

**STATE OF NEW JERSEY
OFFICE OF ADMINISTRATIVE LAW
BEFORE THE HONORABLE GAIL M. COOKSON**

I/M/O THE PETITION OF PUBLIC)	
SERVICE ELECTRIC AND GAS)	
COMPANY FOR APPROVAL OF AN)	
INCREASE IN ELECTRIC AND GAS)	
RATES AND FOR CHANGES IN THE)	BPU DOCKET NOS. ER18010029 and
TARIFFS FOR ELECTRIC AND GAS)	GR18010030
SERVICE, B.P.U.N.J. NO.16 ELECTRIC)	
AND B.P.U.N.J. NO. 16 GAS, AND FOR)	
CHANGES IN DEPRECIATION RATES,)	OAL DOCKET NO. PUC 01151-18
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)	

**DIRECT TESTIMONY OF SUSAN M. BALDWIN
ON BEHALF OF THE
DIVISION OF RATE COUNSEL**

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FILED: August 6, 2018

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I. INTRODUCTION

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

A: My name is Susan M. Baldwin. My business address is 13 Church Hill Street, Watertown, Massachusetts, 02472. Since 1984, I have been specializing in the economics, regulation, and public policy of utilities, with a long-standing focus on telecommunications and with a more recent focus on consumer issues in electric and gas markets. Since 2001, I have been consulting to public sector agencies and consumer advocates as an independent consultant.

Q: Please summarize your educational background and professional experience.

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

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

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

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

A: Yes. In the past I analyzed customer service issues on behalf of Rate Counsel in Docket No. GR15111304 (New Jersey Natural Gas), Docket No. ER16040383 (Jersey Central Power & Light Company), Docket No. ER16030252 and Docket No. ER17030308 (Atlantic City Electric Company), Docket No. GR16090826I (Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas), and Docket No. GR17010071 (South Jersey Gas Company).

Also, in March 2018, I completed an in-depth analysis of the residential electric supply market on behalf of the Massachusetts Office of the Attorney General. In 2014, I

1 submitted testimony on behalf of the Connecticut Office of Consumer Counsel regarding
2 suppliers' rates and customer complaints in the electric retail supplier market, and, in
3 2015, I provided technical assistance to the Massachusetts Office of the Attorney General
4 regarding the development of consumer protection measures in the retail electric supplier
5 market. As Attachment A shows, between 1978 and 1983, I analyzed energy policy for,
6 among others, several government agencies in New England.

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

8 A: This testimony, which concerns customer service matters relating to Public Service
9 Electric and Gas Company ("PSE&G" or "Company"), is being submitted on behalf of
10 Rate Counsel.

11 **Q: Please summarize your findings.**

12 A: My testimony discusses serious problems with PSE&G's customer service including its
13 chronic failure to meet Board-ordered standards; its failure to adequately protect
14 customers' data privacy; its failure to remedy declining enrollment in low-income
15 assistance programs; the need to improve its procedures to protect customers with
16 medical equipment or emergencies, and to address declining deferred payment
17 arrangements, all while shut-offs have been increasing. The quality of PSE&G's
18 customer service affects many customers – the Company serves 1,909,218 households
19 with electricity¹ (more than three-fifths of New Jersey's households),² serves 1,639,940
20 households with gas,³ and provides both electric and gas service for 80 percent of its

¹ RCR-CUS-1, attachment (Excel file titled "RCR-CUS_0001_Electric Customer Counts 2013-2018")

² There are 3,064,645 households in New Jersey. https://www.census-charts.com/HF/New_Jersey.html

³ RCR-CUS-2, attachment (Excel file titled "RCR-CUS_0002_Gas Customer Counts 2013-2018")

territory.⁴

Board-Ordered Customer Service Metrics: In 2010, as part of a comprehensive stipulation, approved by Board Order in the last PSE&G base rate case,⁵ the Company agreed to meet eight customer service performance levels, four of which it has repeatedly failed to meet for both its electric and gas customers:

1. Customer complaints have exceeded the benchmark of one per 1,000 customers for every year since at least 2015.⁶ The vast majority of complaints concern collections⁷ – evidence that PSE&G’s customers are having difficulty paying their bills.

2. For at least eight years, PSE&G has failed to answer calls in a timely manner.⁸

3. For at least eight years, PSE&G has missed an unacceptably high number of scheduled customer appointments to, among other things, initiate new service and to restore disconnected service.⁹ When PSE&G misses appointments, its customers may then lack an essential utility.

4. For at least eight years, PSE&G has failed to read meters on-cycle, which can lead

⁴ RCR-CUS-68.

⁵ I/M/O 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. 14 Electric and B.P.U.N.J. No. 14 Gas Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and for Approval of a Gas Weather Normalization Clause; a Pension Expense Tracker and for Other Appropriate Relief, Decision and Order Approving Stipulation and Adopting Initial Decision for Electric Division, Docket No. GR09050422, OAL Dkt. No. PUCRL-07599-2009N, June 7, 2010 (“2010 Board Order”); see also id., “Stipulation of Settlement,” at 9-10 (paragraph 10), and Attachment B to Stipulation.

⁶ In 2015, the Company revised the way it calculates the complaint rate so one cannot determine using current numbers whether it exceeded the benchmark between 2010 and 2014. RCR-CUS-61, Excel attachment, first tab entitled “bpu stats.”

⁷ RCR-CUS-18, attachment (Excel file titled “BPU inquiries 2013 through Feb 2018”).

⁸ RCR-CUS-61, attachment (Excel file titled “BPU Rate Case Metrics History”).

⁹ RCR-CUS-61, attachment (Excel file titled “BPU Rate Case Metrics History”).

1 to incorrect billing that then needs to be corrected in subsequent billing periods.

2 The Company should be held accountable for these Board-ordered performance metrics,
3 and should be required to propose and comply with a specific plan to achieve compliance
4 within a short and specific period of time. If compliance is still not achieved, there
5 should be financial consequences of sufficient magnitude to create the requisite incentive
6 for compliance.

7 **Data Privacy:** In November 2017, PSE&G's customer data privacy was breached as a
8 result of the Company's vendor's failure to protect customer data. Approximately 22,000
9 customers had their PSE&G Contract Account Number, banking account number, and
10 bank routing number exposed.¹⁰ The PSE&G Contract Account Number and service
11 address for *all* of PSE&G's approximate 2.5 million customers were also exposed as part
12 of the same data breach.¹¹ The Company belatedly informed its customers of this data
13 breach, conducted inadequate customer notification of the data breach, and has yet to
14 offer a public explanation of the lessons it learned from that experience and the steps it is
15 taking to prevent recurrences of such data breaches.

16 **Enrollment in assistance and protection programs:** More customers need assistance
17 paying their bills but are having trouble accessing available assistance:

- 18
- The number of newly established deferred payment arrangements (DPAs) has

¹⁰ RCR-CUS-137.b.

¹¹ RCR-CUS-124, RCR-CUS-137.b and RCR-CUS-147.c. See also RCR-CUS-147.e.

1 been declining since 2013,¹² although the number of shut-offs increased by more
2 than 5% between 2015 and 2017.¹³ The Company should be directed to take pro-
3 active steps to prevent shut-offs, such as assisting customers to enroll in DPAs.

- 4 • Participation in low-income assistance programs has been declining.¹⁴ The
5 Company should expand outreach, especially in the poorest communities in its
6 service territory.
- 7 • Enrollment in the Company's programs, whereby customers who depend on life-
8 sustaining equipment and who have medical emergencies are protected from shut-
9 off, varies significantly among municipalities.¹⁵ The Company should increase
10 public awareness of this option and ensure that the process for enrolling is
11 accessible and understandable for customers. It is critically important to prevent
12 the disconnection of customers with life-sustaining equipment or medical
13 emergencies or during extremely hot or cold weather. These protections are
14 required by Board rules. N.J.A.C. 14:3-3A.2 and N.J.A.C. 14:3-3A.4.

15 **II. BOARD-ORDERED CUSTOMER SERVICE STANDARDS**

16
17 **Q: Has the Board ordered the Company to meet specific customer service standards for**
18 **both electric and gas customers?**

¹² RCR-CUS-81, attachment (Excel file "RCR-CUS_0081_PSEG DPAs").

¹³ RCR-CUS-97, attachment (Excel file "RCR-CUS_0097 Shutoff detail").

¹⁴ RCR-CUS-93, attachment (Excel file "RCR-CUS_0093 PSEnG Combined Bills Compared to Income").

¹⁵ RCR-CUS-90, attachment (Excel file titled "RCR-CUS_0090_PSEG P4 by municipality").

1 A: Yes. In PSE&G's last base rate case, in 2010, the Board ordered the Company to answer
2 at least 80% of its calls within 30 seconds, to have no more than one complaint to the
3 Board for every 1,000 of its customers, to meet at least 95% of its scheduled service
4 appointments, and to read at least 95% of customer meters on cycle.¹⁶

5 **Q: Is the Company complying with Board-ordered customer service standards for both**
6 **electric and gas customers?**¹⁷

7 A: No. Tables 1, 4, and 5, below, show that throughout the eight-year period spanning 2010
8 through 2017, the Company consistently failed to answer customer phone calls promptly
9 (Table 1), to honor customer service appointments (Table 4),¹⁸ and to read meters on-
10 cycle (Table 5).¹⁹ Also, in each of the three most recent years, the Company was the
11 subject of a high number of customer complaints to the Board, in excess of the standard
12 ordered by the Board in PSE&G's last base rate case (Table 2).²⁰ In addition to its
13 statutory and regulatory obligations, PSE&G agreed to comply with these standards eight
14 years ago, and the Board so ordered.²¹ The Company's failure to meet four of the eight
15 Board-ordered standards has led to a prolonged period of inadequate customer service.

¹⁶ 2010 Board Order, at 9; see also, id., "Stipulation of Settlement," at 9-10 (paragraph 10) and Attachment B to Stipulation of Settlement. See also, 2010 Board Order, at 5 (Provision No. 10).

¹⁷ Id.

¹⁸ As set forth in Attachment B to the Stipulation approved in the 2010 Board Order, the missed appointment metric applies to: "appointments for meter installations, disconnects and reconnects, billing investigations, initial and final meter reads and excludes regularly scheduled meter reads, gas leaks, emergencies, outages and appointments missed by the customer."

¹⁹ RCR-CUS-61, attachment (excel file titled "BPU Rate Case Metrics History"). The Company's speed of answering calls improved for the month between February and March 2018, but still fell short of the Board standard and does not provide a meaningful track record. Id.

²⁰ Most of these complaints related to "shut-offs for non-payment, shut off notices, deposits, final bills, etc." RCR-CUS-18, attachment (Excel file titled "BPU inquiries 2013 through Feb 2018").

²¹ 2010 Board Order, at 9; see also, id., "Stipulation of Settlement," at 9-10 (paragraph 10) and Attachment B to Stipulation of Settlement. See also, 2010 Board Order, at 5 (Provision No. 10).

Q: Please elaborate on the Company’s performance on the first standard, answering customers’ calls within 30 seconds.

A: As Table 1, below, shows, the Company has yet to correct eight years of excessively slow call answer time. The Company’s persistent failure to answer calls within the Board-ordered time harms customers.

Table 1²²
Speed of Answer Relative to Board-Ordered Standard

Minimum % of calls answered within 30 seconds	
Board Standard	80%
Actual Performance	
2010	61.6%
2011	78.6%
2012	78.5%
2013	77.2%
2014	71.3%
2015	76.3%
2016	77.6%
2017	72.7%

Q: Has the Company met the second metric ordered by the Board, regarding customer complaints?

A: No. As Table 2, below, shows, in 2017, there were 1.26 complaints to the Board per thousand PSE&G customers, which is 26% worse than the Board-established standard of

²² RCR-CUS-61, attachment (Excel file titled “BPU Rate Case Metrics History”).

1 1.00 complaints per thousand.²³ Moreover, my analysis of complaints by municipality
2 demonstrates that the Company has more complaints from low-income municipalities
3 than the territory-wide average.²⁴

²³ 2010 Board Order, at 9; see also, id., “Stipulation of Settlement,” at 9-10 (paragraph 10) and Attachment B to Stipulation of Settlement. See also, 2010 Board Order, at 5 (Provision No. 10).

²⁴ My calculations show, for example, 7.58 complaints per thousand Camden customers and 4.91 complaints per thousand Trenton customers; by comparison, there were only 1.36 complaints per thousand Edison customers and 1.00 complaint per thousand Princeton customers. RCR-CUS-18, attachment 2 (Excel file entitled “BPU Inquiries by Municipality”). This disparity is consistent with the fact that collections are the major source of complaints. The median household incomes in the first two communities are \$26,214 and \$34,412, respectively, and the median household incomes in the latter two communities are \$91,821 and \$118,467, respectively.
<https://www.census.gov/quickfacts/fact/table/camdencitynewjersey/PST045217>;
<https://www.census.gov/quickfacts/fact/table/princetonnewjersey/PST045217>;
<https://www.census.gov/quickfacts/fact/table/trentoncitynewjersey/PST045217>;
<https://www.census.gov/quickfacts/fact/table/edisontownshipmiddlesexcountynewjersey/PST045217> .

Table 2²⁵
Number of Consumer Complaints to the Board Relative to the Board-Ordered Standard

Maximum # of consumer complaints to the Board per 1,000 customers	
Board Standard	1.00
Actual Performance	
2010	0.19
2011	0.16
2012	0.12
2013	0.13
2014	0.11
2015	1.43
2016	1.29
2017	1.26

Q: What is the major source of consumers' complaints, as recorded by the Company?

A: As Table 3, below, shows, approximately 80 percent of consumer complaints relate to bill collection. The high volume of collections-related complaints is consistent with my concern, which I discuss in Section IV below, that customers need help paying their bills. I am particularly concerned because the Company has proposed to raise residential rates significantly higher,²⁶ which will make it even harder for customers to pay their bills.

²⁵ RCR-CUS-61, attachment (Excel file titled "BPU Rate Case Metrics History"). The Company revised its calculation of the complaint metric in 2015. Id.

²⁶ PSE&G's Petition proposes to increase its electric distribution revenue by 9.47% and its gas distribution revenue by 23.31%.

1 This will cause difficulty not only for low-income customers, who may be eligible for
2 financial assistance, but also those with limited incomes who already have a hard time
3 making ends meet.²⁷

4 The Company classifies all other complaints as “non-collection. “Billing” makes up the
5 largest share of this non-collection category, which includes complaints relating to
6 “customer’s bills but not from customers in the collections process.”²⁸ As I understand
7 this category, it could include complaints from customers having difficulties paying their
8 bills. Complaints classified by the Company as “inquiries” (which the Company
9 describes as “related to the call center” and which I infer means complaints about
10 customers’ interactions with call centers) make up the second largest share of the non-
11 collection category of customer complaints.²⁹ These complaints are consistent with the
12 Company’s failure to answer calls within the Board-specified time.
13

²⁷ Social Security and Supplemental Security Income (SSI) benefits increased only 2.0 percent in 2018 for a cost-of-living adjustment (COLA). <https://www.ssa.gov/news/cola/>

²⁸ RCR-CUS-18, attachment (Excel file titled “BPU inquiries 2013 through Feb 2018”).

²⁹ RCR-CUS-18, attachment (Excel file titled “BPU inquiries 2013 through Feb 2018”).

Table 3

**Categories of Customer Complaints³⁰
2013 – 2017**

Complaint Category	2013 YE	2014 YE	2015 YE	2016 YE	2017 YE
Total Collection Complaints	4,771	5,131	4,559	4,060	4,043
Collections as % of Total	79%	79%	81%	81%	82%
Billing	451	484	415	343	311
Billing as % of Non-Collection	36%	36%	40%	35%	35%
Inquiry - the Call Center	187	234	126	139	146
Inquiry as % of Non-Collection	15%	18%	12%	14%	16%
Other Non-Collection	601	615	497	487	443
Other as % of Non-Collection	49%	46%	48%	50%	49%
Total Non-Collection Complaints	1,239	1,333	1,038	969	900
Non-Collections as % of Total	21%	21%	19%	19%	18%
Total of Collection and Non-Collection Complaints	6,010	6,464	5,597	5,029	4,943

Q: Is the Company's customer service adequate as measured by its compliance with the third Board-ordered criterion, meeting service appointments on the dates scheduled?

A: No. Eight years ago the Board ordered the Company to complete 95 percent of service appointments on the day scheduled.³¹ These appointments include appointments for meter installations, disconnects and reconnects, billing investigations, initial and final

³⁰ RCR-CUS-18, attachment (Excel file titled "BPU inquiries 2013 through Feb 2018").

³¹ 2010 Order, Stipulation, Appendix B, Customer Service Metric No. 7.

1 meter reads and exclude regularly scheduled meter reads, gas leaks, emergencies, outages
2 and appointments missed by the customer.³² Table 4, below, shows that PSE&G has yet
3 to meet this standard. In 2017, for example, the Company missed 12 percent of
4 scheduled appointments, more than twice the Board-ordered 5 percent.³³ That year, the
5 Company missed 32,930 more customer service appointments than the Board-permitted
6 standard.³⁴ The consequence of its failure to meet appointments is that, among other
7 things, some number of customers who want utility service must tolerate having no
8 service until PSE&G reschedules missed appointments.³⁵ Customers should not have to
9 wait extra days for utility service.

³² 2010 Order, Stipulation, Appendix B, Customer Service Metric No. 7.

³³ RCR-CUS-63, attachment (Excel file entitled "Service Appts").

³⁴ RCR-CUS-63, attachment (Excel file entitled "Service Appts").

³⁵ Because the metric for missed service appointments includes various categories of work, one cannot determine from the Company's quarterly reports how many of the missed appointments were for connections and reconnections of service as opposed to appointments for other kinds of work. RCR-CUS-61, attachment (Excel file titled "BPU Rate Case Metrics History").

