Matthew M. Weissman
Managing Counsel - State Regulatory

Law Department
PSEG Services Corporation
80 Park Plaza – T5, Newark, New Jersey 07102-4194
tel : 973-430-7052 fax: 973-430-5983
email: matthew.weissman@pseg.com

December 24, 2020

IN THE MATTER OF THE PETITION OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY FOR APPROVAL OF ITS CLEAN ENERGY FUTURE-ENERGY CLOUD ("CEF-EC") PROGRAM ON A REGULATED BASIS

BPU Docket No. EO18101115

VIA ELECTRONIC MAIL

Aida Camacho-Welch, Secretary of the Board
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Trenton, New Jersey 08625

Dear Secretary Camacho-Welch:

Attached please find the fully executed Stipulation in the above-referenced case resolving all aspects of this matter. The following parties have signed the Stipulation: Public Service Electric and Gas Company; the Staff of the New Jersey Board of Public Utilities; the New Jersey Division of Rate Counsel; New Jersey Large Energy Users Coalition; Direct Energy Business, LLC, Direct Energy Business Marketing, LLC, Direct Energy Services, LLC, Gateway Energy Services Corporation, Centrica Business Solutions, Just Energy Group, Inc., and NRG, Inc. (collectively, the "Market Participants"); and Landis + Gyr Technology, Inc.

In accordance with the Order issued by the Board in connection with I/M/O the New Jersey Board of Public Utilities' Response to the COVID-19 Pandemic for a Temporary Waiver of Requirements for Certain Non-Essential Obligations, BPU Docket No. EO20030254, Order dated March 19, 2020, this document is being electronically filed. No paper copies will follow.

If you have any questions, please do not hesitate to contact me.

Thank you for your consideration in this matter.

Very truly yours,

Matthew M. Weissman

Attach.
C Attached Service List (E-Mail)

AARP
Janine G. Bauer
Szaferman, Lakind, Blumstein, & Blader, P.C.
101 Grovers Mill Road, Suite 200
Lawrenceville NJ 08648
(609) 275-0400 x249
jbauer@szaferman.com

ACE
Philip J. Passanante Esq.
Atlantic City Electric Company - 92DC42
500 N. Wakefield Drive
P.O. Box 6066
Newark DE 19714-6066
(609) 909-7034
philip.passanante@pepcoholdings.com

BPU
Rachel Boylan
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-1458
Rachel.Boylan@bpu.nj.gov

BPU
Aida Camacho-Welch
Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314
Post Office Box 350
Trenton NJ 08625-0350
aida.camacho@bpu.nj.gov

BPU
Paul Flanagan
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-2836
paul.flanagan@bpu.nj.gov

BPU
Andrea Hart
Board of Public Utilities
44 South Clinton Avenue
9th Floor
P.O. Box 350
Trenton NJ 08625-0350
andrea.hart@bpu.nj.gov

BPU
Scott Hunter
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton Nj 08625-0350
(609) 292-1956
B.Hunter@bpu.nj.gov

BPU
Sherri Jones
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-7471
sherri.jones@bpu.nj.gov

BPU
Bart Kilar
Board of Public Utilities
44 South Clinton Avenue
9th Floor
P.O. Box 350
Trenton NJ 08625-0350
bart.kilar@bpu.nj.gov

BPU
Christine Lin
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-2956
christine.lin@bpu.nj.gov

BPU
Stephan Luma
Board of Public Utilities
44 South Clinton Avenue
9th Floor
P.O. Box 350
Trenton NJ 08625-0350
Stephan.Luma@bpu.nj.gov

BPU
Paul Lupo
Board of Public Utilities
44 South Clinton Avenue
P.O. Box 350
Trenton NJ 08625-0350
paul.lupo@bpu.nj.gov

BPU
Jacqueline O'Grady
Board of Public Utilities
44 South Clinton Avenue
9th Floor
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-2947
jackie.ogrady@bpu.nj.gov

BPU
Suzanne Patnaude
Board of Public Utilities
44 South Clinton Avenue
P.O. Box 350
Trenton NJ 08625-0350
Suzanne.Patnaude@bpu.nj.gov

BPU
Stacy Peterson
Board of Public Utilities
44 South Clinton Avenue
9th Floor
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-4517
stacy.peterson@bpu.nj.gov

BPU
Abe Silverman
Board of Public Utilities
44 South Clinton Avenue
9th Floor
Trenton NJ 08625-0350
abe.silverman@bpu.nj.gov

BPU
Scott Sumliner
Board of Public Utilities
44 South Clinton Avenue
9th Floor
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-4519
scott.sumliner@bpu.nj.gov

BPU
Heather Weisband
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
Heather.Weisband@bpu.nj.gov

DAG
Geoffrey Gersten
NJ Dept. of Law & Public Safety
Division of Law, Public Utilities Section
R.J. Hughes Justice Complex
25 Market Street P.O. Box 112
Trenton NJ 08625
(973) 648-3510
Geoffrey.Gersten@law.njoag.gov

DAG
Renee Greenberg Esq.
Division of Law, Public Utilities Section
R.J. Hughes Justice Complex
25 Market Street P.O. Box 112
Trenton NJ 08625
(973) 648-3441
Renee.Greenberg@dol.lps.state.nj.us

DAG
Matko Ilic
NJ Dept. of Law and Public Safety
Richard J. Hughes Justice Complex
Public Utilities Section
25 Market Street, P.O. Box 112
Trenton NJ 08625
matko.iilic@law.njoag.gov

DAG
Jenique Jones
NJ Dept. of Law & Public Safety
Division of Law, Public Utilities Section
R.J. Hughes Justice Complex
25 Market Street P.O. Box 112
Trenton NJ 08625
jenique.jones@dol.lps.state.nj.us

DAG
Patricia A. Krogman DAG
NJ Dept of Law & Public Safety
Division of Law, Public Utilities Section
R.J. Hughes Justice Complex
25 Market Street P.O. Box 112
Trenton NJ 08625
(973) 648-3441
patricia.krogman@dol.lps.state.nj.us

DAG
Andrew Kuntz Esq.
NJ Department of Law & Public Safety
Division of Law, Public Utilities Section
R.J. Hughes Justice Complex
25 Market Street P.O. Box 112
Trenton NJ 08625
Andrew.kuntz@lps.state.nj.us

