

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
Qualifications	1
Assignment	3
Summary of Testimony.....	3
II. OVERVIEW OF TRANSACTION	4
III. CUSTOMER SERVICE.....	7
Field Service Centers, Call Centers, Walk-In Payment Centers.....	7
Quality of Call Center Service.....	9
Consequences for Consumers of Inadequate Customer Service.....	17
Disconnection for Non-Payment.....	18
Energy Assistance Programs and Deferred Payment Arrangements	22
Reporting to the Board and Alignment of Customer Service Metrics	24
Summary of Recommendations	26
IV. CONCLUSION.....	31

List of Tables and Attachments

Table 1	ETG Call Answer Performance: January through August 2022
Table 2	SJG Call Answer Performance: 2017 through 2022
Table 3	SJG Call Answer Performance: July 2021 through August 2022
Table 4	ETG and SJG Residential Customers in Arrears: June 2022 and August 2022
Attachment A	Statement of Qualifications

1 **I. INTRODUCTION**

2 *Qualifications*

3 **Q: Please state your name, position, and business address.**

4 A: My name is Susan M. Baldwin. My business address is 45 Acorn Path, Groton,
5 Massachusetts, 01450. Since 1984, I have been specializing in the economics, regulation,
6 and public policy of utilities, with a long-standing focus on telecommunications and with
7 a more recent focus on consumer issues in electric and gas markets. Since 2001, I have
8 been consulting to public sector agencies and consumer advocates as an independent
9 consultant.

10 **Q: Please summarize your educational background and professional experience.**

11 A: I have prepared a Statement of Qualifications, which is included as Attachment A.

12 **Q: Have you testified previously before the New Jersey Board of Public Utilities**
13 **(“Board”)?**

14 A: Yes, as Attachment A shows, I have testified many times before the Board, primarily on
15 behalf of the New Jersey Division of Rate Counsel (“Rate Counsel”).

16 **Q: Have you analyzed customer issues in electric and gas markets previously?**

17 A: Yes. On behalf of Rate Counsel I have analyzed the customer service issues of the
18 following electric utilities: Atlantic City Electric Company (“ACE”) (Docket No.
19 ER16030252, Docket No. ER17030308, Docket No. ER18080925, and Docket No.
20 ER20120746); Jersey Central Power & Light (Docket No. ER16040383, and Docket No.
21 ER20020146); Public Service Electric and Gas Company (“PSE&G”) (Docket Nos.
22 ER18010029 & GR18010030); and Rockland Electric Company (Docket No.
23 ER19050552, and Docket Nos. ER21050823 and EO21030675).

1 In addition to analyzing PSE&G’s gas customer service, I also analyzed the customer
2 service of the following New Jersey gas utilities on behalf of Rate Counsel: New Jersey
3 Natural Gas (Docket No. GR15111304, Docket No. GR19030420 and Docket No.
4 GR21030679); Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas (“ETG”) (Docket
5 No. GR16090826I, Docket No. GR19040486, and Docket No. GR21121254); and South
6 Jersey Gas Company (“SJG”) (Docket No. GR17010071 and Docket No. GR20030243).
7 I am presently analyzing SJG’s customer service in Docket No. GR22040253.

8
9 I am also assisting Rate Counsel with its participation in the Board’s proceeding
10 regarding utilities’ responses to the COVID-19 pandemic, Docket No. AO20060471.

11
12 I have also analyzed the residential energy supply market on multiple occasions during
13 the past eight years. In 2014, I submitted testimony on behalf of the Connecticut Office
14 of Consumer Counsel (“OCC”) regarding suppliers’ rates and customer complaints in the
15 electric residential retail supplier market, and, in 2015, I provided technical assistance to
16 the Massachusetts Attorney General’s Office (“AGO”) regarding the development of
17 consumer protection measures in the retail electric supplier market. In 2018, I prepared
18 detailed reports on the alternative residential energy supply market on behalf of the
19 Massachusetts AGO¹ and the Maryland Office of People’s Counsel (OPC).² I also

¹ “Are Consumers Benefiting from Competition? An Analysis of the Individual Residential Electric Supply Market in Massachusetts,” Susan M. Baldwin, prepared for the Massachusetts Attorney General’s Office, March 29, 2018. See also two updates to this report prepared for the Massachusetts Attorney General’s Office, dated July 2019 and March 2021.

² “Maryland’s Residential Electric and Gas Supply Markets: Where Do We Go from Here?” Susan M. Baldwin and Sarah M. Bosley, prepared for the Maryland Office of People’s Counsel, November 2018. In 2020 and 2021, I also submitted testimony on behalf of the Maryland OPC in four separate investigations by the Maryland Public Service Commission of four different third-party retail energy suppliers. (Maryland Public Service Commission Case Nos. 9613, 9614, 9615, and 9624.)

1 assisted the Connecticut OCC in a proceeding regarding the participation of hardship
2 customers in the alternative energy supplier market.³ Also, as Attachment A shows,
3 between 1978 and 1983, I analyzed energy policy for, among others, several government
4 agencies in New England. Finally, as Attachment A to my testimony shows, I have
5 analyzed many mergers and spin-offs of behalf of consumer advocates in numerous state
6 and federal regulatory proceedings.

7 ***Assignment***

8 **Q: On whose behalf is this testimony being submitted?**

9 A: This testimony, which concerns customer service issues relating to the proposed
10 transaction, is being submitted on behalf of Rate Counsel.

11 ***Summary of Testimony***

12 **Q: Please summarize your testimony.**

13 A: Based on my review of the Joint Petitioners' filing and review of responses to Rate
14 Counsel discovery questions, and my familiarity with the customer service of ETG and
15 SJG (collectively, "the Companies"), as well as that of other New Jersey utilities, I
16 conclude that the proposed transaction is deficient and will not yield positive benefits for
17 ETG and SJG customers to support Board approval of the transaction. Although Joint
18 Petitioners commit to "continue" to offer safe, adequate and proper service, the Joint
19 Petitioners fail to (1) acknowledge that the service ETG and SJG now provide is
20 inadequate, and do not commit to improving those aspects of their customer service that
21 are inadequate; and (2) commit to more lenient disconnection practices, and contribute

³ Connecticut Public Utilities Regulatory Authority Docket No. 18-06-02, "Review of Feasibility, Costs, and Benefits of Placing Certain Customers on Standard Service Pursuant to Conn. Gen. Stat. § 16-245o(m)," Testimony of Susan M. Baldwin on behalf of the Connecticut Office of Consumer Counsel, February 27, 2019.

1 sufficiently to low-income assistance programs. Moreover, the Petition fails to address
2 the existing and growing number of ETG and SJG customers in arrears and on the verge
3 of possible disconnection of service. The Petition is simply devoid of any specific
4 tangible benefits for ETG and SJG customers. It is hollow and disingenuous for the Joint
5 Petitioners to simply “commit” to provide safe and adequate service and not provide
6 actual plans and enforceable commitments to improve service, address arrearages
7 (possible waiver) and disconnection concerns looming over ETG and SJG customers.
8 Unless and until these fundamental flaws in the proposed transaction are addressed the
9 proposed transaction is not in the public interest, and should not be approved by the
10 Board. I summarize my specific recommendations at the end of my testimony.

11 **II. OVERVIEW OF TRANSACTION**

12 **Q: Please describe the proposed transaction.**

13 A: Joint Petitioners seek authority from the Board for approval of an indirect change of
14 control of ETG and SJG to be effectuated by a merger of SJI and Merger Sub, a wholly-
15 owned subsidiary of Boardwalk, which is in turn a wholly-owned, indirect subsidiary of
16 IIF US 2. As a result of the Proposed Transaction, there would be an indirect change of
17 control of SJI’s two New Jersey public utilities – ETG and SJG. Upon the completion of
18 the Proposed Transaction, SJI would be privately held and would become a member of
19 the portfolio of companies owned by the Infrastructure Investments Fund (“IIF”).

20 **Q. Please describe the Board’s obligations in this proceeding.**

21 A. Among other considerations, in particular under N.J.A.C. 14:1-5.14(c) and 14:1-5.10 the
22 Board’s approval of any merger or transfer of control must be supported by the Board’s

1 finding that the proposed merger will result in positive benefits for New Jersey
2 customers. Specifically, the language in N.J.A.C. 14:1-5.14(c) states:

3 The Board shall not approve a merger, consolidation, acquisition and/or
4 change in control unless it is satisfied that positive benefits will flow to
5 customers and the State of New Jersey and, at a minimum, that there are
6 no adverse impacts on any of the criteria delineated in 48:2-51.1.
7

8 In other words, the Joint Petitioners must demonstrate that the proposed change of
9 control, if approved, leaves customers better off than without the proposed change of
10 control.

11 **Q. Does the Joint Petition address specific benefits flowing from the merger concerning**
12 **service quality and customer service?**

13 A. Yes, according to the Joint Petitioners, among other things, the Proposed Transaction
14 would provide more efficient access to capital by ETG and SJG.

15 Moreover, the Joint Petitioners state (emphasis added):

16 As explained in detail in the Direct Testimony of Andrew E. Gilbert, IIF is
17 a private investment vehicle focused on investing in critical infrastructure
18 assets that provide essential services, including natural gas, electric, and
19 water utilities. By joining forces with IIF, SJI will be well positioned to
20 continue to serve its customers and communities, while executing on its
21 initiatives in support of New Jersey’s Energy Master Plan. Moreover, SJI,
22 and its two regulated public utilities, ETG and SJG, will have efficient,
23 cost-effective access to additional resources to continue to invest in
24 distribution system modernization while *maintaining high standards of*
25 *customer service, safety, and reliability.*⁴

⁴ Joint Petition, at 2.

1 **Q: Why do you add emphasis to the Joint Petitioners’ stated intention of**
2 **“maintaining high standards of customer service”?**

3 A: As I demonstrate in my testimony, neither ETG nor SJG (especially SJG)
4 presently offer high standards of customer service. The Joint Petitioners’ failure
5 to acknowledge or address the persistent deficiencies in customer service
6 underscore the probability that customer service is not an intended area of focus
7 post-transaction. There are specific commitments which Joint Petitioners should
8 adopt to ensure service quality and customer service benchmarks are reached and
9 maintained and would support a finding of positive benefits.

10 **Q: Are there other elements of the Proposed Transaction that could enhance**
11 **customer service and that are lacking in the Petition?**

12 A: Yes. I view customer service to encompass companies’ efforts to prevent disconnection
13 for non-payment. The Petitioners propose various Merger Commitments including: \$15
14 million in customer rate credits; a contribution totaling \$1 million over five years to
15 LIHEAP or NJ SHARES to assist low-income customers in New Jersey; continued
16 charitable giving totaling over \$2 million over five years; continuation of New Jersey
17 headquarters; and employee commitments.⁵ Ms. Crane addresses whether the magnitude
18 of these contributions are sufficient to render the transaction in the public interest. I
19 address the importance of assisting low-income customers and customers with limited
20 income avoid disconnection for non-payment, which are related issues.

⁵ Testimony of Michael J. Renna (“Renna Testimony”), at 12, ll. 3 – 14, l. 18.

1 **Q: Please describe more generally the service territories of SJI’s operating utilities --**
2 **ETG and SJG.**

3 A: SJI delivers natural gas to more than 700,000 customers in all or a portion 12 of 21
4 counties in New Jersey.⁶ Specifically, SJG serves customers in Atlantic, Burlington,
5 Camden, Cape May, Cumberland, Gloucester, and Salem Counties and ETG serves
6 customers in Hunterdon, Mercer, Middlesex, Morris, Sussex, Union and Warren
7 Counties.⁷ ETG serves approximately 306,000 customers and covers a service territory
8 of approximately 1,500 square miles.⁸ SJG serves approximately 413,000 customers
9 located and covers a service territory of over 2,500 square miles.⁹

10 **III. CUSTOMER SERVICE**

11 *Field Service Centers, Call Centers, Walk-In Payment Centers*

12 **Q: Please address Commitment No. 12 in Exhibit C to the Petition.**

13 A: The Joint Petitioners state: “ETG and SJG will maintain their existing call centers, field
14 service centers, and walk-in payment centers for at least three (3) years following the
15 closing of the Merger, with the exception of SJG’s Pleasantville walk-in payment center,
16 the closure of which was approved by Board Order, effective March 2, 2022, in BPU
17 Docket No. GO21101159.¹⁰

⁶ Id., at 8, ll. 10-15.

⁷ Id.

⁸ Testimony of Melissa Orsen (“Orsen Testimony”), at 3, ll. 17-23.

⁹ Id.

¹⁰ See also Orsen Testimony, at 14, ll. 6-8, which states: “As I noted earlier, our field service centers, call center, walk-in payments centers will be maintained for a period of at least three years following the closing of the Merger.”

1 **Q: Did Rate Counsel seek an explanation for the three-year time frame?**

2 A: Yes. The Joint Petitioners stated they “determined that a period of at least three-years
3 ensures continuity and a seamless transition for SJG and ETG customers” and also stated
4 that “[s]uch a period is also consistent with commitments offered in other merger and
5 acquisition proceedings.”¹¹

6 **Q: Should the Board approve the Joint Petitioners’ proposal to limit their commitment
7 to only three years?**

8 A: No. I am unaware of reasons that could justify closing the Companies’ call centers, field
9 service centers, and walk-in payment centers. Therefore, the three-year time frame is
10 arbitrary and inappropriate, would yield negative benefits for customers instead of the
11 required positive benefits, and should be removed. If and when either ETG or SJG
12 considers it appropriate to close any aspect of their operations, they should submit such a
13 request to the Board for its approval as required under Board regulations. The continued
14 operation of these centers is an integral component of the Companies’ provision of safe,
15 adequate and proper service and a requirement under N.J.A.C. 14:3-5.1, *et seq.*
16 Therefore, I recommend that ETG and SJG maintain their existing call centers, field
17 service centers, and walk-in payment centers indefinitely following the closure of the
18 Merger until and unless a filing is made with the Board and the Board approves the filing
19 with the exception of SJG’s Pleasantville walk-in payment center, the closure of which
20 was approved by Board Order, effective March 2, 2022, in BPU Docket No.

¹¹ Response to RCR-CUS-4.a.

1 GO21101159. Moreover, such a filing should not be made for at least three years
2 following the closure of the Merger.

3 ***Quality of Call Center Service***

4 **Q: Would it be sufficient for the transaction to result in the “status quo” for ETG’s and**
5 **SJG’s customer service?**

6 A: No. Simply committing to “maintain” existing levels of customer service¹² is entirely
7 insufficient to protect ratepayers and does not result in the required positive benefits.
8 Joint Petitioners have not provided any explanation of how the transaction would
9 improve customer service, yet improvement is sorely overdue. Relative to the two
10 Board-established call center metrics, as well as a related third call center metric, neither
11 ETG’s nor SJG’s performance is adequate. As customer service is an integral part of
12 service quality, improvement plans to meet and maintain required Board benchmarks and
13 metrics must be committed to by Petitioners to yield a tangible positive benefit for ETG
14 and SJG customers. Absent specific plans and commitments the Board should not
15 approve the proposed transaction.

16 **Q: Which three call center metrics did you analyze?**

17 A: I analyzed the percent of calls answered within 30 seconds; the call abandonment rate;
18 and the average speed of answer (“ASA”). The Board-established benchmark for the first
19 metric is 82 percent for ETG¹³ and 80 percent for SJG.¹⁴ The-Board-established

¹² Joint Petition, at 2.

¹³ Attachment D to Stipulation approved by the Board in I/M/O the Matter of the Petition of Elizabethtown Gas

1 benchmark for the second metric for both companies is 5 percent – that is, no more than 5
2 percent of customers’ calls should be abandoned.¹⁵ Typically, customers abandon calls
3 when the wait time to talk with a customer service representative is too long. The ASA
4 measures the time (expressed in seconds) it takes for a customer service representative to
5 answer a call from a customer. Although the Board has not established a benchmark for
6 the ASA, the ASA sheds light on the quality of the companies’ call answer performance –
7 the longer the ASA, the worse the customer service.

8 **Q: Please discuss your analysis of these call center metrics relative to ETG’s call**
9 **answer performance.**

10 A: Table 1, below, shows a sharp decline in performance beginning in May 2022 and
11 continuing through August 2022 (the most recent month for which data has been
12 provided). The ASA increased from 37 seconds in January to 229 seconds in August,
13 meaning that, on average, customers waited approximately a half-minute in January and
14 waited almost four minutes in August to talk with an ETG customer service
15 representative. Also, because the ASA represents an *average* of wait times, some
16 customers could have waited significantly longer to reach a customer service. Although
17 the Board has not established a benchmark for the ASA, the metric shows an
18 unambiguous decline in service quality.

Company for Approval of Increased Base Tariff Rates and Charges for Gas Service, Changes to Depreciation Rates and Other Tariff Revisions, Decision and Order Adopting Initial Decision, and Stipulation, BPU Docket No. GR21121254, August 17, 2022 (“ETG 2022 Order”).

¹⁴ Attachment D to the Stipulation approved by the Board in I/M/O 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, Decision and Order Adopting Initial Decision, and Stipulation, BPU Docket No. GR20030243, September 23, 2020 (“SJG 2020 Order”).

¹⁵ ETG 2022 Order, Attachment D to Stipulation; SJG 2020 Order, Appendix D to Stipulation.

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Table 1¹⁶
ETG
Call Answer Performance: January through August 2022

	January	Feb	March	April	May	June	July	August
Average Speed of Answer (secondds)	37	62	34	37	51	101	112	229
Percent of Calls Answered within 30 Seconds	88.0%	83.0%	88.0%	84.0%	75.0%	62.0%	61.0%	38.0%
Abandonment Rate	2.1%	3.1%	1.2%	2.0%	3.3%	5.6%	6.4%	14.0%

Q: What does Table 1, above, show relative to the two Board-established call answer metrics?

A: ETG exceeded the Board-established standard of answering at least 82 percent of calls within 30 seconds in each of the first four months of 2022 (meaning its service was adequate), and then ETG’s performance declined to an extreme low of 38 percent in August, 2022 (falling far short of the Board’s standard, and meaning the service was inadequate). ETG exceeded the Board-established standard of a 5 percent abandonment rate between January and May and then failed to meet the standard for the subsequent three months. In August, 14 percent of ETG customers attempting to reach a customer service representative abandoned their calls, presumably because they gave up.

¹⁶ Response to RCR-CUS-22 (Update provided September 6, 2022), Attachment RCR-CUS-22.4, page 1 of 1.

1 **Q: Did you analyze SJG’s call center performance?**

2 A: Yes. As Table 2, below, shows, during the time period spanning 2017 through 2022, the
3 only year in which SJG met the Board-established standard of answering at least 80
4 percent of calls within 30 seconds was 2020.

5 **Table 2**
6 **SJG**
7 **Call Answer Performance: 2017 through 2022¹⁷**

Year	Calls Answered Within 30 Seconds	Average Speed Of Answer	Percentage Abandoned
2017	68.40%	0:01:29	3.90%
2018	55.40%	0:03:21	13.20%
2019	70.61%	0:01:16	3.90%
2020	88.67%	0:00:20	1.40%
2021	66.80%	0:01:51	7.50%
2022	28.08%	0:08:57	32.50%

8
9 **Q: Did you analyze SJG’s call center performance, as measured on a monthly basis?**

10 A: Yes. Table 3, below, shows that SJG’s call center performance in each of the fourteen
11 months spanning July 2021 through August 2022 has been woefully inadequate. In
12 August 2022, SJG answered only one in four calls within 30 seconds, far short of the
13 Board-established standard of four in five calls (80 percent). Customers waited, on
14 average, twelve minutes for their calls to be answered and approximately one in three
15 callers simply gave up and abandoned their calls. As a result, these customers did not
16 obtain the customer service they sought (unless they called the call center again at some
17 other time and were then successful in reaching a customer service representative). The

¹⁷ Response to RCR-CUS-21, Attachment RCR-CUS-22.1, page 1 of 16. The data shown for 2022 encompasses January through June. Response to RCR-CUS-109.a.

odds of reaching a customer service representative should be far greater than now exist.