Table 4³⁶
Service Appointments Met Relative to Board-Ordered Standard

Board Standard	95%
Actual Performance	
2010	81.0%
2011	83.0%
2012	89.0%
2013	90.0%
2014	87.0%
2015	88.0%
2016	90.0%
2017	88.0%

Q: Is the Company’s customer service adequate as measured by its compliance with the fourth Board-ordered standard, for reading gas and electric meters?

A: No. Eight years ago the Board ordered the Company to read 95 percent of gas and electric meters on-cycle.³⁷ Table 5, below, shows that PSE&G has yet to meet this standard. Moreover, the Company’s performance relative to this metric varies significantly among its nine reporting districts: in 2017, its performance ranged between a low of 80.2 percent in the Newark District and a high of 94.9 percent in the New Brunswick District (with the performance measured on a combined basis for electric and gas meter-reading).³⁸

³⁶ RCR-CUS-61, attachment (Excel file titled “BPU Rate Case Metrics History”).

³⁷ 2010 Order, Stipulation, Appendix B, Customer Service Metric No. 7. These appointments include “appointments for meter installations, disconnects and reconnects, billing investigations, initial and final meter reads” and “excludes regularly scheduled meter reads, gas leaks, emergencies, outages and appointments missed by the customer.”

³⁸ RCR-CUS-28, attachment (Excel file entitled RCR-CUS_0028-UPDATE2_2018Rate Case-MR Data).

Table 5³⁹
On-Cycle Meters Read Relative to Board-Ordered Standard

Board Standard	95%
Actual Performance	
2010	89.1%
2011	85.9%
2012	85.1%
2013	88.0%
2014	85.9%
2015	87.6%
2016	90.1%
2017	90.1%

Q: What do you conclude about the Company's performance relative to the four Board-ordered customer service standards?

A: The Company has failed to provide adequate customer service to its electric and gas customers as is shown by its long-standing non-compliance with the 2010 Board Order for: 1) answering 80 percent of calls within 30 seconds; 2) capping customer complaints at no more than one per thousand customers; 3) meeting 95 percent of service appointments on the day scheduled; and 4) reading 95 percent of meters on-cycle throughout all of its service territory. The Board should require the Company to submit a detailed action plan to demonstrate how it will come into compliance with these requirements and establish financial consequences if compliance is not achieved.

³⁹ RCR-CUS-61, attachment (Excel file titled "BPU Rate Case Metrics History").

III. CUSTOMER SERVICE: CUSTOMERS' DATA PRIVACY

Q: Has PSE&G failed to protect its customers' data privacy?

A: Yes. Customers who paid by check between 2012 and 2017 at kiosks in the PSE&G customer service centers (all of which were operated by TIO Networks ("TIO"))⁴⁰ had their PSE&G Contract Account Number, checking account number and bank routing number exposed in November 2017.⁴¹ PSE&G indicates that approximately 22,000 customers had their PSE&G Contract Account Number, banking account number, and bank routing number exposed.⁴² The PSE&G Contract Account Number and service address for *all* of PSE&G's approximately 2.5 million customers (going back to 2014 for the Contract Account Numbers and back to 2015 for the Contract Account Numbers and the addresses) were also exposed as part of the same data breach.⁴³

Q: What does "personally identifiable information" mean?

A: As defined by New Jersey statute:

"Personal information" means an individual's first name or first initial and last name linked with any one or more of the following data elements: (1) Social Security number; (2) driver's license number or State identification card number; or (3) account number or credit or debit card number, in combination with any required security code, access code, or password that would permit access to an individual's financial account. Dissociated data that, if linked, would constitute personal information is personal

⁴⁰ PSE&G first entered into a contract with TIO Networks to process payments in 2012. RCR-CUS-127.

⁴¹ RCR-CUS-147.c. TIO-operated kiosks in the Company's customer service centers were located throughout the Company's service territory. RCR-CUS-147.h.

⁴² RCR-CUS-137.b.

⁴³ RCR-CUS-124, RCR-CUS-137.b and RCR-CUS-147.c. See also RCR-CUS-147.e.

1 information if the means to link the dissociated data were accessed in
2 connection with access to the dissociated data.⁴⁴
3

4 **Q: What is the harm to customers from the TIO⁴⁵ data breach?**

5 A: The TIO systems stored personal information such as payment card information, bank
6 account information, Social Security and other government identification numbers, and
7 account usernames and passwords.⁴⁶ The inherent identity theft risk created by the
8 exposure of customer information, combined with the inconvenience and cost to
9 customers of responding to a notice of a possible breach of their information (and the
10 potential for future breaches), causes harm to customers. As customers increasingly rely
11 on credit cards to pay bills, which involve third-party handling of customer information,
12 the risk of exposing customer information is further increased.

13 **Q: When did PayPal first announce the possible data breach?**

14 A: PayPal, which had acquired TIO Networks in July 2017, issued a press release on
15 November 10, 2017 about the potential data breach, referring to “security
16 vulnerabilities.”⁴⁷ PayPal notified PSE&G via email and phone on November 12, 2017
17 that PayPal had suspended operations of TIO’s networks but not until over two weeks

⁴⁴ N.J.S.A. 56:8-161 (2013).

⁴⁵ “In an effort to expand its operations, PayPal Holdings, Inc. acquired TIO Networks, a multi-channel bill payment processor that serves over 16 million accounts, in July 2017 for \$238 million. However, on November 10, PayPal abruptly announced that it was suspending operations of its new acquisition. The company admitted to a security breach but provided no further explanation.” “PayPal reports Data Breach Affects 1.6M TIO Customers,” TrendMicro, December 4, 2017, <https://www.trendmicro.com/vinfo/us/security/news/cybercrime-and-digital-threats/paypal-reports-data-breach-affects-1-6-m-tio-customers>.

⁴⁶ <http://www.tio.com/incident.html>, site visited July 22, 2018.

⁴⁷ Press release by PayPal Holdings, Inc., “TIO Networks Suspends Operations to Protect Customers Security Vulnerabilities Detected on TIO Networks,” November 10, 2017, http://www.tio.com/PYPL_News_2017_11_10_General_Releases.pdf, site visited July 22, 2018. Exhibit SMB-1 reproduces this press release.

1 later (November 28, 2017) did PayPal notify PSE&G via phone that it had uncovered
2 evidence of unauthorized access to TIO's network, including locations that stored
3 customer data.⁴⁸ Although PayPal's delay in notifying PSE&G was outside of PSE&G's
4 direct control, the delay underscores the importance of PSE&G establishing better
5 systems for notification of any future similar occurrences involving its vendors.

6 **Q: When did the Company notify the Board, the State Attorney General, and Rate**
7 **Counsel of the possible data breach?**

8 A: PSE&G notified the Board and the State Attorney General's Office on November 30,
9 2017 of the potential data breach and notified Rate Counsel on December 14, 2017.⁴⁹
10 More recently, on March 22, 2018, PayPal announced on its web site: "After careful
11 consideration, PayPal has decided to not restore TIO's services and will wind down
12 TIO's business accordingly."⁵⁰

13 **Q: How were PSE&G's customers originally notified of the potential data breach?**

14 A: The Company notified its customers as follows: "two letters directly mailed to customers
15 who had their checking account and bank routing numbers exposed; a press release; a
16 webpage devoted to the TIO security incident, including Frequently Asked Questions; a
17 notice in all 16 PSE&G customer service centers in the state; and a bill notice."⁵¹

18 **Q: In your view, was this customer notification conducted in a timely manner?**

⁴⁸ RCR-CUS-141.

⁴⁹ RCR-CUS-153 and RCR-CUS-154.

⁵⁰ "TIO Networks Provides Second Update on Suspension of Operations," March 22, 2018, <http://www.tio.com/>, site visited July 22, 2018.

⁵¹ RCR-CUS-139. The Company provided two different numbers for the quantity of customers whose bank routing numbers were exposed. See RCR-CUS-137.b (22,000 customers); see also RCR-CUS-155 (17,000 customers).

1 A: No. On November 28, 2017, PayPal notified PSE&G via phone that it had
2 uncovered evidence of unauthorized access to TIO's network, including locations that
3 stored customer data.⁵² PSE&G sent its first communication to approximately 17,000
4 customers on December 5, 2017,⁵³ one week after PayPal notified PSE&G on November
5 28 of the potential breach of its customers' information. PSE&G then sent a follow up
6 letter "on or about December 13, 2017."⁵⁴ PSE&G also issued a public press release on
7 the PR Newswire on December 13, 2017.⁵⁵ On December 20, 2017, PSE&G posted the
8 notification along with FAQs associated with the breach on its website and also sent a
9 first batch of bill inserts to notify customers on January 8, 2018.⁵⁶

10 **Q: What is being offered to customers in light of the possible exposure of their**
11 **personal information?**

12 A: TIO is offering one year of complimentary identity theft protection that includes credit
13 monitoring, identity theft insurance, and assistance with combating identity theft and
14 fraud should any be detected.⁵⁷

15 **Q: Has PSE&G notified its customers of this option for one year of complimentary**
16 **identity protection?**

17 A: The Company states: "Approximately 17,000 customers whose checking account and
18 routing number were exposed have been offered free identify theft protection and credit

⁵² RCR-CUS-141.

⁵³ RCR-CUS-155.

⁵⁴ RCR-CUS-155.

⁵⁵ RCR-CUS-155.

⁵⁶ RCR-CUS-155.

⁵⁷ <http://www.tio.com/incident.html>, site visited July 22, 2018.

1 monitoring services for a period of 12 months.”⁵⁸ However, it is not clear how that
2 “offer” has been made, i.e., how customers have been notified of this option, nor why all
3 22,000 of its customers affected by the data breach ⁵⁹ were not offered this identity
4 protection.

5 **Q: Has the Company provided an explanation of how the data breach occurred and the**
6 **ways in which it plans to prevent similar occurrences?**

7 A: No. The Company has yet to provide a detailed public explanation of how the data
8 breach occurred and how the Company intends to protect its customers’ data privacy in
9 the future. The Company engaged Gartner Consulting, but has not provided a public
10 accounting of that company’s report.⁶⁰ Also, PayPal is conducting a forensic
11 investigation, but the results of that report have not yet been made public.⁶¹

12 **Q: Has the Board issued guidance to utilities on cybersecurity?**

13 A: Yes. The Board has previously stated with reference to cybersecurity:
14

15 As described above, Utilities’ systems are increasingly susceptible to
16 cyber-attack, which jeopardizes safety, reliability, and customer privacy.
17 Due to the critical nature of Utilities’ services, action beyond information
18 sharing and implementing best practices is necessary to safeguard the
19 Utilities’ critical systems.⁶²
20

⁵⁸ RCR-CUS-138.

⁵⁹ RCR-CUS-137.b.

⁶⁰ “Given the confidential nature of this data privacy initiative, a copy of the contract with Gartner Consulting as well as its report is available for BPU Staff’s and Rate Counsel’s review at the Company’s offices in Newark.” RCR-CUS-191.

⁶¹ In response to RCR-CUS-189, the Company stated: “PSE&G inquired as to the earliest date of indicators of compromise from PayPal. PayPal responded that it would not be in a position to answer the question until its forensic investigation is complete.”

⁶² *In the Matter of Utility Cyber Security Program Requirements*, Docket No. A016030196, *Order*, March 28, 2016, at 3.

1 Any business that is involved with e-commerce must incorporate adequate cyber-security
2 measures. The Board set forth numerous requirements regarding cyber-security,
3 including, among other things, the directive to utilities to “safeguard their computerized
4 systems against cyber-attacks.”⁶³ The Board also directed utilities to report cyber-
5 security incidents to the Board’s Reliability and Security Division Staff, which PSE&G
6 did on November 30, 2017, two days after PSE&G clearly learned of the incident.⁶⁴
7 PSE&G should be directed to advise the public of the results of its investigations so that
8 customers are informed fully about the scope of their risk. PSE&G should also release
9 relevant summaries of the report that the Gartner Group has prepared on behalf of the
10 Company.⁶⁵
11

12 PSE&G’s cybersecurity plans were inadequate to protect its customers’ personal
13 information and, as a result, it failed to meet its obligation to provide safe, adequate and
14 proper service.⁶⁶ Simply subcontracting the handling of personally identifying
15 information does not absolve the Company of its obligation to make sure that systems are
16 in place to protect that information.
17

18 In addition to PSE&G’s Board-ordered obligations, PSE&G also must comply with a
19 four-step “red flag” process set forth by the Federal Trade Commission (“FTC”). “The

⁶³ *Id.*, at 4.

⁶⁴ *Id.*, at 5; RCR-CUS-153.

⁶⁵ RCR-CUS-191.

⁶⁶ See also testimony of Charlie Salamone and Maximillian Chang for further discussion of cybersecurity issues.

1 Red Flags Rule defines a “financial institution” as (emphasis added) “a state or national
2 bank, a state or federal savings and loan association, a mutual savings bank, a state or
3 federal credit union, *or a person that, directly or indirectly, holds a transaction account*
4 *belonging to a consumer.*”⁶⁷ The Red Flag rules require utility companies to include four
5 elements of an identity theft prevention program and, as described by the FTC, the
6 program must, among other things:

- 7 1. “include reasonable policies and procedures to identify the red flags of
8 identity theft that may occur in your day-to-day operations.”
- 9 2. “be designed to detect the red flags you’ve identified.”
- 10 3. “spell out appropriate actions you’ll take when you detect red flags.”
- 11 4. “detail how you’ll keep it current to reflect new threats.”⁶⁸

12
13 The lessons to be learned are: (1) PSE&G is responsible not only for its own internal
14 systems but also for its vendors’ handling of customers’ personal information on the
15 Company’s behalf,⁶⁹ and specifically as those actions affect PSE&G’s compliance with
16 Board cybersecurity requirements⁷⁰ (foremost, complying with the directive to utilities to

⁶⁷ <https://www.ftc.gov/tips-advice/business-center/guidance/fighting-identity-theft-red-flags-rule-how-guide-business>, cite omitted, emphasis added. See also <https://www.utilityproducts.com/articles/print/volume-6/issue-8/features/feature-story/utility-companies-must-comply-with-ftcs-quot-red-flags-rules.html>.

⁶⁸ <https://www.ftc.gov/tips-advice/business-center/guidance/fighting-identity-theft-red-flags-rule-how-guide-business>

⁶⁹ This exemplifies what economists label the “principal-agent” problem: namely two parties (the Company and its customers) have different interests and asymmetric information: The agent (PSE&G) has more information than the principal (the customer) and, as a result, the principal (customer) cannot directly ascertain that the agent (PSE&G) is acting in the principal’s best interest. This situation calls out for adequate regulatory oversight and safeguards. At a minimum, PSE&G should, with the resources of its own legal and cybersecurity teams, ensure that any vendor acting on behalf of the Company has secure processes in place before the vendor commences work.

⁷⁰ *In the Matter of Utility Cyber Security Program Requirements*, Docket No. A016030196, *Order*, March 28, 2016, at 3.

1 “safeguard their computerized systems against cyber-attacks”⁷¹); (2) PSE&G’s
2 cybersecurity team should monitor the web sites of any of its vendors who handle
3 sensitive PSE&G customer information; and (3) PSE&G should require its vendors to
4 provide timely notification of potential security breaches.

5 The FTC's Red Flags rules further underscore the importance of a utility having a robust
6 cyber-security plan in today's economy where customers' identity is vulnerable to
7 exposure. I recommend that the Board direct PSE&G to inform Board Staff and Rate
8 Counsel of the specific Red Flags that PSE&G is using to comply with FTC
9 requirements.

10
11 **IV. CUSTOMER SERVICE: ENROLLMENT IN ASSISTANCE AND**
12 **PROTECTION PROGRAMS**

13
14 **Q: Is PSE&G doing enough to help customers pay their bills?**

15 **A:** No. PSE&G is not doing enough to help customers pay their bills:

- 16 • After declining between 2014 and 2015, shut-offs by PSE&G increased by more than
17 5% between 2015 and 2017 (from 149,969 to 157,901), an annual increase of 2.6%.⁷²

18 The Company acknowledges that “[i]ncreasing participation in low income programs
19 should help to lower the number of future shutoffs.”⁷³ But as Table 6, below, shows,
20 fewer PSE&G customer households are receiving assistance through low income

⁷¹ *Id.*, at 4.

⁷² RCR-CUS-97, attachment (Excel file “RCR-CUS_0097 Shutoff detail”).

⁷³ RCR-CUS-81, attachment (Excel file “RCR-CUS_0081_PSEG DPAs”).

1 programs.

- 2
- 3 • Deferred payment arrangements (DPAs) help customers pay bills, but the number of
4 newly established DPAs has been declining (between 2013 and 2017 from 220,163 to
5 189,146)⁷⁴ – which, in turn, may contribute to increasing shut-offs and consumer
6 complaints at numbers above the Board-directed level.
- 7

8 As Table 3, in Section II, above, shows, the vast majority of complaints to the Board
9 about PSE&G concern collections.⁷⁵ Put all together, these facts underscore a
10 fundamental problem: although the Board directed the Company to keep customer
11 complaints below a certain level, the Company has failed to figure out how to address
12 customers' major concern, namely collections. The Company's reliance on an improving
13 economy (as measured, in part, by the unemployment rate) to excuse declining
14 participation in low-income assistance programs⁷⁶ is unpersuasive in light of high
15 consumer complaints and increasing shut-offs.

⁷⁴ RCR-CUS-81.

⁷⁵ RCR-CUS-18, attachment (Excel file titled "BPU inquiries 2013 through Feb 2018").

⁷⁶ RCR-CUS-182 (b).

Table 6
Participation in Major Low-Income Programs⁷⁷

	Year	USF	LIHEAP	Lifeline
	2009	134,059	88,707	58,656
	2010	152,693	99,969	56,432
	2011	171,319	92,011	56,192
	2012	170,308	93,344	53,523
	2013	163,665	96,375	52,586
	2014	160,169	96,811	50,251
	2015	154,731	90,640	48,175
	2016	145,863	88,530	45,978
	2017	133,166	86,038	44,020
Change 2009 to 2017	Absolute	(893)	(2,669)	(14,636)
	Percent	-1%	-3%	-25%

Low-income assistance programs help cash-strapped customers pay their utility bills. It is critically important that the Company undertake comprehensive efforts to ensure that customers who are eligible to participate in these programs do so. Eligible customers must be educated about these programs in their native language and receive assistance from the Company in program enrollment.