DAG
Caroline Vachier DAG
NJ Dept. of Law & Public Safety
Division of Law, Public Utilities Section
R.J. Hughes Justice Complex
25 Market Street P.O. Box 112
Trenton NJ 08625
(973) 648-3709
caroline.vachier@dol.lps.state.nj.us

Direct Energy Services
Christopher E. Torkelson Esq.
Eckert Seamans Cherin & Mellott, LLC
2000 Lenox Drive, Suite 203
Lawrenceville NJ 08648
609-392-2100
ctorkelson@eckertseamans.com

Eastern Environmental Law Center
Daniel Greenhouse
50 Park Pl
Suite 1025
Newark NJ 07102
dgreenhouse@easternenvironmental.org

Enel X
William Harla Esq.
DeCotis, FitzPartrick & Cole, LLP
Glenpointe Centre West
500 Frank W. Burr Blvd.
Teaneck NJ 07666
wharla@decotiislaw.com

Google, LLC
Murray Bevan
Bevan, Mosca & Giuditta P.C
222 Mount Airy Road
Suite 200
Basking Ridge NJ 07920
mbevan@bmg.law

JCP&L
Lauren M. Lepkoski
First Energy Service Company
2800 Pottsville Pike
P.O. Box 16001
Reading PA 19612-6001
610-921-6203
llepkoski@pirstenergycorp.com

Landis+Gyr Technology, Inc.
Barbara Koonz
Greenbaum, Rowe, Smith & Davis LLP
75 Livingston Avenue
Roseland NJ 07068
bkoonz@greenbaumlaw.com

Landis+Gyr Technology, Inc.
David K. Wilson
3000 Mill Creek Avenue
Suite 100
Alpharetta Georgia 30022
david.wilson@landisgyr.com

NJLEUC
Steven S. Goldenberg Esq.
Giordano Halleran & Ciesla, P.A.
125 Half Mile Road, Suite 300
Red Bank NJ 07701
732-741-3900
sgoldenberg@ghclaw.com

Open Systems International, Inc.
Mary Budge
4101 Arrowhead Drive
Medina MN 55340
Mary.Budge@osii.com

PSE&G
Joseph F. Accardo, Jr.
PSEG Services Corporation
80 Park Plaza, T5G
P.O. Box 570
Newark NJ 07102
(973) 430-5811
joseph.accardojr@pseg.com

PSE&G
Michele Falcao
PSEG Services Corporation
80 Park Plaza, T5
P.O. Box 570
Newark NJ 07102
(973) 430-6119
michele.falcao@pseg.com

PSE&G
Bernard Smalls
PSEG Services Corporation
80 Park Plaza-T5
Newark NJ 07102-4194
(973) 430-5930
bernard.smalls@pseg.com

PSE&G
Katherine E. Smith
PSEG Services Corporation
80 Park Plaza, T5
P.O. Box 570
Newark NJ 07102
(973) 430-6996
katherine.smith@pseg.com

PSE&G
Matthew M. Weissman Esq.
PSEG Services Corporation
80 Park Plaza, T5
P.O. Box 570
Newark NJ 07102
(973) 430-7052
matthew.weissman@pseg.com

PSE&G
Caitlyn White
PSEG Services Corporation
80 Park Plaza, T-5
P.O. Box 570
Newark NJ 07102
(973)-430-5659
caitlyn.white@pseg.com

Rate Counsel
Stefanie A. Brand
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
sbrand@rpa.state.nj.us

Rate Counsel
James Glassen
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
jglassen@rpa.state.nj.us

Rate Counsel
Kurt Lewandowski Esq.
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
klewando@rpa.state.nj.us

Rate Counsel
Brian O. Lipman
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
blipman@rpa.nj.gov

Rate Counsel
Shelly Massey
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
smassey@rpa.nj.gov

Rate Counsel
Ami Morita
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
amorita@rpa.state.nj.us

Rate Counsel
Henry M. Ogden Esq.
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
hogden@rpa.nj.gov

Rate Counsel
Sarah Steindel
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
ssteinde@rpa.state.nj.us

Rate Counsel
Felicia Thomas-Friel
Division of Rate Counsel
140 East Front Street, 4th Flr.
P.O. Box 003
Trenton NJ 08625
(609) 984-1460
fthomas@rpa.nj.gov

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY FOR APPROVAL OF ITS CLEAN ENERGY FUTURE – ENERGY CLOUD ("CEF-EC") PROGRAM ON A REGULATED BASIS	**STIPULATION** BPU DOCKET NO. EO18101115

APPEARANCES:

Joseph F. Accardo Jr., Esq., Vice President - Regulatory & Deputy General Counsel**, Matthew M. Weissman**, **Esq.,** Managing Counsel-State Regulatory, and **Katherine E. Smith**, **Esq.,** Associate Counsel – State Regulatory, for the Petitioner, Public Service Electric and Gas Company

Stefanie A. Brand, Esq., Director, **Brian O. Lipman, Esq.**, Litigation Manager, **Felicia Thomas-Friel, Esq.**, Deputy Rate Counsel, **Kurt Lewandowski, Esq.,** Assistant Deputy Rate Counsel, **Christine Juarez, Esq.,** Assistant Deputy Rate Counsel, and **Maria Novas-Ruiz, Esq.,** Assistant Deputy Rate Counsel for the New Jersey Division of Rate Counsel

Matko Ilic, Deputy Attorney General, for the Staff of the New Jersey Board of Public Utilities (**Gurbir S. Grewal,** Attorney General of New Jersey)

Steven Goldenberg, Esq., Giordano Halleran & Ciesla, P.A. for the New Jersey Large Energy Users Coalition

Christopher E. Torkelson, Esq., Karen O. Moury, Esq., Eckert Seamans Cherin & Mellott, LLC for Direct Energy Business, LLC; Direct Energy Business Marketing, LLC; Direct Energy Services, LLC; Gateway Energy Services Corporation; Centrica Business Solutions; Just Energy Group, Inc.; and NRG, Inc. (the "Market Participants")

Barbara J. Koonz, Esq., Greenbaum, Rowe, Smith & Davis LLP for Landis + Gyr Technology, Inc.