Table 3
SJG
Call Answer Performance: July 2021 through August 2022¹⁸

	Calls Answered Within 30 Seconds	Average Speed Of Answer	Percentage Abandoned
Jul 21	67.11%	0:01:12	3.7%
Aug 21	62.18%	0:01:59	6.1%
Sep 21	58.10%	0:02:15	7.7%
Oct 21	36.08%	0:04:31	16.0%
Nov 21	33.84%	0:06:02	24.7%
Dec 21	40.15%	0:04:32	16.3%
Jan 22	25.77%	0:11:13	39.2%
Feb 22	25.19%	0:12:30	46.1%
Mar 22	24.50%	0:09:15	32.0%
Apr 22	31.88%	0:07:52	24.6%
May 22	29.91%	0:06:21	22.0%
Jun 22	31.20%	0:07:14	25.7%
Jul 22	21.93%	0:12:10	44.6%
Aug 22	24.92%	0:12:03	34.0%

Q: When did the Board most recently address ETG’s customer service?

A: The Board issued its most recent Order addressing ETG’s customer service in August 2022, approving a stipulation filed on July 22, 2022. Based on my participation in Docket No. GR21121254, my recollection is that the most recent quarterly customer service data provided was for the quarter spanning January through March 2022, and so ETG’s subsequent decline in customer service would not have been addressed by the Board.

¹⁸ Response to RCR-CUS-22, Attachment RCR-CUS-22.1, page 1 of 3; Supplemental Response Attachment RCR-CUS-22.3, page 1 of 10.

1 I urge the Board to address ETG’s backsliding relative to its call answer performance in
2 the context of the proposed transaction. Although the Joint Petitioners’ Commitment No.
3 13 (in Exhibit C) to their Petition states (emphasis added): “Boardwalk and SJI will
4 provide ETG and SJG with the resources necessary to invest in capital and infrastructure
5 projects to help to ensure that ETG and SJG will *continue to* provide safe, adequate and
6 proper utility service,” neither ETG nor SJG is presently providing adequate utility
7 service. Therefore it is critically important for the Board, if it approves the proposed
8 transaction, to make sure there are robust consumer safeguards so that the Companies
9 first *improve* their service to meet Board-established thresholds and then *continue to*
10 provide safe, adequate and proper utility service.

11 **Q: Has the Board previously found problems with the timeliness of SJG’s call**
12 **answering?**

13 A: Yes. This has been an area of concern in the past. SJG’s customer service was extremely
14 poor in the years leading up to the Board’s October 2017 Order in a previous SJG base
15 rate case,¹⁹ especially with regard to the timeliness of answering customers’ calls. The
16 Board’s in October 2017 Order approving the settlement among the Company, Board
17 Staff and Rate Counsel included several important customer service measures, including
18 a detailed “Customer Service Enhancement Plan.”²⁰ As Table 2, above shows, although
19 SJG’s call answer timeliness failed Board standards in each of the years 2017, 2018, and

¹⁹ I/M/O South Jersey Gas Company Approval of Increased Base Tariff Rates and Charges for Gas Service and Other Tariff Revisions, BPU Docket No. GR17010071 (October 20, 2017), hereafter “October 2017 Order.”

²⁰ Id. See page 7 of the Board’s Order, and the attachments to the Stipulation designated as Exhibit C (“South Jersey Gas Company Customer Service Metrics”); Exhibit D (“Narrative Summary”); and Exhibit E (“South Jersey Gas Company Customer Service Enhancement Plan”).

1 2019, it exceeded Board standards in 2020, and so this aspect of its customer service was
2 not a specific focus of the Board’s Order in 2020, although the Board reiterated its
3 directive to SJG to submit quarterly customer service reports.²¹

4 **Q: Is SJG’s customer service also under investigation in another proceeding pending**
5 **before the Board?**

6 A: Yes. Rate Counsel is examining SJG’s customer service in the Board’s pending
7 investigation of SJG’s request for a rate increase.²² However, I urge the Board to address
8 SJG’s customer service in this proceeding because of its integral relationship to the
9 merits of the proposed transaction.

10 **Q: What is your understanding of ETG’s and SJG’s attempts to remedy their poor call**
11 **answer quality?**

12 A: Based on my review of SJG’s responses to discovery,²³ I understand that SJG has hired
13 an outside vendor and is seeking ways to attract and retain staff.²⁴ ETG and SJG each
14 state “Proficiency supporting the required service level is expected to be achieved by
15 April 2023.”²⁵ For SJG, this means that that customers would need to tolerate poor
16 customer service for two years before SJG expects to provide adequate service. This is
17 not acceptable.

²¹ SJG 2020 Order, at 4-5.

²² Docket No. GR22040253.

²³ Responses to RCR-CUS-109, RCR-CUS-112, RCR-CUS-115.

²⁴ SJG states: “The third party resource is intended to supplement and enhance existing in-house resources and will not result in job elimination for existing and well performing employees.” Response to RCR-CUS-115.a.

²⁵ Responses to RCR-CUS-109-e and RCR-CUS-112.b.

1 **Q: What then do you conclude based on your review of the Companies' performance**
2 **relative to Board-established call answer metrics?**

3 A: Customers have had to endure poor customer service, especially in the case of SJG, for
4 an inordinately long period of time, without any consequence for SJG. As I discuss in the
5 next section of my testimony, this inadequate customer service has harmed and continues
6 to harm customers, which underscores the importance of tipping the balance more in
7 favor of tangible benefits, if the Board approves the proposed transaction.

8 **Q: What then do you recommend?**

9 A: The Board should take into account the Companies' poor service in the Board's
10 assessment of the sufficiency of Joint Petitioners' proposed transaction-related customer
11 credit and contributions to low-income energy assistance programs, especially when
12 viewed in the context of the substantial monetary gain for those involved with the
13 transaction. Also, as I describe in a later section, the Board should condition any approval
14 of the transaction on the Companies' commitment to waive arrearages, submit a customer
15 service improvement plan and file subsequent progress reports for at least five years after
16 the Companies meet the Board-established benchmarks. These conditions would ensure
17 that positive tangible benefits flow to New Jersey customers.

18 **Q: Would it be appropriate for the two Companies' call center benchmarks to be**
19 **aligned?**

20 A: Yes. Because the transaction should benefit customers, it is appropriate to raise SJG's
21 benchmark to 82 percent of calls answered within 30 seconds to align with ETG's Board-

1 established benchmark. I recommend that the Board condition any approval of the
2 transaction on such a commitment by the Companies.

3 ***Consequences for Consumers of Inadequate Customer Service***

4 **Q: What are the consequences of inadequate customer service relative to the call
5 answer time and the abandonment rate?**

6 A: All customers are harmed from poor customer service. In a competitive market,
7 customers would abandon poorly performing companies and purchase their products and
8 services from a company with a better customer service record. Here, as captive
9 customers, they are simply getting less, without any offsetting reduction in the prices they
10 paid for an inferior service, and without any recourse.

11 **Q: Are some customers particularly harmed from long wait times, and high
12 abandonment rates?**

13 A: Yes. Customers who are struggling to pay their bills may reach out to ETG and to SJG
14 for assistance. When customer service representatives answer calls they can help
15 customers enter into deferred payment arrangements and help them begin the process of
16 applying for energy assistance. Those customers who abandon their calls, however, are
17 at higher risk of disconnection for non-payment because they will not have had the
18 opportunity to discuss DPAs and energy assistance programs with ETG's and SJG's
19 customer service representatives.

1 ***Disconnection for Non-Payment***

2 **Q: Is disconnection for non-payment a significant concern?**

3 A: Yes. The moratorium on disconnections for non-payment has ended relatively recently
4 and the numbers are sobering. Post-moratorium, SJG disconnected 776 households for
5 non-payment in May 2022, and disconnected 1,021 households in June, 2022.²⁶ Based
6 on the number of customers with outstanding arrearages, it is likely that disconnections
7 will continue as customers with low and limited incomes try to pay for necessities during
8 a time of inflation and soaring energy costs.

9 **Q: Did ETG and SJG provide information about those customers who may be**
10 **vulnerable to disconnection?**

11 A: Yes. As Table 4, below, shows, as of August 31, 2022, in total, 123,763 residential
12 customers are in arrears and 18,579 are eligible for disconnection for non-payment.²⁷

13 **Q: How do the numbers in Table 4 compare with the total customer base of the**
14 **Companies?**

15 A: Of the 306,000 customers (all customer classes) served by ETG,²⁸ 19 percent are
16 residential customers in arrears and 1.5 percent are households eligible for disconnection.

²⁶ Response to RCR-CUS-23. ETG did not provide disconnection data. Response to RCR-CUS-28. However, as part of the Stipulation approved in August 2022, by the Board, ETG will be submitting an expanded customer service report to Board Staff and Rate Counsel, which will include, among other information, the numbers of disconnections disaggregated by customer class. See In the Matter of the Petition of Elizabethtown Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service, Changes to Depreciation Rates and Other Tariff Revisions, *Decision And Order Adopting Initial Decision and Stipulation*, BPU Docket No. GR21121254, OAL Docket. No. PUC 00872-22, (“ETG August 2022 Order”) Appendix D, at 5-6.

²⁷ My understanding is that “in arrears” means bills are past due more than 30 days.

²⁸ Orsen Testimony, at 3, ll. 17-23.

1 Of the 413,000 customers (all classes) served by SJG,²⁹ 16 percent are residential
 2 customers in arrears and 3.4 percent are households eligible for disconnection. It is
 3 possible that households calling ETG’s and SJG’s call centers seek assistance because
 4 they are struggling to pay bills but are not able to get through to a customer service
 5 representative in a timely manner, and so abandon their calls, and, as a result, do not have
 6 the opportunity to learn about DPAs or energy assistance programs.

7 **Table 4**
 8 **ETG and SJG**
 9 **Residential Customers in Arrears: June 2022 and August 2022³⁰**

Company	Date	# in Arrears	# Eligible for Disconnection for Non-Payment	# Receiving Assistance in Arrears (protected from disconnection)
ETG	6/30/2022	62,620	12,494	3,237
ETG	8/31/2022	57,765	4,450	1,535
SJG	6/30/2022	73,259	19,205	6,450
SJG	8/31/2022	65,998	14,129	3,783
Total	6/30/2022	135,879	31,699	9,687
Total	8/31/2022	123,763	18,579	5,318

11
 12
 13 **Q: Please describe your understanding of the Companies’ disconnection policies.**

14 **A:** The Joint Petitioners discuss aligning the billing and collection procedures of ETG and
 15 SJG.³¹ Both Companies should pass through benefits to those who have been

²⁹ Id.
³⁰ Response to RCR-CUS-30 and Supplemental Response to RCR-CUS-30. Customers who are receiving assistance are protected from disconnection. Id. Disconnections resumed in April 2022. Id.
³¹ See e.g., SJG response to RCR-CUS-19, and Attachment RCR-CUS-19.1. RCR-CUS-19 concerns existing methods, if any, for discussing and identifying best customer service practices by ETG and SJG:

1 disconnected since the end of the moratorium as well as to those who are at risk of
2 disconnection. The Board should condition any approval on both Companies
3 commitment to a more lenient disconnection procedure through December 31, 2024, and
4 should direct the Companies to submit, within 30 days of the Board’s Order in this
5 proceeding, an explanation of their disconnection procedures.

6 **Q: Please discuss those customers who, post-moratorium, have been disconnected.**

7 A: Regarding this group of customers, the Joint Petitioners could offer a tangible benefit by
8 facilitating the re-connection of those who have been disconnected. This would consist
9 of waiving the reconnection charge and waiving the arrearages (or some portion of the
10 arrearages) associated with these customers’ bills.

11 **Q: Please discuss those customers who are eligible for disconnection for non-payment.**

12 A: This group of customers, of course, changes from month to month. With each passing
13 month, some will be disconnected for non-payment and other customers will join the
14 group of customers with overdue bills. The Joint Petitioners can offer a tangible benefit
15 of the transaction by waiving all or part of their arrearages. It is far less disruptive to
16 avoid disconnection. Disconnections jeopardize health and well-being. It is reasonable
17 for the Joint Petitioners to consider how the transaction can benefit those with the fewest
18 resources.

-
- SJG Response: “As it relates to efforts to prevent disconnection for non-payment, SJG and ETG have been very closely aligned throughout 2020 to 2022. Descriptions of these efforts are included in Attachment RCR-CUS-19.1.”
 - The ETG Response does not address efforts to prevent disconnection.

1 **Q: Would benefits flow through to other ratepayers if the Joint Petitioners waived the**
2 **arrearages of those least able to pay their bills?**

3 A: Yes. Reducing arrearages should lower the probability of uncollectibles – the cost of
4 which are recovered from all ratepayers.

5 **Q: Above, you describe two categories of customers – those who have been**
6 **disconnected this year and those at imminent risk of disconnection for non-**
7 **payment. Please address those customers who do not now fall into either category**
8 **but who also raise concerns that should be addressed in the context of the Board’s**
9 **deliberations regarding the merits of the proposed transaction.**

10 A: Among ETG’s customers, a total of 57,765 customers are in arrears, as is shown in Table
11 4, above, and, among SJG’s customers, a total of 65,598 are in arrears. As I understand
12 their use of the word “arrears” the customers’ bills are overdue by at least 30 days.

13 **Q: What is the significance of customers who are in arrears but are not yet eligible for**
14 **disconnection for non-payment?**

15 A: As time passes, and as these customers continue to struggle to pay their bills, they will
16 become eligible for disconnection for non-payment (when they are overdue beyond the
17 time period delineated by the Companies and in amounts exceeding the parameters used
18 by the Companies’ billing and collection practices). Put more simply, customers newly
19 in arrears today may become customers eligible for disconnection for non-payment
20 tomorrow.

21 As I discuss below, the Joint Petitioners could offer a positive tangible benefit by waiving
22 outstanding arrearages. During these times of rising prices for basic goods (housing,

1 food, transportation, energy), some households will be struggling to make ends meet.
2 Those with the fewest resources can benefit greatly from debt forgiveness.

3 **Q: Do the Joint Petitioners address how the transaction might inform the Companies’**
4 **disconnection policies?**

5 A: Yes. Their response to RCR-CUS-36 states, in part: “As a portfolio company of IIF, SJI
6 will also have the opportunity to discuss disconnection and payment practices with other
7 portfolio companies of IIF.” The Petitioners provide no other insight as to how ETG and
8 SJG customers will be treated and impacted. This is not acceptable. Additionally, IIF has
9 not indicated that this will be a benefit to customers if the change of control is approved.

10 *Energy Assistance Programs and Deferred Payment Arrangements*

11 **Q: The Joint Petitioners committed to contributions to low income assistance**
12 **programs. Is their commitment sufficient?**

13 A: No. Commitment No. 15 commits Boardwalk “to make, or to cause to be made, an
14 annual contribution in the amount of \$200,000 to LIHEAP or NJ SHARES (not
15 earmarked for ETG or SJG customers) for a period of at least five (5) years following the
16 closing of the Merger to assist New Jersey’s low-income customers with payment of their
17 utility bills.”³²

³² Petition, Exhibit C.

1 **Q: Did Rate Counsel seek information about the numbers of customers receiving**
2 **LIHEAP and NJ SHARES?**

3 A: Yes. In 2021, 14,821 SJG customers and 10,776 ETG customers received LIHEAP
4 assistance in the total amounts of \$5,278,937 (SJG) and \$6,234,898 (ETG).³³ In the same
5 year, 31 SJG and 302 ETG customers received NJ SHARES assistance, in the total
6 amounts of \$15,017 (SJG) and \$79,725.³⁴ Relative to the more than \$11 million
7 provided in a single year (2021) to the two Companies' customers through these two
8 programs, \$200,000 per year seems paltry. The Joint Petitioners should commit to
9 contribute at least \$500,000 per year for each of five years to energy assistance programs.

10 **Q: Are there other ways that ETG and SJG can help customers avoid disconnection for**
11 **non-payment?**

12 A: Yes. The most important way that ETG and SJG can minimize disconnections for non-
13 payment is by waiving arrearages. The Board should condition any approval of the
14 proposed transaction on the Joint Petitioners' commitment to waive all ratepayers'
15 arrearages as of September 30, 2022, as well as to waive arrearages with those customers
16 that have been and continue to be disconnected for non-payment during the time period
17 spanning the end of the moratorium on disconnection and the consummation of the
18 proposed transaction. The Companies should commit to not recovering these costs in
19 rates.

³³ Response to RCR-CUS-2.

³⁴ Id.

1 **Q: How else can ETG and SJG help ratepayers pay their bills?**

2 A: Deferred payment arrangements (DPA) help cash-strapped customers who have fallen
3 behind on their utility bills pay past due amounts. It is important to structure them to
4 increase customers' possibility of successfully completing them.

5 **Q: What do you recommend relative to DPAs?**

6 A: The Board should condition any approval of the proposed transaction on a commitment
7 by the Companies to offer to those customers struggling to pay overdue bills 24-month
8 DPAs with no down-payment through December 31, 2024.

9 ***Reporting to the Board and Alignment of Customer Service Metrics***

10 **Q: Earlier you described SJG's fourteen-month-plus inadequate customer service**
11 **relative to call center metrics as well as ETG's recent decline regarding Board-**
12 **established metrics. What do you propose?**

13 A: As I describe above, SJG hasn't even come close to meeting relevant call center
14 benchmarks for a sustained period of time. However, there has been no consequence for
15 SJG. As the Board considers the appropriate flow-through of benefits in the form of a
16 customer credit, I recommend that the Board take into consideration, the sustained period
17 of consumer harm. I also recommend the Board direct SJG and ETG each to submit a
18 customer service improvement plan relative to call answer performance within 30 days of
19 the Board's Order in this proceeding, and then to submit quarterly reports regarding
20 progress in meeting call center metrics for at least five years. *after ETG and SJG have*
21 *achieved the standards.*

1 **Q: Do you have any other recommendations regarding ETG’s and SJG’s customer**
2 **service reports to Board Staff and Rate Counsel?**

3 A: Yes.

- 4 – First, I recommend that the Board direct SJG to report on information to parallel
5 ETG’s Part “5”: “Disconnections, Financial Assistance, and Deferred Payment
6 Arrangements (DPAs)” of the customer service report directed in the Board’s ETG
7 August 2022 Order.³⁵
- 8 – Second, because of the vulnerability of so many customers to disconnection for
9 nonpayment, I recommend that the Board direct ETG and SJG to report on the
10 following additional information in its quarterly customer service reports, which can
11 assist the Companies, Board Staff and Rate Counsel in monitoring the status of
12 potential disconnections: Numbers of residential customers (1) in arrears; (2) eligible
13 for disconnection; (3) in arrears and receiving assistance, (4) assessed reconnection
14 fee; and (5) waived reconnection fee.
- 15 – Third, I recommend that the Board direct SJG and ETG to submit reports to Board
16 Staff and Rate Counsel on each Company’s progress in and challenges encountered
17 in preventing disconnection for nonpayment, with the reports be submitted within 60
18 days of Board approval of the Merger and again, twelve months after that date. Also
19 the Companies should commit to include in the reports any practices adopted as a

³⁵ In the Matter of the Petition of Elizabethtown Gas Company for Approval of Increased Base Tariff Rates and Charges for Gas Service, Changes to Depreciation Rates and Other Tariff Revisions, Decision And Order Adopting Initial Decision and Stipulation, BPU Docket No. GR21121254, OAL Docket. No. PUC 00872-22, (“*ETG August 2022 Order*”) Appendix D, at 5-6.