Q: Did you review the outcome of DPAs between PSE&G and its customers?

A: Yes. The five-year failure rate, of approximately 72 percent, shown in Table 7, below, has two adverse consequences. First, it likely contributes to the high number of shut-offs,

⁷⁷ RCR-CUS-93, attachment (Excel file titled "RCR-CUS_0093 PSEnG Combined Bills Compared to Income").

harming customers. Also, defaults lead to expenses that all of the Company's customers must pay through the Company's rates. Gas customer defaults are included in gas distribution base rates, while electric customer defaults are included in the Social Benefit Charge.⁷⁸ Therefore, progress in reducing defaults benefits ratepayers who have difficulty paying their bills as well as all of PSE&G's customers.

Table 7
Deferred Payment Arrangements⁷⁹

	Newly established DPAs	Number of defaulted DPAs	Failure Rate	Success Rate
2013	220,163	165,855	75.3%	24.7%
2014	221,039	159,050	72.0%	28.0%
2015	200,705	143,322	71.4%	28.6%
2016	179,668	129,374	72.0%	28.0%
2017	189,146	136,277	72.0%	28.0%

In sum, PSE&G should increase its customers' participation in low-income assistance programs, which should help improve DPA success rates. This in turn should reduce the disconnection of essential services and also likely reduce the number of customer complaints.

Q: Do the increasing numbers of shut-offs raise other public policy concerns?⁸⁰

A: Yes. Board rules protect customers with life-sustaining equipment or medical emergencies from being disconnected for non-payment of their bills, and so it is important that PSE&G educate and inform its customers accordingly. The Company

⁷⁸ See N.J.S.A. 48:3-60.

⁷⁹ RCR-CUS-81, attachment (Excel file titled "RCR-CUS_0081_PSEG DPAs").

⁸⁰ Rate Counsel reserves the right to amend this section based upon discovery to be received from the Company.

1 flags certain customers' electric service from disconnection if a doctor has certified that a
2 member of the household is utilizing life sustaining equipment. PSE&G refers to these
3 customers as "P4" customers (the reason for using this specific designation is unclear)
4 and PSE&G initiates a recertification process for these customers annually.⁸¹ However,
5 all households who are eligible from such a designation may not be participating in this
6 program. It is critically important for PSE&G to educate its customer service
7 representatives about this option for protection from shut-off so that they, in turn, can
8 inform customers.

9
10 Also, it is extremely difficult to locate information about this option on the Company's
11 web site. It was only with great difficulty that I found information about the option to
12 register life-sustaining equipment or to notify the Company of a medical emergency in
13 the household. Exhibit SMB-2 records my real-time experience making a good-faith
14 effort to locate the information. It should not be so hard to find information about such
15 an important option.

16 **Q: Please elaborate on the public policy concerns raised.**

17 A: The societal benefit and the benefit to individuals of these important options depend
18 critically on the degree to which health care providers, medical device vendors,
19 community organizations, municipal officials, social workers, and individuals are aware
20 that PSE&G provides them. Presently, 4,065 PSE&G customers have the "P4" medical

⁸¹ RCR-CUS-90.a.

1 designation,⁸² but I am unaware of any surveys, studies or other sources of information
2 that indicate how many PSE&G households may be eligible for the P4 medical
3 designation and how many of them are protected from service disconnection.⁸³ More
4 importantly, the question is how customers learn of the option for these protections,
5 whether the enrollment process is fair and understandable, and how PSE&G coordinates
6 with relevant entities (such as health care providers, medical device vendors, municipal
7 officials, etc.).

8 **Q: Is outreach on protection from disconnection for medical issues especially important**
9 **in some communities?**

10 A: Yes. Because customers in low-income communities are more exposed to shutoffs,⁸⁴
11 more outreach to those communities is appropriate concerning the protections from
12 service disconnection for customers with life-sustaining equipment and medical
13 emergencies.

⁸² RCR-CUS-90.b.

⁸³ This testimony does not address the fatal incident last month, which is the subject of investigations by the Company, the Board and the Essex County Prosecutor. Nevertheless, that tragic incident underscores the importance of making sure that customers can easily learn about and enroll in the Company's medical protection programs. Opening Remarks of Board President Joseph L. Fiordaliso, July 25, 2018 Board Agenda meeting, transcript, 5T:L8 – 6T:L5 (7/25/18). On July 13, 2018, PSE&G announced that senior management retained Theodore V. Wells, Esq. and the law firm of Paul, Weiss, Rifkind, Wharton & Garrison LLP, to conduct an independent investigation of the facts surrounding the Company's actions regarding the suspension of electric service for Linda Daniels. <https://nj.pseg.com/newsroom/newsrelease18>.

⁸⁴ For example, in 2017, shutoffs in the three poorest cities in PSE&G's service territory greatly exceeded the territory-wide shutoff average of 8 percent of electric households: in Camden, 26 percent of the 24,989 households were shut off; in Newark, 21 percent of the 91,768 households were shut off; and in Passaic City 14 percent of the 18,741 households were shut off. Camden, Newark, and Passaic City are the 1st, 3rd, and 4th poorest cities in New Jersey: https://www.nj.com/data/2018/01/35_poorest_towns_in_nj.html. Numbers of electric customers by municipality: RCR-CUS-3, attachment (Excel file titled "RCR-CUS_0003_Electric Residential Customers by Municipality"); statewide and municipal-level data on shut-offs: RCR-CUS-97, attachment (Excel file titled "RCR-CUS_0097_Shutoff detail") (see, also, RCR-CUS-97, which indicates that the shut-off activity shown in the attachment to the response entitled "Shutoff Detail" includes premises other than residential households).

1 **Q: Is training staff on how to interact with customers claiming health issues at the**
2 **residence equally important?**

3 A: Yes, effectively managing protections from disconnection, for customers with life-
4 sustaining equipment or medical emergencies, requires proper training for Company staff
5 who interact with the public. Customer awareness without adequate Company staffing
6 and procedures may not be very helpful.

7 **Q What do you recommend?**

8 A: I urge the Board to direct PSE&G to submit a cost-effective plan to Board Staff and Rate
9 Counsel to improve its P4 enrollment throughout all of the communities that it serves in
10 New Jersey. That plan should include specific ways the Company will improve public
11 awareness of the option for the “P4” designation and related processes; an assessment of
12 other utilities’ best practices, which may include coordinating with health care providers,
13 medical device vendors, and others; and metrics to evaluate the effectiveness of the plan,
14 such as increasing “P4” enrollments. I also recommend that the Company conspicuously
15 post the P4 information, including enrollment instructions and all forms such as the
16 medical certification, on the “Home” page of PSE&G’s web site. Outreach through a
17 variety of media may also be appropriate.⁸⁵ PSE&G’s outreach should also involve its
18 outreach for payment assistance, since medical protections and protection from hot-

⁸⁵ For example, internet use is lower as income declines and as age increases, the lack of internet access increases correspondingly: poor, older persons – precisely the most vulnerable population – are the least likely to look for information on a web page. “Internet/Broadband Fact Sheet,” Pew Research Center Internet & Technology, February 5, 2018, <http://www.pewinternet.org/fact-sheet/internet-broadband/>.

1 weather shutoffs are available for those in the “Winter Termination Program,” that is, for
2 those customers having difficulty making their utility payments.

3 **V. CONCLUSION**

4
5 **Q: Does this conclude your testimony?**

6 **A:** Yes. I reserve the right to supplement my testimony as additional discovery and final
7 data are provided by the Company.

ATTACHMENT A

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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 years, more than thirty-four of which have been in telecommunications 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 John F. 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 23 public utility commissions, 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 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. She prepared comprehensive testimony analyzing mass market impairment on behalf of the New Jersey Division of Rate Counsel, the Arkansas Office of the Attorney General, and the Utah Committee of Consumer Services.

In 2018, Ms. Baldwin conducted an in-depth analysis of the retail residential electric market in Massachusetts and was the lead author for the resulting report (“Analysis of the Individual Residential Electric Supply Market in Massachusetts: Are Consumers Benefiting from Competition?” released on March 29, 2018, prepared for the Massachusetts Office of the Attorney General). She co-sponsored testimony in 2014 on behalf of the Connecticut Office of Consumer Counsel regarding the electric retail market. In her testimony she summarized her detailed analysis in Connecticut of the prices that all retail customers of suppliers pay as well as her detailed review of consumer complaints regarding the retail electric market.

Ms. Baldwin has also assisted consumer advocate offices with various customer service issues in the electric and gas industries. During 2014, she also assisted the Massachusetts Office of the Attorney General with consumer education regarding the retail electric market. 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 1992-2000), 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 New England Telephone Company's rates, 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, 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.

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, Pennsylvania PUC Docket No. P-2015-2509336, 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.

In re: Deregulation of Local Exchange Service, Iowa Utilities Board Docket No. INU-2016-0001,

testimony on behalf of Office of Consumer Advocate, February 17, 2017 and April 21, 2017, cross-examined May 23, 2017.

Proceeding on Motion of the Commission to Consider the Adequacy of Verizon New York Inc.'s Retail Service Quality Processes and Programs, New York Public Service Commission Case 16-C-0122, 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.

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), New Jersey Board of Public Utilities Docket No. ER 17030308, testimony on behalf of New Jersey Division of Rate Counsel, August 1, 2017.

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, Wyoming Public Service Commission Docket No. 700000-1644-TA-17, testimony on behalf of AARP, November 15, 2017.

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

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:

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

“Analysis of Local Exchange Carrier April 1988 Bypass Data Submissions” (with William P. Montgomery and Dr. Lee L. Selwyn). Prepared for the National Association of State Utility Consumer Advocates, August 1988.

“Tariff Data is Critical to Network Management.” *Telecommunications Products and Technology*, May 1988 (Volume 6, No. 5).

“Strategic Planning for Corporate Telecommunications in the Post-Divestiture Era: A Five Year View” (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.

“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.

“How Two New England Cities Got a \$100 Million Waste-to-Energy Project” (with Diane Schwartz). *Planning*, March 1983 (Volume 49, Number 3).

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

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“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:

“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.

EXHIBITS



November 10, 2017

TIO Networks Suspends Operations to Protect Customers

Security Vulnerabilities Detected on TIO Networks

SAN JOSE, Calif.--(BUSINESS WIRE)-- PayPal Holdings, Inc. (Nasdaq: PYPL) announced that TIO Networks (TIO), a publicly traded company PayPal acquired in July 2017, has suspended operations to protect TIO's customers. This suspension of services is a result of PayPal's discovery of security vulnerabilities on the TIO platform and issues with TIO's data security program that do not adhere to PayPal's information security standards. TIO is not integrated into PayPal's platform. The PayPal platform is not impacted by this situation in any way and PayPal's customers' data remains secure.

Upon the recent discovery of this vulnerability on the TIO platform, PayPal took action by initiating an internal investigation of TIO and bringing in additional third-party cybersecurity expertise to review TIO's bill payment platform. A focus of the investigation will also include TIO's practices and representations prior to the acquisition.

While we apologize for any inconvenience this suspension of services may cause, the security of TIO's systems and the protection of TIO's customers are our highest priorities. We are working with the appropriate authorities to safeguard TIO customers.

Our investigation is ongoing. We will communicate with TIO customers and merchant partners directly as soon as we have more details. Customer updates will also be posted at www.tio.com.

About PayPal

Fueled by a fundamental belief that having access to financial services creates opportunity, PayPal (Nasdaq: PYPL) is committed to democratizing financial services and empowering people and businesses to join and thrive in the global economy. Our open digital payments platform gives PayPal's 218 million active account holders the confidence to connect and transact in new and powerful ways, whether they are online, on a mobile device, in an app, or in person. Through a combination of technological innovation and strategic partnerships, PayPal creates better ways to manage and move money, and offers choice and flexibility when sending payments, paying or getting paid. Available in more than 200 markets around the world, the PayPal platform, including Braintree, Venmo and Xoom, enables consumers and merchants to receive money in more than 100 currencies, withdraw funds in 56 currencies and hold balances in their PayPal accounts in 25 currencies. For more information on PayPal, visit <https://www.paypal.com/about>. For PayPal financial information, visit <https://investor.paypal-corp.com>.

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PayPal Holdings, Inc.
Justin Higgs
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Source: PayPal Holdings, Inc.

News Provided by Acquire Media

Locating Information about Registering Life-Sustaining Equipment on PSE&G's Web Site

Task: Locate on PSE&G's web site information about the option to register life-sustaining equipment

Explanation of approach: Start at the home page and begin to search for the information. The results of my various attempts to locate the information are highlighted in red italics throughout this exhibit and the rest of the text is copied directly from the PSE&G web site.

1. *First I went to PSE&G's home page.*

<https://nj.pseg.com/> *[The home site does not include any key words that would direct me to information about life-sustaining equipment.]*

2. *I use the search option and search on "medical protection" and am shown this:*

Search Results

Your search for "medical protection" resulted in 34 total results in following categories

<ul style="list-style-type: none">All (34)
<ul style="list-style-type: none">Corporate (2)
<ul style="list-style-type: none">PSE&G New Jersey (32)
<ul style="list-style-type: none">News Releases (0)

And this same search also yields many pages of listings for options for appliance protection.

3. *I then conduct a new search: "life sustaining equipment" and am shown this listing of various unrelated links*

Search Results

Your search for "life-sustaining equipment" resulted in 8 total results in following categories

<ul style="list-style-type: none">All (8)
<ul style="list-style-type: none">Corporate (0)

- [PSE&G New Jersey \(8\)](#)

- [News Releases \(0\)](#)

[Attaching Equipment to Utility Poles - PSE&G](#)

PSE&G must approve all requests to mount customer-owned equipment on company poles. Initiate your request by calling 800-664-4761 # 3 during business hours.

<https://nj.pseg.com/businessandcontractorservices/outdoorlightingunmeteredservices/placingequipmentonpsegpoles>

[Outdoor Lighting & Equipment on Utility poles - PSE&G](#)

Learn more about using PSE&G's utility poles to mount your company's equipment. Call 800-664-4761 option 3 to get started.

<https://nj.pseg.com/businessandcontractorservices/outdoorlightingunmeteredservices>

[Increase Energy Efficiency with Energy Star Products - PSE&G](#)

In the market to buy new energy products? Look for appliances, heating & cooling equipment, home electronics, windows, and more with the blue ENERGY STAR label.

<https://nj.pseg.com/worryfree/learnaboutyourheating/energystarefficiency>

[WorryFree® Furnace, Boiler and A/C Replacement - PSE&G](#)

We've pre-selected the highest-quality appliances from brands you can trust. We'll install your equipment quickly, efficiently, and safely at your convenience.

<https://nj.pseg.com/worryfree/worryfreereplacementinstallation>

[Tips & Solutions to Save Money and Energy - PSE&G](#)

Find energy-saving tips and ideas for HVAC, lighting, equipment, and more to make your business more energy efficient and boost your bottom line.

<https://nj.pseg.com/businessandcontractorservices/saveenergyandmoneyforbusiness/energysavingtips>

[Help Keep Our Technicians Safe - PSE&G](#)

Slowing down in work zones, securing pets, and keeping your equipment accessible and free of clutter will help keep our technicians safe on the job.

<https://nj.pseg.com/safetyandreliability/safetytips/helpkeepourtechnicianssafe>

[Affordable Energy Solutions with Direct Install - PSE&G](#)

Take advantage of PSE&G's Direct Install solution to replace your old equipment with energy-efficient alternatives. You pay 30% of the cost, we've got the rest.

<https://nj.pseg.com/businessandcontractorservices/saveenergyandmoneyforbusiness/directinstallprogram>

Demolition Process - PSE&G

If you need us to remove meters, wires, poles, or other equipment for your demo project, call our Demolition Group at 800-817-3366, Mon. - Fri., 8:30 - 3 p.m.

<https://nj.pseg.com/businessandcontractorservices/constructionandrenovationservices/demolition/demolitionprocess>

4. Then I searched on "P4" and come up with this result:

Search Results

Your search for "p4" resulted in 0 total results in following categories

- [All \(0\)](#)
- [Corporate \(0\)](#)
- [PSE&G New Jersey \(0\)](#)
- [News Releases \(0\)](#)

5. I select the reliability option from the menu on the home page and am then shown this

Safety & Reliability Overview

[OUTAGE MAPS](#)

[NATURAL GAS SAFETY VIDEO](#)

[REPORTING AN OUTAGE VIDEO](#)

[SESAME STREET HELP YOU PREPARE VIDEO](#)

Emergency Preparedness

Electric Safety

[Downed Power Lines](#)

Gas Safety

[Carbon Monoxide Safety](#)

Gas Heaters
Gas Appliances

Storm Safety

Before a Storm
During a Storm
After a Storm
Generator Safety
Flood Safety

Safety Tips

Home Safety
Outdoor Safety
Help Keep Our Technicians Safe
Hot Water Safety
Call Before You Dig
Balloon and Kite Safety

Reliability

Tree Trimming
Current Initiative

6. *I go back to the home page and see a link to a PSE&G press release and select that link and am taken to a press release dated June 28, 2018 (<https://nj.pseg.com/newsroom/newsrelease17>)*

The press release has this headline:

PSE&G Prepared for Hot Weather, Expecting High Temperatures to Linger

I read the press release carefully and it has no mention of protections for customers when extremely hot weather is forecast.

