~	4,920.5~~7,028.8~~
Aug.	8.7~~9.0~~	14.3~~8.5~~	125.3~~85.8~~	6,053.3~~4,538.1~~
Sep.	9.9~~8.4~~	13.5~~15.8~~	119.3~~124.7~~	5,394.7~~3,558.7~~
Total Annual	223.7~~209.9~~	749.1~~726.8~~	4,371.6~~3,594.7~~	178,394.3 ~~178,885.4~~

The BUC shall be reset each time new base rates are placed into effect as the result of a base rate case proceeding.

(c) At the end of the Annual Period, a calculation shall be made that determines for each Customer Class Group the deficiency ("Deficiency") or excess ("Excess") to be surcharged or credited to customers pursuant to the CIP

SOUTH JERSEY GAS COMPANY

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RIDER "M"
CONSERVATION INCENTIVE PROGRAM
(Continued)

mechanism. The Deficiency or Excess shall be calculated each month by multiplying the result obtained from subtracting the Baseline Usage per Customer from the Actual Usage per Customer by the actual number of customers, and then multiplying the resulting therms by the Margin Revenue Factor.

(d) Recovery of any Deficiency in accordance with Paragraph (c), above, associated with non-weather related changes in customer usage will be limited to the level of BGSS savings achieved as provided for in the 2014 Order of the Board of Public Utilities in Docket No. GR13030185. The value of the weather-related changes in customer usage shall be calculated in accordance with Rider F to this tariff.

(e) Except as limited by Paragraph (d), above, the amount to be surcharged or credited to the Customer Class Group shall equal the aggregate Deficiency or Excess for all months during the Annual Period determined in accordance with the provisions herein, divided by the FAU for the Customer Class Group.

(f) The currently effective CIP Factor by Customer Class Group are as follows:

	Group I: RSG Non-Heating	Group II: RSG Heating	Group III: GSG	Group IV: GSG-LV
CIP Factors Per Therm	($0.111064)	($0.011621)	($0.019668)	$0.012806
Applicable Revenue Tax Factor	1.002505	1.002505	1.002505	1.002505
CIP Factors Per Therm	($0.111342)	($0.011650)	($0.019717)	$0.012838
Applicable NJ Sales Tax Factor	1.066250	1.066250	1.066250	1.066250
CIP Factors Per Therm with NJ Sales Tax	**($0.118718)**	**($0.012422)**	**($0.021023)**	**$0.013689**

(g) The CIP shall not operate to cause the Company to earn in excess of its allowed rate of return on common equity of ~~9.60~~10.4% for any twelve month period ending September 30; any revenue which is not recovered will not be deferred. For purposes of this paragraph (g~~f~~), the Company's rate of return on common equity shall be calculated by dividing the Company's net income for such annual period by the Company's average 13 month common equity balance for such annual period, all data as reflected in the Company's monthly reports to the Board of Public Utilities. The Company's net income shall be calculated by subtracting from total net income the Company's share of margins from: (1) Interruptible Sales; (2) Interruptible Transportation; (3) On-System Capacity Release; (4) Off-System Sales and Capacity Release; (5) the Storage Incentive Mechanism, (6) the Energy Efficiency Tracker, (7) the Accelerated Infrastructure Replacement Program and (8) the Storm Hardening and Reliability Program.

(h) As used in this Rider "M", the following terms shall have the meanings ascribed to them herein:

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RIDER "M"
CONSERVATION INCENTIVE PROGRAM (CIP)
(Continued)

rounded to the nearest whole number. Similarly, the Incremental Large Customer Count Adjustment for the GSG-LV customer class for the applicable month shall equal the aggregate connected load for all new active customers that exceed the 50,000 CFH threshold divided by 25,000 CFH, rounded to the nearest whole number.

(ix) **Margin Revenue Factor –** the Margin Revenue Factor ("MRF") shall be the base rate, as reflected in Appendix A to this Tariff, applicable to the Customer Class Groups to which the CIP applies, net of any applicable Riders, including taxes. The MRFs by Customer Class Group are as follows:

Group I (RSG non-heating):	$0.856372~~678051~~ per therm
Group II (RSG heating):	$0.856372~~678051~~ per therm
Group III (GSG):	$0.552743~~566312~~ per therm
Group IV (GSG-LV):	$0.313582~~283532~~ per therm

(i) The annual filing for the adjustment to the CIP rate shall be concurrent with the annual filing for BGSS. The CIP factor shall be credited/collected on a per therm basis within the Delivery Charge for all service classifications stated above. The level of BGSS savings referenced in Special Provision (d) to this Rider "M" shall be identified in the annual CIP filing, and serve as an offset to the non-weather related portion of the CIP charge provided in Special Provision (g) to this Rider "M". The Periodic and Monthly BGSS rates identified in Rider "A" to this tariff shall include the BGSS savings, as applicable.

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GENERAL TERMS AND CONDITIONS - INDEX

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GENERAL TERMS AND CONDITIONS - INDEX

(Continued)

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SOUTH JERSEY GAS COMPANY

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GENERAL TERMS AND CONDITIONS
(Continued)

4.3 **EXTENSIONS REQUESTED BY INDIVIDUAL CUSTOMERS**

4.3.1. **RESIDENTIAL:** The Company will extend its gas mains and services to serve an individual residential customer at no charge where the Extension Cost does not exceed ten (10) times the annual Distribution Revenue at the BUC for the customer's respective Conservation Incentive Program (CIP) Customer Class Group as set forth in Rider "M" to this tariff. The Company may require a deposit equal to the Extension Costs in excess of ten (10) times the annual Distribution Revenue at the BUC for the customer's respective Customer Class Group and shall include any tax consequences to the Company. <u>If the Company accepts an application for an extension, the Company may furnish and place, at no cost to the Customer, up to 200 feet of normal residential facilities. The Company will waive the deposit requirement where the excess cost is $3,000 or less.</u>

4.3.2 **NON-RESIDENTIAL:** The Company will extend its gas mains and services to an individual firm commercial or industrial customer and may require a deposit equal to the Extension Costs, increased by any tax consequences to the Company. <u>The Company will waive the deposit requirement where the excess cost is $3,000 or less.</u> In lieu of a deposit for Extension Costs, the Company and the Customer may agree upon a satisfactory revenue guarantee.

4.4. **EXTENSION OF SERVICE TO MULTI-UNIT RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT**

4.4.1. ALL MULTI-UNIT CUSTOMERS: The Company may require a deposit for an Extension subject to this Section, in an amount no greater than the Extension Cost required to serve the development. The deposit shall be increased by any tax consequences to the Company.<u> The Company will waive the deposit requirement where the excess cost is $3,000 or less. In lieu of a deposit for Extension Costs, the Company and the Customer may agree upon a satisfactory revenue guarantee.</u>

5. **SERVICE CONNECTIONS**

5.1 **GENERAL:** If the Company accepts an application for an Extension, ~~the Company may furnish and place, at no cost to the Applicant, up to 200 feet of N~~<u>n</u>ormal ~~R~~<u>r</u>esidential ~~S~~<u>s</u>ervice ~~C~~<u>c</u>onnection<u>s shall be</u>~~,~~ measured at right angles from the nearest curb line to the Applicant's building, at the point of service entrance designated by the Company. Meters and regulators will be furnished and installed by the Company. The costs of meters and regulators (including the installation) may be waived by the Company.

The Applicant shall consult the Company as to the exact point at which the service pipe will enter the building before installing interior gas piping or starting any other work dependent upon the location of the service pipe. The Company will determine the location of the service pipe depending upon physical constraints in the street and other practical considerations.

Gas service will be supplied to a Applicant 's premises through a single service pipe except where, in the judgment of the Company, its economic considerations; conditions on its distribution system; improvement of service conditions; or volume of the customer's requirements, make it desirable to the Company to install more than one service pipe.

5.2 **CHANGE IN EXISTING INSTALLATIONS:** Change in the existing service pipe and/or metering facilities requested by the customer or Applicant must be approved by the Company and shall be made at the expense of the customer or Applicant.

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

6. **METERING AND MEASURING EQUIPMENT**

6.1 **GENERAL:** Company may, at its discretion, install and maintain a single meter or measuring device for service upon each rate schedule under which the customer receives service. Whenever possible, the meter shall be located outside. If the meter cannot be located outside, the meter may~~be~~ be set so it can be read from outside the building, by a remote meter reading device.

When requested by a customer, remote meter reading equipment which transmits the reading on a meter to a repeating register located on the outside of a building, shall be installed, if feasible. However, the Company must be permitted access to the interior meter at all reasonable times. The cost of installation may be borne by the customer. The payment shall not give the customer any interest in the installed equipment, the ownership being vested exclusively in the Company.

If permitted under the applicable rate schedule, the Company may install an electronic data collection system for use in conjunction with the metering of service, and may assess the customer for the cost of said data collection system and the installation thereof. If the Company so elects, the customer shall arrange for or provide, at no cost to the Company, adequate electrical service for the data collection system, a location for the data collection system acceptable to the Company, and a dedicated means of telemetry (telephone, cellular, etc.) for use in connection with the data collection system. The customer shall be responsible for monthly telemetric data charges (telephone, cellular, etc.) for use in connection with the data collection system when electronic data collection is required by the Company.

The Company's equipment shall be replaced whenever deemed necessary and may be removed by the Company at any reasonable time after the discontinuance of service.

The Company will select the type and make of metering equipment and may, from time to time, change or alter such equipment; its sole obligation is to supply meters that will accurately and adequately furnish records for billing purposes.

6.2 **CUSTOMER'S RESPONSIBILITY:** Customer shall furnish and maintain a suitable space for the meter and associated equipment. Such space shall be as near as practicable to the point of service entrance and which shall be adequately ventilated, dry and free of corrosive vapors, not subject to extreme temperatures and shall be readily accessible to employees of the Company. Customer shall not tamper with or remove meters or other equipment, nor permit access thereto except by the Company's authorized employees. In case of loss or damage to the Company's property from the act or negligence of the customer or his agents or servants, or of failure to return equipment supplied by the Company, customer shall pay to the Company the amount of such loss or damage to the property.

A charge may be made for excessive maintenance caused by vandalism and/or repeated damages.

6.3 **ACCESS TO CUSTOMER'S PREMISES:** The Company, or duly authorized government employees, shall have the right of reasonable access to customer's premises, and to all property furnished by the Company, at all reasonable times for the purpose of inspection of customer's premises incident to the rendering of service, reading meters or inspecting, testing, or repairing its facilities used in connection with supplying the service, or for the removal of its property.

GENERAL TERMS AND CONDITIONS
(Continued)

(7) Delivering gas service to others without the Company's approval, except as permitted under Section 6.6 CHECK METERING.

(8) Failure to make or increase an advance payment or deposit when requested by the Company, provided that the customer had advance notice of the request for said advance payment of deposit;

(9) Refusal to contract for service;

(10) If in the judgment of the Company, customer's installation has become dangerous or defective;

(11) If customer's equipment or use thereof injuriously affects the quality of Company's service to other customers;

(12) Unauthorized increases in the size or total capacity of customer's equipment;

(13) In the event Company is prevented access to its meter or other service facilities, or in the event access thereto is obstructed or hazardous, or for other violation of Company's rules and regulations;

(14) Refusal of a customer receiving interruptible service, to discontinue the use of gas after proper notification;

9.2 **NON-WAIVERS:** Should gas service be terminated for any of the above reasons, such termination shall not be deemed a waiver of any other remedy available to the Company. Failure of the Company to exercise its right to terminate, or any other right, shall not be deemed a waiver of such right.

9.3 **RESTORATION OF SERVICE:** The Company shall restore service upon a proper application by a customer when the conditions under which service was discontinued are corrected, and upon the payment of all proper charges due from the customer provided for in this Tariff, or if the Board so directs when a complaint involving such matter is pending before the Board.

10. **MISCELLANEOUS SERVICE CHARGES**

10.1 **TURN ON CHARGE:** A turn on charge of $45.00~~20.00~~ may be made for each activation of service whether for initial service (by meter turn-on or meter reading in the case of a service transfer) or reactivation of service where Company personnel are required to travel to the service location.

10.2 **RETURNED BANK ITEM:** A charge of $19.00 may be made to reimburse the Company for the expense of processing items returned by the bank as uncollectible on customer's account.

10.3 **TRANSFER OF SERVICE CHARGE:** A charge of $7.00 may be made to transfer service between customers when the customer calls in a meter reading to the Company or exercises other

SOUTH JERSEY GAS COMPANY

GENERAL TERMS AND CONDITIONS
(Continued)

"CITY GATE STATION" is used herein to mean a location at which Company receives gas from a pipeline company.

"COGENERATION" is used herein to mean the process by which natural gas is burned in equipment to generate electricity and recover the by-product heat from the generation process for use in industrial processes or space heating or both.

"COMMERCIAL CUSTOMER" is used herein to be a customer, whose facility at which service is received hereunder is engaged primarily in providing a service or the sale of goods or services. This would include, but not be limited to, wholesale or retail trade, local, state and federal government agencies, agriculture, warehouses, schools, forestry, transportation, communication, sanitary services, finance, insurance, clubs, hotels, and service to three or more dwelling units through a single meter. A customer who is neither Industrial nor Residential is a Commercial Customer.

"COMPANY" as referred to herein is used to designate South Jersey Gas Company which furnishes gas service under these General Terms and Conditions.

"COSTS APPLICABLE" is used herein to mean any and all costs per therm involved in acquiring the gas sold under an applicable rate schedule. Provided, however, that "Costs Applicable" shall not include demand charges paid by the Company for gas sold under said rate schedule. As used herein, "Costs Applicable" shall include but not be limited to, costs of acquisition of gas; costs of transportation of gas; costs of storage of gas; costs of compression; interstate pipeline loss and compressor fuel; line loss on the Company's system; and Taxes.

"CUSTOMER" is used herein to designate any person, firm, organization, partnership or corporation applying for or using gas service supplied by the Company at one specific location.

"CUSTOMER CHARGE" is the minimum fixed monthly charge. Where service is taken for less than one month, the minmum charge will be prorated.

"CUSTOMER GROUP" is used herein to mean a group of customers served under a single rate schedule by a single Aggregator/Marketer.

"CYCLE" is used herein to designate a geographical grouping of customers each having the same meter reading and billing schedules.

"DAY" is used herein to designate a period of twenty-four (24) consecutive hours beginning at 10:00 a.m.

"DAILY PRICE SURVEY" is used herein to mean a column published in the publication "Platts Gas Daily", published by The McGraw Hill Companies. Should the "Transco, zone 6 non-N.Y." prices no longer be available in the "Daily price survey" for an reason, the Company may substitute a substantially equivalent index or calculation.

"DISTRIBUTION MAINS" is used herein to designate the network of distribution piping to which customer's service connections are made.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 126**

GENERAL TERMS AND CONDITIONS
(Continued)

"INDIVIDUALLY METERED SERVICE" is used herein to mean service through a single meter for two or less dwelling units within a single building and appurtenant outbuildings.

"INDUSTRIAL CUSTOMER" is used herein to be a customer, whose facility at which service is received hereunder is engaged primarily in the processing or changing of raw or unfinished materials into another form or product. Sand and thermal energy plants are included within this term.

"INTERRUPTIBLE" as used herein refers to a character of service under applicable rate schedules or contracts which anticipate and permit interruption on three (3) hours, notice.

"INTERRUPTIBLE MARGIN" is used herein to mean net income from Rate Schedules ITS, LMS-LV, LMS-GS and IGS multiplied by a factor to reflect Revenue Taxes and Federal Income Taxes.

"INTERRUPTIBLE USES OF GAS" is used herein to mean uses which are subject to termination on notice by the Company as provided in the applicable rate schedule, and for which the customer has, or is capable of having, an alternate fuel capability.

"MAJOR GROUP" is used herein to mean the first two digits of the Federal North American Industry Classification System (NAICS) code, as defined for the Applicant at the time service is initiated.

"MCF" is used herein to designate one thousand (1,000) cubic feet of gas.

"MONTH" is used herein to designate the period between any two consecutive regularly scheduled meter readings for billing purposes.

"NEW FACILITY" is used herein to mean a newly constructed facility or a facility at which the Company is not currently supplying and has not supplied service under an applicable rate schedule during the preceding twelve (12) months.

~~**"NORMAL RESIDENTIAL SERVICE CONNECTION"** as used herein shall mean the least expensive, feasible service connection as determined by the Company.~~

"OPERATING CONDITIONS" is used herein to describe lack of sufficient gas supplies at the customer's location, lack of sufficient pressure at the customer's location, or similar operating conditions which will render the Company unable to offer service at a given level requested by the customer for a 12 month period.

"OUT-OF-POCKET EXPENSES" is used herein to mean any additional costs incurred by the Company relating to the initiation and rendering of service to a specific customer; such expense shall include, but not be limited to legal expense and travel expense.

"PRICE TO COMPARE" is used herein to mean for any Rate Schedule, the difference between the total charges to be paid by a Firm Sales Service customer under that Rate Schedule, and the total charges to be paid by a Firm Transportation Service customer under that same Rate Schedule.

SOUTH JERSEY GAS COMPANY

B.P.U.N.J. No. 13 - GAS **Original Sheet No. 132**

STANDARD GAS SERVICE AGREEMENT (LV)

This Agreement entered into this _________________ day of _____________ , 20__, by and between South Jersey Gas Company, a New Jersey Corporation, hereinafter referred to as "Seller" or "Company" and ____hereinafter referred to as “Buyer.”

WITNESSETH:

Subject to the terms and conditions contained herein, Seller agrees to sell and deliver and Buyer agrees to purchase and pay for services required by Buyer under Rate Schedule(s)______________________________ at ____________________________as follows:

ARTICLE I
Term of Agreement

This Agreement shall commence____ and be effective from the date hereof and the sale and purchase of services hereunder shall continue until__________________________, a date which is at least twelve (12) months from the commencement, and subject to Seller’s possession of an adequate supply of gas as to Rate Schedules LVS and IGS, and subject to Seller’s possession of adequate system capacity as to Rate Schedules LVS Firm Transportation Service, LVS Limited Firm Transportation and CTS shall continue thereafter from year to year unless and until terminated upon written notice given by either party to the other, at least six (6) months prior to the end of any yearly term.

ARTICLE II
Duly Constituted Authorities

The rates of Seller, and the respective obligations of the parties under this Agreement, are subject to valid laws, orders, rules, and regulation of duly constituted authorities having jurisdiction. The rates, terms, and conditions of this Agreement are subject to change as may be lawfully required or permitted by the Board of Public Utilities of New Jersey, or successor agencies.

ARTICLE III
Tariff For Gas Service

All terms and conditions set forth in Seller's Tariff For Gas Service B.P.U.N.J. No. 12 - Gas are incorporated herein by reference. All sales are subject to the General Terms and Conditions of Seller's Tariff For Gas Service and more specifically by the conditions contained in the Rate Schedule or Rate Schedules contracted for herein.

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (LV)
(Continued)

ARTICLE IV
Service Volumes

1. For service rendered under Rate Schedule LVS, Firm Sales Service_________ Firm Transportation Service __________or CTS _________(check appropriate space):

   Seller hereby agrees to sell and deliver to Buyer and Buyer agrees to pay for in accordance with provisions of the tariff a Contract Demand of ______________ Mcf per day; provided, however, the Company shall not be obligated to transport and deliver more thanBuyer's Contract Demand.

2. For service rendered under Rate Schedule LVS Limited Firm Sales Service __________ LVS Limited Firm Transportation Service _____________or CTS Limited Firm ____________:

   The Company agrees to transport and deliver to the Buyer at the Buyer’s facility designated on the first page of this Agreement such quantity of gas that Buyer makes available from time to time; provided, however, Company shall not be obligated to transport and deliver more than ____________ Mcf per day which will be Buyer’s Limited Firm Contract Demand.

3. For service rendered under Rate Schedule IGS:
   For the purpose of providing criteria for the proration of available supplies, Buyer hereby indicates its minimum and maximum capability of accepting IGS Service:
   a. Minimum capability ________________Mcf per day.
   b. Maximum capability ________________Mcf per day.

   Customer certifies that its alternate fuel capability is___________________________________.

ARTICLE V
Opt-Out Provision

It is understood by Buyer and Seller, that by electing to take delivery of gas under Rate Schedules LVS Firm Transportation Service, LVS Limited Firm Transportation Service or CTS, Buyer forgoes any right or entitlement to purchase the Company's firm system gas, during the term of this Agreement. After the term of this Agreement, if Buyer requests that the Company sell firm system gas to the Buyer, the Buyer shall be treated as a new applicant for service, with no greater entitlement to firm gas sales service than is had by any other New Customer.

Buyer hereby elects, by initialing in the space provided, for a term co-extensive with the Term of Agreement set forth in Article I, to provide its own interstate pipeline capacity and gas supply to Seller’s

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (ITS)
(Continued)

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

______________________________ By: ______________________________
(Name)

____
(Title)

Company

____
(Name of Customer)

ATTEST:

______________________________ By: ______________________________
(Name)

____
(Title)

Customer

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (EGS)
(Continued)

a. Firm - ______________ Mcf per day.

b. Limited Firm - ___________ Mcf per day.

3. For service rendered under Rate Schedule EGS, customer's Firm Daily Contract Demand shall be:

__________ Mcf per day, to be the first gas through the meter each day.

4. For service rendered under Rate Schedule EGS Firm Transportation Service:
The Company agrees to transport and deliver to the Buyer at the Buyer's facility designated on the first page of this Agreement such quantity of gas that Buyer makes available from time to time; provided, however, Company shall not be obligated to transport and deliver more than________________________Mcf per day which will be Buyer's Contract Demand.

It is understood by Buyer and Seller, that by electing to take delivery of gas under Rate Schedule EGS Firm Transportation Service, Buyer forgoes any right or entitlement to purchase the Company's firm system gas, during the term of this Agreement. After the term of this Agreement, if Buyer requests that the Company sell firm system gas to the Buyer, the Buyer shall be treated as a new applicant for service, with no greater entitlement to firm gas sales service than is had by any other New Customer.

ARTICLE VIII
Rates

As provided in the Monthly Rate section of Rate Schedule EGS or EGS-LV; or

Negotiated rates pursuant to Special Provision (e) of Rate Schedule EGS-LV:

D-1 charge will be _______________.

Limited Firm:

C-3 charge will be ________ . **ALL CUSTOMERS MUST COMPLETE.**

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (FES)
(Continued)

Billing Determinants:

(1) Customer shall have a Annual Billing Determinant ("ABD") of ________________MCF .

(2) Customer shall have a Daily Billing Determinant of _________________MCF . (ABD/365)

ARTICLE V
Rates

Negotiated rates pursuant to Special Provision (j) of the Rate Schedule FES are as follows:

Winter Rates:

D-1 Charge will be ____________.

C-3 Charge will be ____________.

Summer Rates:

D-1 Charge will be ____________.

C-3 Charge will be ____________.

ARTICLE VI
Winter Season Interruption

Buyer and Seller agree that Buyer's service under Rate Schedule FES may be partially or totally interrupted on ____ days during a Winter Season pursuant to Special Provision (r) of Rate Schedule FES

ARTICLE VII
Customer Owned Gas

Customer has requested Company to deliver said gas under Rate Schedule FES, Rider "D" from Company's city gate station(s) located at ____
____
____
____

SOUTH JERSEY GAS COMPANY

STANDARD GAS SERVICE AGREEMENT (FES)
(Continued)

This Agreement shall be interpreted, performed and enforced in accordance with the laws of the State of New Jersey.

This Agreement shall be binding upon, and inure to the benefit of the parties hereto and their respective successors and assigns, but shall not be assigned or be assignable by Buyer without the consent in writing of Seller first obtained.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

SOUTH JERSEY GAS COMPANY

ATTEST:

By: ____________________________________
(Name)

____

____
(Title)

SELLER

____
(Name - Company)

ATTEST:

____

By: ____________________________________
(Name)

____
(Title)

BUYER

SOUTH JERSEY GAS COMPANY

AGGREGATOR/MARKETER'S AGREEMENT (A/M)
(Continued)

16. **Binding Effect.** This A/M Agreement shall be binding upon the parties hereto, and their agents, successors and assigns.

17. **No Modification.** This A/M Agreement supersedes and cancels any other agreement dealing with the same subject matter. This A/M Agreement may not be modified, altered, or amended except by a written agreement, signed by the parties hereto.

18. **No Assignment.** This A/M Agreement shall not be assigned or be assignable by the Aggregator/Marketer or a Customer or Customers without the consent in writing of the Company first obtained.

19. **Marketer Standards.** Notwithstanding any other requirements of this A/M Agreement, in order to operate as a Aggregator/Marketer on the Company's system, an Aggregator/Marketer must comply with all Board approved Marketer Standards.

SOUTH JERSEY GAS COMPANY

ATTEST:

______________________________ By: ______________________________
(Name)

____
(Title)

SELLER/COMPANY

ATTEST:

(NAME OF AGGREGATOR/MARKETER)

______________________________ By: ______________________________
(Name)

____
(Title)

AGGREGATOR/MARKETER

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

RESIDENTIAL GAS SERVICE (RSG) - NONHEAT CUSTOMER

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		12.750000		0.844688	**13.594688**
DELIVERY CHARGE (per therm):					
Base Rate		0.856372		0.056735	0.913107
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	(0.111064)	(0.000278)	(0.007376)	(0.118718)
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
TOTAL DELIVERY CHARGE		0.900254	0.000081	0.059593	**0.959928**
BGSS: (Applicable To Sales Customers Only)	A	0.418898	0.001049	0.027822	**0.447769**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

RESIDENTIAL GAS SERVICE (RSG) - HEAT CUSTOMER

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		12.750000		0.844688	**13.594688**
DELIVERY CHARGE (per therm):					
Base Rate		0.856372		0.056735	0.913107
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	(0.011621)	(0.000029)	(0.000772)	(0.012422)
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
Total Delivery Charge		0.999697	0.000330	0.066197	**1.066224**
BGSS: (Applicable To Sales Customers Only)	A 0.324561	0.418898	0.001049	0.027822	**0.447769**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

GENERAL SERVICE (GSG)

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		34.750000		2.302188	**37.052188**
DELIVERY CHARGE (per therm):					
Base Rate		0.552743		0.036619	0.589362
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	0.324561	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	(0.019668)	(0.000049)	(0.001306)	(0.021023)
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
Total Delivery Charge		0.688021	0.000310	0.045547	**0.733878**
BGSS: (Applicable To Sales Customers Only using less than 5,000 therms annually)	A	0.418898	0.001049	0.027822	**0.447769**
BGSS: (Applicable To Sales Customers Only using 5,000 therms annually or greater)	A				**RATE SET MONTHLY**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
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GENERAL SERVICE-LV (GSG-LV)

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		225.000000		14.906250	**239.906250**
D-1 Demand Charge (Mcf)		12.250000		0.811563	**13.061563**
DELIVERY CHARGE (per therm):					
Base Rate		0.313582		0.020775	0.334357
TIC	C	0.001933	0.000005	0.000128	0.002066
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
CIP	M	0.012806	0.000032	0.000851	0.013689
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BUY-OUT PRICE (Applicable to Transportation Customers Only)	J				Rate Set Monthly
Total Delivery Charge		0.481334	0.000391	0.031860	**0.513585**
BGSS: (Applicable Sales Customers Only)	A				**RATE SET MONTHLY**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
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COMPREHENSIVE TRANSPORTATION SERVICE (CTS)

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
FIRM					
CUSTOMER CHARGE		750.000000		49.687500	**799.687500**
D-1 Demand Charge (Mcf)		31.750000		2.103438	**33.853438**
DELIVERY CHARGE (per therm):					
Base Rate		0.088309		0.005850	0.094159
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.159824	0.000150	0.010543	**0.170517**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
BUY-OUT PRICE					RATE SET MONTHLY
LIMITED FIRM					
CUSTOMER CHARGE		100.000000		6.625000	**106.625000**
DELIVERY CHARGE (per therm):					
Base Rate		0.058400		0.003900	0.062300
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.129915	0.000150	0.008593	**0.138658**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
BUY-OUT PRICE					RATE SET MONTHLY

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

LARGE VOLUME SERVICE (LVS)

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
FIRM					
CUSTOMER CHARGE		1,050.000000		69.562500	**1,119.562500**
D-1 Demand Charge (Mcf)		19.750000		1.308438	**21.058438**
D-2 DEMAND BGSS(Applicable to Sales Customers Only)	A	18.357823	0.045986	1.219252	**19.623062**
DELIVERY CHARGE (per therm):					
Base Rate		0.069401		0.004598	0.073999
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.140916	0.000150	0.009291	**0.150357**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable to Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable Transportaton Customers Only)	I				RATE SET MONTHLY
BGSS: (Applicable Sales Customers Only)	A				**RATE SET MONTHLY**
LIMITED FIRM					
CUSTOMER CHARGE		100.000000		6.625000	**106.625000**
DELIVERY CHARGE (per therm):					
Base Rate		0.168713		0.011177	0.179890
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.240228	0.000150	0.015870	**0.256248**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable to Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
BUY-OUT PRICE	I				RATE SET MONTHLY

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

FIRM ELECTRIC SALES (FES)	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
WINTER					
D-1 DEMAND (MCF) (Rate is negotiated. Shown here is the benchmark rate.)		2.897200		0.191900	**3.089100**
D-2 DEMAND BGSS(MCF) (Applicable to Sales Customers Only)	A	9.178912	0.022993	0.609626	**9.811531**
DELIVERY CHARGE (per therm):					
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
Total Delivery Charge		0.083717	0.000181	0.005503	**0.089401**
C-3 All Therms (Rate is negotiated. Shown here is the benchmark rate.)		0.162900		0.010800	**0.173700**
C-4 Escalator Rate (To be determined as prescribed in the Company's Tariff)					**RATE SET MONTHLY**
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only)	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
SUMMER					
D-1 DEMAND (MCF) (Rate is negotiated. Shown here is the benchmark rate.)		2.897200		0.191900	**3.089100**
D-2 DEMAND BGSS(MCF) (Applicable to Sales Customers Only)	A	9.178912	0.022993	0.609626	**9.811531**
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
EET	N	0.015736	0.000039	0.001045	0.016820
Total Delivery Charge		0.083717	0.000181	0.005503	**0.089401**
C-3 All Therms (Rate is negotiated. Shown here is the benchmark rate.)		0.162900		0.010800	**0.173700**
C-4 Escalator Rate (To be determined as prescribed in the Company's Tariff)					**RATE SET MONTHLY**
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only)	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

ELECTRIC GENERATION SERVICE (EGS) - RESIDENTIAL	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		12.750000		0.844688	**13.594688**
DELIVERY CHARGE (per therm):					
Base Rate		0.134084		0.008883	0.142967
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Total Delivery Charge		0.287097	0.000354	0.018989	**0.306440**
BGSS: (Applicable To Sales Customers Only)	A	0.418898	0.001049	0.027822	**0.447769**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

ELECTRIC GENERATION SERVICE (EGS) - COMMERCIAL/INDUSTRIAL	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE		79.000000		5.233750	**84.233750**
D-1 DEMAND (MCF)		8.250000		0.546563	**8.796563**
DELIVERY CHARGE (per therm):					
Base Rate - Winter Season (Nov - Mar)		0.155881		0.010327	0.166208
Base Rate - Summer Season (Apr - Oct)		0.125881		0.008340	0.134221
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
Total Delivery Charge - Winter Season		0.308894	0.000354	0.020433	**0.329681**
Total Delivery Charge - Summer Season		0.278894	0.000354	0.018446	**0.297694**
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

ELECTRIC GENERATION SERVICE-LV (EGS-LV)	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
FIRM					
CUSTOMER CHARGE		750.000000		49.687500	**799.687500**
D-1 DEMAND (MCF) (Rate is negotiated. Shown here is the benchmark rate.)		29.075282		1.926237	**31.001519**
D-2 DEMAND BGSS (MCF) (Applicable to Sales Customers Only)	A	19.869101	0.049772	1.319625	**21.238498**
DELIVERY CHARGE (per therm):					
SBC:					
RAC	E, G	0.033003	0.000083	0.002192	0.035278
CLEP	E, K	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
LIMITED FIRM					
D-2 DEMAND BGSS(MCF) (Applicable to Sales Customers Only)	A	9.178912	0.022993	0.609626	**9.811531**
DELIVERY CHARGE (per therm):					
SBC:					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
CLEP	E, G	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
C-3 (Rate is negotiated. Shown here is the benchmark rate.)		0.162900		0.010800	**0.173700**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge CASH OUT CHARGE (CREDIT) (Applicable to Firm Transportatin Customers Only	I				RATE SET MONTHLY
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

	RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
YARD LIGHTING SERVICE (YLS)					
MONTHLY CHARGE / INSTALL		15.788822		1.046009	**16.834831**
STREET LIGHTING SERVICE (SLS)					
MONTHLY CHARGE / INSTALL		18.977244		1.257242	**20.234486**
INTERRUPTIBLE GAS SALES (IGS)					
Commodity					Rate Set Monthly
SBC:					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC:		0.044403	0.000083	0.002892	0.047378
EET	N	0.015736	0.000039	0.001045	0.016820

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
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INTERRUPTIBLE TRANSPORTATION (ITS)		RIDER	RATE	PUA	NJ SALES TAX	TARIFF RATE
CUSTOMER CHARGE			**100.000000**		**6.625000**	**106.625000**
TRANSPORTATION CHARGE A			**0.028400**		**0.001900**	**0.030300**
SBC:						
RAC		E, K	0.033003	0.000083	0.002192	0.035278
CLEP		E, G	0.023578	0.000059	0.001566	0.025203
USF		E	0.011400	0.000000	0.000700	0.012100
	Total SBC:		0.067981	0.000142	0.004458	0.072581
EET		N	0.015736	0.000039	0.001045	0.016820
TRANSPORTATION CHARGE B			**0.093200**		**0.006200**	**0.099400**
SBC:						
RAC		E, K	0.033003	0.000083	0.002192	0.035278
CLEP		E, G	0.023578	0.000059	0.001566	0.025203
USF		E	0.011400	0.000000	0.000700	0.012100
	Total SBC:		0.067981	0.000142	0.004458	0.072581
EET		N	0.015736	0.000039	0.001045	0.016820
TRANSPORTATION CHARGE C			**0.153200**		**0.010100**	**0.163300**
SBC:						
RAC		E, K	0.033003	0.000083	0.002192	0.035278
CLEP		E, G	0.023578	0.000059	0.001566	0.025203
USF		E	0.011400	0.000000	0.000700	0.012100
	Total SBC:		0.067981	0.000142	0.004458	0.072581
EET		N	0.015736	0.000039	0.001045	0.016820

SOUTH JERSEY GAS COMPANY
Schedule of Rate Components
Appendix A - Effective April 13, 2020

NATURAL GAS VEHICLE (NGV)		RATE	PUA	NJ SALES TAX	TARIFF RATE
COMPANY OPERATED FUELING STATIONS					
DELIVERY CHARGE (per therm):					
SBC					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
CLEP	E, G	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC:		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
DISTRIBUTION CHARGE		0.257299	0.000704	0.0170930	**0.275096**
COMPRESSION CHARGE		0.697060	0.001907	0.046307	**0.745274**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable for Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
CUSTOMER OPERATED FUELING STATIONS					
CUSTOMER CHARGE					
0 - 999 CF/hour		37.500000		2.484400	**39.984400**
1,000 - 4,999 CF/hour		75.000000		4.968800	**79.968800**
5,000 - 24,999 CF/hour		220.000000		14.575000	**234.575000**
25,000 or Greater CF/hour		925.000000		61.281250	**986.281250**
DELIVERY CHARGE (per therm):					
SBC					
RAC	E, K	0.033003	0.000083	0.002192	0.035278
CLEP	E, G	0.023578	0.000059	0.001566	0.025203
USF	E	0.011400	0.000000	0.000700	0.012100
Total SBC:		0.067981	0.000142	0.004458	0.072581
EET	N	0.015736	0.000039	0.001045	0.016820
2017 Tax Act	H	(0.012202)	(0.000031)	(0.000810)	(0.013043)
Total Delivery Charge		0.071515	0.000150	0.004693	**0.076358**
DISTRIBUTION CHARGE		0.257299	0.000704	0.017093	**0.275096**
Balancing Service Charge BS-1	I	0.081498	0.000204	0.005413	0.087115
Balancing Service Charge BS-1 (Opt Out Provision) (Applicable for Transportation Customers Only)	I	0.002570	0.000006	0.000171	0.002747
Balancing Service Charge BS-1	J	0.081498	0.000204	0.005413	0.087115
BGSS: (Applicable To Sales Customers Only)	A				**RATE SET MONTHLY**
Facilities Charge (Applicable only to Customers that elect the Company construct Compressed Natural Gas ("CNG") fueling Facilities located on Customer's property)		0.299096		0.019815	**0.318911**

SOUTH JERSEY GAS COMPANY
Appendix A - Effective April 13, 2020

Heat Residential Rate Schedule:

	RSG FSS	*RSG-FTS*	*Difference*
BGSS	0.447769	0.000000	0.447769
Base Rate	0.913107	0.913107	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
CIP	(0.012422)	(0.012422)	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.513993	1.066224	0.447769

NonHeat Residential Rate Schedule:

	RSG FSS	*RSG-FTS*	*Difference*
BGSS	0.447769	0.000000	0.447769
CIP	(0.118718)	(0.118718)	0.000000
Base Rate	0.913107	0.913107	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.407697	0.959928	0.447769

GSG
(Under 5,000 therms annually)

	GSG FSS	*GSG-FTS*	*Difference*
BGSS	0.447769	0.000000	0.447769
CIP	(0.021023)	(0.021023)	0.000000
Base Rates	0.589362	0.589362	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.181647	0.733878	0.447769

GSG
(5,000 therms annually or greater)

	GSG FSS	*GSG-FTS*	*Difference*
BGSS	0.324561	0.000000	0.324561
CIP	(0.021023)	(0.021023)	0.000000
Base Rates	0.589362	0.589362	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	1.058439	0.733878	0.324561

GSG-LV

	Prior to 7/15/97		
	GSG-LV FSS	*GSG-LV-FTS*	*Difference*
BGSS	0.324561	0.000000	0.324561
CIP	0.013689	0.013689	0.000000
Base Rates	0.334357	0.334357	0.000000
CLEP	0.025203	0.025203	0.000000
RAC	0.035278	0.035278	0.000000
USF	0.012100	0.012100	0.000000
TIC	0.002066	0.002066	0.000000
EET	0.016820	0.016820	0.000000
2017 Tax Act	(0.013043)	(0.013043)	0.000000
BSC "J" BS-1	0.087115	0.087115	0.000000
Price to Compare	0.838146	0.513585	0.324561

PROPOSED SUBSTANTIVE TARIFF CHANGES

In addition to rate changes, the proposed Tariff changes are as follows:

1. Update the Company's address to One South Jersey Place, Atlantic City, New Jersey 08401.

2. Revise Section 4.3.1, Extensions Requested by Individual Customers: Residential, to permit the Company to provide up to 200 feet of normal residential facilities at no cost to the Customer and remove similar language from Section 5.1, Service Connections: General.

3. Revise Section 4.3, Extensions Requested by Individual Customers, and Section 4.4, Extensions of Service to a Multi-Unit Residential and Non-Residential Development, to include a waiver of the deposit requirement where the excess cost is $3,000 or less.

4. Revise Section 10.1, Turn On Charge, to reflect a change in the amount for a turn on charge from $20.00 to $45.00.

5. Add a provision to Section 12, Definitions, to define "Customer Charge" as the minimum monthly fixed charge and delete provision defining Normal Residential Service Connection.

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS	: : : : : :	**PETITION** **BPU DOCKET NO.**

CASE SUMMARY, PETITION, NOTICE AND EXHIBITS

Volume 2 of 3

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Attorney for Petitioner
South Jersey Gas Company

March 13, 2020

INSERT TAB:

B. SCHOMBER

IN THE MATTER OF THE PETITION OF
SOUTH JERSEY GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE, CHANGES TO DEPRECIATION
RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20________

DIRECT TESTIMONY

OF

BRENT W. SCHOMBER

Vice President, Operations
South Jersey Gas Company

On Behalf Of
South Jersey Gas Company

Exhibit P-4

March 13, 2020

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SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
BRENT W. SCHOMBER

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, AFFILIATION AND BUSINESS ADDRESS.

A. My name is Brent W. Schomber, and my business address is 1 South Jersey Place, Atlantic City, NJ 08401. I am Vice President of Operations for South Jersey Gas ("SJG"). In this position, I am responsible for providing leadership and direction for all operational activities including but not limited to construction, asset, utility, and engineering operations. I also have responsibility for the capital spending program and operations of South Jersey Gas Company ("SJG" or "the Company").

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I am a 1998 graduate of Rowan University with a Bachelor of Science degree in Criminal Justice. I began my career in 1998 with Utility Line Services, a subcontractor for SJG, where I worked in the field until 2001 and then in management from 2001 to 2007. I was then employed by SJG in 2007 and have held various management positions of increasing responsibility as follows: SJG Construction Supervisor from 2007 to 2009, SJG Manager from 2009 to 2012, SJG General Manager of Construction from 2012 to 2015, SJG Director of Construction from 2015 to 2017 and SJG Sr. Director of Construction from 2017 to 2018. In November 2018, I became Vice President SJIU, Construction and Shared Services and was recently promoted to my current position of Vice President, Operations, for SJG in December 2019.

I am a member of the American Gas Association and currently serve on the Construction Operations Committee. I am also a member of the Northeast Gas Association and currently serve on the Operations Committee.

Q. HAVE YOU PREVIOUSLY TESTIFIED OR SUBMITTED TESTIMONY BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES ("BPU OR BOARD")?

A. Yes, I have submitted testimony on behalf of SJG in various proceedings, including most recently, the Company's 2019 annual cost roll-in filing under its Accelerated Infrastructure Replacement Program ("AIRP II") and Storm Hardening And Reliability Program ("SHARP") in BPU Docket Nos. GR19040529 and GR19040528.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony in this case will address SJG's recovery of capital expenditures incurred since the Company's prior base rate case. Specifically, I will provide a summary of SJG's capital expenditures for the twelve-month test year period ending June 30, 2020 and the six month post-test year period from July 1, 2020 through December 31, 2020, as well as a description of the categories of expenditures that comprise the capital expenditures forecast. I will also discuss the Company's accomplishments under its AIRP II and SHARP II. Finally, I will discuss certain elements of the major capital projects that will be placed in service during the post-test year period, as well as the circumstances giving rise to the Company's proposal to recover costs associated with an abandoned project to provide service to an electric generation facility referred to as BL England.

Q. DO YOU SPONSOR ANY SCHEDULES AS PART OF YOUR DIRECT TESTIMONY?

A. Yes. I am sponsoring the following schedules, supporting the Company's capital expenditures included in rate base, which were prepared by me or under my supervision or direction:

- Schedule BWS-1 – Utility Plant in Service ("UPIS");
- Schedule BWS-2 – Test Year Plant Additions;
- Schedule BWS-3 – Post-Test Year Plant Additions; and
- Schedule BWS-4 – Post-Test Year Major Capital Projects.

This information will be updated over the course of the proceeding to include actual data for the full twelve-month test year period ending June 30, 2020.

III. OVERVIEW OF THE COMPANY'S DISTRIBUTION SYSTEM

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF SJG'S DISTRIBUTION SYSTEM.

A. South Jersey Gas provides natural gas service to approximately 398,000 customers within its service territory of approximately 2,500 square miles, which includes all or portions of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem counties. As of December 31, 2019, the Company operates a network of 146.3 miles of transmission pipelines, 6,551 miles of distribution mains, and 315,475 service lines that total 5,556 miles in length. SJG's transmission pipelines range in diameter from 8 to 24 inches, and the distribution mains range in diameter from 1 ¼ to 20 inches. The service lines are predominantly (+85%) 1-inch or less in diameter. The distribution system also includes various other forms of infrastructure, including line valves, pressure regulators and meter stations. The network operates in various pressure configurations depending on a variety of factors, including material type and vintage. Specifically, portions of the SJG transmission system operate at a maximum allowable operating pressure ("MAOP") of 700 pounds per square inch gauge ("psig"), while other areas of the distribution system operate at an MAOP of only 15 psig. The distribution system also contains a Liquefied Natural Gas ("LNG") peak shaving facility that provides important pressure support to the system in addition to serving as on-system storage for LNG supplies that the Company liquifies with its recently constructed liquefaction facility. Since 2009, SJG has made significant progress in retiring and replacing its vintage and leak prone infrastructure, primarily bare steel and cast iron, under numerous accelerated programs. As discussed below, SJG continues these efforts on an accelerated basis through the Board approved AIRP II and SHARP II.

IV. UTILITY PLANT IN SERVICE/CAPITAL EXPENDITURES

Q. PLEASE DESCRIBE SJG'S CAPITAL SPENDING SINCE ITS LAST BASE RATE CASE.

A. The Company's distribution rates were last reset in a base rate case approved by the Board in 2017. Since the conclusion of that case, South Jersey Gas has continued to invest a substantial amount of capital in new distribution plant and services and replacement plant and services. Since that time, the Company has made approximately $341 million of plant additions that are not currently reflected in rates, and projects that an additional approximately $238 million will be added to its plant in service balance by December 31, 2020, exclusive of our SHARP and AIRP investments. As reflected on Schedule BWS-1, the Company's actual utility plant in service ("UPIS") as of December 31, 2019 totaled approximately $3.0 billion. Excluding investments made under the AIRP II and SHARP II, the majority of plant additions since the previous base rate case were related to investments for the improvement, replacement and expansion of distribution mains and services required for the continued safe and reliable operation of the Company's gas delivery system.

Q. PLEASE SUMMARIZE THE CAPITAL EXPENDITURES DURING THE TEST YEAR.

A. Schedule BWS-2, provides a summary of the test year capital expenditures based on six months of actual data and six months of projected data. The projected six months of capital expenditures from January 1, 2020 through June 30, 2020, as well as projected plant retirements for the same period, were utilized to calculate the projected UPIS balance for the test year ending June 30, 2020. As shown on Schedule BWS-1, the total projected plant additions and plant retirements for the remaining months of the test year period are approximately $128.8 million and $7.0 million, respectively. This results in a total projected UPIS balance of approximately $3.1 billion as of June 30, 2020, which is reflected in Schedule SMG-2 (Statement of Rate Base) as sponsored by Company witness Stefany Graham. Once the test year is over, SJG will replace the projected data with actual data through June 2020 in the Company's 12-month update to be submitted in this case.

Q. PLEASE SUMMARIZE THE POST-TEST YEAR CAPITAL EXPENDITURES FOR WHICH SJG IS SEEKING RATE RELIEF IN THIS PROCEEDING.

A. SJG is proposing to include in rate base capital expenditures in the post-test year period which are known and measurable, and consistent with Board precedent, including *In Re*

Elizabethtown Water Company Rate Case, BPU Docket No. WR8504330 (May 23, 1985). SJG's proposed post-test year capital expenditures are "prudent and major in nature and consequence," and therefore, should be included in rate base.

In this initial filing, I am sponsoring post-test year adjustments based on a projection of capital expenditures to be made by the Company during the six-month period July 1, 2020 through December 31, 2020. As shown on Schedule BWS-1, the total projected plant additions and plant retirements for the post-test year period are approximately $55.1 million and $7.0 million, respectively. These expenditures total approximately $48.1 million, summarized in Schedule BWS-3. The Company also projects approximately $101.7 million post-test year major capital expenditures summarized on Schedule BWS-4. These projects include:

- New Sentury Compression Project (Transmission Equipment)
- 24 New Sentury Traffic Study HDD (Replacement Mains)
- 8 Ocean Heights Offset (Improvement Mains)
- Wheaton & K Regulation Station Replacement (Transmission Equipment)
- Farm Tap Encapsulations (Transmission Equipment)
- Stokes Road Station Replacement (Transmission Equipment)
- Upgrade LNG SCADA (Production Equipment/Information Technology ("IT"))
- Timothy Lane Regulation Station Replacement (Transmission Equipment)
- Above Grade Station Asbuilt Program (Transmission Equipment)
- Gate Station Odorization (Transmission Equipment)
- Renovation of Folsom Office Facility (Building Improvements)

- Maximo & CC&B Upgrade (IT)
- SJG Contact Center Modernization (IT)
- ServiceNow Enhancement (ITSM, ITBM) (IT)
- SCADA Intrusion Prevention System (IPS) Upgrade (IT)
- Role-Based Access Control (IT)
- Safety Management Solution (IT)
- Cyber Risk Remediation (IT)
- NextGen Portal (IT)
- Windows/SQL Upgrades (IT)
- Customer Meter Set #3 Replacement (Replacement Meters)

The IT projects identified on Schedules BWS-2, BWS-3 and BWS-4 are discussed in further detail by Company witness Leonard Brinson. Moreover, certain of the projects are discussed more fully below. As reflected on Schedule BWS-1, by the end of the post-test year, the Company projects a utility plant in service balance of approximately $3.2 billion.

Q. WHAT ARE THE CAPITAL EXPENDITURE CATEGORIES REFLECTED ON SCHEDULES BWS-2 AND BWS-3?

A. The expenditure categories reflected on Schedules BWS-2 and BWS-3 include those associated with New Business, Improvement Mains, Replacements, Automotive Equipment, Production Equipment, Transmission Equipment, Distribution Equipment, Office Furniture & Equipment, Building Improvements, Cathodic Protection, Communications Equipment, Information Technology, Infrastructure Investment, and Transfer from CWIP to UPIS.

Q. PLEASE EXPLAIN THE TYPES OF COSTS ASSOCIATED WITH THE CAPITAL EXPENDITURE CATEGORIES REFLECTED ON SCHEDULES BWS-2 AND BWS-3.

A. **New Business Mains** This category includes the costs of installed distribution system mains, related to SJG's new business.

New Business Services This category includes the cost of service pipes and accessories leading to the customers' premise, related to SJG's new business.

New Business Meters This category includes the cost of installed meters and/ or devices used in measuring gas delivered to users, related to SJG's new business.

New Business Regulators This category includes the cost of labor and materials associated with the installation of house regulators, related to SJG's new business.

Improvement Mains This category includes the cost of installed improvement distribution system mains.

Replacement Mains This category includes the cost of installed distribution system mains related to replacement mains, including replacements associated with the Company's AIRP II Compliance Stipulated Base as approved by the Board on October 31, 2016 in Docket No. GR16020175. The Stipulated Base represents a level of capital expenditures that the Company must incur outside the AIRP II cost recovery framework.

Replacement Services This category includes the cost of installed distribution system services related to replacement services, including those associated with the Company's Service Replacement Programs and Stipulated Base requirements under the Board approved AIRP II and SHARP II programs.

Leak Clamping This category is a subset of mains and reflects the cost of labor and materials associated with leak clamping.

Replacement Meters This category includes the cost of installed meters and/or devices used in measuring gas delivered to end users.

Replacement Regulators This category includes the cost of labor and materials associated with the installation of replacement house regulators.

Automotive Equipment This category includes the cost of transportation vehicles used for utility purposes.

Production Equipment This category includes the cost of equipment used in the production of gas. The production system ends where the gas enters a gathering system, transmission system or distribution system.

Transmission Equipment This category includes the cost of equipment used in the transmission of gas from a production plant, delivery point of purchased gas, gathering system, storage area, or other wholesale source of gas, to one or more distribution areas.

Distribution Equipment This category includes the cost of miscellaneous distribution systems equipment, such as gas testers and indicators, fire protection equipment, and power operated equipment used in construction or repair work. Specifically, costs associated with miscellaneous tools and equipment purchased by the Company, as well as Compressed Natural Gas ("CNG") Station costs, are included here.

Office Furniture and Equipment This category includes the cost of office furniture and equipment owned by the utility and devoted to utility service.

Building Improvements This category includes the cost associated with structures and improvements for utility purposes.

Cathodic Protection This category reflects the cost of labor and materials associated with cathodic protection. The cost included here is a subset of Mains.

Communication Equipment This category includes the cost of installed telephone and wireless equipment for general use in connection with the Company's gas operations. Currently, no costs are included in this category.

Information Technology This category reflects the cost of information technology systems and equipment. Specifically, costs associated with several technology upgrades and enhancements are included here.

Infrastructure Investment This category includes investments included in the Company's AIRP II and SHARP II programs, which is discussed in further detail in Sections VI and VII of my testimony.

Transfer from CWIP to UPIS This category reflects existing construction work in progress expenditures as of December 31, 2019 that will be transferred to utility plant in service during the test year and post test year. This transfer captures actual utility plant that will be in service and reflected in rate base, as shown on Schedule SMG-2. As indicated earlier, utility plant in service will be updated over the course of the proceeding to include actual data for the full twelve-month test year period ending June 30, 2020.

Q. PLEASE DESCRIBE THE STEPS THAT SJG TAKES TO ENSURE THE REASONABLENESS OF CAPITAL PROJECTS EXPENDITURES.

A. SJG follows a number of practices to ensure that its capital expenditures are reasonable. These include competitive bidding, contractor quality assurance and cost tracking. With respect to competitive bidding, once a project is approved, individual project design documents are prepared for competitive bid so that the project can be bid for construction following design and permitting. Contractor bids are evaluated utilizing a combination of criteria including safety, cost, contractor quality, experience, availability, and timing. As to contractor quality, we continuously monitor the performance of our contractors and we use that information to evaluate the bids we receive from contractors who have worked for us previously. This helps us to ensure that the work they perform delivers pipeline assets constructed in a safe, quality, compliant, and most cost-effective way possible. Finally, we track our capital expenditures after a project commences to monitor the financial performance. Specifically, we examine projects through the project life cycle with monthly (or more frequently as needed) reviews to determine the existence of any variances. If there are significant variances, we undertake a review to determine the causes, identify potential cost mitigation solutions and/or modify the scope of the project as appropriate.

Q. WHAT EFFORTS HAS THE COMPANY UNDERTAKEN TO CONTROL MUNICIPAL COSTS RELATED TO ITS CAPITAL PROJECTS?

A. The Company continues to experience increases in the costs associated with pipeline replacements due to increases in municipal costs. The biggest components of these municipal costs are attributable to the following: repaving requirements; traffic control plans; permit fees; and night work restrictions. The Company continues to maintain an ongoing dialogue with the municipalities it serves during the pre-construction phase and beyond to minimize these requirements. In addition, the Company has increased outreach efforts with local officials concerning these activities. Despite these efforts, the costs are ultimately subject to the determination of the individual municipalities.

With respect to repaving, where possible, SJG seeks to coordinate with other utility or municipal projects to share costs and ultimately save money on repaving, which also has the added benefit of reducing inconvenience to the community. Furthermore, the Company continues to seek to increase use of infrared restoration technology for repaving. This technology is much less expensive than mill and replace repairs. Infrared technology expedites repair by heating, fusing, and compacting recycled asphalt; saving labor, equipment and new material compared to conventional repairs that require the removal of old asphalt from a damaged site and replacement with new asphalt. The ability to use infrared technology depends on the size and extent of a project and the willingness of the individual municipality to agree to its use.

V. PIPELINE INTEGRITY MANAGEMENT ("PIM") AND DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM ("DIMP")

Q. HOW DOES THE COMPANY ENSURE PIPELINE SAFETY THROUGHOUT ITS SYSTEM?

A. SJG has maintained compliance with the Federal pipeline safety regulations on pipeline integrity as found at 49 CFR 192 - Subpart O since those regulations went into effect in December of 2003. Achieving compliance with the regulations required the development and subsequent implementation of an integrity management program for the specific transmission pipelines covered under this part. As of December 31, 2019, South Jersey operates 146.3 miles of transmission pipeline that are subject to the PIM regulations. The Company's detailed and comprehensive program includes:

- An ongoing identification of "high consequence areas" to delineate covered pipeline segments;
- The development of a baseline assessment and reassessment plan;
- Data integration and risk assessment to determine how to address each covered pipeline segment; and
- The selection and implementation of a baseline integrity assessment technique, which addresses the specific risks associated with each covered pipeline segment.

SJG successfully met the December 17, 2012 regulatory deadline established for the completion of the initial baseline integrity assessments of its covered facilities. Additionally, some of these facilities have been reassessed ahead of the seven-year Federal requirement at the request of the BPU's Bureau of Pipeline Safety.

Q. WHAT DO THE PIM REGULATIONS REQUIRE WITH RESPECT TO THE DIMP PLAN?

A. The regulations mandate that a risk-based approach to distribution main and service integrity management plans be prepared by each operator. While the regulations prescribe a specific framework for documenting operating practices and procedures into a plan, the regulations provide significant operator flexibility to satisfy the requirements. At a minimum, each distribution pipeline operator's DIMP plan must address the seven major elements described below. South Jersey's DIMP plan documents the Company's risk-based approach to integrity management according to the required elements as follows:

(1) **Knowledge.** **"**Knowledge" entails the documentation of information pertaining to system design, materials, operating characteristics and environmental factors. SJG's DIMP plan references data contained in the Company's Field Book geographic information

system, including leak and asset management and the corrosion control records system. The combination of these tools allows South Jersey to maintain, store, report and analyze critical data related to its distribution infrastructure.

(2) **Identify threats.** Threat identification determines broad issues that may affect the safe operation of the distribution system. Potential threats include the categories of potential operational hazards established by PHMSA. SJG relies on both internal and external data sources to identify threats. Internal data sources include various design and operating records contained in the systems noted previously. External data sources include industry-wide data, and data related to soil conditions or prepared by independent researchers.

(3) **Evaluate and rank risks.** The process of evaluating and ranking risks determines the relative importance of all identified risks. This process takes into consideration both the likelihood of an occurrence and the consequences of such occurrence. SJG relies on standard industry analyses, such as population densities in specific areas, to evaluate consequences of failure and ranks risks accordingly.

(4) **Identify and implement measures to address risks.** This element included in SJG's DIMP plan documents measures taken to reduce risk of failure. Programs at SJG that address risks include leak management, damage prevention, corrosion control, public awareness and operator qualification programs. Specific actions include prevention, detection, repair, rehabilitation, and/or replacement and upgrade, depending on the risk-based probability of an occurrence and consequences of the specific integrity threat.

(5) **Measure performance, monitor results, and evaluate effectiveness.** Monitoring and measurement activities allow SJG to evaluate the effectiveness of actions implemented by the Company to address risks. SJG measures performance from a variety of information

including the collection of data on leak causes and leaks repaired or eliminated. This data is reported and communicated within SJG for evaluating trends and to provide input for future planning purposes.

(6) **Periodic evaluation and improvement.** Periodic evaluations establish a definitive feedback loop for the overall distribution integrity management processes. Additionally, as knowledge concerning the distribution system or information on potential threats is gained, elements of the DIMP plan or required actions may be revised to take into account the impact of the enhanced understanding as it impacts SJG's integrity management activities.

(7) **Report results.** Reporting on integrity management actions and results provides information to SJG's internal management, and further satisfies Federal and State mandated reporting requirements.

Q. WHAT ACTIONS HAS THE COMPANY TAKEN TO ENSURE COMPLIANCE WITH THE DIMP REQUIREMENTS?

A. In accordance with Federal regulations, SJG finalized and began implementation of its DIMP in August 2011. Since then, the DIMP plan has been reviewed and updated annually, reflecting the most current data and system risk profile for SJG's distribution system. This updated profile forms the basis for actions taken by the Company to mitigate the most significant identified risks. Additionally, a complete program re-evaluation is conducted at least every three years. The most recent re-evaluation occurred in 2017.

Q. HAS THE COMPANY INCURRED EXPENSES ASSOCIATED WITH ENSURING PIM/DIMP COMPLIANCE?

A. The Company has incurred both capital upgrade expenditures and incremental operating and maintenance ("O&M") expenses associated with complying with the transmission and distribution PIM regulations. The capital upgrades have included expenditures associated with physical piping replacements, valve change outs, and station piping retrofits to accommodate in-line inspection tools. The incremental O&M expenses have included expenditures such as the consulting and inspection fees associated with running the in-line inspection tools, and the costs of performing confirmatory field excavations on the pipe to remediate or repair any identified anomalies. The additional capital expenditures have been absorbed by the Company in its annual capital construction budget each year as incurred. The incremental O&M expenses associated with complying with the PIM regulations have been treated as a deferred expense.[1] As of December 31, 2019, these deferred expenses totaled $4,294,911 for transmission integrity management activities, and $807,210 for distribution integrity management activities, including carrying costs. As more pipeline segments have integrity assessments performed, these costs will continue to accrue, and their magnitude will be directly related to the findings associated with the results of each assessment. Projected deferred expenses as of the end of the test year at June 30, 2020 total $4,787,282 for transmission integrity management activities and $848,136 for distribution integrity management activities, including carrying costs. The

[1] *I/M/O the Petition of South Jersey Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service and Other Tariff Revisions*, BPU Docket No. GR17010071, "Order Adopting Initial Decision and Stipulation," p. 4 (October 20, 2017).

Company's proposed recovery and amortization of these amounts are addressed by Company witness Stefany Graham and included in Schedule SMG-23.

Q. ARE THERE ANY NEW PHMSA REGULATIONS THAT COULD INCREASE TRANSMISSION INTEGRITY MANAGEMENT COSTS?

A. Yes. On October 1, 2019 Part 1 of the Gas Transmission Rule (Mega Rule) was listed to the Federal Register. It will significantly impact operating costs associated with material verification, MAOP reconfirmation, and additional integrity assessment methodologies. In addition, capital expenditures related to pipeline replacements or modifications will likely be required as a result of this regulation. This regulation was related to "Part 1" of the Rule; however, SJG anticipates impacts to the Transmission Integrity Management costs will occur when "Part 2" and "Part 3" are issued in the future. The Company estimates potential annual O&M expenses of approximately $300,000 related to this new regulation. As discussed by Company witness Ms. Graham, the Company has not reflected these costs in the test-year O&M expenditures and is instead proposing to track and defer for later recovery the Company's incremental transmission integrity management costs.

VI. <u>ACCELERATED INFRASTRUCTURE REPLACEMENT PROGRAM (AIRP II)</u>

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE COMPANY'S BOARD APPROVED AIRP II.

A. SJG maintains and upgrades it infrastructure to ensure that it continuously provides safe, adequate and proper service to its customers. To that end, the Board has recognized the prudence and need for accelerating the replacement of aging and leak prone materials in a number of accelerated infrastructure proceedings in place and approved throughout the

State since 2009, including SJG's Capital Investment Recovery Tracker ("CIRT"), AIRP and AIRP II.

SJG's AIRP was initially approved by the Board on February 20, 2013 in Docket No. GO12070670. The AIRP was approved as a four-year program pursuant to which South Jersey was permitted to invest $35.3 million annually on the replacement of cast iron and/or unprotected bare steel mains and services. The Company fully utilized the authorized AIRP expenditure budget as of August 31, 2016.

On October 31, 2016, in Docket No. GR16020175, the Board issued an order authorizing the Company to extend the AIRP through the implementation of the AIRP II. The AIRP II was approved as a five-year program permitting SJG to invest up to $302.5 million, excluding an Allowance for Funds Used During Construction ("AFUDC"). This authorized investment amount was derived by applying an average cost per mile cap of $550,000 to a mileage cap of 110 miles per year, or 550 miles over the five-year term of the program. In addition, the Company agreed to a stipulated base replacement amount of no less than 30 miles per year, or 150 miles over the five-year term of the program, which is not recoverable through the AIRP II but is considered base capital to be recovered in future base rate cases.

Q. PLEASE EXPLAIN HOW THE COMPANY RECOVERS ITS AIRP II INVESTMENT COSTS AND PROVIDE AN OVERVIEW OF THE INVESTMENTS TO DATE.

A. Pursuant to the Board's October 31, 2016 Order in Docket No. GR16020175 approving the AIRP II, cost recovery for the AIRP II investments occurs annually. Generally speaking, AIRP II investments that are in service through June 30th of each year are added to base rates effective October 1st of the same year.

By dedicating these investments to the replacement of aging mains and services, SJG has made, and will continue to make, significant improvements to its distribution system. As of December 31, 2019, SJG has invested a total of approximately $214 million in AIRP II projects and has replaced 366 miles of main and 19,251 services. The Company's treatment of the revenue requirements associated with AIRP II investments that will be made through June 30, 2020 is discussed in Ms. Graham's Direct Testimony.

Q. PURSUANT TO THE BOARD'S ORDER APPROVING THE AIRP II, THE PRUDENCE AND NEED FOR THE COMPANY'S INVESTMENTS ARE TO BE REVIEWED IN THE COMPANY'S NEXT BASE RATE CASE. DO YOU BELIEVE THAT THE COMPANY'S AIRP II INVESTMENTS WERE PRUDENT AND NECESSARY CAPITAL INVESTMENTS?

A. Yes. The operational and public safety benefits of the AIRP II have been apparent and abundant since inception of the programs. The AIRP II has and will continue to modernize the Company's distribution system by removing from service a significant portion of the Company's inventory of pipe that is aging and more susceptible to leaks, thus reducing potential safety hazards, increasing the resiliency and reliability of the system, and reducing methane emissions. By replacing these materials with modern plastic pipe, the Company is more readily able to isolate and shutoff a smaller area of the system when performing repairs and maintenance, increasing reliability to its customers. The Company has also installed Excess Flow Valves ("EFVs") on a vast majority of services replaced under the AIRP II, thereby increasing safety for its customers and the general public.

The Company continues to approach the work in a multi-year, planned fashion, and utilizes a competitive bidding process, as described earlier in my testimony, in an effort to achieve the lowest possible unit cost. The Company also makes significant efforts to coordinate with municipalities to mitigate increasing costs for governing agency required fees, paving, and traffic control, all of which contribute to the year over year price per foot increase and are largely beyond the Company's control. At the same time, AIRP II has helped the Company control O&M and capital costs associated with leak repair, leak survey, and leak management work that would have occurred as the Company's leak prone pipe continued to age. Specifically, one of the benefits of the programs to SJG's distribution system is the elimination of open leaks. Pursuant to the Board's Order approving the AIRP II, SJG is required to further reduce its leak inventory, from October 2016 through September 30, 2021, by twenty percent (20%) per year. SJG expects that, with the AIRP II program, it will eliminate all open leaks in inventory and convert to a "find and fix" mode for new incoming leaks by 2021.

When AIRP was first proposed by the Company in 2012, the Company estimated that it would reduce the time it would take to replace all of its aging cast iron and bare steel infrastructure from 50 years to approximately 10 years. Due to the success of AIRP and AIRP II thus far, South Jersey anticipates that it will achieve this 10 year target on or ahead of schedule, and will have eliminated all remaining bare steel and cast iron mains in its distribution system by 2021.

VII. <u>STORM HARDENING AND RELIABILITY PROGRAM (SHARP II)</u>

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE COMPANY'S BOARD APPROVED SHARP.

A. On September 3, 2013, the Company filed with the Board its proposal to implement the SHARP. The filing was made pursuant to the Board's March 20, 2013 Order in *In the Matter of the Board's Establishment of a Generic Proceeding to Review Costs, Benefits and Reliability Impacts of Major Storm Event Mitigation Efforts*, Docket No. AX13030197, which directed Board Staff to invite all regulated utilities subject to Board jurisdiction to submit detailed proposals for infrastructure upgrades designed to protect the State's utility infrastructure from future "Major Storm Events."

At that time, South Jersey had within its system 179 miles of distribution main operating at low pressure in Atlantic City, Ventnor, Margate, Longport, Pleasantville, Somers Point, Ocean City, Wildwood, North Wildwood, Wildwood Crest, Cape May and West Cape May. Approximately 26,000 customers had services off this low pressure distribution system. Low pressure mains, services and regulator stations are susceptible to water intrusion during Major Storm Events, as water intrusion occurs when storm force flooding overcomes the internal operating pressure within a main. This forces water into susceptible points of entry, such as joints and non-welded fittings.

The Company found that a direct hit from a major storm, similar to that experienced by portions of this State during Superstorm Sandy, could render SJG's low pressure system inoperable and interrupt service to thousands of customers. In the event of flooding of SJG's low pressure mains, and a system shutdown, the system would need to be nitrogen purged and pressure tested prior to reintroducing gas. Old bare steel and cast iron mains comprising a low pressure system would not be able to withstand such testing. As a result, if the low pressure system was shut off, it could not be placed back into service and would need to be replaced in its entirety. The net result would include extremely long periods of time, throughout a cold winter, with customer outages causing a significant detriment to peoples' lives, and the economy of the State of New Jersey.

With this in mind, South Jersey proposed and received approval in August 2014 to replace these low-pressure mains and services with high pressure mains and associated services through the SHARP. At the conclusion of the program in June 2017, the Company had invested a total of $103.5 million and replaced approximately 92 miles of main and 11,090 services.

On May 22, 2018, in Docket No. GO17111130, the Board issued an order authorizing the Company to continue its successful storm hardening efforts through a phase two of the SHARP ("SHARP II"). The SHARP II was approved as a three-year program, ending June 30, 2021, focused on 4 targeted system enhancement projects in the coastal regions, with a total budget of approximately $100.25 million, excluding AFUDC. The scope of the SHARP II Projects includes three pipeline looping projects, including the Absecon Island Loop Project, Ocean City Loop Project, and Brigantine Bridget Project, as well as the installation of approximately 20,000 EFVs in coastal areas. In addition, the Company agreed to a stipulated base amount of $10 million over the three year program period, which is not recoverable through the SHARP II but is considered base capital to be recovered in future base rate cases.

Q. PLEASE EXPLAIN HOW THE COMPANY RECOVERS ITS SHARP II INVESTMENT COSTS AND PROVIDE AN OVERVIEW OF THE INVESTMENTS TO DATE.

A. Pursuant to the Board's May 22, 2018 Order in Docket No. GO17111130 approving the SHARP II, cost recovery for the SHARP II investments occurs annually. Similar to the AIRP II cost recovery, SHARP II investments that are in service through June 30th of each year are added to base rates effective October 1st of the same year.

As of December 31, 2019, capital expenditures incurred under the SHARP II total approximately $50.3 million, with approximately 7,900 EFVs installed. The Company has also begun the engineering and design associated with Ocean City Loop project and anticipates completion of the Absecon Island Loop projects in year 2 of the program. The Ocean City Loop and Brigantine Bridge projects are anticipated to be placed in service during Year 3 of the program. The Company's treatment of the revenue requirements associated with SHARP II investments made through June 30, 2020 is discussed in Ms. Graham's Direct Testimony.

Q. PURSUANT TO THE BOARD'S ORDER APPROVING THE SHARP II, THE PRUDENCE AND NEED FOR THE COMPANY'S INVESTMENTS ARE TO BE REVIEWED AT THE TIME OF THE COMPANY'S NEXT BASE RATE CASE. DO YOU BELIEVE THAT THE COMPANY'S SHARP II INVESTMENTS WERE PRUDENT AND NECESSARY CAPITAL INVESTMENTS?

A. Through implementation of the SHARP, SJG has dramatically improved system reliability in coastal areas that are susceptible to flooding. The Company has experienced numerous coastal flooding events since the commencement of the SHARP and, due to the significant operational benefits that have been achieved through the SHARP, has not experienced any significant customer outages.

The SHARP II Program is designed to improve both safety and redundancy/reliability through two separate types of projects. Our core safety initiative, the EFV Project, will provide for the installation of excess flow valves throughout our coastal communities that do not currently have them. This project will improve safety and reduce the need for potential curtailment should a major coastal storm or weather event occur. In addition, our core redundancy/reliability projects, the Absecon Island Loop, Ocean City Loop and Brigantine Bridge Project, will bring redundant and more reliable feeds to all our customers along these barrier islands. The projects will fortify the gas supply in all our barrier islands between Ocean City, and Brigantine City. With the completion of this program, all barrier islands will have two feeds serving each island. The investments in this program will help improve the safety, redundancy, and reliability of our system in the coastal regions, further mitigating potential storm related service disruptions for all our current and future coastal customers.

The Company has taken all reasonable steps to implement its SHARP II Program at a reasonable cost. The Company's cost control processes, which are discussed in greater detail earlier in my testimony, include competitive bidding for projects as well as coordination with municipalities in which work is being performed. These processes have been followed by the Company in proceeding with the SHARP II Program.

Q. HAVE THE COSTS OF THE SHARP II PROGRAM VARIED FROM THE AMOUNTS THAT THE COMPANY ORIGINALLY FORECAST IN SEEKING BOARD APPROVAL OF THE PROGRAM?

A. Yes. The costs reflected in the Company's filing seeking approval of the SHARP II program were based on the best information available to the Company at that time. Nonetheless, the actual costs of components of the program, such as the costs of the excess flow valves installed as part of the program, have turned out to be more expensive based on the response to the Company's competitive bids. Specifically, the forecast cost to install excess flow valves was $3,650 per installation while the actual cost based on the results of competitive bids has been approximately $4,700 per installation. In addition, in forecasting the original costs of SHARP II, the Company estimated that most main would be behind the curb, thus minimizing the Company's restoration costs. Unfortunately, most of the main is in the street, resulting in increased labor and restoration costs. While the costs have exceeded the Company's original estimates, the Company continues to believe that the benefits of the program in terms of increased reliability justify full recovery of the program's costs.

VIII. <u>NEW SENTURY COMPRESSION PROJECT</u>

Q. PLEASE BRIEFLY DESCRIBE THE COMPANY'S NEW SENTURY COMPRESSION PROJECT.

A. The New Sentury Pipeline is an existing 24-inch gas transmission pipeline that was installed in 1998 and operated at 700 PSIG MAOP. The pipeline provides a direct connection to both the Transcontinental Gas Pipe Line Company, L.L.C. ("Transco") and

Columbia Gas Transmission System, LLC ("Columbia") interstate pipelines in Swedesboro, New Jersey and directly serves five of the seven counties that SJG operates in. Gas flows from Swedesboro, Gloucester County to Vineland, Cumberland County and is taken as far south as Cape May Point in Cape May County through various facilities.

Based on contractual operating pressures and gas flow analyses, the Company determined that both Transco and Columbia are not able to provide the pressure necessary to adequately deliver gas to the various subsystems that the New Sentury pipeline feeds. On peak days the gas pressure supplied by Transco and Columbia does not meet SJG's peak demand and creates supply challenges to our customers in these areas.

South Jersey has concluded that the most safe, reliable and cost effective method to enhance the pressure on its transmission system is by installing a compressor station to elevate the pressure back to the pipelines' MAOPs on days where the system needs it most. This system enhancement will provide adequate operating pressure to various counties that the New Sentury pipeline feeds on coldest days, alleviating growth restrictions and allowing older parts of SJG's gas system to operate as originally intended.

In conducting its analysis, South Jersey evaluated a number of operational alternatives to address the system constraints and concluded that the New Sentury Compression Project is the most prudent and cost effective option to resolve the issues that have been identified. The alternatives considered additional capacity options as well as discussions with our pipeline suppliers about incremental capacity increases. In comparing the operation and cost components of each of these alternatives, South Jersey concluded that the New Sentury Compression Project was the most viable and cost-effective approach to reinforce the gas transmission system in this area. As of March 2019, the engineering, design and construction management contract for the New Sentury Compression project has been awarded and permitting is underway. The Company projects that the project will be completed and placed in service in December 2020 at a total cost of approximately $61.5 million, as summarized on Schedule BWS-4.

IX. 24 NEW SENTURY TRAFFIC STUDY HDD

Q. PLEASE BRIEFLY DESCRIBE THE COMPANY'S NEW SENTURY TRAFFIC STUDY HORIZONTAL DIRECTIONAL DRILL ("HDD") PROJECT.

A. During Gloucester County's most recent traffic study, the County identified a potential safety issue with the proximity of the 24" New Sentury Pipeline to County Road 538. The existing pipeline crosses South Branch Raccoon Creek above ground and along an exterior wall of the bridge. The bridge walls are short in height and in close proximity to the travel way. This provides very little protection to the 24" New Sentury Pipeline. Additionally, it creates a safety issue for passing motorists. South Jersey Gas agreed that the existing pipeline should be relocated and as an immediate measure, worked with the county to have more guardrail installed for protection. To further address this issue, SJG will relocate the pipeline. Rather than an above ground crossing, SJG is working to install the new pipeline using HDD technology. At the time of the project's completion the old pipeline will be abandoned, and the safety issue will be rectified. This project is projected to be placed in service in December 2020 at a cost of approximately $1.5 million, as summarized on Schedule BWS-4.

X. RENOVATION OF FOLSOM OFFICE FACILITY

Q. PLEASE DESCRIBE THE RENOVATION OF THE COMPANY'S FOLSOM OFFICE FACILITY.

A. The Company's Folsom New Jersey office facility was first constructed in the late 1960s, with an extension later added in the early 1980s. Other than minor renovations such as painting and flooring, the original structure has not been updated and requires substantial renovation. The renovation involves the replacement of all mechanical systems, furniture, Information Technology and the building roof. In addition, all interior walls are being demolished and the space of the building is being reconfigured and updated to appeal to and address the needs of a new younger workforce. Two current emergency generators are being replaced with a single emergency generator and a new cafeteria and kitchen are being installed. Finally, the customer walk-in payment center is being relocated and updated. The total cost of the project is approximately $19.1 million, as reflected on Schedule BWS-4, and it is projected to be placed in service in July 2020. The Company believes that its renovated facility will help it to attract and retain qualified employees.

Q. HOW ARE THE COSTS OF THE FOLSOM OFFICE REFLECTED IN THE REVENUE REQUIREMENT?

A. The manner in which the costs associated with the Folsom office are reflected in the revenue requirement is discussed in Company Witness O'Brien's testimony.

XI. BL ENGLAND FACILITIES

Q. PLEASE DESCRIBE THE PROJECT THE COMPANY UNDERTOOK TO PROVIDE SERVICE TO BL ENGLAND'S ELECTRIC GENERATION FACILITY.

A. RC Cape May, LLC ("RCCM") owns the BL England electric generation facility in Upper Township, New Jersey. In 2012, RCCM sought gas service from the Company to convert the facility from a coal-fired plant to a natural gas-fired plant. In 2013, SJG and RCCM entered into an agreement (the "Agreement") in which SJG agreed to construct pipeline and other related facilities to enable SJG to provide natural gas transportation service to the BL England facility. The Agreement was initially approved by the BPU by order dated April 29, 2013. The Agreement required RCCM to retrofit unit 2 of the BL England facility to burn natural gas, and it required South Jersey to build a pipeline to provide service to BL England.

The opportunity to provide service to BL England afforded SJG the opportunity to develop a project that would not only enable the Company to serve BL England but also to provide an important reliability benefit to other customers. Specifically, the Company presently serves approximately 145,000 customers in Atlantic and Cape May Counties from a single transmission pipeline feed, as well as two distribution lines. In the event of an outage of the transmission feed, the remaining distribution facilities would not be adequate to avoid significant customer outages. The project that the Company proposed to provide service to BL England afforded it the additional opportunity to greatly enhance reliability by installing a pipeline facility that would enable the Company to provide service to these customers in the event of an interruption of the transmission pipeline feed.

Q. PLEASE DESCRIBE THE PIPELINE PROJECT THAT THE COMPANY PROPOSED TO CONSTRUCT TO SERVE BL ENGLAND AND ENHANCE THE RELIABILITY OF THE SERVICE PROVIDED TO CUSTOMERS IN ATLANTIC AND CAPE MAY COUNTIES.

A. The proposed pipeline project consisted of two segments that traveled approximately 22 miles. The first segment, the Reliability Line, was to interconnect with SJG's existing distribution system and provide service to both BL England's generation facility and to SJG's remaining customers in Atlantic and Cape May Counties in the event of an interruption on the transmission line that currently serves those customers. The second segment, the Dedicated Line, was to connect SJG's existing distribution system in Cape May County to BL England's facility in Upper Township, New Jersey. RCCM agreed to pay rates providing a return on and of the projected cost of the Dedicated Line.

Q. WHY WAS THE SERVICE TO THE BL ENGLAND FACILITY A NECESSARY PREREQUISITE TO THE CONSTRUCTION OF BOTH THE RELIABILITY LINE AND THE DEDICATED LINE?

A. The regulations that govern the construction and operation of natural gas facilities in the Pinelands require that any new facility must be installed "primarily to serve the needs of the Pinelands." The service to BL England provided by the proposed project allowed the Company to meet this test. The pipeline project that the Company proposed would have benefitted a significant number of our customers and residents of the Pinelands by achieving both greater gas reliability through the construction of the Reliability Line and greater electric reliability through local generation that would have been provided by BL England.

Q. PLEASE DESCRIBE THE PROCESS THAT WAS FOLLOWED TO OBTAIN APPROVAL OF THE PROPOSED PROJECT.

A. Over the period 2013-2019, the proposed pipeline project was the subject of extensive litigation before the BPU, the Pinelands Commission and the Appellate Division of the New Jersey Superior Court. The process involved numerous administrative hearings. Throughout the course of the litigation, RCCM affirmatively supported the project. However, on February 17, 2019, RCCM notified the Appellate Division that it no longer intended to use the pipeline to repower the BL England power plant. Subsequently, the Pinelands Commission requested the Appellate Division to remand South Jersey's application to build the pipeline because the repowering of the BL England facility was fundamental to the Commission's decision to approve SJG's application. While SJG opposed the request for remand, the Appellate Division granted it by Order dated May 29, 2019.

Q. DID THE BPU SUPPORT THE PROPOSED PROJECT?

A. Yes. Upon completion of its review process, the BPU found in its December 11, 2015 order in BPU Docket No. GO13111049 that the construction of the Reliability Line "will enhance the reliability of the eastern and southern portions of SJG's service territory by enabling an alternative route for natural gas to be supplied to Atlantic and Cape May Counties." Further, with respect to the entire project, the Board found that "the Project will serve the goals of the EMP ("Energy Master Plan") in that the use of the proposed combined cycle system for the facility should result in significant improvement in air quality and other positive environmental impacts, while also increasing overall system reliability and reinforcement in SJG's service area." In addition, the BPU's Energy

Division Director testified in support of the proposed project in proceedings before the Pinelands Commission.

Q. DOES THE COMPANY PLAN TO CONTINUE TO SEEK WAYS TO ENHANCE THE RELIABILITY OF THE SERVICE IT PROVIDES TO CUSTOMERS IN ATLANTIC AND CAPE MAY COUNTIES?

A. Yes. The Company will continue to look to develop projects that can be constructed and operated in a manner consistent with applicable laws and regulations. At this point however, it is clear that BL England will not proceed with the repowering of its generation facility and thus the Company will not be able to proceed with the project as proposed.

Q. HAS SOUTH JERSEY INCURRED COSTS ASSOCIATED WITH THE DEVELOPMENT OF THE RELIABILITY LINE AND THE DEDICATED LINE?

A. Yes. SJG has incurred approximately $10.1 million through December 31, 2019 in connection with the project. These costs consist of engineering, legal, consulting and other costs.

Q. IS THE COMPANY SEEKING TO RECOVER THESE COSTS IN THIS PROCEEDING?

A. Yes. The Company's proposal is discussed more fully by Company witness O'Brien.

XII. SUMMARY

Q. CAN YOU BRIEFLY SUMMARIZE YOUR TESTIMONY?

A. The issues discussed in my testimony address the significant levels of capital expenditures for both the test year and post-test year periods that are prudent and necessary to provide safe and reliable service to South Jersey's customers. SJG's construction program has increased the safety, operation and reliability of our distribution system. Additionally, the Company's AIRP II and SHARP II investments have significantly reduced leak inventory and help to protect utility infrastructure from Major Storm Events. As such, the Board's approval of the proposals set forth herein is fully justified.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

SOUTH JERSEY GAS COMPANY
STATEMENT OF RATE BASE
UTILITY PLANT IN SERVICE (UPIS)

Line No.					Reference
1					
2	**Actual UPIS as of 12/31/19**			**$2,971,973,300**	SMG-2
3					
4	Projected Test Year Plant Additions (1/1/20 - 6/30/20)	$	128,780,876		BWS-2
5	Projected Test Year Plant Retirements (1/1/20 -6/30/20)	$	(6,972,659)		BWS-2
6	Total Projected Test Year Net Plant Additions (1/1/20-6/30/20)	$	121,808,217		
7					
8	**Projected Test Year Ending UPIS at 6/30/20**			**$3,093,781,517**	
9					
10	Projected Post Test Year Plant Additions (7/1/20 - 12/31/20)	$	55,116,440		BWS-3
11	Projected Post Test Year Plant Retirements (7/1/20 - 12/31/20)	$	(6,972,659)		BWS-3
12	Projected Post Test Year Major Capital Projects	$	101,727,060		BWS-4
13	Total Projected Post Test Year Net Plant Additions (7/1/20-12/31/20)	$	149,870,840		
14					
15	**Projected Post Test Year Ending UPIS at 12/31/20**			**$3,243,652,358**	

Schedule BWS-2
6&6

SOUTH JERSEY GAS COMPANY
ADJUSTMENT TO JUNE 30, 2020 RATE BASE

	July Actual 2019	August Actual 2019	September Actual 2019	October Actual 2019	November Actual 2019	December Actual 2019	January Projected 2020	February Projected 2020	March Projected 2020	April Projected 2020	May Projected 2020	June Projected 2020	2019-202 Test Year Total
New Business													
1.0 Mains	1,656,732	1,918,260	1,624,729	2,106,621	1,252,980	1,538,894	1,034,600	1,295,400	1,898,200	2,118,700	1,597,800	1,427,200	19,470,116
1.1 Services	1,815,218	1,811,642	2,409,461	2,604,810	2,395,199	3,184,307	1,404,300	1,731,400	2,559,200	2,875,300	2,211,700	1,955,300	26,957,838
1.2 Meters	405,570	540,221	863,745	685,155	796,586	795,043	725,200	784,300	882,700	1,044,600	1,079,000	1,077,400	9,679,519
1.3 Regulators	224,115	295,911	255,012	427,243	471,362	436,350	246,500	246,700	246,700	246,700	246,700	246,700	3,589,994
Total New Business	4,101,634	4,566,034	5,152,947	5,823,829	4,916,128	5,954,595	3,410,600	4,057,800	5,586,800	6,285,300	5,135,200	4,706,600	59,697,467
2.0 Improvement Mains	26,997	3,158	31,370	65,795	114,800	39,272	58,900	58,700	58,700	58,700	58,700	58,700	633,792
Replacements													
3.0 Replacement Mains	909,687	1,117,275	1,357,792	1,052,852	1,174,232	795,678	1,395,400	1,489,900	1,869,400	2,463,500	522,200	153,900	14,301,815
3.1 Replacement Services	942,104	2,173,407	905,718	953,858	1,301,008	1,328,006	2,613,900	2,664,100	2,672,100	3,031,000	2,229,200	2,154,600	22,969,000
3.2 Leak Clamping	388,328	304,417	366,319	553,338	424,541	371,857	541,500	575,700	519,300	439,100	361,800	319,500	5,165,700
3.3 Replacement Meters	22,825	9,805	35,454	21,192	27,432	28,302	18,200	18,200	18,200	18,200	18,200	18,200	254,211
3.4 Replacement Regulators	539,829	717,297	605,135	656,964	586,798	347,733	866,800	866,800	866,800	866,800	866,800	866,800	8,654,556
Total Replacements	2,802,773	4,322,201	3,270,418	3,238,204	3,514,010	2,871,576	5,435,800	5,614,700	5,945,800	6,818,600	3,998,200	3,513,000	51,345,283
4.0 Land & Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-
5.0 Automotive Equipment	25,366	42,535	6,778	6,778	27,824	1,584	1,014,700	1,135,900	636,200	105,000	305,000	699,800	4,007,465
6.0 Production Equipment	(102,752)	15,516	61,760	349,409	102,467	105,897	2,300	2,300	57,500	36,200	51,400	90,300	772,296
7.0 Transmission Equipment	45,391	85,676	29,732	99,318	73,457	263,019	66,000	66,300	66,600	66,900	65,700	49,800	977,894
8.0 Distribution Equipment	56,568	575,089	934,703	530,869	507,838	676,757	134,800	80,000	53,200	26,300	26,300	26,300	3,628,724
9.0 Office Furniture & Equipment	5,734	-	2,992	17,830	(10,224)	4,913	-	-	25,000	-	30,200	20,000	96,445
10.0 Building Improvements	71,336	230,886	61,257	86,793	123,865	11,552	109,200	260,500	437,700	964,500	1,110,000	409,900	3,877,490
11.0 Cathodic Protection	228,739	270,989	182,929	298,574	193,681	198,638	201,500	201,500	270,800	306,400	315,700	326,600	2,996,050
12.0 Communications Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-
13.0 Information Technology	282,215	93,120	351,599	151,896	192,992	150,898	84,100	83,600	130,800	127,700	107,100	65,800	1,821,821
14.0 Infrastructure Investment													
SHARP II	(234,131)	1,369,633	423,500	6,375,932	4,045,250	4,297,321	3,045,597	1,824,401	2,370,278	2,208,998	1,984,403	2,051,700	29,762,882
AIRP II	7,892,082	7,516,563	6,650,978	5,971,331	5,212,988	6,509,977	3,944,590	4,457,132	4,626,867	3,990,193	2,346,488	523,476	59,642,665
Total Infrastructure Investment	7,657,951	8,886,196	7,074,479	12,347,263	9,258,238	10,807,298	6,990,187	6,281,533	6,997,145	6,199,191	4,330,891	2,575,176	89,405,546
TOTAL SJG Capex	**15,201,953**	**19,091,400**	**17,160,963**	**23,016,558**	**19,015,077**	**21,085,999**	**17,508,087**	**17,842,833**	**20,266,245**	**20,994,791**	**15,534,391**	**12,541,976**	**219,260,273**
Transfer from CWIP to UPIS	-	-	-	-	-	-	326,387	478,054	2,035,900	521,387	120,842	20,609,984	24,092,554
Total	**15,201,953**	**19,091,400**	**17,160,963**	**23,016,558**	**19,015,077**	**21,085,999**	**17,834,474**	**18,320,886**	**22,302,145**	**21,516,178**	**15,655,233**	**33,151,960**	**243,352,827**
Total Retirements	3,120,679	2,809,595	1,722,498	3,420,998	1,471,065	11,842,817	1,162,110	1,162,110	1,162,110	1,162,110	1,162,110	1,162,110	31,360,310
Total	**12,081,274**	**16,281,806**	**15,438,465**	**19,595,560**	**17,544,012**	**9,243,182**	**16,672,364**	**17,158,777**	**21,140,036**	**20,354,068**	**14,493,123**	**31,989,850**	**211,992,516**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENT TO JUNE 30, 2020 RATE BASE

		July Budget 2020	August Budget 2020	September Budget 2020	October Budget 2020	November Budget 2020	December Budget 2020	Total Post Test Year Budget 2020
	New Business							
1.0	Mains	1,350,300	1,355,900	1,579,600	1,522,000	1,477,900	1,256,200	8,541,900
1.1	Services	1,855,700	1,859,900	2,153,700	2,062,400	1,998,600	1,710,900	11,641,200
1.2	Meters	1,063,000	1,043,100	1,018,700	884,100	758,200	743,800	5,510,900
1.3	Regulators	246,700	246,700	246,700	246,700	246,700	275,700	1,509,200
	Total New Business	4,515,700	4,505,600	4,998,700	4,715,200	4,481,400	3,986,600	27,203,200
2.0	Improvement Mains	58,700	58,700	58,700	58,700	58,700	58,700	352,200
	Replacements							
3.0	Replacement Mains	1,302,900	1,309,600	1,309,600	1,309,600	1,309,600	678,100	7,219,400
3.1	Replacement Services	877,000	921,600	889,000	808,900	814,400	554,300	4,865,200
3.2	Leak Clamping	315,700	426,600	433,000	452,200	499,200	510,700	2,637,400
3.3	Replacement Meters	18,200	18,200	18,200	18,200	18,200	21,100	112,100
3.4	Replacement Regulators	866,800	866,800	866,800	866,800	866,800	866,800	5,200,800
	Total Replacements	3,380,600	3,542,800	3,516,600	3,455,700	3,508,200	2,631,000	20,034,900
4.0	Land & Buildings	-	50,300	50,000	-	-	-	100,300.0
5.0	Automotive Equipment	1,562,100	1,426,000	668,000	44,000	-	-	3,700,100
6.0	Production Equipment	8,400	2,400	2,400	1,300	200	-	14,700
7.0	Transmission Equipment	31,100	11,900	11,900	11,900	11,900	11,900	90,600
8.0	Distribution Equipment	26,300	26,300	26,300	26,400	26,400	27,000	158,700
9.0	Office Furniture & Equipment	25,100	50,000	-	-	-	-	75,100
10.0	Building Improvements	211,700	264,700	201,900	140,700	30,000	25,000	874,000
11.0	Cathodic Protection	326,600	326,600	326,600	274,900	246,700	234,900	1,736,300
12.0	Communications Equipment	-	-	-	-	-	-	-
13.0	Information Technology	80,400	27,200	23,000	23,000	23,100	22,300	199,000
14.0	Infrastructure Investment							
	SHARP II	-	-	-	-	-	-	-
	AIRP II	-	-	-	-	-	-	-
	Total Infrastructure Investment	-	-	-	-	-	-	-
	TOTAL SJG Capex	**10,226,700**	**10,292,500**	**9,884,100**	**8,751,800**	**8,386,600**	**6,997,400**	**54,539,100**
	Transfer from CWIP to UPIS	296,842	1,431	-	64,607	-	214,459	577,340
	Total	**10,523,542**	**10,293,931**	**9,884,100**	**8,816,407**	**8,386,600**	**7,211,859**	**55,116,440**
	Total Retirements	1,162,110	1,162,110	1,162,110	1,162,110	1,162,110	1,162,110	6,972,659
	Total	**9,361,433**	**9,131,821**	**8,721,990**	**7,654,297**	**7,224,490**	**6,049,749**	**48,143,781**

Schedule BWS-4
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SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO DECEMBER 31, 2020
MAJOR CAPITAL PROJECTS

Line No.	Project Name	Type of Project	Actuals as of Dec-19	Test Year Projection	Post-Test Year Projection	Total Projection	Projected In Service Date
1	New Sentury Compression Project	Transmission Equipment	$ 19,638,938	$ 12,624,100	$ 29,236,962	$ 61,500,000	December 2020
2	24 New Sentury Traffic Study HDD	Replacement Mains	$ -	$ 122,400	$ 1,365,800	$ 1,488,200	December 2020
3	8 Ocean Heights Offset	Improvement Mains	$ -	$ 451,700	$ 435,800	$ 887,500	November 2020
4	Wheaton & K Reg Station Replacement	Transmission Equipment	$ -	$ 146,200	$ 505,800	$ 652,000	September 2020
5	Farm Tap Encapsulations 2020	Transmission Equipment	$ -	$ 105,900	$ 517,200	$ 623,100	December 2020
6	Stokes Road Station Replacement	Transmission Equipment	$ -	$ 32,100	$ 451,900	$ 484,000	October 2020
7	Upgrade LNG SCADA	Production Equipment/IT	$ -	$ 174,000	$ 225,900	$ 399,900	October 2020
8	Timothy Lane Reg Station Replacement	Transmission Equipment	$ -	$ 329,200	$ 51,100	$ 380,300	July 2020
9	Above Grade Station Asbuilt Program	Transmission Equipment	$ -	$ 164,700	$ 168,300	$ 333,000	December 2020
10	Gate Station Odorization	Transmission Equipment	$ -	$ 25,700	$ 301,200	$ 326,900	November 2020
11	Renovation of Folsom Office Facility	Building Improvements	$ 4,696,907	$ 9,046,193	$ 5,356,900	$ 19,100,000	July 2020
12	Maximo & CC&B Upgrade	Information Technology	$ 2,749,602	$ 5,535,400	$ 1,535,700	$ 9,820,702	August 2020
13	SJG Contact Center Modernization	Information Technology	$ 1,812,815	$ 557,600	$ 385,400	$ 2,755,815	December 2020
14	ServiceNow Enhancement (ITSM, ITBM)	Information Technology	$ -	$ 305,900	$ 312,700	$ 618,600	December 2020
15	SCADA Intrusion Prevention System (IPS) Upgrade	Information Technology	$ -	$ 201,700	$ 406,800	$ 608,500	October 2020
16	Role-Based Access Control	Information Technology	$ 442,586	$ 62,200	$ 17,400	$ 522,186	August 2020
17	Safety Management Solution	Information Technology	$ 156,304	$ 65,800	$ 202,200	$ 424,304	August 2020
18	Cyber Risk Remediation	Information Technology	$ 64,106	$ 84,300	$ 118,100	$ 266,506	October 2020
19	NextGen Portal	Information Technology	$ -	$ 55,200	$ 112,200	$ 167,400	December 2020
20	Windows/SQL 2008 Upgrades	Information Technology	$ 91,547	$ 98,100	$ 16,800	$ 206,447	August 2020
21	Customer Meter Set #3 Replacement	Replacement Meters	$ -	$ -	$ 161,700	$ 161,700	September 2020
22	**Total Post Test Year Major Capital Projects**		**$ 29,652,805**	**$ 30,188,393**	**$ 41,885,862**	**$ 101,727,060**	

INSERT TAB:

L. BRINSON

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20_______

DIRECT TESTIMONY

OF

LEONARD BRINSON JR.
Vice President and Chief Information Officer
South Jersey Industries, Inc.

On Behalf of
South Jersey Gas Company

Exhibit P-5

March 13, 2020

TABLE OF CONTENTS

Exhibit P-5

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
LEONARD BRINSON JR.

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Leonard Brinson Jr. My business address is 1001 South Grand Street, Hammonton, New Jersey 08037.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by South Jersey Industries, Inc. ("SJI") as Vice President and Chief Information Officer.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL RESPONSIBILITIES.

A. I provide strategic vision and advise executive management on the use of technology to meet strategic business goals. I am accountable for the management of the Information Technology ("IT") department, projects, initiatives, systems and assets. I oversee the critical area of cybersecurity and actively engage in the coordination and development of relationships with third party service providers.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND INDUSTRY RELATED EXPERIENCE.

A. I graduated from Millikin University in 1979 with a Bachelor of the Arts in Political Science and later earned an Executive M.B.A. from Jacksonville University. After graduating from Millikin University, I worked at Prudential Financial Florida and New Jersey from 1980 until 2004, where I held a number of positions including Director, Information Systems, Enterprise Tax Systems and Manager, Technology Services, Output Services and LAN Administration. After Prudential, I worked at Enterprise Technology Partners, LLC from 2004 to 2005, serving as Client Relationship Director. In 2005, I joined

Williams Companies, where I held a number of management positions, including Transformation Manager; Manager, Planning & Governance; Manager, IT Operations; and Manager, Information Management. From 2013 to 2017, I worked at Axalta Coating Systems where I held several Director roles, including Global IT Director, Corporate Applications & Reporting; Global IT Director, Global Applications; and Global IT Director, Office of the CIO. I joined SJI in my current position in April 2017.

Q. HAVE YOU PREVIOUSLY TESTIFIED OR SUBMITTED PREPARED TESTIMONY IN ANY PROCEEDING BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES OR ANY OTHER REGULATORY AGENCY?

A. Yes. I previously submitted testimony on behalf of Elizabethtown Gas Company ("Elizabethtown") in its most recent base rate case in BPU Docket No. GR19040486.

II. <u>PURPOSE OF TESTIMONY</u>

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to support the IT investments that South Jersey Gas Company ("South Jersey," "SJG," or the "Company") has included for recovery in the base rates proposed in this proceeding. To this end, I will explain the IT investments projected to be placed in service during the test year ended June 30, 2020 and prior to December 31, 2020, the end of the post-test year period, and why these investments are needed to support the operations of South Jersey and ensure that the systems enable the Company to comply with all applicable regulatory requirements and continue to provide high quality service to customers.

Q. PLEASE DESCRIBE THE ORGANIZATIONAL STRUCTURE OF THE SJI IT DEPARTMENT AND ITS AREAS OF RESPONSIBILITY.

A. The IT Department is housed within SJI and provides technology services to all companies within the SJI organization, including South Jersey, with an emphasis on the customer experience, utility operations and enterprise service systems. The IT Department oversees system applications and has responsibility for all devices, including personal computers, laptops and mobile devices, as well as all infrastructure, including all networks, layered security devices, communications devices, and physical and virtual servers. The IT Department is responsible for the following five functional areas:

(i) **<u>Plan Function</u>**, which consists of four major components: (1) development and management of the SJI IT budget; (2) management of the SJI IT portfolio, including responsibility for prioritizing IT projects and helping to ensure that they remain within the agreed upon scope, budget and timeline; (3) management of SJI's IT-related vendor relationships, including the negotiation of contracts and monitoring vendor performance; and (4) IT-related Sarbanes Oxley ("SOX") and other internal and external IT-related compliance;

(ii) **<u>Build Function</u>**, which involves the development of new applications as well as enhancements to existing applications, providing new functionality to the organization;

(iii) **<u>Run Function</u>**, which involves the delivery of IT services in three major areas, including (1) infrastructure, including the network and software that provides the foundation on which all IT services are built; (2) applications, which deploy and support IT applications that provide automation and consistency to IT-enabled SJI business processes; and (3) service, which provides first and second tier IT support to business users;

(iv) **Protect Function**, which involves maintaining information security and cybersecurity across the entire SJI enterprise; and

(v) **Report Function**, which involves ensuring the integrity and security of all data assets, data systems, business intelligence, and data-related processes.

III. DISCUSSION OF IT INVESTMENTS

Q. PLEASE DESCRIBE EACH OF THE SIGNIFICANT IT SYSTEMS THAT SOUTH JERSEY IS PLANNING TO PLACE IN SERVICE DURING THE TEST YEAR AND POST TEST YEAR PERIOD OF THIS CASE AND EXPLAIN WHAT THOSE SYSTEMS ARE OR WILL BE USED FOR.

A. The following major systems were already placed in service, or are projected to be placed in service, during the test year and/or post-test year periods:

(i) **IBM Maximo & Oracle Customer Care and Billing ("CC&B") Upgrade:** This project includes an upgrade to South Jersey's Oracle CC&B and IBM Maximo operating systems, along with a reconfiguration and upgrade of associated middleware. These upgrades to the latest versions of Maximo and CC&B are needed to continue to receive support from IBM and Oracle insofar as these vendors will not be providing support for older versions of these products in the near future. Investments to upgrade SJG's Maximo and CC&B systems are also needed to align systems and standardize business practices across SJI's gas utilities.

IBM Maximo is an asset management system that provides a single point of control over all of SJG's physical assets, allowing the Company to share and enforce uniform management practices, inventory, resources and personnel, and serving as the field work management system for SJG.

Oracle CC&B is the main customer support system that provides customer support in the SJG call center(s). CC&B is a complete billing and customer care application. CC&B handles every aspect of the customer life cycle, from establishing new customers, meter reading, billing, rates, payment processing, collections, and creating field work.

Middleware is the critical middle layer between applications and databases that enables a seamless flow of data/information across applications. For example, when CC&B captures a customer complaint of a gas leak, that data is sent to Maximo to create a work order and interface with the Oracle dispatch tool to schedule an appointment with a technician. Middleware ensures that the CC&B complaint data flows through this process. The IBM Maximo and Oracle CC&B Upgrade is projected to be placed in-service in August 2020.

(ii) **South Jersey Contact Center Modernization:** SJG's Contact Center currently uses a Cisco platform, which is widely considered by industry experts as the leading technology platform for the Contact Center. The Cisco platform requires modernization to upgrade the core platform, expand features and functionality, improve the customer experience, and enhance the platform's resiliency. SJI employed a Request For Proposal process to determine much of the work to be completed in 2020. This is a two-phase project. Phase 1 of the project includes upgrades to existing technologies, including Core telephony (Cisco), Workforce Management (Calabrio), Agent Call Recording (Calabrio), Customer Callback, Text to Speech (Nuance), the interactive voice response ("IVR") menu, as well as the addition of new capabilities, including Agent Screen Recording (Calabrio), Extension Mobility (i.e., the ability to move employees' telephone extensions to new locations, which was needed to support the transition to the Company's Atlantic City office) and network infrastructure to support the CustomerLink outsourced call center. Phase 1 was completed and investments were put in service prior to the test year. Phase 2 includes implementation of an Outbound Dialer system, a complete redesign of the Company's IVR system, implementation of an intelligent email management system, and a credit and address validation solution. The investments related to the Outbound Dialer System were placed in service in February 2020, during the test year. The remaining investments in Phase 2 are projected to be placed in service during the post test year, with all investments projected to be placed in service by December 2020.

(iii) **<u>ServiceNow Enhancement:</u>** SJG has been on the ServiceNow Platform since 2018 for change and incident management. This platform has streamlined processes and has created more agile IT for these purposes but needs to be enhanced to include configuration management to improve impact analysis of IT changes and deliver the effective scale and scope of changes to the SJG IT environment. This project consists of an ongoing, multi-phase effort to build

South Jersey's IT Service Management ("ITSM") capabilities in the ServiceNow application. The project is currently in Phase 4, which includes Application Mapping, Orchestration, and Asset Management. Phase 5 will continue to build-out the ServiceNow platform capabilities, and will include an assessment workshop to plan future investments, Application Mapping, configuration management database, and IT business management initiatives. Phases 4 and 5 are projected to be completed by December 2020.

(iv) **<u>Supervisory Control and Data Acquisition ("SCADA") Intrusion Prevention System:</u>** This system is an upgrade and enhancement of South Jersey's Intrusion Prevention System to address cyber security risks to the system and facilitate compliance with the cybersecurity requirements set forth in the Board's March 18, 2016 Order in Docket No. AO16030196 ("Cyber Order"). Phase 1 of the project will be placed in service during the test year and includes an upgrade to the legacy Intrusion Protection System with a NextGen security system that supports Unified Threat Management. Phase 2 of the project is projected to be placed in service in October 2020, during the post-test year period, and includes implementation of industrial cybersecurity software that identifies SCADA network assets, pinpoints malicious activity, and provides step-by-step guidance to investigate and respond to incidents. SJG is currently evaluating the specific tool sets to be used for this implementation. In making this decision, the Company will leverage a similar approach employed in the selection of its other security systems, including documenting requirements, discussions with peers within and outside the utility industry and leveraging SJI's relationship with Gartner, Inc. ("Gartner"), an industry leader in IT service management.

(v) **Role-Based Access Control:** This project will improve South Jersey's overall Identity and Access Management ("IAM") program and starts to set the foundational components to mature the program. The work included in this project is an IAM roadmap and blueprint, implementation of a privileged access management solution, build-out of a Single Sign-On ("SSO") solution, and expansion of the current Multi-Factor Authentication ("MFA"). This is an ongoing, multi-phased project that began prior to the test year and continues through the test year and post-test year period. The projected in-service date for this project is August 2020. The initial roadmap assessment for this project provided areas of focus for SJI to start with regarding Identity and Access Management. Privileged Access Management ("PAM") and expansion of our SSO and MFA solution were key risk areas that provide the foundation for these investments. For PAM, the SJI IT team narrowed down the selection to two leading providers, and had discussions with peers within and outside the utility industry, including Gartner, to help select a PAM solution. For SSO and MFA, SJI IT leveraged its existing solution and expanded the implementation to protect additional applications.

(vi) **Safety Management Solution:** The Company will implement a Safety Management Solution through a SharePoint add in called HSEQ Innovate. This application will provide automation to the manual reporting and tracking processes currently used by the Safety Department. Phase I of the project includes the definition, configuration, integration, and testing of the new application, as well as work to implement the application on SJG's system. This work is projected to be completed in the test year, in June 2020. Phase II of the project includes the integration of the application with Salesforce and Workday applications in 2020. In developing this project, the SJI IT team assessed available software and tools specifically built for the entering/tracking/reporting of safety incident data to determine how best to improve the incident tracking. The Company ultimately decided that the HSEQ Innovate tool provided the best available solution. This tool is a SharePoint add-in that leverages SJI's existing SharePoint infrastructure, provides an industry standard and extensible solution, and improves the overall accuracy and timeliness of safety incident management and reporting. This project will begin during the test year and continue in the post-test year period, with a projected completion date of August 2020.

(vii) **<u>Upgrade Liquefied Natural Gas ("LNG") SCADA:</u>** This project will upgrade the hardware and software at the Company's LNG SCADA facility in McKee City to the latest versions. The LNG SCADA system at SJG is currently running on an older SCADA system software, legacy windows operating systems and aging server hardware. The SJI IT team determined that an upgrade to the existing system is needed to bring the system up to a level that is supported by our vendors. All hardware and software will be upgraded to the latest versions. This mitigates cyber security, support and operational risk. The upgraded hardware and software will align with that in place at SJI's other operating utilities and will simplify support and patching. This project is projected to be placed in-service in October 2020.

(viii) **<u>Cyber Risk Remediation:</u>** This project is a multi-year, multi-phase project designed to evaluate, monitor, mitigate, and resolve cyber risks to South Jersey and facilitate compliance with the Cyber Order. The Cyber Risk Remediation project includes investments during the test year and post-test year period, and has a projected in-service date of October 2020. This project will include penetration testing and vulnerability assessments and leveraging the results of these assessments to address critical areas discovered to address system and process vulnerabilities for the systems currently in place at SJG. This will allow the SJI IT team to continuously improve cybersecurity posture and maturity at SJG. The SJI IT team is currently evaluating the specific tool sets, consulting resources and/or systems required for this project and will leverage its experience in prior security system selections. This process includes documenting requirements, and discussions with peers within and outside the utility industry.

(ix) **<u>NextGen Portal:</u>** This project includes the installation of a Security Appliance onsite at SJI as part of a three-year engagement with Presidio, Inc. ("Presidio"). The appliance is required for information gathering, technical testing, and information sharing and will provide ongoing access for SJI to the results and reports of the various testing and assessment activities performed throughout the 3-year engagement so that SJI can leverage this data for additional insights. This will assist in measuring the cybersecurity maturity of the SJI cybersecurity program. The NextGen Portal project is projected to be placed in service during the post test year, in December 2020.