TO THE HONORABLE BOARD OF PUBLIC UTILITIES:

It is hereby AGREED, as of the 23rd day of December, 2020, by and between Public Service Electric and Gas Company ("Public Service," PSE&G" or the "Company"); the Staff of the New Jersey Board of Public Utilities ("Board Staff"); the New Jersey Division of Rate Counsel

("Rate Counsel"); New Jersey Large Energy Users Coalition ("NJLEUC"); Landis + Gyr Technology, Inc. ("Landis+Gyr"); and Direct Energy Business, LLC, Direct Energy Business Marketing, LLC, Direct Energy Services, LLC, Gateway Energy Services Corporation, NJR Retail Services Company, NRG Energy, Inc., Just Energy Group Inc., and Centrica Business Solutions (collectively, "Market Participants"), the undersigned parties and intervenors (hereinafter referred to as "the Signatories") to execute this Settlement Agreement resolving PSE&G's Petition ("Petition") for approval of the Clean Energy Future – Energy Cloud program ("CEF-EC" or "Program").

The Signatories do hereby join in recommending that the Board issue a Final Decision and Order approving this Settlement Agreement.

BACKGROUND

1. In July 2018, Board Staff issued an investigative report and recommendations regarding the performance of the State's electric distribution companies ("EDCs") during the March 2018 Nor'easters (the "2018 Investigative Report"). Recommendation #12 of the Investigative Report required PSE&G, Atlantic City Electric Company ("ACE") and Jersey Central Power and Light Company ("JCP&L") whom are currently without Advanced Metering Infrastructure ("AMI") to "submit a plan and cost benefit analysis for the implementation of AMI."[1] In January 2020, Governor Murphy unveiled New Jersey's

[1] *See Order Accepting Staff's Report Requiring Utilities to Implement Recommendations*, BPU Docket No. EO18030255, (July 25, 2018), at p. 13.

Energy Master Plan that described AMI as a "foundational component of a modernized electric distribution grid," and noted that, "[s]tatewide AMI installation is a prerequisite to many additional clean energy objectives."[2] The Board issued an Order in February 2020 finding that "AMI is a means to achieve the goals provided in the Energy Master Plan" and directing the EDCs that had not yet implemented AMI to file petitions for AMI implementation, or update previously filed petitions, within 180 days of the effective date of the Order.[3]

2. On October 11, 2018, in part in response to the Board's 2018 Investigative Report, Public Service petitioned the Board in BPU Docket No. EO18101115 for approval of the Program and for the recovery of costs to deploy AMI throughout the Company's electric service territory. In response to the Board's February 2020 AMI Order, PSE&G updated this filing on April 1, 2020.[4] Through the Petition, PSE&G sought approval of: 1) approximately $714 million of investment to deploy AMI over five (5) years, with cost recovery related to these investments through semi-annual base rate adjustment filings consistent with the Board's Infrastructure Investment Program ("IIP") regulations at N.J.A.C. 14:3-2A; 2) deferral, as a regulatory asset, the stranded costs associated with the removal of legacy meters prior to the end of those meters' depreciable lives; and 3) deferral, as a regulatory

[2] Available at: https://www.nj.gov/emp/.

[3] *I/M/O the Petition of Rockland Electric Company for Approval of an Advanced Metering Program; and for Other Relief*, Docket No. ER16060524, Decision and Order (Feb. 19, 2020) ("February 2020 AMI Order").

[4] References to "Petition" herein are to the Petition as amended on April 1, 2020.

asset, of approximately $71 million in incremental operations and maintenance ("O&M") expenses incurred in implementing the CEF-EC. Petition at 12-16.

3. As updated in April 2020, the proposed CEF-EC included a total of 70 potential applications or "use cases" for AMI meters that were split into four (4) "releases." The Petition sought approval of the initial phase of the CEF-EC, referred to as "Release 1," that features 22 of the 70 use cases. The 22 initial use cases focus on customer engagement, network operations and planning, and new utility products and services.[5] The Petition states "Release 1 will establish the foundation for the CEF-EC Program, including the platform that is comprised of advanced electric meters as well as communications and back-office systems." Petition at 5-6. The Company represented in its Petition that it would provide these benefits for the budget proposed in the Petition.

4. On October 29, 2018, the Board issued an Order retaining jurisdiction of the Petition and designating Commissioner Mary-Anna Holden as the presiding officer in the matter to rule on all motions that arise during the pendency of the proceeding, establish and modify any schedules that may be set as necessary, and conduct public and evidentiary hearings.

[5] Specifically, the 22 use cases described in the Petition are 1) Enhanced Customer Engagement and Communications; 2) Rate Analyzer and Comparator; 3) Usage and Bill Alerts, Saving Tips, Interactive Bill Presentment; 4) Interactive Energy Demand and Bill Management; 5) Customer Segmentation and Behavioral Analysis; 6) Customer Power Quality; 7) Customer Energy Efficiency Programs; 8) Customer Service and Call Center Performance; 9) Customer DER/PV/EV; 10) Customer Device Safety; 11) Sensor, Network, and Data Operations; 12) Automated Move in/Move out; 13) Remote Disconnect/Reconnect; 14) Next Generation Meter-to-Cash; 15) Network Connectivity Analysis; 16) Outage Detection and Analysis; 17) Outage Response Notification/Estimated Time of Restoration; 18) Voltage Monitoring and Analysis; 19) Asset Load/Phase Management, Balancing and Power Analysis; 20) Load Profiling and Forecasting; 21) Distribution Losses; and 22) Revenue Protection and Assurance. Petition at 6-7.

5. From October 2018 through November 2020, Commissioner Holden ruled on various Motions to Intervene or Participate in the proceeding. Intervention was granted to: NJLEUC, Landis+Gyr, and the Market Participants. Participant status was accorded to: Google, LLC, Environmental Participants, Enel X North America, Inc., AARP, Open Systems International, ACE, JCP&L, and Rockland Electric Company.[6]

6. A total of four (4) public hearings were held, two (2) each on the evenings of October 7 and October 8, 2020.[7] These hearings were well-attended by the public. Additionally, the Board received several letters of support for the Petition.

7. On August 31, 2020, Rate Counsel and the Market Participants submitted pre-filed direct testimony and Public Service submitted rebuttal testimony on October 5, 2020.

Discovery and Settlement Discussions

8. Over the course of the past year, discovery has been issued and responded to pursuant to a procedural schedule issued by Commissioner Holden.

9. Additionally, the parties engaged in discovery/settlement conferences during July and August 2020 in order to facilitate information gathering and to discuss opportunities for settlement. The parties also met for settlement conferences during November 2020.