7. *Next I select the link to "Home Safety" and do not locate information about the option to register with the Company the fact that I have life-sustaining equipment.*
8. *I select "Save Energy and Money" from the home page, which includes this list under "Get Help Paying Your Bill"*

Struggling to Pay
Bill Past Due
Can't Afford to Pay
Additional Resources
Info for Community Organizations

9. *"Struggling to Pay" doesn't show the protection option.*
10. *Neither does "Bill Past Due."*
11. *Neither does "Can't Afford to Pay."*
12. *Next I try "Additional Resources" and am taken to the relevant information:*

Life-Sustaining Equipment Program

Individuals who rely on electricity to operate life-sustaining electronic equipment, such as a respirator or dialysis machine, should pre-register with PSE&G to receive priority attention in the event of an outage. To request the service, call PSE&G at [1-800-436-PSEG \(7734\)](tel:1-800-436-PSEG) or have your doctor fill out our [Life-Sustaining Equipment Certification](#) and then you can fax or mail the form back to PSE&G.

You should also inform your local rescue squads and fire departments of your needs, in case of an emergency. Even though customers with life-sustaining equipment who have registered with PSE&G will receive priority attention during outages, they should also have emergency back-up equipment on hand, since immediate restoration cannot be guaranteed.

CITED RATE COUNSEL DATA REQUESTS

CITED RATE COUNSEL DATA REQUESTS

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0001

Date of Response: 4/11/2018

Witness: Jennings, Scott

Electric Customer Counts 2013-2018

Question:

Please provide the numbers of (a) residential, (b) commercial and (c) industrial electric customers separately for each of the years 2013 through 2018 year-to-date (indicate months included). If available, provide year-end numbers.

Attachments Provided Herewith: 1

RCR-CUS_0001_Electric Customer Counts 2013-2018.xls

Response:

Please see the attached Excel file "Electric Customer Counts 2013-2018.xlsx" for the numbers of (a) residential, (b) commercial and (c) industrial electric customers separately for December 2013 YTD, December 2014 YTD, December 2015 YTD, December 2016 YTD, December 2017 YTD, and February 2018 YTD.

Month / Year	Customer Class	December 2013 YTD	December 2014 YTD	December 2015 YTD	December 2016 YTD	December 2017 YTD	February 2018 YTD
Electric Customer Accounts *	Residential	1,855,962	1,863,352	1,875,629	1,890,991	1,909,218	1,910,334
	Commercial	273,788	273,632	274,546	276,227	277,509	277,714
	Industrial	8,227	8,495	8,410	8,448	8,526	8,591

* Included Combination Electric & Gas customers

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0002

Date of Response: 4/11/2018

Witness: Jennings, Scott

Gas Customer Counts 2013-2018

Question:

Please provide the numbers of (a) residential, (b) commercial and (c) industrial gas customers separately for each of the years 2013 through 2018 year-to-date (indicate months included). If available, provide year-end numbers.

Attachments Provided Herewith: 1

RCR-CUS_0002_Gas Customer Counts 2013-2018.xls

Response:

Please see the attached Excel file "Gas Customer Counts 2013-2018.xlsx" for the numbers of (a) residential, (b) commercial and (c) industrial gas customers separately for December 2013 YTD, December 2014 YTD, December 2015 YTD, December 2016 YTD, December 2017 YTD, and February 2018 YTD.

Month/Year	Customer Class	December 2013 YTD	December 2014 YTD	December 2015 YTD	December 2016 YTD	December 2017 YTD	February 2018 YTD
Gas Customer Accounts	Residential	1,600,720	1,607,060	1,614,642	1,627,362	1,639,940	1,640,257
	Commercial	150,630	150,171	150,217	150,862	151,115	151,041
	Industrial	6,382	6,710	6,704	6,718	6,765	6,760

* Included Combination Electric & Gas Customers

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0068

Date of Response: 4/11/2018

Witness: N/A

New Customers Accounts Changes

Question:

Please confirm that a comparison of year-end numbers of accounts in service between successive years would reflect the net change in the numbers of new customers and customers who have terminated service.

Attachments Provided Herewith: 0

Response:

PSE&G reports a number, monthly, to the BPU to reflect the number of accounts per commodity. As the Company provides both electric and gas service for 80% of its territory, many customers would be counted twice in those statistics and therefore they would not be reflective of a net change in the numbers of new customers and customers who have terminated service.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0061

Date of Response: 4/11/2018

Witness: N/A

Quarterly Reports Performance for Customer Service Metrics

Question:

Reference Board Order, issued June 7, 2010 in Docket No. GR09050422, para. 10 in which the Board describes the signatory parties' agreement to file quarterly reports regarding monthly performance relative to eight customer service metrics (see also Attachment B to the Stipulation). To the extent not provided in response to RCR-CI-16:

- a. Please provide the quarterly reports filed with the Board and Rate Counsel from 2010 through the present. Please update this response throughout the duration of this proceeding.
- b. Please provide an Excel file separately for each of the eight customer service metrics showing annual average and quarterly average performance for each of the years 2010 through the present (specify the months included in the 2018 average).
- c. Separately for gas and for electric customer service, please state whether the Company is aware of any seasonality in its customer service performance relative to the eight metrics (i.e., reasons that performance would be higher or lower in some months or seasons than others). If so describe fully the effect experienced relative to specific months.
- d. To the extent not addressed in part (c) to this question, all else being equal, does the Company expect its performance on these eight customer service metrics to be reasonably similar during all twelve months of the year?

Attachments Provided Herewith: 9

RCR-CUS_0061_2011-01-31 - PSEnG Metrics 4th Qtr.pdf
RCR-CUS_0061_2012-02-02 - PSEnG Customer Metrics 4th Quarter 2011 Report.pdf
RCR-CUS_0061_2013-02-12 - PSEnG Customer Metrics 4th Quarter 2012 Report.pdf
RCR-CUS_0061_2014-01-31 - PSEnG Customer Metrics 4th Qtr 2013 Report.pdf
RCR-CUS_0061_2015-02-04 - PSEnG Customer Metrics - 4th Qtr 2014.pdf
RCR-CUS_0061_2016-02-01 - PSEnG Customer Metrics 4th Quarter 2015 Report.pdf
RCR-CUS_0061_2017-02-01 - PSEnG Customer Metrics 4th Quarter 2016 Report.pdf
RCR-CUS_0061_2018-02-07 - PSEnG's Customer Service Metrics and Leak Report - 2017 4t.pdf
RCR-CUS_0061_BPU Metric Summary.xlsx

Response:

- a. Please see the attached files for the eight years of reporting:
 - 2011-01-31 - PSE&G Metrics 4th Quarter.pdf
 - 2012-02-02 - PSE&G Customer Metrics 4th Quarter 2011 Report.pdf
 - 2013-02-12 - PSE&G Customer Metrics 4th Quarter 2012 Report.pdf
 - 2014-01-31 - PSE&G Customer Metrics 4th Qtr 2013 Report.pdf

- 2015-02-04 - PSE&G Customer Metrics - 4th Qtr 2014.pdf
- 2016-02-01 - PSE&G Customer Metrics 4th Qtr 2015 Report.pdf
- 2017-02-01 - PSE&G Customer Metrics 4th Quarter 2016 Report.pdf
- 2018-02-07 - PSE&G Customer Service Metrics and Leak Report - 2017 4th.pdf

b. Please see the Excel summary file "BPU Metric Summary.xlsx" for the quarterly and annual metrics.

c. For both electric and gas metrics, there is modest seasonality in the meter reading metric due to winter weather conditions, and the billing rebill metric is impacted in the following months. The BPU inquiries regarding collections are also higher during the March to November time frame.

d. Yes, the expectation is that outside of the above items, the Company's performance with respect to these metrics will be similar throughout the year.

		BPU Rate Case Metrics History									
		2010	2011	2012	2013	2014	2015	2016	2017		
		YTD Dec	YTD Dec	YTD Dec	YTD Dec	YTD Dec	YTD Dec	YTD Dec	YTD Dec		
CO	1) Average Speed of Answer Within 30 Seconds	61.6%	78.6%	78.5%	77.2%	71.3%	76.3%	77.6%	72.7%		
CO	2) Abandoned Call Rate	5.5%	3.8%	4.2%	3.8%	6.5%	3.7%	3.4%	3.6%		
CO	3) Speed of Customer Response Avg in Seconds	83	55	56	61	109	69	68	65		
CO	4) Percent of On-Cycle Meter Reads	89.1%	85.9%	85.1%	88.0%	85.9%	87.6%	90.1%	90.1%		
CO	5) Rebills/1,000 Customers	13.4	12.7	18.3	24.4	22.8	23.9	19.1	19.7		
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.70%	99.80%	99.60%	99.90%	99.90%	99.96%	99.97%	99.98%		
Gas/Elec	7) Percent of Customer Service Appointments Met	81.0%	83.0%	89.0%	90.0%	87.0%	88.0%	90.0%	88.0%		
	8) Escalated Complaints to the BPU/1,000 Customers	0.19	0.16	0.12	0.13	0.11	1.43	1.29	1.26		
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.04	0.04	0.03	0.03	0.03	0.26	0.25	0.23		

Rebill calculation revised in January 2013 to capture total months
Escalated complaints are as reported on BPU quarterly reports; calculation revised in 2015

		BPU Rate Case Metrics History				
		2010	2010	2010	2010	2010
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	NA	NA	55.8%	67.6%	61.6%
CO	2) Abandoned Call Rate	NA	NA	6.9%	3.3%	5.5%
CO	3) Speed of Customer Response Avg in Seconds	NA	NA	98	69	83
CO	4) Percent of On-Cycle Meter Reads	NA	NA	89.70%	88.50%	89.10%
CO	5) Rebills/1,000 Customers	NA	NA	14.2	12.5	13.4
Gas	6) Gas Leak/Odor Response Within 60 Minutes	NA	NA	99.90%	99.70%	99.70%
Gas/Elec	7) Percent of Customer Service Appointments Met	NA	NA	82.0%	79.0%	81.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	NA	NA	0.2	0.19	0.19
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	NA	NA	0.04	0.04	0.04

		BPU Rate Case Metrics History				
		2011	2011	2011	2011	2011
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	76.5%	79.2%	78.4%	79.8%	78.6%
CO	2) Abandoned Call Rate	3.6%	2.8%	4.4%	3.9%	3.8%
CO	3) Speed of Customer Response Avg in Seconds	58	44	58	58	55
CO	4) Percent of On-Cycle Meter Reads	85.3%	88.4%	84.40%	85.50%	85.90%
CO	5) Rebills/1,000 Customers	10.8	11.7	15.0	13.2	12.7
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.90%	99.90%	99.60%	99.90%	99.80%
Gas/Elec	7) Percent of Customer Service Appointments Met	82.0%	83.0%	85.0%	82.1%	83.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	0.13	0.18	0.17	0.16	0.16
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.03	0.03	0.04	0.05	0.04

		BPU Rate Case Metrics History				
		2012	2012	2012	2012	2012
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	79.1%	76.8%	76.0%	79.9%	78.5%
CO	2) Abandoned Call Rate	2.4%	3.8%	4.0%	5.3%	4.2%
CO	3) Speed of Customer Response Avg in Seconds	39	59	53	64	56
CO	4) Percent of On-Cycle Meter Reads	87.1%	87.7%	87.5%	78.3%	85.1%
CO	5) Rebills/1,000 Customers	11.7	15.0	16.2	30.5	18.3
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.80%	99.80%	98.80%	99.70%	99.60%
Gas/Elec	7) Percent of Customer Service Appointments Met	87.0%	91.0%	89.5%	88.2%	89.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	0.10	0.13	0.13	0.13	0.12
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.03	0.02	0.02	0.06	0.03

		BPU Rate Case Metrics History				
		2013	2013	2013	2013	2013
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	75.3%	80.0%	75.9%	77.9%	77.2%
CO	2) Abandoned Call Rate	3.8%	3.0%	4.4%	3.7%	3.8%
CO	3) Speed of Customer Response Avg in Seconds	62	50	70	62	61
CO	4) Percent of On-Cycle Meter Reads	88.9%	88.1%	87.3%	87.8%	88.0%
CO	5) Rebills/1,000 Customers	24.3	22.4	27.0	23.7	24.4
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.90%	99.90%	99.90%	100.00%	99.90%
Gas/Elec	7) Percent of Customer Service Appointments Met	89.0%	91.0%	90.1%	88.3%	90.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	0.11	0.14	0.13	0.13	0.13
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.03	0.03	0.02	0.02	0.03

		BPU Rate Case Metrics History				
		2014	2014	2014	2014	2014
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	72.5%	76.0%	68.5%	68.2%	71.3%
CO	2) Abandoned Call Rate	7.6%	4.1%	8.7%	5.5%	6.5%
CO	3) Speed of Customer Response Avg in Seconds	116	67	144	106	109
CO	4) Percent of On-Cycle Meter Reads	79.7%	88.7%	86.9%	88.4%	85.9%
CO	5) Rebills/1,000 Customers	18.5	20.4	27.0	25.4	22.8
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.90%	100.00%	100.00%	100.00%	99.90%
Gas/Elec	7) Percent of Customer Service Appointments Met	88.0%	90.0%	88.4%	82.6%	87.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	0.06	0.13	0.15	0.11	0.11
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.03	0.03	0.03	0.02	0.03

		BPU Rate Case Metrics History				
		2015	2015	2015	2015	2015
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	75.2%	76.1%	73.5%	80.5%	76.3%
CO	2) Abandoned Call Rate	3.5%	3.7%	4.7%	2.7%	3.7%
CO	3) Speed of Customer Response Avg in Seconds	65	67	88	53	69
CO	4) Percent of On-Cycle Meter Reads	82.0%	88.1%	89.6%	90.7%	87.6%
CO	5) Rebills/1,000 Customers	17.8	25.6	27.6	24.5	23.9
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.93%	99.96%	100.00%	100.00%	99.96%
Gas/Elec.	7) Percent of Customer Service Appointments Met	87.0%	89.0%	87.2%	86.2%	88.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	0.23	0.41	0.42	0.12	1.43
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.06	0.06	0.07	0.02	0.26

		BPU Rate Case Metrics History				
		2016	2016	2016	2016	2016
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	81.3%	79.4%	74.2%	76.1%	77.6%
CO	2) Abandoned Call Rate	2.9%	3.0%	4.6%	3.0%	3.4%
CO	3) Speed of Customer Response Avg in Seconds	56	56	91	66	68
CO	4) Percent of On-Cycle Meter Reads	87.4%	91.1%	90.6%	91.2%	90.1%
CO	5) Rebills/1,000 Customers	16.6	19.2	22.0	18.7	19.1
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.96%	99.97%	100.00%	100.00%	99.97%
Gas/Elec	7) Percent of Customer Service Appointments Met	91.0%	91.0%	88.2%	87.8%	90.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	0.24	0.35	0.37	0.33	1.29
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.05	0.06	0.08	0.06	0.25

		BPU Rate Case Metrics History				
		2017	2017	2017	2017	2017
		2017	2017	2017	2017	2017
		1st QTR	2nd QTR	3rd QTR	4th QTR	YTD Dec
CO	1) Average Speed of Answer Within 30 Seconds	76.3%	74.3%	68.1%	72.6%	72.7%
CO	2) Abandoned Call Rate	2.7%	3.1%	5.3%	3.2%	3.6%
CO	3) Speed of Customer Response Avg in Seconds	56	57	91	52	65
CO	4) Percent of On-Cycle Meter Reads	86.6%	90.7%	91.2%	91.8%	90.1%
CO	5) Rebills/1,000 Customers	16.2	20.1	22.3	20.0	19.7
Gas	6) Gas Leak/Odor Response Within 60 Minutes	99.98%	99.98%	99.98%	99.97%	99.98%
Gas/Elec	7) Percent of Customer Service Appointments Met	90.0%	88.0%	88.2%	84.9%	88.0%
Utility Wide	8) Escalated Complaints to the BPU/1,000 Customers	0.27	0.34	0.34	0.31	1.26
Utility Wide	Escalated Complaints (Non Collection) to the BPU/1,000 Customers	0.06	0.06	0.05	0.05	0.23

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0018

Date of Response: 4/9/2018

Witness: N/A

Customer Complaints

Question:

Please provide, in electronic Excel format, detailed information about customer complaints submitted to Board Staff regarding electric service:

- a. Separately by year for the time period spanning 2013 through 2017 and 2018 (year to date, indicate the months included for 2018) including: (i) total numbers of complaints and (ii) total complaints disaggregated by the following categories (if other categories apply, please include those categories and describe them): billing, payment arrangements, deposits, credit, collections, service disconnection and third-party suppliers.
- b. For the most recent 12-month period for which data are available, please provide in electronic Excel format a disaggregation of customer complaints by municipality and, in the response, include a separate column showing the total number of customers in each municipality.
- c. Please confirm that the Company does not track complaints separately among residential, commercial, and industrial customers.
- d. Please explain the differences, if any, in the way that the Company handles complaints among residential, commercial and industrial customers.

Attachments Provided Herewith: 2

RCR-CUS_0018_BPU inquiries 2013 through Feb 2018.xlsx

RCR-CUS_0018_BPU inquiries by municipality FINAL.xls

Response:

- a. Please see the attached Excel file "BPU inquiries 2013 through Feb 2018.xlsx", which lists the number of customer complaints to the BPU for each area and a description of the area. PSE&G does not classify complaints as electric or gas for common areas such as billing and collections.
- b. Please see the attached Excel file "BPU inquiries by municipality FINAL.xlsx".
- c. PSE&G does not track complaints separately for residential, commercial, and industrial customers.
- d. There are no differences in the way PSE&G handles complaints among residential, commercial and industrial customers.