(x) **Windows/SQL 2008 Upgrades:** Microsoft ended support, including regular security updates and patching, for Windows Server 2008 and 2008r2 on January 14, 2020. South Jersey currently has 70 servers running applications that need to be migrated to 2016 servers or be decommissioned. As of February 2020, the Company had migrated or decommissioned 32 of these servers. The Company is currently evaluating the remaining servers for migration or decommissioning. The server upgrades are projected to be completed by August 2020.

The actual and forecast expenditures for each of these projects, as well as the projected in-service dates, are shown on Schedule BWS-4 to Company witness Brent W. Schomber's testimony.

Q. PLEASE DESCRIBE HOW THE SPECIFIC SYSTEMS TO BE INSTALLED FOR SOUTH JERSEY WERE SELECTED.

A. In assessing its options for each of these projects, South Jersey used a competitive bidding process with multiple vendors to allow the Company to find the most cost-efficient solution to its IT needs. The Company determined that each of the systems being implemented best addressed the Company's particular needs in a cost-efficient manner.

Q. WILL THE NEW SYSTEMS BEING DEVELOPED FOR SOUTH JERSEY HAVE GREATER FUNCTIONALITY OR CAPABILITIES THAN THE CURRENT SYSTEMS USED BY THE COMPANY?

A. Yes, South Jersey will benefit from increased functionality or capabilities from many of its new or enhanced systems. For example, the current SJG versions of the IBM Maximo and Oracle CC&B systems were implemented in 2014 and are nearing the end of their useful lives and will no longer be supported by the vendor. Enhancements available with the latest versions will increase productivity across the 400 Maximo and 250 CC&B users, and also reduce support and maintenance costs.

The Contact Center Modernization efforts also include multiple new and enhanced capabilities. An automated system for contacting delinquent customers will be implemented, which is intended to improve collections department efficiencies. In addition, a redesigned IVR system and automated email management solution will be implemented. The IVR and email management solutions are intended to help speed response to customer inquiries, enhance the customer experience and improve contact center efficiencies.

Q. HOW WILL THIS GREATER FUNCTIONALITY BENEFIT CUSTOMERS?

A. Customers will benefit from the greater functionality of these new and enhanced systems in many ways. For example, the overall objective of the Contact Center Modernization initiatives is to improve the speed and quality of service provided to our customers. The Contact Center Modernization will further benefit customers by improving “self-service” capabilities, enabling customers to more quickly and efficiently access their desired information, reducing wait times for customers seeking access to a customer service representative, and providing more accurate and timely responses to customer email inquiries. In addition, the automated system for contacting delinquent customers will ensure customers are promptly notified and have clear and accurate information regarding resolution of issues associated with their accounts.

Additionally, several of the Company's IT investments, including SCADA Intrusion Prevention System, Role-Based Access Control, Cyber Risk Remediation, and NextGen Cyber Risk Management Portal projects, will enhance the Company's cybersecurity capabilities, resulting in greater protection of confidential customer information, enhanced integrity and reliability of the Company's system, data, and customer services.

Q. WILL THE NEW SYSTEMS CREATE ANY OPPORTUNITIES FOR EFFICIENCIES FOR SOUTH JERSEY?

A. The new systems may create opportunities for efficiencies at South Jersey. The Maximo and CC&B system in place at SJG is outdated and is an older model than was implemented at its affiliate, Elizabethtown. As such, these updates will allow SJI to better align systems and standardize the business across the family of SJI companies. Further, as the versions of Maximo and CC&B currently in place at South Jersey are no longer supported by their respective vendors, the upgrades will allow the Company to continue to obtain technical vendor support, rather than seeking or developing customized support solutions.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

INSERT TAB:

B. O'BRIEN

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20__________

DIRECT TESTIMONY

OF

BRENDA J. O'BRIEN

Vice President, Accounting

On Behalf Of
South Jersey Gas Company

Exhibit P-6

March 13, 2020

TABLE OF CONTENTS

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
BRENDA J. O'BRIEN

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Brenda J. O'Brien. My business address is 1001 South Grand Street, Hammonton, New Jersey 08037.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by South Jersey Industries, Inc. ("SJI") as Vice President, Accounting.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL RESPONSIBILITIES.

A. I oversee the Accounting, Tax, and Payroll functions of SJI and its subsidiaries. In this position, I am responsible for providing leadership and strategic direction for the South Jersey Gas Company's ("South Jersey" or the "Company") accounting, financial systems, and public reporting activities. My responsibilities include, but are not limited to, the implementation of appropriate accounting policies, practices, and procedures; review of monthly and quarterly financial closing packages; maintenance and oversight of upgrades to fixed asset and general ledger accounting systems; assurance of adequate internal control structure for SJI's financial records; compliance with timely external reporting with the Securities and Exchange Commission (Form 10-K and 10-Q); and preparation of internal reports to Board of Directors and Senior Management.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND INDUSTRY-RELATED EXPERIENCE.

A. I graduated with Highest Honors from the University of Pittsburgh in 2006 with a Bachelor of Science in Business Administration Degree, majoring in Accounting and Finance. I am a Certified Public Accountant, holding an active license from the State of Pennsylvania. In

2018, I earned a Master's in Business Administration Degree with a concentration in Finance from Temple University. I am a member of the American Institute of Certified Public Accountants and serve on the Virtua Health Foundation Board of Trustees.

Upon completion of my undergraduate degree, I worked for the Big Four public accounting firm of Deloitte, LLP from 2006 to 2012. During that time, I provided audit services to a variety of clients, including SJI. In July 2012, I joined SJI as the Corporate Finance Manager and have since held several finance-related roles in Risk Management, Financial Planning and Analysis, and most recently Accounting. In June 2019, I was promoted to Vice President, Accounting.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my direct testimony is to support South Jersey's base rate filing with the New Jersey Board of Public Utilities ("BPU" or "Board"). I will discuss South Jersey's proposals to reflect and recover certain regulatory assets in the revenue requirement in this proceeding. These regulatory assets are associated with pension and other post-employment benefits ("OPEB") costs, an Early Retirement Incentive Plan ("ERIP") offered by the Company in 2018 and costs associated with the cancellation of a pipeline project that was intended to provide service to an electric generation facility referred to as BL England. I will also discuss certain elements of the revenue requirement including the calculation of depreciation expense, the interest synchronization adjustment, the determination of the amounts of accumulated depreciation and accumulated deferred Federal and State Income Taxes included in rate base and the recovery of costs associated with the Company's Folsom New Jersey office building. I will also sponsor various financial and accounting data required by the Board's regulations as set forth in Section 14:1-5.12 of the New Jersey Administrative Code ("NJAC"). The information required by the Board's regulations consists of balance sheets, income statements and other financial data.

Q. DO YOU SPONSOR ANY SCHEDULES IN YOUR DIRECT TESTIMONY?

A. Yes. I am sponsoring the following schedules which were prepared or compiled under my direction and supervision:

- Schedule BJO-1 – South Jersey's Balance Sheet for twelve months ended December 31, 2017, 2018 and 2019;
- Schedule BJO-2 – South Jersey's Statements of Income for the twelve months ended December 31, 2017, 2018 and 2019;
- Schedule BJO-3 – South Jersey's Statement of Gas Operating Revenues for the twelve months ended December 31, 2019;
- Schedule BJO-4 – South Jersey's Payments and Accruals to Affiliates for the twelve months ended December 31, 2019;
- Schedule BJO-5 – *Pro Forma* Depreciation Expense & Accumulated Depreciation;
- Schedule BJO-6 – *Pro Forma* Non-Legal Asset Retirement Obligation;
- Schedule BJO-7 – Adjusted Deferred FIT Included in Rate Base;
- Schedule BJO-8 – Adjusted Deferred CBT Included in Rate Base;
- Schedule BJO-9 – Interest Synchronization Adjustment;
- Schedule BJO-10 – *Pro Forma* Revenue and O&M Expense – Folsom Facility;
- Schedule BJO-11 – *Pro Forma* Pension and Retirement Benefit Expense;

- Schedule BJO-12 – ERIP Costs; and
- Schedule BJO-13 – BL England Costs.

III. FILING REQUIREMENTS UNDER NJAC

Q. PLEASE DESCRIBE SCHEDULES BJO-1 THROUGH BJO-4.

A. Schedule BJO-1 through BJO-4 present statements and financial data required by the Board's regulations. Schedules BJO-1 and BJO-2 provide historical comparative balance sheets and income statements, respectively, for South Jersey Gas, for the twelve months ended December 31, 2017, 2018 and 2019. Schedule BJO-3 provides South Jersey's statement of gas operating revenues for the twelve months ended December 31, 2019 and Schedule BJO-4 provides South Jersey's payments and accruals to affiliates for the twelve months ended December 31, 2019.

IV. DEPRECIATION ADJUSTMENTS

Q. PLEASE EXPLAIN THE COMPANY'S CALCULATION OF DEPRECIATION EXPENSE AND ACCUMULATED DEPRECIATION.

A. Schedule BJO-5 is a summary of *pro forma* adjustments to depreciation expense and accumulated depreciation. These adjustments are reflected on line 9 on Schedule SMG-3 (Operating Income Statement) and on line 2 on Schedule SMG-2 (Statement of Rate Base), to the Direct Testimony of Company witness Stefany Graham.

The first adjustment on Schedule BJO-5 is the annualization of depreciation expense utilizing the Company's proposed depreciation rates, as discussed in the Direct Testimony of Dane Watson. The resulting adjustment totaling $3,107,510 (Schedule BJO-

5, line 7) is based upon projected depreciable plant as of the test year ending June 30, 2020. This adjustment is necessary to reflect the proper annual level of depreciation expense as of the end of the test year.

The second adjustment reflects additional annual depreciation expense associated with projected post-test year net plant additions of $149,870,840 from July 2020 through December 2020, as discussed in the Direct Testimonies of Company witnesses Brent W. Schomber, Leonard Brinson and Stefany Graham. The resulting increase in depreciation expense related to post test year plant is $5,759,758 (line 9).

Also included in Schedule BJO-5 is the impact of the additional post-test year depreciation expense, retirements, and cost of removal on the Company's provision for Accumulated Depreciation. The total adjustments result in a $30,337,349 increase in the provision for Accumulated Depreciation, which is included in line 2 of Schedule SMG-2 (Statement of Rate Base) to Ms. Graham's testimony.

Q. PLEASE EXPLAIN THE COMPANY'S ADJUSTMENT FOR THE NON-LEGAL ASSET RETIREMENT OBLIGATION.

A. Under the Board-approved stipulation that resolved the Company's previous base rate case in BPU Docket No. GR17010071, the parties agreed that SJG would record an annual negative net salvage allowance of $4,659,755 and that the Company would be made whole for its actual cost of removal. In addition, the parties agreed that a regulatory liability for net salvage owed to customers of $24,137,762 would be recorded on SJG's books and that current rates would reflect an annual credit to amortize this liability to customers over 33 and 1/12th years at a rate of $729,605. In addition, it was agreed that the Company would continue to reduce the regulatory liability by the amount by which SJG's actual annual net salvage expense exceeded the annual net salvage amount of $4,659,755.

As shown on Schedule BJO-6, net salvage amounts incurred since the conclusion of the Company 2017 base rate case have exceeded the annual net salvage allowance provided in rates in that case. As such, the current non-legal ARO amortization must be adjusted again to further incorporate the projected shortfall of $8,209,842 from the time of the last base rate case through June 30, 2020. Because there will be 30 1/6 years remaining of the initial 40-year amortization period at the end of the test period, the annual reduction in the depreciation credit is $271,960 (Schedule BJO-6, line 14), which reduces the annual amount being returned to customers from $729,605 to $457,645.

Q. PLEASE EXPLAIN THE COMPANY'S NET SALVAGE ADJUSTMENT.

A. The Company proposes an increase in its annual provision for negative salvage to $7,251,586 to reflect the average of three consecutive years of expenditures for negative salvage projected through June 30, 2020, which more accurately reflects the level of net salvage currently being incurred primarily as a result of the Company's accelerated infrastructure programs. This adjustment is described more fully in the testimony of Dane Watson.

Q. DOES THE COMPANY PROPOSE TO CONTINUE THE RATEMAKING/REGULATORY TREATMENT OF NET SALVAGE AGREED TO IN THE COMPANY'S PREVIOUS BASE RATE CASE?

A. Yes. The Company proposes that the updated regulatory liability of $13,805,618 should be amortized over 30 1/6 years at an annual rate of $457,645. The Company further proposes that to the extent that actual net salvage incurred exceeds the annual net salvage of $7,251,586 established in this proceeding, the Company would credit the difference to the regulatory liability balance.

V. FEDERAL AND STATE DEFERRED INCOME TAXES

Q. PLEASE EXPLAIN THE COMPANY'S CALCULATION OF FEDERAL AND STATE DEFERRED INCOME TAXES AS SET FORTH ON SCHEDULES BJO-7 AND BJO-8.

A. The calculation of deferred Federal and State Income Taxes used to reduce rate base reflects the normalization of timing differences between book and tax accounting. The deferred taxes are the accumulation of vintage years' net timing differences calculated at the statutory tax rates. Federal and State Deferred Taxes included in rate base for the adjusted test year ending June 30, 2020 are ($272,156,872) and ($94,703,238), respectively. Federal and State Deferred Taxes included in rate base for the adjusted post-test year ended December 31, 2020 are ($295,566,289) and ($96,920,739), respectively. The derivation of these amounts is shown in Schedules BJO-7 and BJO-8. The deferred income taxes included in rate base also reflect a reduction for excess deferred income taxes as described by Company witness Alan Felsenthal. The total from each of these schedules is included in Schedule SMG-2 to Ms. Graham's testimony.

VI. INTEREST SYNCHRONIZATION

Q. PLEASE EXPLAIN THE COMPANY'S INTEREST SYNCHRONIZATION ADJUSTMENT AS SET FORTH ON SCHEDULE BJO-9.

A. Schedule BJO-9 sets forth the calculation of the *pro forma* adjustment to income tax expense related to interest expense synchronization. The interest expense synchronization adjustment is based on the tax effect of the difference in projected annualized interest expense and test year interest expense. The annualized interest expense is calculated on the projected rate base shown on Schedule SMG-2 to Ms. Graham's testimony, multiplied by the total weighted cost of long-term debt of 1.71%, as set forth in the Direct Testimony of Robert Hevert. This adjustment is necessary to synchronize the Federal income tax associated with interest expense in the test year with the projected tax expense based on an interest calculation using the weighted average cost of debt in the capital structure utilized to support Rate Base. The resulting $408,994 adjustment is an increase to Federal Income Taxes included on Schedule SMG-3, Line 15 to Ms. Graham's testimony.

VII. FOLSOM OFFICE COSTS

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSAL TO RECOVER COSTS ASSOCIATED WITH ITS OFFICE LOCATED IN FOLSOM, NEW JERSEY.

A. The Company has owned the Folsom, New Jersey office building for many years. As described by Company witness Schomber, the Folsom office is currently undergoing a substantial renovation that is projected to be completed in July 2020. Once the renovation is complete, the office will be used by SJI to house various administrative functions that are provided to South Jersey and its utility and non-utility operating affiliates.

Q. WHAT COSTS DOES SJG EXPECT TO INCUR IN CONNECTION WITH THE OPERATION AND MAINTENANCE OF THE FOLSOM OFFICE BUILDING?

A. In addition to the capital costs associated with the Folsom office, which are included in rate base, SJG projects that it will incur $640,000 of annual operation and maintenance expenses for the Folsom office. This amount compared to the projected test year expense of $236,981 results in a pro forma increase of $403,019, as shown on Schedule BJO-12.

Q. WILL SJI COMPENSATE SOUTH JERSEY FOR THE USE OF THE FOLSOM OFFICE?

A. Yes. SJI will pay market-based rent to South Jersey for the use of the facility. Because the Folsom office was being renovated in the first six months of the test year, it is necessary to make a normalization adjustment to SJG's revenue requirement to reflect the full annual rental income that is projected to be received by SJG as set forth on Schedule BJO-10. This adjustment must, in turn, account for the fact that a portion of the rental income – approximately 58 percent – will be assessed to South Jersey by SJI for the administrative services provided to South Jersey by SJI. The net adjustment of $634,148, as set forth on Schedule BJO-10, was determined by applying the cost assignment and allocation procedures followed by SJI under its cost allocation methodology.

Q. PLEASE SUMMARIZE THE OPERATING AND MAINTENANCE ADJUSTMENTS ASSOCIATED WITH THE FOLSOM OFFICE THAT ARE REFLECTED IN SJG'S REVENUE REQUIREMENT IN THIS PROCEEDING.

A. As set forth on Schedule BJO-10, SJG proposes to modify the revenue requirement to reflect an annualized level of facilities costs of $640,000. This amount will be offset by the annual net rental income of $634,148 that SJG will receive from SJI once the renovation is complete, and the offices are reoccupied.

VIII. PENSION & POSTRETIREMENT BENEFIT EXPENSE

Q. PLEASE EXPLAIN THE COMPANY'S DEFERRED PENSION AND POSTRETIREMENT EXPENSE.

A. In the Company's previous rate case, the Board authorized the Company to defer incremental pension and postretirement healthcare expenses resulting from an Accounting Standards Update ("ASU") change effective December 15, 2017 that permitted the Company to capitalize only pension and postretirement benefit service costs. As of December 31, 2019, the Company deferred $3,461,196 costs associated with this ASU change. The Company projects a total deferral amount of $3,485,947 as of test year end June 30, 2020, as shown on Schedule BJO-11. The Company proposes to end the deferral as of June 30, 2020, the end of the Test Year. The Company further proposes a three-year amortization of these costs, as discussed in further detail by Company witness Graham.

In addition, the Company is proposing a *pro forma* adjustment of $49,503 to capture ongoing annual O&M expenses associated with pension and other post-retirement benefits. This is calculated based on the previously projected monthly deferred expense of $4,125 multiplied by 12 months, as shown on Schedule BJO-11, lines 22-24.

IX. EARLY RETIREMENT INCENTIVE PLAN ("ERIP")

Q. PLEASE DESCRIBE THE ERIP.

A. In 2018, SJI offered non-office management employees aged fifty-five years or older with twenty or more years of service an ERIP. The ERIP was also offered to officers aged fifty-five years or older with five or more years of service . To encourage employees to accept the early retirement, SJI offered employees lump sum severances and enhanced retirement benefits. Twenty-four SJG employees took advantage of the program. The ERIP caused South Jersey to incur one-time incremental costs of $5,073,202. At the same time, the ERIP produced annual savings for SJG of approximately $3.8 million that are fully reflected in the revenue requirement in this proceeding.

Q. WHAT IS THE COMPANY'S PROPOSAL WITH RESPECT TO ITS ERIP COSTS?

A. The Company proposes to amortize its ERIP costs over a three-year period. The Company is not proposing to include the unamortized balance of its ERIP costs in rate base or otherwise accrue carrying costs on that balance. The Company's proposal is supported by the fact that the annual savings of the ERIP outweigh the costs by approximately $6.3 million over the proposed three-year amortization period.

X. BL ENGLAND COSTS

Q. PLEASE DESCRIBE THE BL ENGLAND PROJECT.

A. As discussed by Company witness Schomber, the Company incurred costs in connection with the development of a pipeline project that would have enabled the Company to provide gas service to BL England's electric generation facility located in Upper Township, New Jersey. The project also would have significantly enhanced the reliability of the service provided by the Company to customers in Atlantic and Cape May Counties. As a result of the fact that BL England's owner no longer seeks to repower the electric generation facility, the project is no longer viable and must therefore be cancelled. The Company incurred approximately $10.1 million of costs to develop the project over the period 2012-2019.

Q. WHAT IS THE COMPANY'S PROPOSAL WITH RESPECT TO THESE COSTS?

A. The Company proposes to recover these costs in base rates by amortizing them over a 10-year period. The Company is not proposing to include the unamortized balance in rate base or otherwise accrue any carrying charges on the unamortized balance. The Company believes that its proposal is reasonable because the costs were prudently and reasonably incurred to serve customers and the decision to cancel the project was prudently and reasonably arrived at in response to the decision of regulators. The derivation of annual amortization is set forth on Schedule BJO-13.

XI. CONCLUSION

Q. CAN YOU BRIEFLY SUMMARIZE YOUR TESTIMONY?

A. The adjustments presented in this testimony should be adopted by the Board because they are prudent and reasonable. The test year information detailed herein is based upon six months' actual and six months' estimated data. It is the Company's intention to update the test year information and adjustments thereto on a regular basis throughout this proceeding, ending with a 12 month actual test year.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

South Jersey Gas
Balance Sheet
As of December 31, 2017, 2018 & 2019

	Period Ending 12/31/2019	Period Ending 12/31/2018	Period Ending 12/31/2017
	--------------	--------------	--------------
PROPERTY, PLANT & EQUIPMENT			
Utility Plant, original cost	3,154,736,433	2,907,201,841	2,652,243,751
Accum Deprec & Amortization	(558,634,458)	(523,742,648)	(498,160,660)
Property, Plant & Equip, Net	2,596,101,975	2,383,459,193	2,154,083,091
INVESTMENTS			
Available for Sale Securities	-	-	-
Restricted Investments	4,073,274	1,277,520	2,912,307
Total Investments	4,073,274	1,277,520	2,912,307
CURRENT & ACCRUED ASSETS			
Cash & Temp Cash Invest	2,677,809	1,983,850	1,707,410
Notes Receivable	-	-	-
Accounts Receivable	84,940,436	101,572,319	78,571,342
Accts Rec - Unbilled Revenue	45,016,036	43,270,691	54,979,874
Provision for Uncollectibles	(14,031,681)	(13,643,418)	(13,799,186)
Accts Rec - Assc Companies	2,155,913	2,026,920	619,057
Accts Rec - Affiliated Company	177,158	415,153	368,516
Nat Gas in Storage, Avg Cost	14,838,685	16,335,702	14,931,910
Materials & Supplies, Avg Cost	618,809	619,103	825,341
Accum Deferred Income Taxes	-	-	-
Prepaid Taxes	19,547,377	28,772,390	38,325,997
Derivatives-Energy Assets	16,904,059	5,463,881	7,327,040
Other Prepaids & Current Asset	25,074,235	11,279,821	12,669,029
Total Current & Accr Assets	197,918,836	198,096,412	196,526,330
REGULATORY ASSETS:			
Environmental Remed-Expended	156,278,664	136,226,914	100,327,271
Environmental Remed-Liability	131,261,567	148,071,467	171,695,978
Income Taxes-Flowthru Deprec	-	-	-
Deferred ARO Costs	36,514,953	31,096,481	42,367,898
Deferred Fuel Costs-Net	49,469,130	57,889,372	16,838,270
Deferred Postretirement Ben	-	-	-
CIP AR	-	-	26,651,832
Societal Benefits Costs	1,478,218	2,172,822	2,483,709
Premium for Early Debt Retire	-	-	-
Regulatory Assets - ASC 715	72,010,301	80,120,779	78,211,237
Other Regulatory Assets	41,307,505	30,921,075	23,620,129
MTM Interest Rate Swap	7,856,483	5,867,241	7,027,934
Total	496,176,821	492,366,151	469,224,258
NON-CURRENT ASSETS:			
Accum Deferred Income Taxes	-	-	-
Prepaid Pension	-	-	-
Derivatives- Other			
Unamortized Debt Issue Costs	-	-	-
AR-Merchandise	30,958,205	25,530,774	25,851,024
Der - N/C Energy Related Asset	4,820	14,578	4,777
Other Non-Current Assets	23,322,087	17,490,613	17,372,036
Total Non-Current Assets	54,285,112	43,035,965	43,227,837
Total Assets	3,348,556,018	3,118,235,241	2,865,973,823

South Jersey Gas
Balance Sheet
As of December 31, 2017, 2018 & 2019

	Period Ending 12/31/2019	Period Ending 12/31/2018	Period Ending 12/31/2017
	--------------	--------------	--------------
COMMON EQUITY			
Common Stk $2.50 Par Value	5,847,848	5,847,848	5,847,848
Prem on Cap Stk & Misc PIC	355,743,634	355,743,634	355,743,634
Accumulated OCI	(27,874,952)	(22,357,456)	(25,997,099)
Retained Earnings	756,180,196	668,786,544	585,837,939
Total Common Equity	1,089,896,726	1,008,020,570	921,432,322
LONG TERM DEBT	547,161,406	874,506,699	758,052,261
CURRENT & ACCRUED LIABILITIES:			
Notes Payable to Banks	171,300,000	107,500,000	52,000,000
Current Maturities of LTD	417,909,000	18,909,000	63,809,000
AP-Commodity	17,361,226	48,490,361	43,340,551
AP-Other	60,797,299	52,965,815	41,365,222
Derivatives-Energy Liabilities	14,671,226	2,146,189	9,269,753
Derivatives-Other Current	488,486	343,448	388,641
Accts Payable to Assc Comp	9,483,317	12,316,997	16,789,281
A/P Affiliated Comp	268,454	246,157	239,782
Customer Deposits	22,430,497	23,862,105	41,655,614
Accum Deferred Income Taxes	-	-	-
Taxes Accrued	1,906,977	1,890,674	1,760,336
Pension & Postretirement Liability	3,692,583	3,597,406	2,353,228
Environmental Remediation Cost	29,568,566	33,022,266	66,039,705
Interest Accrued	6,789,203	7,133,776	7,615,079
Other Current Liabilities	12,489,765	9,442,853	7,026,915
Total Current & Accrued Liab	769,156,599	321,867,047	353,653,107
DEF CREDITS & NONCURRENT LIAB:			
Pension & Other Post-Retir Ben	99,981,498	96,052,825	88,870,396
Accum Deferred Income Taxes	357,637,363	325,886,195	280,746,262
Investment Tax Credit	-	-	-
Environmental Remediation Cost	101,693,000	115,049,200	105,656,272
Asset Retirement Obligations	96,508,618	79,889,890	58,714,348
Der-N/C Energy Related Liabil	94,844	43,274	170,177
Derivatives-LT	7,367,997	5,523,793	6,639,293
Other NonCurrent Liabilities	4,575,814	4,856,074	4,934,613
Total NonCurrent Liabilities	667,859,134	627,301,251	545,731,361
REGULATORY LIABILITIES:			
Deferred Revenues-Net	-	-	-
Excess Plant Removal Costs	16,333,134	20,805,321	23,295,482
Other Regulatory Liabiltiies	258,149,019	265,734,353	263,809,290
Total Regulatoy Liabilities	274,482,153	286,539,674	287,104,772
Total Capital & Liabilities	3,348,556,018	3,118,235,241	2,865,973,823

South Jersey Gas
Income Statement
For the Years ending 2017,2018,and 2019

	2019 YTD December 31, 2019	2018 YTD December 31, 2018	2017 YTD December 31, 2017
	--------------	--------------	--------------
OPERATING REVENUES	569,226	548,000	517,254
OPERATING EXPENSE			

Cost of Sales	211,344	209,649	204,432
Operation	108,638	112,920	98,992
Maintenance	30,899	28,742	19,727
Depreciation	65,965	59,755	53,887
Other Taxes	4,886	4,246	3,729
Total Operating Expense	421,732	415,312	380,767
OPERATING INCOME	147,494	132,688	136,487
OTHER INCOME & EXPENSE NET	4,376	4,685	6,475
INTEREST CHARGES			

Long Term Debt	32,238	30,251	27,436
Short Term Debt & Other	(584)	(2,240)	(2,731)
Total Interest Charges	31,654	28,011	24,705
Income Before Income Taxes	120,216	109,362	118,257
INCOME TAXES			

Current Fed & State Inc Taxes	12,929	(12,765)	-
Deferred Fed & State Inc Taxes	19,893	39,179	45,700
Total Income Taxes	32,822	26,414	45,700
Income from Continuing Ops	87,394	82,948	72,557

South Jersey Gas
Statement of Gas Operating Revenues
For the twelve months ended December 31, 2019

Operating Revenues:		2019
Firm Residential	$	347,225,691
Firm Commercial		76,295,734
Firm Industrial		3,838,976
Firm Cogen & Electric Gen		3,854,393
Firm Transportation - Residential		10,662,800
Firm Transportation - Commerical		37,936,897
Firm Transportation - Industrial		24,099,585
Firm Transportation - Cogen		6,137,602
Total Firm Operating Revenues		510,051,677
Deferred BGSS		0
CIP Revenue Deferred		(923,077)
All Other Deferred Accts		(758,226)
Total Deferred		(1,681,303)
Interruptible		63,263
Interruptible Transportation		1,222,989
Off-System		51,787,055
Capacity Release & Storage		6,550,137
Other		1,232,137
Total Non-Firm Operating Rev		60,855,581
TOTAL	$	569,225,956

South Jersey Gas Company
Payments and Accruals to Affiliated Companies
For the 12 months ending December 31, 2019

		2019
1	**Millennium Account Services (meter reading services)**	3,253,869
2	**South Jersey Industries, Inc. (corporate support)**	72,636,978
3	**South Jersey Energy Service Plus (heater conversion installations)**	N/A
4	**South Jersey Energy Service Plus (billing servcies remittances)**	N/A
5	**South Jersey Energy Company (billing service remittances)**	4,708,151
6	**SJI Services, LLC (administrative and professional**	N/A
7	**South Jersey Energy Solutions (accounting support)**	157,491
8	**South Jersey Resources Group, LLC (commodity purchases)**	9,612,674
9	**(a) South Jersey Industries, Inc. includes the following major pass-through items:**	
10	**Common Dividends**	-
11	**Federal Income Taxes**	-
12	**Pension Plan Contributions**	7,356,000
13	**Benefits**	2,813,891
14	**Subtotal of Major Pass-Through Items**	10,169,891

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
DEPRECIATION EXPENSE AND ACCUMULATED DEPRECIATION

Line No.		Utility Plant in Service	Depreciation Expense (Proposed Rates)	Schedule Reference
1	**Depreciation Expense:**			
2				
3	Utility Plant In Service as of June 30, 2020	$ 3,093,781,517	$ 70,011,010	
4				
5	Test Year Depreciation Expense		$ 66,903,500	SMG-3
6				
7	Pro Forma Depreciation Expense Annualization Adjustment		$ 3,107,510	
8				
9	Post Test Year Depreciation Expense Annualization Adjustment	$ 149,870,840	$ 5,759,758	
10				
11	Adjustment due to Increase in Proposed Annual Net Negative Salvage Allowance		$ 2,591,831	BJO-6
12				
13	Adjustment due to Decrease in Non-Legal Asset Retirement Obligation (ARO) Credit		$ 271,960	BJO-6
14				
15	**Total Pro Forma Adjustment to Depreciation Expense (Income Statement)**	**$ 3,243,652,358**	**$ 11,731,060**	
16				
17				
18	**Accumulated Depreciation:**			
19				
20	Accumulated Depreciation as of June 2020		$ (567,972,209)	SMG-2
21				
22	Post Test Year Depreciation on UPIS as of June 30, 2020 (Jul 20 -Dec 20)		$ (35,005,505)	Line 3 / 2
23				
24	Post Test Year Depreciation on PTY Plant (Jul 20 -Dec 20)		$ (2,879,879)	Line 7 / 2
25				
26	Post Test Year Retirements (Jul 20 -Dec 20)		$ 6,972,659	BWS-1
27				
28	Post Test Year Net Salvage (Jul 20 -Dec 20)		$ 4,201,169	BJO-6
29				
30	Post Test Year Net Salvage Allowance (Jul 20 -Dec 20)		$ (3,625,793)	BJO-6
31				
32	**Accumulated Depreciation as of Dec 31, 2020 (Rate Base)**		**$ (598,309,558)**	

SOUTH JERSEY GAS COMPANY
NON-LEGAL ASSET RETIREMENT OBLIGATION (ARO) AMORTIZATION

Line No.			(a) Start Reserve	(b) COR Amort.	(c) Net Salvage Allowance	(d) Net Salvage Incurred		(e) End Reserve
1	Jul-17	$	24,657,876	(88,344)	199,181	(613,270)		24,155,442
2	Aug-17	$	24,155,442	(88,344)	199,181	(128,516)		24,137,762
3	Sep-17	$	24,137,762	(88,344)	177,936	(758,741)	$	23,468,612
4	Oct-17	$	23,468,612	(88,344)	199,181	(453,737)	$	23,125,712
5	Nov-17	$	23,125,712	(60,800)	388,313	(208,184)	$	23,245,040
6	Dec-17	$	23,245,040	(60,800)	388,313	(277,070)	$	23,295,482
7	2018	$	23,295,482	(729,605)	4,659,755	(6,420,311)	$	20,805,321
8	2019	$	20,805,321	(729,605)	4,659,755	(8,402,337)	$	16,333,134
9	Jan to June 2020	$	16,333,134	(364,803)	2,329,878	(4,492,592)	$	13,805,618

New Shortfall (net col's c & d)	**(8,209,842)**

Line No.	Description		Amount
10	Projected Balance Available to be Returned to Customer as of June 30, 2020	$	13,805,618
11	Number of Years Remaining from the Original 40-Year Amortization Period		30 1/6
12	Projected Annual Amortization of Regulatory Liability	$	457,645
13	Current Annual Amortization of Regulatory Liability included in Rates (BPU Docket No. GR17010071)	$	729,605
14	**Proposed Decrease in Annual Amortization of Regulatory Liability**	**$**	**(271,960)**
15	Proposed Provision for Annual Net Negative Salvage (3-year average)	$	7,251,586
16	Current Provision for Annual Net Negative Salvage	$	4,659,755
17	**Proposed Change in Annual Net Negative Salvage**	**$**	**2,591,831**

SOUTH JERSEY GAS COMPANY
CALCULATION OF ADJUSTED TEST YEAR
DEFERRED FEDERAL INCOME TAX (DFIT) INCLUDED IN RATE BASE

Line No.		POST TEST YEAR ADDITIONS	ADDED TAX DEPRECIATION	DFIT IN RATE BASE
1	Projected DFIT Rate Base Balance 6/30/20			(272,156,872)
2				
3	Normalization on 6/30/20 Plant (PTY 7/20-12/20):			
4				
5	Book Depreciation	33,299,700		
6				
7	Tax Depreciation-Federal	(58,008,403)		
8				
9	Federal Tax Depreciation Over Book		(24,708,703)	
10				
11	Normalization on PTY Additions (PTY 7/20-12/20):			
12				
13	Book Depreciation	2,879,879		
14				
15	Tax Depreciation-Federal	(2,810,078)		
16				
17	Federal Tax Depreciation Over Book		69,801	
18				
19	Total Added Tax Depreciation		(24,638,903)	
20				
21	Deferred FIT (@ effective FIT rate of 21%)			(5,174,170)
22				
23	Federal benefit of state taxes - 21%			465,675
24				
25	NOL Carryforward			(18,700,923)
26				
27	**Adjusted DFIT Rate Base Balance 12/31/20**			**(295,566,289)**

SOUTH JERSEY GAS COMPANY
CALCULATION OF ADJUSTED TEST YEAR
DEFERRED NJ CORPORATE BUSINESS TAX (CBT) INCLUDED IN RATE BASE

Line No.		POST TEST YEAR ADDITIONS	ADDED TAX DEPRECIATION	DFIT IN RATE BASE
1	Projected DFIT Rate Base Balance 6/30/20			(94,703,238)
2				
3	Normalization on 6/30/20 Plant (PTY 7/20-12/20):			
4				
5	Book Depreciation	33,299,700		
6				
7	Tax Depreciation-Federal	(58,008,403)		
8				
9	Federal Tax Depreciation Over Book		(24,708,703)	
10				
11	Normalization on PTY Additions (PTY 7/20-12/20):			
12				
13	Book Depreciation	2,879,879		
14				
15	Tax Depreciation-Federal	(2,810,078)		
16				
17	Federal Tax Depreciation Over Book		69,801	
18				
19	Total Added Tax Depreciation		(24,638,903)	
20				
21	Pro Forma Adjustment - Deferred NJ CBT @ 9.00%			(2,217,501)
22				
23	**Adjusted DCBT Rate Base Balance 12/31/20**			**(96,920,739)**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
INCOME TAXES - INTEREST SYNCHRONIZATION

Line No.			
1	Adjusted Rate Base	$ 2,183,729,657	
2			
3	Total Weighted Cost of Long Term Debt	1.71%	
4			
5	Annualized Interest Expense	$ 37,331,824	
6			
7	Less: Test Year Interest Expense	$ (38,814,200)	
8			
9	Net Interest Expense		$ (1,482,376)
10			
11	Income Tax Rate		28.11%
12			
13	(Increase)/Decrease to test year income taxes		$ (416,696)
14			
15	AIRP II AFUDC Tax Adjustment		$ 2,031
16			
17	SHARP II AFUDC Tax Adjustment		$ 5,671
18			
19	**Total (Increase)/Decrease to test year income taxes**		**$ (408,994)**

Schedule BJO-10
6&6

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
REVENUE AND O&M EXPENSE - FOLSOM FACILITY

Line No.					
1	Rental Income:				
2	Annualized Test Year Rental Income	$	634,148		
3	Less: Test Year Rental Income	$	-		
4	**Pro Forma Rental Income Adjustment**			**$**	**634,148**
5	Facility Expense:				
6	Annualized Test Year Facility Expense	$	640,000		
7	Less: Test Year Facility Expense	$	236,981		
8	**Pro Forma Facility Expense Adjustment**			**$**	**403,019**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
PENSION EXPENSE

Line No.		Pension	SERP	FAS 106	
1		Acct 182387	Acct 182388	Acct 182389	Total
2	Total Unamortized Deferred Balance as of December 2019	$ 1,509,398	$ 2,888,988	$ (937,190)	$ 3,461,196
3					
4	Projected Monthly Deferred Expenses [1]				
5	Jan-20	$ 16,213	$ 119,865	$ (131,953)	$ 4,125
6	Feb-20	$ 16,213	$ 119,865	$ (131,953)	$ 4,125
7	Mar-20	$ 16,213	$ 119,865	$ (131,953)	$ 4,125
8	Apr-20	$ 16,213	$ 119,865	$ (131,953)	$ 4,125
9	May-20	$ 16,213	$ 119,865	$ (131,953)	$ 4,125
10	Jun-20	$ 16,213	$ 119,865	$ (131,953)	$ 4,125
11		$ 97,278	$ 719,191	$ (791,717)	$ 24,751
12					
13	Projected Unamortized Deferred Balance as of June 2020	$ 1,606,676	$ 3,608,179	$ (1,728,907)	$ 3,485,947
14					
15	[1] *Projected Monthly expenses based on 2020 estimates from Towers Watson.*				
16					
17	Total Projected Deferred Balance at Test Year End June 30, 2020				$ 3,485,947
18	Amortization Period (Years)				3
19	**Pro Forma Annual Amortization Adjustment**				**$ 1,161,982**
20					
21					
22	Projected Monthly Pension Expense				$ 4,125
23	Months				12
24	**Pro Forma Annual Pension Expense Adjustment**				**$ 49,503**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
EARLY RETIREMENT INCENTIVE PLAN

Line No.			Expense
1	Early Retirement Incentive Plan Deferred Balance at June 30, 2020	$	5,073,202
2	**Pro-Forma Adjustment - Three Year Amortization of Deferred Expense**	**$**	**1,691,067**

SOUTH JERSEY GAS COMPANY
PRO FORMA ADJUSTMENTS TO JUNE 30, 2020 OPERATING INCOME
B.L. ENGLAND COSTS

Line No.		Expense
1	BL England Project Costs at December 31, 2019	$ 10,119,921
2	**Pro-Forma Adjustment - Ten Year Amortization of Deferred Expense**	**$ 1,011,992**

INSERT TAB:

R. HEVERT

IN THE MATTER OF THE PETITION OF
SOUTH JERSEY GAS COMPANY FOR APPROVAL OF
INCREASED BASE TARIFF RATES AND CHARGES
FOR GAS SERVICE AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20______

DIRECT TESTIMONY

OF

ROBERT B. HEVERT

ScottMadden, Inc.

On Behalf of
South Jersey Gas Company

Exhibit P-7

March 13, 2020

TABLE OF CONTENTS

GLOSSARY OF FREQUENTLY USED TERMS

TERM	DESCRIPTION
Beta Coefficient	A component of the Capital Asset Pricing Model that measures the risk of a given stock relative to the risk of the overall market.
Bond Yield Plus Risk Premium Approach	A risk premium model used to estimate the Cost of Equity. The Bond Yield Plus Risk Premium approach assumes that investors required a risk premium over the cost of debt as compensation for assuming the greater risk of common equity investment. The model is expressed as a bond yield plus equity risk premium.
Capital Asset Pricing Model ("CAPM")	A risk premium-based model used to estimate the Cost of Equity, assuming the stock is added to a well-diversified portfolio. The CAPM assumes that investors are compensated for the time value of money (represented by the Risk-Free Rate), and risk (represented by the combination of the Beta Coefficient and the Market Risk Premium).
Constant Growth DCF Model	A form of the Discounted Cash Flow model that assumes cash flows will grow at a constant rate, in perpetuity. The model simplifies to a form that expresses the Cost of Equity as the sum of the expected dividend yield and the expected growth rate.
Cost of Equity	The return required by investors to invest in equity securities. The terms "Return on Equity" and "Cost of Equity" are used interchangeably.
Discounted Cash Flow ("DCF") Model	A model used to estimate the Cost of Equity based on expected cash flows. The Cost of Equity equals the discount rate that sets the current market price equal to the present value of expected cash flows.
Dividend Yield	For a given stock, the current annualized dividend divided by its current market price.
Empirical Capital Asset Pricing Model ("ECAPM")	Empirical CAPM is a variant of the CAPM model. ECAPM adjusts for the CAPM's tendency to under-estimate returns for companies that have Beta coefficients less than one, and over-estimate returns for relatively high-Beta coefficient stocks.
Expected Earnings Analysis	An analysis of actual expected earnings used to corroborate a reasonable ROE range.
Market Return	The expected return on the equity market, taken as a portfolio.

TERM	DESCRIPTION
Market Risk Premium	The additional compensation required by investors in the equity market as a portfolio over the Risk-Free rate. The Market Risk Premium is a component of the CAPM.
Proxy Group	A group of publicly traded companies used as the "proxy" for the subject company (in this case, South Jersey Gas Company). Proxy companies are sometimes referred to as "Comparable Companies."
Return on Equity ("ROE")	The return required by investors to invest in equity securities. The terms "Return on Equity" and "Cost of Equity" are used interchangeably. Please note that the ROE in this context is distinct from the accounting measure sometimes referred to as the "Return on Average Common Equity".
Risk-Free Rate	The rate of return on an asset with no risk of default.
Risk Premium	The additional compensation required by investors for taking on additional increments of risk. Risk Premium-based approaches are used in addition to the DCF and CAPM to estimate the Cost of Equity.
Treasury Yield	The return on Treasury securities; the yield on the 30-year Treasury bonds is considered to be a measure of the Risk-Free Rate.

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
ROBERT B. HEVERT

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Robert B. Hevert. I am a Partner with ScottMadden, Inc., a general management consultancy firm. My business address is 1900 West Park Drive, Suite 250, Westborough, MA 01581.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this direct testimony ("Direct Testimony") before the New Jersey Board of Public Utilities (the "BPU" or the "Board") on behalf of South Jersey Gas Company ("South Jersey Gas" or the "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I hold a Bachelor's degree in Business and Economics from the University of Delaware, and an MBA with a concentration in Finance from the University of Massachusetts. I also hold the Chartered Financial Analyst designation.

Q. PLEASE DESCRIBE YOUR EXPERIENCE IN THE ENERGY AND UTILITY INDUSTRIES.

A. I have worked in regulated industries for over 30 years, having served as an executive and manager with consulting firms, a financial officer of a publicly traded natural gas utility, and an analyst at a telecommunications utility. In my role as a consultant, I have advised numerous energy and utility clients across North America on a wide range of financial and economic issues, including corporate and asset-based transactions, asset and enterprise valuation, transaction due diligence, and strategic matters. As an expert witness, I have provided testimony in nearly 300 proceedings regarding financial and regulatory policy matters before numerous state utility regulatory agencies (including the BPU), the Federal Energy Regulatory Commission ("FERC"), the U.S. District Court, and the Alberta Utilities Commission. A summary of my professional and educational background, including a list of my testimony in prior proceedings, is included in Schedule RBH-1 to my Direct Testimony.

II. <u>PURPOSE AND OVERVIEW OF TESTIMONY</u>

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. My Direct Testimony presents evidence and provides a recommendation regarding the Company's proposed Return on Equity ("ROE")[1] and capital structure to be used for ratemaking purposes in this proceeding. My analyses and conclusions are supported by the data presented in Schedules RBH-2 through RBH-11, which have been prepared by me or under my direction.

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE APPROPRIATE COST OF EQUITY FOR THE COMPANY?

A. My analyses indicate that a ROE in the range of 10.00 percent to 10.70 percent represents the range of equity investors' required return for investment in a natural gas utility such as South Jersey Gas in today's capital markets. Based on the quantitative and qualitative analyses discussed throughout my Direct Testimony, and taking into consideration the Board's decisions in prior proceedings, I propose a ROE of 10.40 percent.

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[1] Throughout my Direct Testimony, I interchangeably use the terms "ROE" and "Cost of Equity."

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE ANALYSES THAT LED TO YOUR ROE RECOMMENDATION.

A. Because all financial models are subject to various assumptions and constraints, equity analysts and investors tend to use multiple methods to develop their return requirements. I relied on four widely accepted approaches to develop my ROE recommendation: (1) the Constant Growth form of the Discounted Cash Flow ("DCF") model; (2) the Capital Asset Pricing Model ("CAPM"), including the Empirical Form (the "ECAPM"); (3) the Bond Yield Plus Risk Premium approach; and (4) the Expected Earnings approach, which I consider a corroborating method.

In addition to the methods noted above, I considered current and evolving capital market and business conditions, the Company's business risks, and the effect of the Company's small size relative to the proxy group. Although I did not make explicit adjustments to my ROE estimates for those factors, I did consider them in determining where the Company's Cost of Equity falls within the range of analytical results.

My analyses recognize that estimating the Cost of Equity is an empirical, but not an entirely mathematical exercise; it relies on both quantitative and qualitative data and analyses, all of which are used to inform the judgment that inevitably must be applied. I therefore considered my analytical results in the context of such Company-specific and general capital market factors as those summarized above. Based on the quantitative and qualitative analyses discussed throughout my Direct Testimony, I find 10.40 percent to be a reasonable and appropriate estimate of the Company's Cost of Equity.

As my Direct Testimony explains, no single model is more reliable than all others under all market conditions, and all require the use of reasoned judgment in their application, and in interpreting their results. Therefore, the results of each ROE model must be assessed in the context of current and expected capital market conditions, and relative to other appropriate benchmarks. In developing my recommendation, I recognized that the low and high analytical results (set by the low end of the Constant Growth DCF model results, and the high end of the CAPM and ECAPM results) are not reasonable estimates of the Company's Cost of Equity. In large measure, that is because those results are far removed from the returns recently authorized in other jurisdictions. As discussed in more detail later in my Direct Testimony, because the Constant Growth DCF model's fundamental assumptions do not align with current and expected market conditions, it will not always produce reliable results; other regulatory commissions have found as much. Because Risk Premium-based methods more directly reflect measures of capital market risk, they may be more likely than other approaches (such as the Constant Growth DCF method) to provide reliable ROE estimates in evolving or unstable capital markets.

Q. HOW HAVE CAPITAL MARKETS CHANGED SINCE THE COMPANY REQUESTED AN ROE OF 11.00 PERCENT IN DOCKET NO. GR17010071?

A. As discussed in Section VII, increases in equity market volatility (as measured by the VIX Index) are coincident with decreases in interest rates, indicating investors focus on capital preservation during periods of volatility. Moreover, because investors during those periods are risk averse, it reasons that return requirements would increase in response to abrupt periods of volatility.

Although the Cost of Equity is the market-based measure of the return investors require in the current market, the authorized ROE is a visible indicator of the regulatory environment. Equity and debt investors consider the stability, predictability, and supportiveness of the regulatory environment important factors in assessing risk, and determining required returns. The authorized ROE in this proceeding therefore will have a direct bearing on South Jersey Gas' financial profile, and its ability to access capital at competitive prices, even under constrained market conditions.

Q. PLEASE NOW SUMMARIZE THE RESULTS OF THE FOUR METHODS DISCUSSED ABOVE, AND HOW THEY CONTRIBUTED TO YOUR ROE RECOMMENDATION.

A. The range of results produced by the four approaches noted above are as follows:

- The Constant Growth DCF method indicates an ROE in the range of approximately 7.32 percent to 11.48 percent (please refer to Schedule RBH-2);[2]
- Giving less weight to the highest and lowest results, the CAPM model suggests an ROE in the range of approximately 8.55 percent to 11.42 percent (please refer to Table 3a)[3] and the ECAPM model indicates an ROE in the range of approximately 9.77 percent to 12.49 percent (please refer to Table 3b);[4]
- The Bond Yield Plus Risk Premium approach suggests an ROE in the range of approximately 9.90 percent (*see*, Schedule RBH-7);[5] and
- The Expected Earnings approach indicates an ROE in the range of approximately 10.18 percent to 10.35 percent (*see*, Schedule RBH-8).[6]

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[2] As discussed above, my estimate of the indicated range is narrower than the overall range of model results. Moreover, for the reasons discussed below, I find the underlying assumptions of the Constant Growth DCF model inconsistent with the current capital market and believe the model's results should be viewed with caution.

[3] As discussed above, my estimate of the indicated range is narrower than the overall range of model results.

[4] Results rounded.

[5] Results rounded.

[6] Results rounded.

Based on those estimates, I recommend an ROE in the range of 10.00 percent to 10.70 percent and, within that range, believe an ROE of 10.40 percent is reasonable and appropriate. As discussed in more detail throughout the balance of my Direct Testimony, my conclusions and recommendations reflect the following considerations:

- The small size of South Jersey Gas relative to the proxy group;
- The effect of flotation costs, which represent a permanent reduction to the capital needed to support the assets required to provide safe and reliable utility service; and
- The need to maintain the financial profile required to access capital at reasonable rates, even during periods of capital market volatility.

Q. ARE THERE OTHER FACTORS THAT SHOULD BE CONSIDERED IN DETERMINING THE WEIGHT GIVEN TO THE METHODS AND RESULTS SUMMARIZED ABOVE?

A. Yes. Each model used to estimate the Cost of Equity is subject to its own assumptions, which may become more, or less, relevant as market conditions evolve and market data change. An important consideration is the consistency of each model's underlying assumptions with current and expected market conditions, and the reasonableness of its results relative to observable benchmarks.

For example, the Constant Growth DCF model assumes the estimated Cost of Equity will remain constant in perpetuity, regardless of whether and how market conditions change. Risk Premium-based methods (such as the CAPM), on the other hand, provide a measure of risk by directly considering investors' expectations regarding future market returns. Other Risk Premium approaches (*e.g.*, the Bond Yield Plus Risk Premium approach) reflect the well-documented finding that the Cost of Equity does not move in lockstep with interest rates. For example, at times interest rates fall because investors are so risk averse, they would rather accept a very modest return on Treasury securities than take on the risk of equity ownership. In such circumstances, low interest rates suggest an increasing, not a decreasing, Cost of Equity. The Expected Earnings analysis calculates the Cost of Equity based on the opportunity cost of the return of an alternative investment in an enterprise with similar risk, and corroborates the findings from the DCF, CAPM, and Bond Yield Plus Risk Premium approaches. Because those methods provide different perspectives on investor return requirements, their use in combination enables a more comprehensive assessment of the Cost of Equity.

In summary, because each model has strengths and weaknesses, it is important to recognize differences among them in estimating the Cost of Equity. As noted above, the Constant Growth DCF model requires constant assumptions, inputs, and results in perpetuity, while Risk Premium-based methods provide the ability to reflect investors' views of risk, future market returns, and the relationship between interest rates and the Cost of Equity. The Expected Earnings method provides a way of corroborating other model results without the need to model investor behavior, or draw inferences from market data. With those considerations in mind, I believe my recommendation reasonably reflects the methods investors apply, and the factors they consider in developing their return requirements.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE COMPANY'S PROPOSED CAPITAL STRUCTURE.

A. The Company's proposal, which includes 54.18 percent common equity and 45.82 percent long-term debt, is consistent with the capital structures that have been in place over several fiscal quarters at comparable utility companies and with the equity ratios recently authorized for other gas local distribution companies in New Jersey. Given its continuing need to access external capital, and the consistency of its proposal with similarly situated utility companies, I find the Company's proposed capital structure is entirely reasonable, and supports its Standard & Poor's ("S&P") issuer rating of BBB (stable).

Q. HOW IS THE REMAINDER OF YOUR DIRECT TESTIMONY ORGANIZED?

A. The balance of my Direct Testimony is organized as follows:

Section III – Provides a summary of the issues regarding Cost of Equity estimation in regulatory proceedings and discusses the regulatory guidelines pertinent to the development of the cost of capital;

Section IV – Explains my selection of the proxy group used to develop my analytical results;

Section V – Explains my analyses and the analytical bases for my ROE recommendation;

Section VI – Provides a discussion of specific business risks and other considerations that have a direct bearing on the Company's Cost of Equity;

Section VII – Highlights the current capital market conditions and their effect on the Company's Cost of Equity;

Section VIII – Addresses the reasonableness of the Company's proposed capital structure;

Section IX – Derives the Company's weighted average cost of capital; and

Section X – Summarizes my conclusions and recommendations.

I also have included Appendices A and B, which explain in detail the selection criteria used to develop my utility proxy group, and the analysis and inputs for each of my Cost of Equity analyses.

III. SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN REGULATORY PROCEEDINGS

Q. BEFORE ADDRESSING THE SPECIFIC ASPECTS OF THIS PROCEEDING, PLEASE PROVIDE A GENERAL OVERVIEW OF THE ISSUES SURROUNDING THE COST OF EQUITY IN REGULATORY PROCEEDINGS.

A. In general terms, the Cost of Equity is the return investors require to make an equity investment in a firm. That is, investors will only provide funds to a firm if the return they *expect* is equal to, or greater than, the return they *require* to accept the risk of providing funds to the firm. From the firm's perspective, that required return, whether it is provided to debt or equity investors, has a cost. Individually, we speak of the "Cost of Debt" and the "Cost of Equity" as measures of those costs; together, they are referred to as the "Cost of Capital."

The Cost of Capital (including the costs of both debt and equity) is based on the economic principle of "opportunity costs." Investing in any asset, whether debt or equity securities, implies a forgone opportunity to invest in alternative assets. For any investment to be sensible, its expected return must be at least equal to the return expected on alternative, comparable risk investment opportunities. Because investments with like risks should offer similar returns, the opportunity cost of an investment should equal the return available on an investment of comparable risk. In that important respect, the returns required by debt and equity investors represent a cost to the Company.

Although both debt and equity have required costs, they differ in certain fundamental ways. Most noticeably, the Cost of Debt is contractually defined and can be directly observed as the interest rate, or yield, on debt securities.[7] The Cost of Equity, on the other hand, is neither directly observable nor a contractual obligation. Rather, equity investors have a claim on cash flows only after debt holders are paid; the uncertainty (or risk) associated with those residual cash flows determines the Cost of Equity. Because equity investors bear that additional "residual risk", they require higher returns than debt holders. Simply, debt and equity are fundamentally distinct securities, facing different risks and requiring different returns.

Whereas the Cost of Debt can be directly observed, the Cost of Equity must be estimated or inferred based on market data and various financial models. As discussed throughout my Direct Testimony, each of those models is subject to its own set of specific assumptions, which may be more or less applicable as market conditions change. Further, because the Cost of Equity is based on the principle of opportunity costs, the models used to estimate the Cost of Equity typically are applied to a group of "comparable" or "proxy" companies. The choice of models (including their inputs), the selection of proxy companies, and the interpretation of model results all require the application of reasoned judgment. That judgment should consider data and information, both quantitative and qualitative, not necessarily included in the models themselves.

In the end, the estimated Cost of Equity should reflect the return that investors require considering the subject company's risks, and the returns available on comparable investments. A given utility stock may require a higher return based on the risks to which

[7] The observed interest rate may be adjusted to reflect issuance or other directly observable costs.

it is exposed relative to other utilities. That is, although utilities may be viewed as a "sector", not all require the same return. The assessment of relative risk and its effect on the Cost of Equity requires the application of reasoned, experienced judgment applied to a variety of data, much of which is qualitative.

Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE REGULATORY GUIDELINES ESTABLISHED FOR THE PURPOSE OF DETERMINING THE ROE.

A. The United States Supreme Court (the "Supreme Court") established the guiding principles for establishing a fair return for capital in two cases: (1) *Bluefield Water Works and Improvement Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923) *("Bluefield")*; and (2) *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) *("Hope")*. In those cases, the Supreme Court recognized that the fair ROE should be: (1) comparable to returns investors expect to earn on other investments of similar risk; (2) sufficient to assure confidence in the company's financial integrity; and (3) adequate to maintain and support the company's credit and to attract capital.

Q. DOES NEW JERSEY PRECEDENT PROVIDE SIMILAR GUIDANCE?

A. Yes. For example, in its Final Order in BPU Docket No. ER12111052 (issued March 26, 2015) concerning Jersey Central Power & Light Company, the Board found:

> [i]t is well-established that a public utility is entitled to such rates as will permit it to earn a return on the value of the property that it employs for the convenience of the public, equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings, which are attended by corresponding risks and uncertainties. *Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia*, 262 U.S. 679, 692 (1923). The Board is empowered to determine what, in a particular situation, is a just and reasonable return for a public utility and it has broad discretion in the exercise of that authority.

> *Atlantic City Sewerage Co. v. Board of Public Utility Com'rs*, 128 N.J.L. 359 (1942), aff'd 129 N.J.L. 401. Board-approved public utility rates will be considered valid so long as they enable the utility to operate successfully, maintain its financial integrity, attract capital and compensate its investors for the risk assumed. *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 605 (1944).

Based on those standards, the authorized ROE should provide the Company with the opportunity to earn a fair and reasonable return, and should enable efficient access to external capital under a variety of market conditions.

Q. ASIDE FROM THOSE LONG-HELD STANDARDS, WHY IS IT IMPORTANT FOR A UTILITY TO BE ALLOWED THE OPPORTUNITY TO EARN A RETURN ADEQUATE TO ATTRACT CAPITAL AT REASONABLE TERMS?

A. A return adequate to attract capital at reasonable terms enables the utility to provide service while maintaining its financial integrity. As discussed above, and in keeping with the *Hope* and *Bluefield* standards, that return should be commensurate with the returns expected elsewhere in the market for investments of equivalent risk. Based on those standards, the Board's decision in this case should provide the Company with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks. To the extent the Company is provided a reasonable opportunity to earn its market-based Cost of Equity, neither customers nor shareholders should be disadvantaged. A return adequate to attract capital at reasonable terms enables the Company to continue to provide safe, reliable natural gas service while maintaining its financial integrity.

Q. HOW IS THE COST OF EQUITY ESTIMATED IN REGULATORY PROCEEDINGS?

A. As noted earlier (and as discussed later in my Direct Testimony), the Cost of Equity is estimated using various financial models. By their nature, those models produce a range of results from which the ROE is determined. That determination must be based on a comprehensive review of relevant data and information; it does not necessarily lend itself to a strict mathematical solution. The key consideration in determining the ROE is to ensure the overall analysis reasonably reflects investors' view of the financial markets in general, and the subject company (in the context of the proxy companies), in particular.

In summary, practitioners, academics, and regulatory commissions recognize that financial models are general descriptions of investor behavior, not precise quantifications of it; they are tools to be used in the ROE estimation process. Investors and regulatory commissions also appreciate that the strict adherence to any single approach, or to the specific results of any single approach, can lead to flawed or misleading conclusions. That position is consistent with the *Hope* and *Bluefield* principle that it is the analytical result, as opposed to the method employed, that controls in determining just and reasonable rates. A reasonable ROE estimate therefore considers multiple methods, and the reasonableness of their individual and collective results in the context of observable, relevant market information.

IV. PROXY GROUP SELECTION

Q. AS A PRELIMINARY MATTER, WHY IS IT NECESSARY TO SELECT A GROUP OF PROXY COMPANIES TO DETERMINE THE COST OF EQUITY FOR THE COMPANY?

A. First, it is important to bear in mind that the Cost of Equity for a given enterprise depends on the risks attendant to the business in which the company is engaged. According to financial theory, the value of a given company is equal to the aggregate market value of its constituent business units. The value of the individual business units reflects the risks and opportunities inherent in the business sectors in which those units operate. In this proceeding, we are focused on estimating the Cost of Equity for the Company's South Jersey Gas operations. Because the ROE is a market-based concept, and given that South Jersey Gas is not a publicly traded entity, it is necessary to establish a group of companies that are both publicly traded and comparable to South Jersey Gas to serve as its "proxy" for purposes of the ROE estimation process. Even if the Company were publicly traded, it is possible that transitory events could bias its market value in one way or another over a given period. A significant benefit of using a proxy group is that it serves to moderate the effects of anomalous, temporary events associated with any one company. Please see Appendix A to this Direct Testimony for a description of how I selected the proxy group. Applying the screening criteria discussed in Appendix A results in a proxy group that, taken as a whole, is fundamentally comparable to the Company's investment profile.

Q. PLEASE PROVIDE A SUMMARY PROFILE OF SOUTH JERSEY GAS.

A. South Jersey Gas is a wholly owned subsidiary of SJI Utilities, Inc., providing natural gas distribution service to over 398,000 customers in southern New Jersey.[8] SJI Utilities, Inc. is a wholly owned subsidiary of South Jersey Industries, Inc., which is publicly traded on the New York Stock Exchange under ticker symbol "SJI". South Jersey Industries, Inc.'s, and South Jersey Gas' current long-term S&P issuer credit ratings both are BBB (stable).[9]

Q. WHAT COMPANIES ARE INCLUDED IN YOUR PROXY GROUP?

A. The criteria discussed in Appendix A resulted in a proxy group of the following six companies:

Table 1: Proxy Group Screening Results

Company	Ticker
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
Northwest Natural Holding Company	NWN
ONE Gas, Inc.	OGS
Southwest Gas Holdings, Inc.	SWX
Spire Inc.	SR

Q. DOES THE SELECTION OF A PROXY GROUP ENSURE ANALYTICAL RESULTS WILL BE TIGHTLY CLUSTERED AROUND THE AVERAGE (*I.E.*, MEAN) RESULTS?

A. No. For example, the DCF approach calculates the Cost of Equity using the expected dividend yield and projected growth. Despite the care taken to ensure risk comparability, market expectations with respect to future risks and growth opportunities will vary from

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8 Source: South Jersey Gas Company, Annual Report for the year ended December 31, 2018.
9 Source: Bloomberg Professional.

company to company. Therefore, even within a group of similarly situated companies, it is common for analytical results to reflect a seemingly wide range.[10] An ongoing issue is how to best estimate the market-required ROE from within that range. That determination necessarily must consider a wide range of both empirical and qualitative information. As noted earlier, it is not an entirely mathematical analysis.

V. <u>COST OF EQUITY ESTIMATION</u>

Q. PLEASE BRIEFLY DISCUSS THE ROE IN THE CONTEXT OF THE REGULATED RATE OF RETURN.

A. Regulated utilities primarily use common stock and long-term debt to finance their capital investments. The overall rate of return ("ROR") weighs the costs of the individual sources of capital by their respective book values. As noted earlier, while the Cost of Debt can be directly observed, the Cost of Equity is market-based and, therefore, must be estimated based on observable market information.

Q. HOW HAVE YOU DETERMINED THE INVESTOR-REQUIRED ROE?

A. Because the Cost of Equity is not directly observable, it must be estimated based on both quantitative and qualitative information. Although several empirical models have been developed for that purpose, all are subject to limiting assumptions or other constraints. Consequently, many finance texts recommend using multiple approaches to estimate the Cost of Equity.[11] When faced with the task of estimating the Cost of Equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed and, therefore, rely on multiple analytical approaches.

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10 In Appendix B, I provide more substantive descriptions of the models used to estimate the ROE.

11 *See, for example,* Eugene Brigham, Louis Gapenski, <u>Financial Management: Theory and Practice</u>, 7th Ed., 1994, at 341, and Tom Copeland, Tim Koller and Jack Murrin, <u>Valuation: Measuring and Managing the Value of Companies</u>, 3rd Ed., 2000, at 214.

Regulatory commissions in other regulatory jurisdictions, such as Hawaii, Massachusetts, and North Carolina, have found that no individual model is more reliable than all others under all market conditions, and that the application of judgement is important in developing ROE estimates.[12] Therefore, it is prudent and appropriate to use multiple methods to mitigate the effects of assumptions and inputs associated with any single approach. As such, I have considered the results of the Constant Growth DCF model, the Capital Asset Pricing Model (including the "Empirical" form), the Bond Yield Plus Risk Premium approach, and the Expected Earnings approach.

Q. WHY DID YOU SELECT THOSE FOUR MODELS?

A. I did so for two reasons. First, because the purpose of ROE analyses is to estimate the return investors require, it is important to use the models investors often use. As discussed in Appendix B, the models I have applied are commonly used in practice. Second, the models focus on different aspects of return requirements, and provide different insights to investors' views of risk and return. Using multiple models provides a broader, and therefore a more reliable perspective on investors' return requirements.

Q. PLEASE BRIEFLY DESCRIBE THE CONSTANT GROWTH DCF MODEL.

A. The Constant Growth DCF approach defines the Cost of Equity as the sum of (1) the expected dividend yield, and (2) expected long-term growth. The expected dividend yield generally equals the expected annual dividend divided by the current stock price, and the

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[12] *See, for example*: (1) Public Utilities Commission of the State of Hawaii, Docket No. 7700, Order No. 13704 in Docket No. 7700, *In the Matter of the Application of Hawaiian Electric Company, Inc. For Approval of Rate Increases and Revised Rate Schedules and Rules*, December 28, 1994 at 92; (2) The Commonwealth of Massachusetts Department of Public Utilities, *Investigation by the Department of Public Utilities*, Docket D.P.U. 15-155, September 30, 2016, at 376-378; and (3) State of North Carolina Utilities Commission, *In the Matter of Application of Public Service Company of North Carolina, Inc. for a General Increase in its Rates and Charges*, Docket No. G-5, Sub 565, *Order Approving Rate Increase and Integrity Management Tracker*, October 28, 2016, at 35-36.

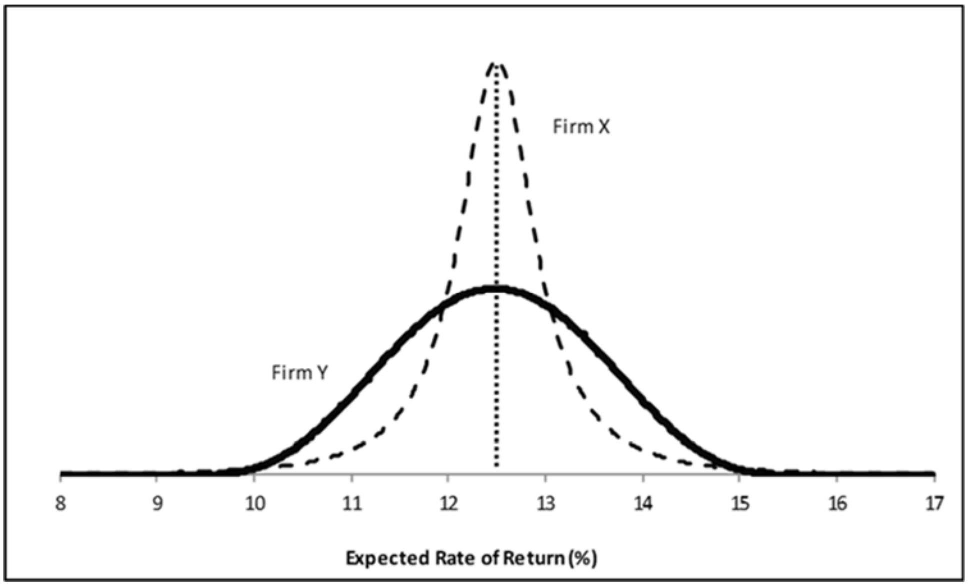
growth rate is based on analysts' expectations of earnings growth. Under the model's strict assumptions, the growth rate equals the rate of capital appreciation (that is, the growth in the stock price).[13] Given that structure, it does not matter whether the investor holds the stock in perpetuity, or whether they hold the stock for a specific period, collect the dividends, then sell at the prevailing market price. Under the model's assumptions, the result is the same regardless of the holding period.

Q. PLEASE BRIEFLY DESCRIBE THE CAPITAL ASSET PRICING MODEL.

A. Whereas DCF models focus on expected cash flows, Risk Premium-based models, such as the CAPM, focus on the additional return that investors require for taking on additional risk. In finance, "risk" generally refers to the variation in expected returns, rather than the expected return, itself. Consider two firms, X and Y, with expected returns, and the expected variation in returns noted in Chart 1, below. Although the two have the same expected return (12.50 percent), Firm Y's are far more variable. From that perspective, Firm Y would be considered the riskier investment.

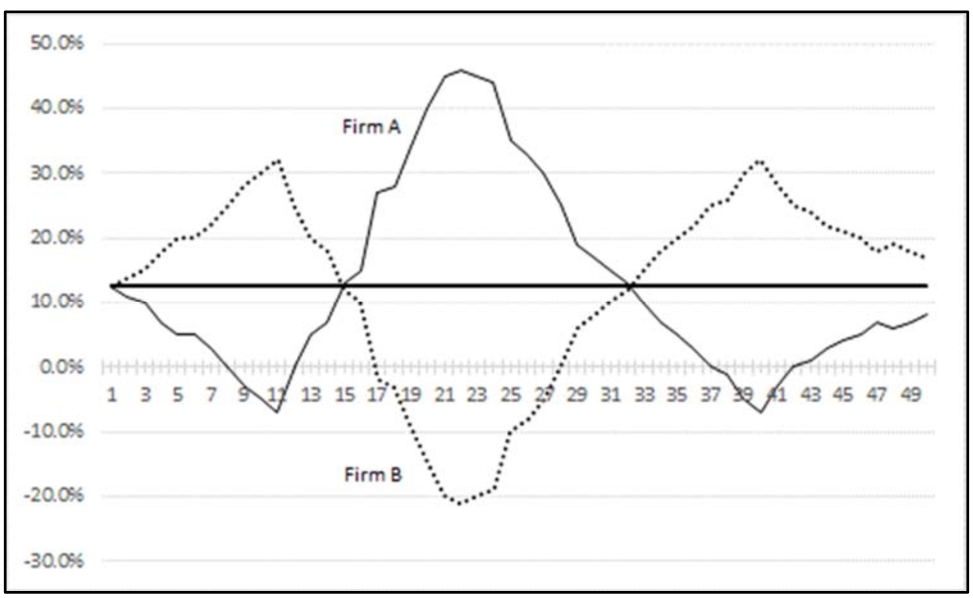
[13] As discussed in Appendix B, the model assumes that earnings, dividends, book value, and the stock price all grow at the same constant rate in perpetuity.

Chart 1: Expected Return and Risk



Now consider two other firms, Firm A and Firm B. Both have expected returns of 12.50 percent, and both are equally risky as measured by their volatility. But as Firm A's returns go up, Firm B's returns go down. That is, the returns are negatively correlated.

Chart 2: Relative Risk



If we were to combine Firms A and B into a portfolio, we would expect a 12.50 percent return with no uncertainty because of the opposing symmetry of their risk profiles.

That is, we can diversify the risk away. As long as two stocks are not perfectly correlated, we can achieve diversification benefits by combining them into a portfolio. That is the essence of the CAPM; because we can combine firms into a portfolio, the only risk that matters is the risk that remains after diversification, *i.e.*, the "non-diversifiable" risk.

The CAPM defines the Cost of Equity as the sum of the "risk-free" rate, and a premium to reflect the additional risk associated with equity investments. The "risk-free" rate is the yield on a security viewed as having no default risk, such as long-term Treasury bonds. The risk-free rate essentially sets the baseline of the CAPM. That is, an investor would expect a higher return than the risk-free rate to purchase an asset that carries risk. The difference between that higher return (*i.e.*, the required return) and the risk-free rate is the risk premium.

Risk-Free Rate + Risk Premium = Required Return [1]

The risk premium is defined as a security's Beta coefficient multiplied by the risk premium of the overall market (the "Market Risk Premium" or "MRP"). The Beta coefficient is a measure of the subject company's risk relative to the overall market, *i.e.*, the "non-diversifiable" risk. A Beta coefficient of 1.00 means that the security is equally as risky as the overall market; a value below 1.00 represents a security with less risk than the overall market, and a value over 1.00 represents a security with more risk than the overall market. Equation [2] provides the general format of the CAPM formula:

Risk-Free Rate + (Beta Coefficient x MRP) = Required Return [2]

I also applied the "Empirical CAPM", which calculates the product of the adjusted Beta coefficient and the Market Risk Premium, and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the Market Risk Premium, without any effect from the Beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ROE estimate. This approach helps correct for the tendency of low-Beta coefficient securities to realize returns somewhat higher than the traditional CAPM would predict, and high-Beta coefficient securities to realize returns lower than predicted. That is, the ECAPM addresses the tendency of the CAPM to underestimate the Cost of Equity for low-Beta coefficient companies, such as regulated utilities.

Q. PLEASE BRIEFLY DESCRIBE THE BOND YIELD PLUS RISK PREMIUM METHOD.

A. This approach is based on the basic financial principle that equity investors bear the risk associated with ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders are more risky than returns to bondholders, equity investors must be compensated for bearing that additional risk (that difference often is referred to as the "Equity Risk Premium"). Bond Yield Plus Risk Premium approaches estimate the Cost of Equity as the sum of the Equity Risk Premium and the yield on a class of bonds.

$$\textit{Bond Yield} + \textit{Equity Risk Premium} = \textit{Required Return} \qquad [3]$$

Q. PLEASE BRIEFLY DESCRIBE THE EXPECTED EARNINGS APPROACH.

A. The Expected Earnings analysis is based on the principle of opportunity costs. Because investors may invest in, and earn returns on alternative investments of similar risk, those rates of return can provide a useful benchmark in determining the appropriate rate of return for a firm. Further, because those results are based solely on the returns expected by investors, exclusive of market-data or models, the Expected Earnings approach provides a direct comparison. I have applied this approach as a corroborating method to the results of my other models.

Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF-BASED ANALYSIS?

A. The results of the Constant Growth DCF model described in Appendix B, part A are provided in Table 2, below.[14]

Table 2: Summary of Constant Growth DCF Results[15]

	Mean Low	Mean	Mean High
30-Day Average	7.45%	9.86%	14.08%
90-Day Average	7.46%	9.88%	14.10%
180-Day Average	7.42%	9.83%	14.06%
	Median Low	**Median**	**Median High**
30-Day Average	7.32%	9.35%	11.48%
90-Day Average	7.36%	9.39%	11.41%
180-Day Average	7.35%	9.42%	11.27%

Q. PLEASE NOW SUMMARIZE YOUR REMAINING ANALYTICAL RESULTS.

A. The Risk Premium-based results, including the CAPM, ECAPM and Bond Yield Plus Risk Premium methods, explained in detail in Appendix B, parts B and C, respectively, are provided in Tables 3a, 3b and 4 below. Table 5 summarizes the Expected Earnings results, which are explained in detail in Appendix B, part D.

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14 *See*, Appendix B for a more detailed description of the models, assumptions, and inputs described in Section V.

15 For the purposes of my Direct Testimony, I have put more emphasis on the median results of my Constant Growth DCF analysis, because the mean results are affected by an anomalously high growth rate for Northwest Natural Gas Company of 27.00 percent from Value Line due to the company's significant losses in 2017.

Table 3a: Summary of CAPM Results

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (2.25%)	8.55%	9.15%
Near Term Projected 30-Year Treasury (2.42%)	8.71%	9.31%
Long Term Projected 30-Year Treasury (3.45%)	9.74%	10.35%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (2.25%)	9.52%	10.22%
Near Term Projected 30-Year Treasury (2.42%)	9.69%	10.38%
Long Term Projected 30-Year Treasury (3.45%)	10.72%	11.42%

Table 3b: Summary of Empirical CAPM Results

	Bloomberg Derived Market Risk Premium	Value Line Derived Market Risk Premium
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (2.25%)	9.77%	10.49%
Near Term Projected 30-Year Treasury (2.42%)	9.93%	10.65%
Long Term Projected 30-Year Treasury (3.45%)	10.97%	11.69%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (2.25%)	10.50%	11.29%
Near Term Projected 30-Year Treasury (2.42%)	10.66%	11.45%
Long Term Projected 30-Year Treasury (3.45%)	11.70%	12.49%

Table 4: Bond Yield Risk Premium Results

Treasury Yield	Return on Equity
Current 30-Year Treasury (2.25%)	9.90%
Near Term Projected 30-Year Treasury (2.42%)	9.87%
Long Term Projected 30-Year Treasury (3.45%)	9.93%

Table 5: Expected Earnings Results

	Return on Equity
Low	9.08%
Median	10.18%
High	11.57%
Average	10.35%

VI. OTHER CONSIDERATIONS

Q. WHAT OTHER FACTORS HAVE YOU CONSIDERED IN DETERMINING YOUR RECOMMENDED ROE?

A. Because the analytical methods discussed above provide a range of estimates, there are several additional factors that should be taken into consideration when establishing a reasonable range for the Company's Cost of Equity. Those factors include the risks associated with the Company's comparatively small size on the Cost of Equity, and flotation costs associated with equity issuances.

A. SMALL SIZE PREMIUM

Q. PLEASE EXPLAIN THE RISK ASSOCIATED WITH SMALL SIZE.

A. Both the financial and academic communities have long accepted the proposition that the Cost of Equity for small firms is subject to a size effect.[16] Although empirical evidence of the size effect often is based on studies of industries beyond regulated utilities, utility analysts also have noted the risks with associated small market capitalizations. Specifically, Ibbotson Associates noted:

> For small utilities, investors face additional obstacles, such as smaller customer base, limited financial resources, and a lack of diversification

[16] *See*, Mario Levis, *The Record on Small Companies: A Review of the Evidence*, Journal of Asset Management, Mar. 2002, at 368-397, for a review of literature relating to the size effect.

> across customers, energy sources, and geography. These obstacles imply a higher investor return.[17]

Small size, therefore, leads to two categories of increased risk for investors: (1) liquidity risk (*i.e.*, the risk of not being able to sell one's shares in a timely manner due to the relatively thin market for the securities); and (2) fundamental business risks.

Q. HOW DOES SOUTH JERSEY GAS COMPARE IN SIZE TO THE PROXY COMPANIES?

A. South Jersey Gas is significantly smaller than the proxy group, both in terms of number of customers and annual revenues. Because the Company is not a separately traded entity, an estimated stand-alone market capitalization for South Jersey Gas must be calculated. To do so, I applied the median market to book ratio for the six-member proxy group to South Jersey Gas' implied book value of equity of $1.19 billion.[18] The implied market capitalization based on that calculation is $2.80 billion, which is approximately 66.00 percent of the median level of the proxy group.

Q. HOW DOES THE SMALLER SIZE OF SOUTH JERSEY GAS AFFECT ITS BUSINESS RISKS RELATIVE TO THE PROXY GROUP OF COMPANIES?

A. In general, smaller companies are less able to withstand adverse events that affect their revenues and expenses. The effect of weather variability, the loss of large customers to bypass opportunities, or the destruction of demand as a result of general macroeconomic conditions or fuel price volatility will have a proportionately greater effect on the earnings and cash flow volatility of smaller utilities. Similarly, capital expenditures for non-revenue producing investments, such as system maintenance and replacements, will put

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[17] Michael Annin, *Equity and the Small-Stock Effect*, Public Utilities Fortnightly, October 15, 1995.
[18] Stockholder equity was calculated by applying the proposed equity ratio of 54.18 percent to the proposed rate base for South Jersey Gas of $2.20 billion.

proportionately greater pressure on customer costs, potentially leading to customer attrition or demand reduction. Taken together, such risks affect the return required by investors for smaller companies.

Q. HOW DID YOU ESTIMATE THE SIZE PREMIUM FOR SOUTH JERSEY GAS?

A. In its 2019 *Stocks, Bonds, Bills and Inflation® Yearbook*, Duff and Phelps calculate the size premium for deciles of market capitalizations relative to the S&P 500 Index. As shown on Schedule RBH-9, the proxy group's mean and median market capitalization are approximately $5.58 billion and $4.21 billion, respectively. Those levels correspond to the fourth and fifth deciles of Morningstar's market capitalization data. Using the median market capitalization in the Morningstar analysis, the proxy group has a size premium of 1.28 percent. The implied market capitalization for South Jersey Gas is approximately $2.80 billion, which falls within the sixth decile and corresponds to a size premium of 1.50 percent (or 150 basis points). The difference between those size premiums is 22 basis points (1.50 percent – 1.28 percent).

Q. HAVE YOU CONSIDERED THE SMALLER SIZE OF SOUTH JERSEY GAS IN YOUR RECOMMENDED RETURN ON EQUITY FOR THE COMPANY?

A. Yes. Although I have quantified the small size effect, rather than proposing a specific premium, I have considered the small size of South Jersey Gas in my assessment of business risks in order to determine where, within a reasonable range of returns, South Jersey Gas' required ROE appropriately falls.

B. FLOTATION COSTS

Q. WHAT ARE FLOTATION COSTS?

A. Flotation costs are the costs associated with the sale of new issues of common stock. These include out-of-pocket expenditures for preparation, filing, underwriting, and other costs of issuance.

Q. WHY IS IT IMPORTANT TO RECOGNIZE FLOTATION COSTS IN THE ALLOWED ROE?

A. To attract and retain new investors, a regulated utility must have the opportunity to earn a return that is both competitive and compensatory. To the extent the opportunity to recover prudently incurred flotation costs is denied, actual returns will fall short of expected (or required) returns, thereby diminishing its ability to attract adequate capital on reasonable terms.

Q. ARE FLOTATION COSTS PART OF THE UTILITY'S INVESTED COSTS OR PART OF THE UTILITY'S EXPENSES?

A. Flotation costs are part of capital costs, which are properly reflected on the balance sheet under "paid in capital" rather than current expenses on the income statement. Flotation costs are incurred over time, just as investments in rate base or debt issuance costs. As a result, the great majority of flotation costs are incurred prior to the test year, but remain part of the cost structure during the test year and beyond, and as such, should be recognized for ratemaking purposes. The recovery of flotation costs therefore is appropriate even if no new issuances are planned in the near future; failure to allow such cost recovery may deny South Jersey Gas the opportunity to earn its required rate of return in the future.

Q. DO THE DCF, CAPM, AND BOND YIELD PLUS RISK PREMIUM MODELS ALREADY INCORPORATE INVESTOR EXPECTATIONS OF A RETURN IN ORDER TO COMPENSATE FOR FLOTATION COSTS?

A. No. The models used to estimate the appropriate ROE assume no "friction" or transaction costs, as these costs are not reflected in the market price (in the case of the DCF model) or risk premium (in the case of the CAPM and the Bond Yield Plus Risk Premium model). Therefore, it is appropriate to consider flotation costs when determining where the Company's return should fall.

Q. IS THE NEED TO CONSIDER FLOTATION COSTS ELIMINATED BECAUSE SOUTH JERSEY GAS IS A WHOLLY OWNED SUBSIDIARY?

A. No, it is not. Wholly owned subsidiaries such as South Jersey Gas receive equity capital from their parents, and provide returns on the capital that roll up to the parent, which is designated to attract and raise capital based on the returns of those subsidiaries. To deny recovery of issuance costs associated with capital that is invested in the subsidiaries ultimately would penalize the investors that fund the utility operations, and would inhibit the utility's ability to obtain new equity capital at a reasonable cost. This is important for companies such as South Jersey Gas that are planning continued capital expenditures in the near term, and for which access to capital (at reasonable cost rates) to fund such required expenditures will be critical.

Q. HOW DID YOU CALCULATE THE FLOTATION COST RECOVERY ADJUSTMENT?

A. I modified the DCF calculation to provide a dividend yield that would reimburse investors for issuance costs. My estimate of flotation costs recognizes the costs of issuing equity that were incurred by the proxy companies in their most recent two issuances. As shown in Schedule RBH-10, an adjustment of 0.07 percent (*i.e.*, seven basis points) reasonably represents flotation costs for the Company.

Q. IS THE NEED TO CONSIDER FLOTATION COSTS RECOGNIZED BY THE ACADEMIC AND FINANCIAL COMMUNITIES?

A. Yes. The need to reimburse investors for equity issuance costs is recognized by the academic and financial communities in the same spirit that investors are reimbursed for the costs of issuing debt. For example, Dr. Morin notes that "[t]he costs of issuing [common stock] are just as real as operating and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit the recovery of these costs."[19] Dr. Morin further notes that "equity capital raised in a given stock issue remains on the utility's common equity account and continues to provide benefits to ratepayers indefinitely."[20] This treatment is consistent with the philosophy of a fair rate of return. As explained by Dr. Shannon Pratt:

> Flotation costs occur when a company issues new stock. The business usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the business. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the business's required returns must be greater to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the net cash flow to discount, or by incorporating the cost into the cost of equity capital. Since flotation costs typically are not applied to operating cash flow, they must be incorporated into the cost of equity capital.[21]

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19 Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 321.

20 *Id.*, at 327.

21 Shannon P. Pratt, Roger J. Grabowski, Cost of Capital: Applications and Examples, 4th ed. (John Wiley & Sons, Inc., 2010), at 586.

Similarly, Morningstar has commented on the need to reflect flotation costs in the Cost of Capital:

> Although the cost of capital estimation techniques set forth later in this book are applicable to rate setting, certain adjustments may be necessary. One such adjustment is for flotation costs (amounts that must be paid to underwriters by the issuer to attract and retain capital).[22]

Q. HAVE COMMISSIONS IN OTHER REGULATORY JURISDICTIONS RECOGNIZED FLOTATION COSTS WHEN DETERMINING THE AUTHORIZED ROE?

A. FERC, along with regulatory commissions in jurisdictions such as Arkansas, Connecticut, and Mississippi, have recognized flotation costs when determining the authorized ROE.[23] Although the method by which flotation costs are reflected in rates may vary (*e.g.*, implicit versus explicit basis point increases to authorized ROE), the recognition of those costs is not limited to, or constrained by recent equity issuances. For instance, the Arkansas Public Service Commission stated that "including some level of valid, sustainable, measurable, and material flotation costs in equity return is appropriate."[24]

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22 Morningstar, Inc. Ibbotson SBBI 2013 Valuation Yearbook, at 25.

23 *See, for example*, FERC Docket Nos. EL05-19-002 and ER05-168-001, *Golden Spread Electric Cooperative, Inc., v. Southwestern Public Service Company*, Opinion No. 501, 123 FERC ¶ 61,0047, (April 21, 2008); Arkansas Public Service Commission, Docket No. 04-176-U, *In the Matter of the Application of Arkansas Western Gas Company for Approval of a General Change in Rates and Tariffs*, Order No. 6, October 31, 2005, at 34; Connecticut Public Utilities Regulatory Authority, Docket No. 14-05-06, *Application of the Connecticut Light and Power Company to Amend Rate Schedules*, Decision, December 17, 2014, at 133-134, 145 (Table 64), and 223 (PP 280-281); Mississippi Public Service Commission, Docket No. 01-UN-0548, *Notice of Intent of Mississippi Power Company to Change Rates for Electric Service in its Certificated Areas in the Twenty-Three Counties of Southeast Mississippi*, Final Order, December 3, 2001, at 26.

24 *Id.*

Q. ARE YOU PROPOSING TO ADJUST YOUR RECOMMENDED ROE BY SEVEN BASIS POINTS TO REFLECT THE EFFECT OF FLOTATION COSTS ON THE COMPANY'S ROE?

A. No. Rather, I have considered the effect of flotation costs, in addition to the Company's small size relative to the proxy group, in determining where the Company's ROE falls within the range of results.

C. ELECTRIFICATION

Q. WHAT IS ELECTRIFICATION?

A. Electrification is the conversion of fossil-fuel based transportation (i.e., gasoline powered vehicles) and end-use heating and appliance loads (such as oil and natural gas-fired heating systems) to electricity.

Q. WHAT RISKS DO ELECTRIFICATION POSE FOR THE NATURAL GAS UTILITY SECTOR?

A. As noted in a recent ICF study for the American Gas Association, as states and local municipalities contemplate "deep decarbonization" of their economies as the electric grid becomes less carbon-intensive, policy-makers and environmental advocates are considering electrification as an option for further reducing greenhouse gas emissions.[25] If successful, these policies could affect the natural gas utility sector by drastically reducing demand for natural gas, leaving natural gas utilities at risk of holding stranded assets.[26]

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[25] *See*, *Implications of Policy Driven Residential Electrification*, An American Gas Association Study prepared by ICF, July 2018, at 1.

[26] McKinsey & Company, "Are US gas utilities nearing the end of their golden age?", September 2018, https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/are-us-gas-utilities-nearing-the-end-of-their-golden-age.

VII. CAPITAL MARKET ENVIRONMENT

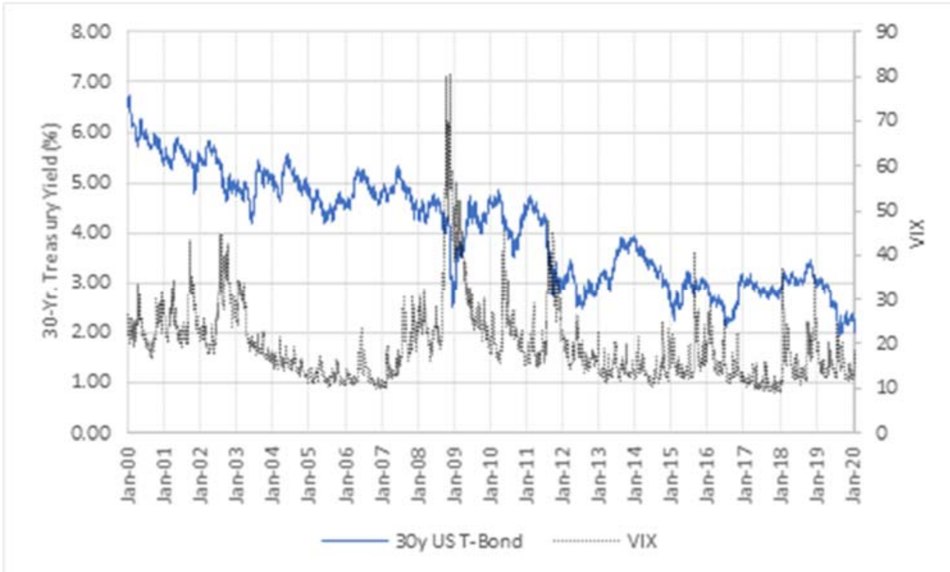
Q. DOES YOUR RECOMMENDATION CONSIDER THE CURRENT CAPITAL MARKET ENVIRONMENT?

A. Yes, it does. From an analytical perspective, it is important that the inputs and assumptions used to arrive at an ROE recommendation, including assessments of capital market conditions, are consistent with the recommendation itself. Although all analyses require an element of judgment, the application of that judgment must be made in the context of the quantitative and qualitative information available to the analyst and the capital market environment in which the analyses were undertaken.

Q. IS THERE A RELATIONSHIP BETWEEN EQUITY MARKET VOLATILITY AND INTEREST RATES?

A. Yes, there is. Significant and abrupt increases in volatility tend to be associated with declines in Treasury yields. That relationship makes intuitive sense; as investors see increasing risk, their objectives may shift principally to capital preservation (that is, avoiding a capital loss). A means of doing so is to allocate capital to the relative safety of Treasury securities, in a "flight to safety." Because Treasury yields are inversely related to Treasury bond prices, as investors bid up the prices of bonds, they bid down the yields. As Chart 3, below, demonstrates, decreases in the 30-year Treasury yield are coincident with significant increases in the VIX.

Chart 3: 30-Year Treasury Yields vs. VIX (1/1/2000 – 1/31/2020)[27]



In those instances, the fall in yields does not reflect a reduction in required returns, it reflects an increase in risk aversion and, therefore, an increase in required equity returns.

Q. HAS MARKET VOLATILITY CHANGED RECENTLY?

A. Yes, it has. A visible and widely reported measure of expected volatility is the Chicago Board Options Exchange ("Cboe") Volatility Index, often referred to as the VIX. As Cboe explains, the VIX "is a calculation designed to produce a measure of constant, 30-day expected volatility of the U.S. stock market, derived from real-time, mid-quote prices of S&P 500® Index (SPXSM) call and put options."[28] Simply, the VIX is a market-based measure of expected volatility. Because volatility is a measure of risk, increases in the VIX, or in its volatility, are a broad indicator of expected increases in market risk. Although the VIX is not expressed as a percentage, it should be understood as such. That is, if the VIX stood at 15.00, it would be interpreted as an expected standard deviation in annual market returns of 15.00 percent over the coming 30 days. Since 2000, the VIX has

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[27] Sources: S&P Global Market Intelligence; and Bloomberg Professional.

[28] Source: http://www.cboe.com/vix.

averaged about 19.46, which is highly consistent with the long-term standard deviation on annual market returns (19.80 percent, as reported by Duff & Phelps).[29]

Table 6, below, demonstrates the increase in market uncertainty from 2017 to early 2020. As that table notes, the standard deviation (that is, the volatility of volatility) from 2018 through early 2020 is about 2.98 times higher than its 2017 level (1.36).

Table 6: VIX Levels and Volatility[30]

VIX Level and Volatility	
Long-term Average	19.13
2018-2020 Average	15.93
2018-2020 Maximum	37.32
2018-2020 Minimum	9.15
2018-2020 Standard Deviation	4.04
2017 Average	11.09
2017 Maximum	16.04
2017 Minimum	9.14
2017 Standard Deviation	1.36

The increase in volatility is not surprising as market participants re-assess the Federal Reserve's long-term objective of monetary policy normalization, and the increasing risks associated with federal trade policy initiatives.

Q. IS MARKET VOLATILITY EXPECTED TO INCREASE FROM ITS CURRENT LEVELS?

A. Yes, it is. One means of assessing market expectations regarding the future level of volatility is to review Cboe's "Term Structure of Volatility." As Cboe points out:

> The implied volatility term structure observed in SPX options markets is analogous to the term structure of interest rates observed in fixed income markets. Similar to the calculation of forward rates of interest, it is possible to observe the option market's expectation of future market volatility through use of the SPX implied volatility term

[29] Source: Duff & Phelps, 2019 SBBI Yearbook, at 6-17.
[30] Source: Yahoo! Finance.

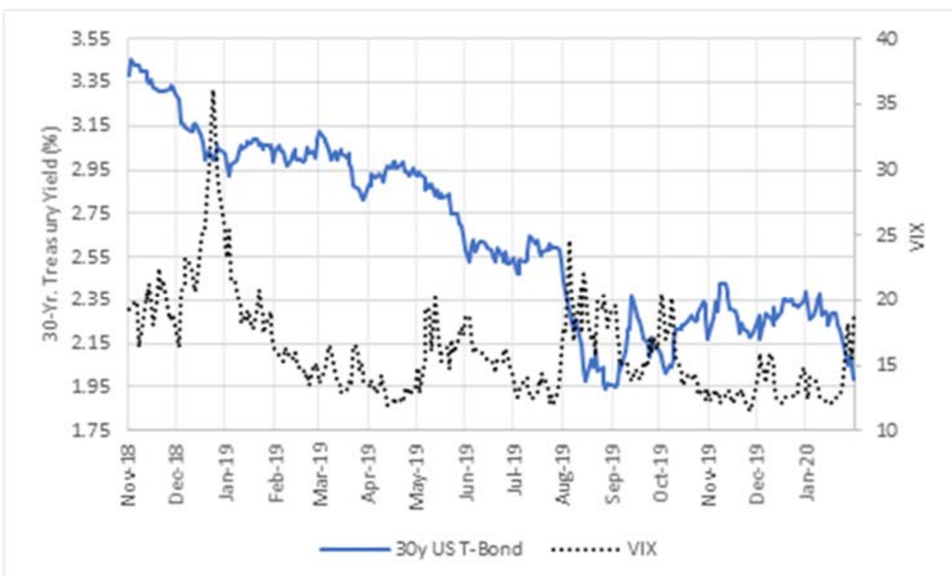
structure.[31]

Cboe's term structure data is upward sloping, indicating market expectations of increasing volatility. The expected VIX value in December 2020 is 18.82, suggesting investors see a reversion to long-term average volatility over the coming months.[32]

Q. HAVE RECENT DECLINES IN TREASURY YIELDS BEEN ASSOCIATED WITH INCREASES IN MARKET VOLATILITY?

A. Yes, they have. Since November 2018, the periods during which Treasury yields fell coincided with increases in the VIX (*see*, Chart 4, below).

Chart 4: 30-Year Treasury Yields vs. VIX (11/1/2018 – 1/31/2020)[33]



Q. HAVE AUTHORIZED RETURNS MOVED IN STEP WITH THE LOW INTEREST RATE ENVIRONMENT?

A. No, they have not. As Chart 5 (below) demonstrates, despite the decline in yields in 2015 and 2016, and again in late 2018 through 2019, regulatory commissions have not been

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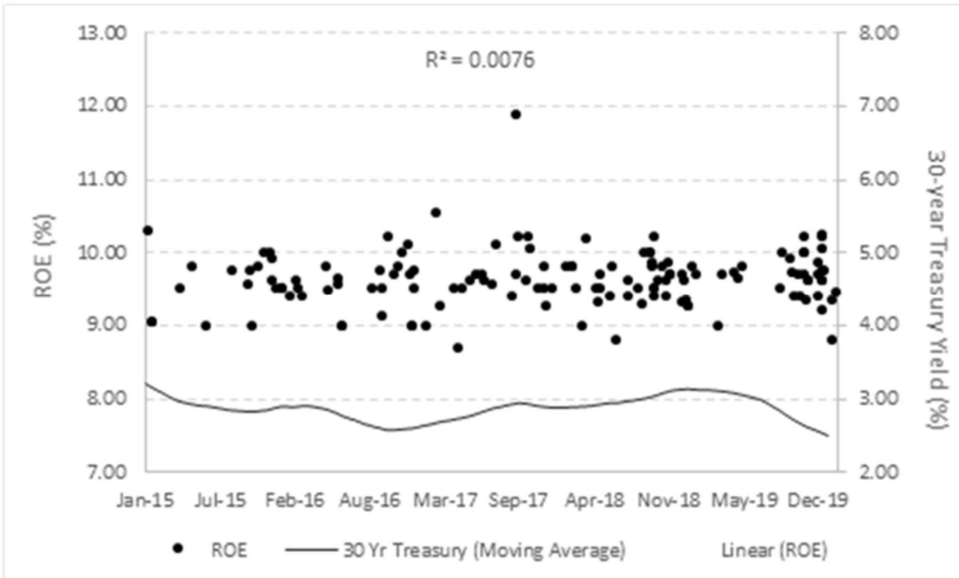
[31] Source: http://www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data.

[32] Source: http://www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data, as of January 31, 2020.

[33] Source: S&P Global Market Intelligence.

inclined to reduce authorized returns for natural gas distribution utilities. The constancy of authorized returns as interest rates fell also is consistent with the widely accepted principle that the Equity Risk Premium increases as interest rates fall.

Chart 5: Authorized Returns for Natural Gas Distribution Utilities (2015 – 2020)[34]



Q. WHAT ARE YOUR OBSERVATIONS RELATED TO RECENTLY AUTHORIZED RETURNS FOR NATURAL GAS DISTRIBUTION UTILITIES?

A. As Chart 5 demonstrates, there has been no meaningful trend since 2015; time explains no more than 1.00 percent of the change in ROEs, and the trend is statistically insignificant. Over that same period, authorized returns ranged from 8.70 percent to 11.88 percent, with an average and median of 9.62 percent and 9.60 percent, respectively. Authorized returns for natural gas distribution utilities from January 1, 2019 through January 31, 2020 ranged from 8.80 percent to 10.25 percent, with an average and median of 9.67 and 9.70 percent, respectively.[35]

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[34] Excludes Limited Issue Riders. Source: Regulatory Research Associates.

[35] The lowest twelve authorized returns for natural gas distribution utilities, ranging from 8.70 percent to 9.00 percent from January 1, 2015 through January 31, 2020 were all authorized by the New York Public Service

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THOSE ANALYSES?

A. It is important to consider whether changes in long-term interest rates reflect fundamental changes in investor sentiment, or whether they reflect potentially transitory factors. The recent, sudden decline in interest rates appears to be related to the increase in equity market volatility, which may be event-driven rather than a fundamental change. Because the methods used to estimate the Cost of Equity are forward-looking, it is important to consider those distinctions in assessing model results.

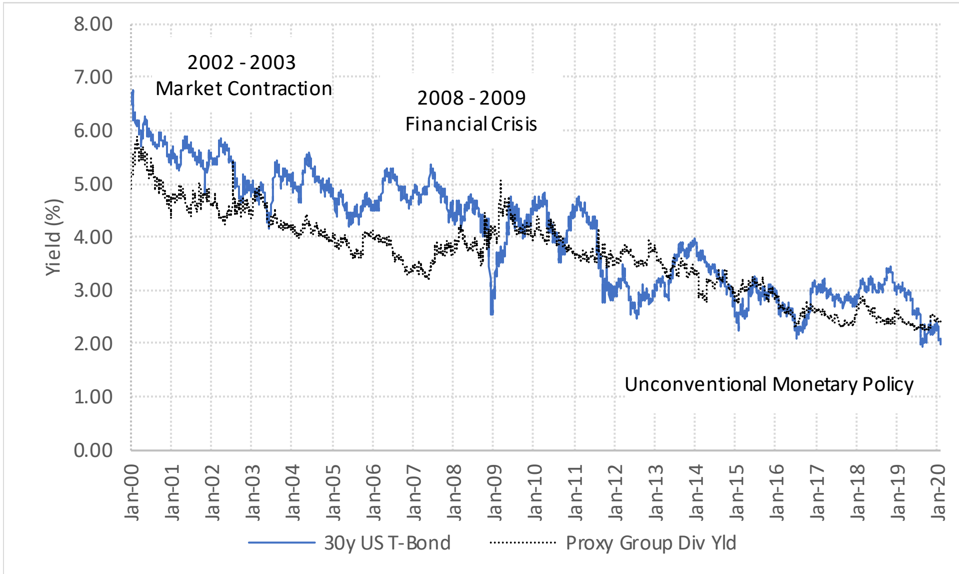
Q. HAVE NATURAL GAS UTILITY DIVIDEND YIELDS CLOSELY FOLLOWED LONG-TERM TREASURY YIELDS?

A. Although they have been directionally related over time, the fundamental relationship between Treasury yields and natural gas utility[36] dividend yields changed after the 2008/2009 financial crisis. From 2000 through 2008, Treasury yields generally exceeded dividend yields; the exception was the 2002-2003 market contraction. Then, as in 2008-2009, investors sought the safety of Treasury securities, accepting lower yields in exchange for a greater likelihood of capital preservation. Once the contraction ended (in the latter half of 2003), the relationship was restored, and Treasury yields again exceeded dividend yields.

Commission, including a 8.80 percent authorized return in 2020. There were no other authorized returns by other utility commissions as low as 9.00 percent.

[36] Defined as the proxy group calculated as an index.

Chart 6: Natural Gas Utility Dividend Yields and 30-Year Treasury Yields[37]



During the 2008/2009 financial crisis, Treasury bond prices increased (yields decreased), and utility stock prices decreased (dividend yields increased) such that the prior relationship became less stable. As the Federal Reserve implemented and maintained "unconventional" monetary policies in reaction to the financial crisis (*i.e.*, Quantitative Easing) with the intended consequence of lowering long-term interest rates, the unstable relationship between Treasury yields and utility dividend yields persisted.

Even though the "yield spread"[38] became inverted for a period following the financial crisis, it has not been static. That is, as Treasury yields fell in response to central bank policies, dividend yields did not fall to the same degree, or necessarily exhibit similar movements. In fact, at times the yield spread has widened (*see*, Chart 6, above). That data suggests that, although utility prices are sensitive to long-term Treasury yields, the relationship is not unbounded.

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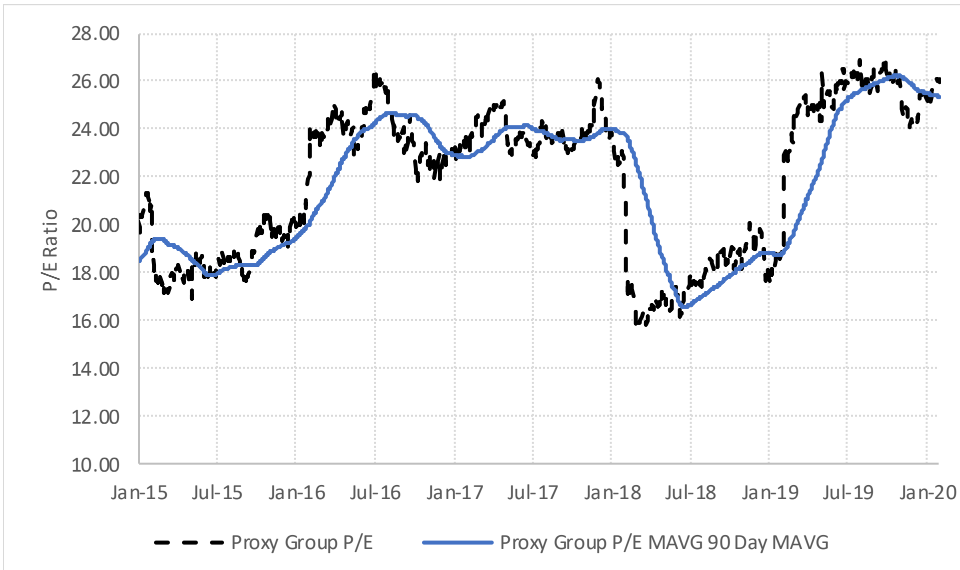
[37] Source: S&P Global Market Intelligence. Proxy Group Dividend Yield calculated as an index.
[38] Defined here as dividend yields less Treasury yields.

Q. IS THAT RELATIONSHIP ALSO SEEN IN UTILITY P/E RATIOS?

A. Yes, it is. Looking to the period following the Federal Reserve's Quantitative Easing policy, the proxy group P/E ratios have varied, often reverting once it has largely breached its 90-day moving average (*see*, Chart 7, below).

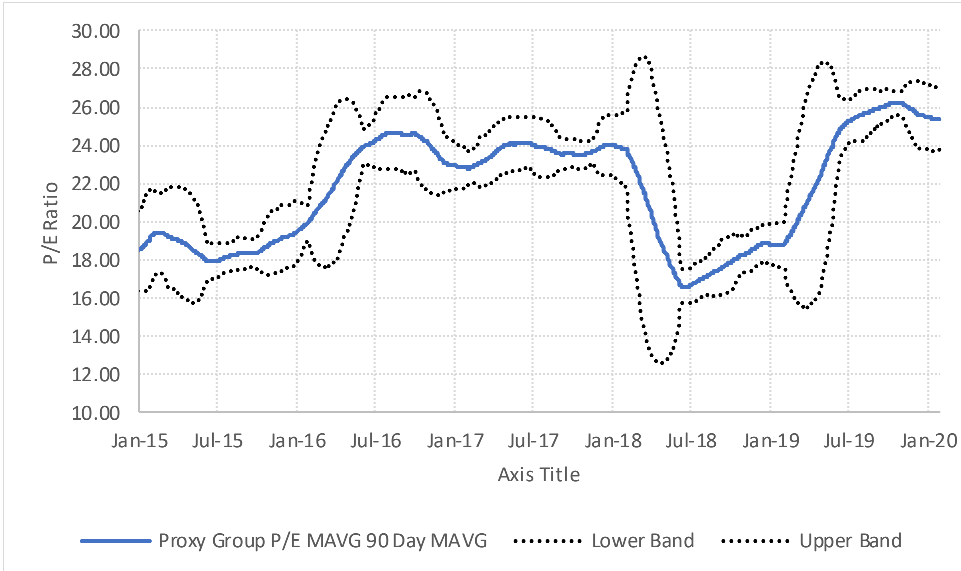
Chart 7: Proxy Group Average Price/Earnings Ratio[39]



From a somewhat different perspective, the proxy group's P/E ratio has traded within a two-standard deviation range, although that range recently has widened, indicating increasing variability in the group's valuation (*see*, Chart 8, below).

[39] Source: S&P Global Market Intelligence. Proxy Group Dividend Yield calculated as an index.

Chart 8: Proxy Group Average P/E Ratio Bands[40]



That data supports the conclusion discussed earlier, that utility stock prices are sensitive to changes in interest rates, to a degree. The "reach for yield" that sometimes occurs when interest rates fall has a limit; investors will not accept the incremental risk of capital losses when utility valuation levels become "stretched." That also may be the case when investors see interest rates reacting to market volatility that is event-driven, rather than a fundamental change in the capital market environment or investor risk tolerances. The increasing variability can be seen in Chart 8 (above), when the bands around the 90-day moving average P/E ratios widen. During those periods, the risk of capital loss increases, implying a further limit on valuation levels.

Q. DOES THE REDUCTION IN THE FEDERAL FUNDS TARGET RATE BY THE FEDERAL RESERVE ALTER ANY OF THE CONCLUSIONS ABOVE?

A. No, it does not. As explained above, utility stock prices are sensitive to changes in interest rates, but only to a point. To the extent investors expect further reductions in the Federal

40 Calculated as an index. Bands represent two standard deviations calculated over 90 days. Source: S&P Global Market Intelligence.