1 result of sharing best practices with other IIF portfolio companies.³⁶

- 2 – Finally, I also recommend that within 60 days of the Board’s order in this
3 proceeding, the Joint Petitioners submit a plan, subject to review and approval by
4 Board Staff and Rate Counsel, for any further alignment of: customer service
5 reporting; benchmarks; and billing and collection practices and procedures.

6 ***Summary of Recommendations***

7 **Q: Please summarize your recommendations.**

8 A: If the Board decides to approve the proposed transaction, I recommend that the Board
9 condition such approval on specific, enforceable commitments relating to ETG’s and
10 SJG’s customer service to ensure positive benefits flow to New Jersey customers. I
11 summarize these conditions below.

12 Measures to minimize disconnections for non-payment

13 The proposed merger is a high-stakes transaction, which will result in substantial
14 monetary benefits for many of the individuals and entities involved in designing and
15 implementing the transaction. The value of the purchase stems in large part from ETG’s
16 and SJG’s long history of serving approximately 700,000 customers as the monopoly
17 provider – in other words, ratepayers have enabled the value now reflected in the
18 purchase price contemplated by the proposed transaction. It is appropriate and fair that
19 ratepayers benefit also if the proposed transaction occurs. I urge the Board to ensure that
20 ratepayers share fairly in the financial benefits.

³⁶ See Response to RCR-CUS-36.

1 As relates to the scope of my testimony, I recommend the following toward the goal of
2 maximizing the numbers of households that are connected to and stay connected to
3 ETG's and SJG's service:

- 4 • Within 30 days of the completion of the transaction, the Companies should waive
5 residential and commercial arrearages.. The Companies should commit to waive
6 100% of the most-recent COVID arrearage reported in the quarterly reports filed
7 pursuant to BPU Docket Number AO20060471. The resulting costs should not be
8 permitted to be recovered from ratepayers.
- 9 • Waive reconnection charges through December 31, 2024.
- 10 • Within 30 days of the completion of the transaction, reconnect all customers
11 disconnected for non-payment since May 2022 at no charge to the customers,
12 waive arrearages associated with these customers, and not recover the resulting
13 costs from ratepayers.
- 14 • Adopt more lenient practices for disconnection for non-payment (such as by
15 setting a larger threshold for amounts past due) through December 31, 2024, and
16 within 30 days of the Board's Order in this proceeding, submit a filing to Board
17 Staff and Rate Counsel describing ETG's and SJG's disconnection practices.
- 18 • Report information to Board Staff and Rate Counsel to assist them in monitoring
19 the extent to which ratepayers are at risk of disconnection for non-payment (see
20 recommendations regarding expanded customer service reporting).
- 21 • In connection with the Customer Service Improvement Reports (described
22 below), the Board should direct SJG and ETG to describe (1) efforts taken and
23 challenges encountered in preventing disconnections for non-payment; and (2)
24 practices adopted as a result of sharing best practices with other IIF portfolio

- 1 companies.
- 2 • SJG and ETG commit to offer DPAs with 24-month terms and no down payment
 - 3 through December 31, 2023.
 - 4 • ETG and SJG should be required to commit to maintaining their existing low-
 - 5 income customer assistance programs, unless otherwise authorized by the Board
 - 6 to discontinue such programs.

7 Alignment of ETG’s and SJG’s customer service objectives

- 8 • SJG should be required to commit to meeting the Board-established benchmark
- 9 for ETG of answering 82 percent of calls within 30 seconds (for which the Board-
- 10 established standard for SJG is now 80 percent).

11 Commitment and detailed plans to fulfill the statutory obligation to provide safe,
12 proper and adequate service.³⁷

13 The Joint Petitioners’ promise to “continue” to provide adequate service rings hollow.³⁸
14 Neither ETG nor SJG presently are providing adequate service, and for SJG, that
15 inadequate service has continued for at least 14 months. Commitments are essential to
16 ensure that service performance is raised to an adequate level and then to protect
17 customers from future service deterioration:

- 18 • SJG and ETG each submit a Customer Service Improvement Report (“CSIP”)
- 19 within 30 days of the transaction’s completion to Board Staff and Rate Counsel
- 20 and quarterly thereafter for five (5) years after they have achieved the Board-
- 21 established call center benchmarks. The CSIP and quarterly reports should

³⁷ See N.J.S.A. 48:3-3(a).

³⁸ Commitment No. 13 in Exhibit C to the Petition includes the following (emphasis added): “Boardwalk and SJI will provide ETG and SJG with the resources necessary to invest in capital and infrastructure projects to help to ensure that ETG and SJG will *continue to* provide safe, adequate and proper utility service.” Ms. Crane addresses this commitment in more detail in her testimony.

1 address progress in meeting and improving call answering performance
2 benchmarks (percent answered within 30 seconds and call abandonment rate).

3 This report should also include a narrative description of the efforts SJG and ETG
4 are taking to improve their performance relative to this metric.

- 5 • ETG and SJG should maintain their existing call centers, field service centers, and
6 walk-in payment centers indefinitely following the closure of the Merger, until
7 and unless a filing is made with the Board and the Board approves the filing, with
8 the exception of SJG's Pleasantville walk-in payment center, the closure of which
9 was approved by Board Order, effective March 2, 2022, in BPU Docket No.
10 GO21101159. Moreover, such a filing shall not be made for at least three years
11 following the closure of the Merger.
- 12 • SJI, Boardwalk and IIF US Holdings 2 should be required to commit that there
13 will be no diminution in current levels of quality of customer service or system
14 reliability for as long as IIF, or an affiliated entity, owns SJI.
- 15 • SJG should be required to fulfill any potential additional Board directives issued
16 in the SJG base rate case, Docket No. GR22040253, regarding customer service.
- 17 • Nothing in this case will preclude the Board from issuing additional customer
18 service directives.
- 19 • SJI, ETG and SJG should be required to maintain their headquarters in New Jersey
20 for so long as Boardwalk owns SJI.
- 21 • Boardwalk and SJI should be required to provide ETG and SJG with the resources
22 necessary to invest in capital and infrastructure projects to help to ensure that
23 ETG and SJG will continue to provide safe, adequate and proper utility service.

1 Continued and Expanded Customer Service Reports

- 2 • SJG should continue to submit quarterly reports to Rate Counsel and the Director
3 of the Board’s Division of Customer Assistance concerning SJG’s performance in
4 relation to certain customer service metrics which were included in SJG’s last rate
5 case stipulation approved in BPU Docket No. GR20030243 and additional and
6 modified metrics regarding (1) Percentage of Calls Answered Within 30 Seconds,
7 (2) Call Center Strike Reporting, if applicable, and (3) Disconnections, Financial
8 Assistance and Deferred Payment Arrangements. The quarterly customer service
9 reports should also contain a section that contains the number of residential
10 customers: (i) in arrears; (ii) eligible for disconnection; (iii) in arrears and
11 receiving assistance, (iv) assessed reconnection fee; and (v) waived reconnection
12 fee. Regarding the Call Center Strike Reporting, if SJG becomes aware of a
13 possible strike among its customer service representatives, SJG should expand its
14 quarterly customer service report to include information to parallel the strike-
15 related information agreed to be provided by ETG.
- 16 • ETG should continue to submit quarterly reports to Rate Counsel and the Director
17 of the Board’s Division of Customer Assistance concerning ETG’s performance
18 in relation to certain customer service metrics which were included in ETG’s last
19 rate case stipulation approved in BPU Docket No. GR21121254. The quarterly
20 customer service reports should also contain a section that shows the numbers of
21 residential customers: (i) in arrears; (ii) eligible for disconnection; (iii) in arrears
22 and receiving assistance, (iv) assessed reconnection fee; and (v) waived
23 reconnection fee.

- 1 • SJG and ETG should commit to submit to Board Staff and Rate Counsel within
2 60 days of the transaction's consummation any additional recommendations the
3 Companies may have for aligning the content and format of their quarterly
4 customer service reports.

5 **IV. CONCLUSION**

6 **Q: Does this conclude your testimony?**

7 A: Yes, but I understand that the Board recently released a SJG management audit and I
8 reserve the right to submit additional testimony regarding that audit or on any other
9 additional information at a later date.

ATTACHMENT A
STATEMENT OF QUALIFICATIONS

SUSAN M. BALDWIN
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Susan M. Baldwin specializes in utility economics, regulation, and public policy, with a long-standing focus on telecommunications and with a more recent focus on consumer issues in electric and gas markets. Ms. Baldwin has been actively involved in public policy for forty-four years, which includes thirty-eight years in telecommunications policy and regulation, and thirteen years in energy policy and regulation. Since 2001, she has been consulting to public sector agencies, consumer advocates, and others as an independent consultant. Ms. Baldwin received her Master of Economics from Boston University, her Master of Public Policy from Harvard University's Kennedy School of Government, and her Bachelor of Arts degree in Mathematics and English from Wellesley College. Ms. Baldwin has extensive experience both in government and in the private sector.

Ms. Baldwin has testified before 24 public utility commissions in more than 75 state proceedings, including: the Arkansas Public Service Commission, California Public Utilities Commission, Colorado Public Utilities Commission, Connecticut Department of Public Utility Control, District of Columbia Public Service Commission, Idaho Public Utilities Commission, Illinois Commerce Commission, Indiana Utility Regulatory Commission, Iowa Utilities Board, Maryland Public Service Commission, Massachusetts Department of Telecommunications and Cable, Nevada Public Service Commission, New Hampshire Public Utilities Commission, New Jersey Board of Public Utilities, New Mexico Public Regulation Commission, New York Public Service Commission, Public Utilities Commission of Ohio, Pennsylvania Public Utility Commission, Rhode Island Public Utilities Commission, Tennessee Public Service Commission, Vermont Public Service Board, Washington Utilities and Transportation Commission, Public Service Commission of West Virginia and Wyoming Public Service Commission. Ms. Baldwin has also authored numerous comments and declarations submitted in various Federal Communications Commission proceedings.

Ms. Baldwin has also participated in projects in Delaware, Hawaii, Illinois, New York, South Dakota, and Canada on behalf of consumer advocates, public utility commissions, and competitive local exchange carriers. Ms. Baldwin has served in a direct advisory capacity to public utility commissions in the District of Columbia, Massachusetts, New Mexico, Utah and Vermont. Ms. Baldwin has also testified on behalf of public utility commission staff in Idaho and Rhode Island. Ms. Baldwin has testified before state legislative committees in Maryland, Massachusetts, Ohio, and Pennsylvania.

Ms. Baldwin has sponsored expert reports in state taxation proceedings. Also, in her capacity as an independent consultant, Ms. Baldwin has consulted to and testified on behalf of consumer advocates on diverse matters including the electric retail market, consumer protection and consumer services issues in telecommunications, electric, and gas proceedings, broadband deployment, numbering resources, unbundled network element (UNE) cost studies, incumbent

local exchange carriers' requests for competitive classification of services, mergers and spin-offs, rate cases, universal service, service quality, and state *Triennial Review Order* (TRO) proceedings.

Ms. Baldwin sponsored detailed testimony on behalf of the Connecticut Office of Consumer Counsel in 2019 and in 2014 regarding the third-party residential electric market. In her testimony, she summarized her detailed analysis of the prices that retail customers of suppliers pay and her review of consumer complaints regarding the retail electric market. In 2018, Ms. Baldwin co-authored an analysis of Maryland's residential electric and gas supply markets on behalf of the Maryland Office of People's Counsel. She also conducted an in-depth analysis of the retail residential electric market in Massachusetts for the Massachusetts Office of the Attorney General.

Ms. Baldwin has analyzed customer service issues in many electric and gas rate case proceedings on behalf of consumer advocate offices. Ms. Baldwin has worked with local, state, and federal officials on energy and environmental issues. As a policy analyst for the New England Regional Commission (NERCOM) and Massachusetts Office of Energy Resources (MOER), she acquired extensive experience working with governors' offices, state legislatures, congressional offices, and industry and advocacy groups. As an energy analyst for NERCOM, Ms. Baldwin coordinated New England's first regional seminar on low-level radioactive waste, analyzed federal and state energy policies, and wrote several reports on regional energy issues. While working with the MOER, Ms. Baldwin conducted a statewide survey of the solar industry and analyzed federal solar legislation. While attending the Kennedy School of Government, Ms. Baldwin served as a research assistant for the school's Energy and Environmental Policy Center.

Ms. Baldwin has contributed to numerous comments submitted to the FCC on diverse aspects of broadband in various proceedings on topics such as data collection, mapping, deployment, universal service, affordability, consumer protection, and network management. Also, in state regulatory proceedings that have examined carriers' proposals for spin-offs and for mergers, she has recommended conditions concerning broadband deployment.

Ms. Baldwin served as a direct advisor to the Massachusetts Department of Telecommunications and Energy (DTE) between August 2001 and July 2003, in Massachusetts DTE Docket 01-20, an investigation of Verizon's total element long run incremental cost (TELRIC) studies for recurring and nonrecurring unbundled network elements (UNEs). She assisted with all aspects of this comprehensive case in Massachusetts. Ms. Baldwin analyzed recurring and nonrecurring cost studies; ran cost models; reviewed parties' testimony, cross-examined witnesses, trained staff, met with the members of the Commission, assisted with substantial portions of the major orders issued by the DTE; and also assisted with the compliance phase of the proceeding.

Ms. Baldwin has also contributed to numerous comments and declarations submitted to the Federal Communications Commission on issues such as broadband; intercarrier compensation reform; the Comcast-NBCU merger, price cap regulation; universal service; carriers' petitions for forbearance; separations reform; special access services, relay services; numbering

optimization, and the Internet Protocol transition.

Ms. Baldwin worked with Economics and Technology, Inc. for twelve years (1984 to 1988 and 1992 to 2000), most recently as a Senior Vice President. Among her numerous projects were the responsibility of advising the Vermont Public Service Board in matters relating to a comprehensive investigation of NYNEX's revenue requirement and proposed alternative regulation plan. She participated in all phases of the docket, encompassing review of testimony, issuance of discovery, cross-examination of witnesses, drafting memoranda and decisions, and reviewing compliance filings. Another year-long project managed by Ms. Baldwin was the in-depth analysis and evaluation of the cost proxy models submitted in the FCC's universal service proceeding. Also, on behalf of the staff of the Idaho Public Utilities Commission, Ms. Baldwin testified on the proper allocation of US West's costs between regulated and non-regulated services. On behalf of AT&T Communications of California, Inc. and MCI Telecommunications Corporation, Ms. Baldwin comprehensively analyzed the non-recurring cost studies submitted by California's incumbent local exchange carriers. Ms. Baldwin has participated in more than twenty state and federal regulatory investigations of the impact of proposed transfers of control of wireline, wireless and cable companies.

Ms. Baldwin has contributed to the development of state and federal policy on numbering matters. On behalf of the Ad Hoc Telecommunications Users Committee, Ms. Baldwin participated in the Numbering Resource Optimization Working Group (NRO-WG), and in that capacity, served as a co-chair of the Analysis Task Force of the NRO-WG. She has also provided technical assistance to consumer advocates in the District of Columbia, Illinois, Iowa, Massachusetts, and Pennsylvania on area code relief and numbering optimization measures. Ms. Baldwin also co-authored comments on behalf of the National Association of State Utility Consumer Advocates in the FCC's proceeding on numbering resource optimization.

During her first years at ETI, Ms. Baldwin was the Director of Publications and Tariff Research, and, in that capacity, she trained and supervised staff in the analysis of telecommunications rate structures, services, and regulation.

Ms. Baldwin served four years (1988-1992) as the Director of the Telecommunications Division for the Massachusetts Department of Public Utilities (now the Department of Telecommunications & Cable), where she directed a staff of nine, and acted in a direct advisory capacity to the DPU Commissioners. (The Massachusetts DTC maintains a non-separated staff, which directly interacts with the Commission, rather than taking an advocacy role of its own in proceedings). Ms. Baldwin advised and drafted decisions for the Commission in numerous DPU proceedings including investigations of a comprehensive restructuring of the rates of New England Telephone Company (NET), an audit of NET's transactions with its NYNEX affiliates, collocation, ISDN, Caller ID, 900-type services, AT&T's request for a change in regulatory treatment, pay telephone and alternative operator services, increased accessibility to the network by disabled persons, conduit rates charged by NET to cable companies, and quality of service. Under her supervision, staff analyzed all telecommunications matters relating to the regulation of the then \$1.7-billion telecommunications industry in Massachusetts, including the review of all

telecommunications tariff filings; petitions; cost, revenue, and quality of service data; and certification applications. As a member of the Telecommunications Staff Committees of the New England Conference of Public Utility Commissioners (NECPUC) and the National Association of Regulatory Utility Commissioners (NARUC), she contributed to the development of telecommunications policy on state, regional, and national levels.

As a budget analyst for the Massachusetts Department of Public Welfare, Ms. Baldwin forecast expenditures, developed low-income policy, negotiated contracts, prepared and defended budget requests, and monitored expenditures of over \$100 million.

Ms. Baldwin received Boston University's Dean's Fellowship. While attending the Kennedy School of Government, Ms. Baldwin served as a teaching assistant for a graduate course in microeconomics and as a research assistant for the school's Energy and Environmental Policy Center, and at Wellesley College was a Rhodes Scholar nominee. She has also studied in Ghent, Belgium.

Record of Prior Testimony

In the matter of the Application of the New Jersey Bell Telephone Company for Approval of its Plan for an Alternative Form of Regulation, New Jersey Board of Regulatory Commissioners Docket No. T092030358, on behalf of the New Jersey Cable Television Association, filed September 21, 1992, cross-examined October 2, 1992.

DPUC review and management audit of construction programs of Connecticut's telecommunications local exchange carriers, Connecticut Department of Public Utility Control Docket No. 91-10-06, on behalf of the Connecticut Office of the Consumer Counsel, filed October 30, 1992, cross-examined November 4, 1992.

Joint petition of New England Telephone and Telegraph Company and Department of Public Service seeking a second extension of the Vermont Telecommunications Agreement, Vermont Public Service Board 5614, Public Contract Advocate, filed December 15, 1992, cross-examined December 21, 1992.

Application of the Southern New England Telephone Company to amend its rates and rate structure, Connecticut Department of Public Utility Control Docket No. 92-09-19, on behalf of the Connecticut Office of Consumer Counsel, filed March 26, 1993 and May 19, 1993, cross-examined May 25, 1993.

In the matter of the Application of Cincinnati Bell Telephone Company for Approval of an Alternative Form of Regulation and for a Threshold Increase in Rates, Public Utilities Commission of Ohio Case No. 93-432-TP-ALT, on behalf of Time Warner AxS, filed March 2, 1994.

Matters relating to IntraLATA Toll Competition and Access Rate Structure, Rhode Island Public Utilities Commission Docket 1995, on behalf of the Rhode Island Public Utilities Commission Staff, filed March 28, 1994 and June 9, 1994, cross-examined August 1, 1994.

In the Matter of the Application of The Ohio Bell Telephone Company for Approval of an Alternative Form of Regulation, Public Utilities Commission of Ohio Case No. 93-487-TP-ALT, on behalf of Time Warner AxS, filed May 5, 1994, cross-examined August 11, 1994.

In Re: Universal Service Proceeding: The Cost of Universal Service and Current Sources of Universal Service Support, Tennessee Public Service Commission Docket No. 95-02499, on behalf of Time Warner

AxS of Tennessee, L.P., filed October 18, 1995 and October 25, 1995, cross-examined October 27, 1995.