10. At the request of the parties based on settlement negotiations, on November 20, 2020, Commissioner Holden issued an Order in this matter suspending the evidentiary hearings and remaining procedural schedule.

[6] Environment New Jersey, Sierra Club, and Natural Resources Defense Council.

[7] Public hearings were held telephonically due to the COVID-19 health pandemic.

11. In the comprehensive settlement, the Signatories agreed, subject to submission of this Stipulation to the Board for approval, that: 1) PSE&G will proceed to invest in and put into service AMI infrastructure, including the installation of AMI meters and related networks and replacement of existing non-AMI meters; 2) associated CEF-EC cost recovery and deferral mechanisms, modified from the mechanisms as-filed and as set forth herein, will be implemented; and 3) the accelerated approach to AMI deployment agreed to by PSE&G in this proceeding will allow the Company to initiate the Program expeditiously and thereby begin to bring all the benefits of smart meter technology infrastructure investment to its customers, as identified in Release 1 of the Petition. All Signatories reserve their rights if PSE&G seeks approval of further AMI use cases, and acceptance of the terms of this Stipulation of Settlement in this proceeding does not constitute acceptance of the submission of a filing for a future release of AMI use cases or any specific measures recommended in that future submission.

In light of the foregoing, the Signatories have agreed to submit this Stipulation of Settlement, the terms of which are set forth below. Specifically, the Signatories hereby **STIPULATE AND AGREE** to the following:

STIPULATED MATTERS

A. CEF-EC Program Investment Levels and Implementation Plan

12. The Signatories agree that the CEF-EC will include installation of approximately 2.2 million AMI meters at an estimated investment cost of $707 million for the advanced meters, network infrastructure, and associated information technology ("IT") to be deployed. These investment costs will be deferred through the stipulated cost deferral

mechanisms described below. These CEF-EC investments are anticipated to be made over an approximately four (4)-year period beginning on the effective date of the Board's Order approving this Stipulation and authorizing the Program.

13. PSE&G will implement the CEF-EC project as described below:

- Initial Activities: PSE&G will begin installing AMI meters exclusively upon Board-approval of this Stipulation, except for customers who opt-out and subject to the availability of sufficient AMI inventory. To ensure the continued exclusive installation of AMI meters during the initial implementation period, PSE&G will execute purchase orders to secure space in the meter vendor's production schedule and build up an AMI inventory. PSE&G will conduct initial customer outreach during this period.
- Phase I of Deployment 2021-2022: PSE&G will conduct procurement for and the expansion of the Energy Cloud communications network to be completed by mid-2022. Additionally, PSE&G will conduct the procurement of the contract installation workforce to be in place to install AMI meters by mid-2022. In 2021, PSE&G plans to install approximately 80,000 AMI meters in the ordinary course of business (*e.g.*, replacements for failure or damage, and new customers). Where practical, and regardless of the age of any particular legacy meter at the time of its removal, PSE&G will replace all the meters at a premise to eliminate the need for additional premise visits in the future to complete the AMI installations.

  In 2022, PSE&G plans to install approximately 300,000 AMI meters. During the first half of the year, PSE&G will continue to install AMI meters in the ordinary course of business. As the installation workforce is secured in the second half of 2022, the

Company will begin the transition from the ordinary course of business AMI installations to a geographic strategic mass meter deployment.

- Phase II Deployment 2023-2024: In 2023 and 2024, PSE&G will install approximately 900,000 meters each year. This installation will incorporate a geographic strategic deployment, designed to maximize installation efficiency and customer satisfaction. To minimize the inefficiencies of sporadic meter deployment, Phase II will proceed regardless of the age of any particular legacy meter at the time of its removal. Utilizing a macrogeographic strategy, PSE&G will divide the service territory into three regions by meter reading district office as follows: Northern Region - Newark, Hackensack, and Harmon Cove; Central Region - Roseland, Cranford, and New Brunswick; Southern Region - Lawrenceville, Burlington, and Audubon. Each of these regions will have separate deployment and supply chain management teams. Meters will be warehoused in multiple locations within the regions.

  Within each region, a microgeographic strategy will be employed to identify and group meters for replacement on a daily basis. PSE&G will utilize its existing manual meter reading routes as the foundational component of this deployment strategy. Installers will follow the same premise order that is utilized by the meter readers, walking from premise to premise, and installation schedules will be aligned with customer billing cycles, taking into account back office activities required to facilitate the meter change in the billing system and ensuring that the customer's old meter is read and closed out and the new AMI meter reading is accurately applied to the customer's next bill.

Similarly, customer communications will be executed at the manual meter reading route level.

- Trailing Work: A relatively small amount of trailing work and project close-out will be performed in 2025.

14. The estimated breakdown of the Company's $707 million CEF-EC investment as well as the associated incremental O&M are shown in the table below. Only actually incurred costs will be deferred as described in more detail below.

CEF-EC Estimated Expenditures	**$M**
Meter Infrastructure	660
Network	23
CEF-EC Related IT Capital	24
Total Investment	**707**
Incremental CEF-EC O&M Expenses	71
Total Expenditures	**778**

15. Notwithstanding paragraph 13 above, the Signatories recognize that the CEF-EC program will be of such substantial scale and scope that there is uncertainty as to the precise timing and budget for each phase of AMI meter deployment. In particular, the ongoing COVID-19 pandemic and related health state-of-emergency is of unpredictable duration and may impact the Company's ability to access premises for meter installation work. Accordingly, the Signatories agree that the Company may make adjustments to the AMI deployment schedule in response to real market and service conditions experienced. Further, the estimated allocation of the $707 million total capital investment among the asset classes listed in paragraph 14 above may change.

16. The Signatories agree that, other than opt-out situations, PSE&G will cease installation of non-AMI meters following issuance of the Board Order approving this Stipulation, subject to the availability of sufficient AMI inventory. The Company further agrees that any costs incurred for make-ready work on customer-owned equipment shall not be capitalized in rates.

17. PSE&G commits to implementing the AMI Release 1 Use Cases, attached hereto as Attachment 1, and ensuring the capabilities are realized. The Company will use best efforts to provide all such use case capabilities within the budget set forth in this Stipulation and in its Petition in this matter. The Parties recognize that these capabilities may not be available until after the full deployment of the AMI meters is complete.