Funds Target Rate or an inversion to the yield curve, the effects on utility stock prices are not certain to be directionally related. Further, although the Federal Open Market Committee ("FOMC") reduced the overnight Federal Funds rate by a quarter percentage point three times in 2019, it noted that in determining the timing and size of future rate adjustments,

> …the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.[41]

As to the longer-term, the FOMC's December 2019 Projection Materials suggest an increase in the Federal Funds rate over the "longer-run."[42]

Q. HAVE YOU ALSO CONSIDERED THE EFFECT OF THE TAX CUTS AND JOBS ACT OF 2017 ("TCJA") ON THE UTILITY INDUSTRY?

A. Yes, I have. The TCJA was enacted on December 22, 2017. Since then, the major rating agencies have observed that a reduction in utilities' revenue associated with lower income taxes and the potential return of excess accumulated deferred income taxes, and that the loss of bonus depreciation also may reduce utilities' cash flow, may put downward pressure on key credit metrics. Because rating agencies have assessed the consequences of the TCJA to utilities' cash flow and credit statistics, we reasonably can assume equity investors also recognize those concerns.

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[41] *Federal Reserve Press Release*, January 29, 2020.

[42] Federal Open Market Committee, *Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assumptions of projected appropriate monetary policy*, December 2019. The projection materials explain that "[l]onger-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy."

Q. WHAT CONCERNS HAVE THE MAJOR RATING AGENCIES RAISED AS THEY CONSIDER THE IMPLICATIONS OF THE TCJA FOR UTILITIES' CASH FLOW AND CREDIT STATISTICS?

A. The major rating agencies have observed that a reduction in utilities' revenue associated with lower income taxes and the potential return of excess accumulated deferred income taxes may reduce utilities' cash flow.[43] As FitchRatings ("Fitch") pointed out "[a]bsent mitigating strategies on the regulatory front, this is expected to lead to weaker credit metrics and negative rating actions for issuers with limited headroom to absorb the leverage creep."[44] In a similar vein, S&P observed that the TCJA is "…negative for credit quality because the combination of a lower tax rate and the loss of stimulus provisions related to bonus depreciation or full expensing of capital spending will create headwinds in operating cash-flow generation capabilities as customer rates are lowered in response to the new tax code."[45] Moody's Investors Service ("Moody's") stated the following:

> Tax reform is credit negative for US regulated utilities because the lower 21% statutory tax rate reduces cash collected from customers, while the loss of bonus depreciation reduces tax deferrals, all else being equal. Moody's calculates that the recent changes in tax laws will dilute a utility's ratio of cash flow before changes in working capital to debt by approximately 150 - 250 basis points on average, depending to some degree on the size of the company's capital expenditure programs. From a leverage perspective, Moody's estimates that debt to total capitalization ratios will increase, based on the lower value of deferred tax liabilities.[46]

All three rating agencies, therefore, have observed the negative effects of the TCJA on utilities' cash flow, and the potential consequences for their credit profiles.

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[43] *See,* S&P Global Market Intelligence, *Rating agencies warn tax reform could drag US utility sector credit quality*, January 25, 2018.

[44] FitchRatings Special Report, *Tax Reform Impact on the U.S. Utilities, Power & Gas Sector*, January 24, 2018.

[45] S&P Global Ratings, *U.S. Tax Reform: For Utilities' Credit Quality, Challenges Abound*, January 24, 2018.

[46] Moody's Investors' Service, *Rating Action: Moody's changes outlooks on 25 US regulated utilities primarily impacted by tax reform*, January 19, 2018.

Q. DID MOODY'S UPDATE ITS REVIEW OF THE UTILITY SECTOR?

A. Yes. On June 18, 2018 Moody's changed its outlook on the U.S. regulated utility sector to "negative" from "stable". Moody's explained that its change in outlook "…primarily reflects a degradation in key financial credit ratios, specifically the ratio of cash flow from operations to debt, funds from operations (FFO) to debt and retained cash flow to debt, as well as certain book leverage ratios."[47] The sector's outlook could remain "negative" if cash flow-based metrics continue to decline, or if there emerge signs of a more "contentious" regulatory environment (which, Moody's notes, is not fully reflected in lower authorized returns). Moody's also noted that "[m]anagement teams' defensive efforts and a few initial signs of supportive regulatory responses to tax reform are important first steps in addressing the sector's increased financial risk," and explained that in its view, "it will take longer than 12-18 months for the sector to exhibit a material financial improvement from these actions."[48]

Q. IS THE TCJA EXPECTED TO AFFECT SOUTH JERSEY GAS' FINANCIAL PROFILE ON A FORWARD BASIS?

A. Yes, the TCJA's effect on South Jersey Gas is expected to be similar to that of its peers. As discussed by Company witness Alan D. Felsenthal,[49] the Company has incorporated the lower tax provision and the flowback of excess accumulated deferred income taxes in its cost of service, which reduce its cash flows. In addition, the Company is no longer able to use bonus depreciation as a financing source for its capital expenditures. As a result, the TCJA's effect on the Company represents a meaningful reduction to its cash

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[47] *See*, Moody's Investors Service, *Announcement: Moody's changes the US regulated utility sector outlook to negative from stable*, June 18, 2018.

[48] *Id.*

[49] Exhibit P-9, Direct Testimony of Alan D. Felsenthal.

flows. As a consequence, South Jersey Gas will require access to the capital markets on a more frequent basis to finance its capital investments, including significant investments in infrastructure replacement. The need to more frequently access external capital, together with the dilution of its cash flow-related credit metrics, creates additional risks and challenges for the Company.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THE DATA AND INFORMATION REGARDING THE TCJA DISCUSSED ABOVE?

A. There is little question the TCJA has increased cash flow-related risks, and created the potentially dilutive effects of additional equity issuances, for utilities. Those risks are reflected in the comments of financial participants such as Moody's, S&P, and Fitch. Further, because non-regulated companies may benefit from the TCJA in ways utilities cannot, it is reasonable to conclude investors have begun to see utilities as less attractive relative to other industry sectors. Lastly, the dilution in cash flow may increase short-term borrowing requirements to fund day-to-day utility operations. Because those effects weigh against utilities, we should focus on the upper end of the range of analytical results.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM YOUR ANALYSES OF THE CURRENT CAPITAL MARKET ENVIRONMENT, AND HOW DO THOSE CONCLUSIONS AFFECT YOUR ROE RECOMMENDATION?

A. Because certain models used to estimate the Cost of Equity require long-term assumptions, it is important to understand whether those assumptions hold. The current market environment is one in which changes in interest rates may be associated with events, more than they are a function of fundamental economic conditions. Further, utility valuations have a limit, even when investors look to them for an alternate source of income as interest rates fall.

On balance, it remains important to consider changes in market conditions, the likely causes of those changes, and how model results are affected by them. Those assessments necessarily involve the application of reasoned and experienced judgment. As discussed throughout my Direct Testimony, that judgment supports my recommended range of 10.00 percent to 10.70 percent.

VIII. CAPITAL STRUCTURE

Q. WHAT IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE?

A. In this proceeding, the Company proposes a ratemaking capital structure that consists of 54.18 percent common equity and 45.82 percent long-term debt which, as I explain below, is consistent with the proxy group. The Company's proposed common equity is significantly lower than the Company's actual common equity ratio as of December 31, 2019, which was 67.21 percent (discussed below).

Q. IS THERE A GENERALLY ACCEPTED APPROACH TO ASSESSING THE CAPITAL STRUCTURE FOR A REGULATED NATURAL GAS UTILITY?

A. Yes, there is. In general, it is important to consider the capital structure in light of industry norms and investor requirements. That is, the capital structure should be reasonably consistent with industry practice, and enable the subject company to maintain its financial integrity, thereby enabling access to capital at competitive rates under a variety of economic and financial market conditions.

Q. HOW DOES THE CAPITAL STRUCTURE AFFECT THE COST OF CAPITAL?

A. It is well understood that from a financial perspective, there are two general categories of risk: business risk and financial risk. Business risk includes operating, market, regulatory, and competitive uncertainties, while financial risk is the incremental risk to investors associated with additional levels of debt. As such, the capital structure relates to a Company's financial risk, which represents the risk that a company may not have adequate cash flows to meet its financial obligations, and is a function of the percentage of debt (or financial leverage) in its capital structure. In that regard, as the percentage of debt in the capital structure increases, so do the fixed obligations for the repayment of that debt. Consequently, as the degree of financial leverage increases, the risk of financial distress (*i.e.*, financial risk) also increases. In essence, even if two firms face the same business risks, a company with meaningfully higher levels of debt in its capital structure is likely to have a higher cost of both debt and equity.[50] Because the capital structure can affect the subject company's overall level of risk, it is an important consideration in establishing a just and reasonable rate of return.

Q. IS THERE SUPPORT FOR THE PROPOSITION THAT THE CAPITAL STRUCTURE IS A KEY CONSIDERATION IN ESTABLISHING AN APPROPRIATE RETURN ON EQUITY?

A. Yes. The Supreme Court and various utility commissions have long recognized the role of capital structure in the development of a just and reasonable rate of return for a

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[50] *See,* Modigliani & Miller Pro position II. The cost of equity capital increases with the percentage of debt in the capital structure. In fact , $ROE = Ro + \frac{D}{E}\, x\ (Ro - Rd)$ where *Ro* is the cost of capital if the firm were financed entirely with equity and *Rd* is the cost of debt.

regulated utility. In particular, a utility's leverage, or debt ratio, has been explicitly recognized as an important element in determining a just and reasonable rate of return:

> Although the determination of whether bonds or stocks should be issued is for management, the matter of debt ratio is not exclusively within its province. Debt ratio substantially affects the manner and cost of obtaining new capital. It is therefore an important factor in the rate of return and must necessarily be considered by and come within the authority of the body charged by law with the duty of fixing a just and reasonable rate of return.[51]

Perhaps ultimate authority for balancing the issues of cost and financial integrity is found in the Supreme Court's statement in *Hope Natural Gas*:

> The rate-making process under the Act, i.e., the fixing of "just and reasonable' rates, involves a balancing of the investor and the consumer interests." 320 U.S. at 603, 64 S. Ct. at 288. The equity investor's stake is made less secure as the company's debt rises, but the consumer rate-payer's burden is alleviated.[52]

Consequently, the principles of fairness and reasonableness with respect to the allowed rate of return and capital structure are considered at both the federal and state levels.

Q. IS THE COMPANY'S PROPOSED EQUITY RATIO OF 54.18 PERCENT GENERALLY CONSISTENT WITH THE EQUITY RATIOS THAT RECENTLY HAVE BEEN APPROVED BY THE BOARD FOR NEW JERSEY'S OTHER GAS DISTRIBUTION UTILITIES?

A. Yes. The Board most recently approved rates for Public Service Electric and Gas Company and New Jersey Natural Gas Company that reflect a 54.00 percent equity ratio.[53]

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[51] *New England Telephone & Telegraph Co. v. State, 98 N.H. 211, 220, 97 A.2d 213, 220 (1953), citing New England Tel. & Tel. Co. v. Department of Pub. Util., (Mass.) 327 Mass. 81, 97 N.E. 2d 509, 514; Petitions of New England Tel. & Tel. Co. 116 Vt. 480, 80 A2d 671.*

[52] *Communications Satellite Corp. et. al. v. FCC, 198 U.S. App. D.C. 60, 63-64611 F.2d 883.*

[53] *See,* Agenda Item: 2K dated 10/29/18 in BPU Docket Nos. ER18010029, GR18010030, AX18010001, and ER18030231; OAL Docket Nos. PUC 01151-18 and PUC 07232-2018N; and Agenda Item: 2D dated 11/13/19 in BPU Docket Nos. GR19030420 and GR18101096; OAL Docket No. 06769-2019S. The Board also has approved rates that reflect a 51.50 percent equity component for Elizabethtown Gas Company. *See*, Agenda Item: 2C dated 11/13/19 in BPU Docket No. GR19040486; OAL Docket No. PUC 06692-2019N.,

Q. WHAT IS SOUTH JERSEY GAS' ACTUAL CAPITAL STRUCTURE?

A. South Jersey Gas' actual capital structure as of December 31, 2019 reflects a 66.88 percent equity ratio. Please see Table 7 (below).

Table 7: Actual Capital Structure as of December 31, 2019[54]

	Amount	Percent of Capital
Common Equity	$1,117,771,678	66.88%
Long-Term Debt	$553,446,000	33.12%
Total Capitalization	$1,671,217,678	100.00%

Q. WHY HAVE YOU EXCLUDED SHORT-TERM DEBT FROM THE COMPANY'S RATEMAKING CAPITAL STRUCTURE?

A. There are several reasons why short-term debt should be excluded. First, prudent financing practice calls for long-term assets (such as rate base items) to be financed with long-term securities (the "matching principle"). Doing otherwise would expose the Company's customers to both refinancing risk (that is, the risk of not being able to roll-over short-term debt as it comes due), and interest rate risk (incurring higher interest costs as maturing short-term debt is refinanced). Although short-term debt may be used as an interim source of financing (that is, until a sufficiently large balance has been accumulated to be efficiently financed by long-term securities), it should not be seen as a permanent source of capital. Rather short-term debt is more appropriate to fund non-rate base items recovered over shorter durations of time under the Company's Tariff for Gas Service including site investigation and remediation costs that are recovered through the Remediation Adjustment Clause ("RAC"), energy efficiency costs that are recovered

54 Company-provided data.

through the Energy Efficiency Tracker ("EET"), and gas costs that are recovered through the Basic Gas Supply Service Charge ("BGSS").

Second, although short-term debt may be used, at least in part, to fund Construction Work In Progress ("CWIP"), the Company has not requested that CWIP be part of the rate base. Because CWIP is not reflected in its rate base, the short-term debt balance associated with CWIP should not be part of the ratemaking capital structure.

Lastly, even when short-term debt is not included in the ratemaking capital structure, customers still realize the benefit of short-term debt in the determination of the Allowance for Funds Used During Construction ("AFUDC") rate that is applied to CWIP. That approach, which matches short-term funding requirements with short-term sources of funds, reduces costs to customers, and mitigates the refinancing and interest risks noted above.

Q. PLEASE EXPLAIN THE "MATURITY MATCHING" PRINCIPLE.

A. Like other utilities, South Jersey Gas follows the long-used financing practice, sometimes referred to as "maturity matching", in which the lives of assets being financed are matched with the maturity of the securities issued to finance those assets. Under that practice, the overall term structure of the utility's long-term liabilities – including both debt and equity – correspond to the life of its long-term assets. As noted by Brigham and Houston, "[t]his strategy minimizes the risk that the firm will be unable to pay off its maturing obligations." Brigham and Houston went on to note that:

> In practice, firms don't finance each specific asset with a type of capital that has a maturity equal to the asset's life. However, academic studies do show that most firms tend to finance short-term assets from short-

term sources and long-term assets from long-term sources.[55]

As a matter of industry practice, it would be unusual for a company such as South Jersey Gas to permanently fund its long-lived assets with short-term debt.

Q. IS SHORT-TERM DEBT SOMETIMES USED AS AN INTERIM SOURCE OF FINANCING?

A. Yes, but that does not mean it should be included in the ratemaking capital structure. In my practical experience, cash requirements associated with capital investments may be temporarily funded with short-term debt, until the balances are sufficiently large that it becomes cost-effective to roll those balances into long-term securities. Long-term securities, such as debt and equity, typically are issued in relatively large, discrete amounts; fixed costs and other constraints (such as legal costs) effectively discourage relatively small issuances because the effective cost rate would be prohibitively high. Short-term debt, within the constraints of lending covenants and financial liquidity requirements (that is, maintaining borrowing capacity to fund near-term, unforeseen needs) provides a vehicle to fund investment requirements until a sufficiently large balance has been accumulated to be efficiently refinanced on a long-term basis. It is not, however, a vehicle used to permanently fund those investments. Rather, short-term debt matches more appropriately as a funding source for CWIP, which is relatively short-lived for gas distribution companies, due to most plant projects closing within a year or less.

In summary, although short-term debt may temporarily fund capital investments, such as CWIP, it is not an appropriate source of permanent financing. If a utility were to

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[55] Brigham, Eugene F. and Joel F. Houston, Fundamentals of Financial Management, Concise 4th Ed., Thomson South-Western, 2004, p. 574.

use short-term debt for that purpose, it would reduce the borrowing capacity needed to fund working capital requirements, and expose customers to both refinancing risk and interest rate risk. For those reasons, and consistent with my experience, it is not the practice of natural gas utilities to fund permanent assets with short-term debt.

Q. WHAT DO YOU CONCLUDE FROM YOUR ANALYSES REGARDING SHORT-TERM DEBT?

A. First, although short-term debt may be used as a source of interim financing, it is not used to finance long-lived assets on a permanent basis. Rather, the long-term assets included in rate base are financed with securities of correspondingly long lives – common equity, and long-term debt. Doing otherwise (that is, financing long-term assets with short-term debt) would expose the Company and its customers to both refinancing risk, and interest rate risk.

Second, although short-term debt may be used to finance CWIP and other non-rate base items such as the RAC, EET and BGSS, the Company has not included any of these balances in its rate base. Because these components are not included in the Company's rate base, nor should short-term debt associated with these components be part of its ratemaking capital structure.

Q. DOES THE COMPANY HAVE ANY ANTICIPATED FINANCING PLANS?

A. Yes, the Company plans to issue up to $400 million of additional long-term debt and $9.5 million of common equity during the test year to refinance maturing debt and fund its capital expenditure program. The Company's *pro forma* capital structure, reflecting those issuances is shown in Table 8 below and reflects an equity ratio of 54.18 percent.

Table 8: *Pro Forma* Capital Structure

	Capital	New Debt Issuance	*Pro Forma* Capital	Percent of Capital
Common Equity	$1,117,771,678	$9,500,000	$1,127,271,678	54.18%
Long-Term Debt	$553,446,000	$400,000,000	$953,446,000	45.82%
Total Capitalization	$1,671,217,678	$409,500,000	$2,080,717,678	100.00%

Q. HOW DOES THE COMPANY'S PROPOSED EQUITY RATIO COMPARE TO THE PROXY COMPANIES' CAPITAL STRUCTURES?

A. It is important to keep in mind that the proxy group has been selected to reflect comparable companies in terms of financial and business risk. As such, it is appropriate to review the proxy companies' capital structures as a means of assessing whether the proposed capital structure is consistent with industry practice. To the extent the Company's proposed capital structure differs from industry practice, the difference in financial risk should be considered when estimating its required Cost of Equity.

To make that assessment, I calculated the average capital structure for the operating utilities held within the proxy companies over the last eight quarters (*see*, Schedule RBH-11). The mean of the proxy group actual capital structures is 54.33 percent common equity and 45.67 percent long-term debt; the common equity ratios range from 49.31 percent to 62.04 percent.

Q. WHAT IS THE BASIS FOR USING AVERAGE CAPITAL COMPONENTS RATHER THAN A POINT-IN-TIME MEASUREMENT?

A. Measuring the capital components at a particular point in time can skew the capital structure by the specific circumstances of a particular period. Therefore, it is more appropriate to normalize the relative relationship between the capital components over a period of time.

Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S PROPOSED RATEMAKING CAPITAL STRUCTURE IN RELATION TO YOUR PROXY GROUP?

A. The proposed capital structure is consistent with, if not slightly below, those in place among the proxy companies. As such, I find it reflects industry practice, and should be adopted in this proceeding.

IX. WEIGHTED AVERAGE COST OF CAPITAL

Q. HAVE YOU CALCULATED THE COMPANY'S WEIGHTED AVERAGE COST OF CAPITAL UTILIZING THE PROPOSED RATEMAKING CAPITAL STRUCTURE?

A. Yes, I used 54.18 percent and 45.82 percent common equity and long-term debt ratios, respectively. For cost rates, I applied my recommended Return on Equity of 10.40 percent, and an embedded cost of long-term debt of 3.731 percent.

Q. HOW DID YOU CALCULATE THE EMBEDDED COST OF LONG-TERM DEBT?

A. The Company currently has fifteen issuances of senior debt with a combined total principal amount of $553.45 million maturing between 2024 and 2047. As noted earlier, the Company plans to issue up to an additional $400 million of first mortgage bonds before the end of 2020. Table 9, below, provides the overall embedded cost of long-term debt of 3.731 percent.

Table 9: Embedded Cost of Long-Term Debt[56]

Maturity	Principal	Unamortized Debt Issuance Costs and Reacquired Debt Costs	Net Principal	Coupon Rate	Annual Interest	Annual Debt Issuance Costs	Total Annual Costs	All-In Cost of Debt
09/20/24	$40,000,000	$164,684	$39,835,316	3.000%	$1,200,000	$35,780	$1,235,780	3.102%
11/30/24	$28,000,000	$98,909	$27,901,091	3.030%	$848,400	$20,057	$868,457	3.113%
12/30/25	$4,546,000	$40,338	$4,505,662	3.630%	$165,020	$6,816	$171,836	3.814%
03/01/26	$15,000,000	$165,343	$14,834,657	4.840%	$726,000	$26,469	$752,469	5.072%
06/30/26	$45,000,000	$192,612	$44,807,388	4.930%	$2,218,500	$29,664	$2,248,164	5.017%
12/30/27	$45,000,000	$213,423	$44,786,577	4.030%	$1,813,500	$27,048	$1,840,548	4.110%
11/21/30	$34,000,000	$245,991	$33,754,009	4.010%	$1,363,400	$22,847	$1,386,247	4.107%
01/30/30	$30,000,000	$153,186	$29,846,814	4.230%	$1,269,000	$15,403	$1,284,403	4.303%
04/01/32	$35,000,000	$449,548	$34,550,452	3.740%	$1,309,000	$37,207	$1,346,207	3.896%
07/15/33	$32,000,000	$854,838	$31,145,162	5.550%	$1,776,000	$63,807	$1,839,807	5.907%
08/01/34	$10,000,000	$163,334	$9,836,666	6.213%	$621,300	$11,356	$632,656	6.432%
09/14/35	$10,000,000	$375,850	$9,624,150	5.450%	$545,000	$24,195	$569,195	5.914%
04/01/36	$24,900,000	$954,961	$23,945,039	3.430%	$854,070	$57,997	$912,067	3.809%
01/25/47	$200,000,000	$1,648,532	$198,351,468	3.000%	$6,000,000	$61,681	$6,061,681	3.056%
New Issuance	$400,000,000	$2,600,000	$397,400,000	3.495%	$13,980,000	$136,194	$14,116,194	3.552%
Total	$953,446,000	$8,321,550	$945,124,450	3.638%	$34,689,190	$576,521	$35,265,710	3.731%

Q. WHAT IS THE RESULTING WEIGHTED AVERAGE COST OF CAPITAL?

A. Based on the 54.18 percent and 45.82 percent Common Equity and Long-Term Debt ratios, respectively, and 10.40 percent and 3.731 percent for Return on Equity and cost of long-term debt, respectively, the Company's weighted average cost of capital is 7.344 percent (*see*, Table 10, below).

Table 10: Weighted Average Cost of Capital

	Weight	Cost Rate	Weighted Average Cost of Capital
Common Equity	54.18%	10.400%	5.634%
Long-Term Debt	45.82%	3.731%	1.710%
Total Capitalization	100.00%		7.344%

56 Company-provided data. Annual debt costs for new issuance assumes $2.6 million of costs amortized over a 19-year life.

X. <u>CONCLUSIONS AND RECOMMENDATION</u>

Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S COST OF EQUITY?

A. As discussed earlier in my Direct Testimony, it is prudent and appropriate to consider multiple methodologies to arrive at an ROE recommendation for South Jersey Gas. I have performed several analyses to estimate the Company's Cost of Equity and have considered several market-wide and Company-specific issues. Given those considerations, I believe an ROE in the range of 10.00 percent to 10.70 percent represents the range of equity investors' required rate of return for investment in natural gas utilities, like South Jersey Gas, in today's capital markets. Within that range, it is my view that an ROE of 10.40 percent is reasonable and appropriate.

As discussed earlier in my Direct Testimony, my recommendation reflects analytical results based on a proxy group of natural gas utilities. My recommendation also considers (but does not make specific adjustments for) other factors, including the Company's comparatively small size, and the direct costs associated with equity issuances.

Q. PLEASE ALSO SUMMARIZE YOUR CONCLUSIONS REGARDING THE COMPANY'S PROPOSED CAPITAL STRUCTURE, AND OVERALL WEIGHTED AVERAGE COST OF CAPITAL.

A. The Company's expected capital structure, which includes approximately 54.18 percent Common Equity and 45.82 percent Long-Term Debt is highly consistent with industry practice; from that perspective, it is reasonable and appropriate. That capital structure, together the Common Equity and Long-Term Debt cost rates of 10.40 percent and 3.731

percent, respectively, indicates an overall Weighted Average Cost of Capital of 7.344 percent, which I also find to be reasonable and appropriate.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

APPENDIX A: PROXY GROUP SELECTION

Q. HOW DID YOU SELECT THE COMPANIES INCLUDED IN YOUR PROXY GROUP?

A. I began with the universe of companies that Value Line classifies as Natural Gas Utilities, which includes ten domestic U.S. utilities, and applied the following screening criteria:

- Because certain of the models used in my analyses assume that earnings and dividends grow over time, I excluded companies that do not consistently pay quarterly cash dividends;
- To ensure that the growth rates used in my analyses are not biased by a single analyst, all the companies in my proxy group are covered by at least two utility industry equity analysts;
- All the companies in my proxy group have investment grade senior unsecured bond and/or corporate credit ratings from S&P;
- To incorporate companies that are primarily regulated gas distribution utilities, I included companies with at least 60.00 percent of operating income derived from regulated natural gas utility operations; and
- I eliminated companies currently known to be party to a merger, or transformative transaction.

Q. DID YOU INCLUDE SJI IN YOUR PROXY GROUP?

A. No. To avoid the circular logic that would otherwise occur, it has been my consistent practice to exclude the subject company (or its parent) from the proxy group. That is, it would be inappropriate to include SJI in the proxy group because South Jersey Gas is an indirectly wholly owned subsidiary of SJI. Because SJI's earnings are affected by South Jersey Gas' operations, SJI is not an appropriate "proxy".

Q. WHAT COMPANIES MET THOSE SCREENING CRITERIA?

A. The criteria discussed above resulted in a proxy group of the following six companies:

Table 11: Proxy Group Screening Results

Company	**Ticker**
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
Northwest Natural Holding Company	NWN
ONE Gas, Inc.	OGS
Southwest Gas Holdings, Inc.	SWX
Spire Inc.	SR

APPENDIX B

A. CONSTANT GROWTH DCF MODEL

Q. PLEASE DESCRIBE THE THEORY BEHIND THE DCF APPROACH.

A. The Constant Growth DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. DCF theory assumes that an investor buys a stock for an expected total return rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate). In its simplest form, the Constant Growth DCF model expresses the Cost of Equity as the discount rate that sets the current price equal to expected cash flows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_t}{(1+k)^t} \quad [4]$$

where P_0 represents the current stock price, $D_1 \ldots D_t$ represent expected future dividends, and k is the discount rate, or required ROE. Equation [4] is a standard present value calculation that can be simplified and rearranged into the familiar form:

$$k = \frac{D(1+g)}{P_0} + g \quad [5]$$

Equation [5] often is referred to as the "Constant Growth DCF" model, in which the first term is the expected dividend yield and the second term is the expected long-term annual growth rate in perpetuity.

Q. WHAT ASSUMPTIONS UNDERLIE THE CONSTANT GROWTH DCF MODEL?

A. The Constant Growth DCF model assumes: (1) earnings, book value, and dividends all grow at the same, constant rate in perpetuity; (2) the dividend payout ratio remains constant; (3) the Price to Earnings ("P/E") multiple remains constant in perpetuity; (4) the discount rate (that is, the estimated Cost of Equity) is greater than the expected growth rate; and (5) the calculated Cost of Equity remains constant, also in perpetuity. These simplifying assumptions, which may become more or less relevant as market conditions change, are required to derive the familiar Constant Growth DCF model provided in Equation [5].

Q. WHAT MARKET DATA DID YOU USE TO CALCULATE THE DIVIDEND YIELD IN YOUR CONSTANT GROWTH DCF MODEL?

A. The dividend yield is based on the proxy companies' current annualized dividend, and average closing stock prices over the 30-, 90-, and 180-trading day periods as of January 31, 2020.

Q. WHY DID YOU USE THREE AVERAGING PERIODS TO CALCULATE AN AVERAGE STOCK PRICE?

A. I did so to ensure the model's results are not skewed by anomalous events that may affect stock prices on any given trading day. At the same time, the averaging period should be reasonably representative of expected capital market conditions over the long term. In my view, using 30-, 90-, and 180-day averaging periods reasonably balances those concerns.

Q. DID YOU MAKE ANY ADJUSTMENTS TO THE DIVIDEND YIELD TO ACCOUNT FOR PERIODIC GROWTH IN DIVIDENDS?

A. Yes, I did. Because utilities increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is appropriate to calculate the expected dividend yield by applying one-half of the long-term growth rate to the current dividend yield.[57] That adjustment ensures that the expected dividend yield is

[57] *See*, Schedule RBH-2.

representative of the coming 12-month period and does not overstate the dividends to be paid during that time.

Q. IS IT IMPORTANT TO SELECT APPROPRIATE MEASURES OF LONG-TERM GROWTH IN APPLYING THE DCF MODEL?

A. Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation [5] above) assumes a single growth estimate in perpetuity. To reduce the long-term growth rate to a single measure, we must assume a fixed payout ratio, and that earnings per share ("EPS"), dividends per share ("DPS"), and book value per share all grow at the same constant rate in perpetuity. Because dividend growth can only be sustained by earnings growth, the model should incorporate a variety of long-term earnings growth estimates. That can be accomplished by averaging measures of long-term growth that tend to be least influenced by capital allocation decisions that companies may make in response to near-term changes in the business environment. Because such decisions may directly affect near-term dividend payout ratios, estimates of earnings growth are more indicative of long-term investor expectations than are dividend growth estimates. For the purposes of the Constant Growth DCF model, therefore, growth in EPS represents the appropriate measure of long-term growth.

Q. PLEASE SUMMARIZE THE FINDINGS OF ACADEMIC RESEARCH ON THE APPROPRIATE MEASURE OF GROWTH FOR ESTIMATING EQUITY RETURNS USING THE DCF MODEL.

A. The relationship between various growth rates and stock valuation metrics has been the subject of much academic research.[58] As noted over 40 years ago by Charles Phillips in The Economics of Regulation:

> For many years, it was thought that investors bought utility stocks largely on the basis of dividends. More recently, however, studies indicate that the market is valuing utility stocks with reference to total per share earnings, so that the earnings-price ratio has assumed increased emphasis in rate cases.[59]

Philips' conclusion continues to hold true. Subsequent academic research has clearly and consistently indicated that measures of earnings and cash flow are strongly related to returns, and that analysts' forecasts of growth are superior to other measures of growth in predicting stock prices.[60] For example, Vander Weide and Carleton state that, "[our] results … are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions."[61]

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[58] *See,* Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

[59] Charles F. Phillips, Jr., The Economics of Regulation, at 285 (Rev. ed. 1969).

[60] *See, e.g.*, Andreas C. Christofi, Petros C. Christofi, Marcus Lori and Donald M. Moliver, *Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate*, Journal of Investing (Spring 1999); Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, 21 (Summer 1992); and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

[61] James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988). The Vander Weide and Carleton study was updated in 2004 under the direction of Dr. VanderWeide. The results of the updated study were consistent with the original study's conclusions.

Other research specifically notes the importance of analysts' growth estimates in determining the Cost of Equity, and in the valuation of equity securities. Dr. Robert Harris noted that "a growing body of knowledge shows that analysts' earnings forecast are indeed reflected in stock prices."[62] Citing Cragg and Malkiel, Dr. Harris notes that those authors "found that the evaluations of companies that analysts make are the sorts of ones on which market valuation is based."[63] Similarly, Brigham, Shome and Vinson noted that "evidence in the current literature indicates that (i) analysts' forecasts are superior to forecasts based solely on time series data; and (ii) investors do rely on analysts' forecasts."[64]

To that point, the research of Vander Weide and Carleton demonstrates that earnings growth projections have a statistically significant relationship to stock valuation levels, while dividend growth rates do not.[65] Those findings suggest that investors form their investment decisions based on expectations of growth in earnings, not dividends. Consequently, earnings growth, not dividend growth, is the appropriate estimate for the purpose of the Constant Growth DCF model.

Q. PLEASE SUMMARIZE YOUR INPUTS TO THE CONSTANT GROWTH DCF MODEL.

A. I applied the DCF model to the proxy group of natural gas utility companies using the following inputs for the price and dividend terms:

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62 Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

63 *Ibid*.

64 Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management (Spring 1985).

65 *See,* Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

- The average daily closing prices for the 30-, 90-, and 180-trading days ended January 31, 2020, for the term P_0; and
- The annualized dividend per share as of January 31, 2020, for the term D_0.

I then calculated my DCF results using each of the following growth terms:

- The Zacks consensus long-term earnings growth estimates;
- The First Call consensus long-term earnings growth estimates;
- The Value Line long-term earnings growth estimates; and
- The Retention Growth estimates.[66]

Q. PLEASE DESCRIBE THE RETENTION GROWTH ESTIMATE AS APPLIED IN YOUR DCF MODEL.

A. The Retention Growth model, which is a generally recognized and widely taught method of estimating long-term growth, is an alternative approach to the use of analysts' earnings growth estimates. The model estimates growth as a function of (1) expected earnings, and (2) the extent to which earnings are retained. In its simplest form, the model represents long-term growth as the product of the retention ratio (*i.e.*, the percentage of earnings not paid out as dividends (referred to below as "b") and the expected return on book equity (referred to below as "r")). Thus, the simple "b x r" form of the model projects growth as a function of internally generated funds. That form of the model is limiting, however, in that it does not provide for growth funded from external equity.

The "br + sv" form of the Retention Growth estimate used in my DCF analysis is meant to reflect growth from both internally generated funds (*i.e.*, the "br" term) and from issuances of equity (*i.e.*, the "sv" term). The first term, which is the product of the

[66] *See,* Schedule RBH-3.

retention ratio (*i.e.*, "b", or the portion of net income not paid in dividends) and the expected Return on Equity (*i.e.*, "r") represents the portion of net income that is "plowed back" into the Company as a means of funding growth. The "sv" term is represented as:

$$\left(\frac{m}{b} - 1\right) x \text{ Growth rate in Common Shares} \quad [6]$$

where $\frac{m}{b}$ is the Market-to-Book ratio. In this form, the "sv" term reflects an element of growth as the product of (a) the growth in shares outstanding, and (b) that portion of the market-to-book ratio that exceeds unity. As shown in Schedule RBH-3, all components of the Retention Growth model may be derived from data provided by Value Line.

Q. HOW DID YOU CALCULATE THE DCF RESULTS?

A. For each proxy company, I calculated the mean low, mean, and mean high DCF results by using the maximum EPS growth rate as reported by Value Line, Zacks, First Call, and the Retention Growth method for each proxy group company in combination with the dividend yield for each of the proxy companies. The proxy group mean high results then reflect the mean of the maximum DCF results for the proxy group as a whole. I used a similar approach to calculate the proxy group mean low results using instead the minimum of the Value Line, Zacks, First Call, and Retention Growth method growth rates for each company. In Schedule RBH-2, I also have presented the median results to reflect the atypically high Value Line growth rate for Northwest Natural Gas Company (27.00 percent), which reflects the company's unusual losses in 2017.

Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF ANALYSIS?

A. My Constant Growth DCF results are summarized in Table 12, below (*see,* also, Schedule RBH-2).

Table 12: Constant Growth DCF Model Results[67]

	Mean Low	Mean	Mean High
30-Day Average	7.45%	9.86%	14.08%
90-Day Average	7.46%	9.88%	14.10%
180-Day Average	7.42%	9.83%	14.06%
	Median Low	**Median**	**Median High**
30-Day Average	7.32%	9.35%	11.48%
90-Day Average	7.36%	9.39%	11.41%
180-Day Average	7.35%	9.42%	11.27%

B. CAPM ANALYSIS

Q. PLEASE DESCRIBE THE GENERAL FORM OF THE CAPM ANALYSIS.

A. The CAPM analysis is a risk premium method that estimates the Cost of Equity for a given security as a function of a risk-free return plus a risk premium (to compensate investors for the non-diversifiable or "systematic" risk of that security). The CAPM describes the relationship between a security's investment risk and the market rate of return. The CAPM assumes that all other risk, *i.e.*, all non-market or unsystematic risk, can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. In addition, the CAPM presumes that investors require compensation only for systematic risk that is the result of macroeconomic and other events that affect the returns on all assets.

As shown in Equation [7], the CAPM is defined by four components, each of which theoretically must be a forward-looking estimate:

$$K_e = r_f + \beta(r_m - r_f) \quad [7]$$

67 *See,* Schedule RBH-2.

where:

k = the required market ROE for a security;

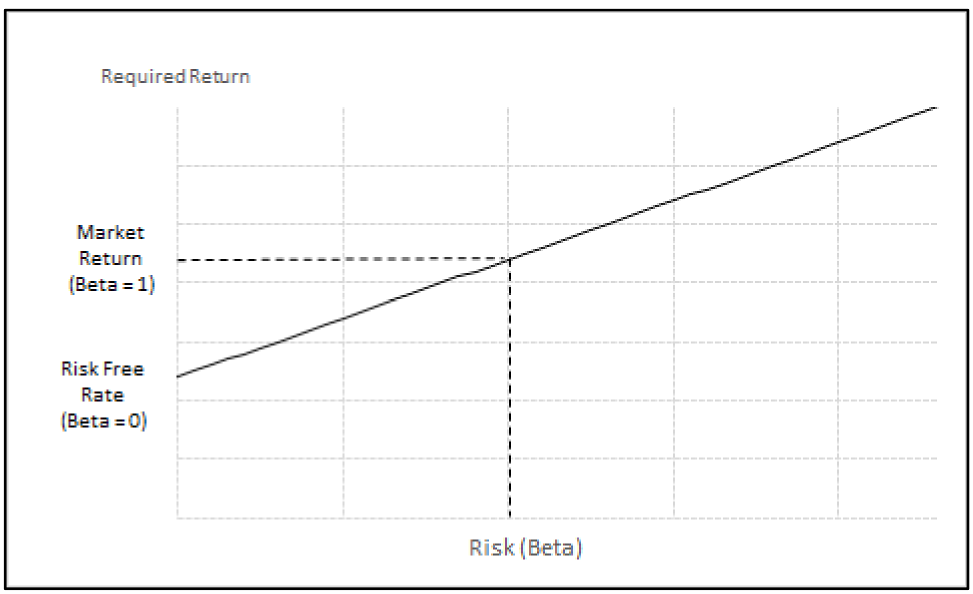
β = the Beta coefficient of that security;

r_f = the risk-free rate of return; and

r_m = the required return on the market as a whole.

Equation [7] describes the Security Market Line ("SML"), or the CAPM risk-return relationship, which is graphically depicted in Chart 9 below. The intercept is the risk-free rate (r_f) which has a Beta coefficient of zero, the slope is the expected market risk premium ($r_m - r_f$). By definition, r_m, the return on the market has a Beta coefficient of 1.00. CAPM states that in well-behaving capital markets, the expected equity risk premium on a given security is proportional to its Beta coefficient.

Chart 9: Security Market Line



Intuitively, higher Beta coefficients indicate the subject company's returns have been relatively volatile and have moved in tandem with the overall market. Consequently, if a company has a Beta coefficient of 1.00, it is considered as risky as the market and does not provide diversification benefit.

In Equation [7], the term (r_m – r_f) represents the Market Risk Premium.[68] According to the theory underlying the CAPM, because unsystematic risk can be diversified away by adding securities to investment portfolios, the market will not compensate investors for bearing that risk. Therefore, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

$$\beta_j = \frac{\sigma_j}{\sigma_m} \, x \, \rho_{j,m} \quad [8]$$

where σ_j is the standard deviation of returns for company "j," σ_m is the standard deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and $\rho_{j,m}$ is the correlation of returns in between company j and the broad market. The Beta coefficient therefore represents both relative volatility (*i.e.*, the standard deviation) of returns, and the correlation in returns between the subject company and the overall market.

Q. DID YOU APPLY A SECOND FORM OF THE CAPM?

A. Yes. I also applied the "Empirical CAPM" approach (also referred to as the ECAPM). The Empirical CAPM calculates the product of the adjusted Beta coefficient and the Market Risk Premium, and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the Market Risk Premium, without any effect from the Beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the Empirical CAPM result, as provided in Equation [9]:

[68] The Market Risk Premium is defined as the incremental return of the market over the risk-free rate.

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [9]$$

Q. WHY DID YOU CONSIDER THE ECAPM METHOD IN YOUR ANALYSIS?

A. Numerous tests have measured the extent to which security returns and Beta coefficients are related as predicted by the CAPM. The ECAPM reflects the finding that the actual SML described by the CAPM formula is not as steeply sloped as the predicted SML.[69] For example, Fama and French state that "[t]he returns on the low Beta portfolios are too high, and the returns on the high Beta portfolios are too low."[70] Similarly, as noted in Dr. Roger Morin's New Regulatory Finance:

> With few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.[71]

Simply, the ECAPM method addresses the tendency of the CAPM to underestimate the Cost of Equity for low-Beta coefficient companies, such as regulated utilities. In its text on Cost of Capital analysis for regulated industries, for example, the Brattle Group summarizes several studies estimating the alpha component of the ECAPM (*see*, Table 13, below).

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[69] *See*, Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 175. The Security Market Line plots the CAPM estimate on the Y-axis, and Beta coefficients on the X-axis.

[70] Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence", *Journal of Economic Perspectives*, Vol. 18, No. 3, Summer 2004, at 33.

[71] Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 175.

Table 13: Empirical Evidence on the Alpha Factor in the ECAPM[72]

Author	Year of Study	Range of Alpha	Study Period
Black	1993	1% for betas 0.00 – 0.80	1931-1991
Black, Jensen and Scholes	1972	4.31%	1931-1965
Fama and McBeth	1972	5.76%	1935-1968
Fama and French	1992	7.32%	1941-1990
Fama and French	2004	N/A	N/A
Litzenberger and Ramaswamy	1979	5.32%	1936-1977
Litzenberger, Ramaswamy and Sosin	1980	1.63% – 3.91%	1936-1978
Pettengil, Sundaram and Mathar	1995	4.60%	1936-1979

Q. HAS THE ECAPM BEEN RECOGNIZED IN OTHER REGULATORY JURISDICTIONS?

A. Yes. For example, it has been used in Minnesota, Mississippi, and New York.[73]

Q. WHAT ASSUMPTIONS DID YOU INCLUDE IN YOUR CAPM AND ECAPM ANALYSES?

A. It is important to select the term (or maturity) of the risk-free rate that best matches the life of the underlying investment. Natural gas utilities typically are long-duration investments and, as such, the 30-year Treasury yield is more suitable for the purpose of calculating the Cost of Equity. As such, I used three different estimates of the risk-free

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72 Villadsen, Vilbert, Harris, and Kolbe, Risk and Return for Regulated Industries, 2017, Table 4.1 at 83. Alpha is an adjustment to the SML that increases the intercept and lowers the slope of the line.

73 Minnesota Public Utilities Commission, MPUC Docket No. G011/GR-15-736, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota, Findings of Fact, Conclusions of Law, and Recommendation*, August 19, 2016, at 29; Mississippi Public Service Commission, Docket No. 01-UN-0548, *Notice of Intent of Mississippi Power Company to Change Rates for Electric Service in its Certificated Areas in the Twenty-Three Counties of Southeast Mississippi*, Final Order, December 3, 2001, at 19; New York Public Service Commission, Case 16-G-0058, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of KeySpan Gas East Corporation d/b/a National Grid for Gas Service*, Order Adopting Terms of Joint Proposal and Establishing Gas Rate Plans, December 16, 2016, at 32.

rate: (1) the current 30-day average yield on 30-year Treasury bonds (*i.e.*, 2.25 percent)[74]; (2) the near-term projected 30-year Treasury yield (*i.e.*, 2.42 percent);[75] and (3) the long-term projected 30-year Treasury yield (*i.e.*, 3.45 percent).[76]

Q. WHY HAVE YOU RELIED ON THE 30-YEAR TREASURY YIELD FOR YOUR CAPM AND ECAPM ANALYSES?

A. In determining the security most relevant to the application of the CAPM (and ECAPM), it is important to select the term (or maturity) that best matches the life of the underlying investment. Because utility equity has a perpetual life, the 30-year Treasury yield is the appropriate measure of the risk-free rate.

Q. PLEASE DESCRIBE YOUR *EX-ANTE* APPROACH TO ESTIMATING THE MARKET RISK PREMIUM.

A. The approach is based on the market required return, less the current 30-year Treasury yield. To estimate the market required return, I calculated the market capitalization weighted average ROE based on the Constant Growth DCF model. To do so, I relied on data from two sources: (1) Bloomberg; and (2) Value Line.[77] With respect to Bloomberg-derived growth estimates, I calculated the expected dividend yield (using the same one-half growth rate assumption described earlier), and combined that amount with the projected earnings growth rate to arrive at the market capitalization weighted average DCF result. I performed that calculation for each of the companies for which Bloomberg

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74 Source: Bloomberg Professional.

75 *See,* Blue Chip Financial Forecasts, Vol. 39, No. 2, February 1, 2020, at 2. Consensus projections of the 30-year Treasury yield for the six quarters ending June 2021.

76 *See,* Blue Chip Financial Forecasts, Vol. 38, No. 12, December 1, 2019, at 14. Consensus projections of the 30-year Treasury yield for the periods 2021-2025 and 2026-2030.

77 *See,* Schedule RBH-4.

provided both dividend yields and consensus growth rates. I then subtracted the current 30-year Treasury yield from that amount to arrive at the DCF-derived *ex-ante* market risk premium estimate. In the case of Value Line, I performed the same calculation, again using all companies for which five-year earnings growth rates were available. The results of those calculations are provided in Schedule RBH-4.

Q. HOW DID YOU APPLY YOUR EXPECTED MARKET RISK PREMIUM AND RISK-FREE RATE ESTIMATES?

A. I relied on each of the *ex-ante* Market Risk Premiums discussed above, together with the current, near-term, and long-term projected 30-year Treasury bond yields as inputs to my CAPM and ECAPM analyses.

Q. WHAT BETA COEFFICIENT DID YOU USE IN YOUR CAPM AND ECAPM MODELS?

A. As shown in Schedule RBH-5, I considered the Beta coefficients reported by Value Line and Bloomberg, both of which adjust their calculated (or raw) Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00. A notable difference between the two is that Value Line calculates the Beta coefficient over a five-year period, whereas Bloomberg's calculation is based on two years of data.

Q. WHAT ARE THE RESULTS OF YOUR CAPM AND ECAPM ANALYSES?

A. The results of the CAPM and ECAPM analyses are summarized in Tables 14a and 14b, respectively, below (*see,* also, Schedule RBH-6).

Table 14a: Summary of CAPM Results[78]

	Bloomberg Derived Market Risk Premium	**Value Line Derived Market Risk Premium**
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (2.25%)	8.55%	9.15%
Near Term Projected 30-Year Treasury (2.42%)	8.71%	9.31%
Long Term Projected 30-Year Treasury (3.45%)	9.74 %	10.35%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (2.25%)	9.52%	10.22%
Near Term Projected 30-Year Treasury (2.42%)	9.69%	10.38%
Long Term Projected 30-Year Treasury (3.45%)	10.72%	11.42%

Table 14b: Summary of Empirical CAPM Results[79]

	Bloomberg Derived Market Risk Premium	**Value Line Derived Market Risk Premium**
Average Bloomberg Beta Coefficient		
Current 30-Year Treasury (2.25%)	9.77%	10.49%
Near Term Projected 30-Year Treasury (2.42%)	9.93%	10.65%
Long Term Projected 30-Year Treasury (3.45%)	10.97%	11.69%
Average Value Line Beta Coefficient		
Current 30-Year Treasury (2.25%)	10.50%	11.29%
Near Term Projected 30-Year Treasury (2.42%)	10.66%	11.45%
Long Term Projected 30-Year Treasury (3.45%)	11.70%	12.49%

78 *See*, Schedule RBH-6.
79 *See*, Schedule RBH-6.

C. BOND YIELD PLUS RISK PREMIUM APPROACH

Q. PLEASE DESCRIBE THE BOND YIELD PLUS RISK PREMIUM APPROACH.

A. This approach is based on the basic financial tenet that equity investors bear the residual risk associated with ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders are riskier than returns to bondholders, equity investors must be compensated for bearing that additional risk. Risk premium approaches, therefore, estimate the Cost of Equity as the sum of the equity risk premium and the yield on a particular class of bonds. Because the Equity Risk Premium is not directly observable, it typically is estimated using a variety of approaches, some of which incorporate *ex-ante*, or forward-looking, estimates of the Cost of Equity, and others that consider historical, or *ex-post*, estimates. An alternative approach is to use actual authorized returns for gas distribution companies to estimate the Equity Risk Premium.

Q. PLEASE EXPLAIN HOW YOU PERFORMED YOUR BOND YIELD PLUS RISK PREMIUM ANALYSIS.

A. As indicated above, I first defined the Risk Premium as the difference between authorized ROEs and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yields. I then gathered data from 1,147 natural gas rate proceedings between January 1, 1980 and January 31, 2020. I also calculated the average period between the filing of the case and the date of the final order (that is, the lag period). To reflect the prevailing level of interest rates during the pendency of the proceedings, I calculated the average 30-year Treasury yield over the average lag period (approximately 187 days).

Because the data cover several economic cycles[80], the analysis also may be used to assess the stability of the Equity Risk Premium. As noted above, the Equity Risk Premium is not constant over time; prior research has shown it is directly related to expected market volatility, and inversely related to the level of interest rates.[81] That finding is particularly relevant given the relatively low level of current Treasury yields.

Q. HOW DID YOU MODEL THE RELATIONSHIP BETWEEN INTEREST RATES AND THE EQUITY RISK PREMIUM?

A. The basic method used was regression analysis, in which the observed Equity Risk Premium is the dependent variable, and the average 30-year Treasury yield is the independent variable. Relative to the long-term historical average, the analytical period includes interest rates and authorized ROEs that are quite high during one period (*i.e.*, the 1980s) and that are quite low during another (*i.e.*, the post-Lehman bankruptcy period). To account for that variability, I used the semi-log regression, in which the Equity Risk Premium is expressed as a function of the natural log of the 30-year Treasury yield:

$$RP = \alpha + \beta(LN(T_{30}) \quad [10]$$

As shown on Chart 10 (below), the semi-log form is useful when measuring an absolute change in the dependent variable (in this case, the Risk Premium) relative to a proportional change in the independent variable (the 30-year Treasury yield).

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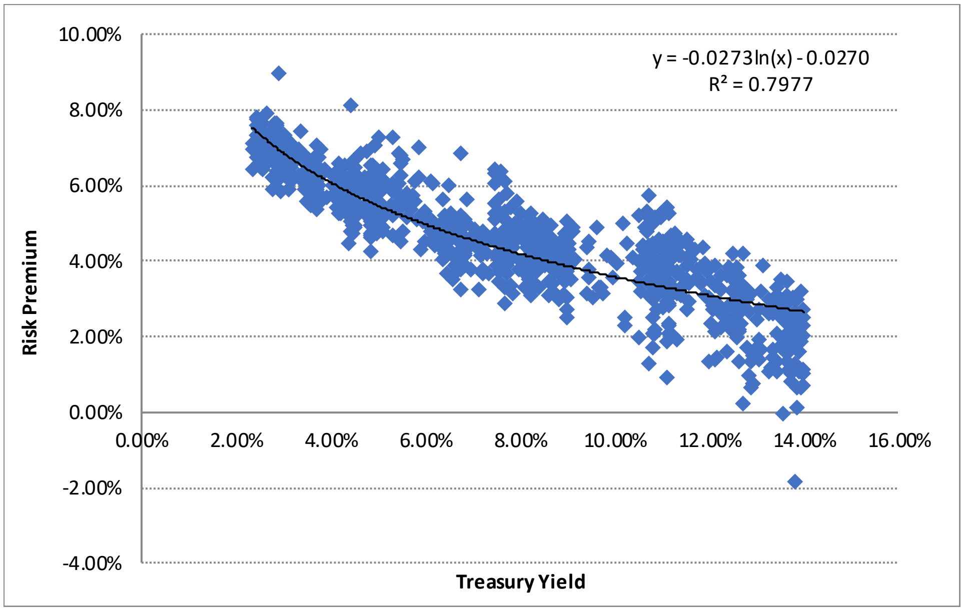
[80] *See*, National Bureau of Economic Research, *U.S. Business Cycle Expansion and Contractions*.

[81] *See*, *e.g.*, Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992, at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, Autumn 1995, at 89-95.

Chart 10: Equity Risk Premium[82]



As Chart 10 demonstrates, over time there has been a statistically significant, negative relationship between the 30-year Treasury yield and the Equity Risk Premium. An important consequence of that relationship is that simply applying the long-term average Equity Risk Premium of 4.76 percent would significantly understate the Cost of Equity. Based on the regression coefficients in Chart 10, however, the implied ROE is between 9.87 percent and 9.93 percent (*see*, Schedule RBH-7 and Table 15, below). [83]

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82 *See*, Schedule RBH-7.

83 I recognize that in 169 FERC ¶ 61,129, Opinion No. 569 (para. 340), the FERC chose to exclude the Risk Premium approach from the methods it will use to determine the ROE. I have long applied this method, and continue to do so. In addition, certain of the FERC's concerns with the Risk Premium method are not applicable in my analysis. For example, the data set used in my analyses contains over 1,600 observations across multiple jurisdictions. Further, the model's results closely follow authorized returns during and after the Federal Reserve's unconventional monetary policies (*see*, Opinion No. 569, para. 344). In addition, in my experience there is little difference between ROEs authorized in litigated versus settled cases. In any event, the Risk Premium approach has been applied by other witnesses, including Staff witnesses, in other state jurisdictions.

Table 15: Summary of Bond Yield Plus Risk Premium Results[84]

	Return on Equity
Current 30-Year Treasury (2.25%)	9.90%
Near Term Projected 30-Year Treasury (2.42%)	9.87%
Long Term Projected 30-Year Treasury (3.45%)	9.93%

D. EXPECTED EARNINGS ANALYSIS

Q. PLEASE DESCRIBE THE EXPECTED EARNINGS ANALYSIS.

A. The Expected Earnings approach supplements market-based models by highlighting information that is important to investors, providing a direct measure of the book-based return comparable-risk utilities are expected to earn. The standard revenue requirements formula explicitly recognizes the validity of book value of equity by choosing to measure capital structure based on book value rather than market value. Because it looks to the earnings expected of comparable-risk companies, the approach is consistent with the *Hope* and *Bluefield* "comparable return" standard. The Expected Earnings approach therefore provides a simple and direct measure of equity investors' expected opportunity cost on the book value of equity, without the need for assumptions regarding investor behavior.

I relied on Value Line's projected Return on Common Equity for the period 2022-2024, and adjusted those projected returns to account for the fact that they reflect common shares outstanding at the end of the period, rather than the average shares outstanding over the course of the year.[85] The results range from 9.08 percent to 11.57 percent, with an

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[84] *See*, Schedule RBH-7.

[85] The rationale for that adjustment is straightforward: Earnings are achieved over the course of a year, and should be related to the equity that was, on average, in place during that year. *See*, Leopold A. Bernstein, Financial Statement Analysis: Theory, Application, and Interpretation, Irwin, 4th Ed., 1988, at 630.

average value of 10.35 percent and median value of 10.15 percent (*see*, Schedule RBH-8).

Q. DO YOU RECOGNIZE THAT THE FERC RECENTLY DECIDED IT WOULD NOT INCLUDE EXPECTED EARNINGS ANALYSES AMONG THE METHODS USED TO DEVELOP ELECTRIC TRANSMISSION ROES?[86]

A. Yes, I do. I am not suggesting the Expected Earnings model should be used to the exclusion of others. As other Commissions have explained, because we are trying to estimate an unobservable parameter (the Cost of Equity) we should not rule out any particular methodology as unworthy of basing an ROE decision. Like all ROE models, the Expected Earnings approach provides valuable information, even though it has potential limitations. To that point, investors consider expected earnings when evaluating their investment options. In my view, it is reasonable to consider the Expected Earnings method in determining the Company's ROE.

[86] *See*, 169 FERC ¶ 61,129, Opinion No. 569, at para. 200.

Resume of:

Robert B. Hevert, Partner
Rates and Regulation Practice Leader

Summary

Bob Hevert is a financial and economic consultant with more than 30 years of broad experience in the energy and utility industries. He has an extensive background in the areas of corporate finance, mergers and acquisitions, project finance, asset and business unit valuation, rate and regulatory matters, energy market assessment, and corporate strategic planning. He has provided expert testimony on a wide range of financial, strategic, and economic matters on nearly 300 occasions at the state, provincial, and federal levels.

Prior to joining ScottMadden, Bob served as managing partner at Sussex Economic Advisors, LLC. Throughout the course of his career, he has worked with numerous leading energy companies and financial institutions throughout North America. He has provided expert testimony and support of litigation in various regulatory proceedings on a variety of energy and economic issues. Bob earned a B.S. in business and economics from the University of Delaware and an M.B.A. with a concentration in finance from the University of Massachusetts at Amherst. Bob also holds the Chartered Financial Analyst designation.

Areas of Specialization

- Regulation and rates
- Utilities
- Fossil/hydro generation
- Markets and RTOs
- Nuclear generation
- Mergers and acquisitions
- Regulatory strategy and rate case support
- Capital project planning
- Strategic and business planning

Recent Expert Testimony Submission/Appearance

- Federal Energy Regulatory Commission – Return on Equity
- New Jersey Board of Public Utilities – Merger Approval
- New Mexico Public Regulation Commission – Cost of Capital and Financial Integrity
- United States District Court – PURPA and FERC Regulations
- Alberta Utilities Commission – Return on Equity and Capital Structure

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies, the Alberta Utilities Commission, and the Federal Energy Regulatory Commission
- For an independent electric transmission provider in Texas, prepared an expert report on the economic damages with respect to failure to meet guaranteed completion dates. The report was filed as part of an arbitration proceeding and included a review of the ratemaking implications of economic damages
- Advised the board of directors of a publicly traded electric and natural gas combination utility on dividend policy issues, earnings payout trends and related capital market considerations
- Assisted a publicly traded utility with a strategic buy-side evaluation of a gas utility with more than $1 billion in assets. The assignment included operational performance benchmarking, calculation of merger synergies, risk analysis, and review of the regulatory implications of the transaction
- Provided testimony before the Arkansas Public Service Commission in support of the acquisition of SourceGas LLC by Black Hills Corporation. The testimony addressed certain balance sheet capitalization and credit rating issues
- For the State of Maine Public Utility Commission, prepared a report that summarized the Northeast and Atlantic Canada natural gas power markets and analyzed the potential benefits and costs associated with natural gas pipeline expansions. The independent report was filed at the Maine Public Utility Commission

scottmadden
MANAGEMENT CONSULTANTS

Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

Sponsor	Date	Case/Applicant	Docket No.	Subject
Regulatory Commission of Alaska				
Cook Inlet Natural Gas Storage Alaska, LLC	06/18	Cook Inlet Natural Gas Storage Alaska, LLC	Docket No. U-18-043	Return on Equity
ENSTAR Natural Gas Company	06/16	ENSTAR Natural Gas Company	Matter No. TA 285-4	Return on Equity
ENSTAR Natural Gas Company	08/14	ENSTAR Natural Gas Company	Matter No. TA 262-4	Return on Equity
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	01/20	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2021 Generic Cost of Capital, Proceeding ID. 24110	Rate of Return
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	10/17	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc., and FortisAlberta Inc.	2018 Generic Cost of Capital, Proceeding ID. 22570	Rate of Return
EPCOR Energy Alberta G.P. Inc.	01/17	EPCOR Energy Alberta G.P. Inc.	Proceeding 22357	Energy Price Setting Plan
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	02/16	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2016 Generic Cost of Capital, Proceeding ID. 20622	Rate of Return
Arizona Corporation Commission				
Southwest Gas Corporation	05/19	Southwest Gas Corporation	Docket No. G-01551A-19-0055	Return on Equity
Southwest Gas Corporation	05/16	Southwest Gas Corporation	Docket No. G-01551A-16-0107	Return on Equity
Southwest Gas Corporation	11/10	Southwest Gas Corporation	Docket No. G-01551A-10-0458	Return on Equity
Arkansas Public Service Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	07/19	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 17-010-FR	Response to Direct Testimony of Staff Witness regarding Cost of Long Term Debt for Formula Rate Plan Rider
Southwestern Electric Power Company	02/19	Southwestern Electric Power Company	Docket No. 19-008-U	Return on Equity
Oklahoma Gas and Electric Company	09/16	Oklahoma Gas and Electric Company	Docket No. 16-052-U	Return on Equity
SourceGas Arkansas, Inc.	12/15	SourceGas Arkansas, Inc.	Docket No. 15-078-U	Response to Direct Testimony by Arkansas Attorney General related to Compliance Issues
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	11/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 15-098-U	Return on Equity
SourceGas Arkansas, Inc.	04/15	SourceGas Arkansas, Inc.	Docket No. 15-011-U	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	01/07	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas	Docket No. 06-161-U	Return on Equity

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MANAGEMENT CONSULTANTS

Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

Sponsor	Date	Case/Applicant	Docket No.	Subject
California Public Utilities Commission				
Southwest Gas Corporation	08/19	Southwest Gas Corporation	Docket No. A-19-08-015	Return on Equity
Southwest Gas Corporation	12/12	Southwest Gas Corporation	Docket No. A-12-12-024	Return on Equity
Colorado Public Utilities Commission				
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Return on Equity
Xcel Energy, Inc.	03/15	Public Service Company of Colorado	Docket No. 15AL-0135G	Return on Equity (gas)
Xcel Energy, Inc.	06/14	Public Service Company of Colorado	Docket No. 14AL-0660E	Return on Equity (electric)
Xcel Energy, Inc.	12/12	Public Service Company of Colorado	Docket No. 12AL-1268G	Return on Equity (gas)
Xcel Energy, Inc.	11/11	Public Service Company of Colorado	Docket No. 11AL-947E	Return on Equity (electric)
Xcel Energy, Inc.	12/10	Public Service Company of Colorado	Docket No. 10AL-963G	Return on Equity (electric)
Atmos Energy Corporation	07/09	Atmos Energy Colorado-Kansas Division	Docket No. 09AL-507G	Return on Equity (gas)
Xcel Energy, Inc.	12/06	Public Service Company of Colorado	Docket No. 06S-656G	Return on Equity (gas)
Xcel Energy, Inc.	04/06	Public Service Company of Colorado	Docket No. 06S-234EG	Return on Equity (electric)
Xcel Energy, Inc.	08/05	Public Service Company of Colorado	Docket No. 05S-369ST	Return on Equity (steam)
Xcel Energy, Inc.	05/05	Public Service Company of Colorado	Docket No. 05S-246G	Return on Equity (gas)
Connecticut Public Utilities Regulatory Authority				
Connecticut Light and Power Company	11/17	Connecticut Light and Power Company	Docket No. 17-10-46	Return on Equity
Connecticut Light and Power Company	06/14	Connecticut Light and Power Company	Docket No. 14-05-06	Return on Equity
Southern Connecticut Gas Company	09/08	Southern Connecticut Gas Company	Docket No. 08-08-17	Return on Equity
Southern Connecticut Gas Company	12/07	Southern Connecticut Gas Company	Docket No. 05-03-17PH02	Return on Equity
Connecticut Natural Gas Corporation	12/07	Connecticut Natural Gas Corporation	Docket No. 06-03-04PH02	Return on Equity
Council of the City of New Orleans				
Entergy New Orleans, LLC	09/18	Entergy New Orleans, LLC	Docket No. UD-18-07	Return on Equity
Delaware Public Service Commission				
Delmarva Power & Light Company	02/20	Delmarva Power & Light Company	Docket No. 20-0150 (Gas)	Return on Equity
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0977 (Electric)	Return on Equity
Delmarva Power & Light Company	08/17	Delmarva Power & Light Company	Docket No. 17-0978 (Gas)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-649 (Electric)	Return on Equity
Delmarva Power & Light Company	05/16	Delmarva Power & Light Company	Case No. 16-650 (Gas)	Return on Equity

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MANAGEMENT CONSULTANTS

Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 13-115	Return on Equity
Delmarva Power & Light Company	12/12	Delmarva Power & Light Company	Case No. 12-546	Return on Equity
Delmarva Power & Light Company	03/12	Delmarva Power & Light Company	Case No. 11-528	Return on Equity
District of Columbia Public Service Commission				
Washington Gas Light Company	01/20	Washington Gas Light Company	Formal Case No. 1162	Return on Equity
Potomac Electric Power Company	05/19	Potomac Electric Power Company	Formal Case No. 1156	Return on Equity
Potomac Electric Power Company	12/17	Potomac Electric Power Company	Formal Case No. 1150	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Formal Case No. 1139	Return on Equity
Washington Gas Light Company	02/16	Washington Gas Light Company	Formal Case No. 1137	Return on Equity
Potomac Electric Power Company	03/13	Potomac Electric Power Company	Formal Case No. 1103-2013-E	Return on Equity
Potomac Electric Power Company	07/11	Potomac Electric Power Company	Formal Case No. 1087	Return on Equity
Federal Energy Regulatory Commission				
LS Power Grid New York Corporation I	12/19	LS Power Grid New York Corporation I	Docket No. ER20-716-000	Return on Equity
Duke Energy Progress, LLC	11/19	Duke Energy Progress	Docket No. EL20-4-000	Answer testimony to Complainant Affidavit from Mr. Mac Mathuna regarding Return on Equity applied in the FRPPA
Edison Electric Institute	07/19	Edison Electric Institute	Docket No. PL19-4-000	Reply comments to FERC Notice of Inquiry regarding Return on Equity analysis
Sabine Pipeline, LLC	09/15	Sabine Pipeline, LLC	Docket No. RP15-1322-000	Return on Equity
NextEra Energy Transmission West, LLC	07/15	NextEra Energy Transmission West, LLC	Docket No. ER15-2239-000	Return on Equity
Maritimes & Northeast Pipeline, LLC	05/15	Maritimes & Northeast Pipeline, LLC	Docket No. RP15-1026-000	Return on Equity
Public Service Company of New Mexico	12/12	Public Service Company of New Mexico	Docket No. ER13-685-000	Return on Equity
Public Service Company of New Mexico	10/10	Public Service Company of New Mexico	Docket No. ER11-1915-000	Return on Equity
Portland Natural Gas Transmission System	05/10	Portland Natural Gas Transmission System	Docket No. RP10-729-000	Return on Equity
Florida Gas Transmission Company, LLC	10/09	Florida Gas Transmission Company, LLC	Docket No. RP10-21-000	Return on Equity
Maritimes and Northeast Pipeline, LLC	07/09	Maritimes and Northeast Pipeline, LLC	Docket No. RP09-809-000	Return on Equity
Spectra Energy	02/08	Saltville Gas Storage	Docket No. RP08-257-000	Return on Equity

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Testimony Listing of:
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Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Panhandle Energy Pipelines	08/07	Panhandle Energy Pipelines	Docket No. PL07-2-000	Response to draft policy statement regarding inclusion of MLPs in proxy groups for determination of gas pipeline ROEs
Southwest Gas Storage Company	08/07	Southwest Gas Storage Company	Docket No. RP07-541-000	Return on Equity
Southwest Gas Storage Company	06/07	Southwest Gas Storage Company	Docket No. RP07-34-000	Return on Equity
Sea Robin Pipeline LLC	06/07	Sea Robin Pipeline LLC	Docket No. RP07-513-000	Return on Equity
Transwestern Pipeline Company	09/06	Transwestern Pipeline Company	Docket No. RP06-614-000	Return on Equity
GPU International and Aquila	11/00	GPU International	Docket No. EC01-24-000	Market Power Study
Florida Public Service Commission				
Florida Power & Light Company	03/16	Florida Power & Light Company	Docket No. 160021-EI	Return on Equity
Tampa Electric Company	04/13	Tampa Electric Company	Docket No. 130040-EI	Return on Equity
Georgia Public Service Commission				
Atlanta Gas Light Company	05/10	Atlanta Gas Light Company	Docket No. 31647-U	Return on Equity
Hawaii Public Utilities Commission				
Hawaiian Electric Company, Inc.	08/19	Hawaiian Electric Company, Inc.	Docket No. 2019-0085	Return on Equity
Hawai'i Electric Light Company, Inc.	12/18	Hawai'i Electric Light Company, Inc.	Docket No. 2018-0368	Return on Equity
Maui Electric Company, Limited	10/17	Maui Electric Company, Limited	Docket No. 2017-0150	Return on Equity
Hawaiian Electric Company, Inc.	12/16	Hawaiian Electric Company, Inc.	Docket No. 2016-0328	Return on Equity
Hawai'i Electric Light Company, Inc.	09/16	Hawai'i Electric Light Company, Inc.	Docket No. 2015-0170	Return on Equity
Maui Electric Company, Limited	12/14	Maui Electric Company, Limited	Docket No. 2014-0318	Return on Equity
Hawaiian Electric Company, Inc.	06/14	Hawaiian Electric Company, Inc.	Docket No. 2013-0373	Return on Equity
Hawai'i Electric Light Company, Inc.	08/12	Hawai'i Electric Light Company, Inc.	Docket No. 2012-0099	Return on Equity
Illinois Commerce Commission				
Ameren Illinois Company d/b/a Ameren Illinois	01/18	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 18-0463	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/15	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 15-0142	Return on Equity

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Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	04/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Docket No. 14-0371	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	01/13	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 13-0192	Return on Equity
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0279	Return on Equity (electric)
Ameren Illinois Company d/b/a Ameren Illinois	02/11	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 11-0282	Return on Equity (gas)
Indiana Utility Regulatory Commission				
Duke Energy Indiana, Inc.	07/19	Duke Energy Indiana, Inc.	Cause No. 45253	Return on Equity
Indiana Michigan Power Company	05/19	Indiana Michigan Power Company	Cause No. 45235	Return on Equity
Indiana Michigan Power Company	07/17	Indiana Michigan Power Company	Cause No. 44967	Return on Equity
Duke Energy Indiana, Inc.	12/15	Duke Energy Indiana, Inc.	Cause No. 44720	Return on Equity
Duke Energy Indiana, Inc.	12/14	Duke Energy Indiana, Inc.	Cause No. 44526	Return on Equity
Northern Indiana Public Service Company	05/09	Northern Indiana Public Service Company	Cause No. 43894	Assessment of Valuation Approaches
Kansas Corporation Commission				
Empire District Electric Company	02/19	Empire District Electric Company	Docket No. 19-EPDE-223-RTS	Return on Equity
Empire District Electric Company	12/18	Empire District Electric Company	Docket No. 19-EPDE-223-RTS	Alternative Ratemaking Mechanisms
Kansas City Power & Light Company	05/18	Kansas City Power & Light Company	Docket No. 18-KCPE-480-RTS	Return on Equity
Westar Energy	02/18	Westar Energy	Docket No. 18-WSEE-328-RTS	Return on Equity
Great Plains Energy, Inc. and Kansas City Power & Light Company	01/17	Great Plains Energy, Inc. and Kansas City Power & Light Company	Docket No. 16-KCPE-593-ACQ	Response to Direct Testimony by Commission Staff related to the ratemaking capital structure processes
Kansas City Power & Light Company	01/15	Kansas City Power & Light Company	Docket No. 15-KCPE-116-RTS	Return on Equity
Maine Public Utilities Commission				
Northern Utilities, Inc.	06/19	Northern Utilities, Inc.	Docket No. 2019-00049	Return on Equity
Northern Utilities, Inc.	05/17	Northern Utilities, Inc.	Docket No. 2017-00065	Return on Equity

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MANAGEMENT CONSULTANTS

Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Central Maine Power Company	06/11	Central Maine Power Company	Docket No. 2010-327	Response to Bench Analysis provided by Commission Staff relating to the Company's credit and collections processes
Maryland Public Service Commission				
Delmarva Power & Light Company	12/19	Delmarva Power & Light Company	Case No. 9630	Return on Equity
Washington Gas Light Company	04/19	Washington Gas Light Company	Case No. 9605	Return on Equity
Potomac Electric Power Company	01/19	Potomac Electric Power Company	Case No. 9602	Return on Equity
Washington Gas Light Company	05/18	Washington Gas Light Company	Case No. 9481	Return on Equity
Potomac Electric Power Company	01/18	Potomac Electric Power Company	Case No. 9472	Return on Equity
Delmarva Power & Light Company	07/17	Delmarva Power & Light Company	Case No. 9455	Return on Equity
Potomac Electric Power Company	03/17	Potomac Electric Power Company	Case No. 9443	Return on Equity
Delmarva Power & Light Company	06/16	Delmarva Power & Light Company	Case No. 9424	Return on Equity
Potomac Electric Power Company	06/16	Potomac Electric Power Company	Case No. 9418	Return on Equity
Potomac Electric Power Company	12/13	Potomac Electric Power Company	Case No. 9336	Return on Equity
Delmarva Power & Light Company	03/13	Delmarva Power & Light Company	Case No. 9317	Return on Equity
Potomac Electric Power Company	11/12	Potomac Electric Power Company	Case No. 9311	Return on Equity
Potomac Electric Power Company	12/11	Potomac Electric Power Company	Case No. 9286	Return on Equity
Delmarva Power & Light Company	12/11	Delmarva Power & Light Company	Case No. 9285	Return on Equity
Delmarva Power & Light Company	12/10	Delmarva Power & Light Company	Case No. 9249	Return on Equity
Massachusetts Department of Public Utilities				
NSTAR Electric Company d/b/a Eversource Energy; Massachusetts Electric Company & Nantucket Electric Company, d/b/a National Grid; and Fitchburg Gas and Electric Light Company, d/b/a Unitil	02/20	NSTAR Electric Company d/b/a Eversource Energy; Massachusetts Electric Company & Nantucket Electric Company, d/b/a National Grid; and Fitchburg Gas and Electric Light Company, d/b/a Unitil	DPU 20-16/DPU 20-17/DPU 20-18	In Support of Request for Financial Remuneration
NSTAR Gas Company d/b/a Eversource Energy	11/19	NSTAR Gas Company d/b/a Eversource Energy	DPU 19-120	Return on Equity

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MANAGEMENT CONSULTANTS

Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
NSTAR Electric Company d/b/a Eversource Energy; Massachusetts Electric Company & Nantucket Electric Company, d/b/a National Grid; and Fitchburg Gas and Electric Light Company, d/b/a Unitil	02/19	NSTAR Electric Company d/b/a Eversource Energy; Massachusetts Electric Company & Nantucket Electric Company, d/b/a National Grid; and Fitchburg Gas and Electric Light Company, d/b/a Unitil	DPU 18-64/DPU 18-65/DPU 18-66	Response to Direct Testimony by Attorney General Witness regarding Remuneration Rate Section 83D
National Grid	11/18	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 18-150	Return on Equity
NSTAR Electric Company d/b/a Eversource Energy	11/18	NSTAR Electric Company d/b/a Eversource Energy	DPU 18-76/DPU 18-77/DPU 18-78	Response to Direct Testimony by Attorney General Witness regarding Remuneration Rate Section 83C
Boston Gas Company, Colonial Gas Company each d/b/a National Grid	11/17	Boston Gas Company, Colonial Gas Company each d/b/a National Grid	DPU 17-170	Return on Equity
NSTAR Electric Company Western and Massachusetts Electric Company each d/b/a Eversource Energy	01/17	NSTAR Electric Company Western Massachusetts Electric Company each d/b/a Eversource Energy	DPU 17-05	Return on Equity
National Grid	11/15	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 15-155	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	06/15	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 15-80	Return on Equity
NSTAR Gas Company	12/14	NSTAR Gas Company	DPU 14-150	Return on Equity
Fitchburg Gas and Electric Light Company d/b/a Unitil	07/13	Fitchburg Gas and Electric Light Company d/b/a Unitil	DPU 13-90	Return on Equity
Bay State Gas Company d/b/a Columbia Gas of Massachusetts	04/12	Bay State Gas Company d/b/a Columbia Gas of Massachusetts	DPU 12-25	Capital Cost Recovery
National Grid	08/09	Massachusetts Electric Company d/b/a National Grid	DPU 09-39	Revenue Decoupling and Return on Equity
National Grid	08/09	Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid	DPU 09-38	Return on Equity – Solar Generation
Bay State Gas Company	04/09	Bay State Gas Company	DPU 09-30	Return on Equity

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MANAGEMENT CONSULTANTS

Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
NSTAR Electric	09/04	NSTAR Electric	DTE 04-85	Divestiture of Power Purchase Agreement
NSTAR Electric	08/04	NSTAR Electric	DTE 04-78	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-68	Divestiture of Power Purchase Agreement
NSTAR Electric	07/04	NSTAR Electric	DTE 04-61	Divestiture of Power Purchase Agreement
NSTAR Electric	06/04	NSTAR Electric	DTE 04-60	Divestiture of Power Purchase Agreement
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Bay State Gas Company	01/93	Bay State Gas Company	DPU 93-14	Divestiture of Shelf Registration
Bay State Gas Company	01/91	Bay State Gas Company	DPU 91-25	Divestiture of Shelf Registration
Michigan Public Service Commission				
Indiana Michigan Power Company	06/19	Indiana Michigan Power Company	Case No. U-20359	Return on Equity
SEMCO Energy Gas Company	05/19	SEMCO Energy Gas Company	Case No. U-20479	Return on Equity
Indiana Michigan Power Company	05/17	Indiana Michigan Power Company	Case No. U-18370	Return on Equity
Minnesota Public Utilities Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/17	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-17-285	Return on Equity
ALLETE, Inc., d/b/a Minnesota Power Inc.	11/16	ALLETE, Inc., d/b/a Minnesota Power Inc.	Docket No. E015/GR-16-664	Return on Equity
Otter Tail Power Corporation	02/16	Otter Tail Power Company	Docket No. E017/GR-15-1033	Return on Equity
Minnesota Energy Resources Corporation	09/15	Minnesota Energy Resources Corporation	Docket No. G-011/GR-15-736	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-15-424	Return on Equity
Xcel Energy, Inc.	11/13	Northern States Power Company	Docket No. E002/GR-13-868	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	08/13	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-13-316	Return on Equity
Xcel Energy, Inc.	11/12	Northern States Power Company	Docket No. E002/GR-12-961	Return on Equity

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MANAGEMENT CONSULTANTS

Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Otter Tail Power Corporation	04/10	Otter Tail Power Company	Docket No. E-017/GR-10-239	Return on Equity
Minnesota Power a division of ALLETE, Inc.	11/09	Minnesota Power	Docket No. E-015/GR-09-1151	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas	11/08	CenterPoint Energy Minnesota Gas	Docket No. G-008/GR-08-1075	Return on Equity
Otter Tail Power Corporation	10/07	Otter Tail Power Company	Docket No. E-017/GR-07-1178	Return on Equity
Xcel Energy, Inc.	11/05	Northern States Power Company -Minnesota	Docket No. E-002/GR-05-1428	Return on Equity (electric)
Xcel Energy, Inc.	09/04	Northern States Power Company - Minnesota	Docket No. G-002/GR-04-1511	Return on Equity (gas)
Mississippi Public Service Commission				
CenterPoint Energy Resources, Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Mississippi Gas	07/09	CenterPoint Energy Mississippi Gas	Docket No. 09-UN-334	Return on Equity
Missouri Public Service Commission				
Empire District Electric Company	08/19	Empire District Electric Company	Case No. ER-2019-0374	Return on Equity
Union Electric Company d/b/a Ameren Missouri	07/19	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2019-0335	Return on Equity
Union Electric Company d/b/a Ameren Missouri	12/18	Union Electric Company d/b/a Ameren Missouri	Case No. GR-2019-0077	Return on Equity
KCP&L Greater Missouri Operations Company	01/18	KCP&L Greater Missouri Operations Company	Case No. ER-2018-0146	Return on Equity
Kansas City Power & Light Company	01/18	Kansas City Power & Light Company	Case No. ER-2018-0145	Return on Equity
Laclede Gas Company and Missouri Gas Energy	11/17	Laclede Gas Company and Missouri Gas Energy	Case No. GR-2017-0215 Case No. GR-2017-0216	Goodwill Adjustment on Capital Structure
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	09/17	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities	Case No. GR-2018-0013	New Ratemaking Mechanisms
Union Electric Company d/b/a Ameren Missouri	07/16	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2016-0179	Return on Equity (electric)
Kansas City Power & Light Company	07/16	Kansas City Power & Light Company	Case No. ER-2016-0285	Return on Equity (electric)
Kansas City Power & Light Company	02/16	Kansas City Power & Light Company	Case No. ER-2016-0156	Return on Equity (electric)
Kansas City Power & Light Company	10/14	Kansas City Power & Light Company	Case No. ER-2014-0370	Return on Equity (electric)

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Testimony Listing of:
Robert B. Hevert, Partner
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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Union Electric Company d/b/a Ameren Missouri	07/14	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2014-0258	Return on Equity (electric)
Union Electric Company d/b/a Ameren Missouri	06/14	Union Electric Company d/b/a Ameren Missouri	Case No. EC-2014-0223	Return on Equity (electric)
Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	02/14	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities	Case No. GR-2014-0152	Return on Equity
Laclede Gas Company	12/12	Laclede Gas Company	Case No. GR-2013-0171	Return on Equity
Union Electric Company d/b/a Ameren Missouri	02/12	Union Electric Company d/b/a Ameren Missouri	Case No. ER-2012-0166	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	09/10	Union Electric Company d/b/a AmerenUE	Case No. ER-2011-0028	Return on Equity (electric)
Union Electric Company d/b/a AmerenUE	06/10	Union Electric Company d/b/a AmerenUE	Case No. GR-2010-0363	Return on Equity (gas)
Montana Public Service Commission				
Northwestern Corporation	09/12	Northwestern Corporation d/b/a Northwestern Energy	Docket No. D2012.9.94	Return on Equity (gas)
Nevada Public Utilities Commission				
Southwest Gas Corporation	05/18	Southwest Gas Corporation	Docket No. 18-05031	Return on Equity (gas)
Southwest Gas Corporation	04/12	Southwest Gas Corporation	Docket No. 12-04005	Return on Equity (gas)
Nevada Power Company	06/11	Nevada Power Company	Docket No. 11-06006	Return on Equity (electric)
New Hampshire Public Utilities Commission				
Northern Utilities, Inc.	06/17	Northern Utilities, Inc.	Docket No. DG 17-070	Return on Equity
Liberty Utilities d/b/a EnergyNorth Natural Gas	04/17	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 17-048	Return on Equity
Unitil Energy Systems, Inc.	04/16	Unitil Energy Systems, Inc.	Docket No. DE 16-384	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	04/16	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 16-383	Return on Equity
Liberty Utilities d/b/a EnergyNorth Natural Gas	08/14	Liberty Utilities d/b/a EnergyNorth Natural Gas	Docket No. DG 14-180	Return on Equity
Liberty Utilities d/b/a Granite State Electric Company	03/13	Liberty Utilities d/b/a Granite State Electric Company	Docket No. DE 13-063	Return on Equity
EnergyNorth Natural Gas d/b/a National Grid NH	02/10	EnergyNorth Natural Gas d/b/a National Grid NH	Docket No. DG 10-017	Return on Equity

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MANAGEMENT CONSULTANTS

Testimony Listing of:
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Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	08/08	Unitil Energy Systems, Inc., EnergyNorth Natural Gas, Inc. d/b/a National Grid NH, Granite State Electric Company d/b/a National Grid, and Northern Utilities, Inc. – New Hampshire Division	Docket No. DG 07-072	Carrying Charge Rate on Cash Working Capital
New Jersey Board of Public Utilities				
Elizabethtown Gas Company	04/19	Elizabethtown Gas Company	Docket No. GR19040486	Return on Equity
Atlantic City Electric Company	10/18	Atlantic City Electric Company	Docket No. EO18020196	Return on Equity
Atlantic City Electric Company	08/18	Atlantic City Electric Company	Docket No. ER18080925	Return on Equity
Atlantic City Electric Company	06/18	Atlantic City Electric Company	Docket No. ER18060638	Return on Equity
Atlantic City Electric Company	03/17	Atlantic City Electric Company	Docket No. ER17030308	Return on Equity
Pivotal Utility Holdings, Inc.	08/16	Elizabethtown Gas	Docket No. GR16090826	Return on Equity
The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	04/16	The Southern Company; AGL Resources Inc.; AMS Corp. and Pivotal Holdings, Inc. d/b/a Elizabethtown Gas	Docket No. GM15101196	Merger Approval
Atlantic City Electric Company	03/16	Atlantic City Electric Company	Docket No. ER16030252	Return on Equity
Pepco Holdings, Inc.	03/14	Atlantic City Electric Company	Docket No. ER14030245	Return on Equity
Orange and Rockland Utilities	11/13	Rockland Electric Company	Docket No. ER13111135	Return on Equity
Atlantic City Electric Company	12/12	Atlantic City Electric Company	Docket No. ER12121071	Return on Equity
Atlantic City Electric Company	08/11	Atlantic City Electric Company	Docket No. ER11080469	Return on Equity
Pepco Holdings, Inc.	09/06	Atlantic City Electric Company	Docket No. EM06090638	Divestiture and Valuation of Electric Generating Assets
Pepco Holdings, Inc.	12/05	Atlantic City Electric Company	Docket No. EM05121058	Market Value of Electric Generation Assets; Auction
Conectiv	06/03	Atlantic City Electric Company	Docket No. EO03020091	Market Value of Electric Generation Assets; Auction Process
New Mexico Public Regulation Commission				
Public Service Company of New Mexico	12/16	Public Service Company of New Mexico	Case No. 16-00276-UT	Return on Equity (electric)
Public Service Company of New Mexico	08/15	Public Service Company of New Mexico	Case No. 15-00261-UT	Return on Equity (electric)
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 14-00332-UT	Return on Equity (electric)

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Testimony Listing of:
Robert B. Hevert, Partner
Rates and Regulation Practice Leader

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Public Service Company of New Mexico	12/14	Public Service Company of New Mexico	Case No. 13-00390-UT	Cost of Capital and Financial Integrity
Southwestern Public Service Company	02/11	Southwestern Public Service Company	Case No. 10-00395-UT	Return on Equity (electric)
Public Service Company of New Mexico	06/10	Public Service Company of New Mexico	Case No. 10-00086-UT	Return on Equity (electric)
Public Service Company of New Mexico	09/08	Public Service Company of New Mexico	Case No. 08-00273-UT	Return on Equity (electric)
Xcel Energy, Inc.	07/07	Southwestern Public Service Company	Case No. 07-00319-UT	Return on Equity (electric)
New York State Public Service Commission				
Consolidated Edison Company of New York, Inc.	01/15	Consolidated Edison Company of New York, Inc.	Case No. 15-E-0050	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	11/14	Orange and Rockland Utilities, Inc.	Case Nos. 14-E-0493 and 14-G-0494	Return on Equity (electric and gas)
Consolidated Edison Company of New York, Inc.	01/13	Consolidated Edison Company of New York, Inc.	Case No. 13-E-0030	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Electric Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Electric Service	Case No. 12-E-0201	Return on Equity (electric)
Niagara Mohawk Corporation d/b/a National Grid for Gas Service	04/12	Niagara Mohawk Corporation d/b/a National Grid for Gas Service	Case No. 12-G-0202	Return on Equity (gas)
Orange and Rockland Utilities, Inc.	07/11	Orange and Rockland Utilities, Inc.	Case No. 11-E-0408	Return on Equity (electric)
Orange and Rockland Utilities, Inc.	07/10	Orange and Rockland Utilities, Inc.	Case No. 10-E-0362	Return on Equity (electric)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-G-0795	Return on Equity (gas)
Consolidated Edison Company of New York, Inc.	11/09	Consolidated Edison Company of New York, Inc.	Case No. 09-S-0794	Return on Equity (steam)
Niagara Mohawk Power Corporation	07/01	Niagara Mohawk Power Corporation	Case No. 01-E-1046	Power Purchase and Sale Agreement; Standard Offer Service Agreement
North Carolina Utilities Commission				
Duke Energy Progress, LLC	10/19	Duke Energy Progress, LLC	Docket No. E-2, Sub 1219	Return on Equity
Duke Energy Carolinas, LLC	09/19	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1214	Return on Equity
Piedmont Natural Gas Company, Inc.	04/19	Piedmont Natural Gas Company, Inc.	Docket No. G-9, Sub 743	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Virginia Electric and Power Company d/b/a Dominion North Carolina Power	03/19	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 562	Return on Equity
Duke Energy Carolinas, LLC	08/17	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1146	Return on Equity
Duke Energy Progress, LLC	06/17	Duke Energy Progress, LLC	Docket No. E-2, Sub 1142	Return on Equity
Public Service Company of North Carolina, Inc.	03/16	Public Service Company of North Carolina, Inc.	Docket No. G-5, Sub 565	Return on Equity
Dominion North Carolina Power	03/16	Dominion North Carolina Power	Docket No. E-22, Sub 532	Return on Equity
Duke Energy Carolinas, LLC	02/13	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1026	Return on Equity
Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	10/12	Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.	Docket No. E-2, Sub 1023	Return on Equity
Virginia Electric and Power Company d/b/a Dominion North Carolina Power	03/12	Virginia Electric and Power Company d/b/a Dominion North Carolina Power	Docket No. E-22, Sub 479	Return on Equity
Duke Energy Carolinas, LLC	07/11	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 989	Return on Equity
North Dakota Public Service Commission				
Otter Tail Power Company	11/17	Otter Tail Power Company	Docket No. 17-398	Return on Equity (electric)
Otter Tail Power Company	11/08	Otter Tail Power Company	Docket No. 08-862	Return on Equity (electric)
Oklahoma Corporation Commission				
Empire District Electric Company	03/19	Empire District Electric Company	Cause No. PUD201800133	Return on Equity
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/16	CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	Cause No. PUD201600094	Return on Equity
Oklahoma Gas & Electric Company	12/15	Oklahoma Gas & Electric Company	Cause No. PUD201500273	Return on Equity
Public Service Company of Oklahoma	07/15	Public Service Company of Oklahoma	Cause No. PUD201500208	Return on Equity
Oklahoma Gas & Electric Company	07/11	Oklahoma Gas & Electric Company	Cause No. PUD201100087	Return on Equity
CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Oklahoma Gas	03/09	CenterPoint Energy Oklahoma Gas	Cause No. PUD200900055	Return on Equity
Pennsylvania Public Utility Commission				
Pike County Light & Power Company	01/14	Pike County Light & Power Company	Docket No. R-2013-2397237	Return on Equity (electric & gas)
Veolia Energy Philadelphia, Inc.	12/13	Veolia Energy Philadelphia, Inc.	Docket No. R-2013-2386293	Return on Equity (steam)

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Testimony Listing of:
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Sponsor	Date	Case/Applicant	Docket No.	Subject
Rhode Island Public Utilities Commission				
The Narragansett Electric Company d/b/a National Grid	02/19	The Narragansett Electric Company d/b/a National Grid	Docket No. 4929	Support for financial remuneration under new power purchase agreement
The Narragansett Electric Company d/b/a National Grid	11/17	The Narragansett Electric Company d/b/a National Grid	Docket No. 4770	Return on Equity (electric & gas)
The Narragansett Electric Company d/b/a National Grid	04/12	The Narragansett Electric Company d/b/a National Grid	Docket No. 4323	Return on Equity (electric & gas)
National Grid RI – Gas	08/08	National Grid RI – Gas	Docket No. 3943	Revenue Decoupling and Return on Equity
South Carolina Public Service Commission				
Duke Energy Carolinas, LLC	11/18	Duke Energy Carolinas, LLC	Docket No. 2018-319-E	Return on Equity
Duke Energy Progress, LLC	11/18	Duke Energy Progress, LLC	Docket No. 2018-318-E	Return on Equity
South Carolina Electric & Gas	08/18	South Carolina Electric & Gas	Docket No. 2017-370-E	Return on Equity
South Carolina Electric & Gas	12/17	South Carolina Electric & Gas	Docket No. 2017-305-E	Return on Equity
Duke Energy Progress, LLC	07/16	Duke Energy Progress, LLC	Docket No. 2016-227-E	Return on Equity
Duke Energy Carolinas, LLC	03/13	Duke Energy Carolinas, LLC	Docket No. 2013-59-E	Return on Equity
South Carolina Electric & Gas	06/12	South Carolina Electric & Gas	Docket No. 2012-218-E	Return on Equity
Duke Energy Carolinas, LLC	08/11	Duke Energy Carolinas, LLC	Docket No. 2011-271-E	Return on Equity
South Carolina Electric & Gas	03/10	South Carolina Electric & Gas	Docket No. 2009-489-E	Return on Equity
South Dakota Public Utilities Commission				
Otter Tail Power Company	04/18	Otter Tail Power Company	Docket No. EL18-021	Return on Equity (electric)
Otter Tail Power Company	08/10	Otter Tail Power Company	Docket No. EL10-011	Return on Equity (electric)
Northern States Power Company	06/09	South Dakota Division of Northern States Power	Docket No. EL09-009	Return on Equity (electric)
Otter Tail Power Company	10/08	Otter Tail Power Company	Docket No. EL08-030	Return on Equity (electric)
Texas Public Utility Commission				
AEP Texas, Inc.	05/19	AEP Texas, Inc.	Docket No. 49494	Return on Equity
CenterPoint Energy Houston Electric LLC	04/19	CenterPoint Energy Houston Electric LLC	Docket No. 49421	Return on Equity
Texas-New Mexico Power Company	05/18	Texas-New Mexico Power Company	Docket No. 48401	Return on Equity

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Entergy Texas, Inc.	05/18	Entergy Texas, Inc.	Docket No. 48371	Return on Equity
Southwestern Public Service Company	08/17	Southwestern Public Service Company	Docket No. 47527	Return on Equity
Oncor Electric Delivery Company, LLC	03/17	Oncor Electric Delivery Company, LLC	Docket No. 46957	Return on Equity
El Paso Electric Company	02/17	El Paso Electric Company	Docket No. 46831	Return on Equity
Southwestern Electric Power Company	12/16	Southwestern Electric Power Company	Docket No. 46449	Return on Equity (electric)
Sharyland Utilities, L.P.	04/16	Sharyland Utilities, L.P.	Docket No. 45414	Return on Equity
Southwestern Public Service Company	02/16	Southwestern Public Service Company	Docket No. 44524	Return on Equity (electric)
Wind Energy Transmission Texas, LLC	05/15	Wind Energy Transmission Texas, LLC	Docket No. 44746	Return on Equity
Cross Texas Transmission	12/14	Cross Texas Transmission	Docket No. 43950	Return on Equity
Southwestern Public Service Company	12/14	Southwestern Public Service Company	Docket No. 43695	Return on Equity (electric)
Sharyland Utilities, L.P.	05/13	Sharyland Utilities, L.P.	Docket No. 41474	Return on Equity
Wind Energy Texas Transmission, LLC	08/12	Wind Energy Texas Transmission, LLC	Docket No. 40606	Return on Equity
Southwestern Electric Power Company	07/12	Southwestern Electric Power Company	Docket No. 40443	Return on Equity
Oncor Electric Delivery Company, LLC	01/11	Oncor Electric Delivery Company, LLC	Docket No. 38929	Return on Equity
Texas-New Mexico Power Company	08/10	Texas-New Mexico Power Company	Docket No. 38480	Return on Equity (electric)
CenterPoint Energy Houston Electric LLC	06/10	CenterPoint Energy Houston Electric LLC	Docket No. 38339	Return on Equity
Xcel Energy, Inc.	05/10	Southwestern Public Service Company	Docket No. 38147	Return on Equity (electric)
Texas-New Mexico Power Company	08/08	Texas-New Mexico Power Company	Docket No. 36025	Return on Equity (electric)
Xcel Energy, Inc.	05/06	Southwestern Public Service Company	Docket No. 32766	Return on Equity (electric)
Texas Railroad Commission				
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex And CenterPoint Energy Texas Gas	10/19	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	GUD 10920	Return on Equity
Atmos Energy Corporation – Mid-Tex Division	10/18	Atmos Energy Corporation – Mid-Tex Division	GUD 10779	Return on Equity
Atmos Energy Corporation – West Texas Division	06/18	Atmos Energy Corporation – West Texas Division	GUD 10743	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/18	Atmos Energy Corporation – Mid-Texas Division	GUD 10742	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex And CenterPoint Energy Texas Gas	11/17	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	GUD 10669	Return on Equity
Atmos Pipeline - Texas	01/17	Atmos Pipeline - Texas	GUD 10580	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex And CenterPoint Energy Texas Gas	12/16	CenterPoint Energy Resources Corp. D/B/A CenterPoint Energy Entex And CenterPoint Energy Texas Gas	GUD 10567	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	03/15	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10432	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/12	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10182	Return on Equity
Atmos Energy Corporation – West Texas Division	06/12	Atmos Energy Corporation – West Texas Division	GUD 10174	Return on Equity
Atmos Energy Corporation – Mid-Texas Division	06/12	Atmos Energy Corporation – Mid-Texas Division	GUD 10170	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	12/10	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 10038	Return on Equity
Atmos Pipeline – Texas	09/10	Atmos Pipeline - Texas	GUD 10000	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	07/09	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex and CenterPoint Energy Texas Gas	GUD 9902	Return on Equity
CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	03/08	CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Texas Gas	GUD 9791	Return on Equity
Utah Public Service Commission				
Dominion Energy Utah	07/19	Dominion Energy Utah	Docket No. 19-057-02	Return on Equity
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	Return on Equity
Vermont Public Service Board				
Central Vermont Public Service Corporation; Green Mountain Power	02/12	Central Vermont Public Service Corporation; Green Mountain Power	Docket No. 7770	Merger Policy

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Central Vermont Public Service Corporation	12/10	Central Vermont Public Service Corporation	Docket No. 7627	Return on Equity (electric)
Green Mountain Power	04/06	Green Mountain Power	Docket Nos. 7175 and 7176	Return on Equity (electric)
Vermont Gas Systems, Inc.	12/05	Vermont Gas Systems	Docket Nos. 7109 and 7160	Return on Equity (gas)
Virginia State Corporation Commission				
Virginia Electric and Power Company	03/19	Virginia Electric and Power Company	Case No. PUR-2019-00050	Return on Equity
Virginia Electric and Power Company	03/17	Virginia Electric and Power Company	Case No. PUR-2017-00038	Return on Equity
Virginia Natural Gas, Inc.	03/17	Virginia Natural Gas, Inc.	Case No. PUE-2016-00143	Return on Equity
Virginia Electric and Power Company	10/16	Virginia Electric and Power Company	Case No. PUE-2016-00112; PUE-2016-00113; PUE-2016-00136	Return on Equity
Washington Gas Light Company	06/16	Washington Gas Light Company	Case No. PUE-2016-00001	Return on Equity
Virginia Electric and Power Company	06/16	Virginia Electric and Power Company	Case Nos. PUE-2016-00063; PUE-2016-00062; PUE-2016-00061; PUE-2016-00060; PUE-2016-00059	Return on Equity
Virginia Electric and Power Company	12/15	Virginia Electric and Power Company	Case Nos. PUE-2015-00058; PUE-2015-00059; PUE-2015-00060; PUE-2015-00061; PUE-2015-00075; PUE-2015-00089; PUE-2015-00102; PUE-2015-00104	Return on Equity
Virginia Electric and Power Company	03/15	Virginia Electric and Power Company	Case No. PUE-2015-00027	Return on Equity
Virginia Electric and Power Company	03/13	Virginia Electric and Power Company	Case No. PUE-2013-00020	Return on Equity
Virginia Natural Gas, Inc.	02/11	Virginia Natural Gas, Inc.	Case No. PUE-2010-00142	Capital Structure
Columbia Gas of Virginia, Inc.	06/06	Columbia Gas of Virginia, Inc.	Case No. PUE-2005-00098	Merger Synergies
Dominion Resources	10/01	Virginia Electric and Power Company	Case No. PUE000584	Corporate Structure and Electric Generation Strategy
Wyoming Public Service Commission				
Questar Gas Company d/b/a Dominion Energy Wyoming	11/19	Questar Gas Company d/b/a Dominion Energy Wyoming	Docket No. 30010-187-GR-19	Return on Equity

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Expert Reports

Matter of Arbitration, City of White Hall, Arkansas				
Liberty Utilities Corporation, White Hall Water and White Hall Sewer	04/19	Liberty Utilities Corporation, White Hall Water and White Hall Sewer	AAA Case No. 01-18-0004-0072	Return on Equity
United States District Court, District of South Carolina, Columbia Division				
South Carolina Electric & Gas Company	07/18	South Carolina Electric & Gas Company	Case No. 3:18-CV-01795-JMC	Return on Equity
United States District Court, Western District of Texas, Austin Division				
Southwestern Public Service Company	02/12	Southwestern Public Service Company	C.A. No. A-09-CA-917-SS	PURPA and FERC regulations
American Arbitration Association				
Confidential Client	11/14	Confidential Client	Confidential	Economic harm related to failure to perform

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Retention Growth Estimate	[9] Average Earnings Growth	[10] Low ROE	[11] Mean ROE	[12] High ROE
Atmos Energy Corporation	ATO	$2.30	$113.12	2.03%	2.12%	7.20%	7.20%	7.50%	10.48%	8.09%	9.31%	10.21%	12.62%
New Jersey Resources Corporation	NJR	$1.25	$43.64	2.86%	2.94%	8.00%	6.00%	2.50%	4.38%	5.22%	5.40%	8.16%	10.98%
Northwest Natural Holding Company	NWN	$1.91	$73.43	2.60%	2.74%	5.00%	3.75%	27.00%	7.04%	10.70%	6.40%	13.44%	29.95%
ONE Gas, Inc.	OGS	$2.16	$93.65	2.31%	2.38%	6.00%	5.00%	8.00%	5.46%	6.12%	7.36%	8.49%	10.40%
Southwest Gas Holdings, Inc.	SWX	$2.18	$76.50	2.85%	2.96%	6.00%	8.20%	9.00%	7.81%	7.75%	8.94%	10.71%	11.98%
Spire Inc.	SR	$2.49	$83.25	2.99%	3.07%	5.10%	4.23%	5.50%	5.49%	5.08%	7.28%	8.15%	8.57%
Proxy Group Mean				2.61%	2.70%	6.22%	5.73%	9.92%	6.78%	7.16%	7.45%	9.86%	14.08%
Proxy Group Median				2.73%	2.84%	6.00%	5.50%	7.75%	6.26%	6.93%	7.32%	9.35%	11.48%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 202(
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [9])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Schedule RBH-3, Value Line
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8]

Constant Growth Discounted Cash Flow Model
90 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Retention Growth Estimate	[9] Average Earnings Growth	[10] Low ROE	[11] Mean ROE	[12] High ROE
Atmos Energy Corporation	ATO	$2.30	$110.96	2.07%	2.16%	7.20%	7.20%	7.50%	10.48%	8.09%	9.35%	10.25%	12.66%
New Jersey Resources Corporation	NJR	$1.25	$43.32	2.89%	2.96%	8.00%	6.00%	2.50%	4.38%	5.22%	5.42%	8.18%	11.00%
Northwest Natural Holding Company	NWN	$1.91	$70.24	2.72%	2.86%	5.00%	3.75%	27.00%	7.04%	10.70%	6.52%	13.56%	30.09%
ONE Gas, Inc.	OGS	$2.16	$92.25	2.34%	2.41%	6.00%	5.00%	8.00%	5.46%	6.12%	7.40%	8.53%	10.44%
Southwest Gas Holdings, Inc.	SWX	$2.18	$80.78	2.70%	2.80%	6.00%	8.20%	9.00%	7.81%	7.75%	8.78%	10.56%	11.82%
Spire Inc.	SR	$2.49	$82.51	3.02%	3.09%	5.10%	4.23%	5.50%	5.49%	5.08%	7.31%	8.17%	8.60%
Proxy Group Mean				2.62%	2.72%	6.22%	5.73%	9.92%	6.78%	7.16%	7.46%	9.88%	14.10%
Proxy Group Median				2.71%	2.83%	6.00%	5.50%	7.75%	6.26%	6.93%	7.36%	9.39%	11.41%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 202(
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [9])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Schedule RBH-3, Value Line
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8]

Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[7] Value Line Earnings Growth	[8] Retention Growth Estimate	[9] Average Earnings Growth	[10] Low ROE	[11] Mean ROE	[12] High ROE
Atmos Energy Corporation	ATO	$2.30	$109.05	2.11%	2.19%	7.20%	7.20%	7.50%	10.48%	8.09%	9.39%	10.29%	12.70%
New Jersey Resources Corporation	NJR	$1.25	$45.55	2.74%	2.82%	8.00%	6.00%	2.50%	4.38%	5.22%	5.28%	8.04%	10.85%
Northwest Natural Holding Company	NWN	$1.91	$70.22	2.72%	2.87%	5.00%	3.75%	27.00%	7.04%	10.70%	6.52%	13.56%	30.09%
ONE Gas, Inc.	OGS	$2.16	$91.35	2.36%	2.44%	6.00%	5.00%	8.00%	5.46%	6.12%	7.42%	8.55%	10.46%
Southwest Gas Holdings, Inc.	SWX	$2.18	$84.87	2.57%	2.67%	6.00%	8.20%	9.00%	7.81%	7.75%	8.65%	10.42%	11.68%
Spire Inc.	SR	$2.49	$83.37	2.99%	3.06%	5.10%	4.23%	5.50%	5.49%	5.08%	7.28%	8.14%	8.57%
Proxy Group Mean				2.58%	2.67%	6.22%	5.73%	9.92%	6.78%	7.16%	7.42%	9.83%	14.06%
Proxy Group Median				2.64%	2.74%	6.00%	5.50%	7.75%	6.26%	6.93%	7.35%	9.42%	11.27%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of January 31, 202(
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [9])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Schedule RBH-3, Value Line
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8]
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8]

Retention Growth Estimate

Company	Ticker	[1] Projected Earnings per share 2022-2024	[2] Projected Dividend Declared per share 2022-24	[3] Retention Ratio (B)	[4] Projected Book Value per Share 2022-24	[5] Return on Book Value (R)	[6] B x R	[7] Projected Common Shares Outstanding 2019	[8] Projected Common Shares Outstanding 2022-24	[9] Common Shares Growth Rate	[10] 2019 High Price	[11] 2019 Low Price	[12] 2019 price midpoint	[13] Projected Book Value per Share 2019	[14] Market/ Book Ratio	[15] "S"	[16] "V"	[17] S x V	[18] BR + SV
Atmos Energy Corporation	ATO	5.60	2.80	50.00%	56.05	9.99%	5.00%	120.00	145.00	4.84%	$ 115.20	$ 89.20	$ 102.20	47.95	2.13	10.33%	53.08%	5.48%	10.48%
New Jersey Resources Corporation	NJR	2.35	1.49	36.60%	21.30	11.03%	4.04%	89.24	90.00	0.21%	$ 51.20	$ 40.30	$ 45.75	17.50	2.61	0.55%	61.75%	0.34%	4.38%
Northwest Natural Holding Company	NWN	3.50	1.97	43.71%	29.40	11.90%	5.20%	30.50	32.00	1.21%	$ 73.50	$ 57.20	$ 65.35	25.90	2.52	3.05%	60.37%	1.84%	7.04%
ONE Gas, Inc.	OGS	4.75	2.65	44.21%	47.90	9.92%	4.38%	53.00	55.00	0.93%	$ 96.70	$ 75.80	$ 86.25	39.90	2.16	2.01%	53.74%	1.08%	5.46%
Southwest Gas Holdings, Inc.	SWX	5.80	2.60	55.17%	57.25	10.13%	5.59%	56.00	62.00	2.58%	$ 92.90	$ 73.30	$ 83.10	44.65	1.86	4.80%	46.27%	2.22%	7.81%
Spire Inc.	SR	5.00	2.67	46.60%	54.20	9.23%	4.30%	51.00	55.00	1.91%	$ 88.00	$ 71.70	$ 79.85	49.20	1.62	3.09%	38.38%	1.19%	5.49%
																		Average	6.78%

Notes:
[1] Source: Value Line
[2] Source: Value Line
[3] Equals 1 - [2] / [1]
[4] Source: Value Line
[5] Equals [1] / [4]
[6] Equals [3] x [5]
[7] Source: Value Line
[8] Source: Value Line
[9] Equals ([8] / [7]) ^ 0.25 - 1
[10] Source: Value Line
[11] Source: Value Line
[12] Equals Average ([10], [11])
[13] Source: Value Line
[14] Equals [12] / [13]
[15] Equals [9] x [14]
[16] Equals 1 - (1 / [14])
[17] Equals [15] x [16]
[18] Equals [6] + [17]