In Re: Universal Service Proceeding: Alternative Universal Service Support Mechanisms, Tennessee Public Service Commission Docket No. 95-02499, on behalf of Time Warner AxS of Tennessee, L.P., filed October 30, 1995 and November 3, 1995, cross-examined November 7, 1995.

In the Matter of the Application of US West Communications, Inc. for Authority to Increase its Rates and Charge for Regulated Title 61 Services, Idaho Public Utilities Commission Case No. USW-S-96-5, on behalf of the Staff of the Idaho Public Utilities Commission, filed November 26, 1996 and February 25, 1997, cross-examined March 19, 1997.

A Petition by the Regulatory Operations Staff to Open an Investigation into the Procedures and Methodologies that Should Be Used to Develop Costs for Bundled or Unbundled Telephone Services or Service Elements in the State of Nevada, Nevada Public Service Commission Docket No. 96-9035, on behalf of AT&T Communications of Nevada, Inc., filed May 23, 1997, cross-examined June 6, 1997.

Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture; Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, California Public Utilities Commission R.93-04-003 and I.93-04-002, co-authored a declaration on behalf of AT&T Communications of California, Inc., and MCI Telecommunications Corporation, filed on December 15, 1997 and on February 11, 1998.

Consolidated Petitions for Arbitration of Interconnection Agreements, Massachusetts Department of Telecommunications and Energy, DPU 96-73/74, 96-75, 96-80/81, 96-83, and 96-84, on behalf of AT&T Communications of New England, Inc. and MCI Telecommunications Corporation, filed February 3, 1998.

In the Matter of the Application of US West Communications, Inc. for Specific Forms of Price Regulation, Colorado Public Utilities Commission Docket No. 97-A-540T, on behalf of the Colorado Office of Consumer Counsel, filed on April 16, 1998, May 14, 1998 and May 27, 1998, cross-examined June 2, 1998.

Joint Application of SBC Communications and Southern New England Telecommunications Corporation for Approval of a Change of Control, Connecticut Department of Public Utility Control Docket No. 98-02-20, on behalf of the Connecticut Office of Consumer Counsel, filed May 7, 1998 and June 12, 1998, cross-examined June 15-16, 1998.

Fourth Annual Price Cap Filing of Bell Atlantic-Massachusetts, Massachusetts Department of Telecommunications and Energy Docket DTE 98-67, on behalf of MCI Telecommunications Corporation, filed September 11, 1998 and September 25, 1998, cross-examined October 22, 1998.

Applications of Ameritech Corp., Transferor, and SBC Communications, Inc., Transferee, For Consent to Transfer Control, Federal Communications Commission CC Docket No. 98-141, co-sponsored affidavit on behalf of Indiana Utility Consumer Counselor, Michigan Attorney General, Missouri Public Counsel, Ohio Consumers' Counsel, Texas Public Utility Counsel and Utility Reform Network, filed on October 13, 1998.

In the Matter of the Joint Application of SBC Communications Inc., SBC Delaware, Inc., Ameritech Corporation and Ameritech Ohio for Consent and Approval of a Change of Control, Public Utilities Commission of Ohio Case No.98-1082-TP-AMT, on behalf of Ohio Consumers' Counsel, filed on December 10, 1998, cross-examined on January 22, 1999.

GTE Corporation, Transferor, and Bell Atlantic Corporation, Transferee, For Consent to Transfer

Control, Federal Communications Commission CC Docket No. 98-184, co-sponsored an affidavit on behalf of a coalition of consumer advocates from Delaware, Hawaii, Maine, Maryland, Missouri, Ohio, Oregon, West Virginia, and Michigan, filed on December 18, 1998.

In the Matter of the Joint Application of GTE and Bell Atlantic to Transfer Control of GTE's California Utility Subsidiaries to Bell Atlantic, Which Will Occur Indirectly as a Result of GTE's Merger with Bell Atlantic, California Public Utilities Commission A. 98-12-005, on behalf of the California Office of Ratepayer Advocate, filed on June 7, 1999.

In the Matter of the Investigation on the Commission's Own Motion Into All Matters Relating to the Merger of Ameritech Corporation and SBC Communications Inc., Indiana Utility Regulatory Commission Cause No. 41255, on behalf of the Indiana Office of Utility Consumer Counselor, filed on June 22, 1999 and July 12, 1999, cross-examined July 20, 1999.

In re Application of Bell Atlantic Corporation and GTE Corporation for Approval of the GTE Corporation - Bell Atlantic Corporation Merger, Washington Utilities and Transportation Commission UT-981367, on behalf of the Washington Attorney General Public Counsel Section, filed on August 2, 1999.

Application of New York Telephone Company for Alternative Rate Regulation, Connecticut Department of Public Utility Control Docket No. 99-03-06, on behalf of the Connecticut Office of Consumer Counsel, filed October 22, 1999.

In re: Area Code 515 Relief Plan, Iowa Utilities Board Docket No. SPU-99-22, on behalf of Iowa Office of Consumer Advocate, filed November 8, 1999, and December 3, 1999, cross-examined December 14, 1999.

In re Application of MCI WorldCom, Inc. and Central Telephone Company - Nevada, d/b/a Sprint of Nevada, and other Sprint entities for Approval of Transfer of Control pursuant to NRS 704.329, Nevada Public Utilities Commission Application No. 99-12029, on behalf of the Nevada Office of the Attorney General, Bureau of Consumer Protection, filed April 20, 2000.

In re: Area Code 319 Relief Plan, Iowa Utilities Board Docket No. SPU-99-30, on behalf of Iowa Office of Consumer Advocate, filed June 26, 2000 and July 24, 2000.

In re: Sprint Communications Company, L.P. & Level 3 Communications, L.L.C., Iowa Utilities Board Docket Nos. SPU-02-11 & SPU-02-13, on behalf of Iowa Office of Consumer Advocate, filed October 14, 2002 and January 6, 2003, cross-examined February 5, 2003.

Illinois Bell Telephone Company filing to increase unbundled loop and nonrecurring rates (tariffs filed December 24, 2002), Illinois Commerce Commission Docket No. 02-0864, on behalf of Citizens Utility Board, filed May 6, 2003 and February 20, 2004.

Qwest Petition for Competitive Classification of Business Services, Washington Utilities and Transportation Commission Docket No. 030614, on behalf of Public Counsel, filed August 13, 2003 and August 29, 2003, cross-examined September 18, 2003.

In the Matter of the Application of CenturyTel of Northwest Arkansas, LLC for Approval of a General Change in Rates and Tariffs, Arkansas Public Service Commission Docket No. 03-041-U, on behalf of the Attorney General, filed October 9, 2003 and November 20, 2003.

In the Matter of the Board's Review of Unbundled Network Elements, Rates, Terms and Conditions of Bell Atlantic New Jersey, Inc., New Jersey Board of Public Utilities Docket No. TO00060356, on behalf of the New Jersey Division of the Ratepayer Advocate, filed January 23, 2004.

In the Matter of the Implementation of the Federal Communications Commission's Triennial Review Order, New Jersey Board of Public Utilities Docket No. TO03090705, on behalf of the New Jersey Division of the Ratepayer Advocate, filed February 2, 2004.

Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Local Exchange Carriers, Federal Communications Commission WC Docket No. 04-313, CC Docket No. 01-338, sponsored affidavit on behalf of the New Jersey Division of the Ratepayer Advocate, filed October 4, 2004.

Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Local Exchange Carriers, Federal Communications Commission WC Docket No. 04-313, CC Docket No. 01-338, sponsored affidavit on behalf of the Utah Committee of Consumer Services, filed October 4, 2004.

In the Matter of Verizon New Jersey, Inc. For a Revision of Tariff B.P.U.-N.J. – No. 2 Providing for a Revenue Neutral Rate Restructure Including a Restructure of Residence and Business Basic Exchange Service and Elimination of \$.65 Credit, New Jersey Board of Public Utilities Docket No. TT04060442, on behalf of the New Jersey Division of the Ratepayer Advocate, filed December 22, 2004 and January 18, 2005.

In the Matter of the Application of Verizon New Jersey, Inc. for Approval (I) of a New Plan for an Alternative Form of Regulation and (II) to Reclassify Multi-Line Rate Regulated Business Services as Competitive Services, and Compliance Filing, New Jersey Board of Public Utilities Docket No. TO01020095, on behalf of the New Jersey Division of the Ratepayer Advocate, filed January 10, 2005 and February 4, 2005.

Joint Petition of SBC Communications Inc. and AT&T Corp., Together with its Certificated Subsidiaries for Approval of Merger, New Jersey Board of Public Utilities Docket No. TM05020168, on behalf of the New Jersey Division of the Ratepayer Advocate, filed May 4, 2005 and June 1, 2005.

In the Matter of Verizon Communications Inc. and MCI, Inc., Applications for Approval of Transfer of Control, Federal Communications Commission WC Docket No. 05-75, co-sponsored affidavit on behalf of the New Jersey Division of the Ratepayer Advocate, filed on May 9, 2005.

In the Matter of the Application of Southwestern Bell Telephone, L.P., d/b/a SBC Arkansas to Set Rates for Unbundled Network Elements, Arkansas Public Service Commission Docket No. 04-109-U, on behalf of the Attorney General, filed May 27, 2005.

Joint Petition of Verizon Communications Inc. and MCI, Inc. for Approval of Merger, New Jersey Board of Public Utilities Docket No. TM05030189, on behalf of the New Jersey Division of the Ratepayer Advocate, filed July 8, 2005 and August 19, 2005.

In the Matter of Joint Petition of United Telephone Company of New Jersey, Inc. d/b/a Sprint and LTD Holding Company for Approval Pursuant to *N.J.S.A. 48:2-51* and *N.J.S.A. 48:3-10* of a change in Ownership and Control, New Jersey Board of Public Utilities Docket No. TM05080739, on behalf of the New Jersey Division of the Ratepayer Advocate, filed November 29, 2005.

In the Matter of the Board's Review of the Classification of Verizon New Jersey's Directory Assistance Services ("DAS") as Competitive and Associated Service Quality, Docket No. TX06010057, In the Matter of the Filing by Verizon New Jersey Inc. for the Reclassification of Existing Rate Regulated Services – Directory Assistance Services as Competitive, New Jersey Board of Public Utilities, Docket No. TT97120889, on behalf of the New Jersey Division of the Ratepayer Advocate, filed May 12, 2006.

In the Matter of AT&T Inc. and BellSouth Corporation Applications for Approval of Transfer of Control, Federal Communications Commission WC Docket No. 06-74, sponsored declaration with Sarah M.

Bosley on behalf of the New Jersey Division of the Ratepayer Advocate, filed June 5, 2006; sponsored declaration with Sarah M. Bosley and Timothy E. Howington on behalf of the New Jersey Division of Rate Counsel, October 3, 2006.

In the Matter of Jurisdictional Separations and Referral to the Federal-State Joint Board, CC Docket No. 80-286, sponsored affidavit on behalf of the National Association of State Utility Consumer Advocates and the New Jersey Division of Rate Counsel, filed August 22, 2006.

In the Matter of the Board Investigation Regarding the Reclassification of Competitive Local Exchange Carrier (CLEC) Services as Competitive, New Jersey Board of Public Utilities Docket No. TX06120841, on behalf of the New Jersey Division of Rate Counsel, filed January 7, 2007, January 30, 2007, and February 20, 2007.

Verizon New England Inc., Bell Atlantic Communications, Inc., NYNEX Long Distance Company, Verizon Select Services Inc. and FairPoint Communications, Inc. Joint Petition for Authority to Transfer Assets and Franchise to FairPoint Communications, Inc., New Hampshire Public Utilities Commission Docket No. DT-07-011, on behalf of the Office of Consumer Advocate, filed August 1, 2007, cross-examined November 1, 2007.

In the Matter of the Commission's Investigation into Verizon Maryland, Inc.'s Affiliate Relationships, Maryland Public Service Commission Case No. 9120, on behalf of the Office of People's Counsel, filed October 29, 2007 and November 19, 2007, cross-examined November 28, 2007.

In the Matter of the Board Investigation Regarding the Reclassification of Incumbent Local Exchange Carrier (ILEC) Services as Competitive, New Jersey Board of Public Utilities Docket No. TX07110873, on behalf of the New Jersey Division of Rate Counsel, filed December 14, 2007, January 10, 2008.

In the Matter of Verizon Washington, DC Inc.'s Price Cap Plan 2007 for the Provision of Local Telecommunications Services in the District of Columbia, Public Service Commission of the District of Columbia Formal Case No. 1057, on behalf of the District of Columbia Office of People's Counsel, filed December 20, 2007, January 31, 2008.

In re Possible Extension of Board Jurisdiction over Single Line Flat-Rated Residential and Business Rates for Local Exchange Carriers, Iowa Utilities Board Docket No. INU-08-1, on behalf of Iowa Office of Consumer Advocate, filed March 17, 2008, April 28, 2008, cross-examined May 22, 2008.

Petition of the Office of Consumer Counsel for Enforcement of Quality of Service Standards for the Southern New England Telephone Company d/b/a AT&T Connecticut, Connecticut Department of Public Utility Control Docket No. 08-07-15, on behalf of the Communications Workers of America, Local 1298, filed January 30, 2009, cross-examined February 25, 2009.

In the Matter of the Board's Investigation and Review of Local Exchange Carrier Intrastate Exchange Access Rates, New Jersey Board of Public Utilities Docket No. TX08090830, on behalf of the New Jersey Division of Rate Counsel, filed February 13, 2009, April 20, 2009, and June 22, 2009, cross-examined October 20, 2009.

In the Matter of Appropriate Forms Of Regulating Telephone Companies, Maryland Public Service Commission, Case No. 9133, on behalf of the Communications Workers of America, filed June 1, 2009, October 16, 2009, October 30, 2009, cross-examined November 4, 2009.

Petition of the Office of Consumer Counsel for Enforcement of Quality of Service Standards for the Southern New England Telephone Company d/b/a AT&T Connecticut, Connecticut Department of Public Utility Control Docket No. 08-07-15PH02, on behalf of the Communications Workers of America, Local 1298, filed September 21, 2009.

In the Matter of the Application of Frontier Communications Corporation, New Communications Holdings, Inc. and Verizon Communications Inc. for Consent and Approval of a Change in Control, Public Utilities Commission of Ohio Case No. 09-454-TP-ACO, on behalf of the Communications Workers of America and International Brotherhood of Electrical Workers, Local 986, filed October 14, 2009.

Frontier Communications Corporation, Verizon Communications, Inc., Verizon North Inc., Verizon South Inc., New Communications of the Carolinas, Inc. Joint Application for the approval of a Reorganization, Illinois Commerce Commission Docket No. 09-0268, on behalf of the International Brotherhood of Electrical Workers, Locals 21, 51, and 702, filed October 20, 2009.

In re Verizon Service Quality in Western Massachusetts, Massachusetts Department of Telecommunications and Cable D.T.C. 09-1, on behalf of the Office of the Attorney General, filed November 9, 2009, February 24, 2010, cross-examined March 31, 2010, April 1, 2010, May 21, 2010.

Joint Application of Frontier Communications Corporation and Verizon West Virginia Inc. and certain affiliates for approval of the transfer of Verizon's local exchange and long distance business in West Virginia to companies to be owned and controlled by Frontier Communications Corporation, Public Service Commission of West Virginia Case No. 09-0871-T-PC, on behalf of the Communications Workers of America, AFL-CIO, filed November 16, 2009.

In the Matter of Qwest Communications Company and CenturyTel, Inc. for Approval of Control of Qwest Communications Company LLC, New Jersey Board of Public Utilities Docket No. TM10050343, on behalf of the New Jersey Division of Rate Counsel, filed September 23, 2010.

Petition of the North American Numbering Plan Administrator on behalf of the Pennsylvania Telecommunications Industry for Approval of Numbering Plan Area Relief Planning for the 814 NPA, Pennsylvania Public Utility Commission Docket No. P-2009-2112925, on behalf of the Pennsylvania Office of Consumer Advocate, filed May 23, 2011, cross-examined May 24, 2011.

In re Applications of AT&T, Inc. and Deutsche Telekom AG for Consent to the Transfer of Control of the Licenses and Authorizations Held by T-Mobile USA, Inc. and its Subsidiaries to AT&T Inc., WT Docket No. 11-65, File Nos. 0004669383, *et al.*, sponsored declarations on behalf of the New Jersey Division of Rate Counsel, May 31, 2011, and June 20, 2011.

In the Matter of Application of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC For Consent To Assign Licenses and Application of Cellco Partnership d/b/a Verizon Wireless and Cox TMI Wireless, LLC For Consent To Assign Licenses, WT Docket No. 12-4, sponsored declarations on behalf of the New Jersey Division of Rate Counsel, filed February 17, 2012, and March 26, 2012.

In the Matter of the Board's Investigation Regarding the Reclassification of Incumbent Local Exchange Carrier (ILEC) Services as Competitive – Phase II, New Jersey Board of Public Utilities Docket No. TX11090570, on behalf of the New Jersey Division of Rate Counsel, filed February 24, 2012, April 27, 2012, and June 11, 2012, cross-examined July 17, 2012.

Petition of David K. Ebersole, Jr. and the Office of Consumer Advocate for a Declaratory Order that Verizon Pennsylvania Inc. Has Not Met Its Legal Obligation to the Greensburg Bona Fide Retail Request Group Pursuant to Its Chapter 30 Plan, Pennsylvania Public Utility Commission Docket No. P-2012-2323362, affidavit on behalf of the Pennsylvania Office of Consumer Advocate, September 6, 2012.

In the Matter of Commission Consideration Of Effective Competition Areas and the Classification of Basic Local Exchange Service, Colorado Public Utilities Commission Proceeding Number 13M-0422T, Pursuant to 4 CCR 723-2-2213, answer testimony on behalf of AARP, December 6, 2013, cross-examined January 7, 2014.

PURA Establishment of Rules for Electric Suppliers and EDCs Concerning Operations and Marketing in the Electric Retail Market, Connecticut Public Utilities Regulatory Authority Docket No. 13-07-18, testimony and supplemental testimony on behalf of the Connecticut Office of Consumer Counsel, initial and supplemental testimony (with Helen E. Golding), March 10, 2014 and March 17, 2014, cross-examined March 27, 2014.

Joint Application of Frontier Communications Corporation and AT&T Inc. for Approval of a Change in Control, Connecticut Public Utilities Regulatory Authority Docket No. 14-01-46, testimony on behalf of the Connecticut Office of Consumer Counsel, May 23, 2014, cross-examined June 30, 2014.

The Utility Reform Network, Complainant vs. Pacific Bell Telephone Company D/B/A AT&T California (U1001C); AT&T Communications of California, Inc. (U5002C), Defendants, California Public Utilities Commission Case No. 13-12-005, Complaint of the Utility Reform Network Regarding Basic Service Rates of AT&T California (Public Utilities Code Section 1702; Commission Rule of Practice and Procedure 4.1(b)), December 6, 2013, initial and rebuttal testimony on behalf of the Utility Reform Network (TURN), August 22, 2014 and October 3, 2014.

Joint Petition of Verizon Pennsylvania LLC and Verizon North LLC for Competitive Classification of all Retail Services in Certain Geographic Areas, and for a Waiver of Regulation for Competitive Services, Pennsylvania PUC Docket Nos. P-2014-2446303 and P-2014-2446304, direct and surrebuttal testimony on behalf of Communications Workers of America and the International Brotherhood of Electrical Workers, November 14, 2014, and December 12, 2014, cross-examined December 16, 2014.