BPU Inquiries		2013	2014	2015	2016	2017	Jan/Feb	Inquiries related to
		YE	YE	YE	YE	YE	2018 YTD	
Electric Delivery		249	185	124	169	106	25	electric field service work including outages, meter operations, system reliability, etc.
Delivery Projects & Construction		19	9	19	19	11	2	large transmission projects and tree trimming
Gas Delivery		107	167	106	92	142	25	gas field work including distribution street work and appliance service work
Materials Management			3	3	1	2	1	appliance service work specifically related to parts issues
Other		62	1	0	16	40	7	issues that cut across more than one line of business or functional area plus any others that do not fit into the major other areas
Customer Operations		202	926	702	632	609	307	total of the areas below
Meter Reading		117	149	105	73	76	7	the meter reading process
Customer Service Center		15	11	7	5	8	1	customers visiting the customer service centers
Inquiry		187	234	126	139	146	27	the call center
Construction Inquiry		14	14	13	17	24	11	new business
Large Customer Support		1	7	6	5	6	0	largest business customers
Billing		451	484	415	343	311	65	customer's bills but not from customers in the collections process
Customer Payment & Processing		5	4	0	2	2	0	customer payments
Revenue Integrity		12	13	17	14	17	3	potential energy theft
Measurement			4	11	32	16	3	meters
Web				2	2	3	0	pseg.com
DSM/Energy Efficiency			3					
Non-Collection Sub-Total		1239	1333	1038	969	900	177	Total of all the highlighted areas above
Collection		12	16	10	1060	7072	452	shut-offs for non-payment, shut off notices, deposits, final bills, etc.
								Total of collections and non-collections issues

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0137
Date of Response: 4/11/2018
Witness: Ford, Aaron
TIO Networks Breach Case

Question:

If a data breach did or could have occurred, explain fully:

- a. How the data breach occurred or could have occurred;
- b. The total number of customers that were affected;
- c. The total number of customers that were potentially affected; and
- d. What steps the Company has taken to prevent data breaches by third-party vendors and how they differ, if at all, from the steps the Company took before December 2017.

Attachments Provided Herewith: 0

Response:

- a. PayPal is still in the process of completing its investigation and has yet to disclose how the breach occurred.
- b. Approximately 22,000 customers had their PSE&G Contract Account Number, banking account number, and bank routing number exposed. PSE&G's approximately 2.5 million customers had their PSE&G Contract Account Number and service address exposed.
- c. Please see the response to part (b) above.
- d. The Chief Information Security Office performs a risk assessment of the information security and protection controls for vendors hosting PSEG applications or environments. The process includes a review of a vendor's Service Organization Control (SOC 2) reports, and/or the completion of a PSEG questionnaire by the vendor. In the summer of 2017, the Company buttressed its model information security clauses for inclusion in vendor contracts. In 2018, PSEG engaged an advisory firm, Gartner Consulting, to review current Company policies pertaining to information security of third-party vendors and provide advice on information security strategies for third party vendors. In addition, PSEG is considering a process for a periodic review of SOC2 reports of existing third-party vendors.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0124
Date of Response: 4/11/2018
Witness: Ford, Aaron
TIO Network Breach Case

Question:

Please refer to the press article: "Hackers Hit PSE&G Third-Party Partner Used to Store Customer Data," Tom Johnson, published on line by N.J. Spotlight on December 13, 3017. This article describes a potential data breach in December 2017 involving the systems of TIO Networks, a subsidiary of PayPal Holdings. As described in the article, TIO Networks processes payments at automated kiosks in PSE&G's walk-in customer service centers and also facilitates payments made by PSE&G customers at third-party locations, such as convenience stores. As reported in the article, "[c]ustomer information for PSE&G's approximately 2.5 million customers may have been exposed as a result of the suspected breach."*6 Please review the cited press article and indicate whether the information reported is accurate. If it is not accurate in any part, please provide a corrected version of the information provided in the press article.

Footnote: 6"Hackers Hit PSE&G Third-Party Partner Used to Store Customer Data," Tom Johnson, N.J. Spotlight, December 13, 3017, available at <http://www.njspotlight.com/stories/17/12/12/hackers-hit-pse-g-third-party-partner-used-to-store-customer-data/> (viewed 3/6/18).

Attachments Provided Herewith: 0

Response:

PSE&G's approximately 2.5 million customers had their PSE&G Contract Account Number and service address potentially exposed by the TIO breach (the article does not mention how the 2.5 million customers may have been impacted).

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0147
Date of Response: 4/11/2018
Witness: Ford, Aaron
TIO Networks Breach Case

Question:

Regarding the potential or actual data breach in December 2017:

- a. List all of the Company's payment options that rely on TIO Networks.
- b. How many customers in total were affected or potentially affected by the data breach? If the precise number is not known or knowable:
 - (i) Please provide an estimate of the largest number of customers who could potentially have been affected by the potential data breach. Include any and all work papers, assumptions, and data sources used to provide the estimate.
 - (ii) Please provide an estimate of the smallest number of customers who could potentially have been affected by the potential data breach. Include any and all work papers, assumptions, and data sources used to provide this estimate.
- c. Were only those customers who used convenience stores and walk-in payment centers potentially affected?
- d. Separately, for each of the months in 2017, indicate the number of customers who used payment options that relied on TIO Networks and, separately by month, separately indicate the numbers of customers using each of the payment options handled by TIO Networks.
- e. During which months was customers' information susceptible to a potential data breach? Include the basis of the response.
- f. Are some payment options that TIO Networks offers more vulnerable to data breaches than others? Please explain fully.
- g. Describe the categories of customers potentially affected (e.g., customers who made payments during a specific month or specific time period, customers using particular payment options, customers using particular convenience stores, etc.).
- h. Did the potential data breach occur throughout the Company's service territory? If not, which specific geographic regions may have been affected by the potential data breach.

Attachments Provided Herewith: 0

Response:

- a. No PSE&G payment options have relied on TIO Networks since November 2017, and PayPal has advised that it is discontinuing TIO's operations. Prior to this security incident, PSE&G relied on TIO networks to effectuate bill payments made at automated kiosks in PSE&G's walk-in customer service centers and cash payments at authorized third-party retail locations, such as convenience stores.
- b. Please see the response to RCR-CUS-0124.
 - i. N/A

- e. Customers who made their bill payments via check from 2012-2017 at TIO-operated kiosks at the customer service centers had the information described above exposed. In addition, PSE&G sent TIO a weekly batch file containing all customers' PSE&G Contract Account Numbers beginning in 2014, and the Contract Account Numbers and service addresses for all customers since 2015, and believes that information was exposed as well.
- f. PSE&G is unaware whether some payment options that TIO Networks offered represented a greater security risk than others. Regarding future payment options, PayPal advised PSE&G that it is discontinuing TIO's operations.
- g. Please see the response to part (c) above.
- h. The Company has not determined whether specific areas throughout its service territory were disparately impacted. TIO-operated kiosks in PSE&G's customer service centers were located throughout the Company's service territory, and all customers had their Contract Account Number and service address exposed.

ii. N/A

- c. No. Customers who paid by check at a TIO-operated automated kiosk in the PSE&G customer service centers between 2012 and 2017 had their PSE&G Contract Account Number, checking account number, and bank routing number exposed. The PSE&G Contract Account Number and service address for all of PSE&G's customers were also exposed.

d.

2017 Retail Payments (Cash Only)

2017	#Retail Payments	\$Retail Payments
January	20,720	\$2,945,361
February	21,117	\$3,109,855.43
March	23,372	\$3,416,864.86
April	17,546	\$2,458,503.28
May	22,347	\$2,664,181.25
June	21,554	\$2,360,935.37
July	22,216	\$2,731,748.49
August	23,365	\$3,152,498.97
September	22,832	\$2,896,862.24
October	23,401	\$2,680,890.98
November	8,115	\$839,474.25
December	0	\$0.00

2017 Kiosk payments

2017	#Retail Payments	\$Retail Payments	#Retail Payments	\$Retail Payments
January	5195	\$770,377	906	\$220,710.46
February	5486	\$870,444	864	\$219,095.33
March	6201	\$1,029,973	1011	\$278,119.93
April	5956	\$905,545	4631	\$692,541.63
May	5362	\$733,393	907	\$211,852.72
June	5652	\$734,079	882	\$200,929.11
July	5791	\$791,055	944	\$217,864.24
August	6473	\$946,448	1147	\$298,967.60
September	3970	\$565,685	688	\$156,565.69
October	2687	\$338,922	484	\$96,172.29
November	1048	\$131,545	146	\$26,956.36
December	0	\$0	0	\$0

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0081

Date of Response: 4/9/2018

Witness: N/A

DPAs Statistics

Question:

Please provide the following information in machine-readable Excel format on a monthly basis and on an annual total basis separately for each of the years: 2013 through 2018 year-to-date (specify months included for 2018). Provide separately for gas and for electric customers.

- a. Newly established deferred payment arrangements (DPAs);
- b. Average down payment (in dollars) of DPAs;
- c. Average term (in months) of DPAs;
- d. Average dollar amount of arrears made subject to a DPA;
- e. Average monthly installment of DPAs;
- f. Number of defaulted DPAs;
- g. Number of completed (or "successful") DPAs;
- h. DPA success rate (explain how it is computed);
- i. DPA failure rate (explain how it is computed);
- j. Post-Bankruptcy DPAs;
- k. Average amount written off for each defaulted DPA; and
- l. The total amount written off by PSE&G for defaulted DPAs.

Attachments Provided Herewith: 1
RCR-CUS_0081_PSEG DPAs.xls

Response:

Not all data requested is available. The Company does track the newly established DPAs (subpart a) and the number of defaulted DPAs (f), which allows PSE&G to calculate the DPA success rate (h) and failure rate (i). The failure rate is calculated by dividing the annual number of broken DPAs by the annual number of newly established DPAs * 100. The success rate is 1 minus the failure rate. Please see the attached Excel file "PSEG DPAs.xlsx".

	Newly established DPAs	Number of defaulted DPAs	Failure Rate	Success Rate
2013	220,163	165,855	75.3%	24.7%
2014	221,039	159,050	72.0%	28.0%
2015	200,705	143,322	71.4%	28.6%
2016	179,668	129,374	72.0%	28.0%
2017	189,146	136,277	72.0%	28.0%

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0097

Date of Response: 4/11/2018

Witness: N/A

Shutoffs

Question:

Please provide separately for each of the years 2013 through 2018 year-to-date (indicate months included), the number of households, if any, the Company disconnected for non-payment.

- a. Please disaggregate by whether the customers were identified as elderly, disabled, or participating in LIHEAP, Lifeline and/or USF programs.
- b. Please disaggregate by municipality.

Attachments Provided Herewith: 1

RCR-CUS_0097_Shutoff detail.xlsx

Response:

Please see the attached Excel spreadsheet file "Shutoff Detail.xlsx" for shutoff activity. Please note that this is all shutoff activity and includes premises other than residential households. The first tab shows the total shut-offs by month and year and includes January through March of 2018.

- a. The third tab shows shutoffs by Tolerance Code, which identifies each of protected program types requested. This level of detail is not available prior to 2017. For additional detail on the term Tolerance Code, please see the response to RCR-CUS-0095.
- b. The second tab shows shutoffs by municipality. This level of detail is not available prior to 2017.

Total Shutoffs

RCR-CUS-97

	2013	2014	2015	2016	2017	2018
Jan	11,215	5,368	4,277	4,765	8,887	8,436
Feb	9,530	3,282	2,172	8,399	9,291	9,109
Mar	14,819	10,416	7,739	11,297	12,453	7,264
Apr	18,932	19,097	13,776	15,555	17,889	
May	19,024	18,930	13,398	17,021	18,153	
Jun	16,425	18,016	16,830	17,309	16,412	
Jul	15,554	23,429	17,924	11,448	12,587	
Aug	17,404	21,428	18,677	16,620	16,435	
Sep	18,114	23,036	20,365	17,241	15,402	
Oct	19,294	21,172	17,873	16,384	15,159	
Nov	9,382	7,860	8,376	11,698	10,681	
Dec	6,584	6,382	8,562	6,615	4,552	
	176,277	178,416	149,969	154,352	157,901	24,809



Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0093
Date of Response: 4/9/2018
Witness: Swetz, Stephen
Electric Bills Compared to Income

Question:

Reference testimony of Stephen Swetz, specifically Exhibit P-9E, page 10, Chart 3 and lines 3-11.

- a. Please provide all workpapers, assumptions, and calculations associated with the analyses related to electricity customers, as well as for any responses he provides in response to this set of discovery.
- b. Does the analysis assume the same usage for the time period 2009 through 2018?
- c. Please provide the actual average usage in 2009 and in 2018.
- d. Provide an alternative version of Chart 3 and the text on lines 3-11 assuming low-income customers do not participate in low-income programs.
- e. Provide an alternative version of Chart 3 showing:
 - (i) only electricity usage;
 - (ii) for electricity customers who use electricity for heat; and
 - (iii) for electricity customers who don't use electricity for heat.

Attachments Provided Herewith: 1

RCR-CUS_0093_PSEnG Combined Bills Compared to Income.xlsx

Response:

- a. Please see the attached Excel spreadsheet titled "PSEnG Combined Bills Compared to Income." This document has been updated compared to the original Excel spreadsheet support document titled "Combined Bills Low Income" that was provided in the original filing to include the analyses requested in this discovery request. The attached document adds the tab titled 'Combined E & G no LI Credits' to remove the low-income programs from Chart 3 as requested in part (d). Finally, since the original filing, the HHS Poverty Guidelines for 2018 were released and updated in the attached Excel spreadsheet.
- b. Yes, the electric analysis is based on a typical residential electric customer using 750 kilowatt-hours per summer month and 7,200 kilowatt-hours on an annual basis, using rates as of June 1 for each year for all years with the exception of 2018, which uses rates as of January 1.
- c. The 2009 average actual electric usage was 7,359 kilowatt-hours. 2018 data is not yet available.
- d. An alternative version of Chart 3 is provided in the attached Excel spreadsheet titled "PSEnG Combined Bills Compared to Income," in tab 'Combined E & G no LI Credits.'

Revised text on lines 3-11 assuming low-income customers do not participate in low-income programs is as follows:

This chart compares the bill as a percentage of income for a typical combined residential customer relative to New Jersey's median income and for low income customers. As can be seen, for the average residential customer, the cost of our service has declined from approximately 3.9% of median income at the time of our last rate case in 2009 to approximately 2.8% today. For lower income customers, relative to an income threshold of 175% of the Federal poverty level and excluding the low income credits, their cost of service has declined from approximately 7.6% of household income at the time of our last base rate case to approximately 4.9% today, a relative decline of approximately 35.5%.

- e. Chart 3 in the direct testimony of Stephen Swetz was designed as a high level analysis of PES&G's typical residential customer bills in relation to income levels. The requested data is not available.

Average Program Credit, 2009-2017

	<u>Recipients</u>	<u>Direct LIHEAP Dollars</u>	<u>LIHEAP Checks</u>	<u>Total LIHEAP Dollars</u>	<u>Average Credit Per Recipient</u>
LIHEAP 2009	88,707	\$ 53,867,724.28	\$ 9,562,840.25	\$ 63,430,564.53	\$ 715.06
LIHEAP 2010	99,969	\$ 51,122,105.98	\$ 10,798,191.20	\$ 61,920,297.18	\$ 619.39
LIHEAP 2011	92,011	\$ 62,059,791.60	\$ 7,658,025.78	\$ 69,717,817.38	\$ 757.71
LIHEAP 2012	93,344	\$ 50,367,537.38	\$ 6,440,927.84	\$ 56,808,465.22	\$ 608.59
LIHEAP 2013	96,375	\$ 42,616,617.53	\$ 4,274,822.85	\$ 46,891,440.38	\$ 486.55
LIHEAP 2014	96,811	\$ 44,844,074.71	\$ 6,517,242.99	\$ 51,361,317.70	\$ 530.53
LIHEAP 2015	90,640	\$ 38,619,487.98	\$ 6,757,472.22	\$ 45,376,960.20	\$ 500.63
LIHEAP 2016	88,530	\$ 40,519,967.62	\$ 6,176,874.64	\$ 46,696,842.26	\$ 527.47
LIHEAP 2017	86,038	\$ 38,384,530.90	\$ 5,787,919.88	\$ 44,172,450.78	\$ 513.41

	<u>Recipients</u>	<u>Lifeline Dollars</u>	<u>Average Credit Per recipient</u>
LIFELINE 2009	58,656	\$ 12,218,175.00	\$ 208.30
LIFELINE 2010	56,432	\$ 11,747,815.50	\$ 208.18
LIFELINE 2011	56,192	\$ 11,670,412.50	\$ 207.69
LIFELINE 2012	53,523	\$ 11,128,364.33	\$ 207.92
LIFELINE 2013	52,586	\$ 10,948,387.50	\$ 208.20
LIFELINE 2014	50,251	\$ 10,464,762.60	\$ 208.25
LIFELINE 2015	48,175	\$ 10,042,537.50	\$ 208.46
LIFELINE 2016	45,978	\$ 9,599,737.00	\$ 208.79
LIFELINE 2017	44,020	\$ 9,201,600.00	\$ 209.03

	<u>Recipients</u>	<u>USF Dollars</u>	<u>Average Credit Per recipient</u>
USF 2009	134,059	\$ 121,352,867.47	\$ 905.22
USF 2010	152,693	\$ 135,017,118.49	\$ 884.24
USF 2011	171,319	\$ 133,049,483.09	\$ 776.62
USF 2012	170,308	\$ 129,675,536.09	\$ 761.42
USF 2013	163,665	\$ 116,478,891.91	\$ 711.69
USF 2014	160,169	\$ 116,149,200.36	\$ 725.17
USF 2015	154,731	\$ 107,602,639.21	\$ 695.42
USF 2016	145,863	\$ 102,924,158.20	\$ 705.62
USF 2017	133,166	\$ 84,287,804.12	\$ 632.95

Source: Claire Bartolomeo, Payment Assistance Outreach Supervisor

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0090
Date of Response: 4/11/2018
Witness: N/A
Low Income Programs PAO

Question:

Reference testimony of Stephen Swetz, specifically Exhibit P-9E, page 8, line 3 through page 9, line 7, and Exhibit P-9G, page 7, line 3 through page 8, line 7.

- a. Please identify and describe all programs offered by the Company to low-income and elderly customers, and customers with medical situations requiring use of life-sustaining equipment or causing a financial hardship, apart from state and federal programs. If the programs offered to electric customers differ from those offered to gas customers, please identify any and all such differences.
- b. Please provide in machine-readable Excel format service-territory enrollment numbers separately for each of the years 2010 through 2018 year-to-date (specify months included). Please provide enrollment numbers separately by all programs available. If any of the categories overlap, please disaggregate to show the overlap.
- c. Please provide enrollment numbers for 2017 by municipality.