B. <u>CEF-EC Reporting and Performance Metrics</u>

18. PSE&G will provide a semi-annual report on the CEF-EC deployment to Board Staff and Rate Counsel ("AMI Report"), setting forth the following information:

- the estimated quantity of work and the quantity completed to date or, if the activity cannot be quantified with numbers, the major tasks completed, e.g., AMI meters deployed, year-to-date and total for both residential and commercial customers; average cost per residential and commercial installation, broken down by labor and meter costs; network deployment status by routers and collectors deployed;
- the number of customers opting out each month and the total number of opt-out customers for the program-to-date;
- the number of actual reads recorded from AMI meters each month;
- the number of meter readers employed by PSE&G each month;
- the number of customers who have accessed the web portal each month;
- the number of customers identified to have received energy saving messaging each month;

- to commence following any Data Access Plan approved by the Board under paragraph 30 of this Agreement, the number of customers who have authorized third party supplier access to their energy usage data for each month and program-to-date customer engagement efforts undertaken by the Company;
- the number of AMI meters replaced due to functioning errors for each month and program-to-date;
- the number of remote connects/disconnects performed each month and for the program-to-date;
- the number of AMI meter tampering cases found each month and for the program-to-date;
- the forecasted and actual CEF-EC capital costs to date for the reporting period and for the program-to-date;
- the forecasted and actual CEF-EC O&M expenses to date for the reporting period and for the program-to-date;
- the forecasted and actual stranded costs deferred to date for the reporting period and for the program-to-date; and
- the estimated CEF-EC project completion date.

The project expenditures shall be broken out between labor, material and other costs. This reporting will begin by September 1, 2021 based on actual results through June 30, 2021. The second semi-annual report will be submitted by March 1, 2022 based on actual results through December 31, 2021. The Company will continue to submit semi-annual reports by March 1st and September 1st of each year through the completion of the CEF-EC AMI meter deployment.

C. <u>Prudency Review and Cost Deferral</u>

19. The Company will invest in the accelerated deployment of AMI in accordance with the approach described in paragraph 13 above. Until being rolled into base rates, as described further below, those AMI-related capital costs and legacy meter stranded costs shall be

deferred and placed in a regulatory asset, as separate and identifiable accounts, for recovery of the regulatory assets deemed prudent in the Company's next base rate case, to be filed no later than January 1, 2024 (the "Next Base Rate Case"). The CEF-EC program costs, including all those deferred and placed in a regulatory asset, will be incurred for utility investment consistent with the Board's finding in BPU Docket No. ER16060524, Order dated February 19, 2020, wherein the Board found that AMI is a means to achieve the goals set forth in the Energy Master Plan. The prudency of the CEF-EC program's costs, including those deferred and placed in the regulatory asset, will be reserved for review and determination in the Company's Next Base Rate Case. The regulatory asset will include AMI-related capital costs and legacy meter stranded costs. Incremental AMI-related O&M costs will be deferred separately without a return, for recovery in the Company's Next Base Rate Case. The Company will also include a revenue reduction pro forma in the Next Base Rate Case for a like amount of future O&M savings. Nonetheless, all costs incurred in connection with this proceeding remain subject to prudency review in the Next Base Rate Case.

20. The average service life of PSE&G's non-AMI legacy meters as determined in the most recent depreciation study submitted with the Company's 2018 base rate case is 26 years. As of September 30, 2020, the net book value of PSE&G's legacy electric meters was $208 million. The typical service life of solid-state digital electric meters currently utilized by PSE&G is estimated to be approximately 20 years. The Parties recognize that the acceleration of AMI deployment will result in existing legacy and non-AMI meters being removed from service before they have been fully depreciated, creating a stranded asset

that the Company will place in a regulatory asset. The value of the regulatory asset is estimated to be approximately $150 million. The actual stranded costs will be the value of the undepreciated net plant of retired meters at the time meters are removed from service. Each month, the stranded asset amount will be calculated by the Company's Property Accounting Group based upon the number of meters retired, with the unrecovered depreciation recorded to a regulatory asset account. PSE&G will implement the deployment in the manner described in paragraph 13 above. The prudency and future recovery of the stranded cost regulatory asset will be decided in the Next Base Rate Case. The Parties agree that upon Board approval of this stipulation, the Company will begin installing AMI meters exclusively, except for customers who opt-out, and subject to the availability of sufficient AMI inventory. The Parties further agree that these stranded costs being deferred would not be incurred but for the accelerated AMI deployment.

21. The Company has the ability to accelerate the investment in the Program as compared with the deployment schedule set forth in the April 2020 filing for recovery in the Next Base Rate Case, and the Parties agree that the Company will endeavor to do so. The Parties also agree that reasonable and prudent costs associated with the CEF-EC investment that are likely to be in-service by the end of six (6) months after the end of the test year in the Company's Next Base Rate Case shall be reflected in the rates established in that case, consistent with the Board's *Elizabethtown Water*[8] standards. Any CEF-EC investment

[8] *In re Elizabethtown Water Company Rate Case*, BPU Docket No. WR8504330, Decision on Motion for Determination of Test Year and Appropriate Time Period for Adjustments (May 23, 1985).

placed in service more than six (6) months after the end of the test year in the Next Base Rate Case will be reviewed and recovered, if deemed reasonable and prudent, in the Company the base rate case following the Next Base Rate Case. However, in the event that PSE&G is not able to implement the full CEF-EC investment within six (6) months of the test year in the Next Base Case for reasons beyond the Company's control, including a continuation of the COVID-19 health emergency, PSE&G may request, in the Next Base Rate Case, that it be permitted to hold that base rate case open for the purpose of rolling those reasonable and prudent costs into rates as soon as practicable after the associated infrastructure has been placed into service and associated stranded costs have been incurred, in advance of the base rate case following the Next Base Rate Case. The Parties reserve their rights if PSE&G requests to hold open the Next Base Rate Case, and acceptance of the terms of this Stipulation in this proceeding does not constitute acceptance of such a request.

D. <u>Cost Deferral Mechanism Details</u>

22. As noted above, the Company will book a regulatory asset ("CEF-EC Regulatory Asset") comprised of: 1) its CEF-EC capital investment ("CEF-EC Investment Deferral"), and 2) the associated stranded costs ("Stranded Cost Deferral") on legacy meters in accordance with paragraphs 23 and 24 below.