Joint Application of Comcast Corporation, Time Warner Cable Inc., Time Warner Cable Information Services (California), LLC, and Bright House Networks Information Services (California), LLC for Expedited Approval of Indirect Transfer of Control of Time Warner Cable Information Services (California), LLC, (U-68740-C); and The Pro Forma Transfer of Control of Bright House Networks Information Services (California), LLC (U-6955-C) to Comcast Corporation, Pursuant to Public Utilities Code Section 854(A), Application No. 14-04-013 (filed April 11, 2014), initial and reply testimony on behalf of the Utility Reform Network (TURN), December 3, 2014 and December 10, 2014.

In the Matter of the Joint Application of Frontier Communications Corporation, Frontier Communications of America, Inc. (U 5429 C), Verizon California Inc. (U 1002 C), Verizon Long Distance, LLC (U 5732), and Newco West Holdings LLC for Approval of Transfer of Control Over Verizon California Inc. and Related Approval of Transfer of Assets and Certifications (Filed March 18, 2015), Application 15-03-005, reply and supplemental testimony on behalf of the Utility Reform Network (TURN), July 28, 2015 and September 11, 2015.

Order Instituting Investigation to Assess the State of Competition Among Telecommunications Providers in California, and to Consider and Resolve Limited Rehearing of Decision (D.) 08-09-042, California Public Utilities Commission Investigation 15-11-007 (November 5, 2015), testimony on behalf of the Utility Reform Network (TURN), March 15, 2016, June 1, 2016 and July 15, 2016; participated in Expert Panel, July 20, 2016.

Pennsylvania Public Utility Commission Docket No. P-2015-2509336, Petition of Communications Workers of America for a Public, On-the-Record Commission Investigation of the Safety, Adequacy, and Reasonableness of Service Provided by Verizon Pennsylvania, LLC, direct testimony on behalf of Communications Workers of America, September 29, 2016.

Petition of the Maryland Office of People's Counsel for an Investigation into Verizon Maryland's Provision of Basic Local Phone Service Over Copper or Fiber Networks, affidavit on behalf of the Maryland Office of People's Counsel, January 13, 2017.

Iowa Utilities Board Docket No. INU-2016-0001, In re: Deregulation of Local Exchange Service, testimony on behalf of Office of Consumer Advocate, February 17, 2017 and April 21, 2017, cross-examined May 23, 2017.

New York Public Service Commission Case 16-C-0122, Proceeding on Motion of the Commission to Consider the Adequacy of Verizon New York Inc.'s Retail Service Quality Processes and Programs, testimony on behalf of the Communications Workers of America, March 24, 2017.

In the Matter of Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84, Notice of Proposed Rulemaking, Notice of Inquiry, and Request for Comment, FCC Rcd 3266, (rel. Apr. 21, 2017), declaration on behalf of the National Association of State Utility Consumer Advocates, Maine Office of the Public Advocate, Maryland Office of People's Counsel ("OPC"), New Jersey Division of Rate Counsel, Office of the Ohio Consumers' Counsel, Pennsylvania Office of Consumer Advocate and The Utility Reform Network, June 15, 2017.

New Jersey Board of Public Utilities Docket No. ER 17030308, In the Matter of the Petition of Atlantic City Electric Company for Approval of Amendments to its Tariff to Provide For an Increase in Rates and Charges for Electric Service Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1, and for Other Appropriate Relief (2017), testimony on behalf of New Jersey Division of Rate Counsel, August 1, 2017.

Wyoming Public Service Commission Docket No. 700000-1644-TA-17, In the Matter of the Application of Qwest Corporation d/b/a CenturyLink QC for Determination that Basic Residential and Business Services Are Competitive Throughout All of CenturyLink QC's Zone 2 and Zone 3 Service Areas, testimony on behalf of AARP, November 15, 2017, cross-examined December 11, 2018.

Washington Utilities & Transportation Commission Docket UT-171082, CenturyLink's Obligations Under the Commission's Line Extension Rules, testimony on behalf of Public Counsel, June 1, 2018 and July 3, 2018.

New Jersey Board of Public Utilities Docket Nos. ER18010029 and GR18010030, In the Matter of the Petition of Public Service Electric and Gas Company for Approval of an Increase in Electric and Gas Rates and for Changes in the Tariffs for Electric and Gas Service, B.P.U.N.J. No. 16 Electric and B.P.U.N.J. No. 16 Gas, and for Changes in Depreciation Rates Pursuant to N.J.S.A. 48:2-18, N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and for Other Appropriate Relief, testimony on behalf of New Jersey Division of Rate Counsel, August 6, 2018.

Washington Utilities & Transportation Commission, Docket UT-180831, Rulemaking to Consider Possible Changes to Rules in Chapter 480-120 WAC, Relating to Service Obligations of Telephone Companies, assisted with the preparation of Comments of Public Counsel, December 7, 2018, participated in technical conference on behalf of Public Counsel, January 17, 2019.

In the Matter of the Petition of the Maryland Office of People's Counsel for an Investigation into Verizon Maryland's Provision of Basic Local Phone Service Over Copper or Fiber Networks - ML#210061, Report on behalf of Maryland Office of People's Counsel, February 8, 2019.

Connecticut Public Utilities Regulatory Authority Docket No. 18-06-02, Review of Feasibility, Costs, and Benefits of Placing Certain Customers on Standard Service Pursuant to Conn. Gen. Stat. § 16-245o(m), testimony on behalf of Connecticut Office of Consumer Counsel, February 27, 2019, cross-examined July 18, 2019.

New Mexico Public Regulation Commission Case No. 18-00295-UT, In the Matter of the Petition of CenturyLink CQ Regarding Effective Competition for Retail Residential Services, testimony on behalf of CWA, April 15, 2019, cross-examined September 25-26, 2019.

New Jersey Board of Public Utilities Docket No. ER19050552, In the Matter of the Verified Petition of Rockland Electric Company for Approval of Changes in Electric Rates, Its Tariff for Electric Service, and Its Depreciation Rates, and for Other Relief, testimony on behalf of New Jersey Division of Rate Counsel, October 11, 2019.

Washington Utilities and Transportation Commission Dockets UE-190529 and UG-190530 (Consolidated), Washington Utilities and Transportation Commission v. Puget Sound Energy, response testimony on behalf of Public Counsel, November 22, 2019.

Washington Utilities and Transportation Commission Docket No. UT-190209, Washington Utilities and Transportation Commission v. Qwest Corporation d/b/a CenturyLink QC, testimony on behalf of Public Counsel, January 9, 2020 and February 13, 2020.

Maryland Public Service Commission Case No. 9613, In the Matter of the Complaint by the Staff of the Public Service Commission v. SmartEnergy Holdings LLC, testimony on behalf of Maryland Office of People's Counsel, January 31, 2020 and July 8, 2020.

Maryland Public Service Commission Case No. 9615, In the Matter of the Complaint by the Staff of the Public Service Commission v. U.S. Gas & Electric Services Providers, Inc., d/b/a Maryland Gas & Electric, testimony on behalf of Maryland Office of People's Counsel, February 14, 2020, March 27, 2020, February 5, 2021, and March 19, 2021.

Maryland Public Service Commission Case No. 9614, In the Matter of the Complaint by the Staff of the Public Service Commission v. Direct Energy Services, LLC testimony on behalf of Maryland Office of People's Counsel, March 6, 2020, February 12, 2021, March 19, 2021, and May 5, 2021.

Maryland Public Service Commission Case No. 9624, In the Matter of the Complaint by the Staff of the Public Service Commission Atlantic Energy MD, LLC, testimony on behalf of Maryland Office of People's Counsel, October 15, 2020, February 22, 2021, and March 17, 2021.

Testimony before State Legislatures:

Testified on September 24, 1997, before the Massachusetts State Legislature Joint Committee on Government Regulations regarding House Bill 4937 (concerning area codes).

Testified on March 2, 2010, before the Maryland State Legislature Senate Finance Committee regarding Senate Bill 677 (concerning Telephone Landline Sale Bill).

Testified on March 11, 2010, before the Maryland State Legislature House Economic Matters Committee regarding House Bill 937 (concerning Telephone Landline Sale Bill).

Testified on June 25, 2013, on behalf of AARP, before the Ohio Select Committee on Telecommunications Regulatory Reform (regarding SB 162).

Testified on December 12, 2013, on behalf of AARP, before the Pennsylvania House Consumer Affairs Committee (regarding House Bill 1608).

Reports/Publications/Presentations

Expert reports in tax matters, reports and publications on telecommunications and energy policy

in trade journals, and presentations at industry associations and conferences include the following:

Expert reports in tax matters:

Iowa Department of Inspections and Appeals, In the Matter of Cable One, Inc. v. Iowa Department of Revenue, DIA 10DORFC014, SBTR Nos. 899 and 903, Property Tax Assessment, Expert Report, January 21, 2011 (on behalf of the Iowa Department of Revenue), deposed February 9, 2011.

Level 3 Communications, LLC. v. Arizona Department of Revenue; Coshise County; Graham County; Greenlee County; La Paz County; Maricopa County; Mohave County; Pima County, Pinal County and Yuma County, Superior Court of the State of Arizona in the Arizona Tax Court, No. TX-2007-000594, Expert Report, May 20, 2011 (on behalf of the Arizona Department of Revenue), deposed July 14, 2011; cross-examined August 24, 2012.

Bresnan Communications, LLC, Plaintiff, v. State of Montana Department of Revenue, Defendant, Cause No. DV-10-1312, July 5, 2011 (on behalf of the Montana Department of Revenue), deposed July 29, 2011.

Verizon California Inc., Plaintiff, v. California Board of Equalization, Defendants, December 18, 2015 (on behalf of the California Board of Equalization), deposed January 20, 2016.

Reports and Publications:

“Are Consumers Benefiting from Competition? An Analysis of the Individual Residential Electric Supply Market in Massachusetts: 2021 Update,” prepared for Massachusetts Attorney General’s Office, March 2021.

“Are Consumers Benefiting from Competition? An Analysis of the Individual Residential Electric Supply Market in Massachusetts,” prepared for Massachusetts Attorney General’s Office, July 2019 Update.

“Residential energy supply market: Unmet promises and needed reforms” (with Frank A. Felder), *The Electricity Journal*, 32 (2019) 31–38.

“Maryland’s Residential Electric and Gas Supply Markets: Where Do We Go from Here?” (with Sarah M. Bosley), prepared for the Maryland Office of People’s Counsel, November 2018.

“Are Consumers Benefiting from Competition? An Analysis of the Individual Residential Electric Supply Market in Massachusetts” (with Sarah M. Bosley), prepared for the Massachusetts Attorney General’s Office, March 29, 2018.

“The Cable-Telco Duopoly’s Deployment of New Jersey’s Information Infrastructure: Establishing Accountability” (with Sarah M. Bosley and Timothy E. Howington). Prepared for the Public Advocate of New Jersey, January 19, 2007.

“Assessing SBC/Pacific’s Progress in Eliminating Barriers to Entry: The Local Market in California Is Not Yet ‘Fully and Irreversibly Open’” (with Patricia D. Kravtin, Dr. Lee L. Selwyn, and Douglas S. Williams). Prepared for the California Association of Competitive Telecommunications Companies, July 2000.

“Where Have All the Numbers Gone? (Second Edition): Rescuing the North American Numbering Plan from Mismanagement and Premature Exhaust” (with Dr. Lee L. Selwyn). Prepared for the Ad Hoc Telecommunications Users Committee, June 2000.

“Price Cap Plan for USWC: Establishing Appropriate Price and Service Quality Incentives for Utah” (with Patricia D. Kravtin and Scott C. Lundquist). Prepared for the Utah Division of Public Utilities, March 22, 2000.

“Telephone Numbering: Establishing a Policy for the District of Columbia to Promote Economic Development” (with Douglas S. Williams and Sarah C. Bosley). Prepared for the District of Columbia Office of People’s Counsel, February 2000 (submitted to Eric W. Price, Deputy Mayor, April 6, 2000).

“The Use of Cost Proxy Models to Make Implicit Support Explicit, Assessing the BCPM and the Hatfield Model 3.1” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, March 1997.

“The Use of Forward-Looking Economic Cost Proxy Models” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC Docket No. CCB/CPB 97-2, February 1997.

“Continuing Evaluation of Cost Proxy Models for Sizing the Universal Service Fund, Analysis of the Similarities and Differences between the Hatfield Model and the BCM2” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, October 1996.

“Converging on a Cost Proxy Model for Primary Line Basic Residential Service, A Blueprint for Designing a Competitively Neutral Universal Service Fund” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, August 1996.

“The Phone Wars and How to Win Them” (with Helen E. Golding). *Planning*, July 1996 (Volume 62, Number 7).

“The BCM Debate, A Further Discussion” (with Dr. Lee L. Selwyn and Helen E. Golding). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, May 1996.

“The Cost of Universal Service, A Critical Assessment of the Benchmark Cost Model” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, April 1996.

“Funding Universal Service: Maximizing Penetration and Efficiency in a Competitive Local Service Environment” (with Dr. Lee L. Selwyn). Prepared for Time Warner Communications, Inc., October 1995.

“A Balanced Telecommunications Infrastructure Plan for New York State” (with Dr. Lee L. Selwyn). Prepared for the New York User Parties, December 4, 1992.

“A Roadmap to the Information Age: Defining a Rational Telecommunications Plan for Connecticut” (with Dr. Lee L. Selwyn, Susan M. Gately, JoAnn S. Hanson, David N. Townsend, and Scott C. Lundquist). Prepared for the Connecticut Office of Consumer Counsel, October 30, 1992.

“ISDN Rate-Setting in Massachusetts.” *Business Communications Review*, June 1992 (Volume 22, No. 6).

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“Competitive Pricing Analysis of Interstate Private Line Services.” Prepared for the National Telecommunications Network, June 1986.

“Analysis of Diamond State Telephone Private Line Pricing Movements: 1980-1990.” Prepared for Network Strategies, Inc., April 1985.

“Analysis of New York Telephone Private Line Pricing Movements: 1980-1990.” Prepared for Network Strategies, Inc., February 1985.

“Auction Methods for the Strategic Petroleum Reserve” (With Steven Kelman and Richard Innes). Prepared for Harvard University Energy Security Program, July 1983.

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“Evaluation of Economic Development and Energy Program in Lawrence, Massachusetts.” (with Richard Innes). Prepared for U.S. Department of Energy, August, 1982.

“Energy Efficiency in New England’s Rental Housing.” New England Regional Commission, 1981.

“Low Level Radioactive Waste Management in New England.” New England Regional Commission, 1981.

“The Realtor's Guide to Residential Energy Efficiency.” Prepared for the U.S. Department of Energy and the National Association of Realtors, 1980.

Presentations:

“Telecom Committee Panel: Like the Phoenix, Telecommunication Service Quality Issues are Rising Again,” National Association of State Utility Consumer Advocates Annual Meeting, San Antonio, Texas, November 19, 2019.

“Retail Supplier Abuses and High Prices for Consumers: Does Retail Choice Still Make Sense?” 2019 National Association of State Utility Consumer Advocates Mid-Year Meeting, Portland, Oregon, June 21, 2019.

“The Battle for Net Neutrality,” lecture in “Methods of Policy Analysis,” MIT Department of Urban Studies & Planning, May 7, 2018.

“Discussion of Massachusetts Report,” Presentation to Nevada Governor’s Committee on Energy Choice, Technical Working Group on Consumer Protection, April 20, 2018.

“Back to Basics: What Specific Consumer Protections Are Still Needed in Telecommunications Regulation?,” Presentation at the Mid-Atlantic Conference of Regulatory Utilities Commissioners 21st Annual Education Conference, Williamsburg, Virginia, June 23, 2016.

“The Three Rs: The Need for Reliable, Redundant and Resilient Telecommunications in the New Age,” 2015 National Association of State Utility Consumer Advocates Annual Meeting, Austin, Texas, November 9, 2015.

“Telecommunications in Transition: Advocating for 50+ Consumers in the Brave New World,”

Presentation at AARP’s State Advocacy and Strategy Integration conference on “State Regulatory and Legislative Landscapes,” Portland, Oregon, September 16, 2014.

“What the IP Transition Means for Consumers and a Ubiquitous, Affordable, Reliable National Communications System,” 2014 National Association of State Utility Consumer Advocates Mid-Year Meeting, Santa Fe, New Mexico, June 2, 2014.

“For Sale - The National Wireline Communications System,” 2014 National Association of State Utility Consumer Advocates Mid-Year Meeting, Santa Fe, New Mexico, June 3, 2014.

“FCC Review of Verizon’s Section 214 Application and Its Implications for the IP Transition,” NASUCA Annual Meeting, Orlando, Florida, November 19, 2013.

“What gets lost in the IP Transition?” NASUCA Annual Meeting, Orlando, Florida, November 18, 2013.

“Service Outage and Restoration,” NARUC Staff panel, NARUC 125th Annual Meeting, Orlando, Florida, November 16, 2013.

“You Don’t Know What You’ve Got Til It’s Gone – Utilities Consumer Protections,” Presentation at AARP’s State Advocacy and Strategy Integration conference on “Fighting for Consumers,” Minneapolis, Minnesota, September 19, 2013.

“Protecting Consumers’ Assets and Income,” Presentation at the National Association of Latino Elected and Appointed Officials Policy Institute on “The Changing Dynamics of the Latino 50+ Population,” Albuquerque, New Mexico, August 25, 2013.

“Federalism in the 21st Century,” Presentation at the Mid-Atlantic Conference of Regulatory Utilities Commissioners 18th Annual Education Conference, Hershey, Pennsylvania, June 24, 2013.

“Trials for the Transition from TDM to IP,” Presentation at the New England Conference of Public Utilities Commissioners 66th Annual Symposium, Groton, Connecticut, June 11, 2013.

“The 1996 Telecom Act Today: Universal, affordable, reliable access to telecommunications for all. Does the federal-state partnership still exist?” AARP Telecommunications Summit, Pew Center for Charitable Trusts, Washington, DC, July 18, 2012.

“Issues and Ramifications Arising From the FCC’s Connect America Fund Order Affecting High Cost Universal Service and Intercarrier Compensation,” 2012 National Association of State Utility Consumer Advocates Mid-Year Meeting, Charleston, South Carolina, June 24, 2012.

“FCC Lifeline/Link Up Reform Order – What will it mean for regulators, consumers, and companies?” Presentation at the Mid-America Regulatory Conference, Des Moines, Iowa, June 11, 2012.

“Improving the Separations Process: Consumer Impact,” panelist for Federal-State Joint Board on Separations on behalf of the National Association of State Utility Consumer Advocates and the New Jersey Division of Rate Counsel, September 24, 2010, CC Docket No. 80-286, Washington, DC.

“The Evolving Role of State Regulation in a Changing Industry,” Presentation at the New England Conference of Public Utilities Commissioners 63th Annual Symposium, Brewster, Massachusetts, May 17, 2010.

“Broadband: Where it is, where it ain’t, and where it oughta be,” June 29, 2009, National Association of State Utility Consumer Advocates Mid-Year Meeting, Boston, Massachusetts.

“Deregulation and Price Increases: The Hallmarks of a Competitive Market?” November 18, 2008; 2008 National Association of State Utility Consumer Advocates Annual Meeting, New Orleans, Louisiana.

“Forbearance: What is it? What’s wrong with it? How to fix it,” November 12, 2007; “Net Neutrality – Not Dead Yet!,” November 13, 2007; 2007 National Association of State Utility Consumer Advocates Annual Meeting, Anaheim, California.

“FCC’s Regulatory Stance – Consumer Advocates’ Role More Important Than Ever,” 2005 National Association of State Utility Consumer Advocates Winter Meeting, March 2, 2005, Washington, D.C.