Attachments Provided Herewith: 2

RCR-CUS_0090_PSEG NJ Shares.xls
RCR-CUS_0090_PSEG P4 by municipality.xlsx

Response:

- a. Besides state and federal programs, NJ Shares is available to provide holistic solutions to a household's temporary or ongoing needs by partnering with over 250 human service agencies statewide to provide critically needed energy assistance to families that are not eligible for other programs. NJ Shares is funded through donations from customers and PSE&G also contributes to NJ Shares.

PSE&G also protects customers' electric service from disconnection if a doctor has certified that a member of the household is utilizing life sustaining equipment. PSE&G refers to these customers as "P4" customers and PSE&G initiates a recertification process annually.

- b. Please see the attached Excel file "PSEG NJ SHARES.xlsx" for PSE&G's annual recipients of NJ Shares funds. P4 account volumes are only available at a snapshot in time. As of March 2018, the number of customers in this program is 4,065.
- c. PSE&G does not track NJ Shares recipients by municipality. Please see the attached Excel file "PSEG P4 by municipality.xlsx" for P4 customers' enrollment by municipality.

Row Labels	Count of Contract Account
#	2
#	2
07001	10
WOODBIDGE TWP	10
07002	44
BAYONNE CITY	44
07003	32
BLOOMFIELD TWP	32
07004	3
FAIRFIELD TWP ESS	3
07006	11
CALDWELL BORO	5
NORTH CALDWELL TWP	3
WEST CALDWELL TWP	3
07008	20
CARTERET BORO	20
07009	2
CEDAR GROVE TWP	2
07010	14
CLIFFSIDE PARK BORO	14
07011	27
CLIFTON CITY	27
07012	5
CLIFTON CITY	5
07013	16
CLIFTON CITY	16
07014	3
CLIFTON CITY	3
07016	9
CRANFORD TWP	9
07017	74
EAST ORANGE CITY	74
07018	41
EAST ORANGE CITY	41
07019	1
EAST ORANGE CITY	1
07020	1
EDGEWATER BORO	1
07022	3
FAIRVIEW BORO	3
07023	2
FANWOOD BORO	1
ROSELLE BORO	1
07024	15
FORT LEE BORO	15

07026	22
GARFIELD CITY	22
07029	3
EAST NEWARK BORO	1
HARRISON TOWN	2
07030	9
HOBOKEN CITY	9
07031	12
NORTH ARLINGTON BORO	12
07032	21
KEARNY TOWN	21
07033	6
KENILWORTH BORO	6
07036	31
LINDEN CITY	30
WINFIELD TWP	1
07039	7
LIVINGSTON TWP	7
07040	10
MAPLEWOOD TWP	10
07042	15
MONTCLAIR TWP	15
07044	8
VERONA TWP	8
07047	27
NORTH BERGEN TWP	27
07050	38
ORANGE CITY	38
07052	25
WEST ORANGE TWP	25
07055	25
PASSAIC CITY	25
07057	6
WALLINGTON BORO	6
07059	1
WARREN TWP	1
07060	28
NORTH PLAINFIELD BORO	8
PLAINFIELD CITY	20
07062	13
PLAINFIELD CITY	13
07063	12
NORTH PLAINFIELD BORO	2
PLAINFIELD CITY	10
07064	3
WOODBRIIDGE TWP	3
07065	22

RAHWAY CITY	22
07066	5
CLARK TWP	5
07067	10
WOODBIDGE TWP	10
07068	4
ROSELAND BORO	4
07069	2
WATCHUNG BORO	2
07070	8
RUTHERFORD BORO	8
07071	15
LYNDHURST TWP	15
07072	5
CARLSTADT BORO	5
07073	9
EAST RUTHERFORD BORO	9
07074	1
MOONACHIE BORO	1
07075	7
WOOD RIDGE BORO	7
07076	10
SCOTCH PLAINS TWP	10
07077	1
WOODBIDGE TWP	1
07079	5
SOUTH ORANGE VILLAGE TWP	5
07080	15
SOUTH PLAINFIELD BORO	15
07081	1
SPRINGFIELD TWP UNI	1
07083	25
UNION TWP UNI	25
07086	2
WEEHAWKEN TWP	2
07087	35
UNION CITY	32
WEEHAWKEN TWP	3
07088	4
UNION TWP UNI	4
07090	9
WESTFIELD TOWN	9
07093	25
GUTTENBERG TOWN	4
WEST NEW YORK TOWN	21
07094	9
SECAUCUS TOWN	9

07095	13
WOODBIDGE TWP	13
07102	24
DO NOT USE	16
NEWARK CITY	8
07103	61
NEWARK CITY	61
07104	55
NEWARK CITY	55
07105	16
NEWARK CITY	16
07106	54
NEWARK CITY	54
07107	32
NEWARK CITY	32
07108	61
NEWARK CITY	61
07109	37
BELLEVILLE TWP	37
07110	14
NUTLEY TOWN	14
07111	81
IRVINGTON TOWN	80
NEWARK CITY	1
07112	65
NEWARK CITY	65
07114	7
NEWARK CITY	7
07201	27
ELIZABETH CITY	27
07202	21
ELIZABETH CITY	21
07203	22
ROSELLE BORO	22
07204	5
ROSELLE PARK BORO	5
07205	12
HILLSIDE TWP	12
07206	23
ELIZABETH CITY	23
07208	11
ELIZABETH CITY	11
07302	12
JERSEY CITY	12
07303	1
JERSEY CITY	1
07304	63

JERSEY CITY	63
07305	106
JERSEY CITY	106
07306	29
JERSEY CITY	29
07307	20
JERSEY CITY	20
07310	2
JERSEY CITY	2
07407	18
ELMWOOD PARK BORO	18
07410	14
FAIR LAWN BORO	14
07424	7
LITTLE FALLS TWP	1
WEST PATERSON BORO	6
07432	4
MIDLAND PARK BORO	4
07450	8
RIDGEWOOD VILLAGE	8
07452	4
GLEN ROCK BORO	4
07463	3
WALDWICK BORO	3
07470	13
WAYNE TWP	13
07481	1
WYCKOFF TWP	1
07501	41
PATERSON CITY	41
07502	10
PATERSON CITY	10
07503	8
PATERSON CITY	8
07504	15
PATERSON CITY	15
07505	4
PATERSON CITY	4
07506	8
HAWTHORNE BORO	8
07508	18
HALEDON BORO	11
NORTH HALEDON BORO	2
PROSPECT PARK BORO	5
07512	12
TOTOWA BORO	12
07513	8

PATERSON CITY	8
07514	22
PATERSON CITY	22
07522	35
PATERSON CITY	35
07524	15
PATERSON CITY	15
07601	28
HACKENSACK CITY	28
07603	2
BOGOTA BORO	2
07604	7
HASBROUCK HEIGHTS	7
07605	2
LEONIA BORO	2
07607	5
MAYWOOD BORO	5
07621	16
BERGENFIELD BORO	16
07628	6
DUMONT BORO	6
07630	2
EMERSON BORO	2
07631	13
ENGLEWOOD CITY	13
07642	1
HILLSDALE BORO	1
07643	7
LITTLE FERRY BORO	7
07644	23
LODI BORO	23
07646	7
NEW MILFORD BORO	7
07649	2
ORADELL BORO	2
07650	2
PALISADES PARK BORO	2
07652	17
PARAMUS BORO	17
07657	7
RIDGEFIELD BORO	7
07660	7
RIDGEFIELD PARK VILLAGE	7
07661	2
RIVER EDGE BORO	2
07662	7
ROCHELLE PARK TWP	7

07663	4
SADDLE BROOK TWP	4
07666	26
TEANECK TWP	26
07670	4
TENAFLY BORO	4
07675	14
OLD TAPPAN BORO	1
RIVER VALE TWP	2
WASHINGTON TWP BER	1
WESTWOOD BORO	10
07676	2
WASHINGTON TWP BER	2
07677	4
WOODCLIFF LAKE BORO	4
08002	18
CHERRY HILL TWP	18
08003	26
CHERRY HILL TWP	26
08007	12
BARRINGTON BORO	9
RUNNEMEDE BORO	3
08010	21
BEVERLY CITY	6
EDGEWATER PARK TWP	15
08012	17
GLOUCESTER TWP	14
WASHINGTON TWP GLO	3
08016	59
BURLINGTON CITY	33
BURLINGTON TWP	25
FLORENCE TWP	1
08022	5
MANSFIELD TWP BUR	5
08029	2
GLOUCESTER TWP	2
08030	48
BROOKLAWN BORO	6
GLOUCESTER CITY	42
08031	23
BELLMAWR BORO	23
08033	6
BARRINGTON BORO	1
HADDON TWP	3
HADDONFIELD BORO	2
08034	15
CHERRY HILL TWP	15

08035	2
HADDON HEIGHTS BORO	2
08036	4
HAINESPORT TWP	4
08043	13
VOORHEES TWP	13
08045	8
LAWNSIDE BORO	8
08046	93
WILLINGBORO TWP	93
08048	9
LUMBERTON TWP	9
08049	15
GLOUCESTER TWP	2
LAWNSIDE BORO	2
MAGNOLIA BORO	11
08051	1
WEST DEPTFORD TWP	1
08052	24
MAPLE SHADE TWP	24
08053	19
EVESHAM TWP	19
08054	30
MOUNT LAUREL TWP	30
08055	5
MEDFORD LAKES BORO	1
MEDFORD TWP	4
08057	17
DELRAN TWP	1
MOORESTOWN TWP	16
08059	3
MOUNT EPHRAIM BORO	3
08060	46
EASTAMPTON TWP	5
HAINESPORT TWP	4
LUMBERTON TWP	5
MOUNT HOLLY TWP	20
PEMBERTON TWP	1
WESTAMPTON TWP	11
08063	6
NATIONAL PARK BORO	6
08065	10
PALMYRA BORO	10
08066	2
WEST DEPTFORD TWP	2
08075	38
DELANCO TWP	7

DELTRAN TWP	14
RIVERSIDE TWP	17
08077	14
CINNAMINSON TWP	13
RIVERTON BORO	1
08078	10
RUNNEMEDE BORO	10
08080	2
DEPTFORD TWP	1
WASHINGTON TWP GLO	1
08083	12
GLOUCESTER TWP	3
HI-NELLA BORO	1
SOMERDALE BORO	8
08086	10
WEST DEPTFORD TWP	10
08088	13
SOUTHAMPTON TWP	13
08090	4
DEPTFORD TWP	4
08093	15
DEPTFORD TWP	6
WESTVILLE BORO	9
08096	85
DEPTFORD TWP	36
WEST DEPTFORD TWP	19
WOODBURY CITY	30
08097	3
WOODBURY HEIGHTS BORO	3
08102	12
CAMDEN CITY	12
08103	33
CAMDEN CITY	33
08104	74
CAMDEN CITY	74
08105	37
CAMDEN CITY	34
PENNSAUKEN TWP	3
08106	10
AUDUBON BORO	10
08107	16
COLLINGSWOOD BORO	3
HADDON TWP	6
OAKLYN BORO	4
WOODLYNNE BORO	3
08108	9
COLLINGSWOOD BORO	5

HADDON TWP	4
08109	20
MERCHANTVILLE BORO	1
PENNSAUKEN TWP	19
08110	28
CAMDEN CITY	2
PENNSAUKEN TWP	26
08198	1
EASTAMPTON TWP	1
08501	1
HAMILTON TWP MER	1
08502	3
MONTGOMERY TWP	3
08505	14
BORDENTOWN CITY	5
BORDENTOWN TWP	6
FIELDSBORO BORO	1
SPRINGFIELD TWP BUR	2
08512	1
SOUTH BRUNSWICK TWP	1
08515	2
CHESTERFIELD TWP	2
08518	7
FLORENCE TWP	7
08520	1
CRANBURY TWP	1
08534	2
HOPEWELL TWP MER	2
08536	6
PLAINSBORO TWP	6
08540	10
FRANKLIN TWP SOM	1
LAWRENCE TWP MER	1
MONTGOMERY TWP	3
PRINCETON BORO	2
PRINCETON TWP	1
SOUTH BRUNSWICK TWP	2
08554	3
FLORENCE TWP	3
08558	2
MONTGOMERY TWP	2
08608	9
TRENTON CITY	9
08609	36
HAMILTON TWP MER	7
TRENTON CITY	29
08610	49

BORDENTOWN TWP	1
HAMILTON TWP MER	38
TRENTON CITY	10
08611	46
HAMILTON TWP MER	1
TRENTON CITY	45
08618	90
EWING TWP	14
TRENTON CITY	76
08619	20
HAMILTON TWP MER	20
08620	13
BORDENTOWN TWP	1
HAMILTON TWP MER	12
08628	14
EWING TWP	14
08629	19
HAMILTON TWP MER	7
TRENTON CITY	12
08638	45
EWING TWP	22
HAMILTON TWP MER	1
HOPEWELL TWP MER	1
TRENTON CITY	21
08648	20
LAWRENCE TWP MER	20
08690	12
HAMILTON TWP MER	12
08691	2
TRENTON CITY	1
WASHINGTON TWP MER	1
08805	8
BOUND BROOK BORO	7
BRIDGEWATER TWP	1
08807	11
BRIDGEWATER TWP	11
08810	3
SOUTH BRUNSWICK TWP	3
08812	2
DUNELLEN BORO	2
08816	9
EAST BRUNSWICK TWP	9
08817	32
EDISON TWP	32
08818	1
EDISON TWP	1
08820	23

EDISON TWP	23
08823	6
FRANKLIN TWP SOM	6
08824	8
SOUTH BRUNSWICK TWP	8
08830	8
WOODBIDGE TWP	8
08832	1
WOODBIDGE TWP	1
08835	8
MANVILLE BORO	8
08837	3
EDISON TWP	3
08840	8
METUCHEN BORO	7
WOODBIDGE TWP	1
08844	15
HILLSBOROUGH TWP	15
08846	5
MIDDLESEX BORO	5
08852	8
SOUTH BRUNSWICK TWP	8
08854	33
PISCATAWAY TWP	33
08861	33
PERTH AMBOY CITY	30
WOODBIDGE TWP	3
08863	5
WOODBIDGE TWP	5
08869	2
RARITAN BORO	2
08872	1
SAYREVILLE BORO	1
08873	57
FRANKLIN TWP SOM	57
08876	3
SOMERVILLE BORO	3
08880	7
SOUTH BOUND BROOK BORO	7
08901	41
NEW BRUNSWICK CITY	41
08902	40
NORTH BRUNSWICK TWP	39
SOUTH BRUNSWICK TWP	1
08904	7
HIGHLAND PARK BORO	7
(blank)	

(blank)

Grand Total

4065

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0063

Date of Response: 4/9/2018

Witness: N/A

Service Appts

Question:

To the extent not provided in response to RCR-CI-60, separately for each year since January 1, 2013 including 2018 (indicate months included for 2018) indicate:

- a. How many mutually agreed service related appointments did the Company make with residential customers (e.g., for meter reads and tests, customer equipment upgrades, miscellaneous referred complaints)? Please exclude the establishment of initial service. If this exclusion is not possible, please indicate such in the response and include all appointments.
- b. How many mutually agreed service related appointments with residential customers did the Company fail to meet? Please provide the number and the percent of appointments.
- c. What was the Company's internal objective for meeting mutually agreed service related appointments?

Attachments Provided Herewith: 1

RCR-CUS_0063_Service Appts.xls

Response:

Please see the response to RCR-CUS-0061 regarding BPU Service Metric Reporting for appointment information percentages. The service metric applies to the following work: Electric Meter installation; Gas Meter Installation; Electric Service Reconnects; Gas Service Reconnects; Billing Investigation; Electric A&I; Gas A&I; and CO A&I. Please see the attached summary file with total number of appointments and total number missed.

- a. Please see the attached Excel spreadsheet file "Service Appts.xls" for service related appointments.
- b. Please see the attached Excel spreadsheet file "Service Appts.xls" for service related missed appointments.
- c. There is no specific target set for this metric.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total	
2013	Appointments	27,142	24,899	31,560	38,113	32,411	27,282	28,126	33,308	30,039	38,187	28,512	20,123	359,702
	Missed	3,489	2,768	2,692	3,142	2,679	2,671	2,589	3,285	3,225	4,205	3,538	2,431	36,714
2014	Appointments	19,661	14,712	22,316	33,119	37,049	32,313	36,377	39,392	37,768	38,153	27,693	22,258	360,811
	Missed	2,185	1,627	2,920	3,595	3,861	3,231	4,192	4,495	4,432	6,814	5,964	2,593	45,909
2015	Appointments	18,215	14,849	20,461	32,239	31,081	34,290	34,190	34,230	36,332	36,689	24,266	25,078	341,920
	Missed	2,221	1,698	2,883	3,555	3,376	3,753	3,710	4,559	5,096	6,120	3,140	2,582	42,693
2016	Appointments	22,131	28,452	40,491	43,648	43,410	40,588	28,314	32,735	30,941	39,413	37,297	30,880	418,300
	Missed	2,252	2,592	2,902	3,698	3,799	4,577	2,932	4,088	3,863	5,472	4,475	3,188	43,838
2017	Appointments	27,918	28,977	35,971	41,036	41,772	41,062	32,537	45,933	44,316	45,553	35,737	26,079	446,891
	Missed	2,706	2,851	4,184	5,032	4,893	4,889	3,643	5,681	5,204	5,907	6,694	3,591	55,275
Total	Appointments	115,067	111,889	150,799	188,155	185,723	175,535	159,544	185,598	179,396	197,995	153,505	124,418	1,927,624
	Missed	12,853	11,536	15,581	19,022	18,608	19,121	17,066	22,108	21,820	28,518	23,811	14,385	224,429

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0028-UPDATE 2

Date of Response: 7/24/2018

Witness: N/A

Meter Reading Complaints Billing

Question:

Please provide the following in machine-readable Excel format: separately by month for the time period spanning January 1, 2013 through the present, and please update throughout the proceeding (if data are unavailable on a monthly basis, please provide the data for the period of time closest to a month for which data are available):

- a. Total meters in operation;
- b. Percentage of meters read each cycle;
- c. Customer reported reads;
- d. Number of complaints that relate to meter reading;
- e. Number of complaints that relate to billing; and
- f. Number of re-bills per 1,000 customers.