23. The formula for the CEF-EC Monthly Investment Deferral component of the CEF-EC Regulatory Asset is:

*CEF-EC Monthly Investment Deferral = (((Pre-Tax Cost of Capital /12) * Average Monthly Rate Base) + Monthly Depreciation and/or Amortization Expense) + (Average Monthly Investment Deferral Balance * (WACC /12))*

a. The term "Pre-Tax Cost of Capital" means PSE&G's pre-tax overall weighted annual average cost of capital ("WACC") in effect at the time of the deferral. The Company's current WACC is 6.99%, or 9.02% on a pre-tax basis based on current tax rates. The WACC is based on the return on equity, long-term debt and capital structure and customer deposits approved by the Board in PSE&G's most recently approved base rate case. Any change in the WACC authorized by the Board in a subsequent base rate case will be applied to AMI additions in subsequent periods. Also, any change to current tax rates will be reflected in the WACC in a subsequent period.

b. The term "Average Monthly Rate Base" refers to the total of the beginning and ending monthly balances for the following items, divided by two (2):

    - AMI Plant in Service
    - Less the associated Accumulated Depreciation and/or Amortization
    - Less Accumulated Deferred Income Tax
    - Plus Accumulated Deferred Cost of Removal

c. The term "Depreciation and/or Amortization Expense" provides for the recovery of PSE&G's AMI investment over the useful book lives of the assets. The book

depreciation rate for the smart meters will be based on a 20-year life. The book recovery for the Network and IT capital expenditures will be based on the Board-approved depreciation/amortization rates most recently approved in a base rate case or in accordance with the Company's Accounting policy. Any future changes in Board-approved depreciation/amortization rates will be reflected in the deferral during the corresponding future period.

d. The term "Average Monthly Investment Deferral Balance" refers to the cumulative sum of the Monthly Investment Deferrals at the beginning and the end of each month divided by two. The term "WACC" refers to the Company's annual weighted average cost of capital from its most recently approved base rate case. Any change in the WACC authorized by the Board in a subsequent base rate case will be utilized.

24. The existing meter infrastructure will be replaced on an accelerated basis as a result of the Program. The Parties agree the Company will accelerate the depreciation expense on these assets to fully defer the remaining undepreciated amount by the end of the CEF-EC implementation. The formula for the Stranded Cost Deferral component of the CEF-EC Regulatory Asset is:

Stranded Cost Deferral = Accelerated Depreciation Expense associated with Legacy Meters – Depreciation Expense on Legacy Meters at the Approved Depreciation Rate as Determined in the 2018 Base Rate Case

25. PSE&G's Next Base Rate Case will include a request for recovery in base rates of all prudently incurred capital expenditures and stranded costs associated with the Program. Those costs will include the CEF-EC Regulatory Asset described above, actual costs of engineering, design and construction, and deferred cost of removal (net of salvage), including actual labor, materials, overhead, and capitalized Allowance for Funds Used During Construction ("AFUDC") associated with the projects (the "Capital Investment Costs"). Capital Investment Costs will be recorded, during construction, in an associated Construction Work In Progress ("CWIP") account or in a Plant In Service account upon the respective investment being deemed used and useful. The Company will follow its current policies and practices with regard to capitalizing costs, including overheads. All CEF-EC investments not recovered through a base rate case proceeding will be tracked separately from all other base investments.

26. The Parties agree that the revenue requirement in the Next Base Rate Case or a subsequent base rate case, if applicable, will include a return of and on the CEF-EC Regulatory Asset defined in paragraphs 22-24 above to the extent that is deemed prudent.

27. The Parties agree that the Company will defer incremental AMI-related O&M costs associated with the CEF-EC implementation into a separate regulatory asset ("CEF-EC O&M Regulatory Asset"), without a return, for recovery in the Company's Next Base Rate Case. The Parties also agree that the Company will include a revenue reduction pro forma in the Next Rate Case for a like amount of future O&M savings. The amortization period of the deferred incremental O&M costs and revenue reduction pro forma will be

determined in the Next Base Rate Case.

28. The CEF-EC investment that is placed into service, but not yet reflected in customer base rates, will record a monthly accrual of a deferred return that will be capitalized and included in the plant balance as described in paragraph 23 above. For ratemaking purposes, depreciation expense will not begin on CEF-EC investment until reflected in base rates in the Next Base Rate Case. Since depreciation expense must be booked when the investment is placed in service for tax and financial reporting purposes, the Company will defer the depreciation in the CEF-EC investment regulatory asset.

E. <u>Data Access Plan</u>

29. Customers' usage data from the AMI meters belongs to the customer, who may choose to share such data with any licensed third party supplier.

30. The development of a Data Access Plan shall be deferred pending the statewide proceeding in Docket No. EO20110716. If that statewide proceeding does not produce a Board-approved Data Access Plan within 180 days of a BPU Order approving PSE&G's CEF-EC Petition, within 60 days after that period PSE&G will convene at least one meeting with the parties to discuss the data access issues raised by the Market Participants in this proceeding. The data access issues included in the testimony submitted by the Market Participants and PSE&G in this proceeding may be supplemented at that time. The parties agree to use best efforts to reach agreement on data access within 120 days of the initial stakeholder meeting. If there is no agreement on the data access issues within 120 days,

this proceeding will be reopened for the limited purpose of adjudicating data access issues, and the parties may supplement the record on data access issues at that time.

F. AMI Opt-Out Fee

31. The recurring monthly fee for customers retaining their existing meter will be $12.00 and the one-time opt-out fee for the removal of an AMI meter and the re-installation of a conventional meter will be $45.00. PSE&G will provide testimony and actual cost information for these fees in its Next Base Rate Case, at which time these fees will be subject to review and modification. The ongoing review and assessment of these fees will take place in future rate cases.

FURTHER PROVISIONS

32. This Stipulation represents a mutual balancing of interests, contains interdependent provisions and, therefore, is intended to be accepted and approved in its entirety. In the event any particular aspect of this Stipulation is not accepted and approved in its entirety by the Board, any Party aggrieved thereby shall not be bound to proceed with this Stipulation and shall have the right to litigate all issues addressed herein to a conclusion. More particularly, in the event this Stipulation is not adopted in its entirety by the Board, in any applicable Order(s), then any Party hereto is free to pursue its then available legal remedies with respect to all issues addressed in this Stipulation as though this Stipulation had not been signed.