“Impact of Federal Regulatory Developments on Consumers and Consumers’ Impact on Regulatory Developments,” Presentation for the Washington Attorney General’s Office, Seattle, Washington, May 27, 2003.

“The Finances of Local Competition” Presentation at the New England Conference of Public Utilities Commissioners 54th Annual Symposium, Mystic, Connecticut, May 21, 2001.

“Facilities-Based Competition” Presentation at the New England Conference of Public Utilities Commissioners 52nd Annual Symposium, Bretton Woods, New Hampshire, May 24, 1999.

“Exploring Solutions for Number Exhaust on the State Level” and “A Forum for Clarification and Dialogue on Numbering Ideas,” ICM Conference on Number Resource Optimization, New Orleans, Louisiana, December 10-11, 1998.

“Telecommunications Mergers: Impact on Consumers,” AARP Legislative Council 1998 Roundtable Meeting, Washington, D.C., November 18, 1998.

“Consumer Perspectives on Incumbent Local Exchange Carrier Mergers,” National Association of Regulatory Utility Commissioners 110th Annual Convention, Orlando, Florida, November 11, 1998.

Federal Communications Commission En Banc Hearing on “Proposals to Revised the Methodology for Determining Universal Service Support,” CC Docket Nos. 96-45 and 97-160,” June 8, 1998, panelist.

“Universal Service: Real World Applications,” 1997 National Association of State Utility Consumer Advocates Mid-Year Meeting, Charleston, South Carolina, June 9, 1997.

“Modeling operating and support expenses” and “Modeling capital expenses,” panelist for Federal-State Joint Board on Universal Service Staff Workshops on Proxy Cost Models, January 14-15, 1997, CC Docket 96-45.

“Evaluating the BCM2: An Assessment of Its Strengths and Weaknesses,” presentation to the AT&T Cost Team (with Michael J. DeWinter), December 4, 1996.

“Interpreting the Telecommunications Act of 1996 Mandate for the Deployment of Advanced Telecommunications Services in a Fiscally Responsible and Fully Informed Manner” (with Helen E. Golding), *Proceedings of the Tenth NARUC Biennial Regulatory Information Conference*, Volume 3, September 11-13, 1996.

“Making Adjustments to the BCM2.” Presentation to the Staff of the Federal-State Joint Board on Universal Service, September 16, 1996.

“Converging on a Model: An Examination of Updated Benchmark Cost Models and their Use in Support of Universal Service Funding.” Presentation to the National Association of Regulatory Utility Commissioners Summer Committee Meetings, July 22, 1996.

“ETI’s Corrections to and Sensitivity Analyses of the Benchmark Cost Model.” Presentation to the Staff of the Federal-State Joint Board on Universal Service,” May 30, 1996.

“Redefining Universal Service.” Presentation at the *Telecommunications Reports* conference on “Redefining Universal Service for a Future Competitive Environment,” Washington, D.C., January 18, 1996.

“Funding Universal Service: Maximizing Penetration and Efficiency in a Competitive Local Service Environment,” (with Lee L. Selwyn, under the direction of Donald Shephard), a Time Warner

Communications Policy White Paper, September 1995.

“Stranded Investment and the New Regulatory Bargain,” (with Lee L. Selwyn, under the direction of Donald Shephard), a Time Warner Communications Policy White Paper, September 1995.

“New Frontiers in Regulation.” Presentation to the New England Women Economists Association, December 12, 1995.

“Local Cable and Telco Markets.” Presentation at the New England Conference of Public Utilities Commissioners 46th Annual Symposium, Dixville Notch, New Hampshire, June 29, 1993.

“Relationship of Depreciation to State Infrastructure Modernization.” Presentation at the *Telecommunications Reports* conference on “Telecommunications Depreciation,” Washington, D.C., May 6, 1993.

“Crafting a Rational Path to the Information Age.” Presentation at the State of New Hampshire's conference on the “Twenty-First Century Telecommunications Infrastructure,” Durham, New Hampshire, April 1993.

“The Political Economics of ISDN,” presentation at the John F. Kennedy School of Government seminar on “Getting from Here to There: Building an Information Infrastructure in Massachusetts,” March 1993.

“The New Competitive Landscape: Collocation in Massachusetts.” Presentation at TeleStrategies Conference on Local Exchange Competition, Washington, D.C., November 1991.

“Telecommunications Policy Developments in Massachusetts.” Presentations to the Boston Area Telecommunications Association, October 1989; March 1990; November 1990; June 1992. Presentation to the New England Telecommunications Association, March 1990.

“How to Capitalize on the New Tariffs.” Presentation at Communications Managers Association conference, 1988.

Advisor to:

United States General Accounting Office Report to the Subcommittee on Antitrust, Business Rights and Competition, Committee on the Judiciary, U.S. Senate, *Characteristics and Competitiveness of the Internet Backbone Market*, GAO-02-16, October 2001.

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Susan M. Baldwin specializes in utility economics, regulation, and public policy, with a long-standing focus on telecommunications and with a more recent focus on consumer issues in electric and gas markets. Ms. Baldwin has been actively involved in public policy for forty-four years, which includes thirty-eight years in telecommunications policy and regulation, and thirteen years in energy policy and regulation. Since 2001, she has been consulting to public sector agencies, consumer advocates, and others as an independent consultant. Ms. Baldwin received her Master of Economics from Boston University, her Master of Public Policy from Harvard University's Kennedy School of Government, and her Bachelor of Arts degree in Mathematics and English from Wellesley College. Ms. Baldwin has extensive experience both in government and in the private sector.

Ms. Baldwin has testified before 24 public utility commissions in more than 75 state proceedings, including: the Arkansas Public Service Commission, California Public Utilities Commission, Colorado Public Utilities Commission, Connecticut Department of Public Utility Control, District of Columbia Public Service Commission, Idaho Public Utilities Commission, Illinois Commerce Commission, Indiana Utility Regulatory Commission, Iowa Utilities Board, Maryland Public Service Commission, Massachusetts Department of Telecommunications and Cable, Nevada Public Service Commission, New Hampshire Public Utilities Commission, New Jersey Board of Public Utilities, New Mexico Public Regulation Commission, New York Public Service Commission, Public Utilities Commission of Ohio, Pennsylvania Public Utility Commission, Rhode Island Public Utilities Commission, Tennessee Public Service Commission, Vermont Public Service Board, Washington Utilities and Transportation Commission, Public Service Commission of West Virginia and Wyoming Public Service Commission. Ms. Baldwin has also authored numerous comments and declarations submitted in various Federal Communications Commission proceedings.

Ms. Baldwin has also participated in projects in Delaware, Hawaii, Illinois, New York, South Dakota, and Canada on behalf of consumer advocates, public utility commissions, and competitive local exchange carriers. Ms. Baldwin has served in a direct advisory capacity to public utility commissions in the District of Columbia, Massachusetts, New Mexico, Utah and Vermont. Ms. Baldwin has also testified on behalf of public utility commission staff in Idaho and Rhode Island. Ms. Baldwin has testified before state legislative committees in Maryland, Massachusetts, Ohio, and Pennsylvania.

Ms. Baldwin has sponsored expert reports in state taxation proceedings. Also, in her capacity as an independent consultant, Ms. Baldwin has consulted to and testified on behalf of consumer advocates on diverse matters including the electric retail market, consumer protection and consumer services issues in telecommunications, electric, and gas proceedings, broadband deployment, numbering resources, unbundled network element (UNE) cost studies, incumbent

local exchange carriers' requests for competitive classification of services, mergers and spin-offs, rate cases, universal service, service quality, and state *Triennial Review Order* (TRO) proceedings.

Ms. Baldwin sponsored detailed testimony on behalf of the Connecticut Office of Consumer Counsel in 2019 and in 2014 regarding the third-party residential electric market. In her testimony, she summarized her detailed analysis of the prices that retail customers of suppliers pay and her review of consumer complaints regarding the retail electric market. In 2018, Ms. Baldwin co-authored an analysis of Maryland's residential electric and gas supply markets on behalf of the Maryland Office of People's Counsel. She also conducted an in-depth analysis of the retail residential electric market in Massachusetts for the Massachusetts Office of the Attorney General.

Ms. Baldwin has analyzed customer service issues in many electric and gas rate case proceedings on behalf of consumer advocate offices. Ms. Baldwin has worked with local, state, and federal officials on energy and environmental issues. As a policy analyst for the New England Regional Commission (NERCOM) and Massachusetts Office of Energy Resources (MOER), she acquired extensive experience working with governors' offices, state legislatures, congressional offices, and industry and advocacy groups. As an energy analyst for NERCOM, Ms. Baldwin coordinated New England's first regional seminar on low-level radioactive waste, analyzed federal and state energy policies, and wrote several reports on regional energy issues. While working with the MOER, Ms. Baldwin conducted a statewide survey of the solar industry and analyzed federal solar legislation. While attending the Kennedy School of Government, Ms. Baldwin served as a research assistant for the school's Energy and Environmental Policy Center.

Ms. Baldwin has contributed to numerous comments submitted to the FCC on diverse aspects of broadband in various proceedings on topics such as data collection, mapping, deployment, universal service, affordability, consumer protection, and network management. Also, in state regulatory proceedings that have examined carriers' proposals for spin-offs and for mergers, she has recommended conditions concerning broadband deployment.

Ms. Baldwin served as a direct advisor to the Massachusetts Department of Telecommunications and Energy (DTE) between August 2001 and July 2003, in Massachusetts DTE Docket 01-20, an investigation of Verizon's total element long run incremental cost (TELRIC) studies for recurring and nonrecurring unbundled network elements (UNEs). She assisted with all aspects of this comprehensive case in Massachusetts. Ms. Baldwin analyzed recurring and nonrecurring cost studies; ran cost models; reviewed parties' testimony, cross-examined witnesses, trained staff, met with the members of the Commission, assisted with substantial portions of the major orders issued by the DTE; and also assisted with the compliance phase of the proceeding.

Ms. Baldwin has also contributed to numerous comments and declarations submitted to the Federal Communications Commission on issues such as broadband; intercarrier compensation reform; the Comcast-NBCU merger, price cap regulation; universal service; carriers' petitions for forbearance; separations reform; special access services, relay services; numbering

optimization, and the Internet Protocol transition.

Ms. Baldwin worked with Economics and Technology, Inc. for twelve years (1984 to 1988 and 1992 to 2000), most recently as a Senior Vice President. Among her numerous projects were the responsibility of advising the Vermont Public Service Board in matters relating to a comprehensive investigation of NYNEX's revenue requirement and proposed alternative regulation plan. She participated in all phases of the docket, encompassing review of testimony, issuance of discovery, cross-examination of witnesses, drafting memoranda and decisions, and reviewing compliance filings. Another year-long project managed by Ms. Baldwin was the in-depth analysis and evaluation of the cost proxy models submitted in the FCC's universal service proceeding. Also, on behalf of the staff of the Idaho Public Utilities Commission, Ms. Baldwin testified on the proper allocation of US West's costs between regulated and non-regulated services. On behalf of AT&T Communications of California, Inc. and MCI Telecommunications Corporation, Ms. Baldwin comprehensively analyzed the non-recurring cost studies submitted by California's incumbent local exchange carriers. Ms. Baldwin has participated in more than twenty state and federal regulatory investigations of the impact of proposed transfers of control of wireline, wireless and cable companies.

Ms. Baldwin has contributed to the development of state and federal policy on numbering matters. On behalf of the Ad Hoc Telecommunications Users Committee, Ms. Baldwin participated in the Numbering Resource Optimization Working Group (NRO-WG), and in that capacity, served as a co-chair of the Analysis Task Force of the NRO-WG. She has also provided technical assistance to consumer advocates in the District of Columbia, Illinois, Iowa, Massachusetts, and Pennsylvania on area code relief and numbering optimization measures. Ms. Baldwin also co-authored comments on behalf of the National Association of State Utility Consumer Advocates in the FCC's proceeding on numbering resource optimization.

During her first years at ETI, Ms. Baldwin was the Director of Publications and Tariff Research, and, in that capacity, she trained and supervised staff in the analysis of telecommunications rate structures, services, and regulation.

Ms. Baldwin served four years (1988-1992) as the Director of the Telecommunications Division for the Massachusetts Department of Public Utilities (now the Department of Telecommunications & Cable), where she directed a staff of nine, and acted in a direct advisory capacity to the DPU Commissioners. (The Massachusetts DTC maintains a non-separated staff, which directly interacts with the Commission, rather than taking an advocacy role of its own in proceedings). Ms. Baldwin advised and drafted decisions for the Commission in numerous DPU proceedings including investigations of a comprehensive restructuring of the rates of New England Telephone Company (NET), an audit of NET's transactions with its NYNEX affiliates, collocation, ISDN, Caller ID, 900-type services, AT&T's request for a change in regulatory treatment, pay telephone and alternative operator services, increased accessibility to the network by disabled persons, conduit rates charged by NET to cable companies, and quality of service. Under her supervision, staff analyzed all telecommunications matters relating to the regulation of the then \$1.7-billion telecommunications industry in Massachusetts, including the review of all

telecommunications tariff filings; petitions; cost, revenue, and quality of service data; and certification applications. As a member of the Telecommunications Staff Committees of the New England Conference of Public Utility Commissioners (NECPUC) and the National Association of Regulatory Utility Commissioners (NARUC), she contributed to the development of telecommunications policy on state, regional, and national levels.

As a budget analyst for the Massachusetts Department of Public Welfare, Ms. Baldwin forecast expenditures, developed low-income policy, negotiated contracts, prepared and defended budget requests, and monitored expenditures of over \$100 million.

Ms. Baldwin received Boston University's Dean's Fellowship. While attending the Kennedy School of Government, Ms. Baldwin served as a teaching assistant for a graduate course in microeconomics and as a research assistant for the school's Energy and Environmental Policy Center, and at Wellesley College was a Rhodes Scholar nominee. She has also studied in Ghent, Belgium.

Record of Prior Testimony

In the matter of the Application of the New Jersey Bell Telephone Company for Approval of its Plan for an Alternative Form of Regulation, New Jersey Board of Regulatory Commissioners Docket No. T092030358, on behalf of the New Jersey Cable Television Association, filed September 21, 1992, cross-examined October 2, 1992.

DPUC review and management audit of construction programs of Connecticut's telecommunications local exchange carriers, Connecticut Department of Public Utility Control Docket No. 91-10-06, on behalf of the Connecticut Office of the Consumer Counsel, filed October 30, 1992, cross-examined November 4, 1992.

Joint petition of New England Telephone and Telegraph Company and Department of Public Service seeking a second extension of the Vermont Telecommunications Agreement, Vermont Public Service Board 5614, Public Contract Advocate, filed December 15, 1992, cross-examined December 21, 1992.

Application of the Southern New England Telephone Company to amend its rates and rate structure, Connecticut Department of Public Utility Control Docket No. 92-09-19, on behalf of the Connecticut Office of Consumer Counsel, filed March 26, 1993 and May 19, 1993, cross-examined May 25, 1993.

In the matter of the Application of Cincinnati Bell Telephone Company for Approval of an Alternative Form of Regulation and for a Threshold Increase in Rates, Public Utilities Commission of Ohio Case No. 93-432-TP-ALT, on behalf of Time Warner AxS, filed March 2, 1994.

Matters relating to IntraLATA Toll Competition and Access Rate Structure, Rhode Island Public Utilities Commission Docket 1995, on behalf of the Rhode Island Public Utilities Commission Staff, filed March 28, 1994 and June 9, 1994, cross-examined August 1, 1994.

In the Matter of the Application of The Ohio Bell Telephone Company for Approval of an Alternative Form of Regulation, Public Utilities Commission of Ohio Case No. 93-487-TP-ALT, on behalf of Time Warner AxS, filed May 5, 1994, cross-examined August 11, 1994.

In Re: Universal Service Proceeding: The Cost of Universal Service and Current Sources of Universal Service Support, Tennessee Public Service Commission Docket No. 95-02499, on behalf of Time Warner

AxS of Tennessee, L.P., filed October 18, 1995 and October 25, 1995, cross-examined October 27, 1995.

In Re: Universal Service Proceeding: Alternative Universal Service Support Mechanisms, Tennessee Public Service Commission Docket No. 95-02499, on behalf of Time Warner AxS of Tennessee, L.P., filed October 30, 1995 and November 3, 1995, cross-examined November 7, 1995.

In the Matter of the Application of US West Communications, Inc. for Authority to Increase its Rates and Charge for Regulated Title 61 Services, Idaho Public Utilities Commission Case No. USW-S-96-5, on behalf of the Staff of the Idaho Public Utilities Commission, filed November 26, 1996 and February 25, 1997, cross-examined March 19, 1997.

A Petition by the Regulatory Operations Staff to Open an Investigation into the Procedures and Methodologies that Should Be Used to Develop Costs for Bundled or Unbundled Telephone Services or Service Elements in the State of Nevada, Nevada Public Service Commission Docket No. 96-9035, on behalf of AT&T Communications of Nevada, Inc., filed May 23, 1997, cross-examined June 6, 1997.

Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture; Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks, California Public Utilities Commission R.93-04-003 and I.93-04-002, co-authored a declaration on behalf of AT&T Communications of California, Inc., and MCI Telecommunications Corporation, filed on December 15, 1997 and on February 11, 1998.

Consolidated Petitions for Arbitration of Interconnection Agreements, Massachusetts Department of Telecommunications and Energy, DPU 96-73/74, 96-75, 96-80/81, 96-83, and 96-84, on behalf of AT&T Communications of New England, Inc. and MCI Telecommunications Corporation, filed February 3, 1998.

In the Matter of the Application of US West Communications, Inc. for Specific Forms of Price Regulation, Colorado Public Utilities Commission Docket No. 97-A-540T, on behalf of the Colorado Office of Consumer Counsel, filed on April 16, 1998, May 14, 1998 and May 27, 1998, cross-examined June 2, 1998.

Joint Application of SBC Communications and Southern New England Telecommunications Corporation for Approval of a Change of Control, Connecticut Department of Public Utility Control Docket No. 98-02-20, on behalf of the Connecticut Office of Consumer Counsel, filed May 7, 1998 and June 12, 1998, cross-examined June 15-16, 1998.

Fourth Annual Price Cap Filing of Bell Atlantic-Massachusetts, Massachusetts Department of Telecommunications and Energy Docket DTE 98-67, on behalf of MCI Telecommunications Corporation, filed September 11, 1998 and September 25, 1998, cross-examined October 22, 1998.

Applications of Ameritech Corp., Transferor, and SBC Communications, Inc., Transferee, For Consent to Transfer Control, Federal Communications Commission CC Docket No. 98-141, co-sponsored affidavit on behalf of Indiana Utility Consumer Counselor, Michigan Attorney General, Missouri Public Counsel, Ohio Consumers' Counsel, Texas Public Utility Counsel and Utility Reform Network, filed on October 13, 1998.

In the Matter of the Joint Application of SBC Communications Inc., SBC Delaware, Inc., Ameritech Corporation and Ameritech Ohio for Consent and Approval of a Change of Control, Public Utilities Commission of Ohio Case No.98-1082-TP-AMT, on behalf of Ohio Consumers' Counsel, filed on December 10, 1998, cross-examined on January 22, 1999.

GTE Corporation, Transferor, and Bell Atlantic Corporation, Transferee, For Consent to Transfer

Control, Federal Communications Commission CC Docket No. 98-184, co-sponsored an affidavit on behalf of a coalition of consumer advocates from Delaware, Hawaii, Maine, Maryland, Missouri, Ohio, Oregon, West Virginia, and Michigan, filed on December 18, 1998.