Ex-Ante Market Risk Premium
Market DCF Method Based - Bloomberg

[1] S&P 500 Est. Required Market Return	[2] Current 30-Year Treasury (30-day average)	[3] Implied Market Risk Premium
13.44%	2.25%	11.18%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Agilent Technologies Inc	A	25,608.74	0.09%	0.87%	10.40%	11.32%	0.0105%
American Airlines Group Inc	AAL	11,757.48	0.04%	1.53%	6.23%	7.81%	0.0033%
Advance Auto Parts Inc	AAP	9,124.93	0.03%	0.18%	15.34%	15.54%	0.0051%
Apple Inc	AAPL	1,354,254.81	4.89%	1.04%	11.97%	13.07%	0.6392%
AbbVie Inc	ABBV	119,814.09	0.43%	5.30%	4.77%	10.19%	0.0441%
AmerisourceBergen Corp	ABC	17,616.10	0.06%	1.95%	12.35%	14.41%	0.0092%
ABIOMED Inc	ABMD	8,411.95	0.03%	0.00%	24.00%	24.00%	0.0073%
Abbott Laboratories	ABT	154,103.23	0.56%	1.60%	10.12%	11.80%	0.0657%
Accenture PLC	ACN	130,514.21	0.47%	1.56%	10.43%	12.07%	0.0569%
Adobe Inc	ADBE	169,295.47	0.61%	0.00%	16.22%	16.22%	0.0992%
Analog Devices Inc	ADI	40,492.75	0.15%	2.07%	12.53%	14.73%	0.0215%
Archer-Daniels-Midland Co	ADM	24,917.28	0.09%	3.25%	9.20%	12.60%	0.0113%
Automatic Data Processing Inc	ADP	73,998.36	0.27%	1.99%	12.55%	14.66%	0.0392%
Alliance Data Systems Corp	ADS	4,734.12	0.02%	2.47%	10.44%	13.04%	0.0022%
Autodesk Inc	ADSK	43,313.50	0.16%	0.00%	46.89%	46.89%	0.0734%
Ameren Corp	AEE	20,186.74	0.07%	2.35%	5.76%	8.18%	0.0060%
American Electric Power Co Inc	AEP	51,479.66	0.19%	2.60%	6.03%	8.71%	0.0162%
AES Corp/VA	AES	13,184.91	0.05%	2.77%	8.47%	11.36%	0.0054%
Aflac Inc	AFL	37,853.31	0.14%	2.10%	3.41%	5.55%	0.0076%
Allergan PLC	AGN	61,269.68	0.22%	1.58%	5.50%	7.13%	0.0158%
American International Group Inc	AIG	43,723.77	0.16%	2.56%	11.00%	13.70%	0.0216%
Apartment Investment & Management Co	AIV	7,847.71	0.03%	3.08%	3.99%	7.14%	0.0020%
Assurant Inc	AIZ	7,916.61	N/A	1.90%	N/A	N/A	N/A
Arthur J Gallagher & Co	AJG	19,293.42	0.07%	1.74%	9.79%	11.62%	0.0081%
Akamai Technologies Inc	AKAM	15,085.47	0.05%	0.00%	13.20%	13.20%	0.0072%
Albemarle Corp	ALB	8,512.33	0.03%	1.79%	8.10%	9.96%	0.0031%
Align Technology Inc	ALGN	20,262.81	0.07%	0.00%	20.31%	20.31%	0.0149%
Alaska Air Group Inc	ALK	7,955.77	0.03%	2.31%	23.69%	26.28%	0.0076%
Allstate Corp/The	ALL	38,401.76	0.14%	1.63%	9.00%	10.71%	0.0149%
Allegion PLC	ALLE	12,015.97	0.04%	0.83%	10.63%	11.51%	0.0050%
Alexion Pharmaceuticals Inc	ALXN	21,994.08	0.08%	0.00%	11.72%	11.72%	0.0093%
Applied Materials Inc	AMAT	53,270.00	0.19%	1.54%	12.42%	14.05%	0.0270%
Amcor PLC	AMCR	17,157.30	0.06%	4.84%	8.60%	13.65%	0.0085%
Advanced Micro Devices Inc	AMD	52,340.49	0.19%	0.00%	17.67%	17.67%	0.0334%
AMETEK Inc	AME	22,207.80	0.08%	0.58%	10.50%	11.11%	0.0089%
Amgen Inc	AMGN	127,685.55	0.46%	2.92%	7.88%	10.91%	0.0503%
Ameriprise Financial Inc	AMP	20,956.72	0.08%	2.48%	6.00%	8.55%	0.0065%
American Tower Corp	AMT	102,647.02	0.37%	1.62%	20.34%	22.13%	0.0821%
Amazon.com Inc	AMZN	999,961.80	3.61%	0.00%	33.19%	33.19%	1.1987%
Arista Networks Inc	ANET	17,062.96	0.06%	0.00%	17.95%	17.95%	0.0111%
ANSYS Inc	ANSS	23,479.83	0.08%	0.00%	10.65%	10.65%	0.0090%
Anthem Inc	ANTM	67,265.38	0.24%	1.42%	13.01%	14.53%	0.0353%
Aon PLC	AON	51,109.34	0.18%	0.86%	10.99%	11.90%	0.0220%
AO Smith Corp	AOS	6,963.25	0.03%	2.46%	8.00%	10.56%	0.0027%
Apache Corp	APA	10,318.44	0.04%	3.64%	-29.00%	-25.88%	-0.0096%
Air Products & Chemicals Inc	APD	52,678.16	0.19%	2.13%	12.67%	14.94%	0.0284%
Amphenol Corp	APH	29,492.03	0.11%	0.99%	9.81%	10.85%	0.0116%
Aptiv PLC	APTV	21,645.88	0.08%	1.13%	5.95%	7.10%	0.0056%
Alexandria Real Estate Equities Inc	ARE	21,134.40	0.08%	2.45%	4.13%	6.63%	0.0051%
Arconic Inc	ARNC	12,966.58	0.05%	0.28%	80.40%	80.79%	0.0378%
Atmos Energy Corp	ATO	14,308.01	0.05%	1.96%	7.15%	9.18%	0.0047%
Activision Blizzard Inc	ATVI	44,927.85	0.16%	0.64%	10.01%	10.68%	0.0173%
AvalonBay Communities Inc	AVB	30,263.31	0.11%	2.80%	6.21%	9.10%	0.0099%
Broadcom Inc	AVGO	121,390.29	0.44%	4.26%	10.33%	14.81%	0.0649%
Avery Dennison Corp	AVY	10,958.92	0.04%	1.84%	5.35%	7.24%	0.0029%
American Water Works Co Inc	AWK	24,621.71	0.09%	1.45%	8.52%	10.03%	0.0089%
American Express Co	AXP	106,268.83	0.38%	1.38%	9.39%	10.83%	0.0416%
AutoZone Inc	AZO	24,960.14	0.09%	0.00%	10.80%	10.80%	0.0097%
Boeing Co/The	BA	179,234.45	0.65%	2.63%	29.38%	32.40%	0.2097%
Bank of America Corp	BAC	290,090.77	1.05%	2.41%	9.75%	12.28%	0.1286%
Baxter International Inc	BAX	45,551.79	0.16%	1.08%	11.74%	12.89%	0.0212%
Best Buy Co Inc	BBY	21,915.86	0.08%	2.36%	7.78%	10.23%	0.0081%
Becton Dickinson and Co	BDX	74,577.01	0.27%	1.31%	10.42%	11.80%	0.0318%
Franklin Resources Inc	BEN	12,571.51	0.05%	4.28%	10.00%	14.49%	0.0066%
Brown-Forman Corp	BF/B	31,751.84	0.11%	1.02%	7.08%	8.13%	0.0093%
Biogen Inc	BIIB	48,511.80	0.18%	0.00%	2.02%	2.02%	0.0035%
Bank of New York Mellon Corp/The	BK	40,332.58	0.15%	2.91%	6.30%	9.30%	0.0136%
Booking Holdings Inc	BKNG	76,618.95	0.28%	0.00%	16.37%	16.37%	0.0453%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Baker Hughes Co	BKR	22,251.25	0.08%	3.37%	30.98%	34.87%	0.0280%
BlackRock Inc	BLK	81,917.15	0.30%	2.68%	9.76%	12.58%	0.0372%
Ball Corp	BLL	23,612.31	0.09%	0.68%	5.50%	6.20%	0.0053%
Bristol-Myers Squibb Co	BMY	147,365.90	0.53%	2.61%	14.78%	17.59%	0.0936%
Broadridge Financial Solutions Inc	BR	13,678.72	0.05%	1.82%	7.50%	9.39%	0.0046%
Berkshire Hathaway Inc	BRK/B	548,282.67	N/A	0.00%	N/A	N/A	N/A
Boston Scientific Corp	BSX	58,359.39	0.21%	0.00%	7.00%	7.00%	0.0148%
BorgWarner Inc	BWA	7,077.78	0.03%	1.99%	4.90%	6.94%	0.0018%
Boston Properties Inc	BXP	22,189.19	0.08%	2.88%	2.17%	5.08%	0.0041%
Citigroup Inc	C	157,310.18	0.57%	2.91%	13.50%	16.61%	0.0944%
Conagra Brands Inc	CAG	16,025.91	0.06%	2.58%	7.97%	10.65%	0.0062%
Cardinal Health Inc	CAH	14,978.33	0.05%	3.95%	1.37%	5.35%	0.0029%
Caterpillar Inc	CAT	72,591.68	0.26%	3.18%	8.97%	12.29%	0.0322%
Chubb Ltd	CB	68,882.22	0.25%	1.98%	10.73%	12.82%	0.0319%
Cboe Global Markets Inc	CBOE	13,660.33	0.05%	1.08%	5.91%	7.03%	0.0035%
CBRE Group Inc	CBRE	20,436.59	0.07%	0.00%	11.00%	11.00%	0.0081%
Crown Castle International Corp	CCI	62,298.75	0.23%	3.06%	17.70%	21.03%	0.0473%
Carnival Corp	CCL	29,392.75	0.11%	4.66%	8.31%	13.16%	0.0140%
Cadence Design Systems Inc	CDNS	20,233.56	0.07%	0.00%	9.35%	9.35%	0.0068%
CDW Corp/DE	CDW	18,743.14	0.07%	0.96%	13.10%	14.12%	0.0096%
Celanese Corp	CE	12,510.47	0.05%	2.67%	4.08%	6.80%	0.0031%
Cerner Corp	CERN	22,561.62	0.08%	0.36%	15.49%	15.88%	0.0129%
CF Industries Holdings Inc	CF	8,758.15	0.03%	2.98%	18.80%	22.06%	0.0070%
Citizens Financial Group Inc	CFG	16,206.32	0.06%	4.15%	5.74%	10.01%	0.0059%
Church & Dwight Co Inc	CHD	18,213.73	0.07%	1.32%	8.17%	9.54%	0.0063%
CH Robinson Worldwide Inc	CHRW	9,767.79	0.04%	2.89%	6.90%	9.89%	0.0035%
Charter Communications Inc	CHTR	125,037.91	0.45%	0.00%	34.30%	34.30%	0.1549%
Cigna Corp	CI	71,839.57	0.26%	0.02%	12.11%	12.13%	0.0315%
Cincinnati Financial Corp	CINF	17,146.10	N/A	2.25%	N/A	N/A	N/A
Colgate-Palmolive Co	CL	63,232.72	0.23%	2.44%	3.39%	5.86%	0.0134%
Clorox Co/The	CLX	19,742.95	0.07%	2.69%	3.44%	6.17%	0.0044%
Comerica Inc	CMA	8,816.48	0.03%	4.62%	9.15%	13.98%	0.0045%
Comcast Corp	CMCSA	196,645.57	0.71%	2.12%	9.34%	11.55%	0.0820%
CME Group Inc	CME	77,804.34	0.28%	2.42%	8.65%	11.17%	0.0314%
Chipotle Mexican Grill Inc	CMG	24,091.77	0.09%	0.00%	28.57%	28.57%	0.0249%
Cummins Inc	CMI	24,507.98	0.09%	3.07%	4.71%	7.85%	0.0070%
CMS Energy Corp	CMS	19,446.05	0.07%	2.39%	7.16%	9.63%	0.0068%
Centene Corp	CNC	36,674.97	0.13%	0.00%	15.03%	15.03%	0.0199%
CenterPoint Energy Inc	CNP	13,271.27	0.05%	4.38%	4.66%	9.13%	0.0044%
Capital One Financial Corp	COF	45,568.68	0.16%	1.65%	5.97%	7.67%	0.0126%
Cabot Oil & Gas Corp	COG	5,747.66	0.02%	2.48%	27.68%	30.50%	0.0063%
Cooper Cos Inc/The	COO	17,019.24	0.06%	0.03%	5.90%	5.93%	0.0036%
ConocoPhillips	COP	65,210.68	0.24%	2.23%	0.80%	3.04%	0.0071%
Costco Wholesale Corp	COST	134,965.79	0.49%	0.89%	8.91%	9.84%	0.0480%
Coty Inc	COTY	7,775.97	0.03%	4.20%	8.64%	13.02%	0.0037%
Campbell Soup Co	CPB	14,597.10	0.05%	2.93%	7.07%	10.10%	0.0053%
Capri Holdings Ltd	CPRI	4,543.00	0.02%	0.00%	4.07%	4.07%	0.0007%
Copart Inc	CPRT	23,584.80	N/A	0.00%	N/A	N/A	N/A
salesforce.com Inc	CRM	161,708.97	0.58%	0.00%	22.38%	22.38%	0.1307%
Cisco Systems Inc	CSCO	195,016.81	0.70%	3.13%	5.40%	8.61%	0.0607%
CSX Corp	CSX	59,723.57	0.22%	1.35%	13.40%	14.84%	0.0320%
Cintas Corp	CTAS	28,943.36	0.10%	0.91%	10.25%	11.21%	0.0117%
CenturyLink Inc	CTL	14,892.53	0.05%	7.32%	3.97%	11.43%	0.0061%
Cognizant Technology Solutions Corp	CTSH	33,609.59	0.12%	1.30%	10.60%	11.97%	0.0145%
Corteva Inc	CTVA	21,648.85	0.08%	1.88%	16.20%	18.23%	0.0143%
Citrix Systems Inc	CTXS	15,785.25	0.06%	1.15%	9.17%	10.37%	0.0059%
CVS Health Corp	CVS	88,231.38	0.32%	2.95%	5.35%	8.37%	0.0267%
Chevron Corp	CVX	202,588.05	0.73%	4.67%	1.89%	6.60%	0.0483%
Concho Resources Inc	CXO	15,233.95	0.06%	0.66%	7.88%	8.57%	0.0047%
Dominion Energy Inc	D	71,086.75	0.26%	4.27%	4.56%	8.92%	0.0229%
Delta Air Lines Inc	DAL	36,049.45	0.13%	2.97%	11.25%	14.38%	0.0187%
DuPont de Nemours Inc	DD	37,799.74	0.14%	2.44%	5.25%	7.75%	0.0106%
Deere & Co	DE	49,922.25	0.18%	2.09%	6.08%	8.24%	0.0148%
Discover Financial Services	DFS	23,290.30	0.08%	2.39%	11.17%	13.69%	0.0115%
Dollar General Corp	DG	39,058.21	0.14%	0.84%	11.03%	11.91%	0.0168%
Quest Diagnostics Inc	DGX	14,906.93	0.05%	2.04%	6.42%	8.52%	0.0046%
DR Horton Inc	DHI	21,688.73	0.08%	1.18%	14.54%	15.81%	0.0124%
Danaher Corp	DHR	111,885.09	0.40%	0.44%	13.01%	13.48%	0.0545%
Walt Disney Co/The	DIS	249,685.43	0.90%	1.34%	6.40%	7.79%	0.0702%
Discovery Inc	DISCA	20,130.70	0.07%	1.20%	11.50%	12.77%	0.0093%
DISH Network Corp	DISH	19,221.67	0.07%	0.00%	5.40%	5.40%	0.0037%
Digital Realty Trust Inc	DLR	26,778.76	0.10%	3.51%	41.20%	45.43%	0.0439%
Dollar Tree Inc	DLTR	20,606.19	0.07%	0.00%	6.42%	6.42%	0.0048%
Dover Corp	DOV	16,538.58	0.06%	1.80%	10.80%	12.70%	0.0076%
Dow Inc	DOW	34,239.78	0.12%	6.25%	-1.28%	4.93%	0.0061%
Duke Realty Corp	DRE	13,346.49	0.05%	2.58%	4.80%	7.44%	0.0036%
Darden Restaurants Inc	DRI	14,147.42	0.05%	3.03%	8.10%	11.25%	0.0057%
DTE Energy Co	DTE	25,475.05	0.09%	2.89%	5.87%	8.84%	0.0081%
Duke Energy Corp	DUK	71,175.48	0.26%	3.88%	4.78%	8.75%	0.0225%
DaVita Inc	DVA	10,232.29	0.04%	0.00%	14.20%	14.20%	0.0052%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Devon Energy Corp	DVN	8,342.65	0.03%	1.61%	11.40%	13.10%	0.0039%
DXC Technology Co	DXC	8,161.20	0.03%	2.60%	-1.44%	1.15%	0.0003%
Electronic Arts Inc	EA	31,510.36	0.11%	0.00%	7.79%	7.79%	0.0089%
eBay Inc	EBAY	26,716.47	0.10%	1.88%	12.25%	14.25%	0.0137%
Ecolab Inc	ECL	56,527.61	0.20%	0.94%	12.37%	13.36%	0.0273%
Consolidated Edison Inc	ED	31,248.46	0.11%	3.15%	3.58%	6.78%	0.0077%
Equifax Inc	EFX	18,150.40	0.07%	1.04%	11.67%	12.78%	0.0084%
Edison International	EIX	27,450.92	0.10%	3.23%	5.29%	8.60%	0.0085%
Estee Lauder Cos Inc/The	EL	70,221.21	0.25%	0.94%	11.84%	12.84%	0.0326%
Eastman Chemical Co	EMN	9,691.24	0.04%	3.73%	5.87%	9.71%	0.0034%
Emerson Electric Co	EMR	43,633.69	0.16%	2.80%	8.03%	10.94%	0.0172%
EOG Resources Inc	EOG	42,416.42	0.15%	1.40%	6.00%	7.44%	0.0114%
Equinix Inc	EQIX	50,291.50	0.18%	1.67%	18.00%	19.82%	0.0360%
Equity Residential	EQR	30,878.42	0.11%	2.87%	8.78%	11.78%	0.0131%
Eversource Energy	ES	29,928.50	0.11%	2.32%	6.67%	9.06%	0.0098%
Essex Property Trust Inc	ESS	20,469.45	0.07%	2.65%	8.22%	10.98%	0.0081%
E*TRADE Financial Corp	ETFC	9,488.16	0.03%	1.36%	3.38%	4.76%	0.0016%
Eaton Corp PLC	ETN	39,053.90	0.14%	2.99%	8.44%	11.55%	0.0163%
Entergy Corp	ETR	26,185.91	0.09%	2.80%	-0.94%	1.85%	0.0017%
Evergy Inc	EVRG	16,445.49	0.06%	2.67%	6.51%	9.27%	0.0055%
Edwards Lifesciences Corp	EW	45,856.20	0.17%	0.00%	14.32%	14.32%	0.0237%
Exelon Corp	EXC	46,160.02	0.17%	3.04%	2.97%	6.06%	0.0101%
Expeditors International of Washington I	EXPD	12,438.80	0.04%	1.35%	9.73%	11.15%	0.0050%
Expedia Group Inc	EXPE	15,712.92	0.06%	1.22%	12.35%	13.65%	0.0077%
Extra Space Storage Inc	EXR	14,334.22	0.05%	3.22%	4.88%	8.18%	0.0042%
Ford Motor Co	F	34,970.39	0.13%	6.80%	3.59%	10.51%	0.0133%
Diamondback Energy Inc	FANG	11,937.08	0.04%	0.90%	24.41%	25.42%	0.0110%
Fastenal Co	FAST	20,025.62	0.07%	2.70%	14.25%	17.15%	0.0124%
Facebook Inc	FB	575,534.49	2.08%	0.00%	22.27%	22.27%	0.4629%
Fortune Brands Home & Security Inc	FBHS	9,561.08	0.03%	1.35%	8.96%	10.38%	0.0036%
Freeport-McMoRan Inc	FCX	16,105.14	0.06%	1.80%	-1.93%	-0.15%	-0.0001%
FedEx Corp	FDX	37,768.26	0.14%	1.81%	20.40%	22.40%	0.0306%
FirstEnergy Corp	FE	27,442.43	0.10%	2.99%	0.69%	3.69%	0.0037%
F5 Networks Inc	FFIV	7,425.26	0.03%	0.00%	8.50%	8.50%	0.0023%
Fidelity National Information Services I	FIS	88,293.48	0.32%	0.98%	11.94%	12.98%	0.0414%
Fiserv Inc	FISV	80,642.35	0.29%	0.00%	17.36%	17.36%	0.0506%
Fifth Third Bancorp	FITB	20,168.66	0.07%	3.84%	3.80%	7.71%	0.0056%
FLIR Systems Inc	FLIR	6,914.25	0.02%	1.31%	13.10%	14.50%	0.0036%
Flowserve Corp	FLS	6,108.55	0.02%	1.65%	11.39%	13.13%	0.0029%
FleetCor Technologies Inc	FLT	27,356.03	0.10%	0.00%	15.57%	15.57%	0.0154%
FMC Corp	FMC	12,389.93	0.04%	1.68%	10.20%	11.97%	0.0054%
Fox Corp	FOXA	22,815.36	0.08%	1.12%	6.02%	7.18%	0.0059%
First Republic Bank/CA	FRC	18,962.92	0.07%	0.71%	10.22%	10.97%	0.0075%
Federal Realty Investment Trust	FRT	9,441.86	0.03%	3.32%	5.70%	9.11%	0.0031%
TechnipFMC PLC	FTI	7,381.04	0.03%	3.28%	7.00%	10.39%	0.0028%
Fortinet Inc	FTNT	19,730.45	0.07%	0.00%	16.82%	16.82%	0.0120%
Fortive Corp	FTV	25,161.81	0.09%	0.39%	8.57%	8.97%	0.0082%
General Dynamics Corp	GD	50,755.86	0.18%	2.51%	7.78%	10.39%	0.0190%
General Electric Co	GE	108,732.69	0.39%	0.32%	8.13%	8.47%	0.0333%
Gilead Sciences Inc	GILD	79,957.20	0.29%	3.97%	1.27%	5.26%	0.0152%
General Mills Inc	GIS	31,583.53	0.11%	3.75%	6.50%	10.38%	0.0118%
Globe Life Inc	GL	11,290.14	0.04%	0.65%	8.07%	8.75%	0.0036%
Corning Inc	GLW	20,337.78	0.07%	3.43%	8.48%	12.06%	0.0089%
General Motors Co	GM	47,707.10	0.17%	4.59%	10.51%	15.34%	0.0264%
Alphabet Inc	GOOGL	988,702.25	3.57%	0.00%	15.76%	15.76%	0.5628%
Genuine Parts Co	GPC	13,595.08	0.05%	3.23%	4.47%	7.77%	0.0038%
Global Payments Inc	GPN	58,742.11	0.21%	0.14%	18.27%	18.42%	0.0391%
Gap Inc/The	GPS	6,499.14	0.02%	5.59%	4.63%	10.36%	0.0024%
Garmin Ltd	GRMN	18,430.49	0.07%	2.30%	6.70%	9.07%	0.0060%
Goldman Sachs Group Inc/The	GS	87,655.68	0.32%	2.20%	7.78%	10.07%	0.0319%
WW Grainger Inc	GWW	16,303.70	0.06%	1.97%	9.28%	11.33%	0.0067%
Halliburton Co	HAL	19,144.91	0.07%	3.33%	12.26%	15.80%	0.0109%
Hasbro Inc	HAS	13,939.21	0.05%	2.65%	10.93%	13.73%	0.0069%
Huntington Bancshares Inc/OH	HBAN	13,841.45	0.05%	4.56%	5.84%	10.53%	0.0053%
Hanesbrands Inc	HBI	4,976.95	0.02%	4.36%	4.94%	9.41%	0.0017%
HCA Healthcare Inc	HCA	47,077.95	0.17%	0.92%	9.72%	10.68%	0.0182%
Home Depot Inc/The	HD	248,818.56	0.90%	2.37%	9.38%	11.87%	0.1067%
Hess Corp	HES	17,237.23	0.06%	1.83%	4.40%	6.27%	0.0039%
HollyFrontier Corp	HFC	7,249.63	0.03%	2.99%	-4.59%	-1.66%	-0.0004%
Hartford Financial Services Group Inc/Th	HIG	21,365.77	0.08%	2.05%	9.50%	11.65%	0.0090%
Huntington Ingalls Industries Inc	HII	10,674.99	0.04%	1.33%	40.00%	41.60%	0.0160%
Hilton Worldwide Holdings Inc	HLT	30,417.17	0.11%	0.56%	12.00%	12.59%	0.0138%
Harley-Davidson Inc	HOG	5,153.37	0.02%	4.56%	7.70%	12.44%	0.0023%
Hologic Inc	HOLX	14,091.92	0.05%	0.00%	10.37%	10.37%	0.0053%
Honeywell International Inc	HON	123,771.49	0.45%	2.08%	7.24%	9.39%	0.0420%
Helmerich & Payne Inc	HP	4,444.45	0.02%	6.50%	4.47%	11.11%	0.0018%
Hewlett Packard Enterprise Co	HPE	18,010.46	0.07%	3.47%	5.41%	8.98%	0.0058%
HP Inc	HPQ	30,981.96	0.11%	3.30%	-1.30%	1.98%	0.0022%
H&R Block Inc	HRB	4,529.71	0.02%	4.44%	10.00%	14.66%	0.0024%
Hormel Foods Corp	HRL	25,271.66	0.09%	1.96%	4.62%	6.62%	0.0060%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Henry Schein Inc	HSIC	10,116.27	0.04%	0.00%	3.21%	3.21%	0.0012%
Host Hotels & Resorts Inc	HST	11,718.69	0.04%	5.04%	16.32%	21.78%	0.0092%
Hershey Co/The	HSY	32,418.33	0.12%	2.05%	7.90%	10.03%	0.0117%
Humana Inc	HUM	44,526.93	0.16%	0.65%	13.52%	14.22%	0.0229%
International Business Machines Corp	IBM	127,292.67	0.46%	4.66%	4.57%	9.34%	0.0429%
Intercontinental Exchange Inc	ICE	55,540.17	0.20%	1.12%	9.80%	10.97%	0.0220%
IDEXX Laboratories Inc	IDXX	23,247.93	0.08%	0.00%	19.19%	19.19%	0.0161%
IDEX Corp	IEX	12,462.41	0.05%	1.27%	12.23%	13.58%	0.0061%
International Flavors & Fragrances Inc	IFF	13,999.43	0.05%	2.23%	9.57%	11.90%	0.0060%
Illumina Inc	ILMN	42,640.29	0.15%	0.00%	13.96%	13.96%	0.0215%
Incyte Corp	INCY	15,739.08	0.06%	0.00%	40.60%	40.60%	0.0231%
IHS Markit Ltd	INFO	30,987.93	0.11%	0.54%	12.00%	12.57%	0.0141%
Intel Corp	INTC	273,428.61	0.99%	2.04%	6.22%	8.32%	0.0821%
Intuit Inc	INTU	72,984.77	0.26%	0.74%	13.96%	14.75%	0.0389%
International Paper Co	IP	15,966.98	0.06%	5.05%	6.10%	11.31%	0.0065%
Interpublic Group of Cos Inc/The	IPG	8,801.52	0.03%	4.14%	6.11%	10.37%	0.0033%
IPG Photonics Corp	IPGP	6,775.45	0.02%	0.00%	-10.17%	-10.17%	-0.0025%
IQVIA Holdings Inc	IQV	30,124.33	0.11%	0.00%	17.60%	17.60%	0.0191%
Ingersoll-Rand PLC	IR	31,750.95	0.11%	1.70%	8.97%	10.75%	0.0123%
Iron Mountain Inc	IRM	9,076.60	0.03%	7.78%	4.42%	12.37%	0.0041%
Intuitive Surgical Inc	ISRG	64,695.74	0.23%	0.00%	12.24%	12.24%	0.0286%
Gartner Inc	IT	14,382.25	0.05%	0.00%	12.77%	12.77%	0.0066%
Illinois Tool Works Inc	ITW	56,239.64	0.20%	2.33%	6.87%	9.28%	0.0188%
Invesco Ltd	IVZ	7,852.36	0.03%	7.41%	6.09%	13.72%	0.0039%
Jacobs Engineering Group Inc	J	12,329.57	0.04%	0.78%	11.99%	12.81%	0.0057%
JB Hunt Transport Services Inc	JBHT	11,502.95	0.04%	1.00%	11.83%	12.90%	0.0054%
Johnson Controls International plc	JCI	30,141.66	0.11%	2.79%	9.67%	12.59%	0.0137%
Jack Henry & Associates Inc	JKHY	11,505.14	0.04%	1.08%	12.65%	13.80%	0.0057%
Johnson & Johnson	JNJ	391,806.84	1.42%	2.69%	5.55%	8.32%	0.1177%
Juniper Networks Inc	JNPR	7,678.18	0.03%	3.43%	8.66%	12.24%	0.0034%
JPMorgan Chase & Co	JPM	415,145.14	1.50%	2.84%	6.80%	9.74%	0.1460%
Nordstrom Inc	JWN	5,722.63	0.02%	4.02%	6.00%	10.14%	0.0021%
Kellogg Co	K	23,266.03	0.08%	3.32%	1.65%	5.00%	0.0042%
KeyCorp	KEY	18,428.56	0.07%	4.18%	11.45%	15.87%	0.0106%
Keysight Technologies Inc	KEYS	17,523.74	0.06%	0.00%	8.19%	8.19%	0.0052%
Kraft Heinz Co/The	KHC	35,657.89	0.13%	5.48%	-2.88%	2.52%	0.0033%
Kimco Realty Corp	KIM	8,226.07	0.03%	5.92%	4.47%	10.52%	0.0031%
KLA Corp	KLAC	26,152.86	0.09%	1.98%	13.90%	16.02%	0.0151%
Kimberly-Clark Corp	KMB	49,103.47	0.18%	2.98%	5.09%	8.15%	0.0145%
Kinder Morgan Inc/DE	KMI	47,269.83	0.17%	5.97%	3.10%	9.16%	0.0156%
CarMax Inc	KMX	15,854.89	0.06%	0.00%	10.31%	10.31%	0.0059%
Coca-Cola Co/The	KO	250,214.30	0.90%	2.86%	8.20%	11.18%	0.1010%
Kroger Co/The	KR	21,503.78	0.08%	2.24%	5.07%	7.38%	0.0057%
Kohl's Corp	KSS	6,693.28	0.02%	6.38%	8.00%	14.64%	0.0035%
Kansas City Southern	KSU	16,219.70	0.06%	0.94%	11.10%	12.09%	0.0071%
Loews Corp	L	15,303.24	N/A	0.49%	N/A	N/A	N/A
L Brands Inc	LB	6,403.15	0.02%	5.19%	11.50%	16.98%	0.0039%
Leidos Holdings Inc	LDOS	14,222.92	0.05%	1.34%	10.00%	11.40%	0.0059%
Leggett & Platt Inc	LEG	6,262.98	0.02%	3.32%	10.00%	13.49%	0.0031%
Lennar Corp	LEN	20,437.69	0.07%	0.50%	12.59%	13.11%	0.0097%
Laboratory Corp of America Holdings	LH	17,031.34	0.06%	0.00%	5.32%	5.32%	0.0033%
L3Harris Technologies Inc	LHX	48,928.24	N/A	1.30%	N/A	N/A	N/A
Linde PLC	LIN	109,116.56	0.39%	1.76%	9.50%	11.34%	0.0447%
LKQ Corp	LKQ	10,016.70	0.04%	0.00%	14.20%	14.20%	0.0051%
Eli Lilly & Co	LLY	134,072.66	0.48%	2.06%	10.49%	12.65%	0.0613%
Lockheed Martin Corp	LMT	120,760.42	0.44%	2.29%	8.89%	11.27%	0.0492%
Lincoln National Corp	LNC	10,805.05	0.04%	2.76%	9.00%	11.89%	0.0046%
Alliant Energy Corp	LNT	14,487.99	0.05%	2.40%	5.78%	8.24%	0.0043%
Lowe's Cos Inc	LOW	89,095.10	0.32%	1.81%	14.88%	16.83%	0.0541%
Lam Research Corp	LRCX	42,483.59	0.15%	1.51%	14.14%	15.76%	0.0242%
Southwest Airlines Co	LUV	28,934.66	0.10%	1.36%	7.70%	9.11%	0.0095%
Las Vegas Sands Corp	LVS	50,160.47	0.18%	4.85%	4.45%	9.41%	0.0170%
Lamb Weston Holdings Inc	LW	13,339.67	0.05%	0.95%	8.97%	9.96%	0.0048%
LyondellBasell Industries NV	LYB	25,959.37	0.09%	5.81%	6.40%	12.40%	0.0116%
Live Nation Entertainment Inc	LYV	14,566.85	N/A	0.00%	N/A	N/A	N/A
Macy's Inc	M	4,928.00	0.02%	9.46%	-1.93%	7.44%	0.0013%
Mastercard Inc	MA	318,151.58	1.15%	0.45%	17.42%	17.91%	0.2058%
Mid-America Apartment Communities Inc	MAA	15,650.98	N/A	2.92%	N/A	N/A	N/A
Marriott International Inc/MD	MAR	45,790.83	0.17%	1.32%	7.32%	8.69%	0.0144%
Masco Corp	MAS	13,594.21	0.05%	1.01%	9.60%	10.66%	0.0052%
McDonald's Corp	MCD	161,139.38	0.58%	2.37%	8.99%	11.47%	0.0667%
Microchip Technology Inc	MCHP	23,295.54	0.08%	1.50%	9.31%	10.88%	0.0092%
McKesson Corp	MCK	25,696.60	0.09%	1.16%	-15.55%	-14.49%	-0.0134%
Moody's Corp	MCO	48,481.95	0.18%	0.82%	11.33%	12.20%	0.0214%
Mondelez International Inc	MDLZ	82,617.12	0.30%	2.07%	8.32%	10.48%	0.0313%
Medtronic PLC	MDT	154,733.18	0.56%	1.84%	7.62%	9.53%	0.0533%
MetLife Inc	MET	45,714.87	0.17%	3.50%	9.96%	13.64%	0.0225%
MGM Resorts International	MGM	15,995.41	0.06%	1.67%	1.97%	3.66%	0.0021%
Mohawk Industries Inc	MHK	9,431.22	0.03%	0.00%	8.35%	8.35%	0.0028%
McCormick & Co Inc/MD	MKC	21,719.80	0.08%	1.50%	5.00%	6.54%	0.0051%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
MarketAxess Holdings Inc	MKTX	13,431.76	N/A	0.67%	N/A	N/A	N/A
Martin Marietta Materials Inc	MLM	16,487.64	0.06%	0.78%	13.85%	14.69%	0.0087%
Marsh & McLennan Cos Inc	MMC	56,452.19	0.20%	1.71%	11.17%	12.98%	0.0265%
3M Co	MMM	91,237.54	0.33%	3.75%	6.65%	10.53%	0.0347%
Monster Beverage Corp	MNST	35,809.60	0.13%	0.00%	12.50%	12.50%	0.0162%
Altria Group Inc	MO	88,309.86	0.32%	7.29%	7.23%	14.79%	0.0472%
Mosaic Co/The	MOS	7,514.65	0.03%	0.97%	4.45%	5.44%	0.0015%
Marathon Petroleum Corp	MPC	35,388.03	0.13%	4.28%	11.58%	16.10%	0.0206%
Merck & Co Inc	MRK	217,528.89	0.79%	2.58%	10.44%	13.15%	0.1033%
Marathon Oil Corp	MRO	9,095.19	0.03%	1.76%	0.20%	1.96%	0.0006%
Morgan Stanley	MS	84,587.93	0.31%	2.88%	10.85%	13.88%	0.0424%
MSCI Inc	MSCI	24,209.34	0.09%	1.00%	13.75%	14.82%	0.0130%
Microsoft Corp	MSFT	1,294,777.38	4.68%	1.16%	11.88%	13.11%	0.6130%
Motorola Solutions Inc	MSI	30,326.48	0.11%	1.30%	7.10%	8.44%	0.0092%
M&T Bank Corp	MTB	22,237.91	0.08%	2.69%	5.46%	8.22%	0.0066%
Mettler-Toledo International Inc	MTD	18,440.51	0.07%	0.00%	11.79%	11.79%	0.0079%
Micron Technology Inc	MU	58,976.28	0.21%	0.00%	6.19%	6.19%	0.0132%
Maxim Integrated Products Inc	MXIM	16,195.98	0.06%	3.20%	6.73%	10.03%	0.0059%
Mylan NV	MYL	11,055.56	0.04%	0.00%	2.90%	2.90%	0.0012%
Noble Energy Inc	NBL	9,455.95	0.03%	2.36%	8.65%	11.11%	0.0038%
Norwegian Cruise Line Holdings Ltd	NCLH	11,456.99	0.04%	0.10%	8.21%	8.32%	0.0034%
Nasdaq Inc	NDAQ	19,089.55	0.07%	1.70%	7.83%	9.60%	0.0066%
NextEra Energy Inc	NEE	131,089.70	0.47%	2.10%	7.97%	10.15%	0.0481%
Newmont Corp	NEM	37,590.79	0.14%	1.83%	7.70%	9.60%	0.0130%
Netflix Inc	NFLX	151,427.79	0.55%	0.00%	29.57%	29.57%	0.1617%
NiSource Inc	NI	10,948.57	0.04%	2.74%	4.68%	7.48%	0.0030%
NIKE Inc	NKE	149,975.00	0.54%	0.97%	14.25%	15.29%	0.0828%
NortonLifeLock Inc	NLOK	17,712.68	0.06%	1.41%	4.67%	6.11%	0.0039%
Nielsen Holdings PLC	NLSN	7,258.53	0.03%	5.48%	8.75%	14.47%	0.0038%
Northrop Grumman Corp	NOC	62,791.84	0.23%	1.49%	16.49%	18.11%	0.0411%
National Oilwell Varco Inc	NOV	7,952.00	0.03%	0.98%	54.53%	55.77%	0.0160%
ServiceNow Inc	NOW	63,790.18	0.23%	0.00%	36.26%	36.26%	0.0835%
NRG Energy Inc	NRG	9,281.31	0.03%	0.33%	37.98%	38.37%	0.0129%
Norfolk Southern Corp	NSC	53,698.39	0.19%	1.83%	11.20%	13.13%	0.0255%
NetApp Inc	NTAP	12,187.28	0.04%	3.59%	5.54%	9.22%	0.0041%
Northern Trust Corp	NTRS	20,724.14	0.07%	2.97%	9.42%	12.53%	0.0094%
Nucor Corp	NUE	14,399.69	0.05%	3.39%	6.80%	10.31%	0.0054%
NVIDIA Corp	NVDA	144,695.16	0.52%	0.27%	9.17%	9.46%	0.0494%
NVR Inc	NVR	13,866.18	0.05%	0.00%	12.23%	12.23%	0.0061%
Newell Brands Inc	NWL	8,269.00	0.03%	4.71%	-12.53%	-8.11%	-0.0024%
News Corp	NWSA	8,080.98	0.03%	1.42%	-1.25%	0.17%	0.0000%
Realty Income Corp	O	25,555.32	0.09%	3.46%	4.95%	8.50%	0.0078%
Old Dominion Freight Line Inc	ODFL	15,663.77	0.06%	0.34%	12.87%	13.23%	0.0075%
ONEOK Inc	OKE	30,927.65	0.11%	4.76%	12.31%	17.36%	0.0194%
Omnicom Group Inc	OMC	16,397.40	0.06%	3.45%	4.16%	7.68%	0.0045%
Oracle Corp	ORCL	168,241.19	0.61%	1.78%	8.18%	10.04%	0.0610%
O'Reilly Automotive Inc	ORLY	30,725.08	0.11%	0.00%	11.95%	11.95%	0.0133%
Occidental Petroleum Corp	OXY	35,482.57	0.13%	7.82%	4.80%	12.81%	0.0164%
Paycom Software Inc	PAYC	18,580.23	0.07%	0.00%	26.00%	26.00%	0.0174%
Paychex Inc	PAYX	30,738.81	0.11%	2.92%	7.25%	10.28%	0.0114%
People's United Financial Inc	PBCT	6,835.29	0.02%	4.65%	2.00%	6.70%	0.0017%
PACCAR Inc	PCAR	25,698.92	0.09%	3.56%	4.47%	8.11%	0.0075%
Healthpeak Properties Inc	PEAK	18,353.23	0.07%	4.11%	3.64%	7.83%	0.0052%
Public Service Enterprise Group Inc	PEG	29,939.01	0.11%	3.17%	5.22%	8.48%	0.0092%
PepsiCo Inc	PEP	198,037.71	0.72%	2.67%	5.08%	7.81%	0.0559%
Pfizer Inc	PFE	206,090.72	0.74%	3.99%	2.77%	6.81%	0.0507%
Principal Financial Group Inc	PFG	14,702.73	0.05%	4.30%	8.34%	12.82%	0.0068%
Procter & Gamble Co/The	PG	307,743.22	1.11%	2.40%	7.44%	9.93%	0.1104%
Progressive Corp/The	PGR	47,171.37	0.17%	3.33%	6.23%	9.67%	0.0165%
Parker-Hannifin Corp	PH	25,139.26	0.09%	1.74%	7.82%	9.62%	0.0087%
PulteGroup Inc	PHM	12,054.39	0.04%	1.08%	11.97%	13.10%	0.0057%
Packaging Corp of America	PKG	9,063.50	0.03%	3.39%	10.00%	13.56%	0.0044%
PerkinElmer Inc	PKI	10,274.60	0.04%	0.30%	7.67%	7.98%	0.0030%
Prologis Inc	PLD	58,679.26	0.21%	2.41%	7.38%	9.87%	0.0209%
Philip Morris International Inc	PM	128,670.83	0.46%	5.58%	6.04%	11.79%	0.0548%
PNC Financial Services Group Inc/The	PNC	64,322.15	0.23%	3.26%	7.57%	10.96%	0.0255%
Pentair PLC	PNR	7,216.23	0.03%	1.76%	7.96%	9.79%	0.0026%
Pinnacle West Capital Corp	PNW	10,981.41	0.04%	3.09%	4.67%	7.83%	0.0031%
PPG Industries Inc	PPG	28,337.75	0.10%	1.78%	5.52%	7.35%	0.0075%
PPL Corp	PPL	26,166.57	0.09%	4.56%	1.38%	5.97%	0.0056%
Perrigo Co PLC	PRGO	7,763.69	0.03%	1.41%	-1.60%	-0.20%	-0.0001%
Prudential Financial Inc	PRU	36,606.12	0.13%	4.40%	9.00%	13.60%	0.0180%
Public Storage	PSA	39,086.51	0.14%	3.58%	3.51%	7.15%	0.0101%
Phillips 66	PSX	40,600.95	0.15%	4.21%	-0.04%	4.17%	0.0061%
PVH Corp	PVH	6,359.78	0.02%	0.17%	6.27%	6.45%	0.0015%
Quanta Services Inc	PWR	5,589.83	0.02%	0.33%	14.50%	14.85%	0.0030%
Pioneer Natural Resources Co	PXD	22,362.28	0.08%	0.62%	20.13%	20.81%	0.0168%
PayPal Holdings Inc	PYPL	133,592.97	0.48%	0.00%	18.81%	18.81%	0.0908%
QUALCOMM Inc	QCOM	97,451.84	0.35%	3.00%	12.26%	15.44%	0.0544%
Qorvo Inc	QRVO	12,246.37	0.04%	0.24%	13.24%	13.49%	0.0060%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Royal Caribbean Cruises Ltd	RCL	24,543.62	0.09%	2.49%	10.06%	12.68%	0.0112%
Everest Re Group Ltd	RE	11,279.11	0.04%	2.07%	10.00%	12.17%	0.0050%
Regency Centers Corp	REG	10,405.95	0.04%	3.77%	4.78%	8.64%	0.0032%
Regeneron Pharmaceuticals Inc	REGN	37,104.38	0.13%	0.00%	9.59%	9.59%	0.0129%
Regions Financial Corp	RF	15,019.43	0.05%	4.19%	7.16%	11.50%	0.0062%
Robert Half International Inc	RHI	6,753.34	0.02%	2.23%	1.83%	4.08%	0.0010%
Raymond James Financial Inc	RJF	12,699.63	0.05%	1.58%	9.85%	11.51%	0.0053%
Ralph Lauren Corp	RL	8,468.96	0.03%	2.40%	6.05%	8.52%	0.0026%
ResMed Inc	RMD	22,989.76	0.08%	1.00%	12.61%	13.67%	0.0114%
Rockwell Automation Inc	ROK	22,267.76	0.08%	2.13%	8.08%	10.30%	0.0083%
Rollins Inc	ROL	12,426.41	N/A	1.40%	N/A	N/A	N/A
Roper Technologies Inc	ROP	39,714.75	0.14%	0.54%	13.10%	13.68%	0.0196%
Ross Stores Inc	ROST	40,263.01	0.15%	0.91%	9.83%	10.79%	0.0157%
Republic Services Inc	RSG	30,334.71	0.11%	1.64%	8.38%	10.09%	0.0111%
Raytheon Co	RTN	61,527.15	0.22%	1.83%	7.41%	9.31%	0.0207%
SBA Communications Corp	SBAC	28,100.71	0.10%	0.28%	28.40%	28.72%	0.0292%
Starbucks Corp	SBUX	99,564.97	0.36%	1.95%	13.65%	15.74%	0.0566%
Charles Schwab Corp/The	SCHW	58,512.59	0.21%	1.64%	3.63%	5.30%	0.0112%
Sealed Air Corp	SEE	5,485.31	0.02%	1.81%	5.08%	6.93%	0.0014%
Sherwin-Williams Co/The	SHW	51,415.32	0.19%	0.96%	11.25%	12.26%	0.0228%
SVB Financial Group	SIVB	12,414.39	0.04%	0.02%	11.50%	11.52%	0.0052%
JM Smucker Co/The	SJM	11,817.38	0.04%	3.32%	1.27%	4.61%	0.0020%
Schlumberger Ltd	SLB	46,395.11	0.17%	5.97%	26.04%	32.78%	0.0549%
SL Green Realty Corp	SLG	7,481.07	0.03%	3.89%	7.58%	11.62%	0.0031%
Snap-on Inc	SNA	8,755.12	0.03%	2.41%	6.62%	9.11%	0.0029%
Synopsys Inc	SNPS	22,205.40	0.08%	0.00%	13.77%	13.77%	0.0110%
Southern Co/The	SO	73,830.87	0.27%	3.50%	4.10%	7.68%	0.0205%
Simon Property Group Inc	SPG	40,859.60	0.15%	6.25%	4.30%	10.68%	0.0158%
S&P Global Inc	SPGI	71,787.61	0.26%	0.77%	11.47%	12.29%	0.0319%
Sempra Energy	SRE	45,283.76	0.16%	2.42%	10.00%	12.53%	0.0205%
STERIS PLC	STE	12,775.97	0.05%	0.95%	10.10%	11.10%	0.0051%
State Street Corp	STT	27,500.83	0.10%	2.88%	8.61%	11.61%	0.0115%
Seagate Technology PLC	STX	14,971.91	0.05%	4.50%	5.37%	9.99%	0.0054%
Constellation Brands Inc	STZ	36,138.73	0.13%	1.59%	5.17%	6.80%	0.0089%
Stanley Black & Decker Inc	SWK	24,220.04	0.09%	1.78%	8.65%	10.50%	0.0092%
Skyworks Solutions Inc	SWKS	19,253.06	0.07%	1.37%	17.23%	18.72%	0.0130%
Synchrony Financial	SYF	19,961.32	0.07%	2.84%	-0.43%	2.40%	0.0017%
Stryker Corp	SYK	78,879.08	0.28%	1.10%	9.36%	10.51%	0.0299%
Sysco Corp	SYY	41,910.03	0.15%	2.05%	9.43%	11.57%	0.0175%
AT&T Inc	T	272,933.10	0.99%	5.55%	5.58%	11.29%	0.1113%
Molson Coors Beverage Co	TAP	12,109.45	0.04%	3.53%	-4.74%	-1.29%	-0.0006%
TransDigm Group Inc	TDG	34,446.58	0.12%	0.00%	11.86%	11.86%	0.0148%
TE Connectivity Ltd	TEL	30,801.22	0.11%	2.00%	9.98%	12.08%	0.0134%
Truist Financial Corp	TFC	69,215.50	0.25%	3.63%	8.93%	12.72%	0.0318%
Teleflex Inc	TFX	17,199.40	0.06%	0.36%	15.48%	15.87%	0.0099%
Target Corp	TGT	56,116.07	0.20%	2.39%	9.55%	12.05%	0.0244%
Tiffany & Co	TIF	16,234.06	0.06%	1.74%	6.77%	8.57%	0.0050%
TJX Cos Inc/The	TJX	71,035.97	0.26%	1.56%	11.13%	12.78%	0.0328%
Thermo Fisher Scientific Inc	TMO	125,586.44	0.45%	0.26%	12.57%	12.84%	0.0583%
T-Mobile US Inc	TMUS	67,752.97	0.24%	0.73%	6.00%	6.75%	0.0165%
Tapestry Inc	TPR	7,110.86	0.03%	5.27%	9.30%	14.81%	0.0038%
T Rowe Price Group Inc	TROW	31,202.93	0.11%	2.43%	10.66%	13.22%	0.0149%
Travelers Cos Inc/The	TRV	33,628.91	0.12%	2.57%	11.75%	14.47%	0.0176%
Tractor Supply Co	TSCO	11,004.00	0.04%	1.59%	10.78%	12.45%	0.0049%
Tyson Foods Inc	TSN	30,191.01	0.11%	2.04%	10.33%	12.48%	0.0136%
Take-Two Interactive Software Inc	TTWO	14,127.56	0.05%	0.00%	7.60%	7.60%	0.0039%
Twitter Inc	TWTR	25,216.07	0.09%	0.00%	42.67%	42.67%	0.0389%
Texas Instruments Inc	TXN	112,780.66	0.41%	3.01%	8.12%	11.25%	0.0458%
Textron Inc	TXT	10,484.11	0.04%	0.17%	11.17%	11.35%	0.0043%
Under Armour Inc	UAA	8,566.16	0.03%	0.00%	28.88%	28.88%	0.0089%
United Airlines Holdings Inc	UAL	18,927.67	0.07%	0.00%	11.23%	11.23%	0.0077%
UDR Inc	UDR	14,040.19	0.05%	2.86%	5.31%	8.25%	0.0042%
Universal Health Services Inc	UHS	12,008.40	0.04%	0.44%	6.15%	6.60%	0.0029%
Ulta Beauty Inc	ULTA	15,314.10	0.06%	0.00%	16.68%	16.68%	0.0092%
UnitedHealth Group Inc	UNH	258,123.20	0.93%	1.73%	13.53%	15.38%	0.1434%
Unum Group	UNM	5,505.31	0.02%	4.11%	9.00%	13.30%	0.0026%
Union Pacific Corp	UNP	124,553.34	0.45%	2.18%	8.40%	10.68%	0.0480%
United Parcel Service Inc	UPS	88,801.80	0.32%	3.87%	7.95%	11.97%	0.0384%
United Rentals Inc	URI	10,092.01	0.04%	0.00%	10.80%	10.80%	0.0039%
US Bancorp	USB	81,639.48	0.29%	3.29%	6.40%	9.79%	0.0289%
United Technologies Corp	UTX	129,662.99	0.47%	2.04%	8.90%	11.03%	0.0516%
Visa Inc	V	390,480.01	1.41%	0.58%	15.53%	16.15%	0.2278%
Varian Medical Systems Inc	VAR	12,779.10	0.05%	0.00%	10.63%	10.63%	0.0049%
VF Corp	VFC	33,136.03	0.12%	2.14%	10.05%	12.29%	0.0147%
ViacomCBS Inc	VIAC	21,200.06	0.08%	2.02%	7.00%	9.09%	0.0070%
Valero Energy Corp	VLO	34,622.13	0.13%	4.65%	17.78%	22.84%	0.0286%
Vulcan Materials Co	VMC	18,745.38	0.07%	0.86%	19.05%	19.99%	0.0135%
Vornado Realty Trust	VNO	12,552.23	0.05%	4.77%	5.15%	10.05%	0.0046%
Verisk Analytics Inc	VRSK	26,623.93	0.10%	0.54%	9.90%	10.46%	0.0101%
VeriSign Inc	VRSN	24,437.51	0.09%	0.00%	10.30%	10.30%	0.0091%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Vertex Pharmaceuticals Inc	VRTX	58,804.36	0.21%	0.00%	38.78%	38.78%	0.0824%
Ventas Inc	VTR	21,566.51	0.08%	5.49%	4.23%	9.84%	0.0077%
Verizon Communications Inc	VZ	245,843.84	0.89%	4.12%	2.84%	7.02%	0.0623%
Westinghouse Air Brake Technologies Corp	WAB	14,157.67	0.05%	0.66%	11.42%	12.12%	0.0062%
Waters Corp	WAT	14,419.77	0.05%	0.00%	9.32%	9.32%	0.0049%
Walgreens Boots Alliance Inc	WBA	45,046.06	0.16%	3.63%	8.23%	12.00%	0.0195%
Western Digital Corp	WDC	19,480.00	0.07%	3.05%	2.77%	5.87%	0.0041%
WEC Energy Group Inc	WEC	31,508.86	0.11%	2.52%	6.69%	9.30%	0.0106%
Welltower Inc	WELL	34,456.44	0.12%	4.10%	2.87%	7.03%	0.0087%
Wells Fargo & Co	WFC	194,068.74	0.70%	4.47%	10.31%	15.00%	0.1051%
Whirlpool Corp	WHR	9,237.91	0.03%	3.41%	4.73%	8.22%	0.0027%
Willis Towers Watson PLC	WLTW	27,166.13	0.10%	1.21%	10.00%	11.27%	0.0111%
Waste Management Inc	WM	51,630.15	0.19%	1.68%	7.50%	9.24%	0.0172%
Williams Cos Inc/The	WMB	25,077.29	0.09%	7.35%	5.00%	12.53%	0.0113%
Walmart Inc	WMT	324,828.16	1.17%	1.88%	4.18%	6.10%	0.0716%
WR Berkley Corp	WRB	13,486.28	0.05%	1.55%	6.95%	8.56%	0.0042%
Westrock Co	WRK	10,079.79	0.04%	5.52%	4.45%	10.09%	0.0037%
Western Union Co/The	WU	11,277.99	0.04%	2.97%	4.22%	7.26%	0.0030%
Weyerhaeuser Co	WY	21,571.87	0.08%	4.70%	3.80%	8.59%	0.0067%
Wynn Resorts Ltd	WYNN	13,543.86	0.05%	2.97%	13.10%	16.27%	0.0080%
Cimarex Energy Co	XEC	4,468.45	0.02%	1.69%	19.35%	21.20%	0.0034%
Xcel Energy Inc	XEL	36,282.41	0.13%	2.46%	5.78%	8.31%	0.0109%
Xilinx Inc	XLNX	21,021.71	0.08%	1.75%	9.05%	10.88%	0.0083%
Exxon Mobil Corp	XOM	262,836.31	0.95%	5.76%	6.33%	12.28%	0.1165%
DENTSPLY SIRONA Inc	XRAY	12,455.17	0.04%	0.63%	12.72%	13.39%	0.0060%
Xerox Holdings Corp	XRX	7,689.82	N/A	2.82%	N/A	N/A	N/A
Xylem Inc/NY	XYL	14,705.24	0.05%	1.18%	12.28%	13.52%	0.0072%
Yum! Brands Inc	YUM	31,991.42	0.12%	1.59%	11.67%	13.35%	0.0154%
Zimmer Biomet Holdings Inc	ZBH	30,420.72	0.11%	0.65%	6.39%	7.06%	0.0078%
Zebra Technologies Corp	ZBRA	12,888.31	0.05%	0.00%	11.80%	11.80%	0.0055%
Zions Bancorp NA	ZION	7,508.44	0.03%	3.13%	5.24%	8.45%	0.0023%
Zoetis Inc	ZTS	63,924.12	0.23%	0.49%	11.40%	11.91%	0.0275%
Total Market Capitalization:		27,688,228.26					13.44%

Notes:
[1] Equals sum of Col. [9]
[2] Source: Bloomberg Professional
[3] Equals [1] − [2]
[4] Source: Bloomberg Professional
[5] Equals weight in S&P 500 based on market capitalization
[6] Source: Bloomberg Professional
[7] Source: Bloomberg Professional
[8] Equals ([6] x (1 + (0.5 x [7]))) + [7]
[9] Equals Col. [5] x Col. [8]

Ex-Ante Market Risk Premium
Market DCF Method Based - Value Line

[1] S&P 500 Est. Required Market Return	[2] Current 30-Year Treasury (30-day average)	[3] Implied Market Risk Premium
14.51%	2.25%	12.25%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Agilent Technologies Inc	A	27,575.81	0.10%	0.81%	11.00%	11.85%	0.0121%
American Airlines Group Inc	AAL	12,615.41	0.05%	1.39%	7.00%	8.44%	0.0040%
Advance Auto Parts Inc	AAP	10,372.55	0.04%	0.16%	14.00%	14.17%	0.0055%
Apple Inc	AAPL	1,418,414.00	5.26%	1.01%	12.50%	13.57%	0.7146%
AbbVie Inc	ABBV	126,095.80	0.47%	5.54%	10.50%	16.33%	0.0764%
AmerisourceBergen Corp	ABC	18,995.92	0.07%	1.84%	8.00%	9.91%	0.0070%
ABIOMED Inc	ABMD	8,344.79	0.03%	0.00%	12.50%	12.50%	0.0039%
Abbott Laboratories	ABT	160,452.00	0.60%	1.59%	10.00%	11.67%	0.0695%
Accenture PLC	ACN	133,905.90	0.50%	1.52%	9.00%	10.59%	0.0526%
Adobe Inc	ADBE	170,569.50	0.63%	0.00%	21.00%	21.00%	0.1329%
Analog Devices Inc	ADI	44,512.98	0.17%	1.79%	9.00%	10.87%	0.0180%
Archer-Daniels-Midland Co	ADM	25,048.29	0.09%	3.29%	9.50%	12.95%	0.0120%
Automatic Data Processing Inc	ADP	77,071.52	0.29%	2.05%	13.50%	15.69%	0.0449%
Alliance Data Systems Corp	ADS	5,153.98	0.02%	2.25%	9.00%	11.35%	0.0022%
Autodesk Inc	ADSK	43,698.55	N/A	0.00%	N/A	N/A	N/A
Ameren Corp	AEE	19,753.80	0.07%	2.50%	6.50%	9.08%	0.0067%
American Electric Power Co Inc	AEP	49,872.72	0.19%	2.81%	4.00%	6.87%	0.0127%
AES Corp/VA	AES	13,649.64	N/A	2.77%	N/A	N/A	N/A
Aflac Inc	AFL	38,638.43	0.14%	2.13%	8.00%	10.22%	0.0146%
Allergan PLC	AGN	62,535.86	0.23%	1.55%	3.00%	4.57%	0.0106%
American International Group Inc	AIG	44,898.07	N/A	2.48%	N/A	N/A	N/A
Apartment Investment & Management Co	AIV	8,211.35	0.03%	2.90%	-3.00%	-0.14%	0.0000%
Assurant Inc	AIZ	7,918.72	0.03%	1.93%	8.50%	10.51%	0.0031%
Arthur J Gallagher & Co	AJG	18,088.64	0.07%	1.77%	14.50%	16.40%	0.0110%
Akamai Technologies Inc	AKAM	15,590.49	0.06%	0.00%	18.00%	18.00%	0.0104%
Albemarle Corp	ALB	8,683.94	0.03%	1.80%	5.50%	7.35%	0.0024%
Align Technology Inc	ALGN	21,339.90	0.08%	0.00%	25.00%	25.00%	0.0198%
Alaska Air Group Inc	ALK	8,281.82	0.03%	2.08%	6.00%	8.14%	0.0025%
Allstate Corp/The	ALL	38,398.75	0.14%	1.69%	10.50%	12.28%	0.0175%
Allegion PLC	ALLE	12,073.74	0.04%	0.83%	9.50%	10.37%	0.0046%
Alexion Pharmaceuticals Inc	ALXN	24,022.12	0.09%	0.00%	42.00%	42.00%	0.0374%
Applied Materials Inc	AMAT	58,523.24	0.22%	1.36%	7.50%	8.91%	0.0194%
Amcor PLC	AMCR	17,371.87	N/A	4.47%	N/A	N/A	N/A
Advanced Micro Devices Inc	AMD	57,604.94	0.21%	0.00%	34.00%	34.00%	0.0727%
AMETEK Inc	AME	23,037.60	0.09%	0.56%	15.50%	16.10%	0.0138%
Amgen Inc	AMGN	140,130.90	0.52%	2.72%	7.50%	10.32%	0.0537%
Ameriprise Financial Inc	AMP	21,834.67	0.08%	2.26%	12.50%	14.90%	0.0121%
American Tower Corp	AMT	105,319.40	0.39%	1.86%	7.50%	9.43%	0.0369%
Amazon.com Inc	AMZN	932,867.10	3.46%	0.00%	39.00%	39.00%	1.3503%
Arista Networks Inc	ANET	17,569.22	0.07%	0.00%	12.00%	12.00%	0.0078%
ANSYS Inc	ANSS	23,373.19	0.09%	0.00%	12.00%	12.00%	0.0104%
Anthem Inc	ANTM	77,250.64	0.29%	1.05%	18.50%	19.65%	0.0563%
Aon PLC	AON	49,886.71	0.19%	0.83%	11.00%	11.88%	0.0220%
AO Smith Corp	AOS	7,618.96	0.03%	2.06%	6.50%	8.63%	0.0024%
Apache Corp	APA	11,382.19	0.04%	3.30%	46.00%	50.06%	0.0211%
Air Products & Chemicals Inc	APD	52,288.04	0.19%	2.26%	10.50%	12.88%	0.0250%
Amphenol Corp	APH	31,604.25	0.12%	0.94%	9.50%	10.48%	0.0123%
Aptiv PLC	APTV	23,604.63	0.09%	0.95%	11.00%	12.00%	0.0105%
Alexandria Real Estate Equities Inc	ARE	18,362.49	N/A	2.50%	N/A	N/A	N/A
Arconic Inc	ARNC	12,784.75	N/A	0.27%	N/A	N/A	N/A
Atmos Energy Corp	ATO	13,814.75	0.05%	1.99%	7.50%	9.56%	0.0049%
Activision Blizzard Inc	ATVI	46,187.41	0.17%	0.67%	9.00%	9.70%	0.0166%
AvalonBay Communities Inc	AVB	30,262.61	0.11%	2.93%	2.50%	5.47%	0.0061%
Broadcom Inc	AVGO	127,220.70	0.47%	4.07%	33.50%	38.25%	0.1806%
Avery Dennison Corp	AVY	10,934.59	0.04%	1.91%	11.00%	13.02%	0.0053%
American Water Works Co Inc	AWK	24,456.38	0.09%	1.51%	9.50%	11.08%	0.0101%
American Express Co	AXP	107,854.80	0.40%	1.31%	10.00%	11.38%	0.0455%
AutoZone Inc	AZO	27,581.73	0.10%	0.00%	13.50%	13.50%	0.0138%
Boeing Co/The	BA	178,848.70	0.66%	2.59%	12.00%	14.75%	0.0979%
Bank of America Corp	BAC	309,784.60	1.15%	2.23%	10.50%	12.85%	0.1477%
Baxter International Inc	BAX	46,480.95	0.17%	0.97%	10.50%	11.52%	0.0199%
Best Buy Co Inc	BBY	23,353.20	0.09%	2.45%	10.50%	13.08%	0.0113%
Becton Dickinson and Co	BDX	75,376.11	0.28%	1.13%	9.50%	10.68%	0.0299%
Franklin Resources Inc	BEN	12,822.10	0.05%	4.52%	7.50%	12.19%	0.0058%
Brown-Forman Corp	BF/B	34,355.11	0.13%	0.97%	14.50%	15.54%	0.0198%
Biogen Inc	BIIB	51,697.80	0.19%	0.00%	8.00%	8.00%	0.0154%
Bank of New York Mellon Corp/The	BK	43,361.79	0.16%	2.64%	7.00%	9.73%	0.0157%
Booking Holdings Inc	BKNG	83,883.82	0.31%	0.00%	12.00%	12.00%	0.0374%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Baker Hughes Co	BKR	14,901.04	N/A	3.14%	N/A	N/A	N/A
BlackRock Inc	BLK	83,648.43	0.31%	2.44%	9.00%	11.55%	0.0359%
Ball Corp	BLL	23,659.31	0.09%	0.84%	25.00%	25.95%	0.0228%
Bristol-Myers Squibb Co	BMY	108,950.30	0.40%	2.69%	9.00%	11.81%	0.0478%
Broadridge Financial Solutions Inc	BR	15,042.40	0.06%	1.65%	11.00%	12.74%	0.0071%
Berkshire Hathaway Inc	BRK/B	-	N/A	0.00%	N/A	N/A	N/A
Boston Scientific Corp	BSX	60,726.82	0.23%	0.00%	15.50%	15.50%	0.0349%
BorgWarner Inc	BWA	8,375.36	0.03%	1.68%	4.50%	6.22%	0.0019%
Boston Properties Inc	BXP	21,954.66	0.08%	2.78%	5.00%	7.85%	0.0064%
Citigroup Inc	C	174,218.90	0.65%	2.63%	10.00%	12.76%	0.0825%
Conagra Brands Inc	CAG	15,913.95	0.06%	2.66%	5.50%	8.23%	0.0049%
Cardinal Health Inc	CAH	16,076.91	0.06%	3.50%	10.50%	14.18%	0.0085%
Caterpillar Inc	CAT	78,891.93	0.29%	2.89%	12.00%	15.06%	0.0441%
Chubb Ltd	CB	68,977.98	0.26%	1.97%	10.00%	12.07%	0.0309%
Cboe Global Markets Inc	CBOE	13,308.32	0.05%	1.20%	14.50%	15.79%	0.0078%
CBRE Group Inc	CBRE	20,427.33	0.08%	0.00%	11.00%	11.00%	0.0083%
Crown Castle International Corp	CCI	62,308.48	0.23%	3.21%	12.50%	15.91%	0.0368%
Carnival Corp	CCL	26,062.87	0.10%	4.04%	10.00%	14.24%	0.0138%
Cadence Design Systems Inc	CDNS	21,162.32	0.08%	0.00%	12.50%	12.50%	0.0098%
CDW Corp/DE	CDW	19,963.25	0.07%	1.10%	10.50%	11.66%	0.0086%
Celanese Corp	CE	14,023.67	0.05%	2.35%	8.50%	10.95%	0.0057%
Cerner Corp	CERN	23,757.31	0.09%	0.95%	9.00%	9.99%	0.0088%
CF Industries Holdings Inc	CF	9,258.24	N/A	3.06%	N/A	N/A	N/A
Citizens Financial Group Inc	CFG	17,694.37	0.07%	3.91%	9.50%	13.60%	0.0089%
Church & Dwight Co Inc	CHD	17,411.11	0.06%	1.28%	9.00%	10.34%	0.0067%
CH Robinson Worldwide Inc	CHRW	10,785.13	0.04%	2.56%	9.00%	11.68%	0.0047%
Charter Communications Inc	CHTR	110,212.20	0.41%	0.00%	17.50%	17.50%	0.0716%
Cigna Corp	CI	79,427.50	0.29%	0.02%	14.50%	14.52%	0.0428%
Cincinnati Financial Corp	CINF	17,317.13	0.06%	2.11%	9.50%	11.71%	0.0075%
Colgate-Palmolive Co	CL	60,515.88	0.22%	2.44%	5.50%	8.01%	0.0180%
Clorox Co/The	CLX	19,962.49	0.07%	2.67%	3.50%	6.22%	0.0046%
Comerica Inc	CMA	9,511.54	0.04%	4.06%	9.50%	13.75%	0.0049%
Comcast Corp	CMCSA	207,673.30	0.77%	1.84%	13.50%	15.46%	0.1192%
CME Group Inc	CME	74,435.38	0.28%	1.44%	3.00%	4.46%	0.0123%
Chipotle Mexican Grill Inc	CMG	24,460.43	0.09%	0.00%	26.50%	26.50%	0.0241%
Cummins Inc	CMI	26,298.31	0.10%	3.05%	8.00%	11.17%	0.0109%
CMS Energy Corp	CMS	19,012.26	0.07%	2.43%	7.00%	9.52%	0.0067%
Centene Corp	CNC	28,545.75	0.11%	0.00%	15.50%	15.50%	0.0164%
CenterPoint Energy Inc	CNP	13,525.19	0.05%	4.42%	10.50%	15.15%	0.0076%
Capital One Financial Corp	COF	49,380.40	0.18%	1.51%	6.00%	7.56%	0.0138%
Cabot Oil & Gas Corp	COG	6,212.68	0.02%	2.63%	46.50%	49.74%	0.0115%
Cooper Cos Inc/The	COO	17,635.80	0.07%	0.02%	14.50%	14.52%	0.0095%
ConocoPhillips	COP	69,281.56	0.26%	2.66%	37.00%	40.15%	0.1032%
Costco Wholesale Corp	COST	138,223.50	0.51%	0.92%	11.00%	11.97%	0.0614%
Coty Inc	COTY	8,107.47	0.03%	4.67%	5.00%	9.79%	0.0029%
Campbell Soup Co	CPB	15,814.08	0.06%	2.86%	2.00%	4.89%	0.0029%
Capri Holdings Ltd	CPRI	5,534.61	0.02%	0.00%	10.50%	10.50%	0.0022%
Copart Inc	CPRT	23,220.15	0.09%	0.00%	16.00%	16.00%	0.0138%
salesforce.com Inc	CRM	163,006.30	0.61%	0.00%	30.00%	30.00%	0.1815%
Cisco Systems Inc	CSCO	207,809.00	0.77%	2.86%	7.50%	10.47%	0.0807%
CSX Corp	CSX	59,958.31	0.22%	1.25%	14.50%	15.84%	0.0353%
Cintas Corp	CTAS	29,661.13	0.11%	0.89%	15.50%	16.46%	0.0181%
CenturyLink Inc	CTL	16,191.34	0.06%	6.73%	1.00%	7.76%	0.0047%
Cognizant Technology Solutions Corp	CTSH	34,402.50	0.13%	1.28%	6.00%	7.32%	0.0093%
Corteva Inc	CTVA	21,291.70	N/A	2.11%	N/A	N/A	N/A
Citrix Systems Inc	CTXS	16,688.01	0.06%	1.09%	7.00%	8.13%	0.0050%
CVS Health Corp	CVS	95,662.53	0.36%	2.72%	6.50%	9.31%	0.0331%
Chevron Corp	CVX	213,857.60	0.79%	4.29%	16.50%	21.14%	0.1678%
Concho Resources Inc	CXO	16,921.87	0.06%	0.59%	21.00%	21.65%	0.0136%
Dominion Energy Inc	D	69,189.62	0.26%	4.47%	6.50%	11.12%	0.0285%
Delta Air Lines Inc	DAL	38,979.20	0.14%	2.87%	10.00%	13.01%	0.0188%
DuPont de Nemours Inc	DD	43,566.10	N/A	2.15%	N/A	N/A	N/A
Deere & Co	DE	54,177.05	0.20%	1.77%	13.50%	15.39%	0.0309%
Discover Financial Services	DFS	27,041.12	0.10%	2.05%	7.50%	9.63%	0.0097%
Dollar General Corp	DG	39,498.65	0.15%	0.83%	12.00%	12.88%	0.0189%
Quest Diagnostics Inc	DGX	14,578.65	0.05%	1.96%	9.00%	11.05%	0.0060%
DR Horton Inc	DHI	21,733.74	0.08%	1.19%	7.00%	8.23%	0.0066%
Danaher Corp	DHR	116,693.10	0.43%	0.42%	13.50%	13.95%	0.0604%
Walt Disney Co/The	DIS	256,244.40	0.95%	1.24%	7.50%	8.79%	0.0836%
Discovery Inc	DISCA	16,047.15	0.06%	0.00%	18.00%	18.00%	0.0107%
DISH Network Corp	DISH	18,188.91	0.07%	0.00%	-2.00%	-2.00%	-0.0014%
Digital Realty Trust Inc	DLR	26,238.81	0.10%	3.62%	7.00%	10.75%	0.0105%
Dollar Tree Inc	DLTR	20,815.40	0.08%	0.00%	10.00%	10.00%	0.0077%
Dover Corp	DOV	17,235.81	0.06%	1.65%	12.50%	14.25%	0.0091%
Dow Inc	DOW	37,260.18	N/A	5.97%	N/A	N/A	N/A
Duke Realty Corp	DRE	12,904.28	0.05%	2.67%	4.50%	7.23%	0.0035%
Darden Restaurants Inc	DRI	14,292.01	0.05%	3.03%	11.00%	14.20%	0.0075%
DTE Energy Co	DTE	24,556.86	0.09%	3.03%	4.50%	7.60%	0.0069%
Duke Energy Corp	DUK	70,042.32	0.26%	3.98%	6.00%	10.10%	0.0263%
DaVita Inc	DVA	10,778.07	0.04%	0.00%	11.50%	11.50%	0.0046%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Devon Energy Corp	DVN	9,435.48	0.04%	1.48%	18.00%	19.61%	0.0069%
DXC Technology Co	DXC	9,089.42	0.03%	2.36%	10.00%	12.48%	0.0042%
Electronic Arts Inc	EA	33,249.64	0.12%	0.00%	11.00%	11.00%	0.0136%
eBay Inc	EBAY	29,164.59	0.11%	1.66%	10.00%	11.74%	0.0127%
Ecolab Inc	ECL	57,150.05	0.21%	0.95%	10.00%	11.00%	0.0233%
Consolidated Edison Inc	ED	30,799.64	0.11%	3.30%	3.00%	6.35%	0.0073%
Equifax Inc	EFX	18,764.45	0.07%	1.01%	8.50%	9.55%	0.0067%
Edison International	EIX	27,853.65	0.10%	3.32%	14.00%	17.55%	0.0181%
Estee Lauder Cos Inc/The	EL	75,339.83	0.28%	0.92%	14.00%	14.98%	0.0419%
Eastman Chemical Co	EMN	10,066.83	0.04%	3.57%	5.00%	8.66%	0.0032%
Emerson Electric Co	EMR	47,407.49	0.18%	2.58%	11.00%	13.72%	0.0241%
EOG Resources Inc	EOG	47,606.81	0.18%	1.41%	31.50%	33.13%	0.0585%
Equinix Inc	EQIX	50,827.14	0.19%	1.77%	23.50%	25.48%	0.0481%
Equity Residential	EQR	30,690.17	0.11%	2.83%	-13.50%	-10.86%	-0.0124%
Eversource Energy	ES	29,537.40	0.11%	2.44%	5.50%	8.01%	0.0088%
Essex Property Trust Inc	ESS	20,591.28	0.08%	2.61%	-0.50%	2.10%	0.0016%
E*TRADE Financial Corp	ETFC	10,448.45	0.04%	1.22%	17.50%	18.83%	0.0073%
Eaton Corp PLC	ETN	40,471.86	0.15%	2.90%	7.00%	10.00%	0.0150%
Entergy Corp	ETR	25,871.36	0.10%	2.88%	2.00%	4.91%	0.0047%
Evergy Inc	EVRG	15,998.72	N/A	2.92%	N/A	N/A	N/A
Edwards Lifesciences Corp	EW	48,219.79	0.18%	0.00%	16.50%	16.50%	0.0295%
Exelon Corp	EXC	46,607.40	0.17%	3.17%	9.00%	12.31%	0.0213%
Expeditors International of Washington I	EXPD	12,592.88	0.05%	1.35%	9.00%	10.41%	0.0049%
Expedia Group Inc	EXPE	16,546.58	0.06%	1.20%	24.00%	25.34%	0.0156%
Extra Space Storage Inc	EXR	14,052.62	0.05%	3.37%	4.00%	7.44%	0.0039%
Ford Motor Co	F	35,591.57	0.13%	6.57%	3.50%	10.18%	0.0135%
Diamondback Energy Inc	FANG	13,648.73	0.05%	0.89%	17.00%	17.97%	0.0091%
Fastenal Co	FAST	20,681.35	0.08%	2.77%	8.50%	11.39%	0.0087%
Facebook Inc	FB	627,195.10	2.33%	0.00%	17.50%	17.50%	0.4074%
Fortune Brands Home & Security Inc	FBHS	9,818.49	0.04%	1.36%	8.50%	9.92%	0.0036%
Freeport-McMoRan Inc	FCX	17,368.47	0.06%	1.67%	22.50%	24.36%	0.0157%
FedEx Corp	FDX	40,442.11	0.15%	1.68%	6.00%	7.73%	0.0116%
FirstEnergy Corp	FE	27,204.71	0.10%	3.18%	6.50%	9.78%	0.0099%
F5 Networks Inc	FFIV	8,086.76	0.03%	0.00%	12.50%	12.50%	0.0038%
Fidelity National Information Services I	FIS	91,492.15	0.34%	0.94%	23.50%	24.55%	0.0834%
Fiserv Inc	FISV	83,214.18	0.31%	0.00%	15.00%	15.00%	0.0463%
Fifth Third Bancorp	FITB	21,097.60	0.08%	3.41%	7.00%	10.53%	0.0082%
FLIR Systems Inc	FLIR	7,362.04	0.03%	1.31%	12.00%	13.39%	0.0037%
Flowserve Corp	FLS	6,418.03	0.02%	1.55%	13.50%	15.15%	0.0036%
FleetCor Technologies Inc	FLT	27,480.38	0.10%	0.00%	16.50%	16.50%	0.0168%
FMC Corp	FMC	12,550.62	0.05%	1.82%	15.00%	16.96%	0.0079%
Fox Corp	FOXA	23,268.13	N/A	1.23%	N/A	N/A	N/A
First Republic Bank/CA	FRC	19,525.04	0.07%	0.66%	10.50%	11.19%	0.0081%
Federal Realty Investment Trust	FRT	9,731.95	0.04%	3.22%	3.00%	6.27%	0.0023%
TechnipFMC PLC	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
Fortinet Inc	FTNT	20,396.69	0.08%	0.00%	28.00%	28.00%	0.0212%
Fortive Corp	FTV	26,046.96	0.10%	0.36%	10.00%	10.38%	0.0100%
General Dynamics Corp	GD	53,411.67	0.20%	2.21%	6.00%	8.28%	0.0164%
General Electric Co	GE	102,793.90	0.38%	0.34%	2.00%	2.34%	0.0089%
Gilead Sciences Inc	GILD	80,948.05	0.30%	3.94%	-1.50%	2.41%	0.0072%
General Mills Inc	GIS	32,793.50	0.12%	3.61%	4.50%	8.19%	0.0100%
Globe Life Inc	GL	11,361.68	0.04%	0.66%	9.50%	10.19%	0.0043%
Corning Inc	GLW	22,694.40	0.08%	2.71%	14.50%	17.41%	0.0147%
General Motors Co	GM	48,832.00	0.18%	4.47%	2.00%	6.51%	0.0118%
Alphabet Inc	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
Genuine Parts Co	GPC	14,554.00	0.05%	3.05%	8.00%	11.17%	0.0060%
Global Payments Inc	GPN	60,042.88	0.22%	0.39%	20.50%	20.93%	0.0466%
Gap Inc/The	GPS	6,643.13	0.02%	5.45%	3.00%	8.53%	0.0021%
Garmin Ltd	GRMN	19,116.76	0.07%	2.27%	10.50%	12.89%	0.0091%
Goldman Sachs Group Inc/The	GS	87,797.05	0.33%	2.04%	10.00%	12.14%	0.0396%
WW Grainger Inc	GWW	17,912.60	0.07%	1.73%	8.50%	10.30%	0.0069%
Halliburton Co	HAL	20,656.08	0.08%	3.05%	19.50%	22.85%	0.0175%
Hasbro Inc	HAS	13,317.17	0.05%	2.58%	9.50%	12.20%	0.0060%
Huntington Bancshares Inc/OH	HBAN	14,737.41	0.05%	4.35%	10.50%	15.08%	0.0082%
Hanesbrands Inc	HBI	5,221.68	0.02%	4.16%	3.00%	7.22%	0.0014%
HCA Healthcare Inc	HCA	49,882.38	0.19%	1.09%	12.50%	13.66%	0.0253%
Home Depot Inc/The	HD	254,678.50	0.95%	2.74%	9.00%	11.86%	0.1121%
Hess Corp	HES	20,134.04	N/A	1.50%	N/A	N/A	N/A
HollyFrontier Corp	HFC	7,478.07	0.03%	3.03%	17.00%	20.29%	0.0056%
Hartford Financial Services Group Inc/Th	HIG	21,229.41	0.08%	2.07%	12.50%	14.70%	0.0116%
Huntington Ingalls Industries Inc	HII	11,361.10	0.04%	1.49%	7.00%	8.54%	0.0036%
Hilton Worldwide Holdings Inc	HLT	31,436.08	0.12%	0.54%	17.00%	17.59%	0.0205%
Harley-Davidson Inc	HOG	5,438.79	0.02%	4.26%	8.50%	12.94%	0.0026%
Hologic Inc	HOLX	14,372.74	0.05%	0.00%	12.00%	12.00%	0.0064%
Honeywell International Inc	HON	128,315.80	0.48%	2.01%	8.50%	10.60%	0.0505%
Helmerich & Payne Inc	HP	4,670.60	N/A	6.65%	N/A	N/A	N/A
Hewlett Packard Enterprise Co	HPE	19,622.63	0.07%	3.17%	8.00%	11.30%	0.0082%
HP Inc	HPQ	32,221.80	0.12%	3.17%	7.00%	10.28%	0.0123%
H&R Block Inc	HRB	4,756.19	0.02%	4.35%	7.00%	11.50%	0.0020%
Hormel Foods Corp	HRL	25,115.59	0.09%	1.98%	10.50%	12.58%	0.0117%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Henry Schein Inc	HSIC	10,384.11	0.04%	0.00%	7.00%	7.00%	0.0027%
Host Hotels & Resorts Inc	HST	12,919.98	0.05%	4.76%	-1.50%	3.22%	0.0015%
Hershey Co/The	HSY	32,184.31	0.12%	2.08%	7.00%	9.15%	0.0109%
Humana Inc	HUM	49,301.45	0.18%	0.63%	12.00%	12.67%	0.0232%
International Business Machines Corp	IBM	126,531.00	0.47%	4.60%	1.00%	5.62%	0.0264%
Intercontinental Exchange Inc	ICE	54,293.40	0.20%	1.13%	10.50%	11.69%	0.0236%
IDEXX Laboratories Inc	IDXX	24,555.38	0.09%	0.00%	13.00%	13.00%	0.0118%
IDEX Corp	IEX	13,210.67	0.05%	1.15%	9.50%	10.70%	0.0052%
International Flavors & Fragrances Inc	IFF	14,526.87	0.05%	2.27%	8.00%	10.36%	0.0056%
Illumina Inc	ILMN	48,069.00	0.18%	0.00%	14.00%	14.00%	0.0250%
Incyte Corp	INCY	16,850.86	N/A	0.00%	N/A	N/A	N/A
IHS Markit Ltd	INFO	31,667.68	0.12%	0.84%	18.00%	18.92%	0.0222%
Intel Corp	INTC	275,442.00	1.02%	1.99%	10.50%	12.59%	0.1288%
Intuit Inc	INTU	75,133.25	0.28%	0.74%	14.50%	15.29%	0.0426%
International Paper Co	IP	17,511.19	0.06%	4.59%	9.00%	13.80%	0.0090%
Interpublic Group of Cos Inc/The	IPG	9,107.63	0.03%	3.99%	11.00%	15.21%	0.0051%
IPG Photonics Corp	IPGP	7,787.81	0.03%	0.00%	8.00%	8.00%	0.0023%
IQVIA Holdings Inc	IQV	31,216.54	0.12%	0.00%	12.50%	12.50%	0.0145%
Ingersoll-Rand PLC	IR	31,696.29	0.12%	1.60%	12.50%	14.20%	0.0167%
Iron Mountain Inc	IRM	9,162.48	0.03%	7.77%	8.50%	16.60%	0.0056%
Intuitive Surgical Inc	ISRG	71,094.00	0.26%	0.00%	14.00%	14.00%	0.0369%
Gartner Inc	IT	14,430.12	0.05%	0.00%	13.50%	13.50%	0.0072%
Illinois Tool Works Inc	ITW	57,723.44	0.21%	2.38%	9.50%	11.99%	0.0257%
Invesco Ltd	IVZ	8,383.42	0.03%	6.71%	3.50%	10.33%	0.0032%
Jacobs Engineering Group Inc	J	13,049.66	0.05%	0.79%	14.50%	15.35%	0.0074%
JB Hunt Transport Services Inc	JBHT	12,416.34	0.05%	0.94%	9.50%	10.48%	0.0048%
Johnson Controls International plc	JCI	32,466.09	0.12%	2.49%	8.00%	10.59%	0.0128%
Jack Henry & Associates Inc	JKHY	11,724.60	0.04%	1.05%	12.00%	13.11%	0.0057%
Johnson & Johnson	JNJ	390,776.60	1.45%	2.56%	12.00%	14.71%	0.2134%
Juniper Networks Inc	JNPR	8,351.09	0.03%	3.19%	5.50%	8.78%	0.0027%
JPMorgan Chase & Co	JPM	428,255.70	1.59%	2.71%	8.50%	11.33%	0.1800%
Nordstrom Inc	JWN	6,105.57	0.02%	3.76%	5.00%	8.85%	0.0020%
Kellogg Co	K	24,026.66	0.09%	3.29%	3.50%	6.85%	0.0061%
KeyCorp	KEY	19,602.71	0.07%	3.78%	10.50%	14.48%	0.0105%
Keysight Technologies Inc	KEYS	19,561.25	0.07%	0.00%	21.50%	21.50%	0.0156%
Kraft Heinz Co/The	KHC	37,460.28	N/A	5.22%	N/A	N/A	N/A
Kimco Realty Corp	KIM	8,617.41	0.03%	5.53%	5.00%	10.67%	0.0034%
KLA Corp	KLAC	28,805.29	0.11%	1.86%	11.00%	12.96%	0.0139%
Kimberly-Clark Corp	KMB	49,629.41	0.18%	2.85%	7.50%	10.46%	0.0193%
Kinder Morgan Inc/DE	KMI	49,284.39	0.18%	4.60%	35.50%	40.92%	0.0748%
CarMax Inc	KMX	16,069.93	0.06%	0.00%	10.50%	10.50%	0.0063%
Coca-Cola Co/The	KO	247,743.70	0.92%	2.87%	6.50%	9.46%	0.0870%
Kroger Co/The	KR	22,808.88	0.08%	2.39%	4.00%	6.44%	0.0055%
Kohl's Corp	KSS	7,256.54	0.03%	6.40%	6.50%	13.11%	0.0035%
Kansas City Southern	KSU	16,524.78	0.06%	0.96%	12.00%	13.02%	0.0080%
Loews Corp	L	15,398.17	0.06%	0.49%	14.00%	14.52%	0.0083%
L Brands Inc	LB	5,796.00	0.02%	5.71%	-2.50%	3.14%	0.0007%
Leidos Holdings Inc	LDOS	14,470.83	0.05%	1.33%	9.00%	10.39%	0.0056%
Leggett & Platt Inc	LEG	6,752.55	0.03%	3.12%	9.00%	12.26%	0.0031%
Lennar Corp	LEN	21,366.23	0.08%	0.74%	8.50%	9.27%	0.0074%
Laboratory Corp of America Holdings	LH	17,509.60	0.06%	0.00%	8.00%	8.00%	0.0052%
L3Harris Technologies Inc	LHX	N/A	N/A	0.00%	N/A	N/A	N/A
Linde PLC	LIN	112,745.60	N/A	1.81%	N/A	N/A	N/A
LKQ Corp	LKQ	10,524.91	0.04%	0.00%	10.00%	10.00%	0.0039%
Eli Lilly & Co	LLY	135,568.10	0.50%	2.10%	12.00%	14.23%	0.0716%
Lockheed Martin Corp	LMT	120,946.40	0.45%	2.24%	12.50%	14.88%	0.0668%
Lincoln National Corp	LNC	11,568.41	0.04%	2.79%	9.00%	11.92%	0.0051%
Alliant Energy Corp	LNT	14,050.45	0.05%	2.60%	6.50%	9.18%	0.0048%
Lowe's Cos Inc	LOW	94,241.28	0.35%	1.92%	11.50%	13.53%	0.0473%
Lam Research Corp	LRCX	45,260.59	0.17%	1.47%	9.00%	10.54%	0.0177%
Southwest Airlines Co	LUV	29,155.69	0.11%	1.30%	10.50%	11.87%	0.0128%
Las Vegas Sands Corp	LVS	53,337.60	0.20%	4.55%	7.50%	12.22%	0.0242%
Lamb Weston Holdings Inc	LW	13,270.21	0.05%	1.01%	11.00%	12.07%	0.0059%
LyondellBasell Industries NV	LYB	28,753.11	0.11%	4.87%	5.50%	10.50%	0.0112%
Live Nation Entertainment Inc	LYV	15,889.79	N/A	0.00%	N/A	N/A	N/A
Macy's Inc	M	5,274.03	0.02%	8.85%	2.00%	10.94%	0.0021%
Mastercard Inc	MA	328,229.80	1.22%	0.49%	16.00%	16.53%	0.2014%
Mid-America Apartment Communities Inc	MAA	15,529.46	0.06%	2.93%	1.00%	3.94%	0.0023%
Marriott International Inc/MD	MAR	47,387.42	0.18%	1.33%	11.50%	12.91%	0.0227%
Masco Corp	MAS	14,134.87	0.05%	1.09%	9.50%	10.64%	0.0056%
McDonald's Corp	MCD	160,726.60	0.60%	2.34%	8.50%	10.94%	0.0653%
Microchip Technology Inc	MCHP	26,326.01	0.10%	1.33%	9.50%	10.89%	0.0106%
McKesson Corp	MCK	27,948.96	0.10%	1.06%	10.50%	11.62%	0.0120%
Moody's Corp	MCO	48,526.00	0.18%	0.78%	11.50%	12.32%	0.0222%
Mondelez International Inc	MDLZ	79,871.08	0.30%	2.13%	8.50%	10.72%	0.0318%
Medtronic PLC	MDT	162,145.30	0.60%	1.79%	8.50%	10.37%	0.0624%
MetLife Inc	MET	47,635.39	0.18%	3.40%	7.50%	11.03%	0.0195%
MGM Resorts International	MGM	16,609.70	0.06%	1.61%	14.00%	15.72%	0.0097%
Mohawk Industries Inc	MHK	10,332.03	0.04%	0.00%	1.50%	1.50%	0.0006%
McCormick & Co Inc/MD	MKC	22,963.21	0.09%	1.44%	8.00%	9.50%	0.0081%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
MarketAxess Holdings Inc	MKTX	13,876.21	0.05%	0.56%	14.50%	15.10%	0.0078%
Martin Marietta Materials Inc	MLM	16,741.88	0.06%	0.83%	9.50%	10.37%	0.0064%
Marsh & McLennan Cos Inc	MMC	57,685.92	0.21%	1.61%	9.00%	10.68%	0.0229%
3M Co	MMM	102,209.60	0.38%	3.24%	6.00%	9.34%	0.0354%
Monster Beverage Corp	MNST	36,635.86	0.14%	0.00%	14.50%	14.50%	0.0197%
Altria Group Inc	MO	94,452.40	0.35%	6.65%	8.50%	15.43%	0.0541%
Mosaic Co/The	MOS	7,581.92	0.03%	1.25%	18.00%	19.36%	0.0054%
Marathon Petroleum Corp	MPC	35,964.50	0.13%	3.83%	11.00%	15.04%	0.0201%
Merck & Co Inc	MRK	225,906.70	0.84%	2.76%	9.00%	11.88%	0.0996%
Marathon Oil Corp	MRO	9,788.22	N/A	1.64%	N/A	N/A	N/A
Morgan Stanley	MS	90,157.78	0.33%	2.52%	10.00%	12.65%	0.0423%
MSCI Inc	MSCI	23,645.96	0.09%	1.01%	18.50%	19.60%	0.0172%
Microsoft Corp	MSFT	1,272,741.00	4.72%	1.22%	14.00%	15.31%	0.7230%
Motorola Solutions Inc	MSI	30,273.84	0.11%	1.45%	10.50%	12.03%	0.0135%
M&T Bank Corp	MTB	22,532.45	0.08%	2.58%	9.50%	12.20%	0.0102%
Mettler-Toledo International Inc	MTD	20,241.10	0.08%	0.00%	10.00%	10.00%	0.0075%
Micron Technology Inc	MU	65,593.59	0.24%	0.00%	14.00%	14.00%	0.0341%
Maxim Integrated Products Inc	MXIM	17,208.03	0.06%	3.02%	5.50%	8.60%	0.0055%
Mylan NV	MYL	11,427.36	0.04%	0.00%	3.50%	3.50%	0.0015%
Noble Energy Inc	NBL	10,689.96	N/A	2.15%	N/A	N/A	N/A
Norwegian Cruise Line Holdings Ltd	NCLH	12,386.77	0.05%	0.00%	16.00%	16.00%	0.0074%
Nasdaq Inc	NDAQ	17,967.70	0.07%	1.72%	8.00%	9.79%	0.0065%
NextEra Energy Inc	NEE	127,120.90	0.47%	2.11%	10.50%	12.72%	0.0600%
Newmont Corp	NEM	35,826.96	0.13%	1.28%	11.50%	12.85%	0.0171%
Netflix Inc	NFLX	153,212.50	0.57%	0.00%	32.00%	32.00%	0.1820%
NiSource Inc	NI	10,900.92	0.04%	2.74%	12.50%	15.41%	0.0062%
NIKE Inc	NKE	160,608.20	0.60%	0.95%	17.50%	18.53%	0.1105%
NortonLifeLock Inc	NLOK	17,693.20	0.07%	1.76%	7.00%	8.82%	0.0058%
Nielsen Holdings PLC	NLSN	7,603.66	0.03%	1.12%	45.50%	46.87%	0.0132%
Northrop Grumman Corp	NOC	64,359.81	0.24%	1.38%	9.50%	10.95%	0.0261%
National Oilwell Varco Inc	NOV	8,766.51	N/A	0.88%	N/A	N/A	N/A
ServiceNow Inc	NOW	58,728.59	N/A	0.00%	N/A	N/A	N/A
NRG Energy Inc	NRG	9,794.70	N/A	3.09%	N/A	N/A	N/A
Norfolk Southern Corp	NSC	54,394.43	0.20%	1.80%	14.00%	15.93%	0.0322%
NetApp Inc	NTAP	13,870.53	0.05%	3.17%	10.00%	13.33%	0.0069%
Northern Trust Corp	NTRS	22,050.56	0.08%	2.69%	8.50%	11.30%	0.0093%
Nucor Corp	NUE	15,639.63	0.06%	3.11%	13.00%	16.31%	0.0095%
NVIDIA Corp	NVDA	154,750.30	0.57%	0.25%	11.50%	11.76%	0.0676%
NVR Inc	NVR	14,896.43	0.06%	0.00%	13.50%	13.50%	0.0075%
Newell Brands Inc	NWL	8,533.73	0.03%	4.56%	4.00%	8.65%	0.0027%
News Corp	NWSA	8,439.55	N/A	1.39%	N/A	N/A	N/A
Realty Income Corp	O	23,461.03	0.09%	3.63%	4.50%	8.21%	0.0072%
Old Dominion Freight Line Inc	ODFL	16,405.78	0.06%	0.35%	9.50%	9.87%	0.0060%
ONEOK Inc	OKE	31,513.56	0.12%	4.98%	17.00%	22.40%	0.0262%
Omnicom Group Inc	OMC	17,146.39	0.06%	3.56%	6.50%	10.18%	0.0065%
Oracle Corp	ORCL	176,705.70	0.66%	1.75%	10.00%	11.84%	0.0776%
O'Reilly Automotive Inc	ORLY	33,021.19	0.12%	0.00%	12.00%	12.00%	0.0147%
Occidental Petroleum Corp	OXY	37,983.84	0.14%	7.46%	24.50%	32.87%	0.0463%
Paycom Software Inc	PAYC	18,153.30	0.07%	0.00%	25.50%	25.50%	0.0172%
Paychex Inc	PAYX	32,130.56	0.12%	2.97%	10.50%	13.63%	0.0162%
People's United Financial Inc	PBCT	6,401.52	0.02%	4.48%	8.00%	12.66%	0.0030%
PACCAR Inc	PCAR	26,826.32	0.10%	4.61%	7.50%	12.28%	0.0122%
Healthpeak Properties Inc	PEAK	17,681.68	0.07%	4.00%	-3.50%	0.43%	0.0003%
Public Service Enterprise Group Inc	PEG	31,116.96	0.12%	3.14%	6.00%	9.23%	0.0107%
PepsiCo Inc	PEP	200,535.40	0.74%	2.75%	6.50%	9.34%	0.0695%
Pfizer Inc	PFE	225,294.10	0.84%	3.73%	10.00%	13.92%	0.1164%
Principal Financial Group Inc	PFG	15,381.74	0.06%	3.98%	5.50%	9.59%	0.0055%
Procter & Gamble Co/The	PG	308,656.90	1.15%	2.38%	9.00%	11.49%	0.1316%
Progressive Corp/The	PGR	44,622.52	0.17%	0.52%	15.50%	16.06%	0.0266%
Parker-Hannifin Corp	PH	25,925.52	0.10%	1.74%	9.50%	11.32%	0.0109%
PulteGroup Inc	PHM	11,882.08	0.04%	1.10%	9.50%	10.65%	0.0047%
Packaging Corp of America	PKG	10,138.58	0.04%	2.95%	6.00%	9.04%	0.0034%
PerkinElmer Inc	PKI	11,041.53	0.04%	0.28%	11.00%	11.30%	0.0046%
Prologis Inc	PLD	60,254.25	0.22%	2.38%	6.50%	8.96%	0.0200%
Philip Morris International Inc	PM	135,484.30	0.50%	5.37%	6.00%	11.53%	0.0580%
PNC Financial Services Group Inc/The	PNC	67,039.69	0.25%	3.01%	8.00%	11.13%	0.0277%
Pentair PLC	PNR	7,863.39	0.03%	1.63%	6.00%	7.68%	0.0022%
Pinnacle West Capital Corp	PNW	10,767.24	0.04%	3.36%	4.00%	7.43%	0.0030%
PPG Industries Inc	PPG	29,855.82	0.11%	1.62%	6.00%	7.67%	0.0085%
PPL Corp	PPL	26,515.89	0.10%	4.52%	1.50%	6.05%	0.0060%
Perrigo Co PLC	PRGO	8,095.82	0.03%	1.51%	2.00%	3.53%	0.0011%
Prudential Financial Inc	PRU	38,048.36	0.14%	4.19%	6.50%	10.83%	0.0153%
Public Storage	PSA	38,866.04	0.14%	3.76%	4.50%	8.34%	0.0120%
Phillips 66	PSX	45,360.07	0.17%	3.82%	10.00%	14.01%	0.0236%
PVH Corp	PVH	7,102.33	0.03%	0.16%	9.00%	9.17%	0.0024%
Quanta Services Inc	PWR	5,848.88	0.02%	0.49%	17.00%	17.53%	0.0038%
Pioneer Natural Resources Co	PXD	23,261.24	0.09%	1.25%	35.00%	36.47%	0.0315%
PayPal Holdings Inc	PYPL	138,402.90	0.51%	0.00%	20.00%	20.00%	0.1027%
QUALCOMM Inc	QCOM	112,056.00	0.42%	2.70%	10.50%	13.34%	0.0555%
Qorvo Inc	QRVO	13,801.77	0.05%	0.00%	62.50%	62.50%	0.0320%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Royal Caribbean Cruises Ltd	RCL	27,162.97	0.10%	2.41%	12.50%	15.06%	0.0152%
Everest Re Group Ltd	RE	11,444.96	0.04%	2.23%	18.50%	20.94%	0.0089%
Regency Centers Corp	REG	10,759.35	0.04%	3.65%	16.00%	19.94%	0.0080%
Regeneron Pharmaceuticals Inc	REGN	39,953.46	0.15%	0.00%	10.00%	10.00%	0.0148%
Regions Financial Corp	RF	15,595.49	0.06%	4.08%	10.50%	14.79%	0.0086%
Robert Half International Inc	RHI	7,260.71	0.03%	2.11%	9.00%	11.20%	0.0030%
Raymond James Financial Inc	RJF	12,576.71	0.05%	1.64%	8.00%	9.71%	0.0045%
Ralph Lauren Corp	RL	8,804.29	0.03%	2.33%	8.00%	10.42%	0.0034%
ResMed Inc	RMD	23,202.88	0.09%	0.97%	18.00%	19.06%	0.0164%
Rockwell Automation Inc	ROK	23,406.11	0.09%	2.03%	8.00%	10.11%	0.0088%
Rollins Inc	ROL	11,987.65	0.04%	1.15%	13.00%	14.22%	0.0063%
Roper Technologies Inc	ROP	39,381.79	0.15%	0.54%	11.50%	12.07%	0.0176%
Ross Stores Inc	ROST	42,482.07	0.16%	0.95%	9.50%	10.50%	0.0165%
Republic Services Inc	RSG	33,355.05	0.12%	1.75%	11.50%	13.35%	0.0165%
Raytheon Co	RTN	64,003.94	0.24%	1.64%	10.00%	11.72%	0.0278%
SBA Communications Corp	SBAC	28,715.15	0.11%	0.58%	29.50%	30.17%	0.0321%
Starbucks Corp	SBUX	113,109.40	0.42%	1.80%	13.50%	15.42%	0.0647%
Charles Schwab Corp/The	SCHW	62,410.09	0.23%	1.55%	12.00%	13.64%	0.0316%
Sealed Air Corp	SEE	5,887.14	0.02%	1.68%	22.50%	24.37%	0.0053%
Sherwin-Williams Co/The	SHW	55,066.02	0.20%	0.87%	10.50%	11.42%	0.0233%
SVB Financial Group	SIVB	13,357.13	0.05%	0.00%	15.00%	15.00%	0.0074%
JM Smucker Co/The	SJM	12,361.82	0.05%	3.29%	3.50%	6.85%	0.0031%
Schlumberger Ltd	SLB	50,433.29	0.19%	5.49%	15.00%	20.90%	0.0391%
SL Green Realty Corp	SLG	7,971.40	0.03%	3.81%	5.50%	9.41%	0.0028%
Snap-on Inc	SNA	9,238.26	0.03%	2.57%	6.00%	8.65%	0.0030%
Synopsys Inc	SNPS	23,301.80	0.09%	0.00%	12.00%	12.00%	0.0104%
Southern Co/The	SO	72,320.70	0.27%	3.68%	3.50%	7.24%	0.0194%
Simon Property Group Inc	SPG	45,501.57	0.17%	5.98%	4.50%	10.61%	0.0179%
S&P Global Inc	SPGI	72,633.23	0.27%	0.85%	11.00%	11.90%	0.0321%
Sempra Energy	SRE	45,136.92	0.17%	2.62%	11.00%	13.76%	0.0231%
STERIS PLC	STE	12,873.03	0.05%	0.98%	10.00%	11.03%	0.0053%
State Street Corp	STT	29,257.11	0.11%	2.62%	5.00%	7.69%	0.0083%
Seagate Technology PLC	STX	16,482.35	0.06%	4.14%	4.00%	8.22%	0.0050%
Constellation Brands Inc	STZ	37,013.16	0.14%	1.62%	8.50%	10.19%	0.0140%
Stanley Black & Decker Inc	SWK	29,804.62	0.11%	1.66%	9.00%	10.73%	0.0119%
Skyworks Solutions Inc	SWKS	21,840.37	0.08%	1.37%	8.00%	9.42%	0.0076%
Synchrony Financial	SYF	23,662.38	0.09%	2.49%	9.50%	12.11%	0.0106%
Stryker Corp	SYK	80,952.77	0.30%	1.06%	13.00%	14.13%	0.0425%
Sysco Corp	SYY	42,703.12	0.16%	2.15%	10.50%	12.76%	0.0202%
AT&T Inc	T	282,129.30	1.05%	5.38%	5.50%	11.03%	0.1155%
Molson Coors Beverage Co	TAP	12,272.86	0.05%	4.02%	2.50%	6.57%	0.0030%
TransDigm Group Inc	TDG	37,018.43	0.14%	0.00%	11.50%	11.50%	0.0158%
TE Connectivity Ltd	TEL	33,765.47	0.13%	1.83%	6.50%	8.39%	0.0105%
Truist Financial Corp	TFC	43,188.84	0.16%	3.27%	8.00%	11.40%	0.0183%
Teleflex Inc	TFX	17,815.63	0.07%	0.35%	15.00%	15.38%	0.0102%
Target Corp	TGT	58,536.51	0.22%	2.29%	9.50%	11.90%	0.0259%
Tiffany & Co	TIF	16,091.78	0.06%	1.77%	10.50%	12.36%	0.0074%
TJX Cos Inc/The	TJX	75,138.84	0.28%	1.47%	13.50%	15.07%	0.0420%
Thermo Fisher Scientific Inc	TMO	145,564.30	0.54%	0.23%	10.00%	10.24%	0.0553%
T-Mobile US Inc	TMUS	70,309.75	0.26%	0.00%	18.50%	18.50%	0.0483%
Tapestry Inc	TPR	7,708.65	0.03%	4.83%	10.50%	15.58%	0.0045%
T Rowe Price Group Inc	TROW	31,264.65	0.12%	2.37%	10.00%	12.49%	0.0145%
Travelers Cos Inc/The	TRV	34,634.44	0.13%	2.44%	9.00%	11.55%	0.0148%
Tractor Supply Co	TSCO	11,096.84	0.04%	1.62%	11.50%	13.21%	0.0054%
Tyson Foods Inc	TSN	32,193.36	0.12%	1.91%	8.00%	9.99%	0.0119%
Take-Two Interactive Software Inc	TTWO	14,610.08	0.05%	0.00%	23.50%	23.50%	0.0127%
Twitter Inc	TWTR	26,289.08	N/A	0.00%	N/A	N/A	N/A
Texas Instruments Inc	TXN	125,547.60	0.47%	2.68%	6.00%	8.76%	0.0408%
Textron Inc	TXT	10,293.40	0.04%	0.18%	13.00%	13.19%	0.0050%
Under Armour Inc	UAA	9,586.02	0.04%	0.00%	17.50%	17.50%	0.0062%
United Airlines Holdings Inc	UAL	21,527.61	0.08%	0.00%	12.00%	12.00%	0.0096%
UDR Inc	UDR	13,275.81	0.05%	2.84%	5.50%	8.42%	0.0041%
Universal Health Services Inc	UHS	12,942.87	0.05%	0.54%	11.00%	11.57%	0.0056%
Ulta Beauty Inc	ULTA	15,592.43	0.06%	0.00%	13.00%	13.00%	0.0075%
UnitedHealth Group Inc	UNH	283,588.70	1.05%	1.44%	13.50%	15.04%	0.1583%
Unum Group	UNM	5,912.59	0.02%	3.98%	7.50%	11.63%	0.0026%
Union Pacific Corp	UNP	130,189.90	0.48%	2.07%	13.00%	15.20%	0.0735%
United Parcel Service Inc	UPS	100,279.20	0.37%	3.39%	8.00%	11.53%	0.0429%
United Rentals Inc	URI	11,752.77	0.04%	0.00%	14.50%	14.50%	0.0063%
US Bancorp	USB	86,224.32	0.32%	3.13%	6.00%	9.22%	0.0295%
United Technologies Corp	UTX	132,770.80	0.49%	1.91%	9.00%	11.00%	0.0542%
Visa Inc	V	410,148.70	1.52%	0.58%	18.00%	18.63%	0.2836%
Varian Medical Systems Inc	VAR	13,566.43	0.05%	0.00%	10.50%	10.50%	0.0053%
VF Corp	VFC	34,067.15	0.13%	2.25%	7.00%	9.33%	0.0118%
ViacomCBS Inc	VIAC	13,871.25	0.05%	2.60%	12.00%	14.76%	0.0076%
Valero Energy Corp	VLO	36,771.60	0.14%	4.19%	11.50%	15.93%	0.0217%
Vulcan Materials Co	VMC	18,867.82	0.07%	0.87%	14.50%	15.43%	0.0108%
Vornado Realty Trust	VNO	13,094.22	0.05%	3.85%	-1.50%	2.32%	0.0011%
Verisk Analytics Inc	VRSK	27,018.95	0.10%	0.61%	10.00%	10.64%	0.0107%
VeriSign Inc	VRSN	25,308.93	0.09%	0.00%	11.00%	11.00%	0.0103%

Company	Ticker	[4] Market Capitalization	[5] Weight in Index	[6] Estimated Dividend Yield	[7] Long-Term Growth Est.	[8] DCF Result	[9] Weighted DCF Result
Vertex Pharmaceuticals Inc	VRTX	60,176.86	0.22%	0.00%	50.00%	50.00%	0.1117%
Ventas Inc	VTR	20,852.33	0.08%	5.54%	4.00%	9.65%	0.0075%
Verizon Communications Inc	VZ	250,256.30	0.93%	4.07%	4.00%	8.15%	0.0757%
Westinghouse Air Brake Technologies Corp	WAB	15,330.25	0.06%	0.60%	13.50%	14.14%	0.0080%
Waters Corp	WAT	15,753.75	0.06%	0.00%	13.00%	13.00%	0.0076%
Walgreens Boots Alliance Inc	WBA	47,335.20	0.18%	3.43%	9.00%	12.58%	0.0221%
Western Digital Corp	WDC	21,137.14	0.08%	2.82%	1.00%	3.83%	0.0030%
WEC Energy Group Inc	WEC	31,133.53	0.12%	2.56%	6.00%	8.64%	0.0100%
Welltower Inc	WELL	33,472.25	0.12%	4.13%	10.50%	14.85%	0.0184%
Wells Fargo & Co	WFC	205,858.00	0.76%	4.27%	5.50%	9.89%	0.0755%
Whirlpool Corp	WHR	9,495.36	0.04%	3.19%	6.50%	9.79%	0.0035%
Willis Towers Watson PLC	WLTW	26,565.52	0.10%	1.26%	17.50%	18.87%	0.0186%
Waste Management Inc	WM	51,382.74	0.19%	1.69%	8.50%	10.26%	0.0196%
Williams Cos Inc/The	WMB	27,197.28	0.10%	6.77%	20.00%	27.45%	0.0277%
Walmart Inc	WMT	328,784.60	1.22%	1.87%	7.50%	9.44%	0.1152%
WR Berkley Corp	WRB	13,110.65	0.05%	0.62%	12.00%	12.66%	0.0062%
Westrock Co	WRK	10,840.49	0.04%	4.42%	8.00%	12.60%	0.0051%
Western Union Co/The	WU	11,652.22	0.04%	2.88%	6.50%	9.47%	0.0041%
Weyerhaeuser Co	WY	22,963.09	0.09%	4.41%	15.00%	19.74%	0.0168%
Wynn Resorts Ltd	WYNN	14,935.26	0.06%	2.88%	14.50%	17.59%	0.0098%
Cimarex Energy Co	XEC	4,900.60	0.02%	1.66%	8.50%	10.23%	0.0019%
Xcel Energy Inc	XEL	35,081.29	0.13%	2.57%	5.50%	8.14%	0.0106%
Xilinx Inc	XLNX	25,752.63	0.10%	1.45%	8.00%	9.51%	0.0091%
Exxon Mobil Corp	XOM	282,503.90	1.05%	5.27%	11.00%	16.56%	0.1736%
DENTSPLY SIRONA Inc	XRAY	13,262.42	0.05%	0.59%	4.50%	5.10%	0.0025%
Xerox Holdings Corp	XRX	7,933.03	0.03%	2.76%	12.50%	15.43%	0.0045%
Xylem Inc/NY	XYL	14,824.80	0.06%	1.17%	14.00%	15.25%	0.0084%
Yum! Brands Inc	YUM	32,111.94	0.12%	1.64%	12.00%	13.74%	0.0164%
Zimmer Biomet Holdings Inc	ZBH	30,739.26	0.11%	0.66%	4.50%	5.17%	0.0059%
Zebra Technologies Corp	ZBRA	13,747.39	0.05%	0.00%	15.50%	15.50%	0.0079%
Zions Bancorp NA	ZION	8,142.13	0.03%	2.85%	9.50%	12.49%	0.0038%
Zoetis Inc	ZTS	65,953.04	0.24%	0.58%	13.50%	14.12%	0.0346%
Total Market Capitalization:		26,942,730.24					14.51%

Notes:
[1] Equals sum of Col. [9]
[2] Source: Bloomberg Professional
[3] Equals [1] − [2]
[4] Source: Value Line
[5] Equals weight in S&P 500 based on market capitalization
[6] Source: Value Line
[7] Source: Value Line
[8] Equals ([6] x (1 + (0.5 x [7]))) + [7]
[9] Equals Col. [5] x Col. [8]

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1] Bloomberg	[2] Value Line
Atmos Energy Corporation	ATO	0.503	0.600
New Jersey Resources Corporation	NJR	0.657	0.700
Northwest Natural Holding Company	NWN	0.569	0.600
ONE Gas, Inc.	OGS	0.540	0.650
Southwest Gas Holdings, Inc.	SWX	0.572	0.700
Spire Inc.	SR	0.536	0.650
Mean		0.563	0.650

Notes:
[1] Source: Bloomberg Professional
[2] Source: Value Line

Capital Asset Pricing Model Results
Bloomberg and Value Line Derived Market Risk Premium

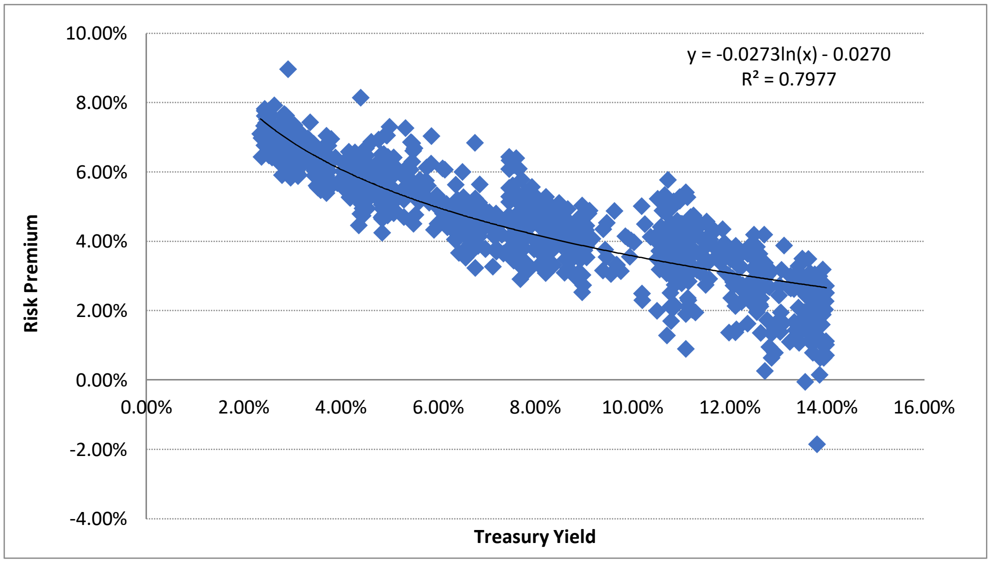
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
			Ex-Ante Market Risk Premium		CAPM Result		ECAPM Result	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT								
Current 30-Year Treasury [9]	2.25%	0.563	11.18%	12.25%	8.55%	9.15%	9.77%	10.49%
Near Term Projected 30-Year Treasury [10]	2.42%	0.563	11.18%	12.25%	8.71%	9.31%	9.93%	10.65%
Long-Term Projected 30-Year Treasury [11]	3.45%	0.563	11.18%	12.25%	9.74%	10.35%	10.97%	11.69%
Mean					9.00%	9.60%	10.22%	10.94%

			Ex-Ante Market Risk Premium		CAPM Result		ECAPM Result	
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg Market DCF Derived	Value Line Market DCF Derived
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT								
Current 30-Year Treasury [9]	2.25%	0.650	11.18%	12.25%	9.52%	10.22%	10.50%	11.29%
Near Term Projected 30-Year Treasury [10]	2.42%	0.650	11.18%	12.25%	9.69%	10.38%	10.66%	11.45%
Long-Term Projected 30-Year Treasury [11]	3.45%	0.650	11.18%	12.25%	10.72%	11.42%	11.70%	12.49%
Mean					9.98%	10.67%	10.96%	11.74%

Notes:
[1] See Notes [9], [10], and [11]
[2] Source: Schedule RBH-5
[3] Source: Schedule RBH-4
[4] Source: Schedule RBH-4
[5] Equals Col. [1] + (Col. [2] x Col. [3])
[6] Equals Col. [1] + (Col. [2] x Col. [4])
[7] Equals Col. [1] + (0.75 x Col. [2] x Col. [3]) + (0.25 x Col. [3])
[8] Equals Col. [1] + (0.75 x Col. [2] x Col. [4]) + (0.25 x Col. [4])
[9] Source: Bloomberg Professional
[10] Source: Blue Chip Financial Forecasts, Vol. 39, No. 2, February 1, 2020, at 2.
[11] Source: Blue Chip Financial Forecasts, Vol. 38, No. 12, December 1, 2019, at 14.