33. It is the intent of the Signatories that the provisions herein be approved by the Board as being in the public interest. The Signatories further agree that they consider the Stipulation to be binding on them for all purposes herein.

34. It is specifically understood and agreed that this Stipulation represents a negotiated agreement and has been made exclusively for the purpose of these proceedings. Except as expressly provided herein, Public Service, Board Staff, Rate Counsel and all other Signatories shall not be deemed to have approved, agreed to, or consented to any principle or methodology underlying or supposed to underlie any agreement provided herein and, in total or by specific item. The Signatories further agree that this Stipulation is in no way binding upon them in any other proceeding, except to enforce the terms of this Stipulation.

35. The Signatories further acknowledge that a Board Order approving this Stipulation will become effective upon the service of said Board Order, or upon such date after the service thereof as the Board may specify, in accordance with N.J.S.A. 48:2-40.

WHEREFORE, the Signatories hereto do respectfully submit this Stipulation and request that the Board issue a Decision and Order approving it in its entirety, in accordance with the terms hereof, as soon as reasonably possible.

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

BY: 

Matthew M. Weissman
Managing Counsel – State Regulatory

DATED: December 24, 2020

NEW JERSEY DIVISION OF RATE COUNSEL,

BY: _____

Stefanie A. Brand
Director

DATED: _____

33. It is the intent of the Signatories that the provisions herein be approved by the Board as being in the public interest. The Signatories further agree that they consider the Stipulation to be binding on them for all purposes herein.

34. It is specifically understood and agreed that this Stipulation represents a negotiated agreement and has been made exclusively for the purpose of these proceedings. Except as expressly provided herein, Public Service, Board Staff, Rate Counsel and all other Signatories shall not be deemed to have approved, agreed to, or consented to any principle or methodology underlying or supposed to underlie any agreement provided herein and, in total or by specific item. The Signatories further agree that this Stipulation is in no way binding upon them in any other proceeding, except to enforce the terms of this Stipulation.

35. The Signatories further acknowledge that a Board Order approving this Stipulation will become effective upon the service of said Board Order, or upon such date after the service thereof as the Board may specify, in accordance with N.J.S.A. 48:2-40.

WHEREFORE, the Signatories hereto do respectfully submit this Stipulation and request that the Board issue a Decision and Order approving it in its entirety, in accordance with the terms hereof, as soon as reasonably possible.

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

BY: _____
Matthew M. Weissman
Managing Counsel – State Regulatory

DATED: _____

NEW JERSEY DIVISION OF RATE COUNSEL,

BY: Brian O. Lipman
~~Stefanie A. Brand~~ Brian O. Lipman
~~Director~~ Litigation Manager

DATED: December 23, 2020

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

BY: Matko Ilic
Matko Ilic
Deputy Attorney General

DATED: 12/23/2020

LANDIS + GYR LLC

BY: _____
Barbara J. Koonz
Greenbaum, Rowe, Smith & Davis LLP

DATED: _____

NEW JERSEY LARGE ENERGY USERS COALITION (NJLEUC)

BY: _____
Steven S. Goldenberg
Fox Rothschild, LLP

DATED: _____

MARKET PARTICIPANTS

BY: _____
Christopher F. Torkelson
Eckert Seamans Cherin & Mellot LLC

DATED: _____

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

BY: _____
Matko Ilic
Deputy Attorney General

DATED: _____

LANDIS + GYR ~~LLC~~ TECHNOLOGY, INC.

BY: Barbara J. Koonz
Barbara J. Koonz
Greenbaum, Rowe, Smith & Davis LLP

DATED: 12/24/2020

NEW JERSEY LARGE ENERGY USERS COALITION (NJLEUC)

BY: _____
Steven S. Goldenberg
Fox Rothschild, LLP

DATED: _____

MARKET PARTICIPANTS

BY: _____
Christopher F. Torkelson
Eckert Seamans Cherin & Mellot LLC

DATED: _____

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

BY: _____
Matko Ilic
Deputy Attorney General

DATED: _____

LANDIS + GYR LLC

BY: _____
Barbara J. Koonz
Greenbaum, Rowe, Smith & Davis LLP

DATED: _____

NEW JERSEY LARGE ENERGY USERS COALITION (NJLEUC)

BY: _____
Steven S. Goldenberg
Giordano, Halleran & Ciesla, P.C.

DATED: 12/23/20

MARKET PARTICIPANTS

BY: _____
Christopher F. Torkelson
Eckert Seamans Cherin & Mellot LLC

DATED: 12/24/2020

Attachment 1

CEF-EC RELEASE 1 USE CASES

Use Case #	Use Case Name	Use Case Overview & Value
1,2,3,4	1.Enhanced Customer Engagement & Communications	A set of customer benefiting functions and analytic applications that provide visualizations and analytics across a variety of customer and iESP data combined with other data – bills, usage, prices, tips, alerts, energy efficiency, appliance profiles, new products and services, notifications, and available through mobile and web portals.
	2.Rate Analyzer & Comparator	
	3.Usage & Bill Alerts, Saving Tips, Interactive Bill Presentment	
	4.Interactive Energy Demand & Bill Management (Portal part of Meter Data Management System - MDMS project)	
5	Customer Segmentation & Behavioral Analysis	Provides the ability to develop highly targeted customer segmentation models based on more granular energy usage data and customer interactions to improve customer service, marketing, time of use ("TOU") rates, new products and services, and planning load forecasts.
6	Customer Power Quality	Capability that allows PSE&G to obtain voltage, load, and alert data directly from the meter to analyze customer power quality issues (flicker, sag, swell), without the need for further instrumentation, and can also help ensure appropriate corrective actions are taken (utility or customer side of the meter).
7	Customer Energy Efficiency Programs (Thermostats & Supporting CEF-EE Filing)	iESP data gives the customer the ability to make more educated energy efficiency related decisions, change energy consumption habits, and ultimately lower utility bills. This is enabled by providing customers with detailed iESP data through web or mobile portals, smart devices and in-home devices. PSE&G can also use this iESP data to design and offer energy efficiency products and services.
8	Customer Service & Call Center Performance	Enables the use of broader range of information (including iESP) to increase call center knowledge, improve service, improve customer satisfaction, and lower customer costs by bringing together historical and real-time information to support decision analysis and improve the customer experience.