In the Matter of the Joint Application of GTE and Bell Atlantic to Transfer Control of GTE's California Utility Subsidiaries to Bell Atlantic, Which Will Occur Indirectly as a Result of GTE's Merger with Bell Atlantic, California Public Utilities Commission A. 98-12-005, on behalf of the California Office of Ratepayer Advocate, filed on June 7, 1999.

In the Matter of the Investigation on the Commission's Own Motion Into All Matters Relating to the Merger of Ameritech Corporation and SBC Communications Inc., Indiana Utility Regulatory Commission Cause No. 41255, on behalf of the Indiana Office of Utility Consumer Counselor, filed on June 22, 1999 and July 12, 1999, cross-examined July 20, 1999.

In re Application of Bell Atlantic Corporation and GTE Corporation for Approval of the GTE Corporation - Bell Atlantic Corporation Merger, Washington Utilities and Transportation Commission UT-981367, on behalf of the Washington Attorney General Public Counsel Section, filed on August 2, 1999.

Application of New York Telephone Company for Alternative Rate Regulation, Connecticut Department of Public Utility Control Docket No. 99-03-06, on behalf of the Connecticut Office of Consumer Counsel, filed October 22, 1999.

In re: Area Code 515 Relief Plan, Iowa Utilities Board Docket No. SPU-99-22, on behalf of Iowa Office of Consumer Advocate, filed November 8, 1999, and December 3, 1999, cross-examined December 14, 1999.

In re Application of MCI WorldCom, Inc. and Central Telephone Company - Nevada, d/b/a Sprint of Nevada, and other Sprint entities for Approval of Transfer of Control pursuant to NRS 704.329, Nevada Public Utilities Commission Application No. 99-12029, on behalf of the Nevada Office of the Attorney General, Bureau of Consumer Protection, filed April 20, 2000.

In re: Area Code 319 Relief Plan, Iowa Utilities Board Docket No. SPU-99-30, on behalf of Iowa Office of Consumer Advocate, filed June 26, 2000 and July 24, 2000.

In re: Sprint Communications Company, L.P. & Level 3 Communications, L.L.C., Iowa Utilities Board Docket Nos. SPU-02-11 & SPU-02-13, on behalf of Iowa Office of Consumer Advocate, filed October 14, 2002 and January 6, 2003, cross-examined February 5, 2003.

Illinois Bell Telephone Company filing to increase unbundled loop and nonrecurring rates (tariffs filed December 24, 2002), Illinois Commerce Commission Docket No. 02-0864, on behalf of Citizens Utility Board, filed May 6, 2003 and February 20, 2004.

Qwest Petition for Competitive Classification of Business Services, Washington Utilities and Transportation Commission Docket No. 030614, on behalf of Public Counsel, filed August 13, 2003 and August 29, 2003, cross-examined September 18, 2003.

In the Matter of the Application of CenturyTel of Northwest Arkansas, LLC for Approval of a General Change in Rates and Tariffs, Arkansas Public Service Commission Docket No. 03-041-U, on behalf of the Attorney General, filed October 9, 2003 and November 20, 2003.

In the Matter of the Board's Review of Unbundled Network Elements, Rates, Terms and Conditions of Bell Atlantic New Jersey, Inc., New Jersey Board of Public Utilities Docket No. TO00060356, on behalf of the New Jersey Division of the Ratepayer Advocate, filed January 23, 2004.

In the Matter of the Implementation of the Federal Communications Commission's Triennial Review Order, New Jersey Board of Public Utilities Docket No. TO03090705, on behalf of the New Jersey Division of the Ratepayer Advocate, filed February 2, 2004.

Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Local Exchange Carriers, Federal Communications Commission WC Docket No. 04-313, CC Docket No. 01-338, sponsored affidavit on behalf of the New Jersey Division of the Ratepayer Advocate, filed October 4, 2004.

Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Local Exchange Carriers, Federal Communications Commission WC Docket No. 04-313, CC Docket No. 01-338, sponsored affidavit on behalf of the Utah Committee of Consumer Services, filed October 4, 2004.

In the Matter of Verizon New Jersey, Inc. For a Revision of Tariff B.P.U.-N.J. – No. 2 Providing for a Revenue Neutral Rate Restructure Including a Restructure of Residence and Business Basic Exchange Service and Elimination of \$.65 Credit, New Jersey Board of Public Utilities Docket No. TT04060442, on behalf of the New Jersey Division of the Ratepayer Advocate, filed December 22, 2004 and January 18, 2005.

In the Matter of the Application of Verizon New Jersey, Inc. for Approval (I) of a New Plan for an Alternative Form of Regulation and (II) to Reclassify Multi-Line Rate Regulated Business Services as Competitive Services, and Compliance Filing, New Jersey Board of Public Utilities Docket No. TO01020095, on behalf of the New Jersey Division of the Ratepayer Advocate, filed January 10, 2005 and February 4, 2005.

Joint Petition of SBC Communications Inc. and AT&T Corp., Together with its Certificated Subsidiaries for Approval of Merger, New Jersey Board of Public Utilities Docket No. TM05020168, on behalf of the New Jersey Division of the Ratepayer Advocate, filed May 4, 2005 and June 1, 2005.

In the Matter of Verizon Communications Inc. and MCI, Inc., Applications for Approval of Transfer of Control, Federal Communications Commission WC Docket No. 05-75, co-sponsored affidavit on behalf of the New Jersey Division of the Ratepayer Advocate, filed on May 9, 2005.

In the Matter of the Application of Southwestern Bell Telephone, L.P., d/b/a SBC Arkansas to Set Rates for Unbundled Network Elements, Arkansas Public Service Commission Docket No. 04-109-U, on behalf of the Attorney General, filed May 27, 2005.

Joint Petition of Verizon Communications Inc. and MCI, Inc. for Approval of Merger, New Jersey Board of Public Utilities Docket No. TM05030189, on behalf of the New Jersey Division of the Ratepayer Advocate, filed July 8, 2005 and August 19, 2005.

In the Matter of Joint Petition of United Telephone Company of New Jersey, Inc. d/b/a Sprint and LTD Holding Company for Approval Pursuant to *N.J.S.A. 48:2-51* and *N.J.S.A. 48:3-10* of a change in Ownership and Control, New Jersey Board of Public Utilities Docket No. TM05080739, on behalf of the New Jersey Division of the Ratepayer Advocate, filed November 29, 2005.

In the Matter of the Board's Review of the Classification of Verizon New Jersey's Directory Assistance Services ("DAS") as Competitive and Associated Service Quality, Docket No. TX06010057, In the Matter of the Filing by Verizon New Jersey Inc. for the Reclassification of Existing Rate Regulated Services – Directory Assistance Services as Competitive, New Jersey Board of Public Utilities, Docket No. TT97120889, on behalf of the New Jersey Division of the Ratepayer Advocate, filed May 12, 2006.

In the Matter of AT&T Inc. and BellSouth Corporation Applications for Approval of Transfer of Control, Federal Communications Commission WC Docket No. 06-74, sponsored declaration with Sarah M.

Bosley on behalf of the New Jersey Division of the Ratepayer Advocate, filed June 5, 2006; sponsored declaration with Sarah M. Bosley and Timothy E. Howington on behalf of the New Jersey Division of Rate Counsel, October 3, 2006.

In the Matter of Jurisdictional Separations and Referral to the Federal-State Joint Board, CC Docket No. 80-286, sponsored affidavit on behalf of the National Association of State Utility Consumer Advocates and the New Jersey Division of Rate Counsel, filed August 22, 2006.

In the Matter of the Board Investigation Regarding the Reclassification of Competitive Local Exchange Carrier (CLEC) Services as Competitive, New Jersey Board of Public Utilities Docket No. TX06120841, on behalf of the New Jersey Division of Rate Counsel, filed January 7, 2007, January 30, 2007, and February 20, 2007.

Verizon New England Inc., Bell Atlantic Communications, Inc., NYNEX Long Distance Company, Verizon Select Services Inc. and FairPoint Communications, Inc. Joint Petition for Authority to Transfer Assets and Franchise to FairPoint Communications, Inc., New Hampshire Public Utilities Commission Docket No. DT-07-011, on behalf of the Office of Consumer Advocate, filed August 1, 2007, cross-examined November 1, 2007.

In the Matter of the Commission's Investigation into Verizon Maryland, Inc.'s Affiliate Relationships, Maryland Public Service Commission Case No. 9120, on behalf of the Office of People's Counsel, filed October 29, 2007 and November 19, 2007, cross-examined November 28, 2007.

In the Matter of the Board Investigation Regarding the Reclassification of Incumbent Local Exchange Carrier (ILEC) Services as Competitive, New Jersey Board of Public Utilities Docket No. TX07110873, on behalf of the New Jersey Division of Rate Counsel, filed December 14, 2007, January 10, 2008.

In the Matter of Verizon Washington, DC Inc.'s Price Cap Plan 2007 for the Provision of Local Telecommunications Services in the District of Columbia, Public Service Commission of the District of Columbia Formal Case No. 1057, on behalf of the District of Columbia Office of People's Counsel, filed December 20, 2007, January 31, 2008.

In re Possible Extension of Board Jurisdiction over Single Line Flat-Rated Residential and Business Rates for Local Exchange Carriers, Iowa Utilities Board Docket No. INU-08-1, on behalf of Iowa Office of Consumer Advocate, filed March 17, 2008, April 28, 2008, cross-examined May 22, 2008.

Petition of the Office of Consumer Counsel for Enforcement of Quality of Service Standards for the Southern New England Telephone Company d/b/a AT&T Connecticut, Connecticut Department of Public Utility Control Docket No. 08-07-15, on behalf of the Communications Workers of America, Local 1298, filed January 30, 2009, cross-examined February 25, 2009.

In the Matter of the Board's Investigation and Review of Local Exchange Carrier Intrastate Exchange Access Rates, New Jersey Board of Public Utilities Docket No. TX08090830, on behalf of the New Jersey Division of Rate Counsel, filed February 13, 2009, April 20, 2009, and June 22, 2009, cross-examined October 20, 2009.

In the Matter of Appropriate Forms Of Regulating Telephone Companies, Maryland Public Service Commission, Case No. 9133, on behalf of the Communications Workers of America, filed June 1, 2009, October 16, 2009, October 30, 2009, cross-examined November 4, 2009.

Petition of the Office of Consumer Counsel for Enforcement of Quality of Service Standards for the Southern New England Telephone Company d/b/a AT&T Connecticut, Connecticut Department of Public Utility Control Docket No. 08-07-15PH02, on behalf of the Communications Workers of America, Local 1298, filed September 21, 2009.

In the Matter of the Application of Frontier Communications Corporation, New Communications Holdings, Inc. and Verizon Communications Inc. for Consent and Approval of a Change in Control, Public Utilities Commission of Ohio Case No. 09-454-TP-ACO, on behalf of the Communications Workers of America and International Brotherhood of Electrical Workers, Local 986, filed October 14, 2009.

Frontier Communications Corporation, Verizon Communications, Inc., Verizon North Inc., Verizon South Inc., New Communications of the Carolinas, Inc. Joint Application for the approval of a Reorganization, Illinois Commerce Commission Docket No. 09-0268, on behalf of the International Brotherhood of Electrical Workers, Locals 21, 51, and 702, filed October 20, 2009.

In re Verizon Service Quality in Western Massachusetts, Massachusetts Department of Telecommunications and Cable D.T.C. 09-1, on behalf of the Office of the Attorney General, filed November 9, 2009, February 24, 2010, cross-examined March 31, 2010, April 1, 2010, May 21, 2010.

Joint Application of Frontier Communications Corporation and Verizon West Virginia Inc. and certain affiliates for approval of the transfer of Verizon's local exchange and long distance business in West Virginia to companies to be owned and controlled by Frontier Communications Corporation, Public Service Commission of West Virginia Case No. 09-0871-T-PC, on behalf of the Communications Workers of America, AFL-CIO, filed November 16, 2009.

In the Matter of Qwest Communications Company and CenturyTel, Inc. for Approval of Control of Qwest Communications Company LLC, New Jersey Board of Public Utilities Docket No. TM10050343, on behalf of the New Jersey Division of Rate Counsel, filed September 23, 2010.

Petition of the North American Numbering Plan Administrator on behalf of the Pennsylvania Telecommunications Industry for Approval of Numbering Plan Area Relief Planning for the 814 NPA, Pennsylvania Public Utility Commission Docket No. P-2009-2112925, on behalf of the Pennsylvania Office of Consumer Advocate, filed May 23, 2011, cross-examined May 24, 2011.

In re Applications of AT&T, Inc. and Deutsche Telekom AG for Consent to the Transfer of Control of the Licenses and Authorizations Held by T-Mobile USA, Inc. and its Subsidiaries to AT&T Inc., WT Docket No. 11-65, File Nos. 0004669383, *et al.*, sponsored declarations on behalf of the New Jersey Division of Rate Counsel, May 31, 2011, and June 20, 2011.

In the Matter of Application of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC For Consent To Assign Licenses and Application of Cellco Partnership d/b/a Verizon Wireless and Cox TMI Wireless, LLC For Consent To Assign Licenses, WT Docket No. 12-4, sponsored declarations on behalf of the New Jersey Division of Rate Counsel, filed February 17, 2012, and March 26, 2012.

In the Matter of the Board's Investigation Regarding the Reclassification of Incumbent Local Exchange Carrier (ILEC) Services as Competitive – Phase II, New Jersey Board of Public Utilities Docket No. TX11090570, on behalf of the New Jersey Division of Rate Counsel, filed February 24, 2012, April 27, 2012, and June 11, 2012, cross-examined July 17, 2012.

Petition of David K. Ebersole, Jr. and the Office of Consumer Advocate for a Declaratory Order that Verizon Pennsylvania Inc. Has Not Met Its Legal Obligation to the Greensburg Bona Fide Retail Request Group Pursuant to Its Chapter 30 Plan, Pennsylvania Public Utility Commission Docket No. P-2012-2323362, affidavit on behalf of the Pennsylvania Office of Consumer Advocate, September 6, 2012.

In the Matter of Commission Consideration Of Effective Competition Areas and the Classification of Basic Local Exchange Service, Colorado Public Utilities Commission Proceeding Number 13M-0422T, Pursuant to 4 CCR 723-2-2213, answer testimony on behalf of AARP, December 6, 2013, cross-examined January 7, 2014.

PURA Establishment of Rules for Electric Suppliers and EDCs Concerning Operations and Marketing in the Electric Retail Market, Connecticut Public Utilities Regulatory Authority Docket No. 13-07-18, testimony and supplemental testimony on behalf of the Connecticut Office of Consumer Counsel, initial and supplemental testimony (with Helen E. Golding), March 10, 2014 and March 17, 2014, cross-examined March 27, 2014.

Joint Application of Frontier Communications Corporation and AT&T Inc. for Approval of a Change in Control, Connecticut Public Utilities Regulatory Authority Docket No. 14-01-46, testimony on behalf of the Connecticut Office of Consumer Counsel, May 23, 2014, cross-examined June 30, 2014.

The Utility Reform Network, Complainant vs. Pacific Bell Telephone Company D/B/A AT&T California (U1001C); AT&T Communications of California, Inc. (U5002C), Defendants, California Public Utilities Commission Case No. 13-12-005, Complaint of the Utility Reform Network Regarding Basic Service Rates of AT&T California (Public Utilities Code Section 1702; Commission Rule of Practice and Procedure 4.1(b)), December 6, 2013, initial and rebuttal testimony on behalf of the Utility Reform Network (TURN), August 22, 2014 and October 3, 2014.

Joint Petition of Verizon Pennsylvania LLC and Verizon North LLC for Competitive Classification of all Retail Services in Certain Geographic Areas, and for a Waiver of Regulation for Competitive Services, Pennsylvania PUC Docket Nos. P-2014-2446303 and P-2014-2446304, direct and surrebuttal testimony on behalf of Communications Workers of America and the International Brotherhood of Electrical Workers, November 14, 2014, and December 12, 2014, cross-examined December 16, 2014.

Joint Application of Comcast Corporation, Time Warner Cable Inc., Time Warner Cable Information Services (California), LLC, and Bright House Networks Information Services (California), LLC for Expedited Approval of Indirect Transfer of Control of Time Warner Cable Information Services (California), LLC, (U-68740-C); and The Pro Forma Transfer of Control of Bright House Networks Information Services (California), LLC (U-6955-C) to Comcast Corporation, Pursuant to Public Utilities Code Section 854(A), Application No. 14-04-013 (filed April 11, 2014), initial and reply testimony on behalf of the Utility Reform Network (TURN), December 3, 2014 and December 10, 2014.

In the Matter of the Joint Application of Frontier Communications Corporation, Frontier Communications of America, Inc. (U 5429 C), Verizon California Inc. (U 1002 C), Verizon Long Distance, LLC (U 5732), and Newco West Holdings LLC for Approval of Transfer of Control Over Verizon California Inc. and Related Approval of Transfer of Assets and Certifications (Filed March 18, 2015), Application 15-03-005, reply and supplemental testimony on behalf of the Utility Reform Network (TURN), July 28, 2015 and September 11, 2015.

Order Instituting Investigation to Assess the State of Competition Among Telecommunications Providers in California, and to Consider and Resolve Limited Rehearing of Decision (D.) 08-09-042, California Public Utilities Commission Investigation 15-11-007 (November 5, 2015), testimony on behalf of the Utility Reform Network (TURN), March 15, 2016, June 1, 2016 and July 15, 2016; participated in Expert Panel, July 20, 2016.

Pennsylvania Public Utility Commission Docket No. P-2015-2509336, Petition of Communications Workers of America for a Public, On-the-Record Commission Investigation of the Safety, Adequacy, and Reasonableness of Service Provided by Verizon Pennsylvania, LLC, direct testimony on behalf of Communications Workers of America, September 29, 2016.

Petition of the Maryland Office of People's Counsel for an Investigation into Verizon Maryland's Provision of Basic Local Phone Service Over Copper or Fiber Networks, affidavit on behalf of the Maryland Office of People's Counsel, January 13, 2017.

Iowa Utilities Board Docket No. INU-2016-0001, In re: Deregulation of Local Exchange Service, testimony on behalf of Office of Consumer Advocate, February 17, 2017 and April 21, 2017, cross-examined May 23, 2017.

New York Public Service Commission Case 16-C-0122, Proceeding on Motion of the Commission to Consider the Adequacy of Verizon New York Inc.'s Retail Service Quality Processes and Programs, testimony on behalf of the Communications Workers of America, March 24, 2017.

In the Matter of Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84, Notice of Proposed Rulemaking, Notice of Inquiry, and Request for Comment, FCC Rcd 3266, (rel. Apr. 21, 2017), declaration on behalf of the National Association of State Utility Consumer Advocates, Maine Office of the Public Advocate, Maryland Office of People's Counsel ("OPC"), New Jersey Division of Rate Counsel, Office of the Ohio Consumers' Counsel, Pennsylvania Office of Consumer Advocate and The Utility Reform Network, June 15, 2017.

New Jersey Board of Public Utilities Docket No. ER 17030308, In the Matter of the Petition of Atlantic City Electric Company for Approval of Amendments to its Tariff to Provide For an Increase in Rates and Charges for Electric Service Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1, and for Other Appropriate Relief (2017), testimony on behalf of New Jersey Division of Rate Counsel, August 1, 2017.

Wyoming Public Service Commission Docket No. 700000-1644-TA-17, In the Matter of the Application of Qwest Corporation d/b/a CenturyLink QC for Determination that Basic Residential and Business Services Are Competitive Throughout All of CenturyLink QC's Zone 2 and Zone 3 Service Areas, testimony on behalf of AARP, November 15, 2017, cross-examined December 11, 2018.