Attachments Provided Herewith: 3

RCR-CUS_0028-UPDATE 2_2018 Rate Case - Billing.xls
RCR-CUS_0028-UPDATE 2_2018 Rate Case - MR Data.xlsx
RCR-CUS_0028-UPDATE 2_Billing Meter Reading BPU inquiry.xlsx

Response:

a –f. The requested monthly update with June 2018 data is provided in the following attached Excel files: “2018 Rate Case – MR Data.xlsx”, “Billing Meter Reading BPU Inquiry.xlsx” and “2018 Rate Case – Billing.xlsx”. Please note that the spreadsheet “2018 Rate Case – MR Data.xlsx” has over 60 worksheets and is being provided electronically only.

District	Total E&G Meters to be read	Actual E&G Meters Read Manually	Customer Provided Reads	AMR Walk		AMR Drive		Estimated E&G Meters	Total E&G		Total E&G Read Rate
				By E&G Reads	Reads	by Gas Reads	Reads		Total E&G Reads	Rate	
Newark	4,428,750	2,157,891	2,592	1,395,322	0	0	0	875,557	3,555,805	80.2%	
Roseland	4,804,696	1,937,013	3,028	1,009,020	1,422,433	0	0	455,136	4,371,494	90.6%	
Harmon Cove	7,139,800	4,139,778	3,320	2,066,776	0	0	0	933,195	6,209,874	86.9%	
Hackensack	11,287,599	6,270,156	10,165	2,980,516	1,121,329	0	0	905,914	10,382,166	92.0%	
Cranford	5,063,029	3,415,821	1,434	1,090,336	0	0	0	558,522	4,507,591	89.0%	
New Brunswick	4,462,367	2,385,752	3,210	1,108,724	732,668	0	0	229,685	4,230,354	94.9%	
Audubon	3,998,997	2,524,474	4,894	1,097,828	0	0	0	371,949	3,627,196	90.7%	
Trenton	4,274,255	2,300,497	2,218	1,069,851	581,529	0	0	320,234	3,954,095	92.5%	
Burlington	2,986,208	2,019,497	1,683	810,451	0	0	0	154,649	2,831,631	94.8%	
Total	48,445,701	27,150,879	32,544	12,628,824	3,857,959	0	0	4,804,841	43,670,206	90.1%	

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0127

Date of Response: 4/9/2018

Witness: N/A

Year Contract with TIO Networks Started

Question:

In which year did PSE&G first enter into a contract with TIO Networks to process payments?

Attachments Provided Herewith: 0

Response:

PSE&G first entered into a contract with TIO Networks to process payments in 2012.



November 10, 2017

TIO Networks Suspends Operations to Protect Customers

Security Vulnerabilities Detected on TIO Networks

SAN JOSE, Calif.--(BUSINESS WIRE)-- PayPal Holdings, Inc. (Nasdaq: PYPL) announced that TIO Networks (TIO), a publicly traded company PayPal acquired in July 2017, has suspended operations to protect TIO's customers. This suspension of services is a result of PayPal's discovery of security vulnerabilities on the TIO platform and issues with TIO's data security program that do not adhere to PayPal's information security standards. TIO is not integrated into PayPal's platform. The PayPal platform is not impacted by this situation in any way and PayPal's customers' data remains secure.

Upon the recent discovery of this vulnerability on the TIO platform, PayPal took action by initiating an internal investigation of TIO and bringing in additional third-party cybersecurity expertise to review TIO's bill payment platform. A focus of the investigation will also include TIO's practices and representations prior to the acquisition.

While we apologize for any inconvenience this suspension of services may cause, the security of TIO's systems and the protection of TIO's customers are our highest priorities. We are working with the appropriate authorities to safeguard TIO customers.

Our investigation is ongoing. We will communicate with TIO customers and merchant partners directly as soon as we have more details. Customer updates will also be posted at www.tio.com.

About PayPal

Fueled by a fundamental belief that having access to financial services creates opportunity, PayPal (Nasdaq: PYPL) is committed to democratizing financial services and empowering people and businesses to join and thrive in the global economy. Our open digital payments platform gives PayPal's 218 million active account holders the confidence to connect and transact in new and powerful ways, whether they are online, on a mobile device, in an app, or in person. Through a combination of technological innovation and strategic partnerships, PayPal creates better ways to manage and move money, and offers choice and flexibility when sending payments, paying or getting paid. Available in more than 200 markets around the world, the PayPal platform, including Braintree, Venmo and Xoom, enables consumers and merchants to receive money in more than 100 currencies, withdraw funds in 56 currencies and hold balances in their PayPal accounts in 25 currencies. For more information on PayPal, visit <https://www.paypal.com/about>. For PayPal financial information, visit <https://investor.paypal-corp.com>.

View source version on [businesswire.com](http://www.businesswire.com): <http://www.businesswire.com/news/home/20171110005741/en/>

PayPal Holdings, Inc.
Justin Higgs
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Source: PayPal Holdings, Inc.

News Provided by Acquire Media

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0141
Date of Response: 4/11/2018
Witness: Ford, Aaron
TIO Networks Breach Case

Question:

Referring to RCR-CI-144, how and when was the Company notified of the potential data breach in December 2017?

Attachments Provided Herewith: 0

Response:

On November 12, 2017, PayPal notified PSE&G via email and phone that PayPal had suspended operations of TIO's networks and as a result, TIO kiosks in PSE&G's customer service centers were taken out of service. On November 28, 2017, PayPal notified PSE&G via phone that it had uncovered evidence of unauthorized access to TIO's network, including locations that stored customer data.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0153

Date of Response: 4/11/2018

Witness: Ford, Aaron

TIO Networks Breach Case - Time to BPU notification

Question:

How much time passed between PSE&G's knowledge of the December 2017 breach and its informing the Board of the potential breach?

Attachments Provided Herewith: 0

Response:

PSE&G learned that its customers' information was exposed as part of the TIO security incident on November 28, 2017. It notified the Board and the State Attorney General's Office on November 30, 2017.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0154

Date of Response: 4/11/2018

Witness: Ford, Aaron

TIO Networks Breach Case - Time to Rate Counsel Notification

Question:

How much time passed between PSE&G's knowledge of the December 2017 breach and its informing Rate Counsel of the potential breach?

Attachments Provided Herewith: 0

Response:

PSE&G learned that the TIO security incident involved the exposure of the Company's customers' information on November 28, 2017. PSEG's legal counsel participated in a telephone call about the security incident with Rate Counsel on December 14, 2017.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0139
Date of Response: 4/11/2018
Witness: Ford, Aaron
TIO Networks Breach Case

Question:

Please describe comprehensively all steps that the Company is taking in 2018, if any, to educate customers about the potential data breach.

Attachments Provided Herewith: 0

Response:

The Company has no current plans to provide additional information to its customers regarding the potential data breach beyond what has already been provided. That information includes:

- two letters directly mailed to customers who had their checking account and bank routing numbers exposed;
- a press release;
- a webpage devoted to the TIO security incident, including Frequently Asked Questions;
- a notice in all 16 PSE&G customer service centers in the state; and
- a bill notice.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0155

Date of Response: 4/11/2018

Witness: Ford, Aaron

TIO Networks Breach Case- Time until Customer Notification

Question:

How much time passed between PSE&G's knowledge of the December 2017 breach and its informing its customers of the potential breach?

Attachments Provided Herewith: 0

Response:

PSE&G learned that the TIO security incident exposed the Company's customers' information on November 28, 2017. The first communication to PSE&G customers was made one week later via US mail on December 5, 2017, and then a follow up letter was sent on or about December 13, 2017. The recipients of these letters were approximately 17,000 customers whose PSE&G Contract Account Number, checking account number, and bank routing number were exposed. PSE&G also issued a public press release on the PR Newswire on December 13, 2017 related to TIO's security incident. On December 20, 2017, the Company posted the notification along with FAQs associated with the breach on its website. PSE&G also sent a first batch of bill inserts to notify customers on January 8, 2018.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0138
Date of Response: 4/11/2018
Witness: Ford, Aaron
TIO Networks Breach Case

Question:

Please describe comprehensively all steps that the Company will take in 2018 through 2020 (or beyond), if any, to compensate customers for the potential data breach.

Attachments Provided Herewith: 0

Response:

PSE&G is presently not aware of any need to compensate customers for the potential data breach involving TIO's systems. Approximately 17,000 customers whose checking account and routing number were exposed have been offered free identify theft protection and credit monitoring services for a period of 12 months.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0191

Date of Response: 6/5/2018

Witness: N/A

Gartner Consulting

Question:

Reference responses to RCR-CUS-157, RCR-160, and RCR-CUS-137, part d.

- a. Please provide a copy of the contract with Gartner Consulting. If it is not included in the contract, describe fully the scope of services, the dates for deliverables, and the cost of the engagement to the Company.
- b. Please provide a copy of the report prepared by Gartner Consulting when it is available as well as any interim drafts provided by Gartner to the Company.

The following questions refer to confidential documents but the questions themselves do not include any confidential information:

Attachments Provided Herewith: 0

Response:

a – b. Given the confidential nature of this data privacy initiative, a copy of the contract with Gartner Consulting as well as its report is available for BPU Staff's and Rate Counsel's review at the Company's offices in Newark. BPU Staff and Rate Counsel may contact the Company to arrange a mutually agreeable time to inspect the documents.

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0189

Date of Response: 6/5/2018

Witness: N/A

TIO Networks Breach Case - Time elapsed prior to PSE&G being made aware of breach

Question:

Reference response to RCR-CUS-152. Did PSE&G ask PayPal when TIO first determined that there was a security incident? If not, why not? If so, what was PayPal's response?

Attachments Provided Herewith: 0

Response:

PSE&G inquired as to the earliest date of indicators of compromise from PayPal. PayPal responded that it would not be in a position to answer the question until its forensic investigation is complete.

Total Shutoffs by Municipality

RCR-CUS-97
PSE&G Confidential

Municipality	2017	2018
ALLENDALE BORO	17	4
ALLENTOWN BORO	27	0
ALPINE BORO	7	0
AUDUBON BORO	243	33
BARRINGTON BORO	138	25
BAYONNE CITY	2,223	334
BEDMINSTER TWP	22	0
BELLEVILLE TWP	1,039	189
BELLMAWR BORO	415	26
BERGENFIELD BORO	384	63
BERKELEY HEIGHTS TWP	13	2
BERNARDS TWP	40	3
BERNARDSVILLE BORO	25	1
BEVERLY CITY	122	36
BLOOMFIELD TWP	1,486	264
BLOOMINGDALE BORO	38	1
BOGOTA BORO	170	22
BORDENTOWN CITY	113	12
BORDENTOWN TWP	146	29
BOUND BROOK BORO	355	32
BRANCHBURG TWP	26	0
BRIDGEWATER TWP	257	0
BROOKLAWN BORO	109	24
BURLINGTON CITY	609	70
BURLINGTON TWP	589	38
BUTLER BORO	50	9
CALDWELL BORO	93	11
CAMDEN CITY	6,498	1,191
CARLSTADT BORO	179	39
CARTERET BORO	541	21
CEDAR GROVE TWP	52	10
CHATHAM BORO	10	0
CHATHAM TWP	12	0
CHERRY HILL TWP	1,242	229
CHESTER BORO	3	0
CHESTERFIELD TWP	24	1
CINNAMINSON TWP	199	53
CLARK TWP	116	9
CLIFFSIDE PARK BORO	659	101
CLIFTON CITY	2,090	350
CLOSTER BORO	36	5
COLLINGSWOOD BORO	294	73
CRANBURY TWP	21	1

CRANFORD TWP	132	7
CRESSKILL BORO	20	2
DELANCO TWP	148	16
DELRAN TWP	330	51
DEMAREST BORO	4	4
DEPTFORD TWP	917	161
DUMONT BORO	196	34
DUNELLEN BORO	166	30
EAST BRUNSWICK TWP	339	103
EAST HANOVER TWP	53	2
EAST NEWARK BORO	81	16
EAST ORANGE CITY	5,886	949
EAST RUTHERFORD BORO	329	56
EAST WINDSOR TWP	76	0
EASTAMPTON TWP	108	12
EDGEWATER BORO	381	102
EDGEWATER PARK TWP	361	78
EDISON TWP	1,206	150
ELIZABETH CITY	5,060	411
ELMWOOD PARK BORO	514	82
EMERSON BORO	60	12
ENGLEWOOD CITY	984	166
ENGLEWOOD CLIFFS BORO	47	6
ESSEX FELS TWP	6	0
EVESHAM TWP	569	112
EWING TWP	878	140
FAIR LAWN BORO	285	76
FAIRFIELD TWP ESS	118	25
FAIRVIEW BORO	435	69
FANWOOD BORO	40	2
FAR HILLS BORO	5	0
FIELDSBORO BORO	12	0
FLORENCE TWP	288	51
FLORHAM PARK BORO	33	1
FORT LEE BORO	615	62
FRANKLIN LAKES BORO	42	0
FRANKLIN TWP SOM	1,675	234
GARFIELD CITY	1,153	300
GARWOOD BORO	71	6
GLEN RIDGE BORO	30	2
GLEN ROCK BORO	67	2
GLOUCESTER CITY	666	140
GLOUCESTER TWP	768	91
GREEN BROOK TWP	86	10
GUTTENBERG TOWN	352	30
HACKENSACK CITY	1,602	320
HADDON HEIGHTS BORO	112	16

HADDON TWP	254	34
HADDONFIELD BORO	94	16
HAINESPORT TWP	79	4
HALEDON BORO	423	55
HAMILTON TWP MER	1,822	256
HANOVER TWP	33	6
HARDING TWP	19	3
HARRINGTON PARK BORO	7	2
HARRISON TOWN	381	102
HASBROUCK HEIGHTS	187	36
HAWORTH BORO	9	10
HAWTHORNE BORO	382	87
HELMETTA BORO	13	0
HIGHLAND PARK BORO	178	37
HIGHTSTOWN BORO	19	0
HILLSBOROUGH TWP	208	8
HILLSDALE BORO	67	11
HILLSIDE TWP	650	86
HI-NELLA BORO	22	2
HOBOKEN CITY	938	79
HOHOKUS BORO	25	3
HOPEWELL BORO	9	0
HOPEWELL TWP MER	45	0
IRVINGTON TOWN	4,835	1,160
JACKSON TWP	3	0
JAMESBURG BORO	40	5
JERSEY CITY	11,943	1,905
KEARNY TOWN	907	184
KENILWORTH BORO	82	5
KINNELON BORO	20	0
LAWNSIDE BORO	184	15
LAWRENCE TWP MER	357	47
LEONIA BORO	151	21
LINCOLN PARK BORO	1	0
LINDEN CITY	1,079	192
LITTLE FALLS TWP	199	27
LITTLE FERRY BORO	255	57
LIVINGSTON TWP	137	28
LODI BORO	789	168
LONG HILL TWP	22	2
LUMBERTON TWP	295	58
LYNDHURST TWP	546	106
MADISON BORO	55	0
MAGNOLIA BORO	97	7
MAHWAH TWP	105	2
MANSFIELD TWP BUR	54	16
MANVILLE BORO	270	10

MAPLE SHADE TWP	586	134
MAPLEWOOD TWP	478	112
MAYWOOD BORO	118	17
MEDFORD LAKES BORO	24	0
MEDFORD TWP	149	23
MENDHAM BORO	7	0
MENDHAM TWP	9	0
MERCHANTVILLE BORO	186	39
METUCHEN BORO	117	9
MIDDLESEX BORO	155	16
MIDLAND PARK BORO	54	3
MILLBURN TWP	25	0
MILLSTONE TWP	39	0
MILLTOWN BORO	27	7
MONROE TWP MID	73	2
MONTCLAIR TWP	818	151
MONTGOMERY TWP	98	27
MONTVALE BORO	19	0
MOONACHIE BORO	114	16
MOORESTOWN TWP	189	54
MORRIS PLAINS BORO	5	0
MORRIS TWP	38	2
MORRISTOWN TOWN	86	13
MOUNT EPHRAIM BORO	150	17
MOUNT HOLLY	1	0
MOUNT HOLLY TWP	456	80
MOUNT LAUREL TWP	699	116
MOUNTAINSIDE BORO	12	0
NATIONAL PARK BORO	118	11
NEW BRUNSWICK CITY	1,670	277
NEW HANOVER TWP	6	0
NEW MILFORD BORO	199	44
NEW PROVIDENCE BORO	7	4
NEWARK CITY	18,980	3,075
NORTH ARLINGTON BORO	212	59
NORTH BERGEN TWP	1,712	322
NORTH BRUNSWICK TWP	1,071	223
NORTH CALDWELL TWP	17	5
NORTH HALEDON BORO	103	12
NORTH PLAINFIELD BORO	548	96
NORTHVALE BORO	23	8
NORWOOD BORO	15	5
NUTLEY TOWN	458	82
OAKLAND BORO	48	5
OAKLYN BORO	156	21
OLD BRIDGE TWP	107	4
OLD TAPPAN BORO	24	0