Use Case #	Use Case Name	Use Case Overview & Value
9	Customer DER/PV/EV	Services and systems that will use iESP data to help assist customers with DER (solar, EV, energy storage) installations and the management of any power quality issues that occur as a result of variable DER load
10	Customer Device Safety	Enhances customer safety by using iESP data, such as alerts and voltage data to detect safety issues relating to customer meters and power connections such as hot sockets and fallen wires, and provide alerts to customers and PSE&G.
11	iESP Sensor, Network & Data Operations	Back office processes and systems that manage the initial iESP infrastructure deployment and the ongoing and updated Meter Operations business function including acquisition, warehousing, testing, installation, maintenance, data streams and quality, alarm management, and meter data management.
12	Automated Move in/Move out & Remote Disconnect/ Reconnect (Primarily in MDMS project)	This use case addresses the messages exchanged between Customer Operations processes and Smart Meter through the HeadEnd and Network when a customer move in or out request is issued by Customer Operations or other customer processes. PSE&G currently sends a metering service employee to move a customer in or out for a variety of reasons. With iESP, the turn on functions and on demand read functions to support these processes can be automated and performed remotely and instantaneously, thereby increasing customer satisfaction and efficiency across various customer processes. • Electric operations reduction due to MIMO and Collection activity automated. • Gas operations reduction due to remote MIMO and Collection activity automated: • Cost reduction due to 85k avoided truck roll costs for move in move outs
13	Remote Disconnect/ Reconnect (Primarily in MDMS project)	This use case addresses the messages exchanged between Customer Operations processes and Smart Meter through the HeadEnd and Network when a meter connect/disconnect request is issued by Customer Operations or other processes. PSE&G currently sends a metering service or collections employee to connect or disconnect the meter for a variety of reasons. With iESP, the reconnect/disconnect functions to support these processes can be automated and performed remotely and instantaneously, thereby increasing customer satisfaction and efficiency across various customer processes. • Electric operations reduction due to remote turn-on/off of electric meters

Use Case #	Use Case Name	Use Case Overview & Value
		• Gas operations reduction due to remote turn-on/off of gas meters: • Cost reduction due to 171k avoided truck roll costs for move in standard turn on/turn offs • Cost reduction due to avoided truck roll costs for turn on/turn off type events • Reduction in writes offs due to energy consumed on inactive accounts. Being able to remotely detect and disconnect will reduce the occurrence. $20m written off yearly. Assuming 70% reduction due to iESP capabilities
14	Next Generation Meter-to-Cash	With more granular and quality iESP data available, alongside numerous other internal data sources, PSE&G can optimize and re-invent their meter-to-cash processes and drive out inefficiencies, increase service, and reduce costs. The iESP data is significantly more accurate at the source and by mapping the data from the iESP to its end use, leakage can be detected more easily. The cost of these losses is spread across the customer base so any improvement ultimately reduces customer bills. • Billing cost reduction due to a decline of billing irregularities and analysis work • Collection cost reduction due to a decline of back office collection workload • Reduction in bad debt due to improvement in field collections. Being able to remotely detect and disconnect will reduce the occurrence. $60m written off yearly. Assuming 31% reduction due to iESP capabilities
15	Network Connectivity Analysis	PSE&G's electricity network is complex, covers a large area, and provides power to different customers at different voltage levels. Ensuring that the required sources and end-use loads are correctly represented in operations systems is often very difficult. The iESP end-point meters can extend the network model and enable a high level of accuracy of connections and phasing, which in turn results in better planning and operations performance, and enables many other network dependent use cases.
16	Outage Detection & Analysis	Uses outage data from operations systems and smart meters to identify and verify possible outage locations, as well as identify network sections and specific customers (and numbers) that are out of power. This data is provided and displayed in real-time, to allow analysis, fast response, and crew dispatch to the precise location (down to meter) with information on the potential cause of the outage in order to

Use Case #	Use Case Name	Use Case Overview & Value
		more quickly restore power and ensure all customers are restored.
17	Outage Response Notification (ETR)	Use iESP outage data to calculate and communicate reasonable, more accurate, and acceptable outage status and restoration times to customers in real time. This largely eliminates one of the most common customer complaints about utility service, *i.e.*, inaccurate estimated restoration times. Messaging solutions within scope of this use case include Interactive Voice Response (IVR), web portals, text messaging, social media, mobile applications, and press releases.
18	Voltage Monitoring & Analysis	Using iESP data and other network data sources, voltage readings are captured, visualized, and system-wide analysis is run to determine locations where voltage violations exist both above and below nominal voltage. Utilities can utilize this information for accurate analysis of voltage issues and a base for voltage planning and optimization across the network. Further, this information can help planners identify strategic locations for deployment of Volt/VAR optimization equipment.
19	Asset Load/Phase Management, Balancing & Power Analysis (incl. Transformer Load Monitoring & Customer Load Curtailment/Limiting)	Using iESP data and other network data sources, load data is imported, aggregated, and visualized. Power flow analysis is run to examine and monitor loading profiles of every network asset along the feeder from the substation to the smart meter. This use case gives visibility of loading profiles and load flows of all network assets and customers with real-time or overnight iESP data updates. This information can be used by planners and operators to determine areas of overloading of assets on the system, plan responses to major events, execute asset balancing, and customer load curtailment.
20	Load Profiling & Forecasting	Capability that would enhance load profiles and forecasts by using iESP data in combination with network, customer billing or other data (*e.g.*, weather) to perform more detailed usage analysis. This is beneficial to customers and PSE&G planners by supporting optimized planning of load growth, which in turn leads to optimized capital spending and reliability of the network.
21	Distribution Losses	Distribution losses can be identified by comparing the iESP end-point meter usage data with usage data at the distribution entry point (*i.e.*, substation). Areas of high losses or network sections with particularly high losses can be identified through the analysis. Further analysis on the causes of the high losses will shed light into the different types of

Use Case #	Use Case Name	Use Case Overview & Value
		corrective / mitigating actions that can be taken to reduce the technical losses. Technical losses are spread across the customer base, so any improvement in this area could reduce customer bills.
22	Revenue Protection & Assurance	Revenue protection refers to the prevention, detection, and recovery of losses caused by interference with or theft of utility service. This use case will leverage smart meter consumption, as well as voltage and event data, to detect energy theft and meter tampering by employing multiple screening techniques, including cross-service correlations. Energy theft is spread across the customer base, so any improvement reduces customer bills.