Bond Yield Plus Risk Premium

	[1] Constant	[2] Slope	[3] 30-Year Treasury Yield	[4] Risk Premium	[5] Return on Equity
	-2.70%	-2.73%			
Current 30-Year Treasury			2.25%	7.64%	9.90%
Near Term Projected 30-Year Treasury			2.42%	7.45%	9.87%
Long Term Projected 30-Year Treasury			3.45%	6.48%	9.93%



Notes:
[1] Constant of regression equation
[2] Slope of regression equation
[3] Source: Current = Bloomberg Professional
Near Term Projected = Blue Chip Financial Forecasts, Vol. 39, No. 2, February 1, 2020, at 2
Long Term Projected = Blue Chip Financial Forecasts, Vol. 38, No. 12, December 1, 2019, at 14
[4] Equals [1] + ln([3]) x [2]
[5] Equals [3] + [4]
[6] Source: S&P Global Market Intelligence
[7] Source: S&P Global Market Intelligence
[8] Source: Bloomberg Professional, equals 187-trading day average (i.e. lag period)
[9] Equals [7] - [8]

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/3/1980	12.55%	9.39%	3.16%
1/4/1980	13.75%	9.40%	4.35%
1/14/1980	13.20%	9.44%	3.76%
1/18/1980	14.00%	9.47%	4.53%
1/31/1980	12.61%	9.56%	3.05%
2/8/1980	14.50%	9.63%	4.87%
2/14/1980	13.00%	9.67%	3.33%
2/15/1980	13.00%	9.69%	3.31%
2/29/1980	14.00%	9.86%	4.14%
3/5/1980	14.00%	9.91%	4.09%
3/7/1980	13.50%	9.95%	3.55%
3/14/1980	14.00%	10.04%	3.96%
3/27/1980	12.69%	10.20%	2.49%
4/1/1980	14.75%	10.26%	4.49%
4/29/1980	12.50%	10.51%	1.99%
5/7/1980	14.27%	10.56%	3.71%
5/8/1980	13.75%	10.56%	3.19%
5/19/1980	15.50%	10.62%	4.88%
5/27/1980	14.60%	10.65%	3.95%
5/29/1980	16.00%	10.67%	5.33%
6/10/1980	13.78%	10.71%	3.07%
6/25/1980	14.25%	10.74%	3.51%
7/9/1980	14.51%	10.77%	3.74%
7/17/1980	12.90%	10.79%	2.11%
7/18/1980	13.80%	10.79%	3.01%
7/22/1980	14.10%	10.79%	3.31%
7/23/1980	14.19%	10.79%	3.40%
8/1/1980	12.50%	10.80%	1.70%
8/11/1980	14.85%	10.81%	4.04%
8/21/1980	13.03%	10.84%	2.19%
8/28/1980	13.61%	10.87%	2.74%
8/28/1980	14.00%	10.87%	3.13%
9/4/1980	14.00%	10.90%	3.10%
9/24/1980	15.00%	10.98%	4.02%
10/9/1980	14.50%	11.05%	3.45%
10/9/1980	14.50%	11.05%	3.45%
10/24/1980	14.00%	11.09%	2.91%
10/27/1980	15.20%	11.10%	4.10%
10/27/1980	15.20%	11.10%	4.10%
10/28/1980	12.00%	11.10%	0.90%
10/28/1980	13.00%	11.10%	1.90%
10/31/1980	14.50%	11.12%	3.38%
11/4/1980	15.00%	11.12%	3.88%
11/6/1980	14.35%	11.13%	3.22%
11/10/1980	13.25%	11.14%	2.11%
11/17/1980	15.50%	11.15%	4.35%
11/19/1980	13.50%	11.14%	2.36%
12/5/1980	14.60%	11.13%	3.47%
12/8/1980	16.40%	11.13%	5.27%
12/12/1980	15.45%	11.15%	4.30%
12/17/1980	14.20%	11.16%	3.04%
12/17/1980	14.40%	11.16%	3.24%
12/18/1980	14.00%	11.16%	2.84%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/22/1980	13.45%	11.16%	2.29%
12/26/1980	14.00%	11.15%	2.85%
12/30/1980	14.50%	11.14%	3.36%
12/31/1980	14.56%	11.14%	3.42%
1/7/1981	14.30%	11.13%	3.17%
1/12/1981	14.95%	11.14%	3.81%
1/26/1981	15.25%	11.20%	4.05%
1/30/1981	13.25%	11.23%	2.02%
2/11/1981	14.50%	11.33%	3.17%
2/20/1981	14.50%	11.40%	3.10%
3/12/1981	15.65%	11.60%	4.05%
3/25/1981	15.30%	11.74%	3.56%
4/1/1981	15.30%	11.82%	3.48%
4/9/1981	15.00%	11.91%	3.09%
4/29/1981	13.50%	12.12%	1.38%
4/29/1981	14.25%	12.12%	2.13%
4/30/1981	13.60%	12.14%	1.46%
4/30/1981	15.00%	12.14%	2.86%
5/21/1981	14.00%	12.37%	1.63%
6/3/1981	14.67%	12.46%	2.21%
6/22/1981	16.00%	12.57%	3.43%
6/25/1981	14.75%	12.60%	2.15%
7/2/1981	14.00%	12.64%	1.36%
7/10/1981	16.00%	12.69%	3.31%
7/14/1981	16.90%	12.71%	4.19%
7/21/1981	15.78%	12.78%	3.00%
7/27/1981	13.77%	12.82%	0.95%
7/27/1981	15.50%	12.82%	2.68%
7/31/1981	13.50%	12.86%	0.64%
7/31/1981	14.20%	12.86%	1.34%
8/12/1981	13.72%	12.93%	0.79%
8/12/1981	13.72%	12.93%	0.79%
8/12/1981	14.41%	12.93%	1.48%
8/25/1981	15.45%	13.02%	2.43%
8/27/1981	14.43%	13.04%	1.39%
8/28/1981	15.00%	13.05%	1.95%
9/23/1981	14.34%	13.24%	1.10%
9/24/1981	16.25%	13.26%	2.99%
9/29/1981	14.50%	13.31%	1.19%
9/30/1981	15.94%	13.32%	2.62%
10/2/1981	14.80%	13.36%	1.44%
10/12/1981	16.25%	13.43%	2.82%
10/20/1981	15.25%	13.50%	1.75%
10/20/1981	16.50%	13.50%	3.00%
10/20/1981	17.00%	13.50%	3.50%
10/23/1981	15.50%	13.54%	1.96%
10/26/1981	13.50%	13.56%	-0.06%
10/29/1981	16.50%	13.60%	2.90%
11/4/1981	15.33%	13.62%	1.71%
11/6/1981	15.17%	13.64%	1.53%
11/12/1981	15.00%	13.65%	1.35%
11/25/1981	15.25%	13.66%	1.59%
11/25/1981	16.10%	13.66%	2.44%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/25/1981	16.10%	13.66%	2.44%
11/30/1981	16.75%	13.66%	3.09%
12/1/1981	15.70%	13.66%	2.04%
12/1/1981	16.00%	13.66%	2.34%
12/15/1981	15.81%	13.69%	2.12%
12/17/1981	14.75%	13.70%	1.05%
12/22/1981	15.70%	13.72%	1.98%
12/22/1981	16.00%	13.72%	2.28%
12/30/1981	16.00%	13.74%	2.26%
12/30/1981	16.25%	13.74%	2.51%
1/4/1982	15.50%	13.75%	1.75%
1/14/1982	11.95%	13.80%	-1.85%
1/25/1982	16.25%	13.84%	2.41%
1/27/1982	16.84%	13.85%	2.99%
1/31/1982	14.00%	13.86%	0.14%
2/2/1982	16.24%	13.86%	2.38%
2/8/1982	15.50%	13.87%	1.63%
2/9/1982	14.95%	13.88%	1.07%
2/9/1982	15.75%	13.88%	1.87%
2/11/1982	16.00%	13.89%	2.11%
3/1/1982	15.96%	13.91%	2.05%
3/3/1982	15.00%	13.91%	1.09%
3/8/1982	17.10%	13.92%	3.18%
3/26/1982	16.00%	13.97%	2.03%
3/31/1982	16.25%	13.98%	2.27%
4/1/1982	16.50%	13.98%	2.52%
4/6/1982	15.00%	13.99%	1.01%
4/9/1982	16.50%	13.99%	2.51%
4/12/1982	15.10%	13.99%	1.11%
4/12/1982	16.70%	13.99%	2.71%
4/18/1982	14.70%	13.99%	0.71%
4/27/1982	15.00%	13.97%	1.03%
5/10/1982	14.57%	13.94%	0.63%
5/14/1982	15.80%	13.92%	1.88%
5/20/1982	15.82%	13.91%	1.91%
5/21/1982	15.50%	13.90%	1.60%
5/25/1982	16.25%	13.90%	2.35%
6/2/1982	14.50%	13.87%	0.63%
6/7/1982	16.00%	13.85%	2.15%
6/23/1982	15.50%	13.81%	1.69%
6/25/1982	16.50%	13.81%	2.69%
7/1/1982	15.55%	13.79%	1.76%
7/1/1982	16.00%	13.79%	2.21%
7/2/1982	15.10%	13.79%	1.31%
7/13/1982	16.80%	13.75%	3.05%
7/22/1982	14.50%	13.71%	0.79%
7/28/1982	16.10%	13.68%	2.42%
7/30/1982	14.82%	13.66%	1.16%
8/4/1982	15.58%	13.64%	1.94%
8/6/1982	16.50%	13.63%	2.87%
8/11/1982	17.11%	13.62%	3.49%
8/25/1982	16.00%	13.59%	2.41%
8/30/1982	16.25%	13.58%	2.67%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/3/1982	15.50%	13.57%	1.93%
9/9/1982	16.04%	13.55%	2.49%
9/15/1982	16.04%	13.52%	2.52%
9/17/1982	15.25%	13.51%	1.74%
9/29/1982	14.50%	13.43%	1.07%
9/30/1982	14.74%	13.42%	1.32%
9/30/1982	15.50%	13.42%	2.08%
9/30/1982	16.50%	13.42%	3.08%
9/30/1982	16.70%	13.42%	3.28%
10/1/1982	16.50%	13.41%	3.09%
10/8/1982	15.00%	13.33%	1.67%
10/15/1982	15.90%	13.26%	2.64%
10/19/1982	15.90%	13.22%	2.68%
10/27/1982	17.00%	13.12%	3.88%
10/28/1982	14.75%	13.11%	1.64%
11/2/1982	16.25%	13.07%	3.18%
11/4/1982	15.75%	13.03%	2.72%
11/5/1982	14.73%	13.01%	1.72%
11/17/1982	16.00%	12.86%	3.14%
11/23/1982	15.50%	12.79%	2.71%
11/24/1982	14.50%	12.77%	1.73%
11/24/1982	16.02%	12.77%	3.25%
11/30/1982	12.98%	12.72%	0.26%
11/30/1982	15.50%	12.72%	2.78%
11/30/1982	15.50%	12.72%	2.78%
11/30/1982	15.65%	12.72%	2.93%
11/30/1982	16.00%	12.72%	3.28%
11/30/1982	16.10%	12.72%	3.38%
12/3/1982	15.33%	12.68%	2.65%
12/8/1982	15.75%	12.63%	3.12%
12/13/1982	16.00%	12.58%	3.42%
12/14/1982	16.40%	12.57%	3.83%
12/17/1982	16.25%	12.52%	3.73%
12/20/1982	15.00%	12.51%	2.49%
12/21/1982	15.70%	12.49%	3.21%
12/28/1982	15.25%	12.42%	2.83%
12/28/1982	15.25%	12.42%	2.83%
12/29/1982	16.25%	12.41%	3.84%
12/29/1982	16.25%	12.41%	3.84%
1/11/1983	15.90%	12.26%	3.64%
1/12/1983	15.50%	12.24%	3.26%
1/18/1983	15.00%	12.18%	2.82%
1/24/1983	15.50%	12.13%	3.37%
1/24/1983	16.00%	12.13%	3.87%
1/28/1983	14.90%	12.08%	2.82%
1/31/1983	15.00%	12.07%	2.93%
2/10/1983	15.00%	11.97%	3.03%
2/25/1983	15.70%	11.84%	3.86%
3/2/1983	15.25%	11.79%	3.46%
3/16/1983	16.00%	11.62%	4.38%
3/21/1983	14.96%	11.57%	3.39%
3/23/1983	15.40%	11.53%	3.87%
3/23/1983	16.10%	11.53%	4.57%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
3/24/1983	15.00%	11.51%	3.49%
4/12/1983	13.25%	11.30%	1.95%
4/29/1983	15.05%	11.09%	3.96%
5/3/1983	15.40%	11.06%	4.34%
5/9/1983	15.50%	11.00%	4.50%
5/19/1983	14.85%	10.90%	3.95%
5/31/1983	14.00%	10.84%	3.16%
6/2/1983	14.50%	10.82%	3.68%
6/7/1983	14.50%	10.80%	3.70%
6/9/1983	14.85%	10.79%	4.06%
6/20/1983	14.15%	10.74%	3.41%
6/20/1983	16.50%	10.74%	5.76%
6/27/1983	14.50%	10.71%	3.79%
6/30/1983	14.80%	10.70%	4.10%
6/30/1983	15.90%	10.70%	5.20%
7/1/1983	14.80%	10.70%	4.10%
7/5/1983	15.00%	10.69%	4.31%
7/8/1983	15.50%	10.69%	4.81%
7/19/1983	15.00%	10.70%	4.30%
7/19/1983	15.10%	10.70%	4.40%
8/18/1983	15.30%	10.81%	4.49%
8/19/1983	15.79%	10.82%	4.97%
8/29/1983	16.00%	10.85%	5.15%
8/31/1983	14.75%	10.87%	3.88%
8/31/1983	15.25%	10.87%	4.38%
9/8/1983	14.75%	10.89%	3.86%
9/16/1983	15.51%	10.93%	4.58%
9/26/1983	14.50%	10.96%	3.54%
9/28/1983	14.25%	10.97%	3.28%
9/30/1983	16.15%	10.98%	5.17%
9/30/1983	16.25%	10.98%	5.27%
10/1/1983	16.25%	10.98%	5.27%
10/13/1983	15.52%	11.02%	4.50%
10/19/1983	15.20%	11.04%	4.16%
10/26/1983	14.75%	11.06%	3.69%
10/27/1983	14.88%	11.07%	3.81%
10/27/1983	15.33%	11.07%	4.26%
11/9/1983	14.82%	11.10%	3.72%
11/9/1983	16.51%	11.10%	5.41%
11/9/1983	16.51%	11.10%	5.41%
12/1/1983	14.50%	11.17%	3.33%
12/8/1983	15.90%	11.20%	4.70%
12/9/1983	15.30%	11.21%	4.09%
12/12/1983	14.50%	11.22%	3.28%
12/12/1983	15.50%	11.22%	4.28%
12/20/1983	15.40%	11.26%	4.14%
12/20/1983	16.00%	11.26%	4.74%
12/22/1983	15.75%	11.27%	4.48%
12/29/1983	15.00%	11.30%	3.70%
12/30/1983	15.00%	11.30%	3.70%
1/10/1984	15.90%	11.34%	4.56%
1/13/1984	15.50%	11.36%	4.14%
1/18/1984	15.53%	11.38%	4.15%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/26/1984	15.90%	11.42%	4.48%
2/14/1984	14.25%	11.51%	2.74%
2/28/1984	14.50%	11.58%	2.92%
3/20/1984	16.00%	11.70%	4.30%
3/23/1984	15.50%	11.72%	3.78%
4/9/1984	15.20%	11.81%	3.39%
4/18/1984	16.20%	11.86%	4.34%
4/27/1984	15.85%	11.90%	3.95%
5/15/1984	13.35%	11.99%	1.36%
5/16/1984	15.00%	12.00%	3.00%
5/22/1984	14.40%	12.04%	2.36%
6/13/1984	15.50%	12.18%	3.32%
7/10/1984	16.00%	12.37%	3.63%
8/7/1984	16.69%	12.51%	4.18%
8/9/1984	15.33%	12.51%	2.82%
8/17/1984	14.82%	12.54%	2.28%
8/21/1984	14.64%	12.54%	2.10%
8/27/1984	14.52%	12.56%	1.96%
8/28/1984	14.75%	12.57%	2.18%
8/30/1984	15.60%	12.58%	3.02%
9/12/1984	15.60%	12.60%	3.00%
9/12/1984	15.90%	12.60%	3.30%
9/25/1984	16.25%	12.61%	3.64%
10/2/1984	14.80%	12.62%	2.18%
10/9/1984	14.75%	12.63%	2.12%
10/10/1984	15.50%	12.63%	2.87%
10/18/1984	15.00%	12.65%	2.35%
10/24/1984	15.50%	12.65%	2.85%
11/7/1984	15.00%	12.64%	2.36%
11/20/1984	15.92%	12.63%	3.29%
11/30/1984	15.50%	12.60%	2.90%
12/18/1984	15.00%	12.55%	2.45%
12/20/1984	15.00%	12.54%	2.46%
12/28/1984	15.75%	12.51%	3.24%
12/28/1984	16.25%	12.51%	3.74%
1/2/1985	16.00%	12.50%	3.50%
1/31/1985	14.75%	12.37%	2.38%
2/7/1985	14.85%	12.33%	2.52%
2/15/1985	15.00%	12.27%	2.73%
2/20/1985	14.50%	12.25%	2.25%
2/22/1985	14.86%	12.25%	2.61%
3/14/1985	15.50%	12.16%	3.34%
3/28/1985	14.80%	12.08%	2.72%
4/9/1985	15.50%	12.02%	3.48%
4/16/1985	15.70%	11.96%	3.74%
6/10/1985	15.75%	11.58%	4.17%
6/26/1985	14.82%	11.46%	3.36%
7/9/1985	15.00%	11.38%	3.62%
7/26/1985	14.50%	11.26%	3.24%
8/29/1985	14.50%	11.11%	3.39%
8/30/1985	14.38%	11.11%	3.27%
9/12/1985	15.25%	11.07%	4.18%
9/23/1985	15.30%	11.03%	4.27%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/25/1985	14.50%	11.02%	3.48%
9/26/1985	13.80%	11.02%	2.78%
9/26/1985	14.50%	11.02%	3.48%
10/25/1985	15.25%	10.91%	4.34%
11/8/1985	12.94%	10.85%	2.09%
11/20/1985	14.90%	10.81%	4.09%
11/25/1985	13.30%	10.79%	2.51%
12/6/1985	12.00%	10.71%	1.29%
12/11/1985	14.90%	10.68%	4.22%
12/20/1985	14.88%	10.59%	4.29%
12/20/1985	15.00%	10.59%	4.41%
12/20/1985	15.00%	10.59%	4.41%
12/30/1985	15.75%	10.53%	5.22%
12/31/1985	14.00%	10.51%	3.49%
12/31/1985	14.50%	10.51%	3.99%
1/17/1986	14.50%	10.38%	4.12%
2/11/1986	12.50%	10.20%	2.30%
2/12/1986	15.20%	10.19%	5.01%
3/11/1986	14.00%	9.98%	4.02%
4/2/1986	12.90%	9.76%	3.14%
4/28/1986	13.01%	9.47%	3.54%
5/21/1986	13.25%	9.18%	4.07%
5/28/1986	14.00%	9.12%	4.88%
5/29/1986	13.90%	9.10%	4.80%
6/2/1986	13.00%	9.08%	3.92%
6/11/1986	14.00%	8.97%	5.03%
6/13/1986	13.55%	8.94%	4.61%
6/27/1986	11.88%	8.77%	3.11%
7/14/1986	12.60%	8.59%	4.01%
7/30/1986	13.30%	8.38%	4.92%
8/14/1986	13.50%	8.22%	5.28%
9/5/1986	13.30%	8.02%	5.28%
9/23/1986	12.75%	7.91%	4.84%
10/30/1986	13.00%	7.67%	5.33%
10/31/1986	13.75%	7.66%	6.09%
11/10/1986	14.00%	7.61%	6.39%
11/19/1986	13.75%	7.56%	6.19%
11/25/1986	13.15%	7.54%	5.61%
12/22/1986	13.80%	7.47%	6.33%
12/30/1986	13.90%	7.47%	6.43%
1/20/1987	12.75%	7.47%	5.28%
1/23/1987	13.55%	7.47%	6.08%
1/27/1987	12.16%	7.47%	4.69%
2/13/1987	12.60%	7.47%	5.13%
2/24/1987	12.00%	7.47%	4.53%
3/30/1987	12.20%	7.46%	4.74%
3/31/1987	13.00%	7.47%	5.53%
5/5/1987	12.85%	7.60%	5.25%
5/28/1987	13.50%	7.73%	5.77%
6/15/1987	13.20%	7.80%	5.40%
6/30/1987	12.60%	7.85%	4.75%
7/10/1987	12.90%	7.88%	5.02%
7/27/1987	13.50%	7.93%	5.57%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
8/25/1987	11.40%	8.09%	3.31%
9/18/1987	13.00%	8.27%	4.73%
10/20/1987	12.60%	8.55%	4.05%
10/20/1987	12.98%	8.55%	4.43%
11/12/1987	12.75%	8.68%	4.07%
11/13/1987	12.75%	8.68%	4.07%
11/24/1987	12.50%	8.73%	3.77%
12/8/1987	12.50%	8.81%	3.69%
12/22/1987	12.00%	8.90%	3.10%
12/31/1987	12.85%	8.94%	3.91%
12/31/1987	13.25%	8.94%	4.31%
1/15/1988	13.15%	8.99%	4.16%
1/20/1988	12.75%	8.99%	3.76%
1/29/1988	13.20%	8.99%	4.21%
2/4/1988	12.60%	8.99%	3.61%
3/23/1988	13.00%	8.95%	4.05%
5/27/1988	13.18%	9.02%	4.16%
6/14/1988	13.50%	9.00%	4.50%
6/17/1988	11.72%	8.99%	2.73%
6/24/1988	11.50%	8.97%	2.53%
7/1/1988	12.75%	8.95%	3.80%
7/8/1988	12.00%	8.93%	3.07%
7/18/1988	12.00%	8.91%	3.09%
7/20/1988	13.40%	8.90%	4.50%
8/8/1988	12.74%	8.90%	3.84%
9/20/1988	12.90%	8.93%	3.97%
9/26/1988	12.40%	8.93%	3.47%
9/27/1988	13.65%	8.93%	4.72%
9/30/1988	13.25%	8.94%	4.31%
10/13/1988	13.10%	8.93%	4.17%
10/21/1988	12.80%	8.94%	3.86%
10/25/1988	13.25%	8.94%	4.31%
10/26/1988	13.50%	8.94%	4.56%
10/27/1988	12.95%	8.94%	4.01%
10/28/1988	13.00%	8.95%	4.05%
11/15/1988	12.00%	8.98%	3.02%
11/29/1988	12.75%	9.01%	3.74%
12/19/1988	13.00%	9.05%	3.95%
12/21/1988	12.90%	9.05%	3.85%
12/22/1988	13.50%	9.05%	4.45%
1/26/1989	12.60%	9.06%	3.54%
1/27/1989	13.00%	9.06%	3.94%
2/8/1989	13.37%	9.05%	4.32%
3/8/1989	13.00%	9.04%	3.96%
5/4/1989	13.00%	9.04%	3.96%
6/8/1989	13.50%	8.96%	4.54%
7/19/1989	11.80%	8.84%	2.96%
7/25/1989	12.80%	8.82%	3.98%
7/31/1989	13.00%	8.81%	4.19%
8/14/1989	12.50%	8.76%	3.74%
8/22/1989	12.80%	8.73%	4.07%
8/23/1989	12.90%	8.72%	4.18%
9/21/1989	12.10%	8.62%	3.48%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
10/6/1989	13.00%	8.58%	4.42%
10/17/1989	12.41%	8.54%	3.87%
10/18/1989	13.25%	8.54%	4.71%
10/20/1989	12.90%	8.53%	4.37%
10/31/1989	13.60%	8.50%	5.10%
11/3/1989	12.93%	8.48%	4.45%
11/5/1989	13.20%	8.48%	4.72%
11/9/1989	12.60%	8.45%	4.15%
11/9/1989	13.00%	8.45%	4.55%
11/28/1989	12.75%	8.37%	4.38%
12/7/1989	13.25%	8.32%	4.93%
12/15/1989	13.00%	8.28%	4.72%
12/20/1989	12.90%	8.26%	4.64%
12/21/1989	12.80%	8.25%	4.55%
12/21/1989	12.90%	8.25%	4.65%
12/27/1989	12.50%	8.23%	4.27%
1/9/1990	13.00%	8.19%	4.81%
1/18/1990	12.50%	8.16%	4.34%
1/26/1990	12.10%	8.14%	3.96%
3/21/1990	12.80%	8.15%	4.65%
3/28/1990	13.00%	8.16%	4.84%
4/5/1990	12.20%	8.17%	4.03%
4/12/1990	13.25%	8.19%	5.06%
4/30/1990	12.45%	8.24%	4.21%
5/31/1990	12.40%	8.31%	4.09%
6/15/1990	13.20%	8.33%	4.87%
6/27/1990	12.90%	8.34%	4.56%
6/29/1990	13.25%	8.35%	4.90%
7/6/1990	12.10%	8.36%	3.74%
7/19/1990	11.70%	8.38%	3.32%
8/31/1990	12.50%	8.53%	3.97%
8/31/1990	12.50%	8.53%	3.97%
9/13/1990	12.50%	8.58%	3.92%
9/18/1990	12.75%	8.60%	4.15%
9/20/1990	12.50%	8.61%	3.89%
10/2/1990	13.00%	8.65%	4.35%
10/17/1990	11.90%	8.68%	3.22%
10/31/1990	12.95%	8.70%	4.25%
11/9/1990	13.25%	8.70%	4.55%
11/19/1990	13.00%	8.70%	4.30%
11/21/1990	12.10%	8.70%	3.40%
11/21/1990	12.50%	8.70%	3.80%
11/28/1990	12.75%	8.70%	4.05%
11/29/1990	12.75%	8.70%	4.05%
12/18/1990	13.10%	8.68%	4.42%
12/20/1990	12.50%	8.67%	3.83%
12/21/1990	12.50%	8.67%	3.83%
12/21/1990	13.00%	8.67%	4.33%
12/21/1990	13.60%	8.67%	4.93%
1/3/1991	13.02%	8.66%	4.36%
1/16/1991	13.25%	8.63%	4.62%
1/25/1991	11.70%	8.61%	3.09%
2/15/1991	12.70%	8.56%	4.14%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
2/15/1991	12.80%	8.56%	4.24%
4/3/1991	13.00%	8.51%	4.49%
4/30/1991	12.45%	8.48%	3.97%
4/30/1991	13.00%	8.48%	4.52%
6/25/1991	11.70%	8.34%	3.36%
6/28/1991	12.50%	8.34%	4.16%
7/1/1991	11.70%	8.34%	3.36%
7/19/1991	12.10%	8.31%	3.79%
7/19/1991	12.30%	8.31%	3.99%
7/22/1991	12.90%	8.30%	4.60%
8/15/1991	12.25%	8.28%	3.97%
8/29/1991	13.30%	8.26%	5.04%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.40%	8.23%	4.17%
10/3/1991	11.30%	8.22%	3.08%
10/9/1991	11.70%	8.21%	3.49%
10/15/1991	13.40%	8.20%	5.20%
11/1/1991	12.90%	8.20%	4.70%
11/8/1991	12.75%	8.20%	4.55%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.00%	8.18%	3.82%
11/27/1991	12.70%	8.18%	4.52%
12/6/1991	12.70%	8.16%	4.54%
12/10/1991	11.75%	8.15%	3.60%
12/19/1991	12.60%	8.14%	4.46%
12/19/1991	12.80%	8.14%	4.66%
12/30/1991	12.10%	8.11%	3.99%
1/22/1992	12.84%	8.05%	4.79%
1/31/1992	12.00%	8.03%	3.97%
2/20/1992	13.00%	8.00%	5.00%
2/27/1992	11.75%	7.98%	3.77%
3/18/1992	12.50%	7.94%	4.56%
5/15/1992	12.75%	7.86%	4.89%
6/24/1992	12.20%	7.85%	4.35%
6/29/1992	11.00%	7.85%	3.15%
7/14/1992	12.00%	7.83%	4.17%
7/22/1992	11.20%	7.82%	3.38%
8/10/1992	12.10%	7.79%	4.31%
8/26/1992	12.43%	7.75%	4.68%
9/30/1992	11.60%	7.72%	3.88%
10/6/1992	12.25%	7.72%	4.53%
10/13/1992	12.75%	7.71%	5.04%
10/23/1992	11.65%	7.71%	3.94%
10/28/1992	12.25%	7.71%	4.54%
10/29/1992	12.75%	7.70%	5.05%
10/30/1992	11.40%	7.70%	3.70%
11/9/1992	10.60%	7.70%	2.90%
11/25/1992	11.00%	7.68%	3.32%
11/25/1992	12.00%	7.68%	4.32%
12/3/1992	11.85%	7.66%	4.19%
12/16/1992	11.90%	7.64%	4.26%
12/22/1992	12.30%	7.62%	4.68%
12/22/1992	12.40%	7.62%	4.78%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/30/1992	12.00%	7.61%	4.39%
12/31/1992	12.00%	7.61%	4.39%
1/12/1993	12.00%	7.59%	4.41%
1/12/1993	12.00%	7.59%	4.41%
2/2/1993	11.40%	7.53%	3.87%
2/22/1993	11.60%	7.48%	4.12%
4/23/1993	11.75%	7.27%	4.48%
5/3/1993	11.50%	7.25%	4.25%
5/3/1993	11.75%	7.25%	4.50%
6/3/1993	12.00%	7.20%	4.80%
6/7/1993	11.50%	7.20%	4.30%
6/22/1993	11.75%	7.16%	4.59%
7/21/1993	11.78%	7.06%	4.72%
7/21/1993	11.90%	7.06%	4.84%
7/23/1993	11.50%	7.05%	4.45%
7/29/1993	11.50%	7.03%	4.47%
8/12/1993	10.75%	6.97%	3.78%
8/24/1993	11.50%	6.92%	4.58%
8/31/1993	11.90%	6.88%	5.02%
9/1/1993	11.25%	6.87%	4.38%
9/1/1993	11.47%	6.87%	4.60%
9/27/1993	10.50%	6.74%	3.76%
9/29/1993	11.00%	6.72%	4.28%
9/30/1993	11.60%	6.72%	4.88%
10/8/1993	11.50%	6.67%	4.83%
10/14/1993	11.20%	6.65%	4.55%
10/15/1993	11.75%	6.64%	5.11%
10/25/1993	11.55%	6.60%	4.95%
10/28/1993	11.50%	6.58%	4.92%
10/29/1993	10.10%	6.57%	3.53%
10/29/1993	10.20%	6.57%	3.63%
10/29/1993	11.25%	6.57%	4.68%
11/2/1993	10.80%	6.56%	4.24%
11/12/1993	11.80%	6.53%	5.27%
11/23/1993	12.50%	6.51%	5.99%
11/26/1993	11.00%	6.50%	4.50%
12/1/1993	11.45%	6.49%	4.96%
12/16/1993	10.60%	6.45%	4.15%
12/16/1993	11.20%	6.45%	4.75%
12/21/1993	11.30%	6.44%	4.86%
12/22/1993	11.00%	6.44%	4.56%
12/23/1993	10.10%	6.44%	3.66%
1/5/1994	11.50%	6.41%	5.09%
1/10/1994	11.00%	6.40%	4.60%
1/25/1994	12.00%	6.37%	5.63%
2/2/1994	10.40%	6.35%	4.05%
2/9/1994	10.70%	6.34%	4.36%
4/6/1994	11.24%	6.35%	4.89%
4/25/1994	11.00%	6.39%	4.61%
6/16/1994	10.50%	6.63%	3.87%
6/23/1994	10.60%	6.67%	3.93%
7/19/1994	10.70%	6.83%	3.87%
9/29/1994	10.90%	7.20%	3.70%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/29/1994	11.00%	7.20%	3.80%
10/7/1994	11.87%	7.26%	4.61%
10/18/1994	11.50%	7.32%	4.18%
10/18/1994	11.50%	7.32%	4.18%
10/24/1994	11.00%	7.35%	3.65%
11/22/1994	12.12%	7.52%	4.60%
11/29/1994	11.30%	7.55%	3.75%
12/1/1994	11.00%	7.56%	3.44%
12/8/1994	11.50%	7.59%	3.91%
12/8/1994	11.70%	7.59%	4.11%
12/12/1994	11.82%	7.60%	4.22%
12/14/1994	11.50%	7.61%	3.89%
12/19/1994	11.50%	7.62%	3.88%
4/19/1995	11.00%	7.72%	3.28%
9/11/1995	11.30%	7.16%	4.14%
9/15/1995	10.40%	7.13%	3.27%
9/29/1995	11.50%	7.06%	4.44%
10/13/1995	10.76%	6.98%	3.78%
11/7/1995	12.50%	6.86%	5.64%
11/8/1995	11.10%	6.85%	4.25%
11/8/1995	11.30%	6.85%	4.45%
11/17/1995	10.90%	6.81%	4.09%
11/20/1995	11.40%	6.80%	4.60%
11/27/1995	13.60%	6.77%	6.83%
12/14/1995	11.30%	6.68%	4.62%
12/20/1995	11.60%	6.65%	4.95%
1/31/1996	11.30%	6.45%	4.85%
3/11/1996	11.60%	6.40%	5.20%
4/3/1996	11.13%	6.41%	4.72%
4/15/1996	10.50%	6.41%	4.09%
4/17/1996	10.77%	6.40%	4.37%
4/26/1996	10.60%	6.40%	4.20%
5/10/1996	11.00%	6.40%	4.60%
5/13/1996	11.25%	6.41%	4.84%
7/3/1996	11.25%	6.49%	4.76%
7/22/1996	11.25%	6.54%	4.71%
10/3/1996	10.00%	6.77%	3.23%
10/29/1996	11.30%	6.84%	4.46%
11/26/1996	11.30%	6.86%	4.44%
11/27/1996	11.30%	6.86%	4.44%
11/29/1996	11.00%	6.86%	4.14%
12/12/1996	11.96%	6.85%	5.11%
12/17/1996	11.50%	6.85%	4.65%
1/22/1997	11.30%	6.83%	4.47%
1/27/1997	11.25%	6.83%	4.42%
1/31/1997	11.25%	6.83%	4.42%
2/13/1997	11.00%	6.82%	4.18%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.81%	4.99%
3/27/1997	10.75%	6.79%	3.96%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
10/29/1997	10.75%	6.70%	4.05%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
10/31/1997	11.25%	6.70%	4.55%
12/24/1997	10.75%	6.53%	4.22%
4/28/1998	10.90%	6.11%	4.79%
4/30/1998	12.20%	6.10%	6.10%
6/30/1998	11.00%	5.94%	5.06%
8/26/1998	10.93%	5.82%	5.11%
9/3/1998	11.40%	5.80%	5.60%
9/15/1998	11.90%	5.77%	6.13%
10/7/1998	11.06%	5.70%	5.36%
10/30/1998	11.40%	5.63%	5.77%
12/10/1998	12.20%	5.52%	6.68%
12/17/1998	12.10%	5.49%	6.61%
2/19/1999	11.15%	5.32%	5.83%
3/1/1999	10.65%	5.31%	5.34%
3/1/1999	10.65%	5.31%	5.34%
6/8/1999	11.25%	5.35%	5.90%
11/12/1999	10.25%	5.92%	4.33%
12/14/1999	10.50%	5.99%	4.51%
1/28/2000	10.71%	6.16%	4.55%
2/17/2000	10.60%	6.20%	4.40%
5/25/2000	10.80%	6.19%	4.61%
6/19/2000	11.05%	6.18%	4.87%
6/22/2000	11.25%	6.18%	5.07%
7/17/2000	11.06%	6.15%	4.91%
7/20/2000	12.20%	6.14%	6.06%
8/11/2000	11.00%	6.11%	4.89%
9/27/2000	11.25%	6.00%	5.25%
9/29/2000	11.16%	6.00%	5.16%
10/5/2000	11.30%	5.98%	5.32%
11/28/2000	12.90%	5.87%	7.03%
11/30/2000	12.10%	5.86%	6.24%
2/5/2001	11.50%	5.75%	5.75%
3/15/2001	11.25%	5.66%	5.59%
5/8/2001	10.75%	5.61%	5.14%
10/24/2001	10.30%	5.54%	4.76%
10/24/2001	11.00%	5.54%	5.46%
1/9/2002	10.00%	5.50%	4.50%
1/30/2002	11.00%	5.47%	5.53%
1/31/2002	11.00%	5.47%	5.53%
4/17/2002	11.50%	5.44%	6.06%
4/29/2002	11.00%	5.45%	5.55%
6/11/2002	11.77%	5.48%	6.29%
6/20/2002	12.30%	5.48%	6.82%
8/28/2002	11.00%	5.49%	5.51%
9/11/2002	11.20%	5.45%	5.75%
9/12/2002	12.30%	5.45%	6.85%
10/28/2002	11.30%	5.35%	5.95%
10/30/2002	10.60%	5.34%	5.26%
11/1/2002	12.60%	5.34%	7.26%
11/7/2002	11.40%	5.33%	6.07%
11/8/2002	10.75%	5.33%	5.42%
11/20/2002	10.00%	5.30%	4.70%
11/20/2002	10.50%	5.30%	5.20%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/4/2002	10.75%	5.27%	5.48%
12/30/2002	11.20%	5.19%	6.01%
1/6/2003	11.25%	5.16%	6.09%
2/28/2003	12.30%	5.01%	7.29%
3/7/2003	9.96%	4.99%	4.97%
3/12/2003	11.40%	4.97%	6.43%
3/20/2003	12.00%	4.95%	7.05%
4/3/2003	12.00%	4.92%	7.08%
5/2/2003	11.40%	4.88%	6.52%
5/15/2003	11.05%	4.87%	6.18%
6/26/2003	11.00%	4.80%	6.20%
7/1/2003	11.00%	4.80%	6.20%
7/29/2003	11.71%	4.78%	6.93%
8/22/2003	10.20%	4.81%	5.39%
9/17/2003	9.90%	4.85%	5.05%
9/25/2003	10.25%	4.85%	5.40%
10/17/2003	10.54%	4.87%	5.67%
10/22/2003	10.46%	4.87%	5.59%
10/22/2003	10.71%	4.87%	5.84%
10/30/2003	11.00%	4.88%	6.12%
10/31/2003	10.20%	4.88%	5.32%
10/31/2003	10.75%	4.88%	5.87%
11/10/2003	10.60%	4.89%	5.71%
12/9/2003	10.50%	4.93%	5.57%
12/18/2003	10.50%	4.94%	5.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
1/13/2004	10.25%	4.95%	5.30%
1/13/2004	12.00%	4.95%	7.05%
2/9/2004	11.25%	4.98%	6.27%
3/16/2004	10.90%	5.05%	5.85%
3/16/2004	10.90%	5.05%	5.85%
5/25/2004	10.00%	5.06%	4.94%
6/2/2004	11.22%	5.07%	6.15%
6/30/2004	10.50%	5.10%	5.40%
7/8/2004	10.00%	5.10%	4.90%
7/22/2004	10.25%	5.10%	5.15%
8/26/2004	10.50%	5.10%	5.40%
8/26/2004	10.50%	5.10%	5.40%
9/9/2004	10.40%	5.10%	5.30%
9/21/2004	10.50%	5.09%	5.41%
9/27/2004	10.30%	5.09%	5.21%
9/27/2004	10.50%	5.09%	5.41%
10/20/2004	10.20%	5.08%	5.12%
11/30/2004	10.60%	5.08%	5.52%
12/8/2004	9.90%	5.09%	4.81%
12/21/2004	11.50%	5.09%	6.41%
12/22/2004	11.50%	5.09%	6.41%
12/28/2004	10.25%	5.09%	5.16%
2/18/2005	10.30%	4.95%	5.35%
3/29/2005	11.00%	4.86%	6.14%
4/13/2005	10.60%	4.84%	5.76%
4/28/2005	11.00%	4.80%	6.20%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
5/17/2005	10.00%	4.77%	5.23%
6/8/2005	10.18%	4.71%	5.47%
6/10/2005	10.90%	4.71%	6.19%
7/6/2005	10.50%	4.65%	5.85%
7/19/2005	11.50%	4.63%	6.87%
8/11/2005	10.40%	4.60%	5.80%
9/19/2005	9.45%	4.53%	4.92%
9/30/2005	10.51%	4.52%	5.99%
10/4/2005	9.90%	4.52%	5.38%
10/4/2005	10.75%	4.52%	6.23%
10/14/2005	10.40%	4.52%	5.88%
10/31/2005	10.25%	4.53%	5.72%
11/2/2005	9.70%	4.53%	5.17%
11/30/2005	10.00%	4.53%	5.47%
12/9/2005	9.70%	4.53%	5.17%
12/12/2005	11.00%	4.53%	6.47%
12/20/2005	10.13%	4.53%	5.60%
12/21/2005	10.40%	4.52%	5.88%
12/21/2005	11.00%	4.52%	6.48%
12/22/2005	10.20%	4.52%	5.68%
12/22/2005	11.00%	4.52%	6.48%
12/28/2005	10.00%	4.52%	5.48%
1/5/2006	11.00%	4.52%	6.48%
1/25/2006	11.20%	4.52%	6.68%
1/25/2006	11.20%	4.52%	6.68%
2/3/2006	10.50%	4.52%	5.98%
2/15/2006	9.50%	4.53%	4.97%
4/26/2006	10.60%	4.65%	5.95%
7/24/2006	9.60%	4.87%	4.73%
7/24/2006	10.00%	4.87%	5.13%
9/20/2006	11.00%	4.93%	6.07%
9/26/2006	10.75%	4.93%	5.82%
10/20/2006	9.80%	4.96%	4.84%
11/2/2006	9.71%	4.97%	4.74%
11/9/2006	10.00%	4.97%	5.03%
11/21/2006	11.00%	4.98%	6.02%
12/5/2006	10.20%	4.97%	5.23%
1/5/2007	10.40%	4.95%	5.45%
1/9/2007	11.00%	4.94%	6.06%
1/11/2007	10.90%	4.94%	5.96%
1/19/2007	10.80%	4.93%	5.87%
1/26/2007	10.00%	4.92%	5.08%
2/8/2007	10.40%	4.91%	5.49%
3/14/2007	10.10%	4.86%	5.24%
3/20/2007	10.25%	4.84%	5.41%
3/21/2007	11.35%	4.84%	6.51%
3/22/2007	10.50%	4.84%	5.66%
3/29/2007	10.00%	4.83%	5.17%
6/13/2007	10.75%	4.81%	5.94%
6/29/2007	9.53%	4.84%	4.69%
6/29/2007	10.10%	4.84%	5.26%
7/3/2007	10.25%	4.85%	5.40%
7/13/2007	9.50%	4.86%	4.64%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
7/24/2007	10.40%	4.87%	5.53%
8/1/2007	10.15%	4.88%	5.27%
8/29/2007	10.50%	4.91%	5.59%
9/10/2007	9.71%	4.91%	4.80%
9/19/2007	10.00%	4.91%	5.09%
9/25/2007	9.70%	4.92%	4.78%
10/8/2007	10.48%	4.92%	5.56%
10/19/2007	10.50%	4.91%	5.59%
10/25/2007	9.65%	4.91%	4.74%
11/15/2007	10.00%	4.89%	5.11%
11/20/2007	9.90%	4.89%	5.01%
11/27/2007	10.00%	4.88%	5.12%
11/29/2007	10.90%	4.88%	6.02%
12/14/2007	10.80%	4.87%	5.93%
12/18/2007	10.40%	4.86%	5.54%
12/19/2007	9.80%	4.86%	4.94%
12/19/2007	9.80%	4.86%	4.94%
12/19/2007	10.20%	4.86%	5.34%
12/21/2007	9.10%	4.86%	4.24%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/17/2008	10.75%	4.81%	5.94%
2/5/2008	9.99%	4.78%	5.21%
2/5/2008	10.19%	4.78%	5.41%
2/13/2008	10.20%	4.76%	5.44%
3/31/2008	10.00%	4.63%	5.37%
5/28/2008	10.50%	4.53%	5.97%
6/24/2008	10.00%	4.52%	5.48%
6/27/2008	10.00%	4.52%	5.48%
7/31/2008	10.70%	4.50%	6.20%
7/31/2008	10.82%	4.50%	6.32%
8/27/2008	10.25%	4.50%	5.75%
9/2/2008	10.25%	4.50%	5.75%
9/19/2008	10.70%	4.48%	6.22%
9/24/2008	10.68%	4.48%	6.20%
9/24/2008	10.68%	4.48%	6.20%
9/24/2008	10.68%	4.48%	6.20%
9/30/2008	10.20%	4.48%	5.72%
10/3/2008	10.30%	4.48%	5.82%
10/8/2008	10.15%	4.47%	5.68%
10/20/2008	10.06%	4.47%	5.59%
10/24/2008	10.60%	4.46%	6.14%
10/24/2008	10.60%	4.46%	6.14%
11/21/2008	10.50%	4.42%	6.08%
11/21/2008	10.50%	4.42%	6.08%
11/21/2008	10.50%	4.42%	6.08%
11/24/2008	10.50%	4.41%	6.09%
12/3/2008	10.39%	4.37%	6.02%
12/24/2008	10.00%	4.26%	5.74%
12/26/2008	10.10%	4.24%	5.86%
12/29/2008	10.20%	4.23%	5.97%
1/13/2009	10.45%	4.14%	6.31%
2/2/2009	10.05%	4.04%	6.01%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
3/9/2009	10.30%	3.89%	6.41%
3/25/2009	10.17%	3.84%	6.33%
4/2/2009	10.75%	3.81%	6.94%
5/5/2009	10.75%	3.71%	7.04%
5/15/2009	10.20%	3.70%	6.50%
5/29/2009	9.54%	3.70%	5.84%
6/3/2009	10.10%	3.71%	6.39%
6/22/2009	10.00%	3.73%	6.27%
6/29/2009	10.21%	3.74%	6.47%
6/30/2009	9.31%	3.74%	5.57%
7/17/2009	9.26%	3.75%	5.51%
7/17/2009	10.50%	3.75%	6.75%
10/16/2009	10.40%	4.09%	6.31%
10/26/2009	10.10%	4.11%	5.99%
10/28/2009	10.15%	4.12%	6.03%
10/28/2009	10.15%	4.12%	6.03%
10/30/2009	9.95%	4.12%	5.83%
11/20/2009	9.45%	4.18%	5.27%
12/14/2009	10.50%	4.24%	6.26%
12/16/2009	10.75%	4.25%	6.50%
12/17/2009	10.30%	4.26%	6.04%
12/18/2009	10.40%	4.26%	6.14%
12/18/2009	10.40%	4.26%	6.14%
12/18/2009	10.50%	4.26%	6.24%
12/22/2009	10.20%	4.27%	5.93%
12/22/2009	10.40%	4.27%	6.13%
12/28/2009	10.85%	4.29%	6.56%
12/29/2009	10.38%	4.30%	6.08%
1/11/2010	10.24%	4.34%	5.90%
1/21/2010	10.23%	4.37%	5.86%
1/21/2010	10.33%	4.37%	5.96%
1/26/2010	10.40%	4.37%	6.03%
2/10/2010	10.00%	4.39%	5.61%
2/23/2010	10.50%	4.40%	6.10%
3/9/2010	9.60%	4.40%	5.20%
3/24/2010	10.13%	4.42%	5.71%
3/31/2010	10.70%	4.43%	6.27%
4/1/2010	9.50%	4.43%	5.07%
4/2/2010	10.10%	4.44%	5.66%
4/8/2010	10.35%	4.44%	5.91%
4/29/2010	9.19%	4.46%	4.73%
4/29/2010	9.40%	4.46%	4.94%
4/29/2010	9.40%	4.46%	4.94%
5/17/2010	10.55%	4.46%	6.09%
5/24/2010	10.05%	4.46%	5.59%
6/3/2010	11.00%	4.46%	6.54%
6/16/2010	10.00%	4.46%	5.54%
6/18/2010	10.30%	4.46%	5.84%
8/9/2010	12.55%	4.41%	8.14%
8/17/2010	10.10%	4.40%	5.70%
9/16/2010	9.60%	4.31%	5.29%
9/16/2010	10.00%	4.31%	5.69%
9/16/2010	10.00%	4.31%	5.69%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
9/16/2010	10.30%	4.31%	5.99%
10/21/2010	10.40%	4.20%	6.20%
11/2/2010	9.75%	4.17%	5.58%
11/2/2010	9.75%	4.17%	5.58%
11/3/2010	10.75%	4.17%	6.58%
11/19/2010	10.20%	4.15%	6.05%
12/1/2010	10.00%	4.13%	5.87%
12/6/2010	9.56%	4.12%	5.44%
12/6/2010	10.09%	4.12%	5.97%
12/9/2010	10.25%	4.12%	6.13%
12/14/2010	10.33%	4.11%	6.22%
12/17/2010	10.10%	4.11%	5.99%
12/20/2010	10.10%	4.11%	5.99%
12/23/2010	9.92%	4.10%	5.82%
1/6/2011	10.35%	4.09%	6.26%
1/12/2011	10.30%	4.09%	6.21%
1/13/2011	10.30%	4.09%	6.21%
3/10/2011	10.10%	4.16%	5.94%
3/31/2011	9.45%	4.20%	5.25%
4/18/2011	10.05%	4.23%	5.82%
5/26/2011	10.50%	4.32%	6.18%
6/21/2011	10.00%	4.36%	5.64%
6/29/2011	8.83%	4.38%	4.45%
8/1/2011	9.20%	4.41%	4.79%
9/1/2011	10.10%	4.33%	5.77%
11/14/2011	9.60%	3.93%	5.67%
12/13/2011	9.50%	3.76%	5.74%
12/20/2011	10.00%	3.72%	6.28%
12/22/2011	10.40%	3.70%	6.70%
1/10/2012	9.06%	3.59%	5.47%
1/10/2012	9.45%	3.59%	5.86%
1/10/2012	9.45%	3.59%	5.86%
1/23/2012	10.20%	3.53%	6.67%
1/31/2012	10.00%	3.49%	6.51%
4/24/2012	9.50%	3.16%	6.34%
4/24/2012	9.75%	3.16%	6.59%
5/7/2012	9.80%	3.13%	6.67%
5/22/2012	9.60%	3.10%	6.50%
5/24/2012	9.70%	3.09%	6.61%
6/7/2012	10.30%	3.06%	7.24%
6/15/2012	10.40%	3.05%	7.35%
6/18/2012	9.60%	3.05%	6.55%
7/2/2012	9.75%	3.04%	6.71%
10/24/2012	10.30%	2.92%	7.38%
10/26/2012	9.50%	2.92%	6.58%
10/31/2012	9.30%	2.92%	6.38%
10/31/2012	9.90%	2.92%	6.98%
10/31/2012	10.00%	2.92%	7.08%
11/1/2012	9.45%	2.91%	6.54%
11/8/2012	10.10%	2.91%	7.19%
11/9/2012	10.30%	2.90%	7.40%
11/26/2012	10.00%	2.89%	7.11%
11/28/2012	10.40%	2.88%	7.52%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/28/2012	10.50%	2.88%	7.62%
12/4/2012	10.00%	2.87%	7.13%
12/4/2012	10.50%	2.87%	7.63%
12/20/2012	9.50%	2.84%	6.66%
12/20/2012	10.10%	2.84%	7.26%
12/20/2012	10.25%	2.84%	7.41%
12/20/2012	10.30%	2.84%	7.46%
12/20/2012	10.40%	2.84%	7.56%
12/20/2012	10.50%	2.84%	7.66%
12/26/2012	9.80%	2.83%	6.97%
2/22/2013	9.60%	2.86%	6.74%
3/14/2013	9.30%	2.89%	6.41%
3/27/2013	9.80%	2.92%	6.88%
4/23/2013	9.80%	2.96%	6.84%
5/10/2013	9.25%	2.96%	6.29%
6/13/2013	9.40%	3.01%	6.39%
6/18/2013	9.28%	3.02%	6.26%
6/18/2013	9.28%	3.02%	6.26%
6/25/2013	9.80%	3.04%	6.76%
9/23/2013	9.60%	3.33%	6.27%
11/6/2013	10.20%	3.42%	6.78%
11/13/2013	9.84%	3.44%	6.40%
11/14/2013	10.25%	3.44%	6.81%
11/22/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.50%	6.70%
12/13/2013	9.60%	3.52%	6.08%
12/16/2013	9.73%	3.53%	6.20%
12/17/2013	10.00%	3.53%	6.47%
12/18/2013	9.08%	3.53%	5.55%
12/23/2013	9.72%	3.55%	6.17%
12/30/2013	10.00%	3.57%	6.43%
1/21/2014	9.65%	3.66%	5.99%
1/22/2014	9.18%	3.66%	5.52%
2/20/2014	9.30%	3.71%	5.59%
2/21/2014	9.85%	3.72%	6.13%
2/28/2014	9.55%	3.73%	5.82%
3/16/2014	9.72%	3.74%	5.98%
4/21/2014	9.50%	3.73%	5.77%
4/22/2014	9.80%	3.73%	6.07%
5/8/2014	9.10%	3.71%	5.39%
5/8/2014	9.59%	3.71%	5.88%
6/6/2014	10.40%	3.66%	6.74%
6/12/2014	10.10%	3.66%	6.44%
6/12/2014	10.10%	3.66%	6.44%
6/12/2014	10.10%	3.66%	6.44%
7/7/2014	9.30%	3.63%	5.67%
7/25/2014	9.30%	3.60%	5.70%
7/31/2014	9.90%	3.59%	6.31%
9/4/2014	9.10%	3.50%	5.60%
9/24/2014	9.35%	3.46%	5.89%
9/30/2014	9.75%	3.44%	6.31%
10/29/2014	10.80%	3.37%	7.43%
11/6/2014	10.20%	3.35%	6.85%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
11/14/2014	10.20%	3.33%	6.87%
11/14/2014	10.30%	3.33%	6.97%
11/26/2014	10.20%	3.30%	6.90%
12/3/2014	10.00%	3.29%	6.71%
1/13/2015	10.30%	3.16%	7.14%
1/21/2015	9.05%	3.13%	5.92%
1/21/2015	9.05%	3.13%	5.92%
4/9/2015	9.50%	2.88%	6.62%
5/11/2015	9.80%	2.82%	6.98%
6/17/2015	9.00%	2.79%	6.21%
8/21/2015	9.75%	2.78%	6.97%
10/7/2015	9.55%	2.82%	6.73%
10/13/2015	9.75%	2.83%	6.92%
10/15/2015	9.00%	2.84%	6.16%
10/30/2015	9.80%	2.87%	6.93%
11/19/2015	10.00%	2.89%	7.11%
12/3/2015	10.00%	2.91%	7.09%
12/9/2015	9.60%	2.92%	6.68%
12/11/2015	9.90%	2.92%	6.98%
12/18/2015	9.50%	2.94%	6.56%
1/6/2016	9.50%	2.97%	6.53%
1/6/2016	9.50%	2.97%	6.53%
1/28/2016	9.40%	2.97%	6.43%
2/10/2016	9.60%	2.95%	6.65%
2/16/2016	9.50%	2.94%	6.56%
2/29/2016	9.40%	2.92%	6.48%
4/29/2016	9.80%	2.83%	6.97%
5/5/2016	9.49%	2.82%	6.67%
6/1/2016	9.55%	2.80%	6.75%
6/3/2016	9.65%	2.79%	6.86%
6/15/2016	9.00%	2.77%	6.23%
6/15/2016	9.00%	2.77%	6.23%
9/2/2016	9.50%	2.56%	6.94%
9/23/2016	9.75%	2.52%	7.23%
9/27/2016	9.50%	2.51%	6.99%
9/29/2016	9.11%	2.50%	6.61%
10/13/2016	10.20%	2.48%	7.72%
10/28/2016	9.70%	2.47%	7.23%
11/9/2016	9.80%	2.47%	7.33%
11/18/2016	10.00%	2.49%	7.51%
12/9/2016	10.10%	2.51%	7.59%
12/15/2016	9.00%	2.53%	6.47%
12/15/2016	9.00%	2.53%	6.47%
12/20/2016	9.75%	2.53%	7.22%
12/22/2016	9.50%	2.54%	6.96%
1/24/2017	9.00%	2.59%	6.41%
2/21/2017	10.55%	2.63%	7.92%
3/1/2017	9.25%	2.65%	6.60%
4/11/2017	9.50%	2.77%	6.73%
4/20/2017	8.70%	2.79%	5.91%
4/28/2017	9.50%	2.81%	6.69%
5/23/2017	9.60%	2.88%	6.72%
6/6/2017	9.70%	2.91%	6.79%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
6/22/2017	9.70%	2.93%	6.77%
6/30/2017	9.60%	2.94%	6.66%
7/20/2017	9.55%	2.97%	6.58%
7/31/2017	10.10%	2.98%	7.12%
9/13/2017	9.40%	2.93%	6.47%
9/19/2017	9.70%	2.92%	6.78%
9/22/2017	11.88%	2.92%	8.96%
9/27/2017	10.20%	2.92%	7.28%
10/20/2017	9.60%	2.90%	6.70%
10/26/2017	10.20%	2.90%	7.30%
10/30/2017	10.05%	2.90%	7.15%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
12/5/2017	9.50%	2.86%	6.64%
12/7/2017	9.80%	2.86%	6.94%
12/13/2017	9.25%	2.85%	6.40%
12/28/2017	9.50%	2.84%	6.66%
1/31/2018	9.80%	2.83%	6.97%
2/21/2018	9.80%	2.84%	6.96%
2/21/2018	9.80%	2.84%	6.96%
2/28/2018	9.50%	2.85%	6.65%
3/15/2018	9.00%	2.87%	6.13%
3/26/2018	10.19%	2.88%	7.31%
4/26/2018	9.50%	2.91%	6.59%
4/27/2018	9.30%	2.91%	6.39%
5/2/2018	9.50%	2.91%	6.59%
5/3/2018	9.70%	2.91%	6.79%
5/29/2018	9.40%	2.95%	6.45%
6/6/2018	9.80%	2.96%	6.84%
6/14/2018	8.80%	2.97%	5.83%
7/16/2018	9.60%	2.98%	6.62%
7/20/2018	9.40%	2.99%	6.41%
8/24/2018	9.28%	3.02%	6.26%
8/28/2018	10.00%	3.03%	6.97%
9/13/2018	10.00%	3.04%	6.96%
9/14/2018	10.00%	3.05%	6.95%
9/19/2018	9.85%	3.05%	6.80%
9/20/2018	9.80%	3.05%	6.75%
9/26/2018	9.40%	3.06%	6.34%
9/26/2018	10.20%	3.06%	7.14%
9/28/2018	9.50%	3.07%	6.43%
9/28/2018	9.50%	3.07%	6.43%
10/5/2018	9.61%	3.08%	6.53%
10/15/2018	9.80%	3.09%	6.71%
10/26/2018	9.40%	3.11%	6.29%
10/29/2018	9.60%	3.11%	6.49%
11/1/2018	9.87%	3.11%	6.76%
11/8/2018	9.70%	3.12%	6.58%
11/8/2018	9.70%	3.12%	6.58%
12/11/2018	9.70%	3.14%	6.56%
12/12/2018	9.30%	3.14%	6.16%
12/13/2018	9.60%	3.14%	6.46%
12/19/2018	9.30%	3.14%	6.16%
12/21/2018	9.35%	3.14%	6.21%
12/24/2018	9.25%	3.14%	6.11%
12/24/2018	9.25%	3.14%	6.11%
1/4/2019	9.80%	3.14%	6.66%
1/18/2019	9.70%	3.14%	6.56%
3/14/2019	9.00%	3.12%	5.88%
3/27/2019	9.70%	3.12%	6.58%
4/30/2019	9.73%	3.11%	6.62%
5/7/2019	9.65%	3.10%	6.55%
5/21/2019	9.80%	3.10%	6.70%
9/4/2019	10.00%	2.76%	7.24%
9/26/2019	9.90%	2.69%	7.21%
10/2/2019	9.73%	2.67%	7.06%

[6] Date of Natural Gas Rate Case	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
10/8/2019	9.40%	2.64%	6.76%
10/15/2019	9.70%	2.62%	7.08%
10/21/2019	9.40%	2.60%	6.80%
10/31/2019	9.70%	2.57%	7.13%
10/31/2019	10.00%	2.57%	7.43%
10/31/2019	10.00%	2.57%	7.43%
10/31/2019	10.20%	2.57%	7.63%
11/7/2019	9.35%	2.55%	6.80%
11/13/2019	9.60%	2.54%	7.06%
11/13/2019	9.60%	2.54%	7.06%
12/6/2019	9.87%	2.47%	7.40%
12/11/2019	9.40%	2.46%	6.94%
12/17/2019	9.75%	2.44%	7.31%
12/18/2019	9.60%	2.44%	7.16%
12/18/2019	9.60%	2.44%	7.16%
12/19/2019	10.05%	2.44%	7.61%
12/19/2019	10.20%	2.44%	7.76%
12/19/2019	10.25%	2.44%	7.81%
12/20/2019	9.20%	2.44%	6.76%
12/26/2019	9.75%	2.42%	7.33%
1/15/2020	9.35%	2.37%	6.98%
1/16/2020	8.80%	2.37%	6.43%
1/24/2020	9.44%	2.35%	7.09%
		Average:	4.76%
		Count:	1,147

Expected Earnings Analysis

		[1]	[2]	[3]	[4]	[5]	[6]
		Expected ROE	Shares Outstanding			Adjustment	Adjusted
Company	Ticker	2022-24	2019	2022-24	% Increase	Factor	ROE
Atmos Energy Corporation	ATO	10.0%	120.00	145.00	4.84%	1.024	10.24%
New Jersey Resources Corporation	NJR	11.0%	89.24	90.00	0.21%	1.001	11.01%
Northwest Natural Holding Company	NWN	11.5%	30.50	32.00	1.21%	1.006	11.57%
ONE Gas, Inc.	OGS	10.0%	53.00	55.00	0.93%	1.005	10.05%
Southwest Gas Holdings, Inc.	SWX	10.0%	56.00	62.00	2.58%	1.013	10.13%
Spire Inc.	SR	9.0%	51.00	55.00	1.91%	1.009	9.08%
						Median	10.18%
						Average	10.35%

Notes:
[1] Source: Value Line
[2] Source: Value Line
[3] Source: Value Line
[4] Equals = ([3] / [2])^(1/4)-1
[5] Equals (2 x (1 + [4])) / (2 + [4])
[6] Equals [1] x [5]

Small Size Premium

	[1] Customers (Mil)	[2] ($Mil)
South Jersey Gas Equity	0.39	$1,191.96
Median Market to Book for Comp Group		2.35
South Jersey Gas Implied Market Cap		$2,799.55

Company Name	Ticker	[3] Customers (Mil)	[4] Market Cap ($Mil)	[5] Market to Book Ratio
Atmos Energy Corporation	ATO	3.26	$13,809.03	2.35
New Jersey Resources Corporation	NJR	0.54	$4,183.29	2.53
Northwest Natural Holding Company	NWN	0.75	$2,233.69	2.65
ONE Gas, Inc.	OGS	2.18	$4,938.72	2.35
Southwest Gas Holdings, Inc.	SWX	2.05	$4,062.66	1.72
Spire Inc.	SR	1.69	$4,244.01	1.84
MEDIAN		1.87	$4,213.65	2.35
MEAN		1.74	$5,578.56	2.24

Market Capitalization ($Mil) [6]			
Decile	Low	High	Size Premium
2	$ 13,512.960	$ 29,022.867	0.52%
3	$ 7,275.967	$ 13,455.802	0.81%
4	$ 4,504.066	$ 7,254.230	0.85%
5	$ 2,996.003	$ 4,503.549	1.28%
6	$ 1,961.831	$ 2,992.251	1.50%
7	$ 1,292.791	$ 1,960.201	1.58%
8	$ 730.047	$ 1,292.224	1.80%
9	$ 325.360	$ 727.843	2.46%
10	$ 2.455	$ 321.578	5.22%

Proxy Group Median	$ 4,213.647	1.28%
6th Decile Size Premium	$ 2,799.550	1.50%
Difference from Proxy Group Median		0.22%

Notes:
[1] Source: South Jersey Gas Company, Annual Report for the year ended December 31, 2018
[2] South Jersey Gas rate base of $2.20 billion mutiplied by the proposed common equity ratio of 54.18%
[3] Source: S&P Global Market Intelligence
[4] Source: Bloomberg Professional, 30-day average
[5] Source: Bloomberg Professional, 30-day average
[6] Source: Ibbotson Associates, 2019 Ibbotson SBBI Market Report

Two most recent open market common stock issuances per company, if available

Company	Date	Shares Issued	Offering Price	Underwriting Discount	Offering Expense	Net Proceeds Per Share	Total Flotation Costs	Gross Equity Issue Before Costs	Net Proceeds	Flotation Cost Percentage
South Jersey Industries Inc.	4/18/2018	12,669,491	$29.50	$1.0325	$700,000	$28.41	$13,781,249	$373,749,985	$359,968,735	3.687%
South Jersey Industries Inc.	5/12/2016	8,050,000	$26.25	$0.9188	$330,000	$25.29	$7,725,938	$211,312,500	$203,586,563	3.656%
Atmos Energy Corporation	11/28/2018	8,059,300	$92.75	$0.9769	$1,000,000	$91.65	$8,873,130	$747,500,075	$738,626,945	1.187%
Atmos Energy Corporation	11/28/2017	4,558,404	$88.56	NA	NA	NA	NA	$403,692,258	NA	NA
New Jersey Resources Corporation	12/4/2019	6,545,454	$41.25	$1.2375	$500,000	$39.94	$8,599,999	$269,999,978	$261,399,978	3.185%
Northwest Natural Gas Company	6/4/2019	1,437,500	$67.00	$2.1775	$400,000	$64.54	$3,530,156	$96,312,500	$92,782,344	3.665%
Northwest Natural Gas Company	11/10/2016	1,012,000	$54.63	$2.0500	$250,000	$52.33	$2,324,600	$55,285,560	$52,960,960	4.205%
Southwest Gas Corporation	11/27/2018	3,565,000	$75.50	$2.5481	$600,000	$72.78	$9,683,977	$269,157,500	$259,473,524	3.598%
Spire Inc.	5/7/2018	2,300,000	$68.75	$2.1094	$325,000	$66.50	$5,176,574	$158,125,000	$152,948,426	3.274%
Spire Inc.	5/12/2016	2,185,000	$63.05	$2.0491	$300,000	$60.86	$4,777,284	$137,764,250	$132,986,967	3.468%
Mean							$7,163,656	$272,289,961		
								WEIGHTED AVERAGE FLOTATION COSTS:		2.631%

Constant Growth Discounted Cash Flow Model Adjusted for Flotation Costs - 30 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
					Expected Dividend Yield								
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Current	Adjusted for Flot. Costs	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Value Line Retention Growth	Average Earnings Growth	DCF k(e)	Flotation Adjusted DCF k(e)
Atmos Energy Corporation	ATO	$2.30	$113.12	2.03%	2.12%	2.17%	7.20%	7.20%	7.50%	10.48%	8.09%	10.21%	10.27%
New Jersey Resources Corporation	NJR	$1.25	$43.64	2.86%	2.94%	3.02%	8.00%	6.00%	2.50%	4.38%	5.22%	8.16%	8.24%
Northwest Natural Holding Company	NWN	$1.91	$73.43	2.60%	2.74%	2.81%	5.00%	3.75%	27.00%	7.04%	10.70%	13.44%	13.51%
ONE Gas, Inc.	OGS	$2.16	$93.65	2.31%	2.38%	2.44%	6.00%	5.00%	8.00%	5.46%	6.12%	8.49%	8.56%
Southwest Gas Holdings, Inc.	SWX	$2.18	$76.50	2.85%	2.96%	3.04%	6.00%	8.20%	9.00%	7.81%	7.75%	10.71%	10.79%
Spire Inc.	SR	$2.49	$83.25	2.99%	3.07%	3.15%	5.10%	4.23%	5.50%	5.49%	5.08%	8.15%	8.23%
PROXY GROUP MEAN												9.86%	9.93%

DCF Result Adjusted For Flotation Costs:	9.93%
DCF Result Unadjusted For Flotation Costs:	9.86%
Difference (Flotation Cost Adjustment):	0.07% [13]

Notes:
The proxy group DCF result is adjusted for flotation costs by dividing each company's expected dividend yield by (1 - flotation cost). The flotation cost adjustment is derived as the difference between the unadjusted DCF result and the DCF result adjusted for flotation costs.
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [10])
[5] Equals [4] / (1 - 2.631%)
[6] Source: Zacks
[7] Source: Yahoo! Finance
[8] Source: Value Line
[9] Source: Schedule RBH-2, Value Line
[10] Equals Average([6], [7], [8], [9])
[11] Equals [4] + [10]
[12] Equals [5] + [10]
[13] Equals average [12] - average [11]

Proxy Group Capital Structure

		% Common Equity								
Company	Ticker	2019Q3	2019Q2	2019Q1	2018Q4	2018Q3	2018Q2	2018Q1	2017Q4	Average
Atmos Energy Corporation	ATO	61.97%	60.69%	60.12%	59.37%	60.85%	60.80%	60.61%	59.80%	60.53%
New Jersey Resources Corporation	NJR	49.89%	54.05%	54.61%	53.34%	52.11%	53.49%	55.77%	53.59%	53.36%
Northwest Natural Holding Company	NWN	48.29%	48.92%	51.67%	50.88%	47.67%	50.03%	50.45%	48.78%	49.59%
ONE Gas, Inc.	OGS	61.40%	61.44%	61.38%	61.38%	62.81%	62.88%	62.87%	62.16%	62.04%
Southwest Gas Holdings, Inc.	SWX	48.47%	49.42%	51.58%	51.27%	47.43%	48.29%	48.16%	49.87%	49.31%
Spire Inc.	SR	52.02%	51.78%	51.60%	51.32%	52.08%	51.42%	49.70%	49.33%	51.16%
Mean		53.67%	54.39%	55.16%	54.59%	53.83%	54.49%	54.60%	53.92%	54.33%

		% Long-Term Debt								
Company	Ticker	2019Q3	2019Q2	2019Q1	2018Q4	2018Q3	2018Q2	2018Q1	2017Q4	Average
Atmos Energy Corporation	ATO	38.03%	39.31%	39.88%	40.63%	39.15%	39.20%	39.39%	40.20%	39.47%
New Jersey Resources Corporation	NJR	50.11%	45.95%	45.39%	46.66%	47.89%	46.51%	44.23%	46.41%	46.64%
Northwest Natural Holding Company	NWN	51.71%	51.08%	48.33%	49.12%	52.33%	49.97%	49.55%	51.22%	50.41%
ONE Gas, Inc.	OGS	38.60%	38.56%	38.62%	38.62%	37.19%	37.12%	37.13%	37.84%	37.96%
Southwest Gas Holdings, Inc.	SWX	51.53%	50.58%	48.42%	48.73%	52.57%	51.71%	51.84%	50.13%	50.69%
Spire Inc.	SR	47.98%	48.22%	48.40%	48.68%	47.92%	48.58%	50.30%	50.67%	48.84%
Mean		46.33%	45.61%	44.84%	45.41%	46.17%	45.51%	45.40%	46.08%	45.67%

Source: S&P Global Market Intelligence

INSERT TAB:

T. LYONS

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20__________

DIRECT TESTIMONY

OF

TIMOTHY S. LYONS

Cash Working Capital

On Behalf Of
South Jersey Gas Company

Exhibit P-8

March 13, 2020

TABLE OF CONTENTS

Exhibit P-8

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
TIMOTHY S. LYONS

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Timothy S. Lyons. My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts 01581.

Q. PLEASE DESCRIBE YOUR CURRENT POSITION.

A. I am a Partner at ScottMadden, Inc. ("ScottMadden").

Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE AND QUALIFICATIONS.

A. I have more than 30 years of experience in the energy industry. I started my career in 1985 at Boston Gas Company, eventually becoming Director of Rates and Revenue Analysis. In 1993, I moved to Providence Gas Company, eventually becoming Vice President of Marketing and Regulatory Affairs. Starting in 2001, I held a number of management consulting positions in the energy industry first at KEMA and then at Quantec, LLC. In 2005, I became Vice President of Sales and Marketing at Vermont Gas Systems, Inc. before joining Sussex Economic Advisors, LLC ("Sussex") in 2013. Sussex was acquired by ScottMadden on June 1, 2016.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I hold a Bachelor's degree from St. Anselm College, a Master's degree in Economics from The Pennsylvania State University, and a Master's degree in Business Administration from Babson College.

Q. HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES ("BPU" OR "BOARD")?

A. Yes, I previously sponsored testimony before the Board. A summary of my testimony experience along with my professional and educational experience is included in Schedule TSL-1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to sponsor the results of the lead-lag study conducted on behalf of South Jersey Gas Company ("South Jersey" or the "Company"), a subsidiary of South Jersey Industries, Inc. The lead-lag study is submitted as part of the Company's March 2020 base rate filing with the Board. The lead-lad study was used to determine the Company's Cash Working Capital ("CWC") requirement, which is included in the Company's rate base.

Q. ARE YOU SPONSORING ANY SCHEDULES IN CONNECTION WITH YOUR TESTIMONY?

A. Yes. I am sponsoring the following schedules that were prepared by me or under my direction:

- Schedule TSL-1 – Curriculum Vitae;
- Schedule TSL-2 – South Jersey Gas Company – Summary of the Cash Working Capital Requirement; and
- Schedule TSL-3 – South Jersey Gas Company – Workpapers supporting the Lead-Lag Study.

II. OVERVIEW OF TESTIMONY

Q. PLEASE DEFINE THE TERM "WORKING CAPITAL" AS A RATE BASE COMPONENT.

A. The term "working capital" refers to the net funds required by the Company to finance goods and services used to provide service to customers from the time those goods and services are paid for by the Company to the time that payment is received from customers. Goods and services considered in the lead-lag study include: operations and maintenance ("O&M") expenses, including labor and non-labor expenses; federal, state, and local taxes; and employment taxes.

Q. HOW WAS THE COMPANY'S CASH WORKING CAPITAL REQUIREMENT DETERMINED?

A. The Company's cash working capital requirement was determined by applying the results of the lead-lag study to post-test year adjusted expenses. The lead-lag study compares differences between the Company's revenue lag and expense leads. The revenue lag represents the number of days from the time customers receive their natural gas service to the time customers pay for their natural gas service, *i.e.*, when the funds are available to the Company. The longer the revenue lag, the more cash the Company needs to finance its day-to-day operations. The expense lead represents the number of days from the time the Company receives goods and services used to provide natural gas service to the time payments are made for those goods and services, *i.e.*, when the funds are no longer available to the Company. The longer the expense lead, the less cash the Company needs to fund its day-to-day operations. Together, the revenue lag and expense leads are used to measure the lead-lag days. The lead-lag days are then applied to the Company's post test year adjusted expenses to determine the CWC requirement. To that amount, there are several working capital adjustments to be included in rate base.

Unless otherwise indicated, the approach to calculate the CWC requirement in this rate case filing is consistent with the approach used in the prior rate case filing.[1]

III. LEAD-LAG STUDY APPROACH

Q. PLEASE DESCRIBE THE APPROACH USED TO DEVELOP THE LEAD-LAG STUDY.

A. The lead-lag study compares differences between the Company's revenue lag and expense leads. The revenue lag measures the number of days from the time natural gas service is provided to customers to the time payment is received from customers. The expense leads measure the number of days from the time goods and services used to provide natural gas service are provided to the Company to the time payments are made by the Company for those goods and services. The leads are measured in days for individual expenses, converted to "dollar-days" that reflect a weighting by expense amount, and then summed across all expenses.

Q. PLEASE DESCRIBE THE FINANCIAL DATA USED IN THE LEAD-LAG STUDY.

A. The lead-lag study was based on data from October 1, 2018 through September 30, 2019 (the "study period"). The data included: customer meter reading and billing schedules; O&M expenses; federal, state, local, and employment taxes; service periods; billing and payment dates; and billing and payment amounts.

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[1] *In the Matter of the Petition of South Jersey Gas Company for Approval of Increased Base Tariff Rates And Charges for Gas Service and Other Tariff Revisions*, BPU Docket No. GR17010071.

A. Revenue Lag

Q. PLEASE DESCRIBE DEVELOPMENT OF THE REVENUE LAG.

A. The revenue lag measures the number of days from the time natural gas service is provided to customers to the time payment is received from customers. There are three categories of revenues that comprise the revenue lag: retail and industrial sales; off-system sales; and capacity release.

The largest revenue category is retail and industrial sales. This category includes revenues from firm, non-firm and transportation customers. The revenue lag for retail and industrial sales was measured as the sum of three components: (1) the service lag; (2) the billing lag; and (3) the collection lag.

Q. WHAT IS THE SERVICE LAG?

A. The service lag measures the average number of days in the service period; *i.e.*, the time between the start and end of the billing month (which is when meters are read). The service lag in this lead-lag study was based on the midpoint of the service period, which reflects an assumption that natural gas is delivered evenly over the service period.

Q. WHAT IS THE BILLING LAG?

A. The billing lag measures the number of days from the time meters are read to the time bills are recorded and sent to customers. The billing lag in this lead-lag study was based on the Company's meter reading schedule.

The Company has twenty meter reading cycles per month, and allows three days to complete the billing process. However, only one-half day is typically required (*i.e.*, meters are read during the day and bills are processed in the evening). The billing lag in this lead-lag study was based on a one-half day billing lag, which is a conservative assumption.

Q. WHAT IS THE COLLECTION LAG?

A. The collection lag measures the number of days from the time bills are recorded and sent to customers to the time customer payments are received (i.e., funds are available to the Company). The collection lag in this lead-lag study was based on monthly accounts receivable balances and billed revenue data. This information was used to calculate the average time to receive customer payments.

However, the accounts receivable balance on the Company's books reflects two amounts: (1) amounts related to Company billings to customers; and (2) amounts related to marketer (or third-party, residential service suppliers) billings to customers. The amounts related to marketer billings reflect the Company's purchase of accounts receivable from marketers. To determine the collection lag associated with the Company's billings to customers, the accounts receivable balance was adjusted to remove the amount related to the purchase of accounts receivable from marketers.

The adjustment is consistent with the approach in the prior lead-lag study, and reduces the collection lag.

Q. WHAT IS THE REVENUE LAG ASSOCIATED WITH OFF-SYSTEM SALES AND CAPACITY RELEASE?

A. The revenue lag for off-system sales and capacity release was measured for each bill as the number of days from the midpoint of the service period to the payment date, converted to "dollar-days" that reflects a weighting of the billed amounts, and then summed across all the billings.

Q. WHAT IS THE TOTAL REVENUE LAG USED IN THE LEAD-LAG STUDY?

A. The total revenue lag used in the lead-lag study is based on the revenue lags associated with retail and industrial sales, off-system sales and capacity release, converted to "dollar-days" that reflects a weighting of the revenue amounts, and then summed across all revenues. The derivation of the revenue lag is shown in Schedule TSL-3 at page 1.

B. Expense Leads

1. Operation and Maintenance Expenses

Q. PLEASE DESCRIBE DEVELOPMENT OF LEAD DAYS FOR O&M EXPENSES.

A. Lead days for O&M expenses were measured separately for the following categories: (1) purchased gas costs; (2) regular payroll; (3) variable compensation; (4) pension; (5) employee benefits; (6) uncollectible expenses; (7) affiliate services; (8) New Jersey Clean Energy Program; (9) select O&M expenses; and (10) other O&M expenses.

Q. HOW WERE LEAD DAYS DETERMINED FOR PURCHASED GAS EXPENSES?

A. Lead days for purchased gas costs were measured separately for the following categories: (a) flowing gas purchases; (b) LNG expenses; (c) Net LNG inventory withdrawals; (d) gas used by the Company; (e) capacity release and hedges.

Lead days for flowing gas purchases were based on a review of the Company's invoices. Lead days were measured as the number of days from the midpoint of the service period to the payment date.

The lead days associated with LNG expenses were based on the lead days associated with O&M expenses (as described below) because LNG expenses are primarily related to labor and electricity expenses, which are included in O&M expenses. This approach is a change to the study filed in the prior rate case because the Company now produces LNG through a liquefaction process that requires labor and electricity instead of purchasing LNG.

There are no lead days associated with LNG inventory withdrawals because LNG is deducted from inventory and charged to expense at the time LNG is withdrawn from storage.

Lead days associated with gas used by the Company was based on lead days for flowing gas purchases.

Lead days associated with capacity release and hedging expenses were measured as the number of days from the midpoint of the service period to the payment date. Since capacity release is a credit to the pipeline invoice, the lead days associated with the capacity release expenses offset the revenue lag associated with capacity release revenues discussed earlier.

Q. HOW WERE LEAD DAYS DETERMINED FOR REGULAR PAYROLL EXPENSES?

A. Lead days for regular payroll expenses were based on the Company's payroll process, which pays employees on a bi-weekly basis. Lead days were measured as the number of days from the midpoint of each pay period to the payment date.

Q. DID THE STUDY ADJUST FOR VARIABLE COMPENSATION EXPENSES?

A. Yes. Lead days for the Company's variable compensation expenses were measured as the number of days from the midpoint of the performance period when the variable compensation was earned to the payment dates.

Q. HOW WERE LEAD DAYS DETERMINED FOR PENSION PLAN PAYMENTS?

A. Lead days for the pension plan payments were based on the timing of the Company's contributions to the pension plan. Lead days were measured as the number of days from the midpoint of the service period to the contribution dates.

Q. HOW WERE LEAD DAYS DETERMINED FOR EMPLOYEE BENEFITS?

A. Lead days for employee benefit expenses were based on a review of the Company's payments related to fourteen benefit items, including medical, dental and 401(k) plans. Lead days were measured for each benefit item as the number of days from the midpoint of the service period to the payment date, converted to "dollar-days" to reflect a weighting of the expense amounts, and then summed across all benefit expenses.

Q. HOW WERE LEAD DAYS DETERMINED FOR UNCOLLECTIBLE EXPENSES?

A. Lead days for uncollectible expenses were based on the Company's approach to create a reserve account for uncollectible expenses prior to the actual write-off. Lead days were measured as the average uncollectible reserve balance over the past five quarters divided by the actual write-off expenses during the study period.

Q. HOW WERE LEAD DAYS DETERMINED FOR SOUTH JERSEY INDUSTRIES, INC. SERVICES COMPANY (AFFILIATE) EXPENSES?

A. Lead days for Services Company (Affiliate) expenses were based on the payment schedule. Services Company (Affiliate) payments are made in the month following the service period. Lead days for Services Company (Affiliate) expenses were measured as the number of days from midpoint of the service period to the payment date.

Q. HOW WERE LEAD DAYS DETERMINED FOR NEW JERSEY CLEAN ENERGY PROGRAM EXPENSES?

A. Lead days for New Jersey Clean Energy Program expenses were based on the payment schedule. New Jersey Clean Energy Program payments are made following the service period. Lead days for New Jersey Clean Energy Program expenses were measured as the number of days from midpoint of the service period to the payment date.

Q. HOW WERE LEAD DAYS DETERMINED FOR SELECT O&M EXPENSES?

A. The lead-lag study determined lead days for eight O&M items based on a review and analysis of the service periods and payment dates. The eight O&M items were similarly analyzed in the lead-lag study filed in the prior rate case. The O&M items are discussed below.

- Materials and supplies – this item was assigned zero lead days because materials and supplies are deducted from inventory at the time the expense is recorded. The payment occurs at the time of purchase and addition to inventory.
- Membership dues – lead days were measured as the number of days from midpoint of the service period to the payment date.
- Utility location markout services – lead days were measured as the number of days from midpoint of the service period to the payment date.
- Bank service fees – lead days were measured as the average monthly balance divided by the average daily expense.
- Motor vehicles – this item includes depreciation expense, which was assigned zero lead days (as discussed below), labor expenses, which were assigned payroll lead

days, and other miscellaneous expenses, which were assigned other O&M lead days.

- Outside services (audit) – lead days were measured as the average monthly balance divided by the average daily expense.
- Meter reading services – lead days were measured as the number of days from midpoint of the service period to the payment date.
- Insurance prepayment – this item was assigned zero lead days because insurance is deducted from a prepayment account at the time expenses are recorded.

FASB 106 expenses are included in Other O&M Expenses rather than measured separately as in the prior rate case. The Company believes the expenses are not unique and can be included in Other O&M expenses.

Q. HOW WERE LEAD DAYS DETERMINED FOR OTHER O&M EXPENSES?

A. Lead days for other O&M expenses were based on a stratified sample of invoices paid by the Company during the study period. Lead days were measured for each invoice as the number of days from the midpoint of the service period to the payment date, converted to "dollar-days" that reflect a weighting of the expense amounts, and then summed across all expenses. The lead days reflect an adjustment to the timing of a large contractor's invoice. The invoice is an outlier due to the contractor's unusual delay in providing a correct invoice. The lead days reflect the date of the corrected invoice rather than the initial incorrect invoice.

2. Current Income Tax Expense

Q. HOW WERE LEAD DAYS DETERMINED FOR FEDERAL INCOME TAXES?

A. Lead days for federal income taxes were based on due dates for tax payments: April 15; June 15; September 15; and December 15. Lead days for federal income taxes were measured as the number of days from the midpoint of the taxing period (*i.e.*, the calendar year) to the due dates. The study assumes the tax payments reflect equal installments.

Q. HOW WERE LEAD DAYS DETERMINED FOR STATE INCOME TAXES?

A. Lead days for state income taxes were based on due dates for tax payments: April 15; May 15; and June 15. Lead days for state income taxes were measured as the number of days from the midpoint of the taxing period (*i.e.*, the calendar year) to the due dates. The study assumes the tax payments reflect the following installments: 25.0 percent in on April 15; 50.0 percent due on May 15; and 25.0 percent due on June 15.

3. Taxes Other than Income Taxes

Q. PLEASE DESCRIBE DEVELOPMENT OF LEAD DAYS FOR TAXES OTHER THAN INCOME TAXES?

A. Lead days for Taxes Other Than Income Taxes were measured separately for the following categories: (1) payroll-related taxes (FICA, federal unemployment, and state unemployment); (2) real estate; (3) federal excise and sales and use taxes; and (4) New Jersey Public Utility Assessment and Ratepayer Advocate Assessment.

Q. HOW WERE LEAD DAYS DETERMINED FOR EACH OF THESE TAXES?

A. Lead days for FICA taxes were measured as the number of days from the midpoint of the applicable pay period to the payment date.

Lead days for federal and state unemployment taxes were measured as the number of days from liability date at the end of each quarter to the due date.

Lead days for real estate taxes were measured as the number of days from the midpoint of the taxing period to the payment date.

Lead days for federal excise and sales and use taxes were measured as the number of days from the midpoint of the taxing period to the payment date.

Lead days for New Jersey Public Utility Assessment and Ratepayer Advocate Assessment were measured as the number of days from the midpoint of the assessment period to the payment date.

4. Return on Invested Capital and Interest Expenses

Q. DID YOU CALCULATE AN EXPENSE LEAD ASSOCIATED WITH RETURN ON INVESTED CAPITAL AND INTEREST PAYMENTS?

A. Yes. Consistent with the Board's practice, the return on invested capital is included in the lead-lag study.[2] A zero expense lead was assigned to the return on common equity, recognizing returns are earned and become the property of the utility's investors at the time services are rendered.

Lead days for interest payments related to long-term debt, short term debt, and customer deposits were measured as the number of days from the midpoint of the service period to the payment date for the study period, October 1, 2018 through September 30, 2019.

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[2] *See In the Matter of the Verified Petition of Jersey Central Power & Light Company for Review and Approval of Increases in and Other Adjustments to Its Rates And Charges For Electric Service, and for Approval of Other Proposed Tariff Revisions in Connection Therewith; and for Approval of an Accelerated Reliability Enhancement Program ("2012 Base Rate Filing")*, BPU Docket No. ER12111052 "Order Adopting Initial Decision with Modifications and Clarifications," (Mar. 26, 2015) at 14.

5. Deferred Income Taxes

Q. DID YOU INCLUDE DEFERRED INCOME TAXES IN THE LEAD-LAG STUDY?

A. No. It has been the Board's practice to exclude deferred taxes from lead-lag studies.[3] As such, no deferred income taxes are included in the analysis. However, the Company has included excess deferred tax amortization with a zero expense lag because this item is deducted from rate base when the amortization amount is recognized.

6. Depreciation and Other Expense Items

Q. PLEASE DESCRIBE HOW YOU CALCULATED THE LAG ASSOCIATED WITH DEPRECIATION EXPENSES.

A. Depreciation expenses are included with a zero expense lead because these items are deducted from rate base when the expenses are recorded. This is consistent with the prior practice of the Board.[4]

C. Working Capital Adjustments

Q. PLEASE DESCRIBE THE WORKING CAPITAL ADJUSTMENTS.

A. There were twelve working capital adjustments to be included in rate base. The adjustments were consistent with those in the study filed in the prior rate case. The amounts are discussed below:

- Cash Balance and Working Funds – this item represents cash on hand to pay expenses. The amount reflects a thirteen-month average of cash and working fund balances.

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[3] *See id.* at 13-14.
[4] *See id.* at 13.

- General Prepayments – this item represents payments in advance of when they are charged to expenses. The amount reflects a thirteen-month average of prepaid account balances.
- Prepaid Energy Sales and Use Tax – this item represents tax payments in advance of collection from customers. The amount reflects a thirteen-month average of prepaid energy sales and use tax balances.
- Universal Service Fund ("USF")/ Lifeline reserve – this item represents payments in advance of collection from customers. The amount reflects a thirteen-month average of USF/ Lifeline reserves.
- Prepaid Pension and Postretirement Healthcare – this item represents payments to a reserve in advance of when they are charged to expense. The amount reflects a thirteen-month average of prepaid pension and postretirement healthcare reserves.
- Accrued Invoices and Accrued Payroll Related to Plant – this item represents materials and labor capitalized prior to the date it is actually paid. The amount reflects a thirteen-month average of material and labor expenses accrued but not yet paid.
- Vacation Accrual and Uninsured Risk Reserve – this item represents expenses recovered from customers but not yet paid out. Vacation accrual reflects a four-quarter average of accrued vacation. Uninsured risk reserve reflects a thirteen-month average of the reserve account.

- Marketer Payment Reserve – this item represents funds received from customers but not yet paid to marketers. The amount reflects a thirteen-month average of payments that are due marketers.

Q. PLEASE EXPLAIN TREATMENT OF EMPLOYEE DEDUCTIONS IN THE CALCULATION OF THE CASH WORKING CAPITAL REQUIREMENT.

A. Employee deductions associated with the employee portion of payroll withholdings are a source of cash working capital to the Company from the time the employee deductions are withheld from employee payroll to the time employee deductions are used to pay for the items for which they were withheld. Therefore, miscellaneous employee deductions are deducted from the cash working capital requirement.

IV. <u>CONCLUSION</u>

Q. WHAT WERE THE RESULTS OF THE LEAD-LAG STUDY?

A. The results of the lead-lag study are included in Schedule TSL-2.

Q. ARE THE RESULTS OF THIS LEAD-LAG STUDY REASONABLE?

A. Yes, the study provides an accurate assessment of the Company's actual cash working capital requirements. The resulting cash working capital requirement should be included in the Company's rate base.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

scottmadden
MANAGEMENT CONSULTANTS

Summary

Tim Lyons is a partner with ScottMadden with more than 30 years of experience in the energy industry. Tim has held senior positions at several gas utilities and energy consulting firms. His experience includes rate and regulatory support, sales and marketing, customer service and strategy development. Prior to joining ScottMadden, Tim was Vice President of Sales and Marketing for Vermont Gas. He has also served as Vice President of Marketing and Regulatory Affairs for Providence Gas Company, Director of Rates at Boston Gas Company, and Project Director at Quantec, LLC, an energy consulting firm.

Tim has sponsored testimony before 18 state regulatory commissions. Tim holds a B.A. from St. Anselm College, an M.A. in Economics from The Pennsylvania State University, and an M.B.A. from Babson College.

Areas of Specialization

- Regulation and Rates
- Retail Energy
- Utilities
- Natural Gas

Capabilities

- Regulatory Strategy and Rate Case Support
- Strategic and Business Planning
- Capital Project Planning
- Process Improvements

Articles and Speeches

- "Country Strong: Vermont Gas shares its comprehensive effort to expand natural gas service into rural communities." ***American Gas Association***, June 2011 (with Don Gilbert).
- "Talking Safety With Vermont Gas." ***American Gas Association***, February 2009 (with Dave Attig).
- "Consumers Say 'Act Now' To Stabilize Prices." ***Power & Gas Marketing***, September/ October 2001 (with Jim DeMetro and Gerry Yurkevicz).
- "Rate Reclassification: Who Buys What and When." ***Public Utilities Fortnightly***, October 15, 1991 (with John Martin).

Recent Assignments

- Sponsored cost of service/rate design testimony for a Mid-Atlantic gas utility. Testimony included a proposal for new residential and commercial rate classes and introduction of a block break rate design.
- Sponsored cost of service/rate design testimony for a Midwest gas utility. Testimony included a proposal for new commercial rate classes and a revenue decoupling mechanism.
- Sponsored cost of service/ rate design and lead-lag testimony for a Midwest gas utility. The testimony included proposals for Revenue Decoupling/ Weather Normalization Mechanism and Tracker Accounts for certain O&M expenses and capital costs.
- Sponsored rate design testimony for a Northeast gas utility. The testimony included: a proposal for zonal rates to promote expansion of natural gas service in the state; market analysis; and financial modeling.
- Led a study for the Massachusetts Department of Energy Resources to evaluate the benefits, costs and policies options associated with natural gas expansion by Massachusetts gas utilities. The study included: (a) research on state regulatory policies; (b) financial modeling and analysis of the economic and environmental impacts of pursuing various policy options; and (c) a survey of Massachusetts homeowners on their opinion of home heating fuels.
- Prepared a transmission and distribution (T&D) avoided cost study and report for a Midwest electric utility. The study was used to support the utility's energy efficiency programs.
- Prepared a review and evaluation of cost of service/ rate design studies for an electric utility. The assignment included review of proposed rate designs that address cost shifting concerns with serving residential distribution generation customers through introduction of higher customer charges, a demand charge and time-of-use energy charges.

- Assisted in the development of an electric portfolio of cost of service, rate design, and rate planning tools. The tools were used to evaluate the impact of future rate filings and resource portfolio decisions on individual rate classes.
- Prepared a market analysis for a utility to evaluate natural gas expansion into new areas, including: (a) survey of homes and businesses; (b) estimate of construction and operating costs; (c) analysis of alternative supply options (including pipeline, LNG and CNG); and (d) financial modeling.
- Directed a process review of natural gas expansion projects for a gas utility. The assignment included a review, evaluation and recommendations related to: (a) policies and procedures; (b) process steps and personnel; (c) financial models and analysis; (d) project decisions and schedules; and (e) post-construction review and evaluation.
- Sponsored lead-lag testimony for several electric and gas utilities.

Sponsor	Date	Docket No.	Subject
Regulatory Commission of Alaska			
ENSTAR Natural Gas Company	06/16	Docket No. U-16-066	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
Arkansas Public Service Commission			
Liberty Utilities (Pine Bluff Water)	10/18	Docket No. 18-027-U	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding.
California Public Utilities Commission			
Southwest Gas Corporation (Southern California, Northern California and South Lake Tahoe jurisdictions)	8/19	Docket No. A.19-08-015	Sponsored testimony on behalf of three separate rate jurisdictions related to: revenue requirements, lead-lag/ cash working capital, and class cost of service, rate design and bill impact analysis for a general rate case proceeding.
Connecticut Public Utilities Regulatory Authority			
Yankee Gas Company	07/14	Docket No. 13-06-02	Sponsored report and testimony supporting the review and evaluation of gas expansion policies, procedures and analysis.
Illinois Commerce Commission			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. 16-0401	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes and a decoupling mechanism.
Iowa Utilities Board			
Liberty Utilities (Midstates Natural Gas)	07/16	Docket No. RPU-2016-0003	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes.
Kansas Corporation Commission			
The Empire District Electric Company	12/18	Docket No. 19-EPDE-223-RTS	Sponsored testimony supporting cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding.
Maine Public Utilities Commission			
Northern Utilities, Inc. d/b/a Unitil	06/19	Docket No. 2019-00092	Sponsored testimony supporting a proposed capital investment cost recovery mechanism.
Northern Utilities, Inc. d/b/a Unitil	06/15	Docket No. 2015-00146	Sponsored testimony supporting the proposed gas expansion program, including a zone area surcharge.
Maryland Public Service Commission			
Sandpiper Energy, a Chesapeake Utilities company	12/15	Case No. 9410	Sponsored testimony supporting the cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new residential and commercial classes.
Massachusetts Department of Public Utilities			
Liberty Utilities (New England Gas Company)	07/18	Docket No. DPU 18-68	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2018/2019 through 2022/2023.
Liberty Utilities (New England Gas Company)	07/16	Docket No. DPU 16-109	Sponsored the Long-Range Forecast and Supply Plan filing for the five-year forecast period 2016/2017 through 2020/2021.

Sponsor	Date	Docket No.	Subject
Boston Gas	10/93	Docket No. DPU 92-230	Sponsored testimony describing the Company's position regarding rate treatment of vehicular natural gas investments and expenses.
Boston Gas	03/90	Docket No. DPU 90-55	Sponsored testimony supporting the weather and other cost of service adjustments, rate design and customer bill impact studies for a general rate case proceeding.
Boston Gas	03/88	Docket No. DPU 88-67-II	Sponsored testimony supporting the rate reclassification of commercial and industrial customers for a rate design proceeding.
Michigan Public Service Commission			
Lansing Board of Water & Light and Michigan State University	04/19	Docket No. U-20322	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Midland Cogeneration Ventures, LLC	09/18	Docket No. U-18010	Sponsored testimony evaluating Consumer Energy's cost of service and rate design proposals.
Missouri Public Service Commission			
The Empire District Electric Company	08/19	Docket No. ER-2019-0374	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a weather normalization mechanism.
Liberty Utilities (Midstates Natural Gas)	09/17	Docket No. GR-2018-0013	Sponsored testimony supporting the cost of service, rate design, bill impact and lead-lag studies for a general rate case proceeding. The testimony also included proposals for a revenue decoupling/ weather normalization mechanism as well as tracker accounts for certain O&M expenses and capital costs.
Missouri Gas Energy	04/17	Docket No. GR-2017-0216	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
Laclede Gas Company	04/17	Docket No. GR-2017-0215	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding. The testimony included support for a decoupling mechanism.
New Hampshire Public Utilities Commission			
Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities	11/17	Docket No. DG 17-198	Sponsored testimony supporting a levelized cost analysis for approval of firm supply and transportation agreements.
Liberty Utilities d/b/a Granite State Electric Company	04/16	Docket No. DE 16-383	Adopted testimony and sponsored Lead/Lag study for a general rate case proceeding.
New Jersey Board of Public Utilities			
Elizabethtown Gas Company	04/19	Docket No. GR19040486	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.

Sponsor	Date	Docket No.	Subject
Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas Company	08/16	Docket No. GR16090826	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Corporation Commission of Oklahoma			
The Empire District Electric Company	03/19	Cause No. PUD 201800133	Sponsored testimony supporting the cost of service, rate design, bill impact and Lead/Lag studies for a general rate case proceeding.
The Empire District Electric Company	04/17	Cause No. PUD 201600468	Adopted direct testimony and sponsored rebuttal testimony supporting the revenue requirements for a general rate case proceeding. The testimony included proposals for alternative ratemaking mechanisms.
Rhode Island Public Utilities Commission			
Providence Gas Company	08/01 09/00 08/96	Docket No. 1673	Sponsored testimony supporting the changes in cost of gas adjustment factor related to projected under-recovery of gas costs; Filed testimony and witness for pilot hedging program to mitigate price risks to customers; Filed testimony and witness for changes in cost of gas adjustment factor related to extension of rate plan.
Providence Gas Company	08/00	Docket No. 2581	Sponsored testimony supporting the extension of a rate plan that began in 1997 and included certain modifications, including a weather normalization clause.
Providence Gas Company	03/00	Docket No. 3100	Sponsored testimony supporting the de-tariff and deregulation of appliance repair service, enabling the Company to have needed pricing flexibility.
Providence Gas Company	06/97	Docket No. 2581	Sponsored testimony supporting a rate plan that fixed all billing rates for three-year period; included funding for critical infrastructure investments in accelerated replacement of mains and services, digitized records system, and economic development projects.
Providence Gas Company	04/97	Docket No. 2552	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for commercial and industrial customers, including redesign of cost of gas adjustment clause, for a rate design proceeding.
Providence Gas Company	02/96	Docket No. 2374	Sponsored testimony supporting the rate design, customer bill impact studies and retail access tariffs for largest commercial and industrial customers for a rate design proceeding.
Providence Gas Company	01/96	Docket No. 2076	Sponsored testimony supporting the rate reclassification of customers into new rate classes, rate design (including introduction of demand charges), and customer bill impact studies for a rate design proceeding.
Providence Gas Company	11/92	Docket No. 2025	Sponsored testimony supporting the Integrated Resource Plan filing, including a performance-based incentive mechanism.

Sponsor	Date	Docket No.	Subject
Railroad Commission of Texas			
Texas Gas Service Company – Central Texas and Gulf Coast Service Areas	12/19	GUD No. 10928	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Beaumont/ East Texas Division	11/19	GUD No. 10920	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Borger/ Skellytown Service Area	08/18	GUD No. 10766	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – North Texas Service Area	06/18	GUD No. 10739	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – South Texas Division	11/17	GUD No. 10669	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Texas Gas Service Company – Rio Grande Valley Service Area	06/17	GUD No. 10656	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Atmos Pipeline – Texas	01/17	GUD No. 10580	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
CenterPoint Energy – Texas Gulf Division	11/16	GUD No. 10567	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Public Utility Commission of Texas			
CenterPoint Energy Houston Electric, LLC	04/19	Docket No. 49421	Sponsored testimony supporting the Lead/Lag study for a general rate case proceeding.
Vermont Public Utilities Commission			
Vermont Gas Systems	12/12	Docket No. 7970	Sponsored testimony describing the market served by $90 million natural gas expansion project to Addison County, VT. Also described the terms and economic benefits of a special contract with International Paper.
Vermont Gas Systems	02/11	Docket No. 7712	Sponsored testimony supporting the market evaluation and analysis for a system expansion and reliability regulatory fund.