Washington Utilities & Transportation Commission Docket UT-171082, CenturyLink's Obligations Under the Commission's Line Extension Rules, testimony on behalf of Public Counsel, June 1, 2018 and July 3, 2018.

New Jersey Board of Public Utilities Docket Nos. ER18010029 and GR18010030, In the Matter of the Petition of Public Service Electric and Gas Company for Approval of an Increase in Electric and Gas Rates and for Changes in the Tariffs for Electric and Gas Service, B.P.U.N.J. No. 16 Electric and B.P.U.N.J. No. 16 Gas, and for Changes in Depreciation Rates Pursuant to N.J.S.A. 48:2-18, N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and for Other Appropriate Relief, testimony on behalf of New Jersey Division of Rate Counsel, August 6, 2018.

Washington Utilities & Transportation Commission, Docket UT-180831, Rulemaking to Consider Possible Changes to Rules in Chapter 480-120 WAC, Relating to Service Obligations of Telephone Companies, assisted with the preparation of Comments of Public Counsel, December 7, 2018, participated in technical conference on behalf of Public Counsel, January 17, 2019.

In the Matter of the Petition of the Maryland Office of People's Counsel for an Investigation into Verizon Maryland's Provision of Basic Local Phone Service Over Copper or Fiber Networks - ML#210061, Report on behalf of Maryland Office of People's Counsel, February 8, 2019.

Connecticut Public Utilities Regulatory Authority Docket No. 18-06-02, Review of Feasibility, Costs, and Benefits of Placing Certain Customers on Standard Service Pursuant to Conn. Gen. Stat. § 16-245o(m), testimony on behalf of Connecticut Office of Consumer Counsel, February 27, 2019, cross-examined July 18, 2019.

New Mexico Public Regulation Commission Case No. 18-00295-UT, In the Matter of the Petition of CenturyLink CQ Regarding Effective Competition for Retail Residential Services, testimony on behalf of CWA, April 15, 2019, cross-examined September 25-26, 2019.

New Jersey Board of Public Utilities Docket No. ER19050552, In the Matter of the Verified Petition of Rockland Electric Company for Approval of Changes in Electric Rates, Its Tariff for Electric Service, and Its Depreciation Rates, and for Other Relief, testimony on behalf of New Jersey Division of Rate Counsel, October 11, 2019.

Washington Utilities and Transportation Commission Dockets UE-190529 and UG-190530 (Consolidated), Washington Utilities and Transportation Commission v. Puget Sound Energy, response testimony on behalf of Public Counsel, November 22, 2019.

Washington Utilities and Transportation Commission Docket No. UT-190209, Washington Utilities and Transportation Commission v. Qwest Corporation d/b/a CenturyLink QC, testimony on behalf of Public Counsel, January 9, 2020 and February 13, 2020.

Maryland Public Service Commission Case No. 9613, In the Matter of the Complaint by the Staff of the Public Service Commission v. SmartEnergy Holdings LLC, testimony on behalf of Maryland Office of People's Counsel, January 31, 2020 and July 8, 2020.

Maryland Public Service Commission Case No. 9615, In the Matter of the Complaint by the Staff of the Public Service Commission v. U.S. Gas & Electric Services Providers, Inc., d/b/a Maryland Gas & Electric, testimony on behalf of Maryland Office of People's Counsel, February 14, 2020, March 27, 2020, February 5, 2021, and March 19, 2021.

Maryland Public Service Commission Case No. 9614, In the Matter of the Complaint by the Staff of the Public Service Commission v. Direct Energy Services, LLC testimony on behalf of Maryland Office of People's Counsel, March 6, 2020, February 12, 2021, March 19, 2021, and May 5, 2021.

Maryland Public Service Commission Case No. 9624, In the Matter of the Complaint by the Staff of the Public Service Commission Atlantic Energy MD, LLC, testimony on behalf of Maryland Office of People's Counsel, October 15, 2020, February 22, 2021, and March 17, 2021.

Testimony before State Legislatures:

Testified on September 24, 1997, before the Massachusetts State Legislature Joint Committee on Government Regulations regarding House Bill 4937 (concerning area codes).

Testified on March 2, 2010, before the Maryland State Legislature Senate Finance Committee regarding Senate Bill 677 (concerning Telephone Landline Sale Bill).

Testified on March 11, 2010, before the Maryland State Legislature House Economic Matters Committee regarding House Bill 937 (concerning Telephone Landline Sale Bill).

Testified on June 25, 2013, on behalf of AARP, before the Ohio Select Committee on Telecommunications Regulatory Reform (regarding SB 162).

Testified on December 12, 2013, on behalf of AARP, before the Pennsylvania House Consumer Affairs Committee (regarding House Bill 1608).

Reports/Publications/Presentations

Expert reports in tax matters, reports and publications on telecommunications and energy policy

in trade journals, and presentations at industry associations and conferences include the following:

Expert reports in tax matters:

Iowa Department of Inspections and Appeals, In the Matter of Cable One, Inc. v. Iowa Department of Revenue, DIA 10DORFC014, SBTR Nos. 899 and 903, Property Tax Assessment, Expert Report, January 21, 2011 (on behalf of the Iowa Department of Revenue), deposed February 9, 2011.

Level 3 Communications, LLC. v. Arizona Department of Revenue; Coshise County; Graham County; Greenlee County; La Paz County; Maricopa County; Mohave County; Pima County, Pinal County and Yuma County, Superior Court of the State of Arizona in the Arizona Tax Court, No. TX-2007-000594, Expert Report, May 20, 2011 (on behalf of the Arizona Department of Revenue), deposed July 14, 2011; cross-examined August 24, 2012.

Bresnan Communications, LLC, Plaintiff, v. State of Montana Department of Revenue, Defendant, Cause No. DV-10-1312, July 5, 2011 (on behalf of the Montana Department of Revenue), deposed July 29, 2011.

Verizon California Inc., Plaintiff, v. California Board of Equalization, Defendants, December 18, 2015 (on behalf of the California Board of Equalization), deposed January 20, 2016.

Reports and Publications:

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“Residential energy supply market: Unmet promises and needed reforms” (with Frank A. Felder), *The Electricity Journal*, 32 (2019) 31–38.

“Maryland’s Residential Electric and Gas Supply Markets: Where Do We Go from Here?” (with Sarah M. Bosley), prepared for the Maryland Office of People’s Counsel, November 2018.

“Are Consumers Benefiting from Competition? An Analysis of the Individual Residential Electric Supply Market in Massachusetts” (with Sarah M. Bosley), prepared for the Massachusetts Attorney General’s Office, March 29, 2018.

“The Cable-Telco Duopoly’s Deployment of New Jersey’s Information Infrastructure: Establishing Accountability” (with Sarah M. Bosley and Timothy E. Howington). Prepared for the Public Advocate of New Jersey, January 19, 2007.

“Assessing SBC/Pacific’s Progress in Eliminating Barriers to Entry: The Local Market in California Is Not Yet ‘Fully and Irreversibly Open’” (with Patricia D. Kravtin, Dr. Lee L. Selwyn, and Douglas S. Williams). Prepared for the California Association of Competitive Telecommunications Companies, July 2000.

“Where Have All the Numbers Gone? (Second Edition): Rescuing the North American Numbering Plan from Mismanagement and Premature Exhaust” (with Dr. Lee L. Selwyn). Prepared for the Ad Hoc Telecommunications Users Committee, June 2000.

“Price Cap Plan for USWC: Establishing Appropriate Price and Service Quality Incentives for Utah” (with Patricia D. Kravtin and Scott C. Lundquist). Prepared for the Utah Division of Public Utilities, March 22, 2000.

“Telephone Numbering: Establishing a Policy for the District of Columbia to Promote Economic Development” (with Douglas S. Williams and Sarah C. Bosley). Prepared for the District of Columbia Office of People’s Counsel, February 2000 (submitted to Eric W. Price, Deputy Mayor, April 6, 2000).

“The Use of Cost Proxy Models to Make Implicit Support Explicit, Assessing the BCPM and the Hatfield Model 3.1” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, March 1997.

“The Use of Forward-Looking Economic Cost Proxy Models” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC Docket No. CCB/CPB 97-2, February 1997.

“Continuing Evaluation of Cost Proxy Models for Sizing the Universal Service Fund, Analysis of the Similarities and Differences between the Hatfield Model and the BCM2” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, October 1996.

“Converging on a Cost Proxy Model for Primary Line Basic Residential Service, A Blueprint for Designing a Competitively Neutral Universal Service Fund” (with Dr. Lee L. Selwyn). Prepared for the National Cable Television Association, submitted in FCC CC Docket No. 96-45, August 1996.

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“Funding Universal Service: Maximizing Penetration and Efficiency in a Competitive Local Service Environment” (with Dr. Lee L. Selwyn). Prepared for Time Warner Communications, Inc., October 1995.

“A Balanced Telecommunications Infrastructure Plan for New York State” (with Dr. Lee L. Selwyn). Prepared for the New York User Parties, December 4, 1992.

“A Roadmap to the Information Age: Defining a Rational Telecommunications Plan for Connecticut” (with Dr. Lee L. Selwyn, Susan M. Gately, JoAnn S. Hanson, David N. Townsend, and Scott C. Lundquist). Prepared for the Connecticut Office of Consumer Counsel, October 30, 1992.

“ISDN Rate-Setting in Massachusetts.” *Business Communications Review*, June 1992 (Volume 22, No. 6).

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(with Dr. Lee L. Selwyn, William P. Montgomery, and David N. Townsend). Report to the International Communications Association, December 1986.

“Competitive Pricing Analysis of Interstate Private Line Services.” Prepared for the National Telecommunications Network, June 1986.

“Analysis of Diamond State Telephone Private Line Pricing Movements: 1980-1990.” Prepared for Network Strategies, Inc., April 1985.

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“Energy Efficiency in New England’s Rental Housing.” New England Regional Commission, 1981.

“Low Level Radioactive Waste Management in New England.” New England Regional Commission, 1981.

“The Realtor's Guide to Residential Energy Efficiency.” Prepared for the U.S. Department of Energy and the National Association of Realtors, 1980.

Presentations:

“Telecom Committee Panel: Like the Phoenix, Telecommunication Service Quality Issues are Rising Again,” National Association of State Utility Consumer Advocates Annual Meeting, San Antonio, Texas, November 19, 2019.

“Retail Supplier Abuses and High Prices for Consumers: Does Retail Choice Still Make Sense?” 2019 National Association of State Utility Consumer Advocates Mid-Year Meeting, Portland, Oregon, June 21, 2019.

“The Battle for Net Neutrality,” lecture in “Methods of Policy Analysis,” MIT Department of Urban Studies & Planning, May 7, 2018.

“Discussion of Massachusetts Report,” Presentation to Nevada Governor’s Committee on Energy Choice, Technical Working Group on Consumer Protection, April 20, 2018.

“Back to Basics: What Specific Consumer Protections Are Still Needed in Telecommunications Regulation?,” Presentation at the Mid-Atlantic Conference of Regulatory Utilities Commissioners 21st Annual Education Conference, Williamsburg, Virginia, June 23, 2016.

“The Three Rs: The Need for Reliable, Redundant and Resilient Telecommunications in the New Age,” 2015 National Association of State Utility Consumer Advocates Annual Meeting, Austin, Texas, November 9, 2015.

“Telecommunications in Transition: Advocating for 50+ Consumers in the Brave New World,”

Presentation at AARP’s State Advocacy and Strategy Integration conference on “State Regulatory and Legislative Landscapes,” Portland, Oregon, September 16, 2014.

“What the IP Transition Means for Consumers and a Ubiquitous, Affordable, Reliable National Communications System,” 2014 National Association of State Utility Consumer Advocates Mid-Year Meeting, Santa Fe, New Mexico, June 2, 2014.

“For Sale - The National Wireline Communications System,” 2014 National Association of State Utility Consumer Advocates Mid-Year Meeting, Santa Fe, New Mexico, June 3, 2014.

“FCC Review of Verizon’s Section 214 Application and Its Implications for the IP Transition,” NASUCA Annual Meeting, Orlando, Florida, November 19, 2013.

“What gets lost in the IP Transition?” NASUCA Annual Meeting, Orlando, Florida, November 18, 2013.

“Service Outage and Restoration,” NARUC Staff panel, NARUC 125th Annual Meeting, Orlando, Florida, November 16, 2013.

“You Don’t Know What You’ve Got Til It’s Gone – Utilities Consumer Protections,” Presentation at AARP’s State Advocacy and Strategy Integration conference on “Fighting for Consumers,” Minneapolis, Minnesota, September 19, 2013.

“Protecting Consumers’ Assets and Income,” Presentation at the National Association of Latino Elected and Appointed Officials Policy Institute on “The Changing Dynamics of the Latino 50+ Population,” Albuquerque, New Mexico, August 25, 2013.

“Federalism in the 21st Century,” Presentation at the Mid-Atlantic Conference of Regulatory Utilities Commissioners 18th Annual Education Conference, Hershey, Pennsylvania, June 24, 2013.

“Trials for the Transition from TDM to IP,” Presentation at the New England Conference of Public Utilities Commissioners 66th Annual Symposium, Groton, Connecticut, June 11, 2013.

“The 1996 Telecom Act Today: Universal, affordable, reliable access to telecommunications for all. Does the federal-state partnership still exist?” AARP Telecommunications Summit, Pew Center for Charitable Trusts, Washington, DC, July 18, 2012.

“Issues and Ramifications Arising From the FCC’s Connect America Fund Order Affecting High Cost Universal Service and Intercarrier Compensation,” 2012 National Association of State Utility Consumer Advocates Mid-Year Meeting, Charleston, South Carolina, June 24, 2012.

“FCC Lifeline/Link Up Reform Order – What will it mean for regulators, consumers, and companies?” Presentation at the Mid-America Regulatory Conference, Des Moines, Iowa, June 11, 2012.

“Improving the Separations Process: Consumer Impact,” panelist for Federal-State Joint Board on Separations on behalf of the National Association of State Utility Consumer Advocates and the New Jersey Division of Rate Counsel, September 24, 2010, CC Docket No. 80-286, Washington, DC.

“The Evolving Role of State Regulation in a Changing Industry,” Presentation at the New England Conference of Public Utilities Commissioners 63th Annual Symposium, Brewster, Massachusetts, May 17, 2010.

“Broadband: Where it is, where it ain’t, and where it oughta be,” June 29, 2009, National Association of State Utility Consumer Advocates Mid-Year Meeting, Boston, Massachusetts.

“Deregulation and Price Increases: The Hallmarks of a Competitive Market?” November 18, 2008; 2008 National Association of State Utility Consumer Advocates Annual Meeting, New Orleans, Louisiana.

“Forbearance: What is it? What’s wrong with it? How to fix it,” November 12, 2007; “Net Neutrality – Not Dead Yet!,” November 13, 2007; 2007 National Association of State Utility Consumer Advocates Annual Meeting, Anaheim, California.

“FCC’s Regulatory Stance – Consumer Advocates’ Role More Important Than Ever,” 2005 National Association of State Utility Consumer Advocates Winter Meeting, March 2, 2005, Washington, D.C.

“Impact of Federal Regulatory Developments on Consumers and Consumers’ Impact on Regulatory Developments,” Presentation for the Washington Attorney General’s Office, Seattle, Washington, May 27, 2003.

“The Finances of Local Competition” Presentation at the New England Conference of Public Utilities Commissioners 54th Annual Symposium, Mystic, Connecticut, May 21, 2001.

“Facilities-Based Competition” Presentation at the New England Conference of Public Utilities Commissioners 52nd Annual Symposium, Bretton Woods, New Hampshire, May 24, 1999.

“Exploring Solutions for Number Exhaust on the State Level” and “A Forum for Clarification and Dialogue on Numbering Ideas,” ICM Conference on Number Resource Optimization, New Orleans, Louisiana, December 10-11, 1998.

“Telecommunications Mergers: Impact on Consumers,” AARP Legislative Council 1998 Roundtable Meeting, Washington, D.C., November 18, 1998.

“Consumer Perspectives on Incumbent Local Exchange Carrier Mergers,” National Association of Regulatory Utility Commissioners 110th Annual Convention, Orlando, Florida, November 11, 1998.

Federal Communications Commission En Banc Hearing on “Proposals to Revised the Methodology for Determining Universal Service Support,” CC Docket Nos. 96-45 and 97-160,” June 8, 1998, panelist.

“Universal Service: Real World Applications,” 1997 National Association of State Utility Consumer Advocates Mid-Year Meeting, Charleston, South Carolina, June 9, 1997.

“Modeling operating and support expenses” and “Modeling capital expenses,” panelist for Federal-State Joint Board on Universal Service Staff Workshops on Proxy Cost Models, January 14-15, 1997, CC Docket 96-45.

“Evaluating the BCM2: An Assessment of Its Strengths and Weaknesses,” presentation to the AT&T Cost Team (with Michael J. DeWinter), December 4, 1996.

“Interpreting the Telecommunications Act of 1996 Mandate for the Deployment of Advanced Telecommunications Services in a Fiscally Responsible and Fully Informed Manner” (with Helen E. Golding), *Proceedings of the Tenth NARUC Biennial Regulatory Information Conference*, Volume 3, September 11-13, 1996.

“Making Adjustments to the BCM2.” Presentation to the Staff of the Federal-State Joint Board on Universal Service, September 16, 1996.

“Converging on a Model: An Examination of Updated Benchmark Cost Models and their Use in Support of Universal Service Funding.” Presentation to the National Association of Regulatory Utility Commissioners Summer Committee Meetings, July 22, 1996.

“ETI’s Corrections to and Sensitivity Analyses of the Benchmark Cost Model.” Presentation to the Staff of the Federal-State Joint Board on Universal Service,” May 30, 1996.

“Redefining Universal Service.” Presentation at the *Telecommunications Reports* conference on “Redefining Universal Service for a Future Competitive Environment,” Washington, D.C., January 18, 1996.

“Funding Universal Service: Maximizing Penetration and Efficiency in a Competitive Local Service Environment,” (with Lee L. Selwyn, under the direction of Donald Shephard), a Time Warner

Communications Policy White Paper, September 1995.

“Stranded Investment and the New Regulatory Bargain,” (with Lee L. Selwyn, under the direction of Donald Shephard), a Time Warner Communications Policy White Paper, September 1995.

“New Frontiers in Regulation.” Presentation to the New England Women Economists Association, December 12, 1995.

“Local Cable and Telco Markets.” Presentation at the New England Conference of Public Utilities Commissioners 46th Annual Symposium, Dixville Notch, New Hampshire, June 29, 1993.

“Relationship of Depreciation to State Infrastructure Modernization.” Presentation at the *Telecommunications Reports* conference on “Telecommunications Depreciation,” Washington, D.C., May 6, 1993.

“Crafting a Rational Path to the Information Age.” Presentation at the State of New Hampshire's conference on the “Twenty-First Century Telecommunications Infrastructure,” Durham, New Hampshire, April 1993.

“The Political Economics of ISDN,” presentation at the John F. Kennedy School of Government seminar on “Getting from Here to There: Building an Information Infrastructure in Massachusetts,” March 1993.

“The New Competitive Landscape: Collocation in Massachusetts.” Presentation at TeleStrategies Conference on Local Exchange Competition, Washington, D.C., November 1991.

“Telecommunications Policy Developments in Massachusetts.” Presentations to the Boston Area Telecommunications Association, October 1989; March 1990; November 1990; June 1992. Presentation to the New England Telecommunications Association, March 1990.

“How to Capitalize on the New Tariffs.” Presentation at Communications Managers Association conference, 1988.

Advisor to:

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