South Jersey Gas Company
Lead-Lag Study
Working Capital Requirement

Line	Description	Post Test Year Adjusted Expenses	Average Daily Expenses	Revenue Lag	Ref.	Expense Lead	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
1	**Operations and Maintenance Expenses**								
2	Purchased Gas Costs	$ 231,934,651	$ 635,437	66.29	A	(36.51)	B	29.77	18,920,037
3	Payroll	24,642,848	67,515	66.29	A	(11.92)	C-1	54.36	3,670,367
4	Variable Compensation	683,228	1,872	66.29	A	(238.97)	C-2	(172.68)	(323,234)
5	Pension	3,262,085	8,937	66.29	A	31.44	C-3	97.73	873,395
6	Employee Benefits	6,633,385	18,174	66.29	A	(33.53)	C-4	32.76	595,367
7	Uncollectible Expense	4,964,368	13,601	66.29	A	(653.47)	A	(587.18)	(7,986,252)
8	Affiliate Services	29,077,798	79,665	66.29	A	(42.86)	C-5	23.43	1,866,172
9	New Jersey Clean Energy Program	11,496,700	31,498	66.29	A	(67.15)	C-6	(0.86)	(27,149)
10	Materials & Supplies Issues	378,692	1,038	66.29	A	0.00	C-7	66.29	68,774
11	Membership Dues	218,063	597	66.29	A	(23.46)	C-7	42.83	25,586
12	Utility Location Markout Services	3,272,763	8,966	66.29	A	(41.60)	C-7	24.69	221,382
13	Bank Service Fees	1,541,200	4,222	66.29	A	(36.04)	C-7	30.25	127,716
14	Motor Vehicle	3,669,638	10,054	66.29	A	(18.18)	C-7	48.10	483,614
15	Outside Services (Audit)	1,257,303	3,445	66.29	A	(39.99)	C-7	26.29	90,571
16	Meter Reading Services	3,201,230	8,770	66.29	A	(37.06)	C-7	29.23	256,339
17	Insurance	1,888,018	5,173	66.29	A	0.00	C-7	66.29	342,880
18	Other O&M Expenses	67,273,015	184,310	66.29	A	(51.14)	C-8	15.14	2,791,147
19	**Total O&M Expenses**	$ 395,394,984				.			21,996,711
20	**Income Taxes**								
21	Excess Deferred Tax Amortization	$ (2,223,581)	$ (6,092)	66.29	A	0.00	D-1	66.29	(403,821)
22	Federal Income Taxes	32,110,348	87,974	66.29	A	(37.00)	D-1	29.29	2,576,489
23	State Income Tax	15,122,613	41,432	66.29	A	47.25	D-2	113.54	4,704,047
24	**Total Income Taxes**	$ 45,009,380							6,876,715
25	**Taxes Other Than Income Taxes**								
26	PUA and Ratepayer Advocate	$ 1,304,740	$ 3,575	66.29	A	(394.50)	E-7	(328.21)	(1,173,239)
27	Other Taxes Other Than Income Taxes	3,936,705	10,785	66.29	A	(18.36)	E	47.92	516,877
28	**Total Taxes Other Than Income Taxes**	$ 5,241,445							(656,362)
29	**Depreciation and Amortization Expense**	$ 78,634,560	215,437	66.29	A	0.00		66.29	14,280,700
30	**Interest Expense**								
31	Interest on Long-Term Debt	$ 37,331,824	$ 102,279	66.29	A	(59.51)	F-1	6.77	692,781
32	Interest on Short-Term Debt	$ -	-	66.29	A	(6.91)	F-2	59.38	-
33	Interest on Customer Deposits	$ 163,179	447	66.29	A	(246.39)	F-3	(180.10)	(80,518)
34	**Total Interest Expense**	$ 37,495,003							612,263
35	**Return**	$ 123,047,051	337,115	66.29	A	0.00		66.29	22,346,383
36	**Other Working Capital Requirements / (Sources)**								
37	Employee Deductions								(1,000,161)
38	Cash Balance								290,164
39	Working Funds								301,750
40	General Prepayments								4,706,834
41	Prepaid Energy Sales and Use Tax								10,536,917
42	USF/Lifeline Reserve								755,201
43	Prepaid Pension								35,641,494
44	Prepaid Postretirement Healthcare								8,215,471
45	Accrued Invoiced Related to Plant								(31,831,110)
46	Accrued Payroll Related to Plant								(1,107,153)
47	Vacation Accrual Reserve								(1,127,898)
48	Uninsured Risk Reserve								(718,226)
49	Marketer Payment Reserve								(1,268,576)
50	**Total Other Working Capital**								23,394,706
51	**Total Working Capital Requirement**	$ 684,822,423							88,851,116

South Jersey Gas Company
Lead-Lag Study
Revenue and Collection Lag

Line	Description		Revenue	Revenue Lag		Dollar Days	Reference
1	Retail & Industrial Sales						
2	Service Period Lag			15.21			(365 / 12) / 2
3	Billing Lag			0.50			WP A-1
4	Collection Lag			53.89			WP A-2
5	Retail & Industrial Sales	$	512,938,700	69.60	$	35,702,005,083	
6	Off System Sales		58,176,900	40.55		2,359,348,959	WP A-3
7	Capacity Release		5,761,577	30.92		178,149,993	WP A-4
8	Composite Revenue Lag	$	576,877,177	66.29	$	38,239,504,034	

South Jersey Gas Company
Lead-Lag Study
Purchased Gas

Line	Description	Payments	Expense Lead	Lead / Lag Dollars	Supporting Schedule
1	Natural Gas Purchases	$ 207,440,578	(37.77)	$ (7,835,390,761)	WP B-1
2	Net NG inventory withdrawal	(397,419)	0.00	-	
3	LNG Expenses - Labor	969,626	(11.92)	(11,560,931)	WP C-1
4	LNG Expenses - Non-Labor	507,920	(51.14)	(25,976,689)	WP C-8
5	Net LNG inventory withdrawal	(2,040,960)	0.00	-	
6	Gas Used by Company	(191,104)	(37.77)	7,218,317	WP B-1
7	BSC Purchases	-	0.00	-	
8	OSS Capacity Release	5,761,577	(30.92)	(178,149,993)	WP A-4
9	Hedges	5,820,645	15.27	88,903,125	
10	Total	$ 217,870,863	(36.51)	$ (7,954,956,931)	

South Jersey Gas Company
Lead-Lag Study
O&M Expenses Summary

Line	Description	(Lead)/Lag Days	Reference
1	Regular Payroll		
2	Regular Payroll	(11.92)	WP C-1
3	Variable Compensation	(238.97)	WP C-2
4	Pension	31.44	WP C-3
5	Employee Benefits	(33.53)	WP C-4
6	Affiliate Services	(42.86)	WP C-5
7	New Jersey Clean Energy Program	(67.15)	WP C-6
8	O&M Expenses	See C-7	WP C-7
9	Other O&M Expenses	(51.14)	WP C-8

South Jersey Gas Company
Lead-Lag Study
Income Taxes

Line	Description	(Lead)/Lag Days	Ref.
1	Income Taxes		
2	Current Federal Income Taxes	(37.00)	D-1
3	State Income Tax	47.25	D-2
4	Total Federal Income Taxes		

South Jersey Gas Company
Lead-Lag Study
Taxes Other Than Income Taxes

Line	Description		Expense	Percent	(Lead)/Lag Days	Reference		Dollar Days
1	Payroll Taxes							
2	FICA	$	2,077,559	95.52%	(12.96)	E-1	$	(26,928,355)
2	Federal Unemployment		14,311	0.66%	(75.63)	E-2		(1,082,235)
3	State Unemployment		83,128	3.82%	(75.63)	E-3		(6,286,539)
4	Total Payroll Taxes	$	2,174,997	100.00%	(15.77)		$	(34,297,129)
5	Real Estate Taxes	$	528,146		13.88	E-4	$	7,328,027
6	Federal Excise Tax	$	7,556		(38.14)	E-5	$	(288,206)
7	Sales and Use Tax		858,019		(44.61)	E-6		(38,277,600)
8	Taxes Other Than Income (Lead)/Lag Days	$	3,568,718		(18.36)		$	(65,534,908)

South Jersey Gas Company
Lead-Lag Study
Interest Expense

Line	Description	(Lead)/Lag Days	Ref.
1	Long-Term Debt	(59.51)	F-1
2	Short-Term Debt	(6.91)	F-2
3	Interest on Customer Deposits	(246.39)	F-3

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS	: : : : : :	**PETITION** **BPU DOCKET NO.**

CASE SUMMARY, PETITION, NOTICE AND EXHIBITS

Volume 3 of 3

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Attorney for Petitioner
South Jersey Gas Company

March 13, 2020

INSERT TAB:

A. FELSENTHAL

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20________

DIRECT TESTIMONY

OF

ALAN D. FELSENTHAL

PricewaterhouseCoopers LLP

On Behalf of
South Jersey Gas Company

Exhibit P-9

March 13, 2020

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Exhibit P-9

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
ALAN D. FELSENTHAL

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, OCCUPATION AND EMPLOYER.

A. My name is Alan Felsenthal. My business address is One North Wacker Drive, Chicago, Illinois, 60606. I am a Managing Director at PricewaterhouseCoopers LLP ("PwC").

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS REBUTTAL TESTIMONY?[1]

A. I am submitting this testimony on behalf of South Jersey Gas Company ("South Jersey Gas," "SJG," or the "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I graduated from the University of Illinois in 1971 and began my career at Arthur Andersen & Co ("Arthur Andersen"), where I was an auditor, and focused on audits of financial statements of regulated entities. In 2002, I joined PwC and became a Managing Director in their Power and Utilities Group and continued performing audits for regulated entities. I was hired by Huron Consulting Group ("Huron") in 2008 and returned to PwC in November of 2010. At both Arthur Andersen and PwC, I supervised audits of financial statements on which the

[1] This testimony was prepared in connection with the current South Jersey Gas Company rate case and for the use and benefit of South Jersey Gas. PwC disclaims any contractual or other responsibility to others based on their access to or use of this rebuttal testimony and the information contained herein.

firms issued audit opinions that were filed with the Securities and Exchange Commission, the Federal Communications Commission, the Federal Energy Regulatory Commission ("FERC") and various state commissions. At Arthur Andersen, PwC and Huron, I consulted on a significant number of utility rate cases and helped develop testimony for myself and others on a variety of issues, including construction work in progress in rate base, projected test years, lead-lag studies, cost allocation, various accounting issues (*e.g.*, pension accounting, regulatory accounting, income tax accounting, cost of removal) and compliance with the income tax normalization requirements. I developed and presented utility accounting seminars focusing on the unique aspects of the regulatory process and the resulting accounting consequences of the application of Generally Accepted Accounting Principles ("GAAP"). I have also conducted these seminars in-house for the FERC, several state commissions and I have presented at various Edison Electric Institute and American Gas Association ratemaking and accounting seminars.

Q. PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AT PWC.

A. I am currently a member of the firm's Complex Accounting and Regulatory Solutions ("CARS") practice. Throughout my career, my focus has been on the regulated industry sector, primarily electric, gas, telecommunications and water utilities. I have focused on utility accounting, income tax and regulatory issues, primarily as a result of auditing regulated enterprises. The unique accounting standards applicable to regulated entities embodied in Accounting Standards Codification ("ASC") 980, Regulated Operations (formerly, Statement of

Financial Accounting Standards ("SFAS") 71, FAS 90, FAS 92, FAS 101 and various Emerging Issues Task Force ("EITF") issues, all need to be understood so that auditors can determine whether a company's financial statements are fairly presented in accordance with GAAP. I have witnessed the issuance of these standards and have consulted with utilities as to how they should be applied. At both Arthur Andersen and PwC, I worked with the technical industry, accounting and auditing leadership to communicate and consult on utility accounting and audit matters. My curriculum vitae is attached as Schedule ADF-1.

Q. HAVE YOU PREVIOUSLY TESTIFIED OR SUBMITTED TESTIMONY BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES ("BOARD") OR ANY OTHER REGULATORY COMMISSION?

A. Yes. I have testified before the Board as well as the Arizona Corporation Commission, the Florida Public Service Commission, the Hawaii Public Utilities Commission, the Illinois Commerce Commission, the Indiana Utility Regulatory Commission, the Maine Public Utilities Commission, the Public Utility Commission of Ohio, the Public Utility Commission of Texas, the Public Service Commission of Utah, the Washington Utilities and Transportation Commission and FERC. Schedule ADF-1 lists the various issues and testimony I have presented as well as the jurisdiction.

Q. HAVE YOU PROVIDED TRAINING ON THE APPLICATION OF GAAP TO REGULATED ENTERPRISES?

A. Yes. At Arthur Andersen, Huron and PwC, I developed and taught utility accounting seminars focusing on the unique aspects of the regulatory process and the resulting accounting consequences of the application of GAAP. I have presented seminars, as well as delivered training on an in-house basis. Seminar participants have included utility company and regulatory commission staff accountants, utility rate departments and internal auditors, tax accountants and others. I have also conducted these seminars for FERC and several state commissions, and I have presented at various Edison Electric Institute and American Gas Association ratemaking and accounting seminars. The income tax training programs I have presented include topics such as the normalization requirements for public utilities in the Internal Revenue Code ("IRC"), protected and unprotected deferred taxes and the mechanics and application of the Average Rate Assumption Method ("ARAM").

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony addresses certain income tax amounts included in the rate case filing of South Jersey Gas, specifically 1) the calculation of the Consolidated Tax Adjustment ("CTA"), which, in this filing, is zero; 2) the amount of excess accumulated deferred income taxes ("Excess ADIT") reversing in the test period as well as the balance of the net excess ADIT regulatory liability that reduces the Company's rate base.

Q. ARE YOU SPONSORING ANY SCHEDULES AS PART OF YOUR DIRECT TESTIMONY?

A. Yes. I am supporting the following schedules that were prepared by me or under my supervision or direction:

- Schedule ADF-1: Curriculum Vitae;
- Schedule ADF-2: Determination of CTA for the test period – Confidential;
- Schedule ADF-3: Calculation of excess ADIT test period reversal and the associated ADIT regulatory liability at end of test period; and
- Schedule ADF-4: Illustrative example of ARAM.

Q. WHERE DID YOU OBTAIN THE INFORMATION USED IN THE PREPARATION OF YOUR SCHEDULES ADF-2 AND ADF-3?

A. The primary sources of the data included in Schedules ADF-2 and ADF-3 were the Company's books and records. For determining the CTA, I used certain income tax return information of the Company, its affiliates and parent. For determining the excess ADIT Liability and excess ADIT Net Operating Loss ("NOL") Asset, I used information from the Company's Power Tax software application.

Q. WHAT TEST PERIOD IS BEING USED IN SJG'S FILING IN THIS PROCEEDING?

A. The test year period for this proceeding is the twelve months beginning July 1, 2019 and ending June 30, 2020.

III. INCOME TAX ACCOUNTING AND RATEMAKING FUNDAMENTALS

Q. PLEASE DESCRIBE THE ACCOUNTING FOR INCOME TAXES UNDER GAAP?

A. Accounting for income taxes under GAAP is addressed in the accounting literature in section ASC 740 (formerly SFAS No. 109, Accounting for Income Taxes (SFAS 109)) of the accounting codification. There are several components to the calculation: currently payable income taxes; deferred income taxes; and investment tax credits. My testimony will only focus on the first two components as investment tax credits are not an issue in this proceeding. Also, my descriptions will focus on federal currently payable income taxes and federal deferred income taxes, although the same basic explanation would also be applicable for relevant state income taxing regimes.

Q. PLEASE DESCRIBE THE FIRST COMPONENT, CURRENTLY PAYABLE INCOME TAXES.

A. Currently payable income tax expense represents the estimated amount of current year income taxes payable to the U.S. Treasury based on current year taxable income, determined in accordance with the IRC. For purposes of preparing an income tax return each year, the IRC contains guidance for determining if and when an item is "taxable" or "deductible."

Q. ARE THE TAXABLE OR DEDUCTIBLE AMOUNTS UNDER THE IRC FOR DETERMINING IRC TAXABLE INCOME THE SAME AS THOSE USED IN DETERMINING REVENUE OR EXPENSE UNDER GAAP?

A. No, not always. The IRC rules for determining what is taxable or deductible may differ from what is reportable as "revenue," "income" or "expense" under GAAP. For instance, certain expenses recorded on the financial statements under GAAP in one year may be deductible on the tax return in a different accounting period. There are also instances where the amounts shown as deductions on the tax return in one year are not reflected on the financial statements until a later year. As a result, at the end of each reporting period, there will likely be accumulated differences on the book and income tax balance sheets of reported assets and liabilities resulting from different book treatment and tax return treatment of revenues, income and expenses. These differences are referred to as timing or temporary differences.

Q. CAN YOU FURTHER EXPLAIN WHAT IS MEANT BY A TIMING OR TEMPORARY DIFFERENCE AND PROVIDE AN EXAMPLE?

A. Yes. One common temporary difference relates to the concept of depreciation. For book purposes, when a company acquires a fixed asset, GAAP requires that the asset be depreciated over its estimated useful life in a systematic and rational manner. In so doing, the cost of the fixed asset is "allocated" to the periods in which the fixed asset is being used to provide service. Most utilities depreciate their fixed assets for book purposes using the straight-line depreciation method, wherein the same depreciation amount is recorded each year of a fixed asset's estimated useful life.

In contrast to the straight-line depreciation method used for determining depreciation expense under GAAP, an accelerated depreciation method is commonly used for income tax purposes. Under an accelerated depreciation approach, that same fixed asset may be depreciated on the income tax return using an accelerated method (more than a straight-line method) and/or different (generally shorter) estimated useful life. When the annual depreciation charge for book purposes is compared to the annual depreciation for income tax purposes, there will likely be differences. In the early years of an asset's life, tax depreciation using an accelerated method and/or shorter lives will be greater than book depreciation which is computed under a straight-line approach. In the later years, the reverse will be true because given the same capitalized asset cost, the cumulative tax and book depreciation amounts over the entire life of the asset must equal. The sum of the annual book-tax depreciation differences results in accumulated book-tax depreciation differences when comparing the net book value and net tax value of fixed assets.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE DEPRECIATION BOOK TAX DIFFERENCE ARISES AND REVERSES?

A. Yes. Assume a utility acquires property, plant and equipment for $10 million cash. The entry to record the asset is to debit property, plant and equipment and to credit cash. For book purposes, assume that asset has a useful life of ten years. For income tax purposes, assume that same asset qualifies as a five-year tax depreciation asset under the Modified Accelerated Cost Recovery System ("MACRS" – an allowable approach under the IRC). Under MACRS for a five-year asset, the asset is depreciated using double declining balance, switching to straight line at the tax midpoint of its life. Thus, the depreciation deduction is 20 percent the first year, 32 percent in year two, 19.2 percent in year three, 11.52 percent in years four and five and 5.76 percent in year six. The annual depreciation charges for book and tax would be as follows:

Year	Book Depreciation	Tax Depreciation	Difference	Cumulative Book-Tax Difference
1	1,000,000	2,000,000	1,000,000	1,000,000
2	1,000,000	3,200,000	2,200,000	3,200,000
3	1,000,000	1,920,000	920,000	4,120,000
4	1,000,000	1,152,000	152,000	4,272,000
5	1,000,000	1,152,000	152,000	4,424,000
6	1,000,000	576,000	(424,000)	4,000,000
7	1,000,000		(1,000,000)	3,000,000
8	1,000,000		(1,000,000)	2,000,000
9	1,000,000		(1,000,000)	1,000,000
10	1,000,000		(1,000,000)	0
Total	10,000,000	10,000,000	0	

At the end of year 1, the net book basis of property, plant and equipment for book purposes would be $9 million ($10 million gross plant, less $1 million of accumulated book depreciation) while its tax basis would be $8 million ($10 million gross tax basis less $2 million of accumulated tax depreciation). Each year's book depreciation expense would reduce the net book basis of property, plant and equipment and each year's tax depreciation would affect the tax basis of property, plant and equipment. The difference between the book basis and tax basis of property, plant and equipment represents a temporary difference under ASC 740.

However, because total depreciation expense/deductions are limited to the gross capitalized cost of the property, plant and equipment, accelerated income tax depreciation claimed in the early years (reducing income tax payments) will reverse in subsequent periods when book depreciation exceeds tax depreciation (increasing income tax payments) so that when the asset is retired, the depreciation temporary difference will have completely reversed.

Q. WHAT IS THE ACCOUNTING FOR TEMPORARY DIFFERENCES UNDER ASC 740?

A. Under GAAP, because the financial statements reflect accrual, not cash basis accounting, deferred income taxes are recorded on temporary differences. As a result, income tax expense under GAAP includes both a currently payable component (as previously described, based on the tax return) as well as a "deferred" income tax component (based on timing/temporary differences). Such deferred income taxes reflect the liability or asset for income taxes payable or receivable in the future stemming from transactions recorded in the financial statements currently. The balance sheet liability or asset for future taxes is ADIT. In other words, to the extent that accelerated tax depreciation is claimed on the income tax return in an amount that exceeds book depreciation reported on the financial statements (reducing the current year's taxable income and tax obligation), a liability for future taxes results. The future tax liability will be "paid" in later years when book depreciation exceeds income tax deductible tax depreciation.

Under ASC 740, a calculation of required ADIT is performed at the end of each annual reporting period. The required ADIT is measured by multiplying the temporary differences by the currently applicable income tax rates. The difference obtained by comparing the ADIT at the current balance sheet date to the ADIT at the previous balance sheet date results in "deferred income tax expense." For regulated entities, such as SJG, the process of recording deferred income taxes on temporary differences is referred to as "normalization," "deferred tax accounting," or "comprehensive interperiod income tax allocation."

Q. PLEASE EXPLAIN HOW CURRENT AND DEFERRED INCOME TAXES WOULD BE RECORDED ON THE FINANCIAL STATEMENTS FOR THE DEPRECIATION DIFFERENCE EXAMPLE YOU DISCUSSED PREVIOUSLY.

A. In year 1 of the example, the Company would record depreciation expense on the books in accordance with GAAP of $1 million. In that same year, they would reduce taxable income on the income tax return by tax depreciation of $2 million. Assuming a 21 percent income tax rate, by claiming a $2 million depreciation deduction, **current** taxes payable and **current** tax expense would be reduced by $420,000 (21 percent income tax rate times the $2 million tax depreciation deduction).

However, by claiming an additional $1 million of tax depreciation ($2 million tax depreciation compared to $1 million of book depreciation) the Company will also record a deferred income tax liability and deferred tax expense of $210,000 (21 percent income tax rate times book/tax difference of $1 million). The deferred tax will become payable when the book depreciation exceeds tax depreciation. In other words, by claiming accelerated depreciation (compared to straight line book depreciation) in years 1-5, the Company has incurred a deferred tax obligation that will become payable in years 6-10.

Thus, a timing or temporary difference that reduces current income tax expense and current taxes payable is offset by an equal increase in deferred tax expense and ADIT. When the timing or temporary difference reverses, current income tax expense and current taxes payable will increase and be offset by a decrease in deferred income tax expense and ADIT.

Q. HOW ARE DEFERRED INCOME TAXES TREATED IN THE RATEMAKING PROCESS?

A. In the ratemaking process, revenue requirements are unaffected by such timing or temporary differences (from the expense side) as the reduction (or increase) in current tax expense is offset by an equal and offsetting increase (or reduction) of deferred tax expense. In this manner, it should be noted that utility customers do not pay deferred income taxes (offsetting current and deferred expense amounts). Instead, the source of such deferred income taxes is the U.S. Treasury. As a result, ADIT balances are often characterized as an “interest free loan” from the U.S. Treasury. This was the objective Congress intended when it enacted accelerated depreciation in the IRC. Congress believed that allowing companies to increase their tax depreciation deductions (and thereby reduce current income tax payments), would lower the financing costs of their investment in capital assets and thus companies would be incented to make such expenditures.

Q. DOES THE IRC PROVIDE GUIDANCE ON HOW BOOK-TAX DIFFERENCES SHOULD BE TREATED IN THE UTILITY RATEMAKING PROCESS?

A. Yes. To ensure that regulated utilities enjoy the benefits intended by Congress, there are separate rules applicable to depreciation differences resulting from using tax methods and tax lives to determine deductible tax depreciation versus using book methods and lives to determine book depreciation on public utility property. These depreciation-related method and life timing/temporary differences are referred to as "protected differences" (protected by the IRC) in that the IRC governs how the associated deferred income taxes are to be treated in determining revenue requirements. The IRC requires that deferred income tax expense on such book-tax differences must be permitted as a recoverable expense in the ratemaking process with the related, remaining ADIT on such differences reducing rate base. Because the ADIT balance reduces rate base, the customer benefits from this procedure as the U.S. Treasury is providing funds that, in the absence of accelerated tax deductions and deferred tax accounting, would need to be obtained from other sources, such as debt and equity, which have a cost (interest or return).

To ensure compliance, if such normalization rules are not followed, the Company is prohibited from claiming accelerated depreciation for income tax purposes and, instead, can only use straight-line depreciation in determining the depreciation deduction for income tax purposes. In such a case, there is no depreciation book-tax difference and no interest-free loan. Being unable to claim accelerated depreciation is a significant penalty.

Q. YOU SAID THAT THE IRS NORMALIZATION RULES APPLY TO PROTECTED BOOK-TAX DIFFERENCES AND DEFINE PROTECTED BOOK-TAX DIFFERENCES AS PRIMARILY DUE TO DIFFERENCES BETWEEN THE BOOK AND TAX DEPRECIATION METHODS AND BETWEEN BOOK AND TAX LIVES USED IN THE CALCULATIONS. ARE THE REST OF A COMPANY'S BOOK-TAX TIMING/TEMPORARY DIFFERENCES CONSIDERED UNPROTECTED?

A. Basically, yes. The normalization rules apply to protected book-tax differences, which are primarily differences between book and tax depreciation caused by different depreciation methods (accelerated for tax, straight-line for books) and depreciation lives (different, generally shorter lives for tax purposes). There are several other book-tax differences that are also considered protected, such as the book-tax difference associated with contributions in aid of construction and the appropriate treatment of NOL Deferred Tax Assets. All other book-tax temporary/timing differences are considered unprotected and are not subject to the normalization requirements of the IRC. For example, rate case expense is deferred and amortized for book purposes, but a current income tax deduction is permitted for such expense in the year accrued.

Q. IS DEFERRED INCOME TAX ACCOUNTING APPROPRIATE FOR RATEMAKING PURPOSES?

A. Yes. Income tax expense in a given year is the result of that year's economic activity. In determining the revenue requirement, it is important for regulatory commissions to consider the recovery of all appropriate costs of providing service (return, operating expense, maintenance expense, depreciation expense, etc.) and, after such pre-tax amounts are determined, including the associated income tax effects of the permitted cost of service.

Q. FROM A RATEMAKING PERSPECTIVE, IS THERE A WAY TO COMPUTE OR CHECK THAT THE APPROPRIATE INCOME TAXES HAVE BEEN CONSIDERED IN DETERMINING THE REVENUE REQUIREMENT?

A. Yes. Federal income taxes requested by the Company and included in the revenue requirement determination should be based on pre-tax revenues, income and expenses included in the cost of service calculation. It is neither appropriate nor equitable to increase or reduce cost of service by tax costs or benefits that are not related to the rendition of utility service to customers.

Said another way, income taxes have no independent existence of their own. They are based on revenues, income and expenses. Once the Board decides on the appropriate revenues and expenses that are necessary for the provision of service, the related income taxes can be determined.

One way to check the ratemaking income tax calculation is to begin with after-tax equity return as a starting point. Under this method, equity return (rate base times the weighted cost of equity) , or total return less synchronized interest (rate base times the weighted cost of debt), is adjusted for items for which there is no tax deduction to offset amounts recovered through revenues – such as book amortization of flow-through differences (if any), permanent items, and the reversal of excess ADIT. The resulting “adjusted equity return” is then grossed-up to a revenue requirement level, multiplied by the statutory income tax rate and then adjusted for flow-through and permanent differences and the reversal of excess ADIT. This approach is used to determine Federal income tax expense in total, with no segregation between current and deferred Federal income taxes.

IV. <u>CONSOLIDATED TAX ADJUSTMENT</u>

Q. PLEASE EXPLAIN THE CONCEPT OF A CTA.

A. A CTA is calculated as the "benefit realized" attributable to an affiliated group's filing of a consolidated income tax return and results when the consolidated tax liability for the group is less than what the liability would have been had each member of the group calculated income taxes on a stand-alone basis. For example, consider a simple example of a consolidated group with two members, A and B, both newly formed corporations owned by a Parent entity with no taxable income of its own. If A has net taxable income of $1,000 for the tax year but B generates a net operating loss of $1,000 for such year, the consolidated group of A, B and the Parent would have no tax liability even though, on a stand-alone basis and assuming a 21 percent income tax rate, A would have had a tax liability of $210 (21 percent of $1,000) and B would have had no liability. The consolidated tax savings realized by the consolidated group is $210. However, it is clear that the $210 consolidated tax savings relates entirely to the net operating loss of Member B. In this example, Member A would record a current income tax expense of $210 and remit that amount to the Parent entity as that is the amount that relates to its taxable income. Depending on the tax sharing agreement, the Parent may either reimburse Member

B $210 for its taxable loss or retain such amount and distribute to Member B when it is able to utilize such benefit on a stand-alone basis.

Q. DOES THE BOARD HAVE RULES FOR CTAS?

A. Yes. The Board has issued rules that require that, for determining revenue requirements, CTAs are to be calculated and applied. The Board's methodology for the CTA calculation has fluctuated over the years. However, recently, the Board has adopted regulations that clarified the CTA methodology for rate case filings. The Board's regulations state that a CTA calculation shall be included in a regulatory filing if the company filing the rate case is a member of a group that files a consolidated tax return. Under the recently enacted rule, the CTA is to be calculated using each affiliate's taxable income/loss for five consecutive years (including the complete tax year within the utility's test year) using statutory income tax rates or the alternative minimum tax, whichever is applicable. The CTA calculation sums each affiliate's taxable income/taxable loss for the five- year period and separates the result into "taxable loss" and "taxable income" companies. The calculated total of taxable losses is then apportioned to the taxable income companies in proportion to each affiliate's share of the total taxable income. To the extent that a regulated affiliate has cumulative taxable income in this five-year period, the amount of taxable losses allocated to this regulated affiliate becomes the CTA. Under the recently enacted Board CTA rules, the rate base may be reduced by up to 25 percent of the full CTA.

Q. HAS SOUTH JERSEY GAS COMPUTED A CTA IN THE MANNER REQUIRED BY THE BOARD'S REGULATIONS?

A. Yes. Schedule ADF-2 (Confidential) is the CTA calculation for South Jersey Gas.

Q. PLEASE DESCRIBE THE CTA CALCULATION ON SCHEDULE ADF-2.

A. For each of the five years 2015-2019, the entities included in SJI's consolidated tax return were identified, along with their taxable income or losses each year. The cumulative taxable income or loss for each entity over this period was identified. Those entities with taxable losses were summed and then allocated to the entities with cumulative taxable income over this same period in proportion to each taxable entity's share of the cumulative taxable income. In this manner, the amount of the loss companies that is theoretically monetized (through taxable income of the income entities) is determined. Because South Jersey Gas has a cumulative taxable loss during this period, there is no CTA and no CTA adjustment to rate base.

Q. IS THE CONCEPT OF A CTA COMMON ACROSS REGULATORY JURISDICTIONS INCLUDING THE FERC?

A. No. Almost all regulatory jurisdictions, including FERC, have rejected the concept of the CTA. Almost all regulatory jurisdictions use a "stand-alone" approach for determining regulated income tax expense. Under a stand-alone methodology, federal income taxes are computed based on revenues and expenses of the Company included in the utility's revenue requirement as if the Company were a stand-alone taxpayer. This approach appropriately allocates federal income taxes among members of the consolidated group using the benefits/burdens criteria outlined by FERC in Opinion 173.[2] Under this method, federal income taxes calculated for the Company relate to and result from the revenue, income and expenses associated with providing utility service to customers. The benefits and burdens criterion refer to computing the tax consequences of transactions based on the revenue and expense transactions themselves.

With that said, in this proceeding the Company applied the CTA methodology required under the Board's regulations and determined that no CTA exists and therefore there should be no CTA reflected as a reduction to rate base.

V. EXCESS ADIT AND THE TAX CUTS AND JOBS ACT OF 2017 ("TCJA")

Q. PLEASE GENERALLY DESCRIBE THE TCJA.

A. The TCJA was enacted by the United States Congress on December 20, 2017 and was signed into law by the President on December 22, 2017. *See Tax Cuts and Jobs Act of 2017*, Pub. Law 115-97, 131 Stat. 2054 (2017). The TCJA amends the IRC and contains the most significant set of changes to the federal income tax laws since the Tax Reform Act of 1986. The TCJA makes major changes in many areas of our nation's tax laws, some of which directly affect regulated utilities like South Jersey Gas.

[2] *Columbia Gulf Transmission Co. et al.*, 23 FERC ¶ 61,396 (1983).

Q. PLEASE DESCRIBE THE PROVISIONS OF THE TCJA THAT HAVE THE GREATEST IMPACT ON REGULATED UTILITIES LIKE SJG AND THEIR CUSTOMERS.

A. The TCJA has significant, though varying, impacts on most utilities in terms of reported tax expenses charged against the company's operations, cash flows and the calculation of revenue requirements and cost of service.

The most significant provision of the TCJA for regulated utilities, including SJG, is the reduction of the Federal Income Tax Rate from 35 percent to 21 percent, which will reduce current income tax expense and originating deferred tax expense. At the previous 35 percent federal income tax rate, revenue of $1.5385 was required to provide $1.00 of after-tax income. A corporate tax rate of 21 percent requires $1.2685 of revenue to generate $1.00 of after-tax income. A separate New Jersey state income tax rate of 9 percent exists. The New Jersey state income tax rate is deductible for federal income tax purposes so the "combined federal and state income tax rate" has gone from 40.85 percent to 28.11 percent. The combined income tax gross-up factor before and after the TCJA has been reduced from 1.6906 to 1.3910, respectively.

Further, as a result of the lower 21 percent income tax rate becoming effective under the TCJA, all companies, including utilities, were required under ASC 740 to "remeasure," as of December 31, 2017, the amounts of ADIT in their financial statements. Regulated utilities reclassified the reduction in ADIT to a regulatory liability representing the excess ADIT that will be used to reduce future revenue requirements.

Q. WHAT IS "EXCESS" ADIT AND HOW IS IT CALCULATED?

A. Excess ADIT is the portion of the ADIT balance existing immediately prior to the reduction in the corporate tax rate (the ADIT balance at December 31, 2017) less the amount that would have been in the ADIT balance had that balance been determined using the revised lower corporate income tax rate.

Q. CAN YOU EXPLAIN HOW THE REDUCTION IN THE FEDERAL CORPORATE INCOME TAX RATE AFFECTED SJG'S ADIT, INCLUDING EXCESS ADIT?

A. Yes. The Company calculated the excess ADIT amounts at December 31, 2017 by comparing the ADIT existing at that date to the ADIT that would have been recorded had the lower 21 percent income tax rate always been in effect. The difference is the excess ADIT. The excess ADIT were then separated into three "buckets": Excess ADIT relating to protected book-tax differences; excess ADIT relating to the NOL; and excess ADIT relating to unprotected book-tax differences. The reason for separating the excess ADIT in this manner is because of different ratemaking treatment, in some cases required, for the reversal.

Q. DID THE TCJA DISCUSS HOW REGULATED PUBLIC UTILITIES WERE TO PASS BACK <u>PROTECTED</u> EXCESS ADIT?

A. Yes. The TCJA addressed how ADIT on protected book-tax differences (primarily depreciation-related method and life differences) are to be treated in the ratemaking process. The TCJA requires that excess ADIT on such protected book-tax differences reduce customer rates over the book lives of the related property no more rapidly than under the Average Rate Assumption Method ("ARAM"), which

I will describe subsequently. If the necessary books and records are not available to compute the reversal under ARAM, an alternative approach, referred to as the Reverse South Georgia Method ("RSGM"), can be used. The RSGM is straightforward: Determine the excess ADIT and spread the amount over the estimated remaining useful lives of the assets giving rise to the excess ADIT. The choice of ARAM vs. RSGM is not optional, ARAM must be used unless the records needed to compute ARAM are not available.

Q. HOW IS THE ARAM COMPUTED?

A. The ARAM requires the development of an average rate which is determined by dividing the aggregate normalized protected timing/temporary differences into the ADIT that have been provided on such timing/temporary differences. The average rate so calculated is applied to reversing timing differences to derive the deferred taxes that are credited to income tax expense. Under this approach, protected ADIT are reduced over the remaining lives of the property which gave rise to the ADIT as the timing/temporary differences reverse. Public utilities must take care to properly apply the ARAM to protected ADIT because a normalization violation could occur if the amount of protected excess ADIT is reduced more rapidly or to a greater extent than under the ARAM. If the normalization rules were so violated, two negative results would occur: 1) current income taxes would become payable for the more rapid reduction plus, more importantly, 2) accelerated depreciation methods would not be permitted for income tax purposes going forward. Rather, book depreciation would have to be used for income tax purposes.

Q. HAVE YOU PREPARED A SCHEDULE THAT DEMONSTRATES HOW THE ARAM IS TO BE CALCULATED?

A. Yes, Schedule ADF-4 provides an example describing the originating and reversing book-tax differences and the required ADIT each year when there is a change (in this case, a reduction) in the federal income tax rate. This example is based on the assumptions used in my previous example describing depreciation book-tax differences and how such differences originate and reverse. I begin with an income tax rate of 35 percent in the early years that is reduced to 21 percent before the asset is fully depreciated. The example again assumes a $1 million asset placed in service in 2016 with a 10-year book life and a five-year MACRS life, with no bonus tax depreciation. The MACRS rate is shown in Column B and each year's tax depreciation is shown in Column C. Book depreciation is $100,000 each year and Column E contains the difference between tax and book depreciation each year. Column F contains the cumulative difference between book and tax at the end of each year. Column G contains the income tax rates, beginning with 35 percent in 2016 and 2017, reducing that rate to 21 percent at the beginning of 2018. Columns H and I show each year's deferred tax expense, with Column H showing the deferred tax expense on originating book-tax differences and Column I showing the deferred tax expense on reversing book-tax differences. Column J shows the ADIT balance, increasing and decreasing the previous year's balance by the deferred tax expense. Column M shows the excess ADIT balance, decreasing as it reverses according to the ARAM methodology.

Q. CAN YOU EXPLAIN THE DETERMINATION OF EXCESS ADIT AND HOW THE ARAM IS USED TO REVERSE THE ADIT FOR THE TAX RATE CHANGE?

A. Yes. When the tax rate changed at the end of 2017, the balance of ADIT was $112,000 (Column J). This balance was derived by applying the 35 percent tax rate to the cumulative book-tax differences at that time in Column F ($320,000). The remeasurement necessitated by the change in tax rates is shown on Line 2a where the ADIT balance at December 31, 2017 is allocated into two components: The "normal" ADIT amount and the excess ADIT amount. The normal ADIT balance is calculated by applying the new 21 percent tax rate to those cumulative book-tax differences at the time of the rate change ($320,000 x 21 percent = $67,200) and comparing that amount to the then existing ADIT balance with the difference representing the excess ADIT ($112,000-$67,200 = $44,800).

Under the ARAM, this excess ADIT balance does not begin reversing until 2021 when the book-tax difference begins to reverse. In 2018 through 2020, book-tax differences continue to originate, now at the lower 21 percent income tax rate with no reversal permitted for excess ADIT.

At the end of 2020 the combined ADIT and excess ADIT balance is $137,704 (Column H: $35,000+$77,000+$19,320+$3,192+$3,192) and the cumulative book-tax difference is $442,400 (the 2016 through 2020 differences in Column F). The average rate at which the $137,704 combined ADIT and excess ADIT balance was accumulated is thus 31.1266 percent ($137,704 / $442,400). This is the average rate that must be applied to the book-tax differences reversing in each year beginning in 2021 (Column E) broken into two components: 1) the statutory rate (21 percent) applied to the reversing book-tax differences beginning in 2021 to reduce the normal ADIT balance (Column I), and 2) the excess ADIT rate (31.1266 percent minus 21 percent = 10.1266 percent, shown in Column K) also applied to the reversing book-tax differences beginning in 2021.

At the end of its useful life, the originating and reversing deferred tax expense (consisting of both the normal ADIT reversal plus the excess ADIT reversal) equal one another, and the ADIT balance is $0.

Q. HOW IS THIS TYPICALLY REFLECTED IN A RATE CASE?

A. Reversal of ADIT is included in the normal calculation of income tax expense (i.e. the statutory rate multiplied by pre-tax net income). No special calculation is required for this component of total tax expense. Once the normal calculation of income tax expense is determined, the reversal of the <u>excess</u> ADIT must be added/subtracted to obtain the amount that is included in the calculation of revenue requirement.

Q. IN THAT EXAMPLE, IF A RATE HIGHER THAN THE COMBINED AVERAGE RATE OF 31.1266 PERCENT WERE USED TO REDUCE THE REVERSING ADIT OR IF ANY OF THE EXCESS ADIT WERE REVERSED PRIOR TO 2020 WHAT WOULD HAPPEN?

A. Flowing back protected ADIT more rapidly than permitted under the ARAM will result in a violation of the normalization rules. I have already discussed the two-fold penalty for violating the normalization rules for excess ADIT: (1) currently payable income tax is increased by the amount by which the utility reduced its excess tax reserve more rapidly than permitted under the ARAM or the RSGM, and (2) the utility will be unable to claim accelerated depreciation for income tax purposes.

Q. DOES THE TCJA PRESCRIBE A METHOD FOR REVERSING EXCESS ADIT ON "UNPROTECTED" EXCESS ADIT?

A. No. Prior to the TCJA, the ADIT provided on all book-tax differences typically reversed at the tax rate used to record the deferred tax expense when the book-tax difference originated; however, the TCJA does not contain such a requirement on the excess ADIT on unprotected book-tax differences. Reversal of the balance of unprotected ADIT is thus up to a decision by the utility and its regulator.

Q. IS UNPROTECTED EXCESS ADIT ADDRESSED IN THIS RATE FILING?

A. No. The unprotected excess ADIT is subject to a separate rider, Rider H, which was proposed to the Board and approved in 2018 under Docket Nos. AX18010001 and GR18030230 ("2018 Rider H Filing"). Under Rider H, the unprotected excess ADIT balances are being reversed through rates (tariffs) using a five-year, straight-line amortization period, beginning with the fiscal period beginning October 1, 2018. Rider H tracks the actual amount being credited to customers and contains a true-up mechanism. Continuing Rider H for this credit will ensure that the unprotected excess ADIT will be fully returned to customers. Amounts over/under credited in one period (due to changes in volumes) will be trued-up, with interest, in a subsequent period.

Q. DID THE 2018 RIDER H FILING ADDRESS PROTECTED EXCESS ADIT, INCLUDING THE PROTECTED EXCESS RELATING TO THE NOL DEFERRED TAX ASSET?

A. No. The 2018 Rider H Filing only covered the unprotected excess ADIT. In a subsequent proceeding involving the Company's 2019 Rider H Filing, Docket Nos. AX18010001 and GR18030230 and GR19060701, the parties entered into a Stipulation ("2019 Rider H Stipulation") and agreed to address the protected excess ADIT Liability and the protected excess ADIT NOL Asset as follows:

- The protected excess ADIT Liability amounts will reverse using ARAM.
- The protected excess ADIT NOL Asset will reverse using the RSGM as the necessary vintage year detail was unavailable to allocate the excess ADIT NOL Asset using ARAM. Instead, the average remaining life of the ADIT contributing to the NOL and excess ADIT NOL Asset was determined and used for the reversal.

The 2019 Rider H Stipulation is pending consideration by the Board.

Q. IS THE REVERSAL OF EITHER THE PROTECTED EXCESS ADIT LIABILITY OR PROTECTED EXCESS ADIT NOL ASSET INCLUDED IN RIDER H?

A. No. In accordance with the 2019 Rider H Stipulation, Rider H includes only the unprotected excess ADIT; the return of the protected excess ADIT (the net of the excess ADIT Liability and the excess ADIT NOL Asset) is being effectuated in this base rate filing. Thus, Rider H only covers the benefit to customers of reversing excess ADIT on unprotected excess ADIT and this rate case filing excludes such amounts.

Q. HOW ARE THE PROTECTED EXCESS ADIT BEING TREATED IN THIS FILING?

A. The Company is treating the protected excess ADIT in accordance with the provisions of the 2019 Rider H Stipulation. Prior to this filing, there has been no reversal in SJG's books and records of the TCJA protected excess ADIT Liability using ARAM nor any reversal of the excess ADIT Asset related to the Company's NOL. Instead, in this filing, the Company is calculating the reversal of protected excess ADIT Liability using ARAM and the excess ADIT NOL Asset using RSGM and proposing a *pro forma* adjustment to reflect the test year excess ADIT amortization as well as the remaining excess ADIT balances that will reduce end of period rate base.

Schedule ADF-3 shows the initial calculation of protected excess ADIT Liability and the calculated reversal under ARAM, beginning January 1, 2018. The protected plant-related excess ADIT Liability as of December 31, 2017 was originally calculated as $198,471,424. A portion of this calculated protected amount, $19,898,890, was subsequently reclassified as "unprotected," increasing the amount to be credited to customers under Rider H. In addition, a return to accrual adjustment of $2,468,313 was recorded, producing an <u>adjusted</u> protected plant-related excess ADIT Liability of $181,040,847 as of December 31, 2017.

Applying the ARAM methodology to this balance results in annual and monthly ARAM reversals as follows:

2018--$2,177,376 ($181,448 per month)

2019--$2,359,511 ($196,626 per month)

2020--$3,083,553 ($256,963 per month)

As the test year in this rate case is July 1, 2019 to June 30, 2020, the amount of protected excess ADIT reversing under ARAM in this period is $2,721,532 calculated as follows:

6 months (July-December 2019 @ $196,626/month) =$1,179,756

6 months (January-June 2020 @ $256,963/month) = $1,541,776

Q. HOW HAS SOUTH JERSEY GAS TREATED THE "DELAYED" PROTECTED EXCESS ADIT LIABILITY REVERSAL USING ARAM FROM JANUARY 1, 2018 TO THE BEGINNING OF THE TEST PERIOD?

A. As I stated, none of the calculated ARAM reversal of the protected excess ADIT Liability has been credited to customers prior to this rate case. However, the amount of the protected excess ADIT Liability that would have reversed under ARAM from January 1, 2018 through June 30, 2019 that has not yet been credited to customers is $3,357,132 calculated as follows:

2018 reversal = $2,177,376

2019 reversal (6 months at $196,626/month) = $1,179,756

In addition to crediting customers for the ARAM reversal occurring in the July 1, 2019 to June 30, 2020 test period, the Company is proposing to credit this "delayed" amount to customers over five-years on a straight-line basis, or $671,426 per year ($3,357,132/5=$671,426). In this manner, customers will be made whole for the delayed implementation of ARAM within a reasonable, relatively short, period.

Thus, the total reversal of protected excess ADIT Liability reflected in this rate case is $3,392,958 ($2,721,532+671,426=$3,392,958). As none of this reversal has been reflected on the Company's books, a *pro forma* adjustment is included for the test year amortization.

Q. HOW IS THE PROTECTED EXCESS ADIT NOL ASSET TREATED IN THIS FILING?

A. The Company is treating the protected excess ADIT NOL in accordance with the provisions of the 2019 Rider H Stipulation. The adjusted protected excess ADIT Asset relating to the Company's NOL is $31,570,143. The Company is proposing to amortize this amount using a RSGM approach. The blended estimated average remaining life of the book-tax method and life depreciation differences giving rise to the excess ADIT NOL Asset is 40.8 years. Applying the average remaining life to the excess ADIT NOL Asset, results in the reversal of $955,720 ($79,643 per month) in the July 1, 2019 to June 30, 2020 test period.

Q. CAN YOU EXPLAIN HOW YOU DETERMINED THE BLENDED ESTIMATED AVERAGE REMAINING BOOK LIVES USED TO CALCULATE THE RSGM?

A. Yes. The NOL carryforward giving rise to the excess ADIT NOL Asset was allocated to the tax classes of the underlying assets. Each tax class was mapped to a book asset class (FERC Functional Account) based on data within the PowerTax deferred tax grid and PowerTax Tax-Book Translation table. For tax classes that were assigned to multiple book asset classes, a weighted average allocation was developed. The remaining average useful life of the assets within each class was then obtained. For each of the asset classes, the applicable remaining book life was applied creating a schedule of reversals over the estimated remaining book lives of the various asset classes giving rise to the NOL. In this manner, as the assets in the different asset classes become fully depreciated, the reversal of the associated excess ADIT NOL Asset will have fully reversed. While some asset classes have longer book lives and others have relatively shorter book lives, the blended average remaining book lives of such various asset classes as of December 31, 2017 (the date that the excess ADIT NOL Asset was measured) is 40.8 years.

Q. HOW HAS SOUTH JERSEY GAS TREATED THE DELAYED REVERSAL OF THE PROTECTED EXCESS ADIT NOL ASSET THAT WOULD HAVE REVERSED (CHARGED/COLLECTED FROM CUSTOMERS) FROM JANUARY 1, 2018 TO THE BEGINNING OF THE TEST PERIOD?

A. For the period January 1, 2018 through June 30, 2019, none of the excess ADIT NOL Asset has been recovered from customers. Had reversal of the excess ADIT NOL Asset using RSGM started on January 1, 2018, approximately $1,433,580 would have previously been charged to customers ($79,643 per month times 18 months). Consistent with the approach for delayed ARAM amounts, the Company is proposing a five-year recovery of the NOL excess ADIT not yet recovered. Thus, an additional $286,716 ($1,433,580 divided by five years) is being added to the test year NOL excess ADIT reversing in the test period, producing a total test year reversal (*pro forma* adjustment) of $1,242,436 ($955,720 + $286,716=$1,242,436).

Q. PLEASE SUMMARIZE HOW COST OF SERVICE INCOME TAX EXPENSE HAS BEEN ADJUSTED FOR THE REVERSAL OF THE PROTECTED EXCESS ADIT, BOTH THE EXCESS ADIT LIABILITY AND THE EXCESS ADIT NOL ASSET.

A. The adjusted excess ADIT amortization for the test year is a decrease to income tax expense of $2,150,522 (a customer benefit), consisting of a credit of $3,392,958 related to the reversal of property-related excess ADIT Liability subject to ARAM (and amortization of the delayed ARAM credit over five years) offset by an increase of $1,242,436 to recover the excess ADIT NOL Asset using RSGM (and recovery of the delayed excess ADIT NOL Asset over five years). Because neither amount has been recorded on SJG's books prior to this rate case, such amortization is included as a *pro forma* adjustment.

Q. HAS THE IRS ADDRESSED THE AMORTIZATION PERIOD FOR AN EXCESS ADIT NOL ASSET OR PROVIDED GUIDANCE ON HOW A DELAYED ARAM IMPLEMENTATION OF THE EXCESS ADIT LIABILITY IS TO BE TREATED?

A. No. However, the IRS has issued a notice (2019-33) indicating they plan to issue guidance on certain ratemaking issues that have arisen or are anticipated to arise due to the corporate income tax rate reduction. The IRS asked for comments on various ratemaking issues with comments due in July 2019. As a result of this notice, the IRS is not responding to ruling requests awaiting resulting guidance.

It is important that when such guidance is formalized, that public utilities read the IRS response and, if necessary, adjust the ratemaking positions to comply.

Said another way, to the extent that the IRS guidance is contrary to excess ADIT positions taken prior to such guidance, utilities and regulators, including South Jersey Gas and the Board, should be allowed to implement any required adjustments to comply with such requirements.

Q. ARE THERE OTHER ISSUES BEING ADDRESSED BY THE IRS IN NOTICE 2019-33 THAT MAY AFFECT SOUTH JERSEY GAS?

A. One other issue that could have an impact is whether the book-tax difference due to different book versus tax treatment of cost of removal is protected or unprotected. For book purposes cost of removal is accrued over the book life of the related property, plant and equipment as a component of book depreciation. The composite book depreciation rate includes an estimate for the eventual cost to remove or be received as salvage. For income tax purposes, cost of removal or salvage is recognized in the period the removal cost is paid or when salvage amounts are received. There is diversity in practice as to whether the ADIT (and excess ADIT) related to cost of removal is a protected book-tax difference subject to ARAM or whether it is unprotected. In this filing, the Company has treated the excess ADIT on cost of removal as a protected book-tax difference. As I stated, guidance on this issue should be forthcoming when the IRS addresses the matters contained in the notice.

Q. PLEASE SUMMARIZE HOW THE EXCESS ADIT ARE BEING TREATED IN THIS FILING.

A. The Company is treating excess ADIT in accordance with the terms of the 2019 Rider H Stipulation as follows:

Unprotected excess ADIT: Not reflected in this filing. Rider H exists to credit customers with the full amount of unprotected excess ADIT.

Protected excess ADIT Liability subject to ARAM: The amortization of the protected excess ADIT Liability is calculated using ARAM reversals during the July 1, 2019 through June 30, 2020 test period. I identified the annual excess ADIT Liability reversals under ARAM for 2019 and 2020 and converted the annual amounts to monthly amounts. I then used the last six months of 2019 reversals and the first six months of 2020 reversals to compute the test year reversals included as a *pro forma* adjustment in the rate case filing. The test year reversals were then applied to the previously determined excess ADIT Liability balance to obtain the *pro forma* excess ADIT Liability balance at the end of the test year, June 30, 2020.

Protected excess ADIT NOL Asset: The *pro forma* adjustment for the reversal of the protected excess ADIT NOL Asset is calculated using RSGM, including the amount reversing in the July 1, 2019 to June 30, 2020 test period.

Additional amount due to delayed implementation of ARAM from the beginning of the reversal period (January 1, 2018 through the beginning of the test period): Because of the delayed implementation of crediting/charging customers for ARAM and NOL amounts, I calculated the ARAM and excess NOL amounts that would have reversed beginning January 2018 through June 2019, and added the amortization of these delayed reversals (using a five-year amortization period) to the pro forma amortization adjustment.

Q. WHAT IS THE RATE BASE IMPACT OF THE PROTECTED EXCESS ADIT BALANCES?

A. The balance of the net protected excess ADIT at June 30, 2020, the end of the test period, including *pro forma* adjustments is projected to be $147,320,182. This balance consists of $177,647,889 for the property-related excess ADIT Liability (using ARAM) offset by the excess ADIT NOL Asset of $ 30,327,707 (reversing using RSGM).

The normalization rules require consistency between rate base components (Property, Plant and Equipment, Accumulated Depreciation, ADIT, including excess ADIT). Because South Jersey Gas determines these other components using an end of period rate base, the rate base reduction for excess ADIT at the end of the test period was used.

Q. WERE THERE ANY OTHER EXCESS ADIT TO CONSIDER?

A. Yes. While the focus of my testimony has been the TCJA impacts of the significant protected excess ADIT balances (excess ADIT Liability subject to ARAM and the excess NOL ADIT Asset subject to five-year amortization), the Company has a small amount of excess ADIT remaining related to the previous changes in income tax rates associated with the 1986 and 1993 tax reform initiatives. The excess ADIT related to prior tax reform was adjusted downwards to $729,595 as a result of 35 percent to 21 percent tax rate reduction under TCJA. Because the remaining excess ADIT balance for these prior amounts has been reduced to reflect the lower income tax rate, the annual reversal of this remaining balance has also been reduced (from $121,764 annually to $73,058 annually). The monthly reversal has been reduced from \$10,147 to \$6,088, beginning July 1, 2019 (the start of the test year). These amounts have been included in the Company's filing in addition to the TCJA excess ADIT effects discussed herein. There is no delayed impact for this pre-TCJA excess ADIT as SJG's current tariff includes a credit to customers for this item.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

CURRICULUM VITAE

ALAN D. FELSENTHAL

EDUCATIONAL BACKGROUND

June, 1971	B.S. in Accounting University of Illinois Champaign, Illinois
May, 1972	Certified Public Accountant

EMPLOYMENT

2010-	Managing Director, Power and Utilities PricewaterhouseCoopers LLP
2008-2010	Managing Director-Utilities Industry Huron Consulting Group
2002-2007	Managing Director—Utilities Industry PricewaterhouseCoopers LLP
1985-2002	Principal in Utilities and Telecommunications Practice, Arthur Andersen LLP, Chicago
1976-1985	Manager in Utilities and Telecommunications Practice, Arthur Andersen LLP, Chicago
1971-1976	Staff and Senior Accountant, Arthur Andersen LLP, Utilities and Telecommunications Division, Chicago

TESTIMONY EXPERIENCE

Testified before the Illinois Commerce Commission on behalf of Town Gas Company of Illinois, 1985. Accounting witness covering cost of service issues.

Testified before the Illinois Commerce Commission on behalf of Town Gas Company of Illinois, 1986. Generic hearing regarding high gas costs.

Testified before the Florida Public Service Commission on behalf of Central Telephone Company of Florida (1991). Testimony addressed projected test year, a computer model we developed to simplify forecast procedures and propriety of including pension asset in rate base.

Submitted an expert report and testified in an appeal by Yellow Cab Company versus the City of Chicago, (2000). Topic dealt with the adequacy of taxicab lease rates. Yellow Cab was appealing the lease rates they were permitted to charge lessees. The model developed by the City of Chicago to set lease rates was based on traditional utility ratemaking principles. Was hired by the City of Chicago to review Yellow Cab's appeal compared to traditional ratemaking principles and submit a report. Yellow Cab appealed the decision and a hearing before a judge resulted.

Testified before the Arizona Corporation Commission on behalf of Tucson Electric Power Company, 2008. Rebuttal testimony addressed application of FAS 71 when a portion of the business was opened to competition and appropriate treatment of the FAS 143 cost of removal regulatory liability.

Testified before the Florida Public Service Commission on behalf of Tampa Electric Company and Peoples Gas, (2008). Direct testimony on income taxes, including the appropriate accumulated deferred income tax calculation when a projected test period is used.

Testified before the Washington Utilities and Transportation Commission on behalf of Avista Corporation, (2008).

Testified before the Illinois Commerce Commission on behalf of The Peoples Gas, Light and Coke Company/North Shore Gas Company (2009). Rebuttal and Surrebuttal testimony on the appropriate treatment of prepaid pension asset in rate base.

Testified before the Indiana Utility Regulatory Commission on behalf of Northern Indiana Public Service Company (2009). Rebuttal testimony on the appropriate treatment of cost of removal vis a vis FAS 143.

Submitted an expert report and a reply expert report to a Seattle-based arbitration panel in a dispute involving Grays Harbor Energy LLC vs. Energy Northwest, 2009. Subject involved the appropriate determination of fixed costs and cost of capital pursuant to a purchase and sale agreement.

Testified before the Public Utility Commission of Texas on behalf of Centerpoint Energy (2010). Direct and Rebuttal testimony on a number of income tax issues including consolidated income tax adjustments and FIN 48.

Testified before the Indiana Utility Regulatory Commission on behalf of Indianapolis Power & Light Company (2015). Rebuttal testimony on including prepaid pension asset in rate base.

Testified before the Public Utility Commission of Ohio on behalf of Dayton Power & Light Company (2015). Direct testimony on the results of a lead-lag study.

Submitted rebuttal testimony to the Indiana Utility Regulatory Commission on behalf of Northern Indiana Public Service Company (2016) on the appropriateness of including the prepaid pension asset in rate base.

Submitted an expert report to the Virginia State Corporation Commission regarding the allocation of Dominion Resources Inc. shared service costs to Virginia Electric Power Company (2016).

Submitted an expert report to the Oregon Public Service Commission regarding the capitalization of administrative and general overhead costs. (2017).

Testified before the Florida Public Service Commission on behalf of Tampa Electric Company and Peoples Gas on the subject of the appropriate treatment of excess Accumulated Deferred Income Taxes resulting from the Tax Cuts and Jobs Act (2018).

Testified before the Indiana Utility Regulatory Commission on behalf of Indianapolis Power & Light Company (2018). Rebuttal testimony on including a return on the Company's prepaid pension asset.

Testified before the FERC on behalf of GridLiance West (2018). Direct testimony supporting the derivation and reasonableness of the Company's Start-Up Regulatory Asset.

Submitted rebuttal testimony to the Indiana Utility Regulatory Commission on behalf of Northern Indiana Public Service Company (2019) on reasons why including a return on the Company's prepaid pension asset is appropriate.

Submitted direct testimony to the New Jersey Board of Public Utilities on behalf of Elizabethtown Gas Company (2019) discussing consolidated income tax adjustments and Excess Accumulated Deferred Income Taxes being passed on to customers after the acquisition of the Company from Southern Company by South Jersey Industries.

Submitted direct testimony to the Hawaii Public Utilities Commission on behalf of Young Brothers (2019) on a number of income tax topics (Excess Accumulated Deferred Income Taxes, including the NOL Deferred Tax Asset in Rate Base, treatment of the Hawaii Capital Goods Excise Tax Credit) and including the prepaid pension asset in rate base.

Participated on accounting panels before the Maine Public Utilities Commission supporting 1) a market study of Central Maine Power Company's shared service costs and 2) the treatment of Excess Accumulated Deferred Income Taxes(2019).

Submitted rebuttal testimony before the Utah Public Service Commission on pension accounting symmetry in connection with the rate case of Dominion Energy Utah (2019).

REGULATORY CONSULTING EXPERIENCE

Synopsis—Throughout the late 1970's, the 1980's, 1990's, 2000's and 2010's assisted Andersen and PwC partners in the preparation of regulatory testimony covering a variety of accounting issues. Much of this testimony involved income tax accounting issues related to flow-through versus normalization or investment tax credit and the appropriate accounting and ratemaking treatment of excess accumulated deferred income taxes when statutory tax rates change. Also developed testimony on CWIP in rate base and working capital (lead-lag technique), appropriateness of allocation of service company costs to regulated entities, recovery of pre-operating cost regulatory assets and capital structure issues.

In 2015, assisted with the preparation of an Expert Report for EverSource Energy subsidiary Connecticut Light & Power which was submitted to the Connecticut regulator. The issue concerned reopening a rate order to address the treatment of accumulated deferred income taxes which was incorrectly decided in the rate order.

In 2018, assisted with the preparation of a private letter ruling by American Transmission Company as to whether an internal transfer between a regulated and non-regulated partner would trigger the elimination of accumulated deferred income taxes that would need to be reflected on the books and records of the partnership.

In 2018 and 2019, assisted with the preparation of Expert testimony and a private letter ruling discussing the appropriate income tax treatment of a like-kind exchange between Oncor and Sharyland. The issue concerned whether the accumulated deferred income taxes relating to the exchanged assets could carry over or would need to be eliminated.

Provided assistance on rate case testimony for the following companies:

- Indianapolis Power & Light Company
- Dayton Power & Light Company
- Pacific Gas & Electric Company
- Iowa-Illinois Gas and Electric Company
- The Peoples Gas Light and Coke Company
- Northern Indiana Public Service Company
- Elizabethtown Gas Company
- New Mexico Gas Company
- GridLiance Corporation
- PPL Montana (contract dispute)
- Southern Bell Telephone Company
- Indiana Bell Telephone Company
- Iowa Power Company
- El Paso Electric Company
- Ameritech Corporation
- Central Illinois Light Company
- Central Illinois Public Service Company
- Tampa Electric Company/Peoples Gas Company
- Public Service Company of New Mexico
- Connecticut Light and Power Company
- Young Brothers, Limited
- Central Telephone Company of Florida
- Central Telephone Company of Texas
- Central Telephone Company of Nevada
- Integrys Energy Group, Inc.
- Dominion Energy Utah
- San Gabriel Valley Water Company
- Transco Pipeline

Provided regulatory consulting for the Panama Canal Company. Tariffs charged to transit the Panama Canal were based on a cost of service approach. Assisted the Panama Canal Company in determining test year costs. Tariffs were established based on these costs.

2012-2019. Led several projects to evaluate a rate case filing prior to filing validating the completeness, accuracy, consistency and support of the filing. As a result, adjustments and edits were made to the filing to increase the credibility of the utility's filing. Provided a similar role with respect to date request responses and rebuttal testimony.

FINANCIAL CONSULTING EXPERIENCE

Assisted two Chinese utility companies in registration filings to have their shares traded on the New York Stock Exchange. Huaneng Power International and Shandong Huaneng Power Company were the first two Chinese utilities to list on the NYSE. Process involved working with attorneys, company personnel and the Securities and Exchange Commission to file the equivalent of a Form S-1.

Assisted a number of companies in the preparation, review and filing of Registration Statements with the SEC to raise debt and equity capital.
Consulted with an electric transmission company on whether costs charged to generation companies based on specific costs are in accordance with the costs permitted by the Federal Energy Regulatory Commission.

Consulted with Ameritech Corporation on a number of projects involving cost allocations and compliance with the Federal Communications Commission separations rules.

Consulted with several entities in the preparation of a private letter ruling request to determine whether certain regulatory/ratemaking approaches would violate the Internal Revenue Service ("IRS") normalization rules. Provided the ratemaking aspect of the request when, combined with income tax consulting assistance formed the basis for a complete request, accepted by the IRS.

FINANCIAL AUDIT EXPERIENCE

- Allegheny Energy
- Ameritech Corporation
- Ameritech Cellular
- Ameritech New Media
- Louisville Gas and Electric Company
- Iowa-Illinois Gas and Electric Company
- Centel Corporation
- Constellation Energy
- Nicor, Inc.
- Peoples Energy
- Nisource
- Focal Communications
- Utilities, Inc.
- Chicago Skyway
- United Airlines

LECTURES AND SEMINARS

Speaker at Edison Electric Institute/American Gas Association Introductory, Intermediate and Advanced Accounting Seminar 1996-2019.

Speaker at SNL (Regulatory Research Associates) Utility Foundations Seminar 2013-2017

Speaker at Power Plan Associates annual conference (2012, 2010, 2008, 2006, 2004, 2002) on recent accounting, regulatory and SEC matters affecting utilities.

Developed and conducted Utilities Industry Basic Accounting and Ratemaking Seminar. This two-day seminar is conducted each year for Andersen, Huron and PwC personnel assigned to utility audits or projects. In addition, the seminar is periodically offered on an open-registration basis for utility company personnel as well as offered and conducted for specific utility companies at their training sites.

Developed and conducted Utility Income Taxes-Accounting and Ratemaking Issues. This two-and-a-half day seminar is conducted each year for Andersen, PwC and Huron personnel assigned to utility audits or income tax projects. In addition, the seminar is conducted annually on an open-registration basis for utility company personnel as well as offered and conducted for specific utility companies at their training sites.

Developed and conducted Rate Case Experience Seminar and Utility Income Tax Seminar. The Rate Case Experience Seminar is week-long seminar is conducted each year on an open-registration basis for utility company personnel as well as offered and conducted for specific utility companies at their training sites. The Utility Income Tax Seminar is a two-day seminar focusing on the accounting, tax return/compliance and financial statement aspects of utility income taxes taking into consideration the consequences of ratemaking/revenue requirements. Specific examples of special training conducts for utility companies/regulators are as follows:

- Nicor
- Entergy
- Peoples Energy
- Sempra Energy
- Centerpoint
- Nisource, Inc.
- Cleco Corporation
- Consolidated Edison
- Duke Energy
- National Grid
- Dominion Resources
- Tucson Electric Power
- Portland General Electric
- Pepco Holdings, Inc.
- Ameritech Corporation
- Louisville Gas and Electric
- American Water Works
- Tampa Electric
- Natural Gas Pipeline Company of America
- Transco Pipeline
- Federal Energy Regulatory Commission
- Oklahoma Commission
- Arkansas Commission
- PPL Corporation
- Southern California Edison
- Sempra Energy
- Williams Pipeline
- Illinois Commerce Commission

- Sprint Corporation
- American Electric Power
- Consumers Power Company
- Arizona Public Service Company
- Qwest
- Northwest Pipeline
- Alaska Regulatory Commission
- Xcel Energy
- Exelon Corporation
- PG&E Corporation
- One Gas Corporation

PROFESSIONAL ASSOCIATIONS

American Institute of Certified Public Accountants

Illinois CPA Society

** The confidential version of this schedule will be provided after the execution of a Non-Disclosure Agreement

PRELIMINARY PUBLIC COPY

Schedule ADF-2

	2015	2016	2017	2018	2019 (Est.)	(A) Total 2015-2019	(B) Income Companies	(C) Loss Companies	(D) (B)/ Total(B) Income Company Percent of Income Companies Total	(E) Total(C) times (D) Allocate Total of Loss Companies to Income Companies based on Taxable Income Share
Taxable Income/(Loss):										
South Jersey Gas	**$ (16,501,655)**	**$ (153,374,901)**	**$ (83,008,088)**	**$ 29,469,426**	**63,585,720**	**$ (159,829,498)**	**$ -**	**$ (159,829,498)**	**0%**	**$ -**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

		Excess ADIT Liability Depreciation-related (ARAM)	Excess ADIT Asset NOL (RSGM)	Total Reg Liab	IIIIIII IIIIIII IIIIIII	Pre TCJA	Total with Pre TCJA
Balance at December 31, 2017, reported in 10-K (not grossed-up)		$ 198,471,424	$ (34,190,850)	$ 164,280,574	IIIIIII	$ 729,595	$ 165,010,169
Adjustments to 12/31/2017 opening balance:				$ -	IIIIIII		$ -
Q1 2018 14% NOL true-up			$ 5,068,146	$ 5,068,146	IIIIIII		$ 5,068,146
2017 Provision to Return true-ups		2,468,313	$ (2,447,439)	$ 20,874	IIIIIII		$ 20,874
Reclass from Protected to Unprotected (fixed asset basis differences)		$ (19,898,890)		$ (19,898,890)	IIIIIII		$ (19,898,890)
Returned to ratepayers through Rider H		$ -	$ -	$ -	IIIIIII	$ -	$ -
Excess ADIT Balance at December 31, 2017, as adjusted	**A**	**$ 181,040,847**	**$ (31,570,143)**	**$ 149,470,704**	**IIIIIII**	**$ 729,595**	**$ 150,200,299**
Monthly reversals, January-December 31, 2018:				$ -			$ -
Jan-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Feb-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Mar-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Apr-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
May-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Jun-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Jul-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Aug-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Sep-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Oct-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Nov-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
Dec-18		$ (181,448)	$ 79,643	$ (101,805)	IIIIIII	$ (10,147)	$ (111,952)
January-December 2018 reversal		$ (2,177,376)	$ 955,720	$ (1,221,656)	IIIIIII	$ (121,764)	$ (1,343,420)
Excess ADIT Balance at December 31, 2018		$ 178,863,471	$ (30,614,423)	$ 148,249,048	IIIIIII	$ 607,831	$ 148,856,879
Monthly reversals, January-December 2019							
Jan-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (10,147)	$ (127,130)
Feb-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (10,147)	$ (127,130)
Mar-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (10,147)	$ (127,130)
Apr-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (10,147)	$ (127,130)
May-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (10,147)	$ (127,130)
Jun-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (10,147)	$ (127,130)
Jul-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (6,088)	$ (123,071)
Aug-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (6,088)	$ (123,071)
Sep-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (6,088)	$ (123,071)
Oct-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (6,088)	$ (123,071)
Nov-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (6,088)	$ (123,071)
Dec-19		$ (196,626)	$ 79,643	$ (116,983)	IIIIIII	$ (6,088)	$ (123,071)
Estimated reversal, January-December 2019		$ (2,359,511)	$ 955,720	$ (1,403,791)	IIIIIII	$ (97,411)	$ (1,501,202)
Excess ADIT Balance December 31, 2019		$ 176,503,960	$ (29,658,703)	$ 146,845,257	IIIIIII	$ 510,420	$ 147,355,677
Monthly reversals, January-December 2020							
Jan-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Feb-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Mar-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Apr-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
May-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Jun-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Jul-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Aug-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Sep-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Oct-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Nov-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Dec-20		$ (256,963)	$ 79,643	$ (177,319)	IIIIIII	$ (6,088)	$ (183,408)
Estimated excess ADIT reversals 2020		$ (3,083,553)	$ 955,720	$ (2,127,833)	IIIIIII	$ (73,058)	$ (2,200,891)
Excess ADIT Balance December 31, 2020		$ 173,420,407	$ (28,702,983)	$ 144,717,424	IIIIIII	$ 437,361	$ 145,154,785
******************	******************	******************	******************	******************	******	******************	***************
AMOUNTS INCLUDED IN RATE CASE FILING (PRO FORMA ADJUSTMENTS)							
Protected Excess ADIT reversal 7/1/2019-6/30/2020 (REVERSING IN TEST YEAR)	B	$ (2,721,532)	$ 955,720	$ (1,765,812)	IIIIIII	$ (73,058)	$ (1,838,870)
Reversal Prior to Test Year Delayed (1/1/2018-6/30/2019)	C	$ (3,357,132)	$ 1,433,580	$ (1,923,552)	IIIIIII	$ -	$ (1,923,552)
Five-Year amortization of delayed credit/recovery	(C divided by 5)=D	$ (671,426)	$ 286,716	$ (384,710)	IIIIIII	$ -	$ (384,710)
Rate Case Amortization for protected excess ADIT (PRO FORMA)	(B +D) =E	$ (3,392,958)	$ 1,242,436	$ (2,150,522)	IIIIIII	$ (73,058)	$ (2,223,581)
Protected Excess ADIT balance at June 30, 2020:							
Balance at December 31, 2017	A	$ 181,040,847	$ (31,570,143)	$ 149,470,704	IIIIIII	$ 729,595	$ 150,200,299
PRO FORMA Rate Case Amortization: January 1, 2018 through June 30, 2020	E	$ (3,392,958)	$ 1,242,436	$ (2,150,522)	IIIIIII	$ (73,058)	$ (2,223,581)
PRO FORMA Protected Excess ADIT Balance at June 30, 2020	A+E=F	$ 177,647,889	$ (30,327,707)	$ 147,320,182	IIIIIII	$ 656,537	$ 147,976,718

Schedule ADF-4

ARAM ILLUSTRATION

Line No.	Year	(A) Asset Cost	(B) 5-year MACRS Tax Rate	(A x B = C) Tax Depreciation	(A / 10 = D) Book Depreciation 10 yrs. S/L	(C - D = E) Tax over Book Difference	(F) Cumulative Tax Over Book Difference	(G) Tax Rate	(E x G = H) Originating Deferred	(E x G = I) ADIT Reversing Deferred	(F x G = J) ADIT Cumulative Balance	(K) Average Excess ADIT Rate	(E x K = L) Excess ADIT Reversing unde ARAM	(M) Excess ADIT Cumulative Balance
1	2016	1,000,000	20.000%	200,000.00	100,000.00	100,000.00	100,000.00	35%	35,000.00		35,000			
2	2017		32.000%	320,000.00	100,000.00	220,000.00	320,000.00	35%	77,000.00		112,000			
2a	**Remeasurement at December 31, 2017**		-	-	-	-	**320,000.00**	**21%**	-		**67,200**			**44,800**
3	2018		19.200%	192,000.00	100,000.00	92,000.00	412,000.00	21%	19,320.00		86,520			44,800
4	2019		11.520%	115,200.00	100,000.00	15,200.00	427,200.00	21%	3,192.00		89,712			44,800
5	2020		11.520%	115,200.00	100,000.00	15,200.00	442,400.00	21%	3,192.00		92,904			44,800
6	2021		5.760%	57,600.00	100,000.00	(42,400.00)	400,000.00	21%	-	(8,904)	84,000	10.1266%	(4,294)	40,506
7	2022		0.000%	-	100,000.00	(100,000.00)	300,000.00	21%	-	(21,000)	63,000	10.1266%	(10,127)	30,380
8	2023		0.000%	-	100,000.00	(100,000.00)	200,000.00	21%	-	(21,000)	42,000	10.1266%	(10,127)	20,253
9	2024		0.000%	-	100,000.00	(100,000.00)	100,000.00	21%	-	(21,000)	21,000	10.1266%	(10,127)	10,127
10	2025		0.000%	-	100,000.00	(100,000.00)	-	21%	-	(21,000)	0	10.1266%	(10,127)	0
	Total			1,000,000.00	1,000,000.00	-			137,704.00	(92,904)			(44,800)	

(137,704)

$1,000,000 fixed asset placed in service on January 1, 2016
Book Depreciation using straight-line method, 10-year life, no half-year convention
Tax Depreciation using MACRS, five-year life

At the end of 2017, when the tax rate changes, the ADIT is remeasured at 21%. The remeasurement reclassifies a portion of the ADIT as Excess ADIT. (line 2a)
The remeasured ADIT reverses normally (i.e. the book tax difference times the current statutory rate) while the Excess ADIT reverses following ARAM

Average Rate (Column K) computed when the book-tax difference reverses (Column E-Year 2021). Computation is based on dividing the Excess ADIT balance at the time of reversal (44,800 in Column M) by the cumulative book-tax differences at the beginning of the year ($442,400 - the total originating differences in Column F). The average rate is 31.166 per cent, broken into 1) the statutory tax rate to apply to reversing book-tax differences (21 perecent) to clear the ADIT balance (Column I) and 2) the rate to apply to reversing book-tax differences to clear the Excess ADIT balance (Column L).

Ratemaking tax expense includes both the deferred tax expense (i.e originatind deferred or reversing defered) and rate base is reduced for both the Cumulative ADIT and Excess ADIT balances.

INSERT TAB:

D. WATSON

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20________

DIRECT TESTIMONY

OF

DANE A. WATSON, PE CDP

Partner,
Alliance Consulting Group

On Behalf Of
South Jersey Gas Company

Exhibit P-10

March 13, 2020

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SCHEDULES:

DAW-1 – DANE A. WATSON TESTIMONY EXPERIENCE

DAW-2 – SOUTH JERSEY GAS DEPRECIATION RATE STUDY AT DECEMBER 31, 2018

Exhibit P-10

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
DANE A. WATSON

I. <u>POSITION AND QUALIFICATIONS</u>

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Dane A. Watson, and my business address is 101 E. Park Blvd., Suite 220, Plano, Texas 75074. I am a Partner of Alliance Consulting Group. Alliance Consulting Group provides consulting and expert services to the utility industry.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I hold a Bachelor of Science degree in Electrical Engineering from the University of Arkansas at Fayetteville and a Master's Degree in Business Administration from Amberton University.

Q. DO YOU HOLD ANY SPECIAL CERTIFICATION AS A DEPRECIATION EXPERT?

A. Yes. The Society of Depreciation Professionals ("the Society") has established national standards for depreciation professionals. The Society administers an examination and has certain required qualifications to become certified in this field. I met all requirements and have become a Certified Depreciation Professional ("CDP").

Q. PLEASE OUTLINE YOUR EXPERIENCE IN THE FIELD OF DEPRECIATION.

A. Since graduation from college in 1985, I have worked in the area of depreciation and valuation. I founded Alliance Consulting Group in 2004 and am responsible for conducting depreciation, valuation and certain accounting-related studies for utilities in various industries. My duties related to depreciation studies include the assembly and analysis of historical and simulated data, conducting field reviews, determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for its consideration, and supporting such rates before regulatory bodies.

My prior employment from 1985 to 2004 was with Texas Utilities ("TXU"). During my tenure with TXU, I was responsible for, among other things, conducting valuation and depreciation studies for the domestic TXU companies. During that time, I served as Manager of Property Accounting Services and Records Management in addition to my depreciation responsibilities.

I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and Valuation Committee and have been Chairman of EEI's Depreciation and Economic Issues Subcommittee. I was the Industry Project Manager for the EEI/American Gas Association ("AGA") effort around the electric and gas industry adoption of FAS 143 and testified before FERC in the hearings leading up to the release of FERC Order 631. I was also the Project Leader for the EEI/AGA "Introduction to Depreciation" textbook update. I am a Registered Professional Engineer in the State of Texas and a Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE") and served for several years as an officer of the Executive Board of the Dallas Section of IEEE as well as national and worldwide offices. I have served as President of the Society twice and teach as part of their annual training program as well as teaching depreciation in multiple venues for EEI/AGA.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES OR ANY OTHER STATE AND/OR REGULATORY COMMISSIONS?

A. Yes. I have testified before the New Jersey Board of Utilities and numerous other state and federal agencies in my 35-year career in performing depreciation studies. I have conducted depreciation studies, filed written testimony, and/or testified before the Commissions identified in Schedule DAW-1.

II. <u>PURPOSE OF DIRECT TESTIMONY</u>

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A. I sponsor and support the depreciation study performed for South Jersey Gas ("SJG" or "Company"). The SJG depreciation study resulted in depreciation rates that are used to determine the Test Year depreciation expense for SJG's assets in this proceeding.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. The SJG depreciation study and analysis that I have performed fully supports establishing depreciation rates at the level recommended in my testimony. The SJG depreciation study is attached to my testimony as Schedule DAW–2. The study shows that an overall increase in annual depreciation expense of approximately $4.1 million is needed to ensure that the appropriate amount of depreciation expense is collected by the Company. This amount was calculated by determining the depreciation expense difference between the currently effective depreciation rates for SJG and the proposed rates as shown in Schedule DAW-2, Appendix A, for assets at December 31, 2018. The primary drivers for the increase in the annual depreciation expense when compared to the existing rates are related to the additional net salvage accrual based on the Commission's approved methodology and changes in the reserve position for certain Distribution and General Plant accounts. There are a total of 37 accounts, of which six have life increase recommendations; nine accounts have life decrease recommendations; 20 accounts have no change; and two accounts where no comparison can be made. Company witness Brenda O'Brien is sponsoring the depreciation expense adjustment set forth in the Company's filing in this proceeding.

III. SJG DEPRECIATION STUDY

Q. DID YOU PREPARE THE SJG DEPRECIATION STUDY?

A. Yes. The study in Schedule DAW-2 analyzes the life and net salvage for all the depreciable property groups associated with SJG assets at December 31, 2018.

Q. WHAT PROPERTY IS INCLUDED IN THE DEPRECIATION STUDY?

A. There are five general classes, or functional groups, of depreciable property included in the study: the Liquefied Natural Gas ("LNG") Plant, Transmission Plant, Distribution Plant and General Plant depreciable and General Plant amortized property. The LNG Storage Plant functional group primarily consists of the structures, gas holders and purification equipment associated with LNG facilities. The Transmission Plant functional group primarily consists of lines and associated facilities used to move gas from the production or storage fields to the distribution system. The Distribution Plant functional group primarily consists of lines and associated facilities used to distribute gas to customers within the territory served by SJG. General Plant property is not location specific but is used to support the overall operations to distribute gas to its customers.

Q. HAVE YOU CALCULATED THE ANNUAL DEPRECIATION EXPENSE FOR SJG?

A. Yes. The proposed annual depreciation expense, based on plant balances at December 31, 2018, for SJG is $69.4 million. Using the existing approved rates for SJG accounts applied to December 31, 2018 balances, the existing annual depreciation expense would be $65.3 million. Comparing the existing and proposed rates would result in an increase of approximately $4.1 million in annual depreciation expense. The complete account comparison is shown in Schedule DAW-2, Appendix A. The calculation of the annual expense and rates are shown in Appendix B. A listing of the life and net salvage parameters used are shown in Appendix C.

Q. WHAT DEFINITION OF DEPRECIATION HAVE YOU USED FOR THE PURPOSES OF CONDUCTING A DEPRECIATION STUDY AND PREPARING YOUR TESTIMONY?

A. The term "depreciation," as used herein, is considered in the accounting sense; that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. Depreciation is a process of allocation, not valuation. Depreciation expense is systematically allocated to accounting periods over the lives of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. Thus, depreciation is considered an expense or cost, rather than a loss or decrease in value. The Company accrues depreciation based on the original cost of all property included in each depreciable plant account. On retirement, the full cost of depreciable property, less the net salvage amount, if any, is charged to the depreciation reserve.

Q. PLEASE DESCRIBE YOUR DEPRECIATION STUDY APPROACH.

A. I conducted the depreciation studies in four phases as shown in Schedule DAW-2. The four phases are: Data Collection, Analysis, Evaluation, and Calculation. During the initial phase of the study, I collected historical data to be used in the analysis. After the data was assembled, I performed analyses to determine the life and net salvage percentage for the different property groups being studied. As part of this process, I conferred with field personnel, engineers, and managers responsible for the installation, operation, and removal of the assets to gain their input into the operation, maintenance, and salvage of the assets. The information obtained from field personnel, engineers, managerial personnel, was combined with the study results, and then evaluated to determine how the results of the historical asset activity analysis, in conjunction with the Company's expected future plans should be applied. Using all of these resources, I then calculated the depreciation rate for each function.

Q. WHAT DEPRECIATION METHODOLOGY DID YOU USE?

A. The straight-line, Average Life Group ("ALG") remaining-life depreciation system was employed to calculate annual and accrued depreciation in this study. This methodology that I used is consistent with the methodology used to develop the existing approved depreciation rates for SJG.

Q. HOW ARE DEPRECIATION RATES DETERMINED UNDER THE ALG PROCEDURE?

A. In this system, the annual depreciation expense for each group was computed by dividing the original cost of the asset, less allocated book depreciation reserve, less estimated net salvage, by its respective average life group remaining life. The resulting annual accrual amounts of all depreciable property within an account were accumulated, and the total was divided by the original cost of all depreciable property within the account to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group. The computations of the annual depreciation rates and remaining life calculations are shown in Appendix B of Schedule DAW-2.

Q. WHAT TIME PERIOD DID YOU USE TO DEVELOP THE PROPOSED DEPRECIATION RATES?

A. The account level depreciation rates were developed based on the depreciable property recorded on the Company's books at December 31, 2018.

Q. IN DEVELOPING THE PROPOSED DEPRECIATION RATES, DID YOU ALSO CONSIDER THE COMPANY'S CURRENT ASSET ACCOUNTING PRACTICES?

A. Yes. In developing the proposed depreciation rates, the depreciation study analysis focused not only on historical data but also considered the current asset accounting practices used by the Company. The results of this analysis confirmed that the historical accounting and operational data was generally representative of ongoing SJG practices.

Q. WHAT FACTORS INFLUENCE THE DEPRECIATION RATES FOR AN ACCOUNT?

A. The primary factors that influence the depreciation rate for an account are: 1. the remaining investment to be recovered in the account, 2. the depreciable life of the account, and 3. the net salvage for the account. In the case of SJG, account level net salvage is not recognized due to BPU requirements. However, a three year average net salvage amount is included in the overall depreciation expense accrual amount.

Q. WHAT METHOD DID YOU USE TO ANALYZE HISTORICAL DATA TO DETERMINE LIFE CHARACTERISTICS?

A. All accounts were analyzed using both the simulated plant record ("SPR") and the actuarial methods of life analysis. However, it was determined there is not enough aged retirement data (actuarial) to produce meaningful analyses in most of the accounts. Therefore, the SPR method of life analysis was relied upon to estimate the life of property. In much the same manner as human mortality is analyzed by actuaries, depreciation analysts use models of property mortality characteristics that have been validated in research and empirical applications. Further detail is found in the life analysis section of Schedule DAW-2.

Q. WHAT IS THE SIGNIFICANCE OF AN ASSET'S USEFUL LIFE IN YOUR DEPRECIATION STUDY?

A. An asset's useful life was used to determine the remaining life over which the remaining cost (original cost plus or minus net salvage, minus accumulated depreciation) can be allocated ratably over future periods.

Q. HOW DID YOU DETERMINE THE AVERAGE SERVICE LIVES FOR EACH ASSET GROUP?

A. The establishment of appropriate average service lives for each account was determined by using the SPR life analysis. The remaining life, by account, is shown in Appendix B of Schedule DAW-2. Graphs and tables supporting the SPR analysis and the chosen Iowa Curves used to determine the average service lives for analyzed accounts are found in the Life Analysis section of Schedule DAW-2. A summary of the depreciable life for each account is shown in Schedule DAW-2, Appendix C.

Q. WHAT IS NET SALVAGE?

A. While discussed more fully in the study itself, net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset). Generally, salvage and removal cost percentages are calculated by dividing the current cost of salvage or removal by the original installed cost of the asset. Some plant assets can experience significant negative removal cost percentages due to the amount of removal cost and the timing of the addition versus the retirement. For example, a Distribution asset in FERC Account 376 Steel Mains with a current installed cost of $500 (2018) would have had an installed cost of $17.15[1] in 1950. A removal cost of $50 for the asset calculated (incorrectly) on current installed cost would only have a negative 10 percent removal cost ($50/$500). However, a correct removal cost calculation would show a negative 292 percent removal cost for that asset ($50/$17.15). Inflation from the time of installation of the asset until the time of its removal must be taken into account in the calculation of the removal cost percentage because the depreciation rate, which includes the removal cost percentage, will be applied to the original installed cost of assets.

Q. HOW WOULD YOU TYPICALLY ANALYZE NET SALVAGE?

A. I would examine the experience realized by the Company by observing the actual net salvage amounts recorded for each year. The analysis also looks at various bands (or combinations) of these years, such as 2-year, 3-year etc., up to 10-years. Evaluating these moving averages allows the smoothing of the timing differences between when retirements, removal cost and salvage are booked. By looking at successive average bands ("rolling bands"), an analyst can also see trends in the data that would indicate the future

[1] Using the Handy-Whitman Bulletin No. 190, G-1, line 44, $17.15 = $500 x 32/933.

net salvage in the account. This examination, in combination with the feedback of Company engineers related to any changes in operations or maintenance that would affect the future net salvage of the asset, generally is the basis for the selection of the best estimate of future net salvage for each account.

Q. IS THE APPROACH YOU JUST DESCRIBED CONSISTENT WITH THE GENERALLY ACCEPTED APPROACH TO THE ANALYSIS OF NET SALVAGE IN THE INDUSTRY?

A. Yes, my approach is consistent with National Association of Regulatory Utility Commissioners' 1996 Public Utilities Depreciation Practices Manual and other authoritative texts. It is also the generally accepted methodology for the analysis of net salvage across most of the jurisdictions in the country.

Q. HAVE YOU USED THE NET SALVAGE APPROACH YOU JUST DESCRIBED IN YOUR STUDY IN THIS CASE?

A. No. I have not.

Q. WHY NOT?

A. Consistent with the stipulation in prior cases, net salvage is calculated by taking the average of the actual net salvage expense over an immediate prior period. While I and SJG disagree with this position, to avoid repeated litigation over the net salvage methodology, we used the approach approved by the BPU in prior cases.

Q. WHAT METHODOLOGY HAVE YOU USED IN THIS CASE?

A. I have utilized the average salvage expense for the most recently completed three year period 2016-2018. The Company directed me to use this most recent three-year average net salvage as the allowance. This calculation resulted in net salvage of $6,268,760, which will be added annually to the annual depreciation expense accruals for net salvage. This calculation is provided in Schedule DAW-2, Appendix D. The previous net salvage amount was stipulated at $4,659,755.

Q. WHAT IS CAUSING THE 3-YEAR AVERAGE TO INCREASE?

A. The costs of activities related to retirement costs (generally including cutting, capping, and purging of gas for the abandonment of pipe) have increased in part due to the cost of labor. Performing these activities today is more expensive than in the past and is definitely more expensive than the retirement costs reflected in the existing net salvage amount. Also, the use of the most recent 3-year average captures the level of accelerated infrastructure replacement program retirement activities that are occurring and expected to continue in the near term.

Q. IN YOUR JUDGMENT WHAT IS THE EFFECT OF UTILIZING THE AVERAGE OF RECENT YEAR'S NET SALVAGE EXPENSE TO CALCULATE NET SALVAGE?

A. It disregards the growth in net salvage percentage as plant ages and the growth in total removal cost required as larger portions of the asset base are retired – to some extent disregarding accrual accounting. As a result, it causes an intergenerational shift, whereby the burden of net salvage is shifted from today's customers and placed upon our children and grandchildren.

Q. IS THIS A REASONABLE METHOD FOR DETERMINING NET SALVAGE RATES?

A. Not in my opinion and not by the majority of utilities and state commissions who have utilized and adopted the traditional net salvage methodology. Additionally, there are authoritative texts[2] that also describe and support the traditional net salvage methodology.

IV. CONCLUSION

Q. WHAT ACCOUNT DEPRECIATION RATES ARE YOU PROPOSING, AND HOW DO THEY COMPARE WITH THE CURRENT RATES?

A. The current depreciation rates and the rates I am now proposing are found in Schedule DAW-2. Detailed comparisons and calculations of these rates are found in Appendices A and B of Schedule DAW–2.

Q. MR. WATSON, DO YOU HAVE ANY CONCLUDING REMARKS?

A. Yes. The depreciation study and analysis performed under my supervision fully support setting depreciation rates at the level I have indicated in my testimony. The Company should continue to periodically review the annual depreciation rates for its property. In this way, all customers are charged for their appropriate share of the capital expended for their benefit. The depreciation study for SJG depreciable property as of December 31, 2018 describes the extensive analysis performed and the resulting rates that are now appropriate for Company property. The Company's depreciation rates should be set at my recommended amounts in order to recover the Company's total investment in property over the estimated remaining life of the assets.

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[2] *The Estimation of Depreciation*, by Drs. Fitch, Wolf and Bissinger and the National Association of Regulatory Utility Commissioners' *Public Utility Depreciation Practices*.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas, New Mexico	Federal Energy Regulatory Commission	ER20-277-000	Southwestern Public Service Company	2019	Electric Production and General Plant Depreciation Study
Alaska	Regulatory Commission of Alaska	U-19-086	Alaska Electric Light and Power	2019	Electric Depreciation Study
Delaware	Delaware Public Service Commission	19-0615	Suez Water Delaware	2019	Water Depreciation Study
Texas	Public Utility Commission of Texas	49831	Southwestern Public Service Company	2019	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	19-00170-UT	Southwestern Public Service Company	2019	Electric Depreciation Study
Georgia	Georgia Public Service Commission	42516	Georgia Power Company	2019	Electric Depreciation Study
Georgia	Georgia Public Service Commission	42315	Atlanta Gas Light	2019	Gas Depreciation Study
Arizona	Arizona Corporation Commission	G-01551A-19-0055	Southwest Gas Corporation	2019	Gas Removal Cost Study
New Hampshire	New Hampshire Public Service Commission	DE 19-064	Liberty Utilities	2019	Electric Distribution and General
New Jersey	New Jersey Board of Public Utilities	GR19040486	Elizabethtown Natural Gas	2019	Gas Depreciation Study
Texas	Public Utility Commission of Texas	49421	CenterPoint Houston Electric LLC	2019	Electric Depreciation Study
North Carolina	North Carolina Utilities Commission	Docket No. G-9, Sub 743	Piedmont Natural Gas	2019	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-18-121	Municipal Power and Light City of Anchorage	2018	Electric Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Various	FERC	RP19-352-000	Sea Robin	2018	Gas Depreciation Study
Texas New Mexico	Federal Energy Regulatory Commission	ER19-404-000	Southwestern Public Service Company	2018	Electric Transmission Depreciation Study
California	Federal Energy Regulatory Commission	ER19-221-000	San Diego Gas and Electric	2018	Electric Transmission Depreciation Study
Kentucky	Kentucky Public Service Commission	2018-00281	Atmos Kentucky	2018	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-18-054	Matanuska Electric Coop	2018	Electric Generation Depreciation Study
California	California Public Utilities Commission	A17-10-007	San Diego Gas and Electric	2018	Electric and Gas Depreciation Study
Texas	Public Utility Commission of Texas	48401	Texas New Mexico Power	2018	Electric Depreciation Study
Nevada	Public Utility Commission of Nevada	18-05031	Southwest Gas	2018	Gas Depreciation Study
Texas	Public Utility Commission of Texas	48231	Oncor Electric Delivery	2018	Depreciation Rates
Texas	Public Utility Commission of Texas	48371	Entergy Texas	2018	Electric Depreciation Study
Kansas	Kansas Corporation Commission	18-KCPE-480-RTS	Kansas City Power and Light	2018	Electric Depreciation Study
Arkansas	Arkansas Public Service Commission	18-027-U	Liberty Pine Bluff Water	2018	Water Depreciation Study
Kentucky	Kentucky Public Service Commission	2017-00349	Atmos KY	2018	Gas Depreciation Rates

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Tennessee	Tennessee Public Utility Commission	18-00017	Chattanooga Gas	2018	Gas Depreciation Study
Texas	Railroad Commission of Texas	10679	Si Energy	2018	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-17-104	Anchorage Water and Wastewater	2017	Water and Waste Water Depreciation Study
Michigan	Michigan Public Service Commission	U-18488	Michigan Gas Utilities Corporation	2017	Gas Depreciation Study
Texas	Railroad Commission of Texas	10669	CenterPoint South Texas	2017	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	17-061-U	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Kansas	Kansas Corporation Commission	18-EPDE-184-PRE	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Oklahoma	Oklahoma Corporation Commission	PUD 201700471	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Missouri	Missouri Public Service Commission	EO-2018-0092	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Michigan	Michigan Public Service Commission	U-18457	Upper Peninsula Power Company	2017	Electric Depreciation Study
Florida	Florida Public Service Commission	20170179-GU	Florida City Gas	2017	Gas Depreciation Study
Michigan	FERC	ER18-56-000	Consumers Energy	2017	Electric Depreciation Study
Missouri	Missouri Public Service Commission	GR-2018-0013	Liberty Utilities	2017	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-18452	SEMCO	2017	Gas Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Public Utility Commission of Texas	47527	Southwestern Public Service Company	2017	Electric Production Depreciation Study
MultiState	FERC	ER17-1664	American Transmission Company	2017	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-17-008	Municipal Power and Light City of Anchorage	2017	Generating Unit Depreciation Study
Mississippi	Mississippi Public Service Commission	2017-UN-041	Atmos Energy	2017	Gas Depreciation Study
Texas	Public Utility Commission of Texas	46957	Oncor Electric Delivery	2017	Electric Depreciation Study
Oklahoma	Oklahoma Corporation Commission	PUD 201700078	CenterPoint Oklahoma	2017	Gas Depreciation Study
New York	FERC	ER17-1010-000	New York Power Authority	2017	Electric Depreciation Study
Texas	Railroad Commission of Texas	GUD 10580	Atmos Pipeline Texas	2017	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10567	CenterPoint Texas	2016	Gas Depreciation Study
MultiState	FERC	ER17-191-000	American Transmission Company	2016	Electric Depreciation Study
New Jersey	New Jersey Board of Public Utilities	GR16090826	Elizabethtown Natural Gas	2016	Gas Depreciation Study
North Carolina	North Carolina Utilities Commission	Docket G-9 Sub 77H	Piedmont Natural Gas	2016	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-18195	Consumers Energy/DTE Electric	2016	Ludington Pumped Storage Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Alabama	FERC	ER16-2313-000	SEGCO	2016	Electric Depreciation Study
Alabama	FERC	ER16-2312-000	Alabama Power Company	2016	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-18127	Consumers Energy	2016	Natural Gas Depreciation Study
Mississippi	Mississippi Public Service Commission	2016 UN 267	Willmut Natural Gas	2016	Natural Gas Depreciation Study
Iowa	Iowa Utilities Board	RPU-2016-0003	Liberty-Iowa	2016	Natural Gas Depreciation Study
Illinois	Illinois Commerce Commission	GRM #16-208	Liberty-Illinois	2016	Natural Gas Depreciation Study
Kentucky	FERC	RP16-097-000	KOT	2016	Natural Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-16-067	Alaska Electric Light and Power	2016	Generating Unit Depreciation Study
Florida	Florida Public Service Commission	160170-EI	Gulf Power	2016	Electric Depreciation Study
California	California Public Utilities Commission	A 16-07-002	California American Water	2016	Water and Waste Water Depreciation Study
Arizona	Arizona Corporation Commission	G-01551A-16-0107	Southwest Gas	2016	Gas Depreciation Study
Texas	Public Utility Commission of Texas	45414	Sharyland	2016	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	16A-0231E	Public Service Company of Colorado	2016	Electric Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Multi-State NE US	FERC	16-453-000	Northeast Transmission Development, LLC	2015	Electric Depreciation Study
Arkansas	Arkansas Public Service Commission	15-098-U	CenterPoint Arkansas	2015	Gas Depreciation Study and Cost of Removal Study
New Mexico	New Mexico Public Regulation Commission	15-00296-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
Atmos Energy Corporation	Tennessee Regulatory Authority	14-00146	Atmos Tennessee	2015	Natural Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	15-00261-UT	Public Service Company of New Mexico	2015	Electric Depreciation Study
Hawaii	NA	NA	Hawaii American Water	2015	Water/Wastewater Depreciation Study
Kansas	Kansas Corporation Commission	16-ATMG-079-RTS	Atmos Kansas	2015	Gas Depreciation Study
Texas	Public Utility Commission of Texas	44704	Entergy Texas	2015	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-15-089	Fairbanks Water and Wastewater	2015	Water and Waste Water Depreciation Study
Arkansas	Arkansas Public Service Commission	15-031-U	Source Gas Arkansas	2015	Underground Storage Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	15-00139-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
Texas	Public Utility Commission of Texas	44746	Wind Energy Transmission Texas	2015	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	15-AL-0299G	Atmos Colorado	2015	Gas Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Arkansas	Arkansas Public Service Commission	15-011-U	Source Gas Arkansas	2015	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10432	CenterPoint- Texas Coast Division	2015	Gas Depreciation Study
Kansas	Kansas Corporation Commission	15-KCPE-116-RTS	Kansas City Power and Light	2015	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-120	Alaska Electric Light and Power	2014-2015	Electric Depreciation Study
Texas	Public Utility Commission of Texas	43950	Cross Texas Transmission	2014	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	14-00332-UT	Public Service of New Mexico	2014	Electric Depreciation Study
Texas	Public Utility Commission of Texas	43695	Xcel Energy	2014	Electric Depreciation Study
Multi State – SE US	FERC	RP15-101	Florida Gas Transmission	2014	Gas Transmission Depreciation Study
California	California Public Utilities Commission	A.14-07-006	Golden State Water	2014	Water and Waste Water Depreciation Study
Michigan	Michigan Public Service Commission	U-17653	Consumers Energy Company	2014	Electric and Common Depreciation Study
Colorado	Public Utilities Commission of Colorado	14AL-0660E	Public Service of Colorado	2014	Electric Depreciation Study
Wisconsin	Wisconsin	05-DU-102	WE Energies	2014	Electric, Gas, Steam and Common Depreciation Studies

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Public Utility Commission of Texas	42469	Lone Star Transmission	2014	Electric Depreciation Study
Nebraska	Nebraska Public Service Commission	NG-0079	Source Gas Nebraska	2014	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-055	TDX North Slope Generating	2014	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-054	Sand Point Generating LLC	2014	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-045	Matanuska Electric Coop	2014	Electric Generation Depreciation Study
Texas, New Mexico	Public Utility Commission of Texas	42004	Southwestern Public Service Company	2013-2014	Electric Production, Transmission, Distribution and General Plant Depreciation Study
New Jersey	New Jersey Board of Public Utilities	GR13111137	South Jersey Gas	2013	Gas Depreciation Study
Various	FERC	RP14-247-000	Sea Robin	2013	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	13-078-U	Arkansas Oklahoma Gas	2013	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	13-079-U	Source Gas Arkansas	2013	Gas Depreciation Study
California	California Public Utilities Commission	Proceeding No.: A.13-11-003	Southern California Edison	2013	Electric Depreciation Study
North Carolina/South Carolina	FERC	ER13-1313	Progress Energy Carolina	2013	Electric Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Wisconsin	Public Service Commission of Wisconsin	4220-DU-108	Northern States Power Company - Wisconsin	2013	Electric, Gas and Common Transmission, Distribution and General
Texas	Public Utility Commission of Texas	41474	Sharyland	2013	Electric Depreciation Study
Kentucky	Kentucky Public Service Commission	2013-00148	Atmos Energy Corporation	2013	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	13-252	Allete Minnesota Power	2013	Electric Depreciation Study
New Hampshire	New Hampshire Public Service Commission	DE 13-063	Liberty Utilities	2013	Electric Distribution and General
Texas	Railroad Commission of Texas	10235	West Texas Gas	2013	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-12-154	Alaska Telephone Company	2012	Telecommunications Utility
New Mexico	New Mexico Public Regulation Commission	12-00350-UT	Southwestern Public Service Company	2012	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL-1269ST	Public Service Company of Colorado	2012	Gas and Steam Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL-1268G	Public Service Company of Colorado	2012	Gas and Steam Depreciation Study
Alaska	Regulatory Commission of Alaska	U-12-149	Municipal Power and Light City of Anchorage	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40824	Xcel Energy	2012	Electric Depreciation Study
South Carolina	Public Service Commission of South Carolina	Docket 2012-384-E	Progress Energy Carolina	2012	Electric Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Alaska	Regulatory Commission of Alaska	U-12-141	Interior Telephone Company	2012	Telecommunications Utility
Michigan	Michigan Public Service Commission	U-17104	Michigan Gas Utilities Corporation	2012	Gas Depreciation Study
North Carolina	North Carolina Utilities Commission	E-2 Sub 1025	Progress Energy Carolina	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40606	Wind Energy Transmission Texas	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40604	Cross Texas Transmission	2012	Electric Depreciation Study
Minnesota	Minnesota Public Utilities Commission	12-858	Northern States Power Company - Minnesota	2012	Electric, Gas and Common Transmission, Distribution and General
Texas	Railroad Commission of Texas	10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10174	Atmos West Texas	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10182	CenterPoint Beaumont/ East Texas	2012	Gas Depreciation Study
Kansas	Kansas Corporation Commission	12-KCPE-764-RTS	Kansas City Power and Light	2012	Electric Depreciation Study
Nevada	Public Utility Commission of Nevada	12-04005	Southwest Gas	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10147, 10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Kansas	Kansas Corporation Commission	12-ATMG-564-RTS	Atmos Kansas	2012	Gas Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Texas Public Utility Commission	40020	Lone Star Transmission	2012	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-16938	Consumers Energy Company	2011	Gas Depreciation Study
Colorado	Public Utilities Commission of Colorado	11AL-947E	Public Service of Colorado	2011	Electric Depreciation Study
Texas	Texas Public Utility Commission	39896	Entergy Texas	2011	Electric Depreciation Study
MultiState	FERC	ER12-212	American Transmission Company	2011	Electric Depreciation Study
California	California Public Utilities Commission	A1011015	Southern California Edison	2011	Electric Depreciation Study
Mississippi	Mississippi Public Service Commission	2011-UN-184	Atmos Energy	2011	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-16536	Consumers Energy Company	2011	Wind Depreciation Rate Study
Texas	Public Utility Commission of Texas	38929	Oncor	2011	Electric Depreciation Study
Texas	Railroad Commission of Texas	10038	CenterPoint South TX	2010	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-070	Inside Passage Electric Cooperative	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	36633	City Public Service of San Antonio	2010	Electric Depreciation Study
Texas	Texas Railroad Commission	10000	Atmos Pipeline Texas	2010	Gas Depreciation Study
Multi State – SE US	FERC	RP10-21-000	Florida Gas Transmission	2010	Gas Depreciation Study
Maine/ New Hampshire	FERC	10-896	Granite State Gas Transmission	2010	Gas Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Public Utility Commission of Texas	38480	Texas New Mexico Power	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	38339	CenterPoint Electric	2010	Electric Depreciation Study
Texas	Texas Railroad Commission	10041	Atmos Amarillo	2010	Gas Depreciation Study
Georgia	Georgia Public Service Commission	31647	Atlanta Gas Light	2010	Gas Depreciation Study
Texas	Public Utility Commission of Texas	38147	Southwestern Public Service	2010	Electric Technical Update
Alaska	Regulatory Commission of Alaska	U-09-015	Alaska Electric Light and Power	2009-2010	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-043	Utility Services of Alaska	2009-2010	Water Depreciation Study
Michigan	Michigan Public Service Commission	U-16055	Consumers Energy/DTE Energy	2009-2010	Ludington Pumped Storage Depreciation Study
Michigan	Michigan Public Service Commission	U-16054	Consumers Energy	2009-2010	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-15963	Michigan Gas Utilities Corporation	2009	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-15989	Upper Peninsula Power Company	2009	Electric Depreciation Study
Texas	Railroad Commission of Texas	9869	Atmos Energy	2009	Shared Services Depreciation Study
Mississippi	Mississippi Public Service Commission	09-UN-334	CenterPoint Energy Mississippi	2009	Gas Depreciation Study
Texas	Railroad Commission of Texas	9902	CenterPoint Energy Houston	2009	Gas Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Colorado	Colorado Public Utilities Commission	09AL-299E	Public Service Company of Colorado	2009	Electric Depreciation Study
Tennessee	Tennessee Regulatory Authority	11-00144	Piedmont Natural Gas	2009	Gas Depreciation Study
Louisiana	Louisiana Public Service Commission	U-30689	Cleco	2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	35763	Southwestern Public Service Company	2008	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Wisconsin	Wisconsin	05-DU-101	WE Energies	2008	Electric, Gas, Steam and Common Depreciation Studies
North Dakota	North Dakota Public Service Commission	PU-07-776	Northern States Power Company - Minnesota	2008	Net Salvage
New Mexico	New Mexico Public Regulation Commission	07-00319-UT	Southwestern Public Service Company	2008	Testimony – Depreciation
Multiple States	Railroad Commission of Texas	9762	Atmos Energy	2007-2008	Shared Services Depreciation Study
Minnesota	Minnesota Public Utilities Commission	E015/D-08-422	Minnesota Power	2007-2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	35717	Oncor	2008	Electric Depreciation Study
Texas	Public Utility Commission of Texas	34040	Oncor	2007	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-15629	Consumers Energy	2006-2009	Gas Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Colorado	Colorado Public Utilities Commission	06-234-EG	Public Service Company of Colorado	2006	Electric Depreciation Study
Arkansas	Arkansas Public Service Commission	06-161-U	CenterPoint Energy – Arkla Gas	2006	Gas Distribution Depreciation Study and Removal Cost Study
Texas, New Mexico	Public Utility Commission of Texas	32766	Southwestern Public Service Company	2005-2006	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Texas	Railroad Commission of Texas	9670/9676	Atmos Energy Corp	2005-2006	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9400	TXU Gas	2003-2004	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9313	TXU Gas	2002	Gas Distribution Depreciation Study
Texas	Railroad Commission of Texas	9225	TXU Gas	2002	Gas Distribution Depreciation Study
Texas	Public Utility Commission of Texas	24060	TXU	2001	Line Losses
Texas	Public Utility Commission of Texas	23640	TXU	2001	Line Losses
Texas	Railroad Commission of Texas	9145-9148	TXU Gas	2000-2001	Gas Distribution Depreciation Study
Texas	Public Utility Commission of Texas	22350	TXU	2000-2001	Electric Depreciation Study, Unbundling
Texas	Railroad Commission of Texas	8976	TXU Pipeline	1999	Pipeline Depreciation Study

Dane Watson Testimony Appearances

Asset Location	Commission	Docket (If Applicable	Company	Year	Description
Texas	Public Utility Commission of Texas	20285	TXU	1999	Fuel Company Depreciation Study
Texas	Public Utility Commission of Texas	18490	TXU	1998	Transition to Competition
Texas	Public Utility Commission of Texas	16650	TXU	1997	Customer Complaint
Texas	Public Utility Commission of Texas	15195	TXU	1996	Mining Company Depreciation Study
Texas	Public Utility Commission of Texas	12160	TXU	1993	Fuel Company Depreciation Study
Texas	Public Utility Commission of Texas	11735	TXU	1993	Electric Depreciation Study

SOUTH JERSEY GAS

DEPRECIATION RATE STUDY

As of December 31, 2018

ALLIANCE CONSULTING GROUP

http://www.utilityalliance.com

SOUTH JERSEY GAS
DEPRECIATION RATE STUDY
EXECUTIVE SUMMARY

South Jersey Gas ("SJG" or "Company") engaged Alliance Consulting Group to conduct a depreciation study of the Company's natural gas operations depreciable assets as of fiscal year end December 31, 2018.

The existing depreciation rates were based on the straight-line method, average life group ("ALG") procedure, and remaining-life technique and the same method, procedure, and technique are retained in this study. At the request of the Company, however, this study does not include a traditional net salvage approach. Instead, it includes a similar approach approved by the New Jersey Board of Public Utilities ("Board") in the last case. The approach being proposed in the study utilizes the development of an annual amount, based on the most recent three years, to be accrued as part of the depreciation expense. The net salvage accrual $6,268,760, is shown in Appendix A. Appendix D provides the calculation of the $6,268,760 net salvage amount. In total, this study recommends an increase of approximately $4.1 million in annual depreciation expense when compared to the depreciation rates currently in effect. Life estimates show the following changes: 6 accounts have an increase in life, nine accounts have a decrease in life, and 20 accounts remain unchanged. For the remaining 2 accounts, there is either no comparison possible.

The depreciation study Alliance conducted analyzed and developed depreciation recommendations at an account level resulting in annual depreciation accrual amounts and depreciation rates at that level. Appendix A demonstrates the change in depreciation expense.

SOUTH JERSEY GAS
DEPRECIATION RATE STUDY
As of December 31, 2018
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PURPOSE

The purpose of this study is to develop depreciation rates for the depreciable property as recorded on SJG's books at December 31, 2018. The account-based depreciation rates were designed to recover the total remaining undepreciated investment, over the remaining life of SJG's property on a straight-line basis. Non-depreciable property and property that is amortized, such as intangible assets, were excluded from this study.

SJG provides local gas distribution service to approximately 398,000 customers in 113 municipalities over 2,500 square miles of service territory in southern New Jersey. Its assets currently consist of various liquefied natural gas ("LNG"), transmission, distribution, and general assets, with approximately 146 miles of transmission pipe, 6,551 miles of steel and plastic gas distribution mains, and 315,475 service lines that total 5,556 miles in length, which are located across the service area. The Company has seven receipt points, or city gates, throughout the system where gas enters the distribution system and is then delivered to customers for burner tip consumption.

STUDY RESULTS

The existing and current study of annual depreciation expense result from the use of Iowa Curve dispersion patterns with the straight-line method, average life group procedure and remaining-life technique, in the development of the study recommended depreciation rates. Detailed information for each of these factors will follow in this report.

Overall depreciation rates for SJG depreciable property are shown in Appendix A. The recommended rates translate into an annual depreciation accrual of approximately $69.4 million based on SJG's depreciable investment at December 31, 2018. The annual equivalent depreciation expense calculated by the same method using the currently approved rates is $65.3 million. The primary driver for the increase in the annual depreciation expense when compared to the existing is related to additional investment, reserve position, and net salvage accrual based on the Board's approved methodology, offset by increases in life for many of the accounts in the Transmission and Distribution Functions.

Appendix A presents a comparison of the composite existing rates versus the recommended study rates. Appendix B presents the development of the depreciation rates and annual accruals. Appendix C presents the mortality parameters by account. Appendix D presents the calculation for the net salvage annual accrual amount of $6,268,760.

GENERAL DISCUSSION

Definition

The term "depreciation" as used in this study is considered in the accounting sense, that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. The Company accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. On retirement the full cost of depreciable property, less the net salvage value, is charged to the depreciation reserve.

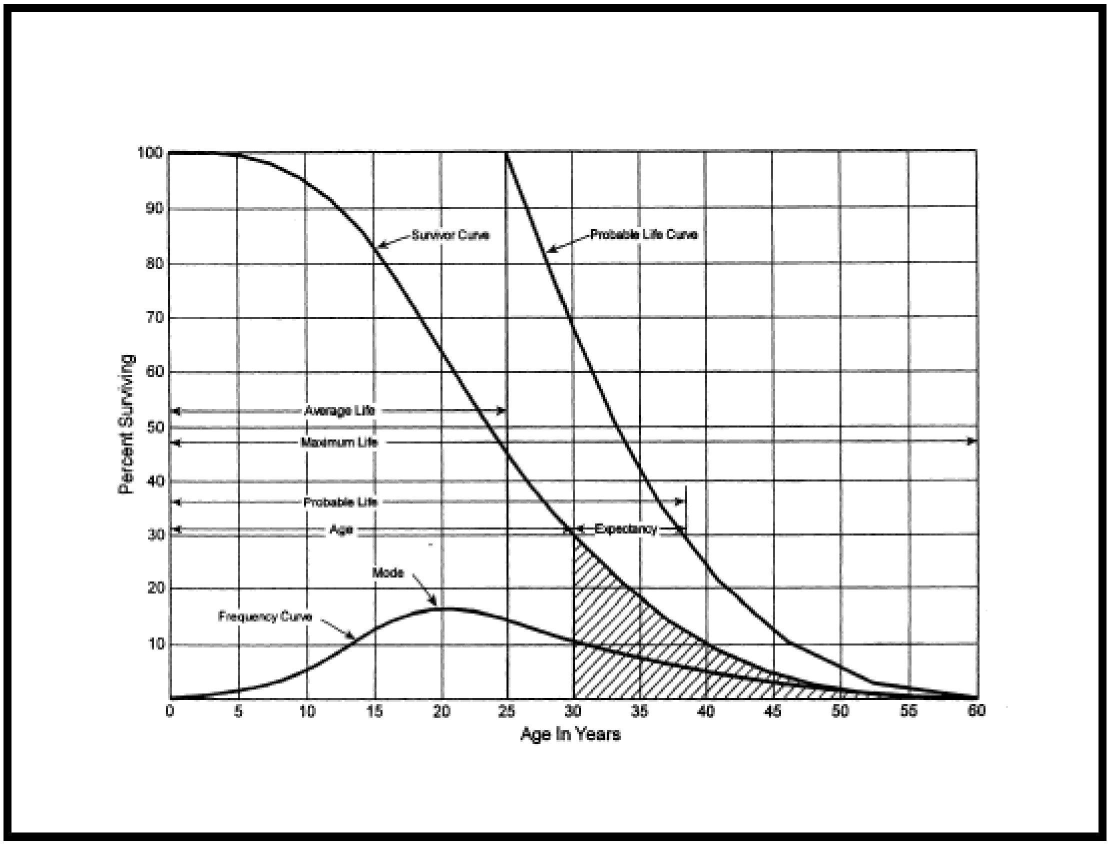
Basis of Depreciation Estimates

Annual and accrued depreciation were calculated in this study by the straight-line, broad group, remaining-life depreciation system. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset group less allocated depreciation reserve less estimated net salvage by its respective average remaining life. The resulting annual accrual amounts of all depreciable property within a function were accumulated and the total was divided by the original cost of all functional depreciable property to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group, and were computed in a direct weighting by multiplying each vintage or account balance times its remaining life and dividing by the plant investment in service as of December 31, 2018. The computations of the annual depreciation rates are shown in Appendix B and remaining life calculations are provided in the workpapers.

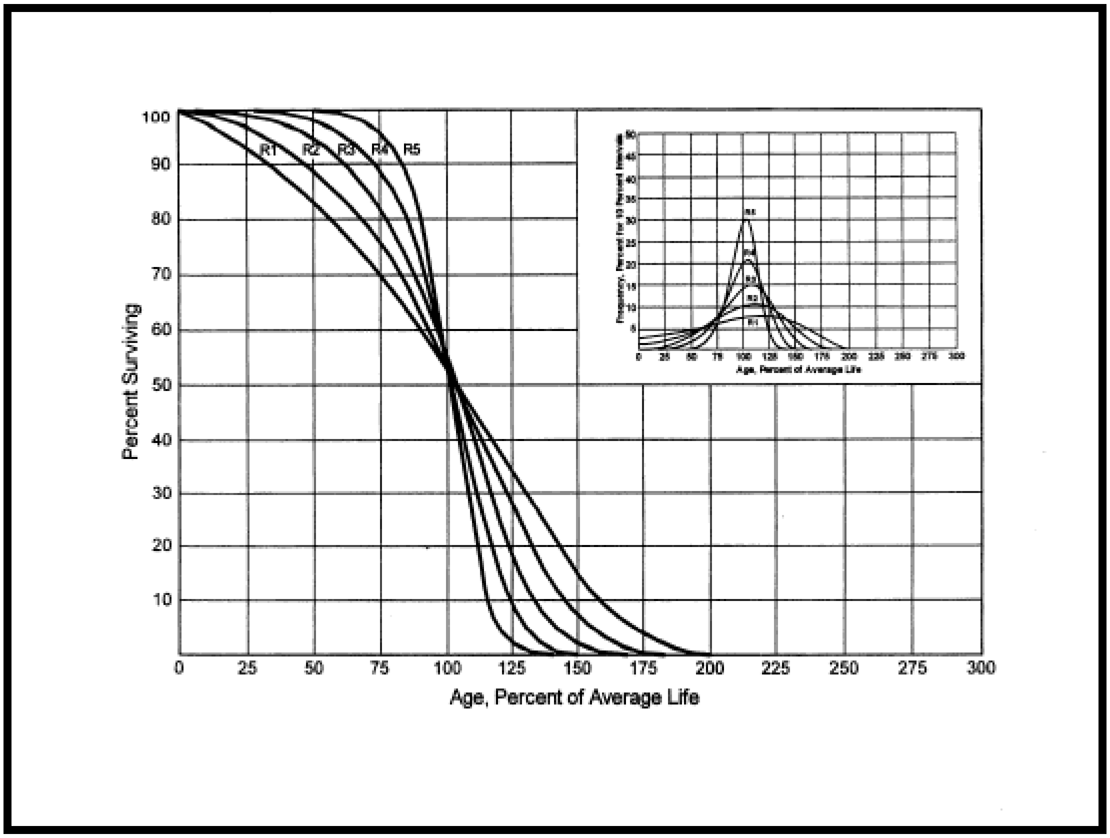
A variety of life estimation approaches were incorporated in the life analyses. Both Simulated Plant Record ("SPR") analysis and Actuarial Analysis are commonly used mortality analysis techniques for gas utility property. Historically, SJG has used SPR analysis to evaluate lives of its asset groups. The SPR balances approach was used for each account within a function where sufficient activity occurred within the account. Since some vintage information is available, actuarial analysis was performed on the largest accounts, primarily in the distribution function. For the accounts using actuarial analysis the experience bands varied depending on the amount of data. Judgment was used to a greater or lesser degree on all accounts. Each approach used in this study is more fully described in a later section.

Survivor Curves

To fully understand depreciation projections in a regulated utility setting, there must be a basic understanding of survivor curves. Individual property units within a group do not normally have identical lives or investment amounts. The average life of a group can be determined by first constructing a survivor curve which is plotted as a percentage of the units surviving at each age. A survivor curve represents the percentage of property remaining in service at various age intervals. The Iowa Curves are the result of an extensive investigation of life characteristics of physical property made at Iowa State College Engineering Experiment Station in the first half of the prior century. Through common usage, revalidation and regulatory acceptance, these curves have become a descriptive standard for the life characteristics of industrial property. An example of an Iowa Curve is shown below.



There are four families in the Iowa Curves that are distinguished by the relation of the age at the retirement mode (largest annual retirement frequency) and the average life. For distributions with the mode age greater than the average life, an "R" designation (i.e., Right modal) is used. The family of “R” moded curves is shown below.



Similarly, an "S" designation (i.e., Symmetric modal) is used for the family whose mode age is symmetric about the average life. An "L" designation (i.e., Left modal) is used for the family whose mode age is less than the average life. A special case of left modal dispersion is the "O" or origin modal curve family. Within each curve family, numerical designations are used to describe the relative magnitude of the retirement frequencies at the mode. A "6" indicates that the retirements are not greatly dispersed from the mode (i.e., high mode frequency) while a "1" indicates a large dispersion about the mode (i.e., low mode frequency). For example, a curve with an average life of 30 years and an "L3" dispersion is a moderately dispersed, left modal curve that can be designated as a 30 L3 Curve. An SQ, or square, survivor curve occurs where no dispersion is present (i.e., units of common age retire simultaneously).

Most property groups can be closely fitted to one Iowa Curve with a unique average service life. The blending of judgment concerning current conditions and future trends along with the matching of historical data permits the depreciation analyst to make an informed selection of an account's average life and retirement dispersion pattern.

Actuarial Analysis

Actuarial analysis (retirement rate method) was used in evaluating historical asset retirement experience where vintage data were available and sufficient retirement activity was present. In actuarial analysis, interval exposures (total property subject to retirement at the beginning of the age interval, regardless of vintage) and age interval retirements are calculated. The complement of the ratio of interval retirements to interval exposures establishes a survivor ratio. The survivor ratio is the fraction of property surviving to the end of the selected age interval, given that it has survived to the beginning of that age interval. Survivor ratios for all of the available age intervals were chained by successive multiplications to establish a series of survivor factors, collectively known as an observed life table. The observed life table shows the experienced mortality characteristic of the account and may be compared to standard mortality curves such as the Iowa Curves. Consistent with the prior study some accounts were analyzed using this method. Placement bands were used to illustrate the composite history over a specific era, and experience bands were used to focus on retirement history for all vintages during a set period. Matching data in observed life tables for each experience and placement band to an Iowa Curve requires visual examination. As stated in Depreciation Systems by Wolf and

Fitch, “the analyst must decide which points or sections of the curve should be given the most weight. Points at the end of the curve are often based on fewer exposures and may be given less weight than those points based on larger samples” (page 46). Some analysts chose to use mathematical fitting as a tool to narrow the population of curves using a least squares technique. Use of the least squares approach does not imply a statistical validity, however, because the underlying data does not meet criteria for independence between vintages and the same average price for property units through time. Thus, Depreciation Systems cautions, “… the results of mathematical fitting should be checked visually and the final determination of best fit made by the analyst” (page 48). This study uses the visual matching approach to match Iowa Curves, since mathematical fitting produces theoretically possible curve matches. Visual examination and experienced judgment allow the depreciation professional to make the final determination as to the best curve type.

Detailed information for each account is shown later in this study and in workpapers.

Simulated Plant Record Procedure (SPR)

The SPR - Balances approach is one of the commonly accepted approaches used to analyze mortality characteristics of utility property. SPR was applied to all accounts due to the unavailability of sufficient vintaged transactional data. In this method, an Iowa Curve and average service life are selected as a starting point of the analysis and its survivor factors are applied to the actual annual additions to give a sequence of annual balance totals. These simulated balances are compared with the actual balances by using both graphical and statistical analysis. Through multiple comparisons, the mortality characteristics (as defined by an average life and Iowa Curve) that are the best match to the property in the account can be found.

The Conformance Index (CI) is one measure used to evaluate SPR analyses. CIs are also used to evaluate the "goodness of fit" between the actual data and the Iowa Curve being referenced. The sum of squares difference (SSD) is a summation of the difference between the calculated balances and the actual balances for the band or test year being analyzed. This difference is squared and then summed to arrive at the SSD, where *n* is the number of years in the test band.

$$SSD = \sum_1^n (Calculated\ Balance_i - Observed\ Balance_i)^2$$

This calculation can then be used to develop other calculations, which the analyst feels might give a better indication for the "goodness of fit" for the representative curve under consideration. The residual measure (RM) is the square root of the average squared differences as developed above. The residual measure is calculated as follows:

$$RM = \sqrt{(\frac{SSD}{n})}$$

The CI is developed from the residual measure and the average observed plant balances for the band or test year being analyzed. The calculation of conformance index is shown below:

$$CI = \frac{\sum_1^n Balances_i / n}{RM}$$

The retirement experience index (REI) gives an indication of the maturity of the account and is the percent of the property retired from the oldest vintage in the band at the end of the test year. Retirement indices range from 0 percent to 100 percent and a REI of 100 percent indicates that a complete curve was used. A retirement index less than 100 percent indicates that the survivor curve was truncated at that point. The originator of the SPR method, Alex Bauhan, suggests ranges of value for the CI and REI. The relationship for CI proposed by

Bauhan is shown below[1]:

CI	Value
Over 75	Excellent
50 to 75	Good
25 to 50	Fair
Under 25	Poor

The relationship for REI proposed by Bauhan[2] is shown below:

REI	Value
Over 75	Excellent
50 to 75	Good
33 to 50	Fair
17 to 33	Poor
17 and below	Valueless

Depreciation analysts have used these measures in analyzing SPR results for nearly 60 years, since the SPR method was developed. Both the CI and REI statistics provide the analyst with important information with which to make a comparison between a band of simulated or calculated balances and the observed or actual balances in the account being studied. It is important to understand that observing the pattern of best-fitting curves over various bands, as well as considering other company and asset-specific information, is important in the ultimate decision for the most appropriate live and curve combination that will reflect future retirements of each account.

Statistics are useful in analyzing mortality characteristics of accounts, as well as determining a range of service lives to be analyzed using the detailed graphical method. However, these statistics boil all the information down to one, or at most, a few numbers for comparison. Visual matching through comparison between actual and calculated balances expands the analysis by permitting the analyst to view many points of data at a time. The goodness of fit should be

1 Public Utility Depreciation Practices, p. 96.
2 Public Utility Depreciation Practices, p. 97.

visually compared to plots of other Iowa Curve dispersions and average lives for the selection of the appropriate curve and life. Detailed information for each account is shown later in this study and in workpapers.

Judgment

Any depreciation study requires informed judgment by the analyst conducting the study. A knowledge of the property being studied, company policies and procedures, general trends in technology and industry practice, and a sound basis of understanding depreciation theory are needed to apply this informed judgment. Judgment was used in areas such as survivor curve modeling and selection, depreciation method selection, simulated plant record method analysis, and actuarial analysis.

Judgment is not defined as being used in cases where there are specific, significant pieces of information that influence the choice of a life or curve. Those cases would simply be a reflection of specific facts into the analysis. Where there are multiple factors, activities, actions, property characteristics, statistical inconsistencies, implications of applying certain curves, property mix in accounts or a multitude of other considerations that impact the analysis (potentially in various directions), judgment is used to take all of these factors and synthesize them into a general direction or understanding of the characteristics of the property. In these cases, it is rare for one factor to individually have a, substantial impact on the analysis. However, individual factors may shed light on the utilization and characteristics of assets. Judgment may also be defined as deduction, inference, wisdom, common sense, or the ability to make sensible decisions. There is no single correct result from statistical analysis; hence, there is no answer absent judgment. At the very least for example, any analysis requires choosing upon which bands to place more emphasis.

The establishment of appropriate average service lives and retirement dispersions for the Liquefied Natural Gas, Transmission, Distribution and General accounts require judgment to incorporate the understanding of the operation of the system with the available accounting information analyzed using the SPR balances and actuarial methods. The appropriateness of lives and curves depends not only on statistical analyses, but also on how well future retirement patterns will match past retirements.

Current applications and trends in use of the equipment also need to be factored into life and survivor curve choices in order for appropriate mortality characteristics to be chosen.

Average Life Group Depreciation

At the request of SJG, this study continues to use the average life group depreciation procedure to group the assets within each account. After an average service life and dispersion were selected for each account, those parameters were used to estimate what portion of the surviving investment of each vintage was expected to retire. The depreciation of the group continues until all investment in the vintage group is retired. ALG groups are defined by their respective account dispersion, life, and salvage estimates. A straight-line rate for each ALG group is calculated by computing a composite remaining life for each group across all vintages within the group, dividing the remaining investment to be recovered by the remaining life to find the annual depreciation expense, and dividing the annual depreciation expense by the surviving investment. The resultant rate for each ALG group is designed to recover all retirements less net salvage when the last unit retires. The ALG procedure recovers net book cost over the life of each account by averaging many components.

Theoretical Depreciation Reserve

The book depreciation reserve is derived from Company records and is reallocated from a functional level to individual accounts. This Study uses a reserve model that relies on a prospective concept relating future retirement and accrual patterns for property, given current life and salvage estimates. The theoretical reserve of a group is developed from the estimated remaining life, total life of the property group, and estimated net salvage. The theoretical reserve represents the portion of the group cost that would have been accrued if current expectations were used throughout the life of the group for future depreciation accruals. The computation involves multiplying the vintage balances within the group by the theoretical reserve ratio for each vintage. The ALG method requires an estimate of dispersion and service life to establish how much of each vintage is expected to be retired in each year until all property within the group is retired. Estimated average service lives and dispersion determine the amount within each average life group. The straight-line, remaining life theoretical reserve ratio at any given age (RR) is calculated as:

$$RR = 1 - \frac{(\text{Average Remaining Life})}{(\text{Average Service Life})} * (1 - \text{Net Salvage Ratio})$$

In the workpapers, a theoretical reserve is computed for each account as of December 31, 2018, using the proposed life. The proration factor is computed by developing a ratio of the total book reserve to the total theoretical reserve for Storage, Transmission, Distribution, and General Plant. After each theoretical reserve is computed, each amount is then multiplied by the proration factor to re-establish the book reserve for each account for purposes of then determining proposed depreciation rates.

DETAILED DISCUSSION

Depreciation Study Process

This depreciation study encompassed four distinct phases. The first phase involved data collection and field interviews. The second phase was where the initial data analysis occurred. The third phase was where the information and analysis was evaluated. Once the first three stages were complete, the fourth phase began. This phase involved the calculation of deprecation rates and documenting the corresponding recommendations.

During the Phase I data collection process, historical data was compiled from continuing property records and general ledger systems. Data was validated for accuracy by extracting and comparing to multiple financial system sources. Audit of this data was validated against historical data from prior periods, historical general ledger sources, and field personnel discussions. This data was reviewed extensively to put in the proper format for a depreciation study. Further discussion on data review and adjustment is found in the Salvage Considerations Section of this study. Also, as part of the Phase I data collection process, numerous discussions were conducted with engineers and field operations personnel to obtain information that would assist in formulating life and salvage recommendations in this study. One of the most important elements of performing a proper depreciation study is to understand how the Company utilizes assets and the environment of those assets. Interviews with engineering and operations personnel are important ways to allow the analyst to obtain information that is beneficial when evaluating the output from the life and net salvage programs in relation to the Company's actual asset utilization and environment. Information that was gleaned in these discussions is found both in the Detailed Discussion of this study in the life analysis section, the salvage analysis section, and also in workpapers.

Phase 2 was where the SPR and Actuarial analysis was performed. Phase 2 and 3 overlap to a significant degree. The detailed property records information is used in Phase 2 to develop observed life tables for life analysis. These tables were visually compared to industry standard tables to determine historical life characteristics. It is possible that the analyst would cycle back to this phase based on the evaluation process performed in Phase 3. Net salvage analysis consists of compiling historical salvage and removal data by functional group to determine values and trends in gross salvage and removal cost. This information was then carried forward into Phase 3 for the evaluation process.

Phase 3 was the evaluation process that synthesized analysis, interviews, and operational characteristics into a final selection of asset lives and net salvage parameters. The historical analysis from Phase 2 was further enhanced by the incorporation of recent or future changes in the characteristics or operations of assets that were revealed in Phase 1. Phases 2 and 3 allowed the depreciation analyst to validate the asset characteristics as seen in the accounting transactions with actual Company operational experience.

Finally, Phase 4 involved the calculation of accrual rates, making recommendations and documenting the conclusions in the final report. The calculation of accrual rates is found in Appendix B. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 1[3] documents the steps used in conducting this study. Depreciation Systems, page 289, documents the same basic processes in performing a depreciation study which are: Statistical analysis, evaluation of statistical analysis, discussions with management, forecast assumptions, write logic supporting forecasts and estimation, and write final report.

[3] Introduction to Depreciation for Public Utilities and Other Industries, AGA EEI, 2013.

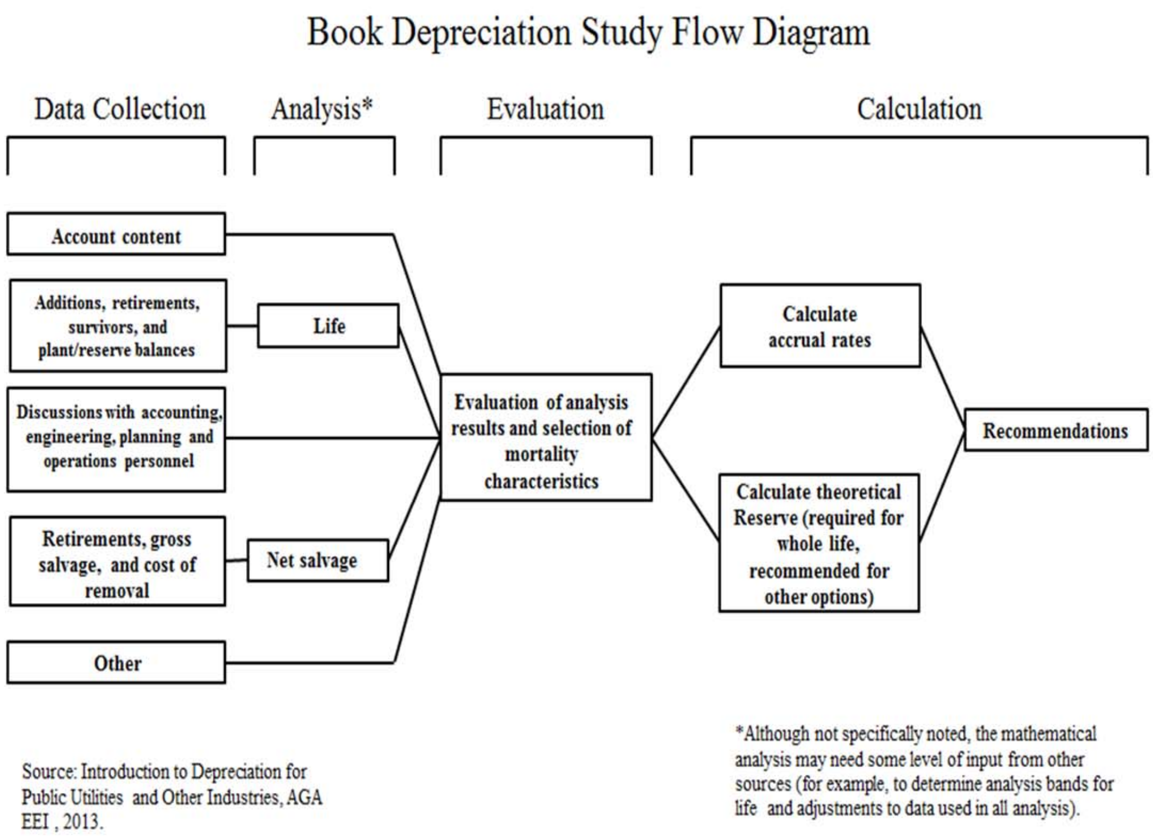


Figure 1

SJG DEPRECIATION STUDY PROCESS

Depreciation Rate Calculation

Annual depreciation expense amounts for the depreciable accounts of the Company were calculated by the straight line, average life group, remaining life system. With this approach, remaining lives were calculated according to standard ALG group expectancy techniques, using the Iowa Curves noted in the calculation. For each plant account, the difference between the surviving investment and adjusted for the book depreciation reserve, was divided by the average remaining life to yield the annual depreciation expense. These calculations are shown in Appendix B.

Remaining Life Calculation

The establishment of appropriate average service lives and retirement dispersions for each account within a functional group was based on engineering judgment that incorporated available accounting information analyzed using either the retirement rate actuarial or the SPR methods. After establishment of appropriate average service lives and retirement dispersion, remaining life was computed for each account. Theoretical depreciation reserve with zero net salvage was calculated using theoretical reserve ratios as defined in the theoretical reserve portion of the General Discussion section. The difference between plant balance and theoretical reserve was then spread over the ALG depreciation accruals. Remaining life is shown for each account in the workpapers.

Calculation Process

Annual depreciation expense amounts for all accounts were calculated by the straight line, remaining life procedure.

In a whole life representation, the annual accrual rate is computed by the following equation,

$$\text{Annual Accrual Rate} = \frac{(100\% - \text{Net Salvage Percent})}{\text{Average Service Life}}$$

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. With the straight line, remaining life, average life group system using Iowa Curves, composite remaining lives were calculated according to standard broad group expectancy techniques, noted in the formula below:

$$\text{Composite Remaining Life} = \frac{\sum \text{Original Cost} - \text{Theoretical Reserve}}{\sum \text{Whole Life Annual Accrual}}$$

For each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$\text{Annual Depreciation Expense} = \frac{\text{Original Cost} - \text{Book Reserve} - (\text{Original Cost}) * (1 - \text{Net Salvage}\%)}{\text{Composite Remaining Life}}$$

Where the net salvage percent represents future net salvage.

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

$$\text{Annual Depreciation Rate} = \frac{\sum \text{Annual Depreciation Expense}}{\sum \text{Original Cost}}$$

These calculations are shown in Appendix B. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in workpapers. Book depreciation reserves at an individual account level and the theoretical reserve computation was used to compute a composite remaining life for each account.

LIFE ANALYSIS

The SPR semi actuarial analysis method was applied to the majority of the accounts for SJG. For each account where this method was used, a simulated plant record method analysis was performed at intervals for the overall band and at various intervals (usually 10 and/or 5-year) within the overall balance period. In addition to reviewing the SPR analysis for each band and account, where possible, a graphical comparison between actual and simulated balances was performed.

The retirement rate actuarial analysis method was applied to those accounts where vintage retirement detail is available. Vintaged retirement detail by account is only available from 2003 forward. For each account, an actuarial retirement rate analysis was made with placement and experience bands of varying width. The historical observed life table was plotted and compared with various Iowa Survivor Curves to obtain the most appropriate match. Those analyses are contained in the workpapers.

In the actuarial analysis, using the overall band (i.e., placement from earliest vintage year through 2018 and experience band from earliest available experience year, 2003, through 2018) for each account, the most recently approved survivor curves were used as a starting point. Then, using the same life, various dispersion curves were plotted. Frequently, visual matching would confirm one specific dispersion pattern (e.g., L, S, or R) as an obviously better match than others. The next step would be to determine the most appropriate life using that dispersion pattern. Then, after looking at the overall placement band, different placement bands were plotted and analyzed. Repeated matching usually pointed to a focus on one dispersion family and small range of service lives. Generally, the goal of visual matching was to minimize the differential between the observed life table and Iowa curve in top and mid-range of the plots. When adequate activity is present a graph of the observed life table versus the proposed life and curve is provided for each account where the actuarial life analysis was used. For assets with a long life, a period of ten years' experience was generally inconclusive for actuarial analysis and SPR was given more weight to detect historic trends.

These results are used in conjunction with all other factors that may influence asset lives.

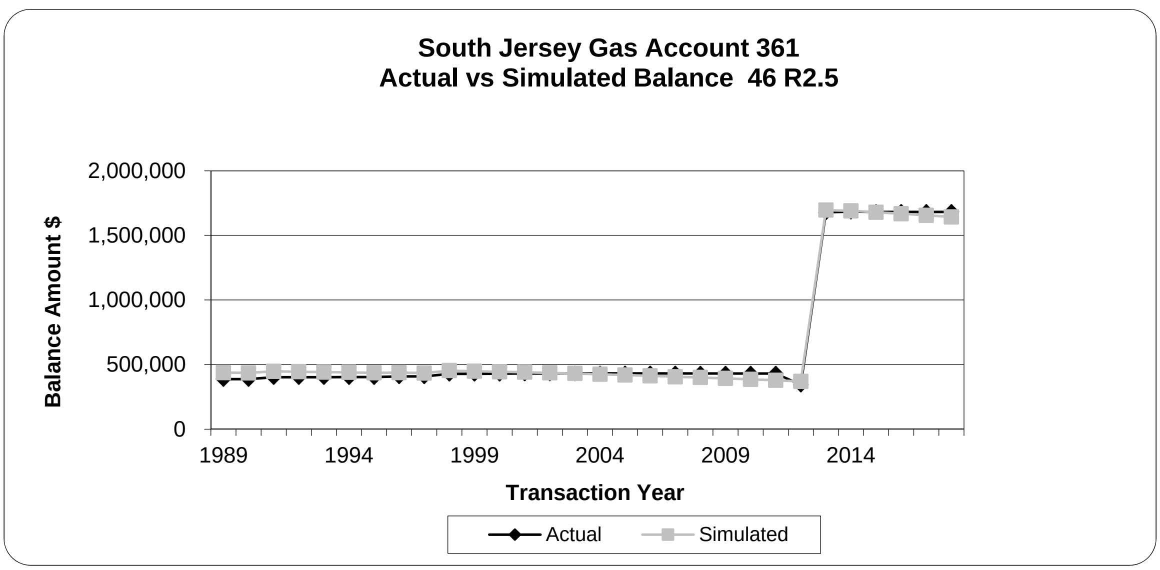
Liquefied Natural Gas Plant

Account 361 Structures and Improvements (46 R2.5)

This account consists of structures and various improvements associated with the natural gas plant. There is approximately $1.7 million in this account. The existing life is 46 R2.5. The average age of this account is 12.31 years.

Discussions with Company personnel indicated that there are five buildings and one shed in this account. With the exception of the original building, which houses the generators, all of these structures were built later. The original building has been re-coated and doors and windows have been replaced, but the skin and foundation are original.

When reviewing the SPR results, top ranked curves have REIs that are not in the excellent range and the CIs are in the poor range. When narrowing the curves to REIs of 90 and above for bands of 30 years and longer, the R2.5 curve is consistently the first choice. A life in the mid-40s is reasonable given that the steel building would last longer, but some of the sub systems would need to be replaced earlier. Based on the study analysis, type and age of assets, and judgment, the 46 R2.5 dispersion is retained. A comparison of actual versus simulated balances is shown below for the 46 R2.5.

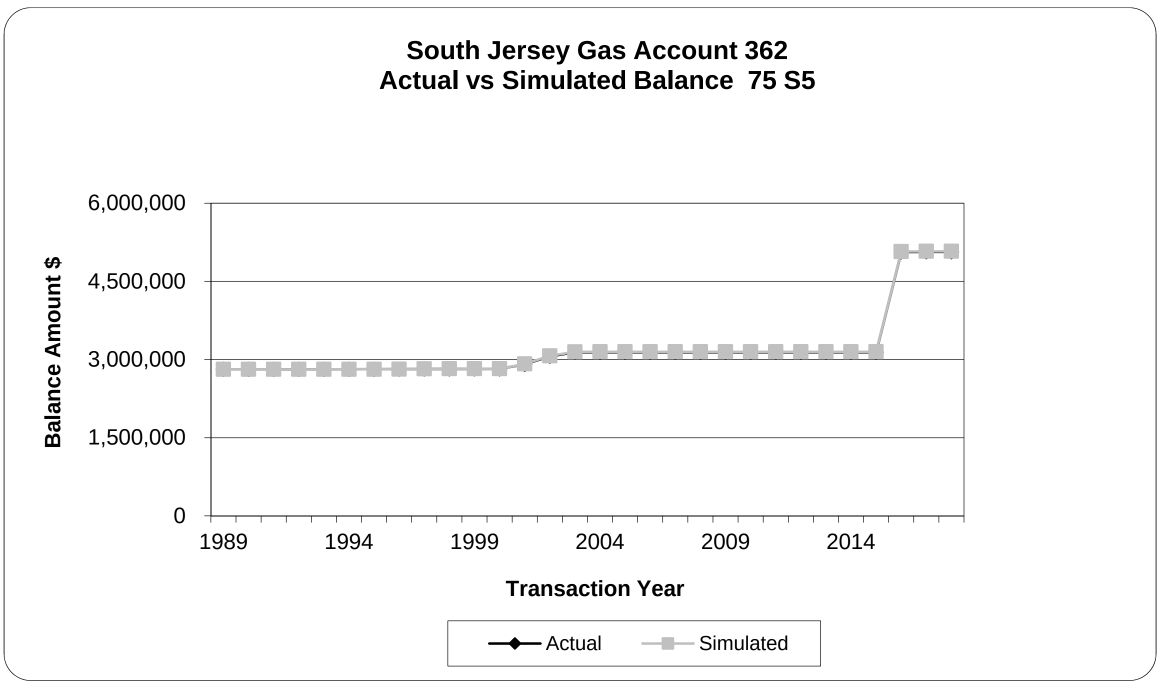


Account 362 Gas Holders (75 S5)

This account consists of gas holders used in connection with the storage of gas. There is approximately $5.1 million in this account. The existing life is 50 S5. The average age of this account is 26.87 years.

Discussions with Company personnel indicated that the tank is basically original equipment but was recoated around 20 years ago. Over time the Company has replaced heaters, replaced and automated sumps, automated lighting systems, upgraded level systems and relief valves, and upgraded overflow valve. Around half of the assets in this account are related to short-lived (20 year) assets such as coatings and automation, but the tank would last longer.

All the SPR runs show REIs of less than 1, in the valueless range. The CIs are all in the excellent range, but with life indications far beyond a range of reasonableness. This study recommends increasing the life of this account to 75 years and retaining the S5 dispersion. A comparison of actual versus simulated balances is shown below for the 75 S5.

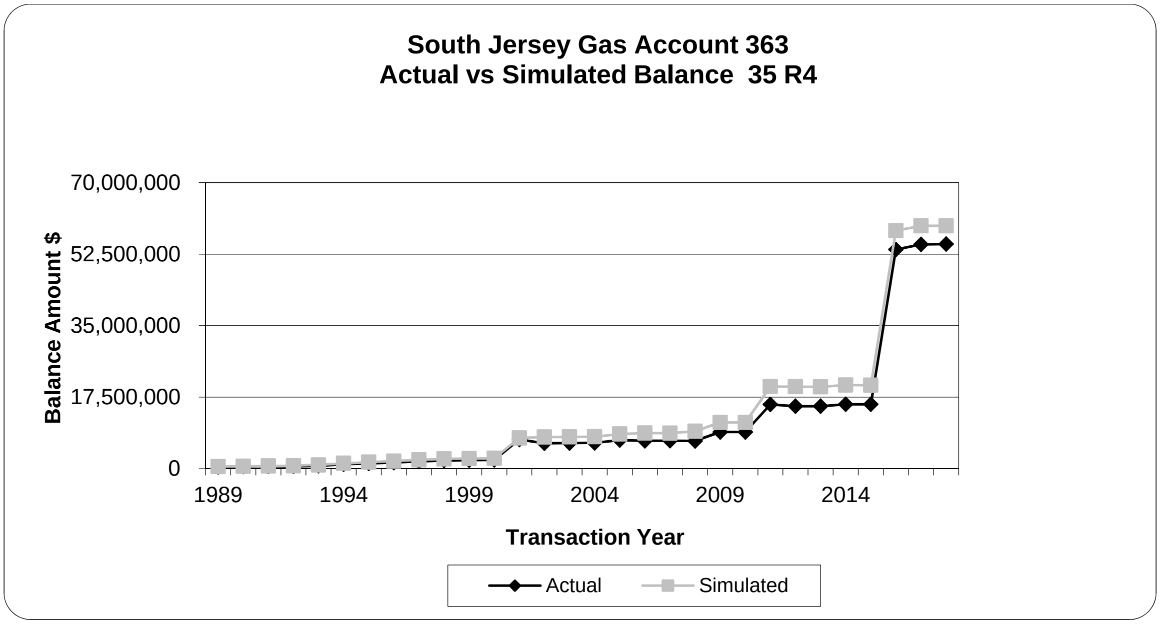


Account 363 Purification Equipment (35 R4)

This account consists of equipment used to remove impurities from gas and for conditioning gas. There is approximately $55.0 million in this account. The existing life is 30 R4. The average age of this account is 4.79 years.

Discussions with Company personnel indicated essentially all assets in this account have been replaced or modernized since original installation. Three vaporizers have been added over time, with the most recent replacement replaced at 29 years old in 2002. The third vaporizer is being evaluated for replacement at around 30 years old. The largest asset group in this account is the liquefier, which was recently replaced at around 30 years. There are two boil-off compressors, which run 24 hours a day. They are electric driven and have routine, smaller overhauls under O&M. The original compressors were replaced at around 30 years as well. Some of the software may have a 5-10 years life. The newer equipment may see a slightly longer life than the earlier generations of equipment. However, there are a number of other assets such as software, automation, etc., that would have much shorter life.

The SPR results show lives of 15 to 18 years, which is not a reasonable expectation for the type of assets. Based on the analysis, type of assets, discussions with Company personnel and judgment, this study recommends moving the life to 35 years but retaining the R4 dispersion. A comparison of actual versus simulated balances is shown below for the 35 R4.



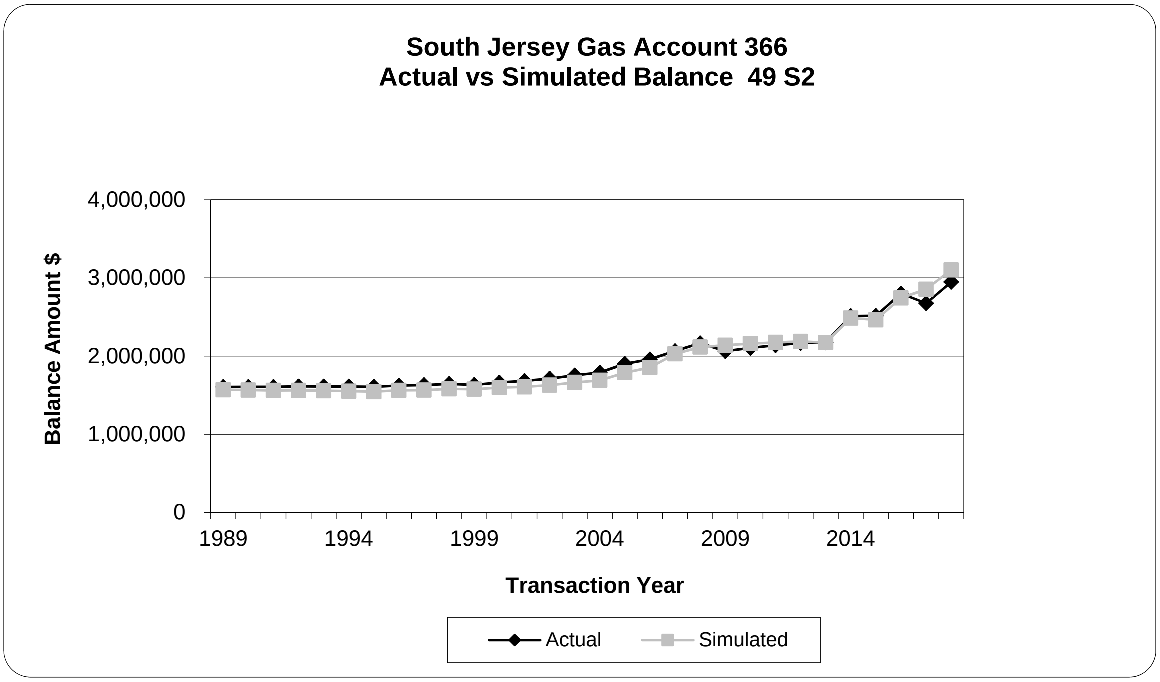
Transmission Plant

Account 366 Structures and Improvements (49 S2)

This account consists of structures and various improvements associated with the transmission plant. There is approximately $2.9 million in this account. The existing life is 50 R4. The average age of this account is 19.79 years.

Discussions with Company personnel indicated that a building life of 50 is reasonable. Some buildings are pre-constructed and others are masonry buildings. There are other assets, such as HVAC, that would have a shorter life.

In bands of 30 years and greater, SPR results show the top ranked curve as a 49 S2. The analyses indicate poor Cis but some excellent REIs. Given the type of investments in this account and discussions with Company personnel, this study recommends moving to a 49 year life with the S2 dispersion. A comparison of actual versus simulated balances is shown below for the 49 S2.

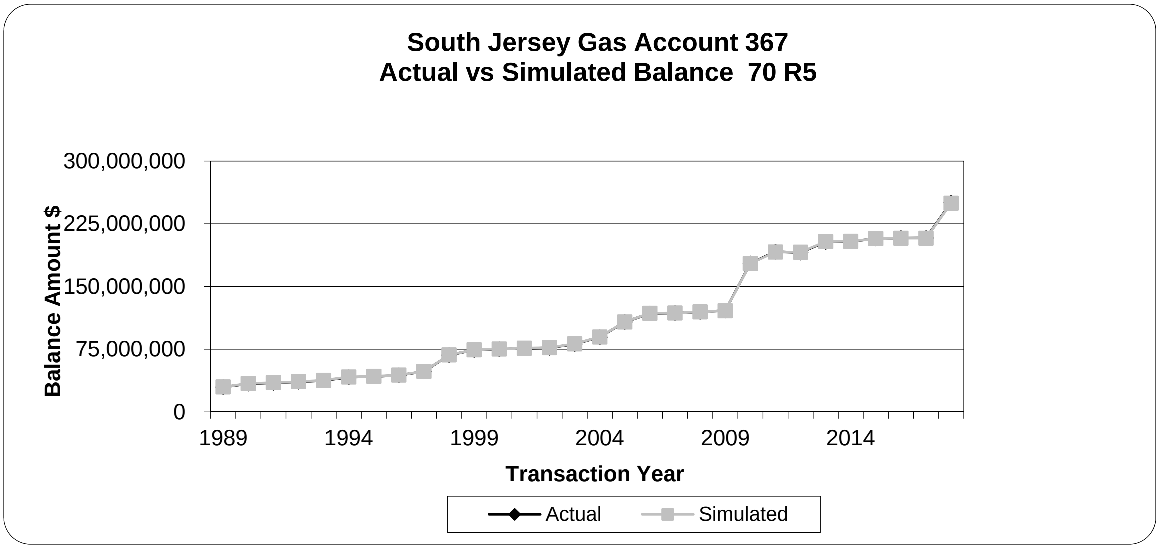

South Jersey Gas Account 366
Actual vs Simulated Balance 49 S2
Balance Amount $
4,000,000
3,000,000
2,000,000
1,000,000
0
1989
1994
1999
2004
2009
2014
Transaction Year
Actual
Simulated

Account 367 Mains (70 R5)

This account consists of the cost of steel mains and other miscellaneous assets used in connection with transmission operations. There is approximately $250.3 million in this account. The existing life is 68 R4. The average age of this account is 13.8 years.

Discussions with Company personnel indicated there are approximately 146 miles of steel transmission mains, all of which is cathodically protected. The existing 50 year life appears shorter than expected for the types of assets in this account, and a life of at least 60 years is a more reasonable expectation. None of the programs currently affect transmission mains. PHMSA will affect transmission mains, but at this point it is still in the planning stage. The Company expects that they may renew 40-50 miles of mains and retest the rest. In-line inspections are finding more problems that can be repaired before they become major issues, and the level of repair is increasing.

In bands of 30 years and greater, SPR results show the REIs in the valueless range and CIs in the excellent range. However, the life range for some of the top ranked curves is outside the range of reasonable. Based on experience with Account 376, which will be discussed later, this study recommends moving to a 70 year life with the R5 dispersion. A comparison of actual versus simulated balances is shown below for the 70 R5.



Account 368 Compressor Station Equipment (35 R4)

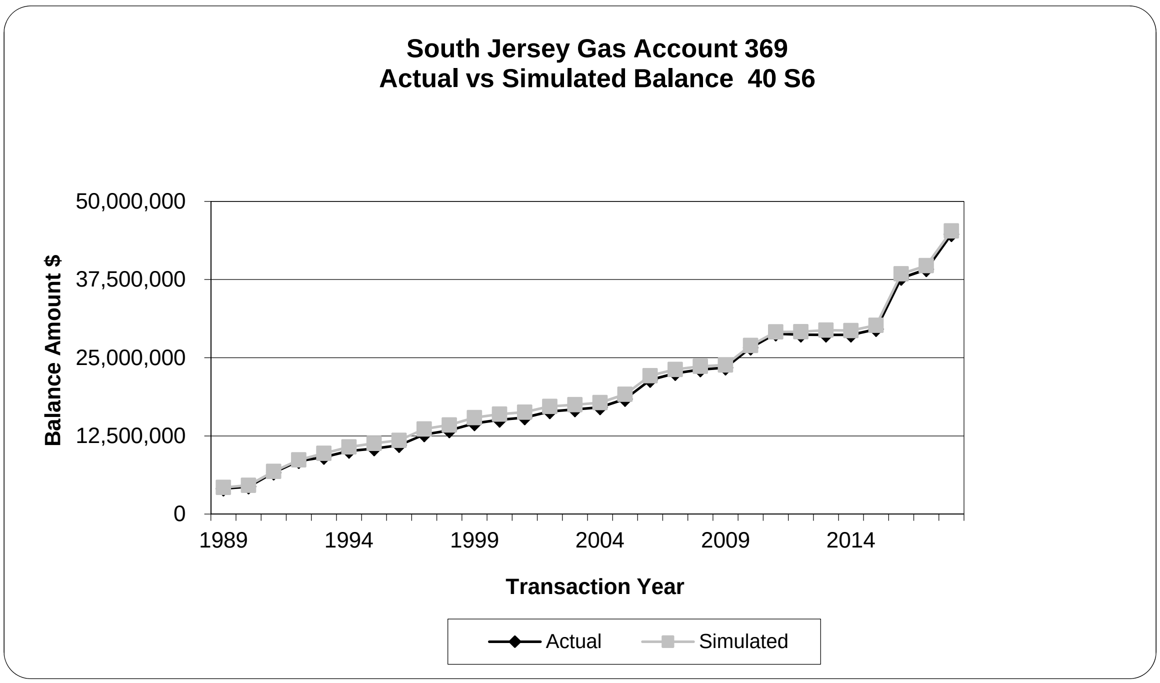
This account consists of compressor station equipment used in connection with transmission operations. Interviews with Company personnel indicated that there is currently no investment. One station is in the process of being constructed, and is scheduled to be in service around November 2020. There will be two units (15k HP total), both of which are centrifugal with electric drive. These units will run a small number of hours during the year. The Company would expect a life somewhere between 30 and 40 years to be reasonable. Based on Company expectations and industry expectations for this type of equipment, this study recommends 35 R4 and a whole life rate of 2.86% be approved and applied to investment when put in service.

Account 369 Measuring and Regulating Equipment (40 S6)

This account consists of the measuring and regulating station equipment used in connection with transmission operations. There is approximately $44.7 million in this account. The existing life is 30 S6. The average age of this account is 12.62 years.

Interviews with Company personnel indicated that the city gate is always a custody transfer point and that there are around 150 stations in total. Transmission stations tend to be larger and use control valves, all of which are SCADA driven with security equipment. Nearly all have pressure regulation, and regulators are repaired on site. The Company is rapidly growing and will upgrade regulators due to capacity needs. They have started using a new treatment, aluminum spray coatings, on above ground stations that will not corrode. Retirements are a result of parts wearing out and capacity increase needs. The Company believes the new stations, operationally, could last 40 years or more but that the older stations may only last 30 or less.

In bands of 30 years and greater, SPR results show the top ranked curve is an S6 33 with an excellent REI of 100 and the CI in the good range. Even though a lower life is indicated, moving the life longer is reasonable due to the replacement of older stations and newer coatings/technology. Based on the SPR results and Company input, this study recommends moving to a 40 year life and retaining the S6 dispersion. A comparison of actual versus simulated balances is shown below for the 40 S6.

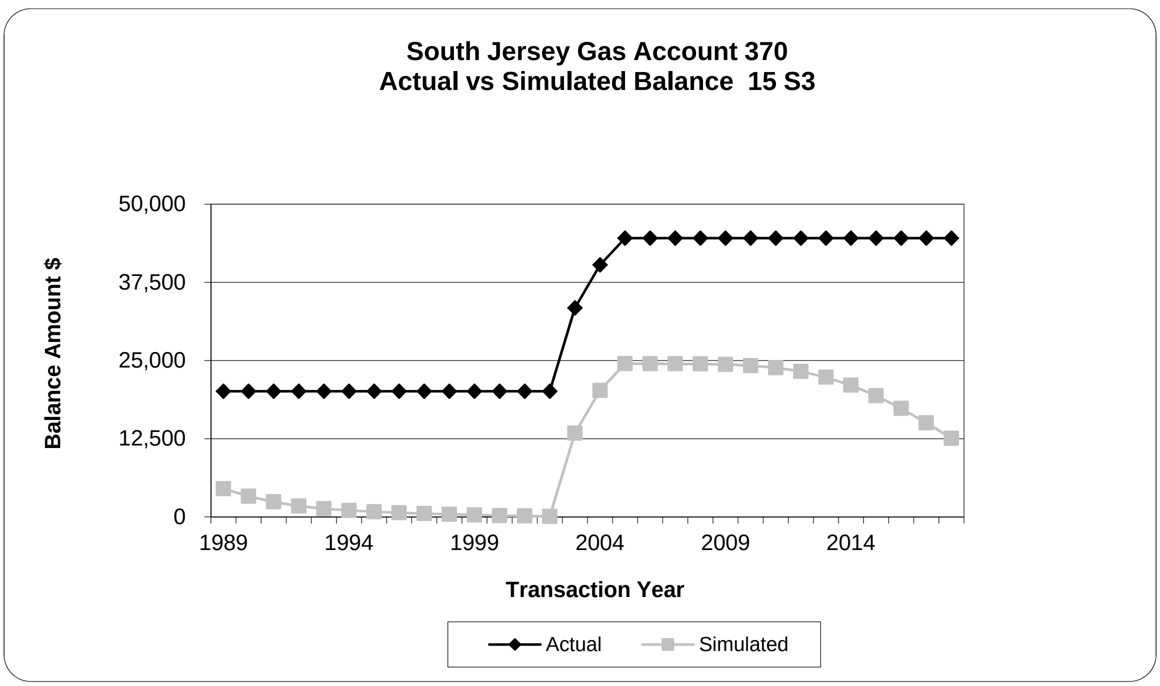


Account 370 Communication Equipment (15 S3)

This account consists of all communication equipment including mobile and fixed radio systems along with telephone, telemetering, and other miscellaneous communication equipment used in connection with transmission activities. There is approximately $44.6 thousand in this account. The existing life is 25 S3. The average age of this account is 29.11 years.

Discussions with Company personnel indicated that 25 years for transmitters and SCADA is long, especially with newer technology and electronics in the field.

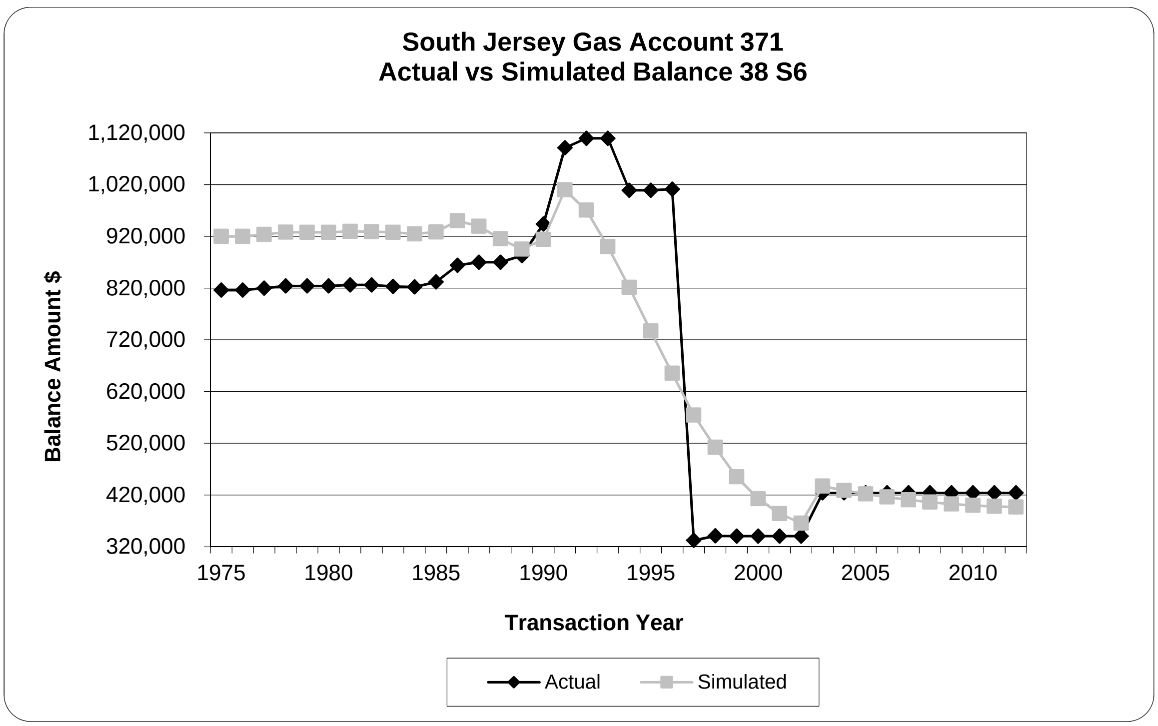
Because retirements have been very limited in this account, the SPR analysis does not produce any meaningful results. Giving consideration to the historical activity, the type of assets, and the impact of software technology, this study proposes to move the life of the account to 15 years and retain the existing S3 dispersion. A comparison of actual versus simulated balances is shown below for the 15 S3.



Account 371 Other Equipment (38 S6)

This account consists of the cost of various other equipment used in connection with transmission assets and activities. There is approximately $184.1 thousand in this account. The existing life is 38 S6. The average age of this account is 26.44 years.

The top ranked curve with an REI of 100 in bands of 20 years and longer is the S6 dispersion. Given the age of the assets, this study proposes to retain the 38 year life and the S6 dispersion. A comparison of actual versus simulated balances is shown below for the 38 S6.

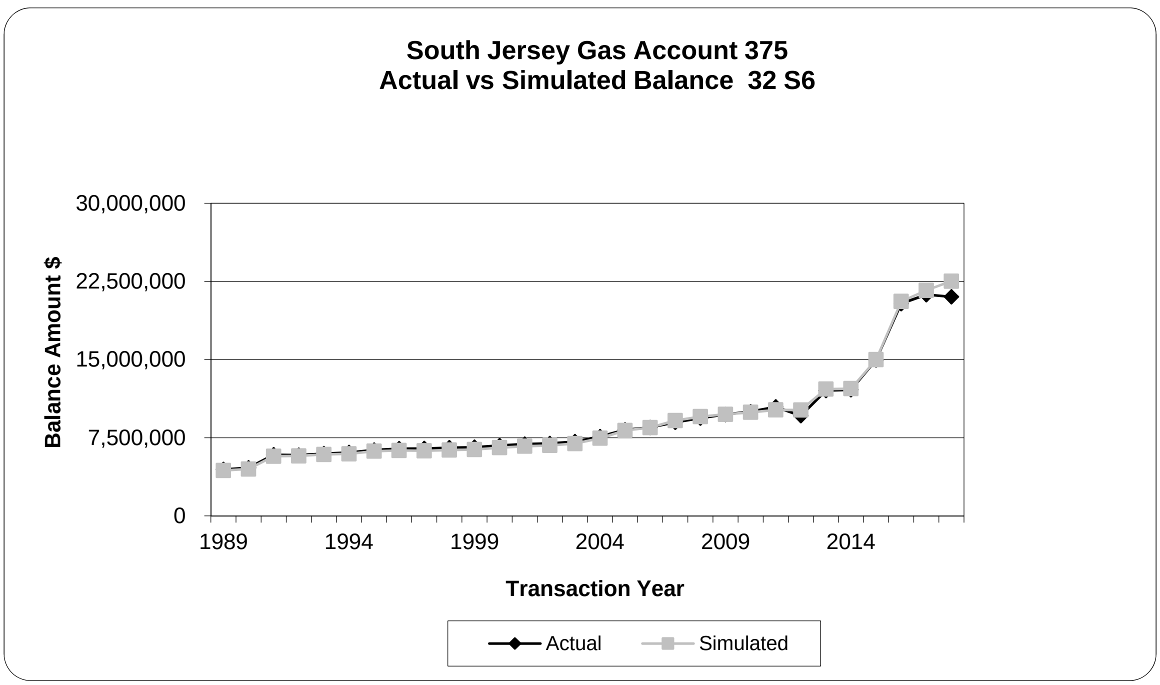


Distribution Plant

Account 375 Structures and Improvements (32 S6)

This account consists of structures and various improvements associated with the distribution plant. There is approximately $20.9 million in this account. The existing life is 34 L5. The average age of this account is 9.73 years.

For bands of 20 years and longer, SPR analysis shows the S6 dispersion curve as the top ranked with an REI of 100 but with fair to poor CIs. Besides long-lived assets such as buildings, there are many short lived items in this account such as lighting, pumps, roofs, and other items. Based on the mix of assets in this account and SPR results, this study recommends moving to a 32 year life with the S6 dispersion. A comparison of actual versus simulated balances is shown below for the 32 S6.

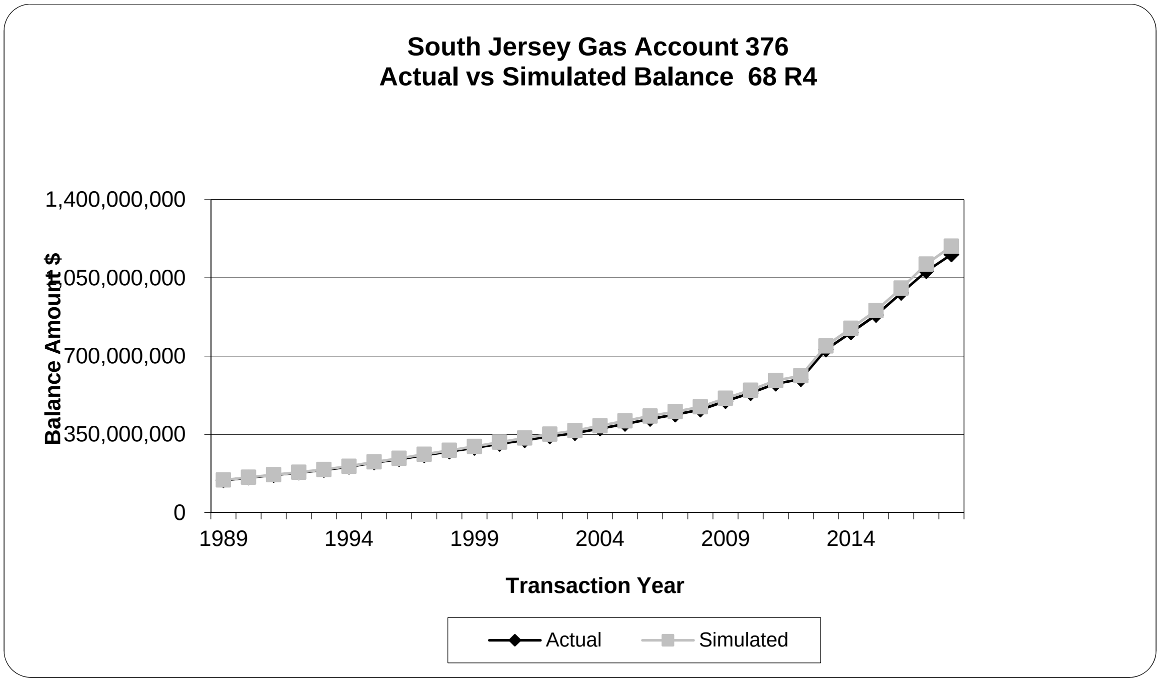


Account 376 Mains (68 R4)

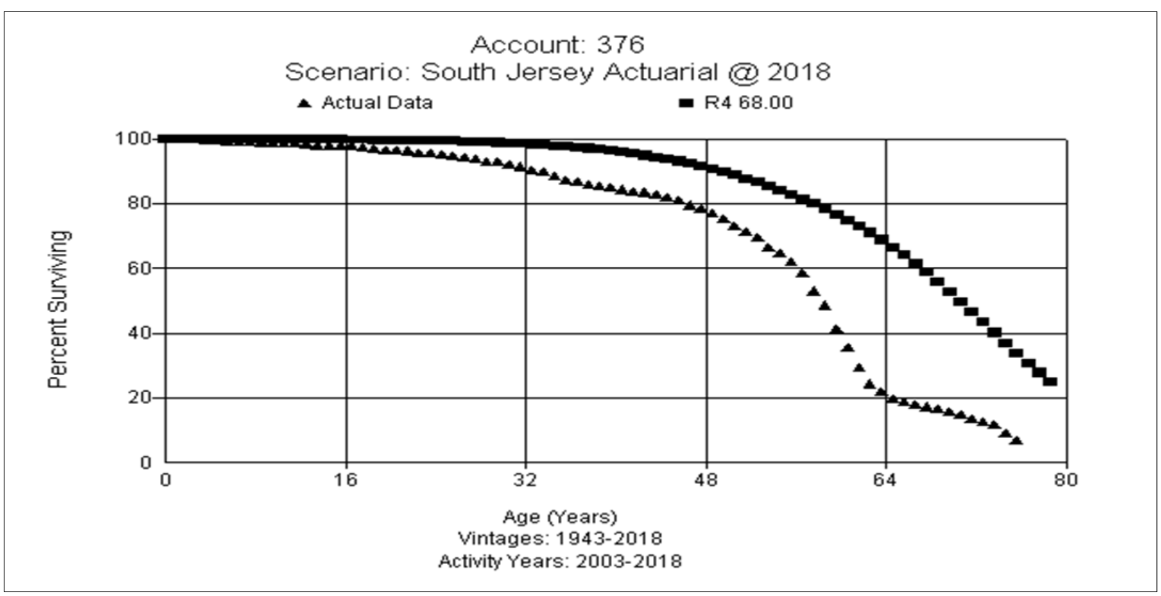
This account consists of the cost of steel mains and other miscellaneous assets used in connection with distribution operations. There is nearly $1.2 billion in this account. The existing life is 68 R4. The average age of this account is 12.28 years.

Discussions with Company personnel indicated that there is approximately 6,000 miles of mains. All cast iron has been removed from the system and bare steel is expected to be entirely removed by late 2020 or mid-2021. The pipe replacements are plastic and are expected to have as long a life as the steel being replaced or longer. Unless there is a pressure issue, steel will be replaced with plastic. The primary cathodic protection is anodes on wrapped steel, which are expected to last 15-20 years. The wells for the rectifiers will last around 25 years. The Company has renewed a significant amount of pipe, and the renewals may be affecting the historical life analysis as the programs were retiring some pipe earlier than the projected life. Approximately 74% of distribution is plastic and of that, 25% is Aldel-A. The Company does not currently have a program to replace Aldel-A.

For Account 376 SPR analysis, bands of 40 years and longer show the R4 dispersion curve as one the top four ranked with an REI of 100 and an excellent CI. However, the life associated with the R4 is 53 years, which is less than the existing 68 R4. Leaving the life at 68 years is reasonable until or if the Company starts a early generation plastic replacement program. Once the current replacement program nears completion, the dispersion, and eventually the life, will begin to increase back to the expected level. Based on the discussions with Company personnel, the mix of assets, and the analysis, this study recommends retention of the 68 R4 dispersion. A comparison of actual versus simulated balances is shown below for the 68 R4.



In the 10 years of actuarial data (2003-2012) available for analysis, the widest placement band and experience band produce a curve that goes to 20 percent surviving. Although the level may not rise to a statistically valid sample, as with the SPR analysis, the actuarial analysis also indicates a life less than the existing and movement to a slightly flatter dispersion. A graph of the account observed life table versus the proposed life and curve is shown below.

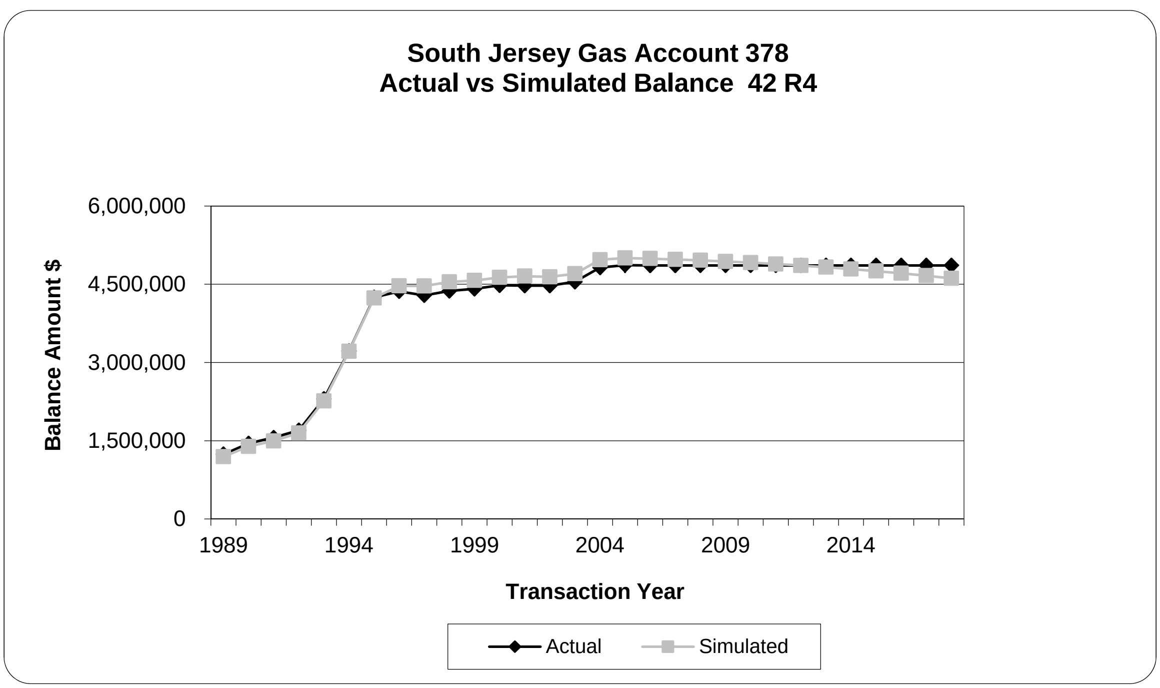


Account 378 Measuring and Regulating Station Equipment- General (42 R4)

This account consists of the measuring and regulating station equipment used in connection with general distribution operations. There is approximately $4.9 million in this account. The existing life is 38 R4. The average age of this account is 26.78 years.

Discussions with Company personnel indicated that they do not expect the “MegaRule” to materially affect the level of retirements in this account. They do not see any specific reason that the life would materially increase or decrease and believe the existing 38 years or slightly longer would be reasonable.

For SPR analysis, the top ranked curve with excellent REI and fair CI is the S6 dispersion. About half-way down the ranking, the R4 dispersion has a REI of 100 but the CI is in the poor range. Keeping the same dispersion as existing, giving consideration to the discussions with Company personnel, and using judgment, this study recommends moving to a 42 year life and retaining the R4 dispersion. A comparison of actual versus simulated balances is shown below for the 42 R4.

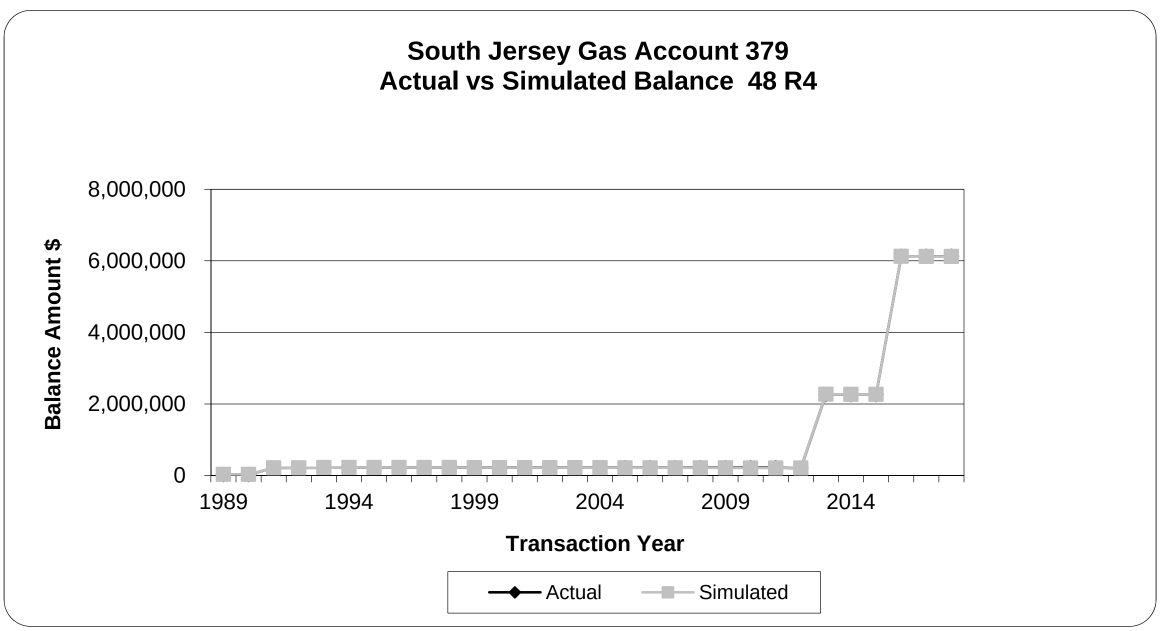


Account 379 Measuring and Regulating Station Equipment- City Gate (48 R4)

This account consists of the measuring and regulating station equipment used in connection with City Gate distribution operations. There is approximately $6.1 million in this account. The existing life is 38 R4. The average age of investment is 5.38 years.

Discussions with Company personnel indicated that there is a small sample size, with only seven city gates. They may replace control valves or heaters, but they do not generally replace stations. The gates are in buildings (for noise reasons) so they are more protected from the environment. The Company expects, operationally, that there should be some difference in life between a DRS (378) and a city gate, with the city gates having a slightly longer life.

The SPR analysis produces both excellent REI and CI with the R4 dispersion and a life of 48 years. This supports the discussions with Company personnel and a move toward a slightly longer life in both Account 378 and 379. This study recommends moving to a 48 year life and retaining the R4 dispersion. A comparison of actual versus simulated balances is shown below for the 48 R4.

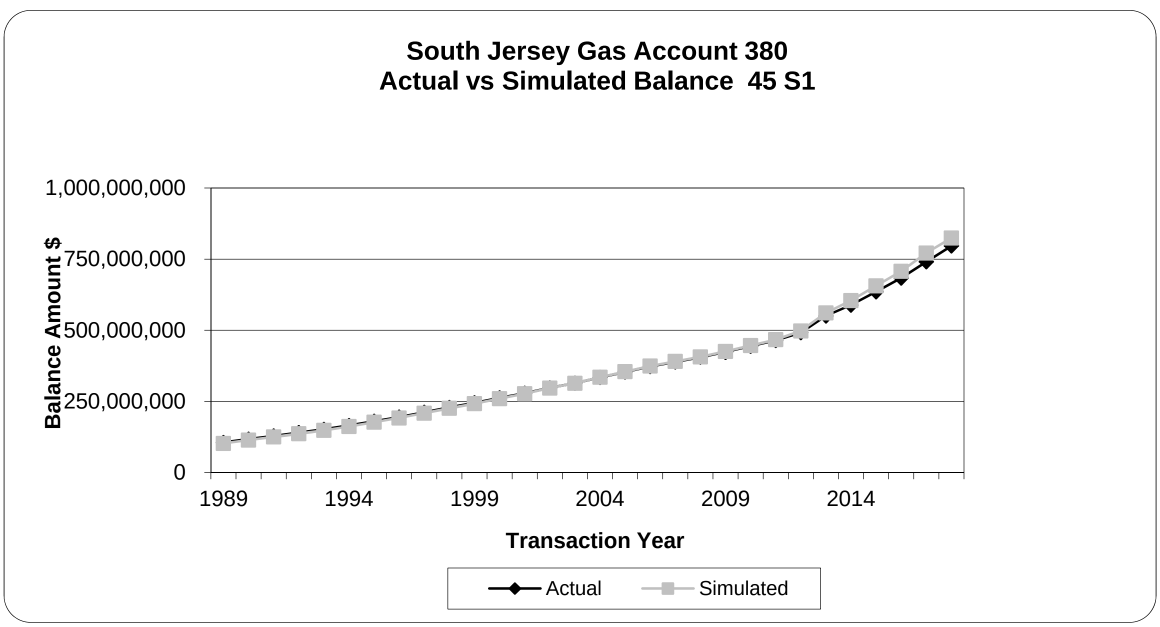


Accounts 380 Services (45 S1)

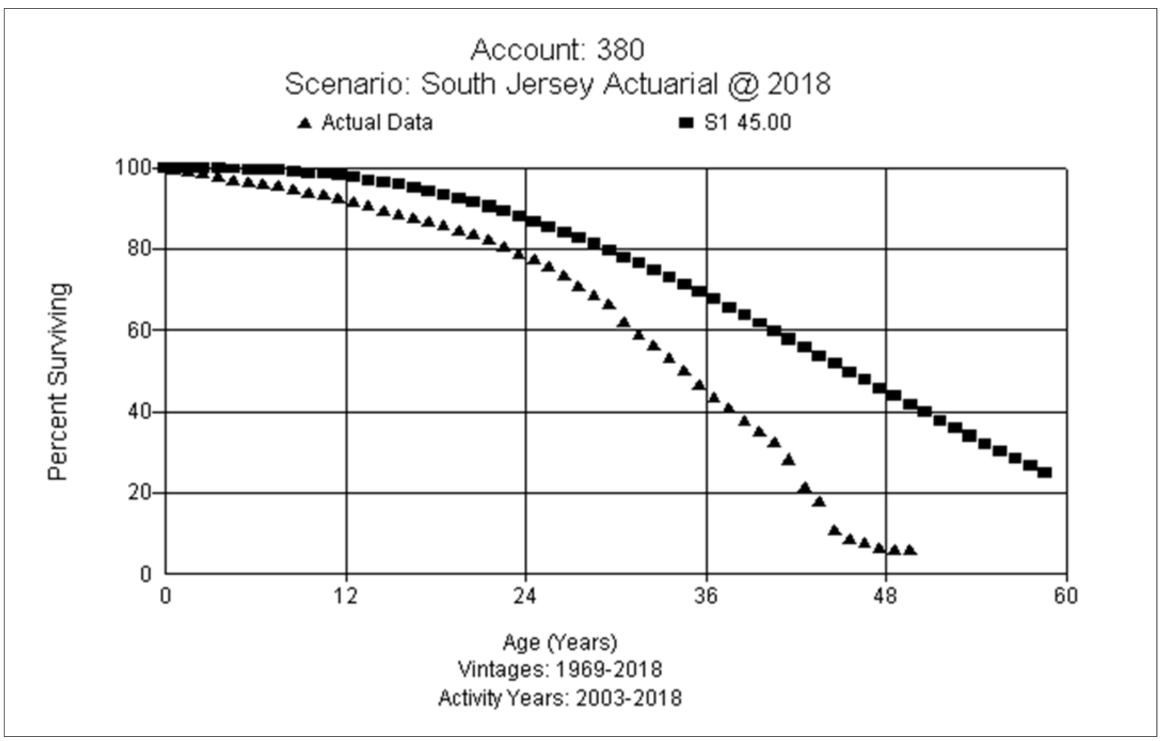
This account consists of the cost of all types of services associated with the distribution operations. There is approximately $796.7 million in the account. The existing life is 45 S1. The current average age of investment is approximately 9.62 years.

Discussions with Company personnel indicate EFVs are one of the triggers of replacement of services (SHARP Program). Risers are part of the service. Main replacement work also includes replacing some services. Service line lives may be shorter than in the past due to the concurrent replacement with mains, among other reasons. Any steel service will be replaced with plastic when there is mains work. After the steel main program is over, service life as seen in the analysis may begin to increase.

The top ranked curves in the SPR analysis produces are signaling lives that are below the existing lives. Generally, the REIs are excellent and the Cis are fair to good. Considering the replacement activity is depressing the life shown in the analysis, this Study retains the existing life rather than to decrease it. A comparison of actual versus simulated balances is shown below for the 45 S1.



There is just over ten years of actuarial data from 2003-2012 available for analysis. Generally, the life indications, from a short experience band, appear to be noting the effects of the recent replacement programs in the life characteristics. In this case, the stub curve goes to near zero percent surviving. Similar to the SPR analysis, the best fits indicate a life about 10 years less than the existing life and do not match the future life expectations after the replacement programs. The life indications suggest a decrease (similar to mains). Given the large effort to replace aging infrastructure, neither SPR analysis nor actuarial analysis may yield life characteristics applicable to the long-term projection for current investment. With these considerations, this study recommends retaining the existing 45 S1. A graph of the account observed life table versus the proposed life and curve is shown below.

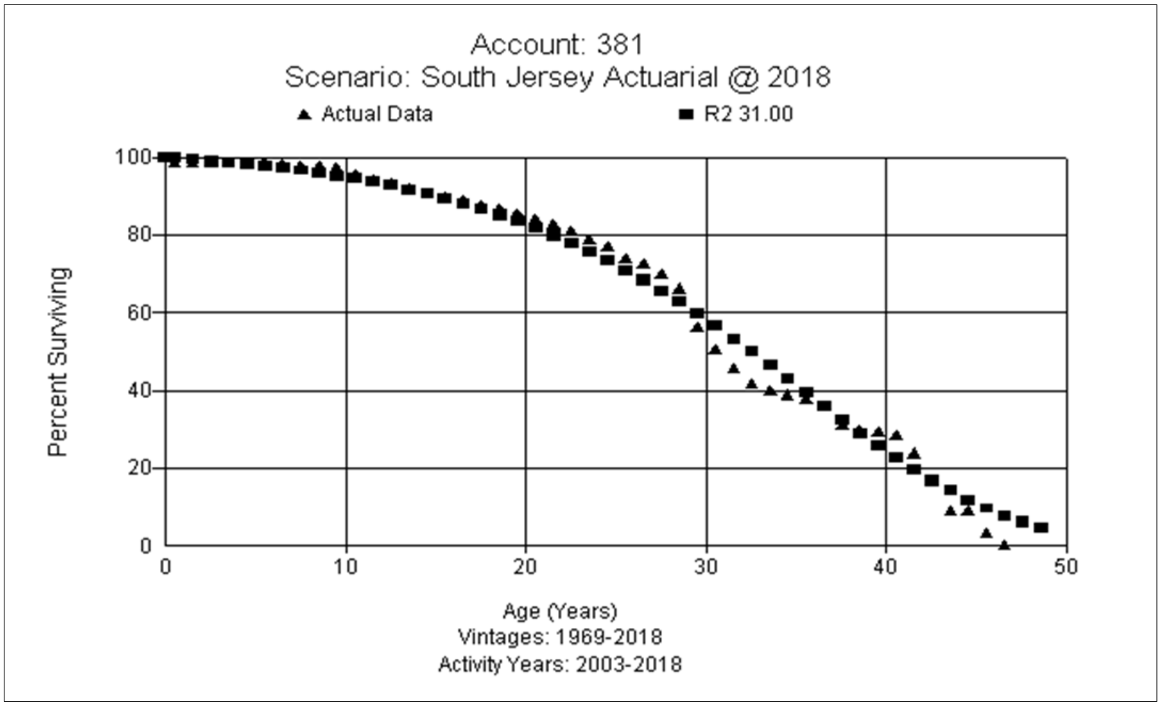


Account 381 Meters (31 R2)

This account consists of the cost of meters associated with distribution operations. There is approximately $66.5 million in the account. The existing life is 39 S0. The current average age of investment is approximately 8.11 years.

Discussions with Company personnel indicated they no longer repair residential meters. This change will have the effect of lowering the life of meters since repairing meters and keeping them in service will extend the useful life of those meters. They will test and, if possible, repair commercial meters. Currently, there are nearly 400,000 meters on the system. Larger meters (over 500 CFH) are subject to mandatory replacement every 10 years, which is about 5-6% per year. Smaller meters are targeted for replacement when they reach 15-20 years, although there is no mandate and it does not always happen. The State sampling criteria is tightening in 2020 and it may trigger a higher level of meter replacements going forward. The Company replaced 40-45 thousand meters due to Hurricane Sandy.

Both the SPR and actuarial analysis were performed. The SPR analysis produces excellent REIs but poor to fair CIs in the fuller bands. In this account, the actuarial analysis was useful in projecting future life characteristics since the life-cycle for these assets is shorter than seen in Mains or Services and there were sufficient transactional activity. The actuarial analysis produced a great fit in the fuller placement 1969-2018 and experience band 2003-2018 with the 31 R2. Based upon the analyses, the changing sampling requirements, and general expectation for meters to have a shorter, not longer, life, this study recommends moving to a 31 year life and the R2 dispersion. A graph of the account observed life table versus the proposed life and curve is shown below.

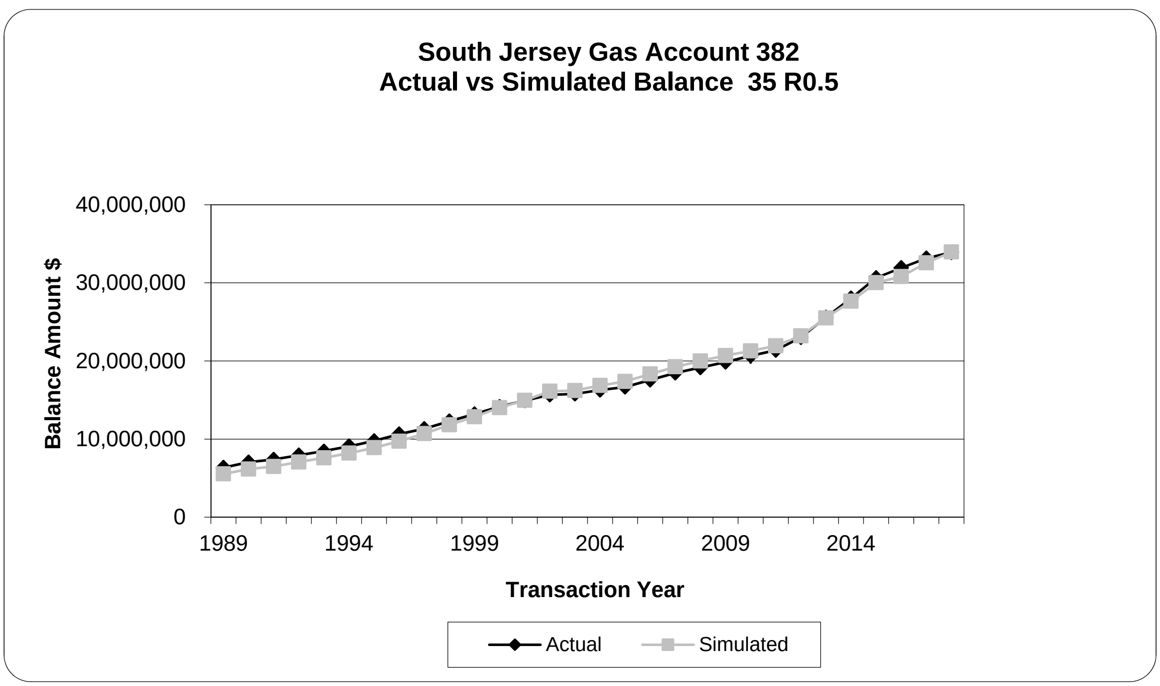

Account: 381
Scenario: South Jersey Actuarial @ 2018
▲ Actual Data
■ R2 31.00
Percent Surviving
100
80
60
40
20
0
0
10
20
30
40
50
Age (Years)
Vintages: 1969-2018
Activity Years: 2003-2018

Account 382 Meter Installations (35 R0.5)

This account consists of the cost of meter installations associated with distribution operations. There is approximately $33.9 million in the account. The existing life is 34 R0.5. The current average age of investment is approximately 9.75 years.

Discussions with Company personnel indicated that they are currently using a pre-fabricated meter bar, and began using these at least 15 years ago. The meter bar does not include the riser. Company personnel indicated that 75% of the time when a meter is pulled the meter bar is replaced as well. This would suggest the life of this account should be reasonably close to the 31 years life of the meters.

In the SPR analysis, the focus was on curves that produce an REI of 100, but the CIs are in the poor to fair range. The 35 R0.5 is the top ranked curve with an excellent REI of 100 in the 30 year band and is 35.6 across all the other bands. A comparison of actual versus simulated balances is shown below for the 35 R0.5.

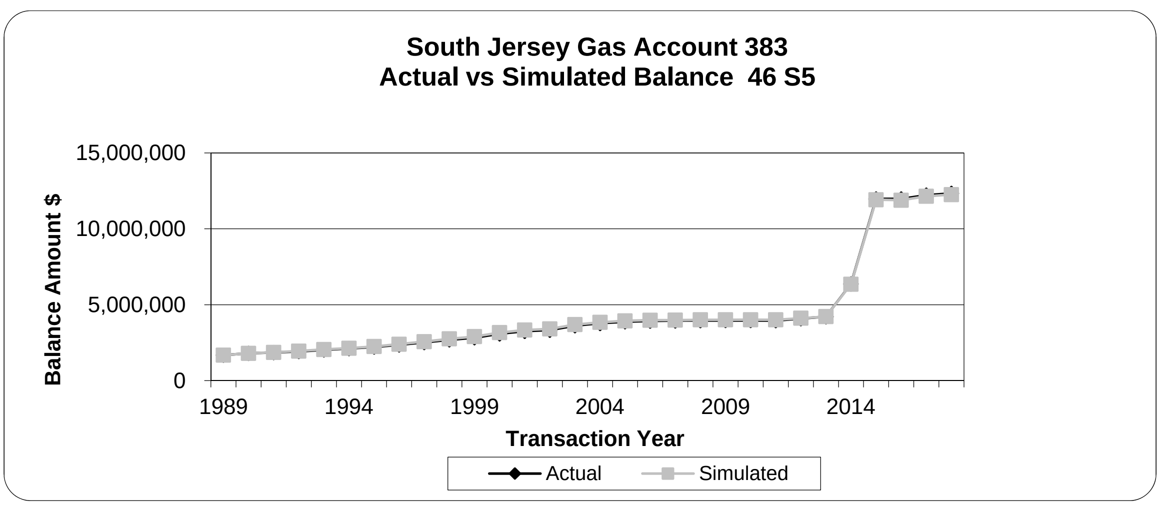


Account 383 House Regulators (46 S5)

This account consists of the cost of house regulators associated with distribution operations. There is approximately $12.3 million in this account. The existing life is 45 R4. The current average age of investment is approximately 9.96 years.

Discussions with Company personnel indicated that since the implementation of Maximo in 2014 they are doing a more accurate job at retiring regulators, which is expected to decrease the life indications going forward. There have been enough years of the higher level of transactions to materially affect the life analysis at this point.

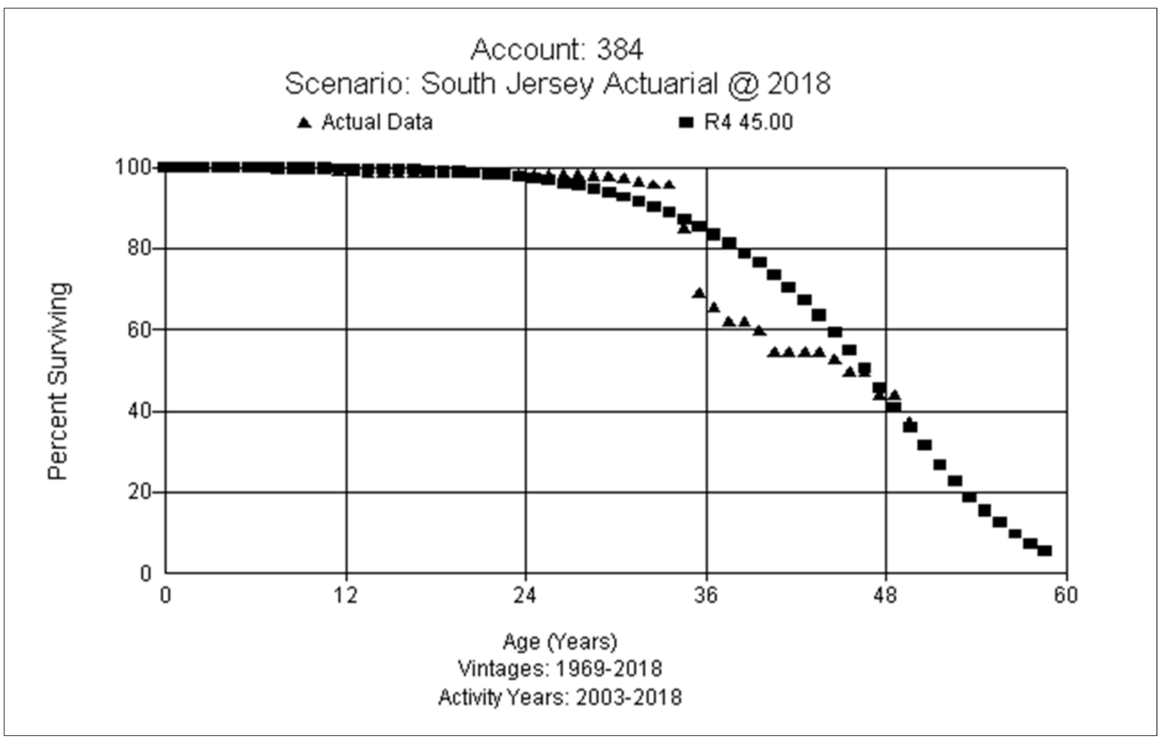
Both the SPR and actuarial analysis were performed. However, with the limited experience band (2003-2018), the actuarial analysis produced life indications beyond what would reasonably be expected. In the SPR analysis, some curves produce an excellent REI and CI. However, the top ranked curves in the fuller bands have excellent CIs and fair REIs. The steeper dispersion patterns yield the best REI and CI. The 30 year band has the S5 ranked in the middle and has an excellent CI and REI with a life of 46 years. The CI declines to good in fuller bands analyzed. Due to the existing life, only bands of 30 years or longer were evaluated. Based upon the analyses, this study recommends moving to a 46 year life and the S5 dispersion. A comparison of actual versus simulated balances is shown below for the 46 S5.



Account 384 House Regulator Installations (45 R4)

This account consists of the cost of the installation of house regulators associated with distribution operations. There is approximately $52.0 million in this account. The existing life is 45 R3. The current average age of investment is 5.65 years.

Both the SPR and actuarial analysis were performed. In the SPR analysis, the top ranked curves produce an excellent REI and CI with the 40 S6. The other bands produce similar results, which indicates a life lower than approved and lower than expected. However, the actuarial analysis provides a good fit in the fuller bands (e.g. placement 1969-2018 and experience 2003-2018) with the 45 R4. Based on type of assets, the analyses and judgment, this study recommends retention of the existing 45 year life, but moving from the R3 to R4 dispersion. A graph of the account observed life table versus the proposed life and curve is shown below.



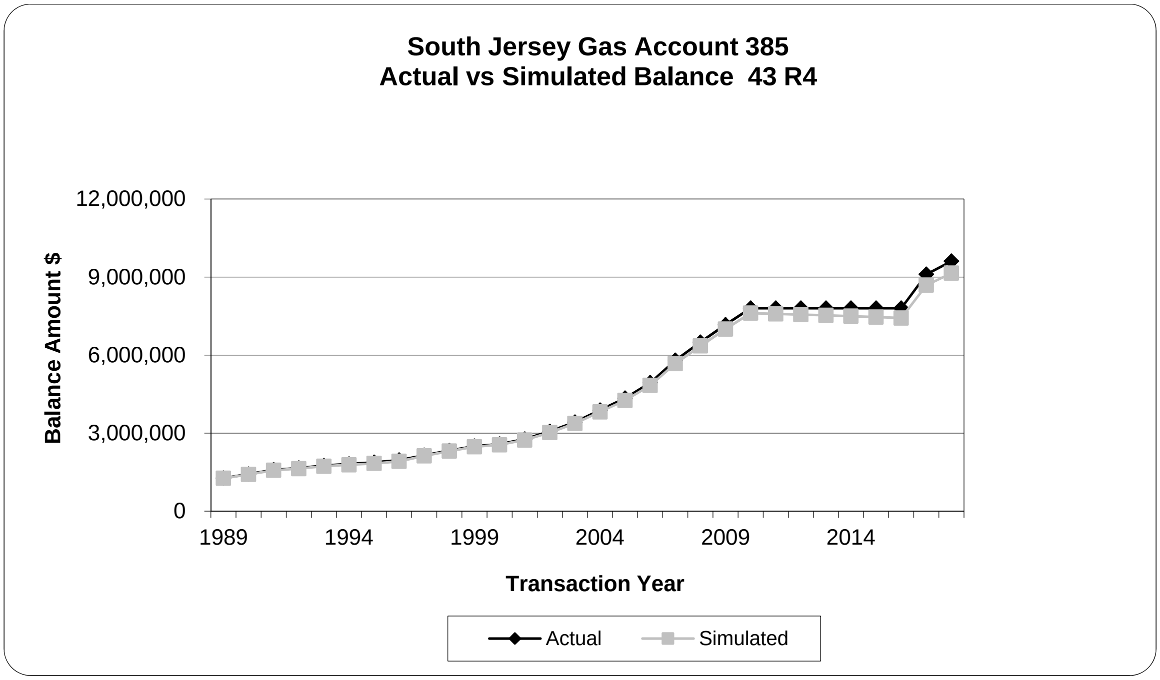
Account 385 Industrial Measuring and Regulating Equipment (43 R4)

This account consists of the cost of industrial measuring and regulating equipment associated with distribution operations. There is approximately $9.6 million in this account. The existing life is 30 R1. The current age of surviving investment is 15.73 years.

Discussions with Company personnel indicated that their expectation from an operational standpoint isthat these would have a life-cycle close to that of DRS. From a life standpoint, the life would be similar to an above ground DRS, but the assets much more susceptible to changes in customer capacity demands since the current assets are installed at industrial and commercial customers' locations across the system. There may be some differential in life between a DRS, but parity with DRS would also be reasonable.

In the SPR analysis, the CI is in the good range and the REIs are in the excellent range. However, the life is significantly longer than existing and even longer than the life proposed for DRS in Account 378. The top ranked dispersion pattern in the 30 year or more bands is the SQ with a 51 year life. The SQ dispersion is not representative of a typical retirement pattern for this type of equipment in the industry since it would suggest all assets retire at that same time.

Given the indications in the analysis, discussions with Company personnel, similarity of assets, and judgment, this study recommends moving toward the life proposed for Accounts 378. The study recommendation is a 43 R4, which is just one year longer than Account 378, but using the same R4 dispersion. A comparison of actual versus simulated balances is shown below for the 43 R4.

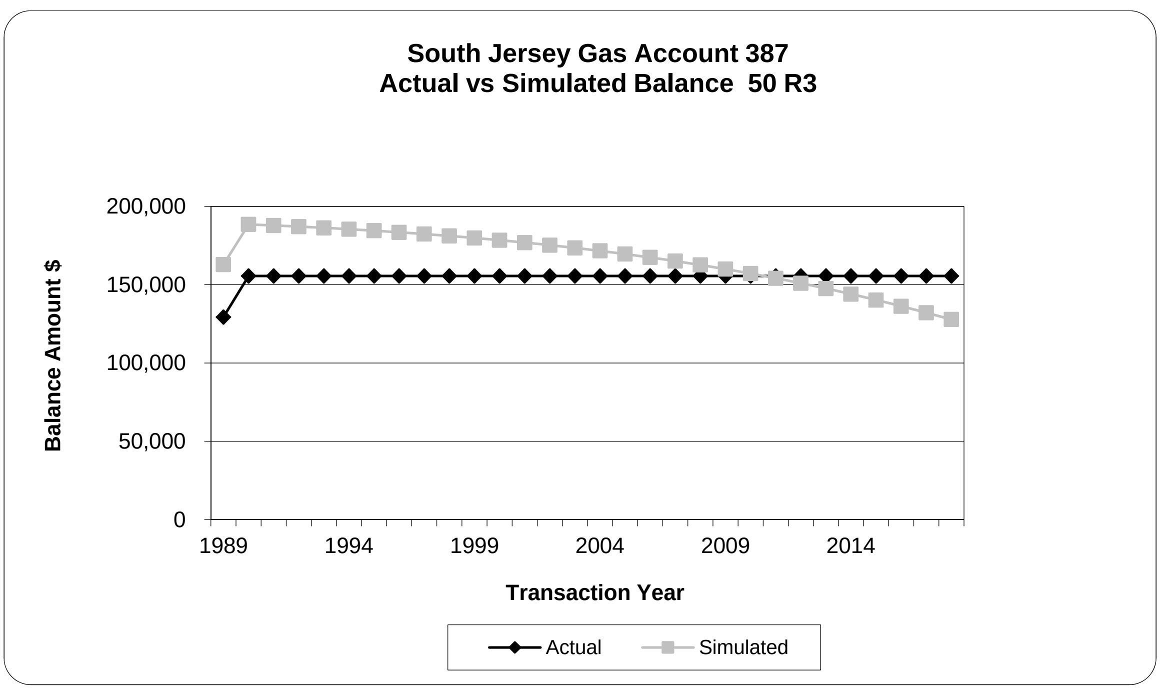

South Jersey Gas Account 385
Actual vs Simulated Balance 43 R4
12,000,000
9,000,000
6,000,000
3,000,000
0
Balance Amount $
1989
1994
1999
2004
2009
2014
Transaction Year
Actual
Simulated

Account 387 Other Equipment (50 R3)

This account consists of the cost related to various other equipment associated with distribution operations. There is approximately $156.0 thousand in this account. The existing life is 45 R3. The current average age of surviving investment is approximately 46.99 years.

Discussions with Company personnel indicated that the cost is mostly parking lots and roads. They noted that 45 years seems a somewhat long, but the practice of incrementally adding layers to roads in many cases rather than replacing them might push the life longer.

Investment in this account has remained constant which limits the usefulness of the SPR analysis. The top ranked curves in the SPR analysis have poor CIs and fair REIs. The lower ranked curves have better indices. The existing R3 is ranked in the middle with a life of 50 years. This account is fully depreciated. Based on judgment, this study recommends moving the life to 50 years, but retaining the R3 dispersion and a whole life rate of 2.22% if assets are added in the future. A comparison of actual versus simulated balances is shown below for the 50 R3.



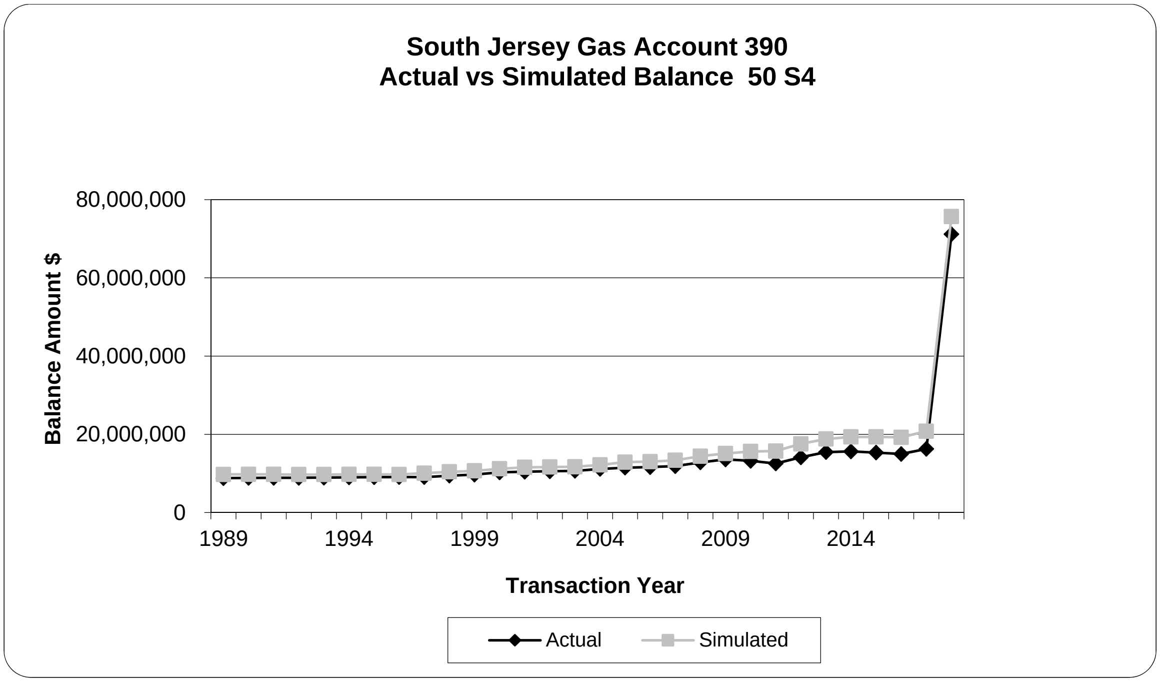
General Plant – Depreciated

Account 390 Structures and Improvements (50 S4)

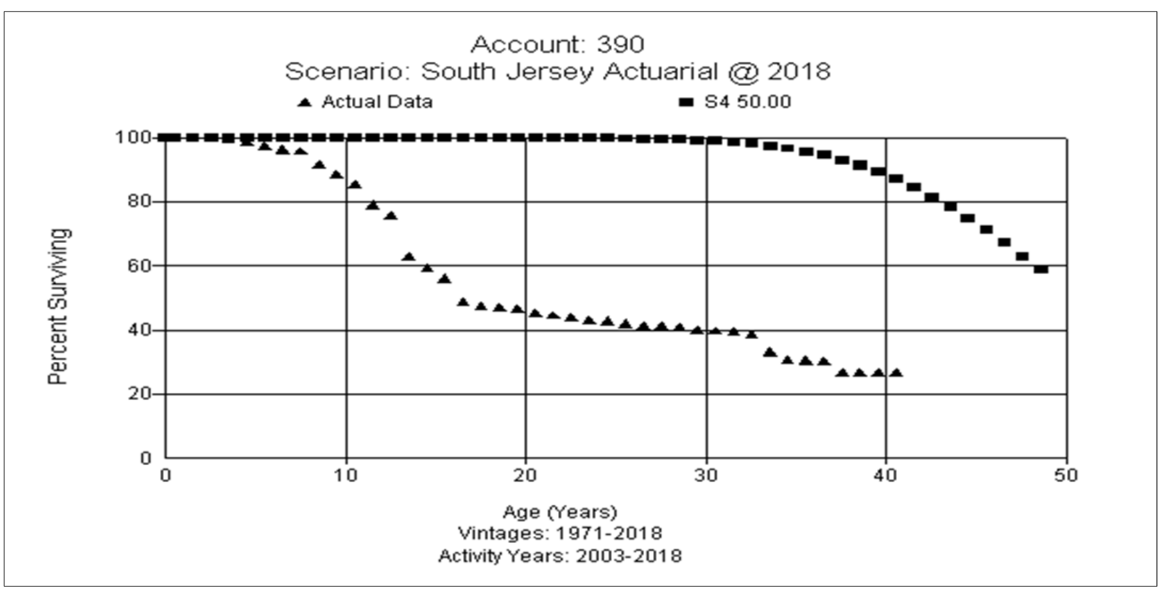
This account consists of structures and various improvements associated with the general plant. There is approximately $65.3 million in this account. The existing life is 31 S4. The current average age of surviving investment is approximately 4.37 years.

Discussions with Company personnel indicated that the new Atlantic City Headquarters ("HQ"), built in 2018, is the largest asset in this account. There are six operating division buildings in this account as well, all six of which have been in service for at least 50 years. Although many of the assets related to the building have been replaced, the structure of the buildings could last up to 70 years. Four of the operating division buildings are good for another 5-10 year period, while one, Pleasantville, could be considered for replacement due to capacity and location. Another operating division building, Glassboro, could be considered for replacement due to capacity and training needs, which will likely result in the Company adding to that facility. There are various other assets with shorter lives such as: 20 years for HVAC (less due to salt for HQ); 10 years for Roofs (20 for HQ); a 15 year cycle to reseal for Parking Lots, but no retirement until the lot fails completely, and Remodeling would occur as needed, possibly in a 15 year cycle range; 20-25 years for Generators.

Both the SPR and actuarial analysis were performed. In the SPR analysis, the 31 S4 is in the top five ranked curves with poor to fair CIs and REIs of 100 for the periods analyzed. The life indications are all in the 30 year range, which is significantly lower than what would be expected for the majority of the investment. A comparison of actual versus simulated balances is shown below for the 50 S4.



The actuarial analysis provided similar indications of a lower life than what is expected and is not reasonable for the mix of assets. Giving consideration to the analyses and the significance of recent investment, such as the HQ building that was added in 2018, a longer life is reasonable. The study recommendation is to move the life to 50 years, but retain the S4 dispersion. A graph of the account observed life table versus the proposed life and curve is shown below.

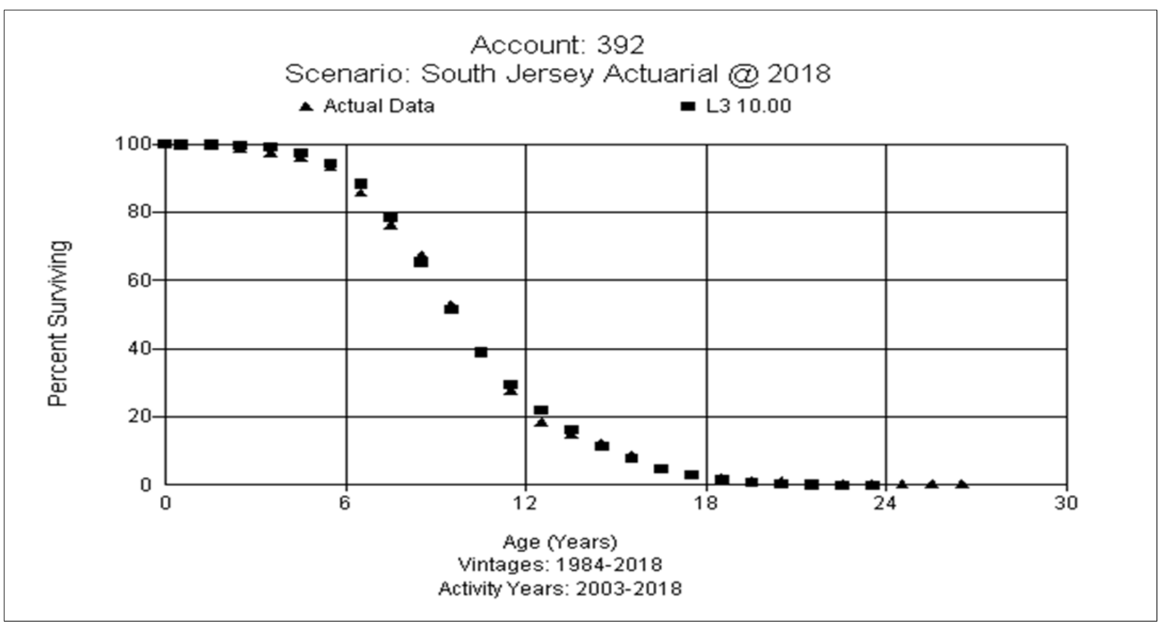


Account 392 Transportation Equipment (10 L3)

This account consists of various types of transportation equipment including car and trucks. There is approximately $19.2 million in this account. The existing life is 10 L2.5. The current average age of the investment is 5.64 years.

Discussions with Company personnel indicated that the larger trucks costs are between $100 and $150 thousand. These trucks can run 100,000 miles or more, and most are replaced around 165,000 miles. There are a few vehicles in this account that will generally last 6, 7, 8, and 9 years, but they are a small part of the overall fleet. The Company believes that a 10 average for the group is appropriate.

Actuarial analysis was used for this account and produced multiple fits with varying dispersion but all at 10 years. The best and excellent fit was made in the placement 1984-2018 and experience band 2003-2018 with the 10 L3. Based on the actuarial analysis and discussions with Company, this study recommends retention of the 10 year life and moving to a slightly steeper L3 dispersion. A graph of the account observed life table versus the proposed life and curve is shown below.

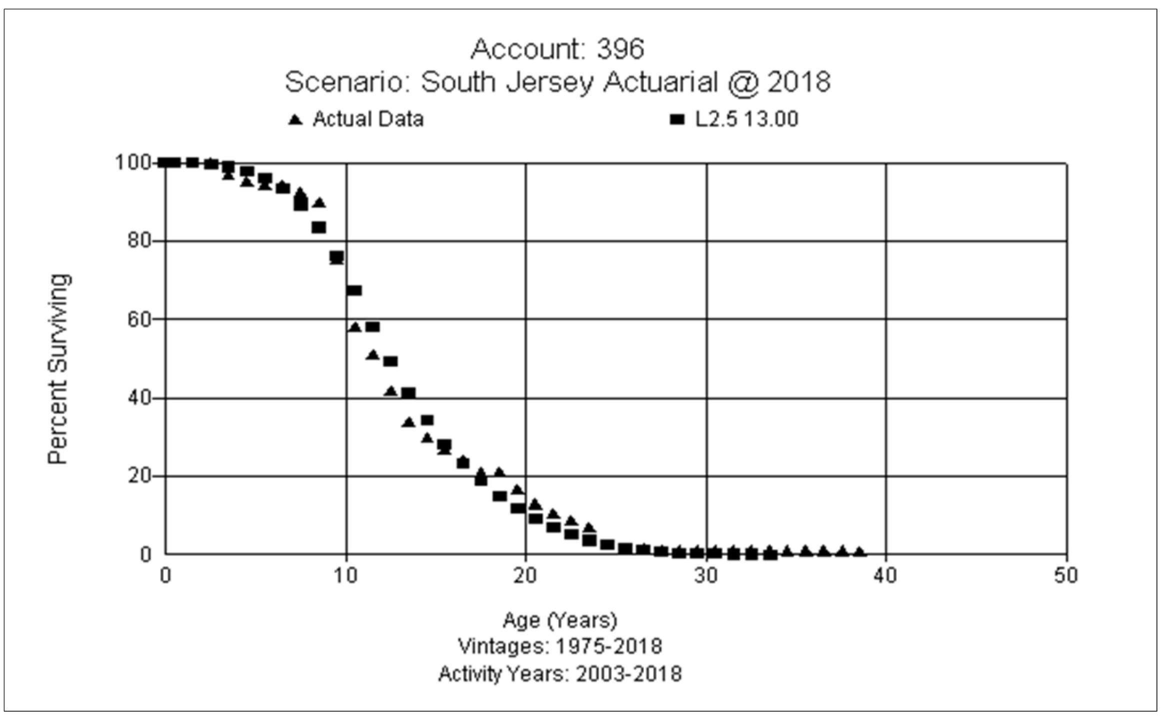


Account 396 Power Operated Equipment (13 L2.5)

This account consists of the cost of power operated equipment associated with the general plant. There is approximately $2.3 million in this account. The existing life is 13 L3. The current average age of investment is approximately 7.27 years.

From an operational standpoint, Company personnel are comfortable that the existing life is indicative of their expectations. Trailers are generally sold with the equipment they are carrying. There is some concern on the part of Company personnel that the life would be slightly less since the quality and durability of the equipment is lower than in the past.

Since the existing life is close to the number of experience years, actuarial analysis was relied upon for this account. The fits indicated a life between 12 and 13 years with various L patterns. The best fit was in the placement 1975-2018 and experience band 2003-2018 with a 13 L2.5. Based on the actuarial analysis and discussions with Company, the study recommends retaining the life of 13 years but moving to a flatter L2.5 dispersion. A graph of the account observed life table versus the proposed life and curve is shown below.



General Plant - Amortized

The Company has previously segregated these accounts into pre-2005 vintage assets and post-2004 vintage assets. Pre-2005 assets are depreciated compared to post-2004 assets which are amortized. No additional investment is going into the pre-2004 asset groups. This study consolidates the two groups of assets into a single account for amortization going forward.

Account 391.00 Office Furniture and Equipment (20 SQ)

This account consists of miscellaneous office furniture such as desks, chairs, filing cabinets, and tables used for general utility service. There is approximately $5.2 million in this account after retirements for implementation of FERC AR-15. The existing life is 20 SQ. Newer furniture has a shorter life than in the past, both from construction, design, and the embedding of electronics in some assets. Some of the older furniture might have up to a 30 year life when the newer furniture (e.g., the furniture in HQ) may only have a 15 year life. The existing 20 SQ is retained.

Account 391.358 - Computer Equipment (5 SQ)

This account consists of the cost of computers associated with general plant facilities. There is $16.6 million of investment in this account after retirements for implementation of FERC AR-15. The existing life is 5 SQ.

Discussions with Company personnel indicated that the Company's PCs are on a four-year replacement cycle; in the fifth and occasionally the sixth year, some are used as spares. Toughbooks are in the process of being replaced between 5-7 years and are being replaced with Windows Tablets (which will likely have a shorter life). Servers, which were formerly Dell servers, are on a five-year cycle. The Company is now using a Cisco virtual server "farm" but do not expect the life-cycle to change materially. Networking equipment, such as routers, switches, connections, is all Cisco equipment and is all expected to last 5 year. Given the mix of assets in this account and their life-cycles, the existing 5

SQ is retained.

Account 391.356 Major Software Systems Implementation (15 SQ)

This is a new account that will consist of the cost of major software and systems and implementation associated with general plant facilities. There is approximately $108.5 million in this account.

Discussions with Company personnel indicated that software, such as ERP, CIS, Hyperion, and Oracle, will likely have around a 15 year-cycle. The CIS and WMS systems were replaced in 2014 and 2013, respectively. The Company is also upgrading CC&B and Maximo. All of these are long-term applications and this study recommends a life of 15 SQ with general plant amortization.

Account 393 Stores Equipment (25 SQ)

This account consists of various costs associated with stores equipment. There is approximately $6.2 thousand in this account after retirements for implementation of FERC AR-15. This is mostly shelving and the existing life 25 SQ is reasonable and retained.

Account 394.00 Tools, Shop, and Garage Equipment (15 SQ)

This account consists of other miscellaneous tools, shop, and garage equipment associated with the general plant. There is approximately $11.7 million in this account after retirements for implementation of FERC AR-15. The existing life is 20 SQ. Discussions with Company personnel indicated electronic tools have a shorter life, while the “steel” tools have a longer life. However, for the majority of the tools, they break or are lost long before 20 years, making 20 years unreasonable. The study recommends moving the life to 15 SQ.

Account 395 Laboratory Equipment (20 SQ)

This account consists of various costs associated with laboratory equipment. There is no investment in this account after retirements for implementation of FERC AR-15. The existing life 20 SQ is retained for any future investment.

Account 397.00 Communication Equipment (15 SQ)

This account consists of all communication equipment including mobile and fixed radio systems along with telephone, telemetering, and other miscellaneous communication equipment used in connection with the general plant. There is a balance of approximately $2.8 million in this account after retirements for implementation of FERC AR-15. The existing life is 15 SQ.

Discussions with Company personnel indicated that the assets are private network radios in trucks, many of which were upgraded in 2012 due to the narrow banding. The bulk of mobile radios were upgraded within the last five years. The base station equipment is probably 10 years old. Telephone equipment at all locations is now VOIP, which occurred approximately 3 years ago. Overall the life expectation for the account is between 10-15 years. This study retains the existing 15 SQ.

Account 398.00 Miscellaneous Equipment (20 SQ)

This account includes the cost of miscellaneous equipment associated with the general plant. There is approximately $67.2 thousand in this account, after retirements for implementation of FERC AR-15. The existing life is 20 SQ and is retained.

SALVAGE ANALYSIS

When a capital asset is retired, physically removed from service and finally disposed of, terminal retirement is said to have occurred. The residual value of a terminal retirement is called gross salvage. Net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset). Salvage and removal cost percentages are calculated by dividing the salvage and removal costs stated in current dollars by the <u>original</u> installed cost of the asset stated in dollars when the plant went into service. Some plant assets can experience significant negative removal cost percentages due to the timing of the original addition versus the retirement. For example, a Distribution asset in FERC Account 376 Steel Mains with a current installed cost of $500 (2018) would have had an installed cost of $17.15[4] in 1950. A removal cost of $50 for the asset calculated (incorrectly) on current installed cost would only have a negative 10 percent removal cost ($50/$500). However, a correct removal cost calculation would show a negative 292 percent removal cost for that asset ($50/$17.15). Inflation from the time of installation of the asset until the time of its removal must be taken into account in the calculation of the removal cost percentage because the depreciation rate, which includes the removal cost percentage, will be applied to the <u>original</u> installed cost of assets.

The normal net salvage analysis that is performed uses the history of the individual accounts to estimate the future net salvage that a company can expect in its operations. As a result, the analysis not only looks at the historical experience but also takes into account recent and expected changes in operations that could reasonably lead to different future expectations for net salvage than were experienced in the past. Generally, recent experience is more heavily weighted in making net salvage recommendations than experience older than 10 years. Is discussed below, this approach was not used for South Jersey

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[4] Using the Handy-Whitman Bulletin No. 190, G-1, line 44, $17.15 = $500 x 32/933.

Gas.

Salvage Characteristics

In the traditional net salvage analysis, we take historical data for each account, including data for retirements, gross salvage, and cost of removal for as far back as available. A minimum of 10 years is desired. Moving averages, which remove timing differences between retirement and salvage and removal cost, would be analyzed over periods varying from one to 2 to 10 years. These are then evaluated in making the net salvage recommendations for the study. However, the Board of Public Utilities' past orders have supported the Division of Rate Counsel position that an average of net salvage expense should be used to calculate net salvage and included in the overall depreciation expense of the Company. Therefore, while neither the Company nor Alliance agrees with this position, the Company wished to avoid significant controversy on this issue and directed Alliance to follow this methodology.

As a result, it was agreed that we would use an average of recent historical net salvage experience. For reasons set forth in the testimony accompanying this report, the most recently completely three year period was used to calculate the average. As a result, a net salvage amount of $6,268,760 was developed and has been incorporated into the total annual accrual amount for the Company as shown on Appendix A. Appendix D provides the calculation of the $6.3 million used for the annual net salvage accrual amount.

APPENDIX A - Comparison of Approved and Proposed Rates

SOUTH JERSEY GAS COMPANY
COMPARISON OF APPROVED AND PROPOSED ACCRUAL RATES
AS OF DECEMBER 31, 2018

Account and Description (1)	Original Plant Cost 12/31/2018 (2)	Current Accrual Rate (3)	Current Accrual Amount (4)= (2) x (3)	Proposed Accrual Rate (5)	Proposed Accrual Amount (6) = (2) x (5)	Difference (7)= (6) - (4)
Liquefied Natural Gas Plant						
361 Structures and Improvements	1,681,795	0.67%	11,268	2.00%	33,657	22,389
362 Gas Holders	5,067,188	0.07%	3,547	1.13%	57,281	53,734
363 Purification Equipment	54,965,869	3.37%	1,852,350	2.74%	1,506,111	(346,238)
Total Liquefied Natural Gas Plant	61,714,852	3.03%	1,867,165	2.59%	1,597,050	(270,115)
Transmission Plant						
366 Structures and Improvements	2,947,681	2.13%	62,786	1.62%	47,894	(14,892)
367 Mains	250,295,862	1.29%	3,228,817	1.30%	3,243,918	15,101
368 Compressor Equipment		0.00%	0	2.86% *	0	0
369 Measuring and Regulating Equipment	44,743,785	3.38%	1,512,340	2.10%	939,585	(572,754)
370 Communication Equipment	44,562	0.00%	0	0.00%	0	0
371 Other Equipment	184,096	0.00%	0	1.67%	3,079	3,079
Total Transmission Plant	298,215,986	1.61%	4,803,942	1.42%	4,234,476	(569,466)
Distribution Plant						
375 Structures and Improvements	20,868,796	3.80%	793,014	3.15%	656,996	(136,018)
376 Mains	1,154,736,695	1.37%	15,819,893	1.48%	17,051,034	1,231,141
378 Measuring & Regulating Station Equipment - General	4,860,675	1.69%	82,145	2.45%	118,983	36,837
379 Measuring & Regulating Station Equipment - City Gate	6,124,925	1.26%	77,174	2.09%	127,905	50,731
380 Services	796,714,103	2.01%	16,013,953	2.23%	17,788,407	1,774,454
381 Meters	66,466,808	2.38%	1,581,910	3.24%	2,155,087	573,177
382 Meter Installations	33,889,445	2.69%	911,626	2.87%	971,976	60,350
383 House Regulators	12,332,106	1.82%	224,444	2.19%	269,460	45,015
384 House Regulator Installations	51,967,135	2.09%	1,086,113	2.23%	1,157,720	71,607
385 Industrial Measuring and Regulating Equipment	9,611,695	3.09%	297,001	2.35%	225,681	(71,320)
387 Other Equipment	155,583	0.00%	0	2.12%	3,295	3,295
Total Distribution Plant	2,157,727,966	1.71%	36,887,275	1.88%	40,526,543	3,639,269
General Plant Depreciated						

SOUTH JERSEY GAS COMPANY
COMPARISON OF APPROVED AND PROPOSED ACCRUAL RATES
AS OF DECEMBER 31, 2018

Account and Description (1)	Original Plant Cost 12/31/2018 (2)	Current Accrual Rate (3)	Current Accrual Amount (4)= (2) x (3)	Proposed Accrual Rate (5)	Proposed Accrual Amount (6) = (2) x (5)	Difference (7)= (6) - (4)
390 Structures and Improvements	65,327,593	4.98%	3,253,314	2.09%	1,366,256	(1,887,058)
392 Transportation Equipment	19,227,782	10.87%	2,090,060	17.29%	3,325,366	1,235,306
396 Power Operated Equipment	2,310,376	6.43%	148,557	12.33%	284,952	136,395
Total General Depreciated	86,865,751	6.32%	5,491,931	5.73%	4,976,575	(515,356)
General Plant Amortized Consolidated - After AR 15 Retirements						
391.00 Office Furniture and Equipment	5,249,031	5.00%	262,452	5.00%	262,452	0
391.36 PC, Laptop, Tougbook Equipment	0			25.00% *		
391.36 Network/Server Hardware	0			16.67% *		
391.36 PC, Laptop, Non Enterprise Software	0			20.00% *		
391.36 Network/Server Software	0			33.33% *		
391.356 Major Software Systems Implementation	108,480,063	6.67%	7,232,004	6.67%	7,232,004	0
391.580 Computer Equipment	16,573,219	20.00%	3,314,644	20.00%	3,314,644	0
393.00 Stores Equipment	6,203	0.00%	0	4.00%	248	248
394.00 Tools, Shop and Garage Equipment	11,708,838	5.00%	585,442	6.67%	780,589	195,147
395.00 Laboratory Equipment	0	5.00%	0	5.00%	0	0
397.00 Communication Equipment	2,840,316	6.67%	189,449	6.67%	189,449	0
398.00 Miscellaneous Equipment	67,224	5.00%	3,361	5.00%	3,361	0
Subtotal General Amortized	144,924,895	8.00%	11,587,352	8.13%	11,782,747	195,395
Total Depreciable and Amortized	2,749,449,451	2.21%	60,637,665	2.30%	63,117,391	2,479,726
Three Year Average Annual Net Salvage Amount			4,659,755		6,268,760	1,609,005
Total Study	2,749,449,451	2.37%	65,297,420	2.52%	69,386,151	4,088,731

*Account segregations are for new investment.

Notes: The following proforma retirements recorded at 12/31/19 were incorporated into the study:

305100 - Structures & Improvements Total 258,487.70

SOUTH JERSEY GAS COMPANY
COMPARISON OF APPROVED AND PROPOSED ACCRUAL RATES
AS OF DECEMBER 31, 2018

Account and Description	Original Plant Cost 12/31/2018	Current Accrual Rate	Current Accrual Amount	Proposed Accrual Rate	Proposed Accrual Amount	Difference
(1)	(2)	(3)	(4)= (2) x (3)	(5)	(6) = (2) x (5)	(7)= (6) - (4)
311000 - Liquefied Petroleum Gas	2,280.09					
371000 - Other Equipment Total	239,982.75					
375000 - Structures & Improvements Total	148,694.00					
377000 - Compressor Station Equipme Total	14,678.37					
390000 - Structures & Improvements Total	5,821,582.00					
395050 - Laboratory Equipment - Post	1,538.89					
	6,487,243.80					

APPENDIX B - Computation of Depreciation Accrual Rate

SOUTH JERSEY GAS COMPANY
COMPUTAT ION OF DEPRECIATION ACCRUAL RATE
AT DECEMBER 31, 2018

Account Description	Original Plant Cost at 12/31/2018	Allocated Book Reserve	Net Salvage Percent	Net Salvage Amount	Unaccrued Balance	Composite Remaining Life	Calculated Annual Accrual Amount	Calculated Annual Accrual Rate
(1)	(2)	(3)	(4)	(5) = (4) x (2)	(6) = (2) - (3)- (5)	(7)	(8)=(6)/(7)	(9) = (8)/(2)
Liquefied Natural Gas Plant								
361 Structures and Improvements	1,681,795	482,741	0.00%	0.00	1,199,054	35.63	33,657	2.00%
362 Gas Holders	5,067,188	2,309,865	0.00%	0.00	2,757,323	48.14	57,281	1.13%
363 Purification Equipment	54,965,869	9,319,124	0.00%	0.00	45,646,745	30.31	1,506,111	2.74%
Total Liquefied Natural Gas Plant	61,714,852	12,111,729		0.00	49,603,123		1,597,050	
Transmission Plant								
366 Structures and Improvements	2,947,681	1,417,196	0.00%	0.00	1,530,484	31.96	47,894	1.62%
367 Mains	250,295,862	67,711,880	0.00%	0.00	182,583,982	56.29	3,243,918	1.30%
369 Measuring and Regulating Equipment	44,743,785	18,810,275	0.00%	0.00	25,933,510	27.60	939,585	2.10%
370 Communication Equipment	44,562	44,562	0.00%	0.00	0	1.60	0	0.00%
371 Other Equipment	184,096	143,816	0.00%	0.00	40,280	13.08	3,079	1.67%
Total Transmission Plant	298,215,986	88,127,728		0.00	210,047,977		4,234,476	
Distribution Plant								
375 Structures and Improvements	20,868,796	5,733,877	0.00%	0.00	15,134,918	23.04	656,996	3.15%
376 Mains	1,154,736,695	200,190,797	0.00%	0.00	954,545,898	55.98	17,051,034	1.48%
378 M&R Station Equip. - General	4,860,675	2,838,566	0.00%	0.00	2,022,109	17.00	118,983	2.45%
379 M&R Station Equip. - City Gate	6,124,925	663,788	0.00%	0.00	5,461,137	42.70	127,905	2.09%
380 Services	796,714,103	154,980,959	0.00%	0.00	641,733,144	36.08	17,788,407	2.23%
381 Meters	66,466,808	13,800,735	0.00%	0.00	52,666,073	24.44	2,155,087	3.24%
382 Meter Installations	33,889,445	5,549,214	0.00%	0.00	28,340,230	29.16	971,976	2.87%
383 House Regulators	12,332,106	2,553,955	0.00%	0.00	9,778,151	36.29	269,460	2.19%
384 House Regulator Installations	51,967,135	5,913,742	0.00%	0.00	46,053,393	39.78	1,157,720	2.23%
385 Industrial Measuring and Regulating Equip.	9,611,695	3,160,766	0.00%	0.00	6,450,929	28.58	225,681	2.35%
387 Other Equipment	155,583	115,278	0.00%	0.00	40,305	12.23	3,295	2.12%
Total Distribution Plant	2,157,727,966	395,501,678		0.00	1,762,226,288		40,526,543	1.88%
General Plant Depreciated								
390 Structures and Improvements	65,327,593	1,030,900	0.00%	0.00	64,296,693	47.06	1,366,256	2.09%
392 Transportation Equipment	19,227,782	2,576,829	0.00%	0.00	16,650,953	5.01	3,325,366	17.29%
396 Power Operated Equipment	2,310,376	280,297	0.00%	0.00	2,030,079	7.12	284,952	12.33%
Total General Depreciated	86,865,751	3,888,025		0.00	82,977,726		4,976,575	5.73%
GENERAL PLANT CONSOLIDATED - AMORTIZED								
After Retirements of Assets With Age > Average Service Life								
391.000 Office Furniture and Equipment	5,249,031	1,211,204	0.00%	0.00	4,037,827		262,452	5.00%
391.359 PC, Laptop, Tougbook Equipment	0	0	0.00%	0.00	0		0 *	25.00%

SOUTH JERSEY GAS COMPANY
COMPUTAT ION OF DEPRECIATION ACCRUAL RATE
AT DECEMBER 31, 2018

Account	Description		Original Plant Cost at 12/31/2018	Allocated Book Reserve	Net Salvage Percent	Net Salvage Amount	Unaccrued Balance	Composite Remaining Life	Calculated Annual Accrual Amount		Calculated Annual Accrual Rate
391.360	Network/Server Hardware		0	0	0.00%	0.00	0		0	*	16.67%
391.361	PC, Laptop, Non Enterprise Software		0	0	0.00%	0.00	0		0	*	20.00%
391.362	Network/Server Software		0	0	0.00%	0.00	0		0	*	33.33%
391.36	Major Software Systems Implementation		108,480,063	28,121,475	0.00%	0.00	80,358,588		7,232,004		6.67%
391.58	Computer Equipment	#	16,573,219	8,080,285	0.00%	0.00	8,492,935		3,314,644		20.00%
393.00	Stores Equipment		6,203	5,335	0.00%	0.00	868		248		4.00%
394.00	Tools, Shop and Garage Equipment		11,708,838	1,810,926	0.00%	0.00	9,897,912		780,589		6.67%
395.00	Laboratory Equipment		0	0	0.00%	0.00	0		0		5.00%
397.00	Communication Equipment		2,840,316	1,760,458	0.00%	0.00	1,079,858		189,354		6.67%
398.00	Miscellaneous Equipment		67,224	19,620	0.00%	0.00	47,604		3,361		5.00%
	Total General Plant Amortized		144,924,895	41,009,302		0.00	103,915,593		11,782,653		
	Total General Plant Depreciated & Amortized		231,790,647	44,897,328		0.00	186,893,319		16,759,227		
	Three Year Average Annual Net Salvage Amount								6,268,760		
	Total Study Depreciable (Excl ARO, Land and ROW)		2,749,449,451	540,638,464		$ -	2,208,770,707		69,386,056		

*Account segregations are for new investment.

Excluded from Study Amounts:		
301000 - Organization	138,013	
302000 - Franchise & Consents	43,395	
303100 - Misc. Intangible Plant	47,212	4,062
304100 - Land	24,146	96
304200- Gas Production Land Rights		(96)
320400 - Miscellaneous	0	(1,718)
350100 - Land	25,586	0
354000 - Compressor Station Equipme Total		(126,287)
357001 - ARO Other Equipment	9,284	6,659
360100 - Land	18,975	
365110 - Land	297,213	
365120 - Land Rights	3,064,947	
365200 - Rights of Way	4,402,053	
374100 - Land	516,658	0
374200 - Land Rights	156,331	
376001 - ARO Mains-Distribution	9,162,686	2,058,749
380001-ARO Services	45,328,289	3,819,799
389100 - Land	3,100,131	
390001 - ARO Structures & Impr	38,736	32,808
Total Excluded	66,373,657	5,794,072

SOUTH JERSEY GAS COMPANY
COMPUTAT ION OF DEPRECIATION ACCRUAL RATE
AT DECEMBER 31, 2018

Account Description	Original Plant Cost at 12/31/2018	Allocated Book Reserve	Net Salvage Percent	Net Salvage Amount	Unaccrued Balance	Composite Remaining Life	Calculated Annual Accrual Amount	Calculated Annual Accrual Rate
Total Plant	2,815,823,107	546,432,536						
GL w/ARO	2,822,663,653	553,268,203						
Difference	(6,840,545)	(6,835,667)						
PROFORMA ADJUSTMENTS								
305100 - Structures & Improvements	258,488	432,368						
311000 - Liquefied Petroleum Gas	13,446	(165,313)						
371000 - Other Equipment	239,983	239,983						
375000 - Structures & Improvements (Folsom)	148,694	148,694						
37700 - Compressor Station Equipment	14,678	14,678						
39000 - Structures & Improvements (Folsom)	5,821,582	5,821,582						
395.05-Laboratory Equipment Post 12/04	1,539	1,539						
Total Proforma/Adjustments	6,498,409	6,493,531						
Reconciled Difference	(342,136)	(342,136)						
AR 15	342,136	342,136						
	(0)	(0)						

APPENDIX C - Comparison of Parameters

SOUTH JERSEY GAS COMPANY
COMPARISON OF EXISTING VS PROPOSED DEPRECIATION PARAMETERS
AS OF DECEMBER 31, 2018

Account	Description	Current		Proposed		
Production Plant		Life	Net Salvage	Life	Curve	Net Salvage
305	Structures and Improvements	30-R4	0.00%	46	R2.5	0.00%
311	Liquefied Petroleum Gas Equipment	28-R2.5	0.00%	46	R2.5	0.00%
Underground Storage Plant						
351	Structures and Improvements	47 S6	0.00%	47	S6	0.00%
355	Measuring and Regulating Equipment	30-R2.5	0.00%	47	S6	0.00%
LNG Plant						
361	Structures and Improvements	46 R2.5	0.00%	46	R2.5	0.00%
362	Gas Holders	50 S5	0.00%	75	S5	0.00%
363	Purification Equipment	30 R4	0.00%	35	R4	0.00%
Transmission Plant						
366	Structures and Improvements	50 R4	0.00%	49	S2	0.00%
367	Mains	68 R4	0.00%	70	R5	0.00%
368	Compressor Equipment (New Construction)			35	R4	0.00%
369	Measuring and Regulating Equipment	30 S6	0.00%	40	S6	0.00%
370	Communication Equipment	25 S3	0.00%	15	S3	0.00%
371	Other Equipment	38 S6	0.00%	38	S6	0.00%
Distribution Plant						
375	Structures and Improvements	34 L5	0.00%	32	S6	0.00%
376	Mains	68 R4	0.00%	68	R4	0.00%
377	Compressor Station Equipment	45 R0.5	0.00%	45	R0.5	0.00%
378	Measuring & Regulating Station Equipment - General	38 R4	0.00%	42	R4	0.00%
379	Measuring & Regulating Station Equipment - City Gate	38 R4	0.00%	48	R4	0.00%
380	Services	45 S1	0.00%	45	S1	0.00%
381	Meters	39 S0	0.00%	31	R2	0.00%
382	Meter Installations	34 R0.5	0.00%	35	R0.5	0.00%
383	House Regulators	45 R4	0.00%	46	S5	0.00%
384	House Regulator Installations	45 R3	0.00%	45	R4	0.00%
385	Industrial Measuring and Regulating Equipment	30 R1	0.00%	43	R4	0.00%
387	Other Equipment	45 R3	0.00%	50	R3	0.00%
General Plant						
390	Structures and Improvements	31 S4	0.00%	50	S4	0.00%
391	Office Furniture and Equipment	20 SQ	0.00%	20	SQ	0.00%
391.051	Office Furniture and Equipment	20 SQ	0.00%	20	SQ	0.00%
391.250	Office Furniture and Equip- Computers Post 12/04	5 SQ	0.00%	5	SQ	0.00%
391.357	Computer Equipment ADS	NA	NA	5	SQ	0.00%
391.358	Office Furniture and Equip- Computers Post 12/04	5 SQ	0.00%	5	SQ	0.00%
391.356	Major Software Systems Implementation	NA	NA	15	SQ	0.00%
392	Transportation Equipment	10 L2.5	0.00%	10	L3	0.00%
393	Stores Equipment	25-SQ	0.00%	25	SQ	0.00%
394	Tools, Shop and Garage Equipment	20-SQ	0.00%	15	SQ	0.00%
395	Laboratory Equipment	20-SQ	0.00%	20	SQ	0.00%
396	Power Operated Equipment	13 L3	0.00%	13	L2.5	0.00%
397	Communication Equipment	15-SQ	0.00%	15	SQ	0.00%
398	Miscellaneous Equipment	20-SQ	0.00%	20	SQ	0.00%
*Account segregations are for new investment.						
391.359	PC, Laptop, Tougbook Equipment			4	SQ	0.00%
391.360	Network/Server Hardware			6	SQ	0.00%
391.361	PC, Laptop, Non Enterprise Software			5	SQ	0.00%
391.362	Network/Server Software			3	SQ	0.00%

APPENDIX D - Cost of Removal and Salvage

South Jersey Gas Company
Three Year Cost of Removal and Salvage

Date	*Acct 108103* Actual COR	*Acct 108104* Actual Salv
1/1/16 -12/31/16	$ 6,107,234.65	$ (361,615.94)
1/1/17 -12/31/17	7,062,228.20	(421,879.02)
1/1/18 -12/31/18	6,899,062.72	(478,751.71)
Total 3 Year	**20,068,525.57**	**(1,262,246.67)**
Net Salvage Total 2016 thru 2018	**18,806,279**	
Average over 3 Years	**$ 6,268,759.63**	

INSERT TAB:

D. YARDLEY

IN THE MATTER OF THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF INCREASED BASE TARIFF RATES AND CHARGES FOR GAS SERVICE, CHANGES TO DEPRECIATION RATES AND OTHER TARIFF REVISIONS

BPU DOCKET NO. GR20________

DIRECT TESTIMONY

OF

DANIEL P. YARDLEY

On Behalf Of
South Jersey Gas Company

Exhibit P-11

March 13, 2020

TABLE OF CONTENTS

SOUTH JERSEY GAS COMPANY
DIRECT TESTIMONY OF
DANIEL P. YARDLEY

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, AFFILIATION AND BUSINESS ADDRESS.

A. My name is Daniel P. Yardley. I am Principal, Yardley Associates and my business address is 2409 Providence Hills Drive, Matthews, North Carolina 28105.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf South Jersey Gas Company ("South Jersey Gas" or the "Company").

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND.

A. I have been employed as a consultant to the natural gas industry for over 30 years. During this period, I have directed or participated in numerous consulting assignments on behalf of local distribution companies ("LDCs"). A number of these assignments involved the development of gas distribution company cost allocation, pricing, service unbundling, revenue decoupling and other tariff analyses. In addition to this work, I have performed interstate pipeline cost of service and rate design analyses, gas supply planning analyses, and financial evaluation analyses. I received a Bachelor of Science Degree in Electrical Engineering from the Massachusetts Institute of Technology in 1988.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES AND OTHER REGULATORY BODIES?

A. Yes. Over the last 20 years, I have testified before the New Jersey Board of Public Utilities (the "BPU") on various ratemaking and regulatory matters including rate unbundling, cost allocation, service design, rate design, revenue decoupling, cost recovery mechanisms and tariff design. My testimony in various proceedings has been presented on behalf of South

Jersey Gas, Elizabethtown Gas Company, and New Jersey Natural Gas Company, including testimony on behalf of South Jersey Gas in its previous base rate proceedings. I have also testified in proceedings before several other state utility regulatory commissions, the Federal Energy Regulatory Commission, and the Canada Energy Regulator on a variety of rate and regulatory topics.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I have been asked by South Jersey Gas to evaluate the manner in which it recovers its base distribution revenue requirements from customers and to propose changes that are consistent with the nature of the services it provides, as well as important rate design objectives. In this regard, my testimony addresses two topics. First, I will review important public policy and industry developments that are guiding important changes in the way regulatory agencies and LDCs are approaching rate design matters. Second, I will support the derivation of specific rates and charges for distribution services that fairly apportion the Company's revenue requirement among customer classes. The new charges are based on appropriate rate design considerations including the results of an allocated cost of service study ("ACOSS") performed in a consistent manner with other elements of the Company's filing.

Q. PLEASE SUMMARIZE YOUR FINDINGS.

A. The five principal conclusions of my testimony are as follows:

(1) **South Jersey Gas' Conservation Incentive Program ("CIP") provides an appropriate foundation for the Company's rate structure.** The CIP aligns the financial interests of South Jersey Gas and its customers with respect to energy consumption by adjusting margin recoveries for changes in customer use. This rate mechanism promotes important rate design goals and recognizes the important role

of utilities in promoting the most efficient use of energy by customers. As such, South Jersey Gas' rate design, which incorporates the CIP, contributes to longer-term consumer and environmental benefits.

(2) **Existing monthly fixed customer charges for the majority of the Company's customers are substantially below cost-based levels:** The customer charges for residential customers are less than 20% of corresponding customer-related costs. Similarly, customer charges for general service customers are less than 40% of customer-related costs. The below-cost customer charges result in intra-class subsidies as substantial customer-related costs are recovered through volumetric charges applied to customer use. This shifts a disproportionate share of customer-related costs to larger customers within a class.

(3) **The cost of distribution service provided to South Jersey Gas' residential customers remains subsidized by prices paid by commercial and industrial customers:** The results of the ACOSS demonstrate that the Company is currently providing service to residential customers at below-average returns. The below-average returns for the residential class are the primary driver of the Company's need to increase its distribution prices because the residential class is by far the largest class on the system, representing over 90% of customers and over 50% of firm throughput.

(4) **Within the residential class, non-heating customers receive the greatest level of subsidy by other customers:** The prices for service to residential non-heating customers do not provide adequate revenue recovery based upon the consumption patterns of residential non-heating customers.

(5) **Class-differentiated base revenue changes are appropriate based upon the results of the ACOSS:** The results of the ACOSS demonstrate that the earned rates of return for service to residential and natural gas vehicle customers are well below the rates of return for all other classes of customers. By applying the largest proportion of the revenue increase to these rate classes, the proposed class-specific revenue requirements promote fairness among the various customers that South Jersey Gas serves.

Q. ARE YOU SUPPORTING ANY SCHEDULES THAT ACCOMPANY YOUR TESTIMONY?

A. Yes. I am sponsoring the following four schedules, which was prepared under my direction and supervision and will be explained later in my testimony:

Schedule DPY-1:	Allocated Cost of Service Study;
Schedule DPY-2:	Summary of Existing and Proposed Rates and Revenues;
Schedule DPY-3:	Pro Forma Revenue Adjustment Attributable to Updating CIP Tariff Factors; and
Schedule DPY-4:	Derivation of Updated CIP Baseline Use per Customer Factors.

II. RATE DESIGN POLICY BACKGROUND

Q. HOW DOES RATE DESIGN AFFECT THE ACHIEVEMENT OF ENERGY POLICY OBJECTIVES?

A. From a public policy perspective, rate design is a critically important tool for achieving specific energy policy goals that influence the quality of life for New Jersey's citizens and the State's competitive position. Policy goals affected by rate design include end-use fuel mix, energy efficiency and the resulting environmental and cost impacts of energy consumption. Therefore, the form of a utility's rate structure is an important building block that can contribute to achieving important energy policy goals.

The nexus between rate design and energy policy objectives continues to receive attention throughout the U.S., due in large part to the prevalence of usage-based rate designs. Usage-based rate designs recover a substantial portion of LDC fixed-cost revenue requirements through volumetric charges applied to the amount of natural gas consumed by customers. The inherent operating incentives under this form of rate structure are for the LDC to promote increased consumption by its existing customers. However, it is essential for utilities to actively support more efficient use of their product by customers in order to achieve public policy goals that favor energy conservation and reductions in customer energy bills. LDCs such as South Jersey Gas are promoting increased energy efficiency to their customers. The form of rate design is essential to LDCs' fully embracing the energy efficiency imperative while also meeting fiduciary responsibilities to shareholders, regulators and customers alike.

Q. HOW WOULD YOU CHARACTERIZE SOUTH JERSEY GAS' EXISTING RATE DESIGN?

A. Base rates are intended to recover a utility's cost of service, excluding purchased gas and other tracked costs. The costs recovered through base rates are fixed costs. The Company's rate design reflects a throughput-based approach. A throughput-based rate design recovers a substantial portion of an LDC's fixed-cost revenue requirements through volumetric charges applied to the amount of natural gas consumed by customers. While the rates for customers include a combination of fixed monthly charges and throughput-based or variable charges, base revenues from variable charges account for nearly 70% of the Company's total base revenue recoveries. This indicates a significant dichotomy between the manner in which South Jersey Gas incurs costs and how costs are recovered from customers.

Q. DOES THE CIP REPRESENT A RATE DESIGN APPROACH THAT ADDRESSES THIS DICHOTOMY BETWEEN COST INCURRENCE AND COST RECOVERY?

A. Yes. A fundamental tenet of the CIP Tariff is alignment of the financial interests of South Jersey Gas with those of its customers with respect to reductions in total energy costs to customers. In particular, the base revenue impacts of any customer savings from energy efficiency and conservation do not contribute negatively to the Company's financial performance. The CIP Tariff enables South Jersey Gas to recover fixed costs through a variable or usage-based rate structure without negative consequences. Customers continue to realize substantial savings as gas supply commodity costs are avoided altogether. The CIP and other similar programs adopted in other jurisdictions are recognized as supporting important local and national policy goals to lower energy use and reduce the associated environmental impacts.

Elimination of the disincentives to promoting customer conservation enables South Jersey Gas to embrace new and complementary initiatives to those required by New Jersey's Clean Energy Program ("NJCEP") that capitalize on various channels for promoting conservation by customers. Energy efficiency and renewable energy resources are two of the building blocks to ensuring a secure energy future for New Jersey. These resources play an important role in achieving environmental policy goals of reducing carbon emissions that pose environmental risks.

Q. PLEASE COMMENT ON THE RELATIONSHIP BETWEEN SOUTH JERSEY GAS' CIP AND THE APPROPRIATE RATE DESIGN IN THIS PROCEEDING.

A. The CIP represents an appropriate means of separating the Company's margin revenue recoveries from customer usage. The CIP is essential to aligning the interests of South Jersey Gas and its customers with respect to energy consumption. Removing the link between throughput and margins through the CIP allows the Company to fully support increased energy efficiency and conservation, encouraging customers to reduce their gas bills and lower the environmental impacts of their gas consumption.

Moreover, the CIP is layered over the existing rate design, which provides important flexibility in terms of the design of base rates. While increases to fixed charges are appropriate, the CIP enables the ongoing recovery of a portion of fixed costs through variable charges and is an integral component of South Jersey Gas' overall rate structure.

III. SOUTH JERSEY GAS DISTRIBUTION RATE DESIGN

Q. PLEASE DESCRIBE THE SPECIFIC RATE DESIGN GOALS THAT GUIDED THE DEVELOPMENT OF NEW RATES AND TARIFFS FOR SOUTH JERSEY GAS IN THIS PROCEEDING?

A. The rate design approach I am recommending seeks to achieve the following six goals:

(1) **Fairness** – Fairness is accomplished through pricing services based on the underlying cost. Fairness is important in many respects including, (i) between the Company and its customers, (ii) across rate classes served by South Jersey Gas, and (iii) among customers taking service under a common rate schedule.

(2) **Not Discriminatory** – Avoiding undue discrimination requires rates that do not grant an unreasonable preference or subject an unreasonable disadvantage to any customer or group of customers.

(3) **Rate Moderation** – Moderation allows for the implementation of price changes over time to ensure that customers are not exposed to dramatic price changes all at once.

(4) **Revenue Stability** – Revenue stability means that the Company's base rate revenues are more predictable in view of future uncertainties. As customer usage patterns have become less certain, improved revenue stability through rate design takes on greater importance as a way of mitigating the increased risks to customers and the Company associated with such unpredictable consumption patterns.

(5) **Energy Efficiency** – Reducing energy consumption through energy efficiency and conservation supports policy objectives that benefit customers and the environment.

(6) **Simplicity** – Simplicity means a rate structure that is easy for customers to understand and straightforward to administer.

Q. PLEASE DESCRIBE THE COMPANY'S EXISTING RATE SCHEDULES.

A. South Jersey Gas' existing rate schedules are segregated by sector, nature of service (firm or interruptible) and by customer size. Firm service is primarily provided under one Residential Service ("RSG") and two size-based general service rate schedules. General service customers with less than 100,000 annual therms are served under the General Service ("GSG") rate schedule and larger customers are served under the General Service – Large Volume ("GSG-LV") rate schedule.

Firm service is also provided to any commercial or industrial electric generating customer including distributed generation and combined heat and power loads pursuant to the Electric Generation Service ("EGS") rate schedule for customers below 200 Mcf per Day or the Electric Generation Service – Large Volume ("EGS-LV") rate schedule for larger customers. A limited number of large customers take firm service under either the Comprehensive Transportation Service ("CTS") or the Large Volume Service ("LVS") rate schedules. CTS requires a minimum contract demand of 100 Mcf/day and LVS requires a minimum contract demand of 200 Mcf/day. The Company also provides firm service to customers using natural gas as a motor vehicle fuel pursuant to its Natural Gas Vehicle ("NGV") rate schedule.

Interruptible customers are either served under the Interruptible Gas Service ("IGS") or Interruptible Transportation Service ("ITS") rate schedules. Lastly, gas lighting service is provided pursuant to the Yard Lighting Service ("YLS") and Street Lighting Service ("SLS") rate schedules.

Q. WHAT RATES AND CHARGES ARE INCORPORATED INTO THE RSG AND GSG RATE SCHEDULES?

A. The existing rate design for these customers is similar and includes two types of base rate charges that are intended to recover South Jersey Gas' non-gas revenue requirements. The RSG base rates consist of a $9.50 customer charge and a flat distribution or throughput charge that is $0.678051 per therm.[1] Customer charges are applied per customer per month and distribution charges are applied to each customer's monthly therm usage. Under this rate structure, all residential customers pay a minimum amount to South Jersey Gas equal

[1] All prices noted in this testimony and supporting schedules exclude the New Jersey Sales and Use Tax ("SUT"). The SUT rate is 6.625% as of January 1, 2018.

to the customer charge, regardless of their monthly usage. The rate design also results in customers paying higher amounts as their consumption increases due to the per-therm distribution charge. The distribution charge is considered a variable charge because all of the associated revenues are linked to customer usage or throughput. The existing rate design for GSG customers is similar to that for residential customers. The monthly customer charge for GSG customers is $29.97 and the distribution charge is $0.566312 per therm.

Q. DO THE REMAINING RATE SCHEDULES EMPLOY THE SAME TYPE OF RATE DESIGN?

A. The rate structures for larger commercial and industrial customers taking service under South Jersey Gas' other rate schedules employ a fixed monthly demand charge in addition to monthly customer and distribution charges. The demand charge is an important means of recovering fixed peak-related costs from customers in an equitable manner.

Q. ARE THERE SEPARATE CHARGES FOR GAS SUPPLY?

A. Yes. Sales customers that purchase their gas supply from South Jersey Gas pay a volumetric Basic Gas Supply Service ("BGSS") rate for gas supply. The BGSS rate recovers the costs of purchased gas and upstream pipeline capacity and storage resources necessary to ensure firm delivery to customers throughout the year, and is adjusted periodically to track changes in the delivered cost of gas supply. The BGSS rate for residential customers may be adjusted three or more times per year and for non-residential customers with greater than 5,000 annual therms is adjusted monthly.

Many customers are transportation-only customers, and pay South Jersey Gas to deliver gas supply that they have purchased from various Third Party Suppliers ("TPSs") that may offer competitive pricing or other terms. The gas supply price for a firm transportation customer is negotiated in a competitive marketplace between the customer and the TPS. Transportation customers also have the option of returning to sales service at any point in the future, subject to certain notice requirements.

Q. DID YOU PERFORM A TRADITIONAL ACOSS TO SUPPORT YOUR RATE DESIGN RECOMMENDATIONS?

A. Yes. I believe that an ACOSS provides an important means of assessing the reasonableness of existing prices, and guides the development of price changes. In particular, the ACOSS that I performed for South Jersey Gas examines all of the Company's common costs reflected in its base rate petition, and through appropriate cost assignments and allocations, establishes measures of investments, expenses and income by customer class. The ACOSS is an important tool because many of the Company's costs are common and are incurred to serve many classes of customers collectively.

The ACOSS calculates the total investment and operating costs incurred to serve each customer class, thereby establishing class-specific total revenue requirements. The class-specific revenue requirements are compared to class revenues in order to establish class income and rate of return on investment. The class-specific rates of return are one factor to consider in the apportionment of the revenue requirements among all of South Jersey Gas' customer classes in conjunction with the development of proposed rates. The ACOSS also determines the classification of costs among demand, customer and commodity components. The classification of costs within a rate classification is used to guide the development of the form of billing rates for that class. Although the ACOSS is not the only factor relied upon to design rates, it is an invaluable guide to ensuring that the process is fair and reasonable. A full description of the South Jersey Gas ACOSS and detailed results are presented in Schedule DPY-1.

Q. PLEASE SUMMARIZE THE RESULTS OF THE ACOSS AND HOW THESE RESULTS GUIDED THE DEVELOPMENT OF THE PROPOSED BASE RATES FOR SOUTH JERSEY GAS.

A. The primary results from the ACOSS are the rate of return by class and the unit customer and demand-related costs. The results of the ACOSS indicate that the rate of return for the residential and NGV classes are less than the system-average rate of return at present rates. The rate of return for all other classes is above the system-average, to varying degrees. Table 1 provides a summary of the rate of return by class and total existing base revenues.

Table 1

Rate of Return by Class and Existing Base Revenues ($ million)

	ACOSS Rate of Return	Unitized Return	Existing Base Revenues
Residential Heating	2.5%	0.5	$227.4
Residential Non-Heating	(3.5%)	(0.7)	$3.2
GSG	20.6%	4.0	$77.3
GSG-LV	18.7%	3.7	$11.2
CTS	19.2%	3.8	$6.4
LVS	11.1%	2.2	$6.7
EGS	16.6%	3.3	$0.3
EGS-LV	9.9%	1.9	$1.0
NGV	(6.5%)	(1.3)	$0.7
Overall	5.1%	1.0	$334.1

With respect to unit costs, the ACOSS indicates that the system-wide average customer cost is $60.41 per month, and the cost generally varies with the size of the customer. The lowest average customer cost of $57.20 per month is indicated for the residential non-heating class and the highest is $3,036 per month for the EGS-LV class. A comparison of existing customer costs to customer-related costs is presented in Table 2.

Table 2

Comparison of Existing Customer Charges and Customer-Related Costs

	Existing Customer Charge	Customer-Related Cost
Residential Heating	$9.50	$58.83
Residential Non-Heating	$9.50	$57.20
GSG	$29.97	$77.40
GSG-LV	$150.00	$217.33
CTS	$600.00	$1,506.34
LVS	$900.00	$1,667.33
EGS	$63.38	$283.74
EGS-LV	$428.32	$3,036.09
NGV (5,000- 24,999 CFH)	$200.00	$409.89

The significant variance between monthly customer-related costs and customer charges is taken into consideration when designing the intra-class rate design.

Q. WHAT STEPS DID YOU EMPLOY TO ESTABLISH THE SPECIFIC BASE RATES YOU ARE PROPOSING?

A. First, I determined the class-by-class revenue requirements, which reflect the results of the ACOSS and other rate design principles. Next, I evaluated the existing level of customer charges and proposed increases, where appropriate, to recover a greater proportion of customer-related costs through customer charges. Lastly, I established the appropriate rate structure and rate levels to recover the remaining portion of class revenue requirements.

Q. HOW DID YOU DEVELOP THE CLASS-BY-CLASS REVENUE REQUIREMENTS?

A. The development of the class-by-class revenue requirements is a two-step process. The first step entails estimating the rate change that will occur pursuant to the Company's existing Storm Hardening and Reliability Program ("SHARP II") and its Accelerated Infrastructure Replacement Program ("AIRP II") rate mechanisms. The costs associated with the SHARP and AIRP programs are reflected in rates each October 1st through an adjustment to base rates. Based on current cost estimates, the revenue requirement impact of the next SHARP adjustment is $3.4 million and of the next AIRP II adjustment is $6.3 million. Since these adjustments will occur independently of the base rate adjustments resulting from this rate case, I estimated the revenue requirement impact to each class of the combined adjustment based on the percentage of existing base revenues for each class.

Next, I determined the appropriate additional base revenue change for each rate class resulting from the Company's requested revenue increase of $75.3 million. Specifically, the base revenue requirements by rate class are based upon the existing base revenues and the results of the ACOSS. Specifically, those classes demonstrating an existing rate of return that is above the system-average receive a lower percentage increase in base revenues than do rate classes demonstrating an existing rate of return that is below the system-average rate of return. In particular, the GSG, GSG-LV, CTS and EGS rate classes receive an increase that is equal to one-half of the average percentage change in base revenues. The rates of return for these four rate classes are more than twice the proposed rate of return. The LVS and EGS-LV, whose existing rates of return are between one and two times the proposed rate of return, receive an increase that is equal to the average percentage change in base revenues. The remaining increase is applied to the RSG and NGV rate classes. All rate classes receive a base rate increase in order to mitigate the impact of the rate change upon rate classes that receive a larger-than-average base rate increase.

Q. WHY IS THE LEVEL OF THE CUSTOMER CHARGE IMPORTANT?

A. The level of the monthly fixed customer charge is important for a variety of reasons that relate to the Company's rate design goals I described earlier. First, the monthly fixed customer charge provides customers with an important price signal concerning the impact of connecting to South Jersey Gas' distribution system. Second, recovering customer-related costs through monthly fixed customer charges contributes to intra-class fairness. To the extent that a portion of customer-related costs are recovered through volumetric charges, intra-class subsidies are created as larger customers pay a disproportionate share of customer-related costs. Third, the fixed monthly customer charge provides revenue stability as fixed costs that are incurred to serve customers are recovered through a fixed charge.

Q. PLEASE DESCRIBE YOUR PROPOSED CHANGES TO THE COMPANY'S FIXED CHARGES INCLUDING MONTHLY CUSTOMER CHARGES AS WELL AS ANY APPLICABLE DEMAND CHARGES.

A. I am proposing changes to the fixed charges applicable to all rate schedules including changes to the monthly customer charges for most customers. It is desirable to recover a greater proportion of the class revenue requirement increase through the customer charge, so that individual rate elements move closer to cost-based levels. For the RSG class, the proposed monthly customer charge is $12.75 per month. The proposed increase is needed to bring the charge closer to the cost-based level indicated by the ACOSS and to address the very low rate of return for residential non-heating customers. The higher RSG monthly customer charge reduces the increases needed to volumetric charges in order to recover the class-specific revenue requirements. Even with the increase to the residential customer charge, 80% of the target revenue requirements of the class are recovered through the volumetric charge under the proposed RSG rates.

I am proposing to increase the monthly customer charge for the GSG class to \$34.75, for the GSG-LV class to \$225.00, for the CTS class to \$750.00, for the LVS class to \$1,050.00, for the EGS class to \$79.00, for the EGS-LV class to \$750.00, for the NGV class for meters from 5,000 to 24,999 CFH to \$220.00, and for the NGV class for meters above 25,000 CFH to \$925.00. Additionally, I am proposing to reflect a portion of the revenue increase for the GSG-LV, CTS, LVS, EGS and EGS-LV classes through an increase to the applicable monthly demand charge for each of these classes. These increases to fixed monthly customer and demand charges are also supported by the results of the ACOSS and reduce the required increase to volumetric charges to yield class margin revenues.

Q. PLEASE EXPLAIN THE NEXT STEP IN THE RATE DESIGN PROCESS.

A. Once the monthly customer and demand charges are established, the next step in the rate design process is to design the remaining rate elements for each class to recover the total target revenue requirements less the revenues recovered through the customer charge. For all rate classes, I have derived appropriate volumetric distribution base rates to yield the target revenue requirements assigned to each class.

Q. HAVE YOU PREPARED A SUMMARY OF THE PROPOSED RATE CHANGES?

A. Yes. The existing and proposed rates for each class are compared in Schedule DPY-2. This schedule reflects the two-step process necessary to establish class-by-class revenue requirements discussed earlier in my testimony. The last column of Schedule DPY-2 provides the percentage increases in base and total revenues by class. In addition, Schedule DPY-2 also provides a proof of revenues demonstrating that the proposed charges yield the requested revenue requirements based on the Company's forecasts of sales and customers.

Q. Please comment on the impact of the proposed rate changes on South Jersey Gas' recovery of its overall costs of providing service to customers.

A. The proposed rates reflect class-differentiated changes in base rates that reduce existing subsidies indicated by the ACOSS. At the same time, all rate classes receive a base revenue increase, mitigating the rate increase to the residential class. The moderate increases in the fixed customer charges result in charges that are closer to cost-based levels. The estimated return on rate base investment by rate class at existing and proposed rates is provided in Table 3.

Table 3

Estimated Return on Rate Base Investment

Rate Schedule	Existing Rates	Proposed Rates
Residential Heating	2.5%	5.1%
Residential Non-Heating	(3.5%)	(2.3%)
GSG	20.6%	19.6%
GSG-LV	18.7%	21.9%
CTS	19.2%	22.3%
LVS	11.1%	15.2%
EGS	16.6%	19.3%
EGS-LV	9.9%	13.6%
NGV	(6.5%)	(0.6%)
Overall	5.1%	7.3%

While the proposed rates do not eliminate existing subsidies, improvement in intra-class revenue responsibility is achieved through the increases to fixed charges. In my view, the proposed rates in this proceeding result from a fair and reasonable rate design approach given the continuation of the Company's CIP.

Q. WHAT ELEMENTS OF THE CIP TARIFF ARE UPDATED IN A BASE RATE CASE?

A. Aspects of the CIP tariff that interrelate with South Jersey Gas base rate revenue recoveries must be updated when new base rates are determined in a base rate case. Specifically, the Margin Revenue Factors and the monthly Baseline Usage per Customer ("BUC") set forth in the CIP tariff must be updated in order to align these aspects of the CIP with the BPU's approval of new rates in a base rate proceeding. In conjunction with updating the BUC, the date for determining incremental large customers set forth in Section (h)(viii) of the CIP Tariff should be changed to July 1, 2020, the first day following the end of the test year.

Updating the BUC levels also affects projected test period revenues. A component of test period revenues are the revenues, positive or negative, associated with the difference between the BUC and actual customer use. Any CIP revenues included in the test period are eliminated on a *pro forma* basis with the resetting of the BUC to the test period throughput level. Schedule DPY-3 provides the CIP revenues that are eliminated from the test period. In addition, Schedule DPY-4 provides the derivation of updated BUC factors to be effective upon implementation of new rates. These BUC factors reflect the billing determinants relied upon to derive the proposed rates in Schedule DPY-4.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

SOUTH JERSEY GAS COMPANY
ALLOCATED COST OF SERVICE STUDY

I. PURPOSE AND GUIDING PRINCIPLES

South Jersey Gas Company ("South Jersey Gas") is proposing to change existing rates in connection with a proposed increase in base rate revenue requirements. An allocated cost of service study ("ACOSS") assesses the reasonableness of existing prices, and guides the development of price changes. In particular, the ACOSS examines all of a utility's common costs, and through appropriate cost assignments and allocations, establishes measures of investments, expenses and income by customer class. An ACOSS is necessary to determine the cost responsibility for each customer class because many of the Company's costs are common and are incurred to serve many classes of customers collectively.

The ACOSS calculates the total investment and operating costs incurred to serve each customer class, establishing class-specific total revenue requirements. The class-specific revenue requirements are compared with class revenues in order to establish class income and rate of return on investment. The class-specific rates of return are used to guide the apportionment of the base rate increase among all of South Jersey Gas' customer classes in conjunction with the development of proposed rates. The ACOSS also determines the classification of costs among demand, customer and commodity components. The classification of costs within a rate classification is used to guide the form of billing rates for that class. Although the ACOSS is not the only factor relied upon to design rates, it is an invaluable guide to ensuring that the process is fair and reasonable.

The primary principle that guides the ACOSS process is that of cost causation. Each step in the development of the ACOSS is consistent with the factors that drive or contribute to the incurrence of costs on the South Jersey Gas system. For example, the principle of cost causation requires that the costs incurred by the Company for meter reading be apportioned to classes on the basis of the number of meter readings in each class.

II. SPECIFICATION OF SOUTH JERSEY GAS ACOSS

A. Overview

The ACOSS follows a three-part process, which consists of the functionalization, classification and allocation of South Jersey Gas' total cost of service. First, cost functionalization involves the segregation of costs into categories based on the function that each cost is incurred to provide. In the ACOSS, the functions are production, transmission, storage and distribution – the direct functions associated with costs incurred by the Company. Second, cost classification further separates costs according to the primary cost causative forces exhibited on South Jersey Gas' system. The cost classifications used in the ACOSS relate to fixed costs required to serve peak requirements (demand-related), fixed costs associated with providing customers with access to and active status on the system (customer-related), and variable costs associated with system throughput (commodity-related). Finally, cost allocation takes each classification of cost for each function and apportions that cost to each of the Company's customer classes. Cost allocation utilizes a variety of factors to apportion the various types of costs among classes in a manner that is consistent with principles of cost responsibility.

B. Customer Classes

The ACOSS includes nine customer classes, which are: Residential Heating, Residential Non-Heating, General Service ("GSG"), General Service – Large Volume ("GDS-LV"), Comprehensive Transportation Service ("CTS"), Large Volume Service ("LVS"), Electric Generation Service ("EGS"), Electric Generation Service – Large Volume ("EGS-LV") and Natural Gas Vehicle Service ("NGV").

The Residential Heating and Residential Non-Heating customers are served under the same rate schedule, Residential Service ("RSG"); however, the two types of customers are studied separately to guide the design of the customer and delivery rates that apply to RSG customers. This approach provides for the evaluation of the cost of serving subsets of customers with disparate characteristics served under a common rate schedule. Residential Non-Heating customers have much lower use than Residential Heating customers and also have a much higher load factor, both of which have important implications for designing rates that are revealed by separating the two types of customers in the ACOSS.

C. Data Sources

The primary data sources fall in two general categories: data related to the establishment of the total cost of service, and data used as the basis for allocating the total cost of service among customer classes. The total cost of service or revenue requirement data utilized in the ACOSS are taken from schedules supporting South Jersey Gas' base rate application in this proceeding. The Company's forecasts of sales, customers and revenues by class supporting the application as adjusted for pro forma changes are used as allocation bases for several categories of costs. The remaining allocation data are derived from special studies of facility or operating costs. All of the data utilized in the ACOSS correspond to a common time period of July 2019 through June 2020. This is South Jersey Gas' test year, which is the period for which rates are to be determined.

D. Cost Functionalization

The functionalization of costs refers to the segregation of costs among the primary functions provided by gas utilities to their retail customers. The chart of accounts prescribed by the New Jersey Board of Public Utilities separates the majority of costs into the following four functions:

- *Production:* The production function includes costs associated with the upstream commodity gas supply, interstate pipeline transportation capacity necessary to deliver the supply to South Jersey Gas' system, and upstream storage facilities. Additionally, the costs of any production facilities and the administrative costs associated with procuring natural gas and transportation are categorized as production-related.

- *Storage:* The storage function includes costs associated with on-system facilities that are able to receive injected supplies or delivered liquid natural gas for later withdrawals.

- *Transmission:* The transmission function includes costs associated with large diameter, high pressure facilities that deliver gas to smaller distribution facilities. Transmission facilities include transmission mains and compressors.

- *Distribution:* The distribution function includes costs associated with delivering supplies within areas that are close in proximity to gas loads, such as distribution mains. The costs associated with connecting customers to the distribution system are also considered distribution-related, which include costs associated with services, meters and regulators.

The majority of South Jersey Gas' non-gas supply costs are associated with the distribution function. Costs that do not directly fall into one of these primary functions, such as administrative and general expenses, are functionalized on the same basis as other related costs.

E. Cost Classification

Classification is the apportionment of costs among demand, customer and commodity categories. Each of South Jersey Gas' rate base and expense accounts is classified consistent with the manner in which the associated costs are incurred. Costs that are associated with serving peak requirements on the system are classified as demand-related, e.g., costs of transmission facilities. Costs that are associated with providing customers access to and active status on the distribution system are classified as customer-related. Customer-related costs are incurred regardless of the amount of gas a customer consumes in any given period and include the costs of services, meters and regulators, and meter reading and billing expenses. Costs that are associated with the quantity of gas purchased or transported are classified as commodity-related. Examples of commodity-related costs are purchased gas costs. Demand and customer-related costs are considered fixed, while commodity-related costs are variable. Some categories of costs vary with more than one of the classifications described previously.

Lastly, some categories of costs are appropriately classified based on how other related costs are classified. For example, distribution operations supervision and engineering expenses are classified based on the classification of all other distribution operations accounts.

The classification of distribution mains reflects the distinct cost causative factors that drive the Company's investments in these facilities. The first factor is the coincident peak demand on the system. Distribution mains are designed to deliver the maximum quantities that are required during a peak period from South Jersey Gas' transmission pipelines or interstate pipeline interconnects to the interconnection with each individual customer service. The second factor is the number of customers on the system. Distribution mains are also designed to deliver supplies in reasonable proximity to customers in order to minimize the length of pipe used to serve all customers in an overall efficient fashion.

The breakdown of distribution mains investment costs between the demand and customer-related components is determined through a minimum-size study. The premise underlying this study is that the size of distribution main installed in a given location is most affected by the peak load that will be served by the main, and that the length of distribution main is most affected by the number of customers that are served. The validity of this premise is supported by the system design criteria taken into consideration by the Company's distribution engineering staff.

The minimum size study evaluates the cost of replacing the existing distribution mains of the system under two different sets of assumptions. The first determines the cost of replacing existing distribution mains with the same type, diameter and lengths of pipe as is currently installed. The second determines the replacement cost assuming that the entire system is replaced with two-inch diameter plastic pipe, which is the smallest, least-expensive size and type of pipe presently being installed. The customer component of distribution mains is equal to the ratio of the replacement cost using the smallest size pipe to the replacement cost using the installed sizes of pipe. Based on the results of this study, 49% of South Jersey Gas' distribution mains investment is classified as customer-related.

F. Cost Allocation

Cost allocation is the apportionment of individual elements of the Company's classified cost of service among rate classes based on each class' responsibility for the cost being incurred. Cost allocation follows cost causation principles and requires the development of numerous allocation factors that reflect the different types of costs included in South Jersey Gas' overall revenue requirements. Considerable effort is required to yield the set of allocation factors underlying the ACOSS.

The ACOSS follows system-design criteria in order to allocate costs on the basis of cost causation. The demand allocator used in the ACOSS is the coincident design day demand factor. Under this method, the allocation of demand costs reflects the manner in which the Company designs, plans and constructs its system to satisfy firm demands. Off-peak loads do not increase the Company's demand-related investments, and therefore, are not factored into the demand allocator in a system-design ACOSS.

The other allocation factors used in the ACOSS may be grouped into three categories as follows: (i) class summary statistics reflected in the base rate filing, such as the number of customers and sales by class; (ii) special studies that examine the costs associated with a specific type of investment or expense; and (iii) internal allocation factors, which are composite factors determined on the basis of how related cost items are allocated. All of the various factors must be developed assuming a consistent time period for the ACOSS to be accurate.

Seven special studies were performed related to significant capital investment and operations and maintenance ("O&M") expense accounts. The studies are as follows:

- *Meter Investment Study:* The meter investment study establishes the aggregate investment in meters and associated regulators based on the type and replacement cost of various meters installed to serve each class.

- *Service Investment Study:* South Jersey Gas' investment in distribution services is the largest investment on its books after the Company's investment in mains. The services investment study establishes the aggregate investment in services based on the type and length of various services installed to serve each class.

- *Industrial Customer Investment Study:* The industrial customer investment study examines the Company's investments in services, meters and regulators to serve the largest customers on the system.

- *Working Capital Study:* The working capital study examines the components of South Jersey Gas' proposed working capital allowance. A composite allocator is derived from the allocation of each component within the ACOSS.

- *Labor Expense Study:* A study of the Company's payroll expense examines components of the Company's payroll costs. The labor study is used as the basis for allocating costs that vary with direct payroll costs, such as pensions and benefits costs.

- *Write-offs Study:* The write-offs study examines historical write-offs by customer class.

Together, these special studies are utilized to allocate a substantial portion of the Company's total revenue requirements to customer classes.

Gas costs represent a significant proportion of the Company's overall O&M

expense. Gas costs are allocated among South Jersey Gas' rate classes on the basis of Basic Gas Supply Service ("BGSS") revenues. The Company does not necessarily incur all gas costs on this basis as a portion of gas costs result from fixed interstate pipeline demand charges. However, given that all customers are allowed to choose an alternate gas supplier, it is important that the application of the ACOSS results to the design of distribution prices not be affected by variances in the allocation of gas costs among sales service classifications.

III. RESULTS

Detailed ACOSS results are provided in Schedule DPY-1, Attachment 1. The first two pages of the attached results provide an income statement by class at existing and proposed rates, respectively. Pages three, four and five contain summaries of allocated rate base, O&M expense and total revenue requirements by classification and rate class. Lastly, page six provides a detailed analysis of the components of monthly customer-related costs.

The ACOSS demonstrates that the rates of return for the Residential Heating, Residential Non-Heating, and NGV customers are less than the system-average rate of return of 5.10% at present rates. The residential class is by far South Jersey Gas' largest class. The rate of return for all other classes is above the system-average, indicating that these classes are subsidizing the prices for residential customers.

Monthly customer costs are derived from the costs that are classified as customer-related and the apportionment of these costs to South Jersey Gas' various customer classes. The system-wide average monthly customer cost is $60, and the cost generally varies with the size of the customer. The lowest average customer cost of $57 per month is associated with serving the Residential Non-Heating class.

The results of the ACOSS indicates that class-differentiated base rate revenue increases would be appropriate given the wide disparity in rates of return by customer class. In addition, the monthly customer-related costs should be taken into consideration in the development of proposed modifications to existing customer charges.

South Jersey Gas Company
Income and Rate of Return at Present Rates

	Total System	Residential Heating	Residential Non-Heating	General Service GSG	General Service GSG-LV	CTS	LVS	EGS	EGS-LV	NGV
REVENUES										
Margin Revenues	$ 334,122,866	$ 227,379,690	$ 3,183,953	$ 77,283,063	$ 11,194,507	$ 6,385,509	$ 6,703,330	$ 314,174	$ 973,635	$ 705,004
Rider Revenues	275,358,650	187,430,787	1,371,864	60,448,728	9,844,516	5,159,149	8,446,833	715,704	1,355,547	585,522
Miscellaneous Revenues	5,833,219	4,732,768	119,651	684,667	111,076	63,019	95,402	3,471	14,937	8,228
Total	**$ 615,314,735**	**$ 419,543,245**	**$ 4,675,468**	**$ 138,416,458**	**$ 21,150,099**	**$ 11,607,677**	**$ 15,245,565**	**$ 1,033,349**	**$ 2,344,119**	**$ 1,298,755**
OPERATING EXPENSES										
Operations and Maintenance	$ 394,248,316	$286,443,646	$3,903,470	$73,055,609	$11,517,683	$5,951,938	$9,667,122	$758,820	$1,527,999	$1,422,028
Depreciation and Amortization	78,634,560	64,260,892	1,707,601	8,999,150	1,276,073	796,141	1,131,653	40,883	186,889	235,277
Taxes Other Than Income Taxes	5,051,306	4,306,724	113,661	604,283	87,356	47,586	73,306	2,628	11,275	(195,514)
Total	**$ 477,934,181**	**$ 355,011,262**	**$ 5,724,732**	**$ 82,659,042**	**$ 12,881,112**	**$ 6,795,665**	**$ 10,872,082**	**$ 802,331**	**$ 1,726,164**	**$ 1,461,792**
OPERATING INCOME BEFORE TAXES	**$ 137,380,554**	**$ 64,531,983**	**$ (1,049,265)**	**$ 55,757,416**	**$ 8,268,988**	**$ 4,812,012**	**$ 4,373,483**	**$ 231,018**	**$ 617,955**	**$ (163,037)**
INCOME TAXES										
Federal Income Taxes	$ 16,859,312	$ 13,678,762	$ 345,818	$ 1,978,841	$ 321,034	$ 182,140	$ 275,732	$ 10,032	$ 43,171	$ 23,781
State Income Taxes	8,987,234	7,291,771	184,346	1,054,866	171,135	97,094	146,985	5,348	23,013	12,677
Deferred Income Taxes	-	-	-	-	-	-	-	-	-	-
Total	**$ 25,846,546**	**$ 20,970,533**	**$ 530,164**	**$ 3,033,707**	**$ 492,169**	**$ 279,234**	**$ 422,717**	**$ 15,379**	**$ 66,184**	**$ 36,459**
RATEMAKING ADJUSTMENTS	**$ (163,179)**	**($132,395)**	**($3,347)**	**($19,153)**	**($3,107)**	**($1,763)**	**($2,669)**	**($97)**	**($418)**	**($230)**
NET INCOME	**$ 111,370,829**	**$ 43,429,056**	**$ (1,582,775)**	**$ 52,704,556**	**$ 7,773,711**	**$ 4,531,014**	**$ 3,948,097**	**$ 215,542**	**$ 551,353**	**$ (199,726)**
RATE BASE	**$ 2,183,729,657**	**$1,771,763,793**	**$44,792,609**	**$256,312,614**	**$41,582,510**	**$23,592,009**	**$35,714,649**	**$1,299,347**	**$5,591,797**	**$3,080,330**
RATE OF RETURN AT PRESENT RATE	**5.10%**	**2.45%**	**-3.53%**	**20.56%**	**18.69%**	**19.21%**	**11.05%**	**16.59%**	**9.86%**	**-6.48%**

South Jersey Gas Company
Income and Rate of Return at Proposed Rates

	Total System	Residential Heating	Residential Non-Heating	General Service GSG	General Service GSG-LV	CTS	LVS	EGS	EGS-LV	NGV
REVENUES										
Margin Revenues	$ 402,999,258	$ 290,474,812	$ 4,129,386	$ 77,208,865	$ 12,878,037	$ 7,327,041	$ 8,477,088	$ 360,500	$ 1,231,267	$ 912,263
Rider Revenues	275,358,650	187,430,787	1,371,864	60,448,728	9,844,516	5,159,149	8,446,833	715,704	1,355,547	585,522
Miscellaneous Revenues	6,462,554	5,243,378	132,560	758,534	123,060	69,818	105,694	3,845	16,548	9,116
Total	**$ 684,820,462**	**$ 483,148,977**	**$ 5,633,810**	**$ 138,416,127**	**$ 22,845,613**	**$ 12,556,008**	**$ 17,029,615**	**$ 1,080,049**	**$ 2,603,363**	**$ 1,506,902**
OPERATING EXPENSES										
Operations and Maintenance	$ 395,394,984	$287,491,577	$3,915,331	$73,125,001	$11,528,220	$5,957,745	$9,667,122	$759,312	$1,527,999	$1,422,676
Depreciation and Amortization	78,634,560	64,260,892	1,707,601	8,999,150	1,276,073	796,141	1,131,653	40,883	186,889	235,277
Taxes Other Than Income Taxes	5,241,446	4,460,994	117,561	626,600	90,976	49,640	76,416	2,741	11,762	(195,245)
Total	**$ 479,270,989**	**$ 356,213,462**	**$ 5,740,493**	**$ 82,750,751**	**$ 12,895,270**	**$ 6,803,526**	**$ 10,875,192**	**$ 802,936**	**$ 1,726,651**	**$ 1,462,708**
OPERATING INCOME BEFORE TAXES	**$ 205,549,473**	**$ 126,935,515**	**$ (106,684)**	**$ 55,665,376**	**$ 9,950,343**	**$ 5,752,482**	**$ 6,154,423**	**$ 277,113**	**$ 876,712**	**$ 44,194**
INCOME TAXES										
Federal Income Taxes	$ 29,886,767	$ 24,248,556	$ 613,037	$ 3,507,923	$ 569,103	$ 322,883	$ 488,795	$ 17,783	$ 76,530	$ 42,158
State Income Taxes	15,122,613	12,269,696	310,195	1,774,998	287,964	163,378	247,329	8,998	38,724	21,332
Deferred Income Taxes	-	-	-	-	-	-	-	-	-	-
Total	**$ 45,009,380**	**$ 36,518,252**	**$ 923,231**	**$ 5,282,921**	**$ 857,067**	**$ 486,261**	**$ 736,123**	**$ 26,781**	**$ 115,254**	**$ 63,489**
RATEMAKING ADJUSTMENTS	**$ (163,179)**	**($132,395)**	**($3,347)**	**($19,153)**	**($3,107)**	**($1,763)**	**($2,669)**	**($97)**	**($418)**	**($230)**
NET INCOME	**$ 160,376,914**	**$ 90,284,868**	**$ (1,033,262)**	**$ 50,363,302**	**$ 9,090,168**	**$ 5,264,458**	**$ 5,415,631**	**$ 250,234**	**$ 761,041**	**$ (19,526)**
RATE BASE	**$ 2,183,729,657**	**$1,771,763,793**	**$44,792,609**	**$256,312,614**	**$41,582,510**	**$23,592,009**	**$35,714,649**	**$1,299,347**	**$5,591,797**	**$3,080,330**
RATE OF RETURN AT PROPOSED RAT	**7.34%**	**5.10%**	**-2.31%**	**19.65%**	**21.86%**	**22.31%**	**15.16%**	**19.26%**	**13.61%**	**-0.63%**

South Jersey Gas Company
Rate Base

	Total System	Residential Heating	Residential Non-Heating	General Service GSG	General Service GSG-LV	CTS	LVS	EGS	EGS-LV	NGV
I. PLANT IN SERVICE										
Demand	$ 1,051,028,023	$ 697,674,643	$ 3,307,950	$199,087,184	$60,443,033	$28,132,087	$49,380,202	$1,549,191	$6,727,009	$4,726,724
Customer	2,191,222,356	1,930,406,612	63,166,174	178,324,431	1,855,352	9,219,043	5,504,480	379,039	2,059,392	307,833
Commodity	1,401,979	954,297	6,985	307,773	50,123	26,268	43,007	3,644	6,902	2,981
	$ 3,243,652,358	$2,629,035,553	$66,481,109	$377,719,388	$62,348,507	$37,377,398	$54,927,689	$1,931,873	$8,793,302	$5,037,538
II. ACCUMULATED RESERVE FOR DEPRECIATION										
Demand	$ 210,899,033	$ 139,730,213	$ 662,516	$39,873,163	$12,105,525	$5,634,292	$9,889,862	$310,272	$1,347,285	$1,345,906
Customer	402,792,843	352,358,810	11,529,564	32,669,528	340,848	3,098,963	1,897,485	107,315	684,849	105,482
Commodity	357,191	243,133	1,780	78,413	12,770	6,692	10,957	928	1,758	760
	$ 614,049,068	$492,332,156	$12,193,859	$72,621,104	$12,459,143	$8,739,947	$11,798,305	$418,515	$2,033,892	$1,452,148
III. NET PLANT IN SERVICE										
Demand	$ 840,128,990	$ 557,944,430	$ 2,645,434	$159,214,021	$48,337,508	$22,497,796	$39,490,340	$1,238,919	$5,379,724	$3,380,817
Customer	1,788,429,512	1,578,047,802	51,636,611	145,654,903	1,514,504	6,120,080	3,606,995	271,724	1,374,543	202,351
Commodity	1,044,788	711,165	5,205	229,359	37,353	19,575	32,050	2,716	5,143	2,222
	$ 2,629,603,290	$2,136,703,397	$54,287,250	$305,098,284	$49,889,364	$28,637,450	$43,129,385	$1,513,359	$6,759,411	$3,585,390
IV. RATE BASE ADDITIONS										
Demand	$ 41,111,948	$ 31,728,364	$ 600,766	$6,676,998	$955,899	$330,553	$585,110	$51,077	$87,579	$95,602
Customer	60,570,986	47,591,691	1,136,127	8,805,092	1,163,786	539,617	955,393	60,700	146,918	171,660
Commodity	35,409	27,770	658	5,183	689	319	566	36	87	101
	$ 101,718,344	$79,347,826	$1,737,552	$15,487,273	$2,120,375	$870,490	$1,541,068	$111,813	$234,585	$267,363
V. RATE BASE DEDUCTIONS										
Demand	$ (176,676,544)	$ (118,221,189)	$ (650,818)	($33,258,841)	($9,882,642)	($4,576,766)	($8,034,570)	($258,626)	($1,096,118)	($696,974)
Customer	(370,698,868)	(325,918,095)	(10,580,200)	(30,967,079)	(536,960)	(1,335,177)	(914,695)	(66,647)	(305,032)	(74,984)
Commodity	(216,564)	(148,146)	(1,175)	(47,023)	(7,627)	(3,989)	(6,539)	(552)	(1,049)	(466)
	$ (547,591,976)	($444,287,430)	($11,232,193)	($64,272,943)	($10,427,229)	($5,915,931)	($8,955,804)	($325,824)	($1,402,199)	($772,423)
VI. TOTAL RATE BASE										
Demand	**$ 704,564,394**	**$ 471,451,606**	**$ 2,595,383**	**$132,632,178**	**$39,410,765**	**$18,251,582**	**$32,040,880**	**$1,031,369**	**$4,371,185**	**$2,779,446**
Customer	**1,478,301,631**	**1,299,721,398**	**42,192,538**	**123,492,916**	**2,141,330**	**5,324,520**	**3,647,693**	**265,778**	**1,216,430**	**299,027**
Commodity	**863,633**	**590,789**	**4,688**	**187,520**	**30,415**	**15,906**	**26,077**	**2,200**	**4,182**	**1,857**
	$ 2,183,729,657	**$1,771,763,793**	**$44,792,609**	**$256,312,614**	**$41,582,510**	**$23,592,009**	**$35,714,649**	**$1,299,347**	**$5,591,797**	**$3,080,330**

South Jersey Gas Company
O&M Expense

	Total System	Residential Heating	Residential Non-Heating	General Service GSG	General Service GSG-LV	CTS	LVS	EGS	EGS-LV	NGV
I. PRODUCTION EXPENSE										
Demand	$ -	$ -	$ -	$0	$0	$0	$0	$0	$0	$0
Customer	-	-	-	-	-	-	-	-	-	-
Commodity	256,377,051	174,510,415	1,277,296	56,281,750	9,165,893	4,803,508	7,864,558	666,367	1,262,104	545,160
	$ 256,377,051	$174,510,415	$1,277,296	$56,281,750	$9,165,893	$4,803,508	$7,864,558	$666,367	$1,262,104	$545,160
II. STORAGE EXPENSE										
Demand	$ 483,334	$ 321,971	$ 1,527	$ 91,877	$ 27,894	$ 12,983	$ 22,789	$ 715	$ 3,104	$ 475
Customer	-	-	-	-	-	-	-	-	-	-
Commodity	-	-	-	-	-	-	-	-	-	-
	$ 483,334	$321,971	$1,527	$91,877	$27,894	$12,983	$22,789	$715	$3,104	$475
III. TRANSMISSION EXPENSE										
Demand	$ 8,988,538	$ 5,987,678	$ 28,390	$ 1,708,633	$ 518,742	$ 241,439	$ 423,797	$ 13,296	$ 57,733	$ 8,830
Customer	-	-	-	-	-	-	-	-	-	-
Commodity	-	-	-	-	-	-	-	-	-	-
	$ 8,988,538	$5,987,678	$28,390	$1,708,633	$518,742	$241,439	$423,797	$13,296	$57,733	$8,830
IV. DISTRIBUTION EXPENSE										
Demand	$ 5,786,944	$ 3,425,868	$ 16,243	$977,599	$296,800	$138,140	$242,477	$7,607	$33,032	$649,176
Customer	21,516,830	18,564,715	605,500	2,287,808	34,659	13,223	5,944	1,364	3,267	350
Commodity	-	-	-	-	-	-	-	-	-	-
	$ 27,303,774	$21,990,583	$621,743	$3,265,408	$331,459	$151,363	$248,421	$8,971	$36,299	$649,527
V. CUSTOMER ACCOUNTS EXPENSE										
Demand	$ 4,459,172	$ 4,075,202	$ 46,124	$ 269,851	$ 40,979	$ 22,582	$ -	$ 1,913	$ -	$ 2,521
Customer	23,342,291	21,182,445	510,821	1,496,996	91,889	49,005	898	4,464	173	5,600
Commodity	5,466	4,995	57	331	50	28	-	2	-	3
	$ 27,806,929	$25,262,642	$557,001	$1,767,177	$132,918	$71,615	$898	$6,380	$173	$8,124
VI. CUSTOMER SERVICE AND SALES EXPENSE										
Demand	$ 168,505	$ 112,249	$ 532	$ 32,031	$ 9,725	$ 4,526	$ 7,945	$ 249	$ 1,082	$ 166
Customer	1,762,171	1,591,549	52,167	117,275	744	205	113	57	22	39
Commodity	15,952,152	10,858,291	79,475	3,501,932	570,315	298,881	489,344	41,462	78,530	33,921
	$ 17,882,828	$ 12,562,089	$ 132,175	$ 3,651,238	$ 580,784	$ 303,612	$ 497,402	$ 41,768	$ 79,634	$ 34,125
VII. ADMINISTRATIVE AND GENERAL EXPENSE										
Demand	$ 12,499,475	$ 8,222,016	$ 39,354	$2,344,265	$710,840	$330,753	$580,574	$18,241	$79,097	$174,335
Customer	43,793,019	38,457,179	1,256,549	3,957,570	50,394	37,601	20,706	2,899	8,574	1,548
Commodity	260,036	177,004	1,296	57,083	9,296	4,872	7,976	676	1,280	553
	$ 56,552,530	$46,856,198	$1,297,199	$6,358,917	$770,530	$373,226	$609,257	$21,816	$88,951	$176,436
VIII. TOTAL O&M EXPENSE										
Demand	**$ 32,385,967**	**$ 22,144,982**	**$ 132,170**	**$ 5,424,256**	**$ 1,604,980**	**$ 750,423**	**$ 1,277,582**	**$ 42,022**	**$ 174,050**	**$ 835,502**
Customer	**90,414,312**	**79,795,889**	**2,425,037**	**7,859,649**	**177,686**	**100,034**	**27,661**	**8,783**	**12,035**	**7,538**
Commodity	**272,594,705**	**185,550,706**	**1,358,123**	**59,841,096**	**9,745,555**	**5,107,288**	**8,361,879**	**708,508**	**1,341,914**	**579,637**
	$ 395,394,984	**$ 287,491,577**	**$ 3,915,331**	**$ 73,125,001**	**$ 11,528,220**	**$ 5,957,745**	**$ 9,667,122**	**$ 759,312**	**$ 1,527,999**	**$ 1,422,676**

South Jersey Gas Company
Total Revenue Requirements

	Total	Residential		General Service						
	System	Heating	Non-Heating	GSG	GSG-LV	CTS	LVS	EGS	EGS-LV	NGV
I. O&M EXPENSE										
Demand	$ 32,385,967	$ 22,144,982	$ 132,170	$ 5,424,256	$ 1,604,980	$ 750,423	$ 1,277,582	$ 42,022	$ 174,050	$ 835,502
Customer	90,414,312	79,795,889	2,425,037	7,859,649	177,686	100,034	27,661	8,783	12,035	7,538
Commodity	272,594,705	185,550,706	1,358,123	59,841,096	9,745,555	5,107,288	8,361,879	708,508	1,341,914	579,637
	$ 395,394,984	$ 287,491,577	$ 3,915,331	$ 73,125,001	$ 11,528,220	$ 5,957,745	$ 9,667,122	$ 759,312	$ 1,527,999	$ 1,422,676
II. DEPRECIATION										
Demand	$ 21,244,177	$ 14,013,973	$ 66,446	$ 3,999,002	$ 1,214,100	$ 565,080	$ 991,885	$ 31,118	$ 135,123	$ 227,449
Customer	57,283,396	50,174,095	1,640,623	4,976,662	58,148	229,056	136,486	9,487	51,239	7,600
Commodity	106,986	72,823	533	23,486	3,825	2,005	3,282	278	527	227
	$ 78,634,560	$ 64,260,892	$ 1,707,601	$ 8,999,150	$ 1,276,073	$ 796,141	$ 1,131,653	$ 40,883	$ 186,889	$ 235,277
III. TAXES OTHER THAN INCOME										
Demand	$ 1,308,713	$ 1,006,280	$ 5,093	$ 285,450	$ 85,896	$ 39,897	$ 70,035	$ 2,221	$ 9,546	$ (195,705)
Customer	3,920,456	3,446,355	112,406	338,457	4,641	9,514	6,005	488	2,156	433
Commodity	12,277	8,360	62	2,693	439	230	376	32	60	26
	$ 5,241,446	$4,460,994	$117,561	$626,600	$90,976	$49,640	$76,416	$2,741	$11,762	($195,245)
IV. DEFERRED INCOME TAXES										
Demand	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Customer	-	-	-	-	-	-	-	-	-	-
Commodity	-	-	-	-	-	-	-	-	-	-
	$ -	$0	$0	$0	$0	$0	$0	$0	$0	$0
V. RATEMAKING ADJUSTMENTS										
Demand	$ 52,648	$ 35,229	$ 194	$ 9,911	$ 2,945	$ 1,364	$ 2,394	$ 77	$ 327	$ 208
Customer	110,466	97,121	3,153	9,228	160	398	273	20	91	22
Commodity	65	44	0	14	2	1	2	0	0	0
	$ 163,179	$132,395	$3,347	$19,153	$3,107	$1,763	$2,669	$97	$418	$230
VI. RETURN										
Demand	$ 53,039,488	$ 35,490,797	$ 195,380	$ 9,984,528	$ 2,966,836	$ 1,373,976	$ 2,412,032	$ 77,641	$ 329,062	$ 209,236
Customer	111,286,297	97,842,807	3,176,247	9,296,526	161,199	400,829	274,598	20,008	91,573	22,511
Commodity	65,014	44,474	353	14,116	2,290	1,197	1,963	166	315	140
	$ 164,390,799	$133,378,078	$3,371,980	$19,295,170	$3,130,324	$1,776,002	$2,688,593	$97,815	$420,950	$231,887
VII. INCOME TAXES										
Demand	$ 14,521,947	$ 9,717,203	$ 53,494	$ 2,733,714	$ 812,305	$ 376,188	$ 660,402	$ 21,258	$ 90,096	$ 57,288
Customer	30,469,632	26,788,872	869,641	2,545,342	44,135	109,745	75,183	5,478	25,072	6,163
Commodity	17,801	12,177	97	3,865	627	328	537	45	86	38
	$ 45,009,380	$36,518,252	$923,231	$5,282,921	$857,067	$486,261	$736,123	$26,781	$115,254	$63,489
VIII. TOTAL REVENUE REQUIREMENTS										
Demand	**$ 122,552,941**	**$ 82,408,464**	**$ 452,777**	**$ 22,436,861**	**$ 6,687,062**	**$ 3,106,929**	**$ 5,414,330**	**$ 174,336**	**$ 738,204**	**$ 1,133,978**
Customer	**293,484,558**	**258,145,139**	**8,227,107**	**25,025,864**	**445,970**	**849,575**	**520,207**	**44,264**	**182,165**	**44,268**
Commodity	**272,796,848**	**185,688,584**	**1,359,168**	**59,885,271**	**9,752,737**	**5,111,049**	**8,368,039**	**709,029**	**1,342,902**	**580,068**
	$ 688,834,347	**$526,242,187**	**$10,039,052**	**$107,347,996**	**$16,885,769**	**$9,067,552**	**$14,302,576**	**$927,629**	**$2,263,272**	**$1,758,314**

South Jersey Gas Company
Monthly Customer Cost Detail

	Total	Residential		General Service						
	System	Heating	Non-Heating	GSG	GSG-LV	CTS	LVS	EGS	EGS-LV	NGV
I. AVERAGE CUSTOMER COSTS										
Customer-Related Revenue Req.	$ 293,484,558	$ 258,145,139	$ 8,227,107	$ 25,025,864	$ 445,970	$ 849,575	$ 520,207	$ 44,264	$ 182,165	$ 44,268
Average Customers	404,844	365,645	11,985	26,943	171	47	26	13	5	9
Average Monthly Customer Cost	**$ 60.41**	**$ 58.83**	**$ 57.20**	**$ 77.40**	**$ 217.33**	**$ 1,506.34**	**$ 1,667.33**	**$ 283.74**	**$ 3,036.09**	**$ 409.89**
II. MONTHLY CUSTOMER COST DETAIL										
O&M Expense										
Mains and Services Expense	$ 1.93	$ 1.92	$ 1.92	$ 2.00	$ 2.00	$ 19.77	$ 15.66	$ 7.08	$ 47.19	$ 2.00
Meter & Regulator Expense	1.14	0.99	0.97	3.21	11.10	-	-	-	-	-
Meter Reading Expense	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Customer Records and Collections	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
Uncollectible Accounts	1.60	1.62	0.56	1.46	34.84	69.86	-	21.40	-	40.72
All Other O&M	11.06	10.77	10.53	14.76	35.77	84.86	70.12	24.95	150.51	24.19
Total O&M	$ 18.61	$ 18.19	$ 16.86	$ 24.31	$ 86.59	$ 177.36	$ 88.66	$ 56.30	$ 200.58	$ 69.79
Depreciation										
Mains	$ 2.53	$ 2.53	$ 2.53	$ 2.53	$ 2.53	$ 2.53	$ 2.53	$ 2.53	$ 2.53	$ 2.53
Services	4.47	4.44	4.44	4.72	4.72	63.73	50.09	21.57	154.82	4.72
Measuring and Regulating	1.25	1.03	1.01	3.32	11.50	318.55	364.79	30.09	650.87	58.77
All Other Depreciation	3.54	3.44	3.43	4.82	9.59	21.32	20.06	6.63	45.77	4.36
Total Depreciation	$ 11.79	$ 11.44	$ 11.41	$ 15.39	$ 28.34	$ 406.13	$ 437.46	$ 60.81	$ 853.99	$ 70.37
Taxes Other Than Income Taxes	$ 0.81	$ 0.79	$ 0.78	$ 1.05	$ 2.26	$ 16.87	$ 19.25	$ 3.13	$ 35.93	$ 4.01
Deferred Income Taxes	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ratemaking Adjustments	$ 0.02	$ 0.02	$ 0.02	$ 0.03	$ 0.08	$ 0.71	$ 0.87	$ 0.13	$ 1.51	$ 0.21
Rate Base-Related (Return and Income Taxes)										
Mains	$ 13.35	$ 13.35	$ 13.35	$ 13.35	$ 13.35	$ 13.35	$ 13.35	$ 13.35	$ 13.35	$ 13.35
Services	16.22	14.83	14.83	15.75	15.75	212.74	167.19	71.99	516.79	15.75
Meters and Regulators	3.50	2.88	2.83	9.32	32.29	786.08	900.17	74.25	1,606.12	145.02
All Other Rate Base-Related	(3.89)	(2.65)	(2.88)	(1.80)	38.68	(106.89)	40.39	3.78	(192.18)	91.39
Total Rate Base-Related	$ 29.18	$ 28.40	$ 28.13	$ 36.63	$ 100.07	$ 905.27	$ 1,121.09	$ 163.37	$ 1,944.08	$ 265.50
Total Average Monthly Customer Cost	**$ 60.41**	**$ 58.83**	**$ 57.20**	**$ 77.40**	**$ 217.33**	**$ 1,506.34**	**$ 1,667.33**	**$ 283.74**	**$ 3,036.09**	**$ 409.89**

South Jersey Gas Company
Base and Total Revenues at Present and Proposed Rates

Component	Amount	Units	Present Rates Rate	Present Rates Revenue	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Rate	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Revenue	Proposed Rates Rate	Proposed Rates Revenue	Increase
			RSG		RSG		RSG		
Residential Service									
Customer Charge	4,531,567	Bills	$ 9.50	$ 43,049,890	$ 9.50	$ 43,049,890	$ 12.75	$ 57,777,484	
Distribution Charge	276,548,155	Therms	0.678051	187,513,753	0.702706	194,332,048	0.856372	236,828,096	
CIP Revenues				(5,472,678)		(5,472,678)		-	
Total Base Revenues				**$ 225,090,965**		**$ 231,909,260**		**$ 294,605,581**	**27.0%**
		Rider Revenues		**$ 159,248,510**		**$ 159,248,510**		**$ 159,248,510**	
		Total Class Revenues		**$ 384,339,475**		**$ 391,157,770**		**$ 453,854,091**	**16.0%**
			GSG		GSG		GSG		
General Service (0-100,000 Annual Therms)									
Customer Charge	323,321	Bills	$ 29.97	$ 9,689,918	$ 29.97	$ 9,689,918	$ 34.75	$ 11,235,391	
Distribution Charge	119,356,723	Therms	0.566312	67,593,145	0.583388	69,631,280	0.552743	65,973,593	
CIP Revenues				(9,995,628)		(9,995,628)		-	
Total Base Revenues				**$ 67,287,435**		**$ 69,325,570**		**$ 77,208,984**	**11.4%**
		Rider Revenues		**$ 59,229,860**		**$ 59,229,860**		**$ 59,229,860**	
		Total Class Revenues		**$ 126,517,295**		**$ 128,555,430**		**$ 136,438,844**	**6.1%**

South Jersey Gas Company
Base and Total Revenues at Present and Proposed Rates

Component	Amount	Units	Present Rates Rate	Present Rates Revenue	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Rate	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Revenue	Proposed Rates Rate	Proposed Rates Revenue	Increase
			GSG-LV		GSG-LV		GSG-LV		
General Service Large Volume (100,000 + Annual Therms)									
Customer Charge	2,053	Bills	$ 150.00	$ 307,950	$ 150.00	$ 307,950	$ 225.00	$ 461,925	
Demand Charge	231,528	Mcf	9.6086	2,224,660	9.6086	2,224,660	12.2500	2,836,218	
Distribution Charge	30,549,982	Therms	0.283532	8,661,897.41	0.294660	9,001,858	0.313582	9,579,924	
CIRT Revenues				28,681		28,681		-	
Total Base Revenues				**$ 11,223,188**		**$ 11,563,148**		**$ 12,878,067**	**11.4%**
		Rider Revenues		**$ 7,989,473**		**$ 7,989,473**		**$ 7,989,473**	
		Total Class Revenues		**$ 19,212,661**		**$ 19,552,621**		**$ 20,867,540**	**6.7%**
			CTS		CTS		CTS		
Comprehensive Firm Transportation Service									
Customer Charge	560	Bills	$ 600.00	$ 336,000	$ 600.00	$ 336,000	$ 750.00	$ 420,000	
Demand Charge	170,624	Mcf	28.6555	4,889,316	28.6555	4,889,316	31.7500	5,417,312	
Distribution Charge	16,869,883	Therms	0.068773	1,160,192	0.080239	1,353,623	0.088309	1,489,763	
Total Base Revenues				**$ 6,385,509**		**$ 6,578,939**		**$ 7,327,075**	**11.4%**
		Rider Revenues		**$ 4,202,019**		**$ 4,202,019**		**$ 4,202,019**	
		Total Class Revenues		**$ 10,587,528**		**$ 10,780,958**		**$ 11,529,094**	**6.9%**

South Jersey Gas Company
Base and Total Revenues at Present and Proposed Rates

Component	Amount	Units	Present Rates Rate	Present Rates Revenue	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Rate	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Revenue	Proposed Rates Rate	Proposed Rates Revenue	Increase
			LVS		LVS		LVS		
Large Volume Service									
Customer Charge	306	Bills	$ 900.00	$ 275,400	$ 900.00	$ 275,400	$ 1,050.00	$ 321,300	
Demand Charge	299,496	Mcf	15.9588	4,779,597	15.9588	4,779,597	19.7500	5,915,046	
Distribution Charge	32,287,343	Therms	0.051052	1,648,333	0.057341	1,851,389	0.069401	2,240,774	
Total Base Revenues				**$ 6,703,330**		**$ 6,906,385**		**$ 8,477,120**	**22.7%**
		Rider Revenues		**$ 6,879,770**		**$ 6,879,770**		**$ 6,879,770**	
		Total Class Revenues		**$ 13,583,100**		**$ 13,786,155**		**$ 15,356,890**	**11.4%**
			EGS		EGS		EGS		
Electric Generation Service									
Customer Charge	156	Bills	$ 63.38	$ 9,887	$ 63.38	$ 9,887	$ 79.00	$ 12,324	
Demand Charge	9,396	Mcf	7.8432	73,695	7.8432	73,695	8.2500	77,517	
Distribution Charge (Nov - Mar.)	907,290	Therms	0.135163	122,632	0.140084	127,097	0.155881	141,429	
Distribution Charge (Apr - Oct.)	1,026,600	Therms	0.105163	107,960	0.110084	113,012	0.125881	129,229	
Total Base Revenues				**$ 314,174**		**$ 323,691**		**$ 360,500**	**11.4%**
		Rider Revenues		**$ 582,926**		**$ 582,926**		**$ 582,926**	
		Total Class Revenues		**$ 897,100**		**$ 906,617**		**$ 943,425**	**4.1%**

South Jersey Gas Company
Base and Total Revenues at Present and Proposed Rates

Component	Amount	Units	Present Rates Rate	Present Rates Revenue	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Rate	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Revenue	Proposed Rates Rate	Proposed Rates Revenue	Increase
			EGS-LV		EGS-LV		EGS-LV		
Electric Generation Service - Large Volume									
Customer Charge	60	Bills	$ 428.32	25,699	$ 428.32	$ 25,699	$ 750.00	$ 45,000	
Demand Charge	40,800	Mcf	23.233717	947,936	23.956564	977,428	29.075282	1,186,272	
Total Base Revenues				**$ 973,635**		**$ 1,003,127**		**$ 1,231,272**	**22.7%**
		Rider Revenues		**$ 1,104,065**		**$ 1,104,065**		**$ 1,104,065**	
		Total Class Revenues		**$ 2,077,700**		**$ 2,107,192**		**$ 2,335,337**	**10.8%**

Component	Amount	Units	Present Rates Rate	Present Rates Revenue	Existing Adjusted Rate	Existing Adjusted Revenue	Proposed Rates Rate	Proposed Rates Revenue	Increase
			NGV		NGV		NGV		
Natural Gas Vehicle Service									
Cust. Charge 0-999 CFH	12	Bills	$ 37.50	$ 450	$ 37.50	$ 450	$ 37.50	$ 450	
Cust. Charge 1,000-4,999 CFH	-	Bills	75.00	-	75.00	-	75.00	-	
Cust. Charge 5,000-24,999 CFH	12	Bills	200.00	2,400	200.00	2,400	220.00	2,640	
Cust. Charge 25,000+ CFH	84	Bills	703.47	59,091	703.47	59,091	925.00	77,700	
Distribution Charge	1,888,852	Therms	0.196474	371,110	0.203419	384,228	0.257299	486,000	
Subtotal Distribution				**$ 433,052**		**$ 446,170**		**$ 566,790**	
Compression Charge	495,620	Therms	0.548712	271,952	0.548712	271,952	0.697060	345,477	
Total Base Revenues				**$ 705,004**		**$ 718,122**		**$ 912,266**	**27.0%**
		Rider Revenues		**$ 476,896**		**$ 476,896**		**$ 476,896**	
		Total Class Revenues		**$ 1,181,900**		**$ 1,195,018**		**$ 1,389,162**	**16.2%**

South Jersey Gas Company
Base and Total Revenues at Present and Proposed Rates

Component	Amount	Units	Present Rates Rate	Present Rates Revenue	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Rate	Exsting Rates Adjusted for Projected October 1, 2020 SHARP and AIRP II Roll-In Revenue	Proposed Rates Rate	Proposed Rates Revenue	Increase
			GLS		GLS		GLS		
Gas Lights Service									
Yard Lights	48	Mantles	$ 8.818524	$ 5,079	$ 9.085644	$ 5,233	$ 11.152022	$ 6,424	
Street Lights	36	Mantles	$ 9.506499	4,107	$ 9.794458	4,231	$ 12.022044	5,194	
Total Base Revenues				**$ 9,186**		**$ 9,465**		**$ 11,617**	**22.7%**
	Rider Revenues			**$ 34,114**		**$ 34,114**		**$ 34,114**	
	Total Class Revenues			**$ 43,300**		**$ 43,578**		**$ 45,731**	**4.9%**
TOTAL SYSTEM BASE DISTRIBUTION REVENUES				***$ 318,692,426***		***$ 328,337,707***		***$ 403,012,481***	***22.7%***
Other Revenues									
Rider Revenues				**$ 239,747,632**		**$ 239,747,632**		**$ 239,747,632**	
Special Contracts				**3,687,306**		**3,687,306**		**3,687,306**	
Service Charges				**2,136,448**		**2,136,448**		**2,763,631**	
Total Other Revenues				**$ 245,571,387**		**$ 245,571,387**		**$ 246,198,570**	
TOTAL SYSTEM INCLUDING OTHER REVENUES				***$ 564,263,813***		***$ 573,909,094***		***$ 649,211,051***	***13.1%***

Increase	**$ 75,301,957**
Target	**75,302,112**
Difference	**($155)**

SOUTH JERSEY GAS COMPANY
Pro Forma Adjustment to June 30, 2020
Summary of CIP Revenue Adjustment

Description	Actual 2019 July	Actual 2019 August	Actual 2019 September	Actual 2019 October	Actual 2019 November	Actual 2019 December	Projected 2020 January	Projected 2020 February	Projected 2020 March	Projected 2020 April	Projected 2020 May	Projected 2020 June	Test Year Total
CIP Revenue Adjustment													
CIP Group 1 - RSG non-Heat	($6,063)	($2,107)	$11,451	$26,262	$43,959	$76,641	($22,540)	($25,825)	$2,766	($238)	$11,691	($9,257)	$106,740
CIP Group 2 - RSG Heat	($55,615)	$1,332,528	($529,892)	$1,440,189	$3,634,254	($1,937,820)	$1,340,670	$662,029	($601,716)	($966,863)	$401,601	$582,817	$5,302,181
CIP Group 3 - GSG	$35,573	$521,321	($117,209)	$817,295	$1,202,435	($561,092)	($603,342)	$1,587,390	$820,778	$1,441,585	$2,600,335	$2,232,176	$9,977,245
CIP Group 4 - GSG-LV	($97,543)	$70,518	$84,949	$61,447	$91,260	($42,615)	($134,320)	$4,493	($107,862)	$73,052	($120,480)	$86,058	($31,042)
Total Revenue	($123,647)	$1,922,260	($550,702)	$2,345,193	$4,971,908	($2,464,885)	$580,467	$2,228,087	$113,966	$547,536	$2,893,148	$2,891,794	$15,355,124
Weather Related Dollars	$0	$0	$0	($3,591,424)	$5,704,020	($2,197,097)	$0	$0	$0	$0	$0	$0	($84,501)
Total Non-Weather Related Dollars	($123,647)	$1,922,260	($550,702)	$5,936,617	($732,112)	($267,788)	$580,467	$2,228,087	$113,966	$547,536	$2,893,148	$2,891,794	$15,439,625

South Jersey Gas Company
Derivation of CIP Baseline Use-per-Customer
6 + 6 Update

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total
Group 1: RSG Non-Heat													
Customers	11,564	11,553	11,538	11,489	11,480	11,466	11,583	11,612	11,655	11,695	11,729	11,769	139,133
Therms	112,114	100,743	114,501	151,322	266,879	466,186	313,114	319,517	284,981	189,077	145,058	126,428	2,589,920
Baseline Use per Cust.	**9.70**	**8.72**	**9.92**	**13.17**	**23.25**	**40.66**	**27.03**	**27.52**	**24.45**	**16.17**	**12.37**	**10.74**	**223.70**
Group 2: RSG Heat													
Customers	355,602	355,501	355,777	356,438	357,814	359,223	359,498	360,284	360,740	360,999	361,151	361,154	4,304,181
Therms	4,715,241	5,067,607	4,807,725	12,322,564	25,061,283	44,633,568	56,477,843	47,705,885	36,195,907	18,213,226	8,753,687	5,301,511	269,256,047
Baseline Use per Cust.	**13.26**	**14.25**	**13.51**	**34.57**	**70.04**	**124.25**	**157.10**	**132.41**	**100.34**	**50.45**	**24.24**	**14.68**	**749.10**
Group 3: GSG													
Customers	25,614	25,505	25,498	25,613	25,875	26,083	26,140	26,270	26,424	26,468	26,478	26,481	312,449
Therms	2,889,219	3,194,586	3,042,258	5,408,674	8,842,701	15,252,075	16,915,772	17,753,263	15,306,596	9,698,918	8,957,422	7,140,704	114,402,187
Baseline Use per Cust.	**112.80**	**125.25**	**119.31**	**211.17**	**341.75**	**584.75**	**647.13**	**675.80**	**579.26**	**366.44**	**338.30**	**269.66**	**4,371.62**
Group 4: GSG-LV													
Customers	170	171	170	170	170	170	172	172	172	172	172	172	2,053
Therms	836,487	1,035,121	917,111	2,097,699	2,835,856	4,174,974	5,351,489	4,589,154	3,844,192	2,466,183	1,201,319	1,200,396	30,549,982
Baseline Use per Cust.	**4,920.51**	**6,053.34**	**5,394.77**	**12,339.41**	**16,681.51**	**24,558.67**	**31,113.31**	**26,681.13**	**22,349.95**	**14,338.27**	**6,984.41**	**6,979.05**	**178,394.33**