ORADELL BORO	44	12
ORANGE CITY	2,407	342
PALISADES PARK BORO	351	58
PALMYRA BORO	223	28
PARAMUS BORO	193	25
PARK RIDGE BORO	29	3
PARSIPPANY-TROY HILLS TWP	10	4
PASSAIC CITY	2,594	354
PATERSON CITY	9,815	1,550
PEAPACK-GLADSTONE BORO	7	0
PEMBERTON BORO	15	5
PEMBERTON TWP	288	24
PENNINGTON BORO	13	0
PENNSAUKEN TWP	1,540	377
PEQUANNOCK TWP	26	1
PERTH AMBOY CITY	1,529	127
PISCATAWAY TWP	648	85
PLAINFIELD CITY	2,513	307
PLAINSBORO TWP	341	99
PLUMSTED TWP	20	0
POMPTON LAKES BORO	58	3
PRINCETON BORO	108	16
PRINCETON TWP	70	13
PROSPECT PARK BORO	309	73
RAHWAY CITY	870	118
RAMSEY BORO	36	5
RANDOLPH TWP	2	0
RARITAN BORO	127	2
READINGTON TWP	6	0
RIDGEFIELD BORO	230	47
RIDGEFIELD PARK VILLAGE	309	41
RIDGEWOOD VILLAGE	159	20
RINGWOOD BORO	45	0
RIVER EDGE BORO	72	7
RIVER VALE TWP	58	1
RIVERDALE BORO	21	0
RIVERSIDE TWP	309	43
RIVERTON BORO	37	4
ROCHELLE PARK TWP	80	13
ROCKY HILL BORO	11	0
ROOSEVELT BORO	7	0
ROSELAND BORO	28	2
ROSELLE BORO	760	85
ROSELLE PARK BORO	182	22
RUNNEMEDE BORO	237	11
RUTHERFORD BORO	333	41
SADDLE BROOK TWP	192	45

SADDLE RIVER BORO	18	1
SAYREVILLE BORO	262	54
SCOTCH PLAINS TWP	175	7
SECAUCUS TOWN	435	65
SOMERDALE BORO	186	14
SOMERVILLE BORO	238	14
SOUTH AMBOY CITY	20	0
SOUTH BOUND BROOK BORO	95	7
SOUTH BRUNSWICK TWP	561	129
SOUTH HACKENSACK TWP	68	6
SOUTH ORANGE VILLAGE TWP	236	28
SOUTH PLAINFIELD BORO	294	12
SOUTH RIVER BORO	77	10
SOUTHAMPTON TWP	87	1
SPOTSWOOD BORO	13	1
SPRINGFIELD TWP BUR	14	0
SPRINGFIELD TWP UNI	29	0
SUMMIT CITY	56	0
TEANECK TWP	732	151
TENAFLY BORO	124	10
TETERBORO BORO	3	0
TEWKSBURY TWP	3	0
TOTOWA BORO	232	51
TRENTON CITY	6,007	868
UNION CITY	2,511	423
UNION TWP UNI	1,007	32
UPPER FREEHOLD TWP	11	1
UPPER SADDLE RIVER BORO	44	0
VERONA TWP	82	4
VOORHEES TWP	474	77
WALDWICK BORO	77	1
WALLINGTON BORO	205	34
WANAQUE BORO	46	0
WARREN TWP	41	6
WASHINGTON TWP BER	28	7
WASHINGTON TWP GLO	140	16
WASHINGTON TWP MER	86	3
WATCHUNG BORO	39	8
WAYNE TWP	445	102
WEEHAWKEN TWP	489	98
WEST CALDWELL TWP	49	12
WEST DEPTFORD TWP	564	66
WEST MILFORD TWP	120	3
WEST NEW YORK TOWN	1,471	221
WEST ORANGE TWP	1,065	142
WEST PATERSON BORO	379	60
WEST WINDSOR TWP	142	28

WESTAMPTON TWP	196	17
WESTFIELD TOWN	151	9
WESTVILLE BORO	240	62
WESTWOOD BORO	119	15
WILLINGBORO TWP	1,526	318
WINFIELD TWP	29	6
WOOD RIDGE BORO	3	0
WOODBIDGE TWP	1,241	21
WOODBURY CITY	567	92
WOODBURY HEIGHTS BORO	59	5
WOODCLIFF LAKE BORO	46	8
WOODLYNNE BORO	187	38
WOOD-RIDGE BORO	186	39
WRIGHTSTOWN BORO	17	0
WYCKOFF TWP	58	0
Grand Total	157,901	24,809

Shutoffs by Tolerance Code

RCR-CUS-97

Tolerance Codes	2017	2018
Not identified as Low	134,654	24,809
Income		
AFD	7	
HDS	507	
HEA	1,692	
MS	9	
NJSH	69	
PAA	1	
PVCH	172	
SCIT	805	
SNJL	251	
SSI	82	
TEMP	104	
USF	17,622	
USFA	1,732	
USFB	5	
USFS	130	
WEL	59	
Grand Total	157,901	24,809

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0182

Date of Response: 6/6/2018

Witness: N/A

Energy Assistance Dollars 2009-2017

Question:

Reference response to RCR-CUS-106 and attached Excel file entitled, "PAO Portfolio Scorecard."

- a. Please explain what "LIHEAP Checks" means and how it differs from "LIHEAP." Do the two categories overlap? Explain fully.
- b. Does the Company have any views on why LIHEAP Checks and LIHEAP declined by 9.5% and 13.8%, respectively, between 2016 and 2017? If so, please provide.
- c. Does the Company have any views on why TRUE/PAGE participation increased by 38.6% between 2016 and 2017? If so, please provide.
- d. Does the Company have any views on why USF participation decreased by 8.7% between 2016 and 2017? If so, please provide.
- e. The response indicates that PSE&G created its PAO Portfolio Scorecard in 2016. Recognizing that the scorecard did not exist before 2016, does the Company nonetheless retain information about participation for prior years? If not, why not? If so, provide as much comparable information as exists for 2013 through 2015 to correspond with the information shown in the attachment.
- f. In the context of the "USF Letter Running Issue," the Company refers to mechanical issues and the letter containing "PII information." What is "PII information"?

Attachments Provided Herewith: 1

RCR-CUS_0182_Energy Assistance Dollars 2009-2017.xls

Response:

- a. "LIHEAP" refers to the benefits received electronically from the State to PSE&G through a secure file. These benefits are electronically credited directly to the customer's PSE&G account.

"LIHEAP Checks" are checks sent from the State directly to the customer. The customer can take the check to the customer service center to have the funds credited to their PSE&G account. These "LIHEAP Checks" are processed as regular customer payments in the Company's customer system.

The two categories do not overlap.

- b. PSE&G believes that the downward trend in the New Jersey unemployment rate is an indicator of an improving economy. This is further confirmed by an 8.1% decrease in the Supplemental Nutrition Assistance Program (SNAP, commonly known as Food Stamps)

participation, between 2016 and 2017 (State of New Jersey, Department of Human Services, Division of Family Development, Current Program Statistics, November 2017). Customers receiving SNAP are automatically evaluated for eligibility into the LIHEAP program.

c. While PSE&G does not have any direct evidence of the cause of the increase in participation between 2016 – 2017, PSE&G has utilized targeted social media to market these programs, as well as increasing the amount of direct marketing targeting potential TRUE/PAGE customers via email, letter and or phone campaigns. Direct marketing TRUE/PAGE campaign outreach increased from 9 campaigns in 2016 to 16 campaigns in 2017.

d. SNAP participation decreased 8.9% between 2016 and 2017, which has contributed to the decrease in LIHEAP participation. Those that receive LIHEAP are also screened for participation in the USF program. Additionally, the USF is based on the previous year's energy usage. The USF is a Percentage of Income program (PIP) that takes the annual customer energy costs, subtracts the customer PIP (3% gas, 3% electric or 6% electric heating), and subtracts LIHEAP or LIFELINE payments. The remainder is divided by 12 with a customer receiving from \$5 to \$150 per month toward their electric and gas bills for 12 months. With the lower natural gas prices, the cost of energy has been lower, reducing the calculated USF subsidies.

e. PSE&G has participation information dating back to 2009. Please see the attached Excel spreadsheet "Energy Assistance Dollars 2009-2017.xlsx". This data is based on the heating season, not the calendar year when the actual money was received (which is how it is reported on the PAO Scorecard in the original response).

f. PII is Personally Identifiable Information such as date of birth and driver's license.

Energy Assistance Dollars 2009 - 2017

	<u>Recipients</u>	<u>Direct LIHEAP Dollars</u>	<u>LIHEAP Checks</u>	<u>Total LIHEAP Dollars</u>
LIHEAP 2009	88,707	\$ 53,867,724.28	\$ 9,562,840.25	\$ 63,430,564.53
LIHEAP 2010	99,969	\$ 51,122,105.98	\$ 10,798,191.20	\$ 61,920,297.18
LIHEAP 2011	92,011	\$ 62,059,791.60	\$ 7,658,025.78	\$ 69,717,817.38
LIHEAP 2012	93,344	\$ 50,367,537.38	\$ 6,440,927.84	\$ 56,808,465.22
LIHEAP 2013	96,375	\$ 42,616,617.53	\$ 4,274,822.85	\$ 46,891,440.38
LIHEAP 2014	96,811	\$ 44,844,074.71	\$ 6,517,242.99	\$ 51,361,317.70
LIHEAP 2015	90,640	\$ 38,619,487.98	\$ 6,757,472.22	\$ 45,376,960.20
LIHEAP 2016	88,530	\$ 40,519,967.62	\$ 6,176,874.64	\$ 46,696,842.26
LIHEAP 2017	86,038	\$ 38,384,530.90	\$ 5,787,919.88	\$ 44,172,450.78

	<u>Recipients</u>	<u>Lifeline Dollars</u>
LIFELINE 2009	58,656	\$ 12,218,175.00
LIFELINE 2010	56,432	\$ 11,747,815.50
LIFELINE 2011	56,192	\$ 11,670,412.50
LIFELINE 2012	53,523	\$ 11,128,364.33
LIFELINE 2013	52,586	\$ 10,948,387.50
LIFELINE 2014	50,251	\$ 10,464,762.60
LIFELINE 2015	48,175	\$ 10,042,537.50
LIFELINE 2016	45,978	\$ 9,599,737.00
LIFELINE 2017	44,020	\$ 9,201,600.00

	<u>Recipients</u>	<u>USF Dollars</u>
USF 2009	134,059	\$ 121,352,867.47
USF 2010	152,693	\$ 135,017,118.49
USF 2011	171,319	\$ 133,049,483.09
USF 2012	170,308	\$ 129,675,536.09
USF 2013	163,665	\$ 116,478,891.91
USF 2014	160,169	\$ 116,149,200.36
USF 2015	154,731	\$ 107,602,639.21
USF 2016	145,863	\$ 102,924,361.00
USF 2017	133,166	\$ 84,287,804.62

Public Service Electric and Gas Company
Case Name: 2018 PSE&G Rate Case
Docket No(s): ER18010029 and GR18010030

Response to Discovery Request: RCR-CUS-0003

Date of Response: 4/9/2018

Witness: N/A

Electric Residential Customers by Municipality

Question:

Please provide the numbers of electric residential customers separately by municipality for 2017.

Attachments Provided Herewith: 1

RCR-CUS_0003_Electric Residential Customers by Municipality.xlsx

Response:

Please see the attached Excel spreadsheet file "Electric Residential Customers by Municipality.xlsx" for the number of electric residential customers by municipality as of March 30, 2018. This data is only available at a specific point in time and cannot be reported for historic time periods. Therefore, 2017 is not available.

**Residential Customers by
Municipality**

Municipal City Code	Electric Total Residential
ALLENDAL E BORO	
ALPINE BORO	
BERGENFIELD BORO	9,246
BOGOTA BORO	2,970
CARLSTADT BORO	2,506
CLIFFSIDE PARK BORO	10,540
CLOSTER BORO	
CRESSKILL BORO	
DEMAREST BORO	
DUMONT BORO	6,519
ELMWOOD PARK BORO	7,789
EAST RUTHERFORD BORO	4,287
EDGEWATER BORO	6,464
EMERSON BORO	2,495
ENGLEWOOD CITY	10,612
ENGLEWOOD CLIFFS BORO	1,950
FAIR LAWN BORO	12,281
FAIRVIEW BORO	5,088
FORT LEE BORO	15,915
FRANKLIN LAKES BORO	
GARFIELD CITY	11,617
GLEN ROCK BORO	4,041
HACKENSACK CITY	18,440
HARRINGTON PARK BORO	
HASBROUCK HEIGHTS	4,652
HAWORTH BORO	720
HILLSDALE BORO	3,594
HOHOKUS BORO	1,492
LEONIA BORO	3,388
LITTLE FERRY BORO	4,402
LODI BORO	9,745
LYNDHURST TWP	9,392
MAHWAH TWP	
MAYWOOD BORO	3,803
MIDLAND PARK BORO	2,785
MONTVALE BORO	
MOONACHIE BORO	1,121
NEW MILFORD BORO	6,426
NORTH ARLINGTON BORO	6,642
NORTHVALE BORO	
NORWOOD BORO	
OAKLAND BORO	

OLD TAPPAN BORO	577
ORADELL BORO	2,857
PALISADES PARK BORO	7,169
PARAMUS BORO	8,630
PARK RIDGE BORO	
RAMSEY BORO	
RIDGEFIELD BORO	4,144
RIDGEFIELD PARK VILLAGE	4,976
RIDGEWOOD VILLAGE	8,727
RIVER EDGE BORO	4,251
RIVER VALE TWP	3,382
ROCHELLE PARK TWP	2,228
ROCKLEIGH BORO	
RUTHERFORD BORO	7,269
SADDLE BROOK TWP	5,521
SADDLE RIVER BORO	441
SOUTH HACKENSACK TWP	918
TEANECK TWP	14,020
TENAFLY BORO	5,149
TETERBORO BORO	27
UPPER SADDLE RIVER BORO	
WALDWICK BORO	3,680
WALLINGTON BORO	4,990
WASHINGTON TWP BER	3,367
WESTWOOD BORO	4,684
WOODCLIFF LAKE BORO	1,976
WOOD RIDGE BORO	4,025
WYCKOFF TWP	2,523
BEVERLY CITY	1,072
BORDENTOWN CITY	1,986
BORDENTOWN TWP	4,618
BURLINGTON CITY	4,098
BURLINGTON TWP	8,510
CHESTERFIELD TWP	1,891
CINNAMINSON TWP	6,273
DELANCO TWP	2,067
DELRAN TWP	6,719
EASTAMPTON TWP	2,613
EDGEWATER PARK TWP	3,791
EVESHAM TWP	15,202
FIELDSBORO BORO	237
FLORENCE TWP	5,188
HAINESPORT TWP	2,389
LUMBERTON TWP	4,703
MANSFIELD TWP BUR	3,677
MAPLE SHADE TWP	8,844
MEDFORD TWP	6,325

MEDFORD LAKES BORO	1,591
MOORESTOWN TWP	7,693
MOUNT HOLLY TWP	4,088
MOUNT LAUREL TWP	19,001
NEW HANOVER TWP	
NORTH HANOVER TWP	
PALMYRA BORO	3,383
PEMBERTON BORO	
PEMBERTON TWP	177
RIVERSIDE TWP	3,149
RIVERTON BORO	1,104
SOUTHAMPTON TWP	4,084
SPRINGFIELD TWP BUR	786
WESTAMPTON TWP	3,320
WILLINGBORO TWP	11,742
WRIGHTSTOWN BORO	
AUDUBON BORO	3,818
BARRINGTON BORO	3,175
BELLMAR BORO	4,932
BROOKLAWN BORO	806
CAMDEN CITY	24,989
CHERRY HILL TWP	26,593
COLLINGSWOOD BORO	5,613
GLOUCESTER CITY	4,472
GLOUCESTER TWP	11,612
HADDON TWP	6,148
HADDONFIELD BORO	4,695
HADDON HEIGHTS BORO	3,064
HI-NELLA BORO	123
LAWN SIDE BORO	1,212
MAGNOLIA BORO	1,836
MERCHANTVILLE BORO	1,692
MOUNT EPHRAIM BORO	1,996
OAKLYN BORO	1,864
PENNSAUKEN TWP	12,704
RUNNEMEDE BORO	3,547
SOMERDALE BORO	2,236
VOORHEES TWP	7,127
WOODLYNNE BORO	1,001
BELLEVILLE TWP	14,431
BLOOMFIELD TWP	20,631
CALDWELL BORO	3,460
CEDAR GROVE TWP	4,782
EAST ORANGE CITY	24,860
ESSEX FELLS TWP	799
FAIRFIELD TWP ESS	2,731
GLEN RIDGE BORO	2,461

IRVINGTON TOWN	21,525
LIVINGSTON TWP	7,479
MAPLEWOOD TWP	8,815
MILLBURN TWP	
MONTCLAIR TWP	15,617
NEWARK CITY	91,768
NORTH CALDWELL TWP	2,321
NUTLEY TOWN	12,166
ORANGE CITY	12,029
ROSELAND BORO	2,584
SOUTH ORANGE VILLAGE TWP	6,170
VERONA BORO	5,394
WEST CALDWELL TWP	3,845
WEST ORANGE TWP	17,361
DEPTFORD TWP	10,469
NATIONAL PARK BORO	1,162
WASHINGTON TWP GLO	1,583
WEST DEPTFORD TWP	8,892
WESTVILLE BORO	1,896
WOODBURY CITY	4,149
WOODBURY HEIGHTS BORO	1,140
BAYONNE CITY	26,111
EAST NEWARK BORO	848
GUTTENBERG TOWN	3,358
HARRISON TOWN	7,139
HOBOKEN CITY	26,628
JERSEY CITY	115,520
KEARNY TOWN	13,948
NORTH BERGEN TWP	20,692
SECAUCUS TOWN	8,519
UNION CITY	22,623
WEEHAWKEN TWP	7,868
WEST NEW YORK TOWN	18,367
CLINTON TWP	
EAST AMWELL TWP	54
READINGTON TWP	
TEWKSBURY TWP	
EAST WINDSOR TWP	
EWING TWP	14,434
HAMILTON TWP MER	36,612
HIGHTSTOWN BORO	
HOPEWELL BORO MER	835
HOPEWELL TWP	5,581
LAWRENCE TWP MER	13,080
PENNINGTON BORO	994
PRINCETON BORO	4,251
PRINCETON TWP	5,532

TRENTON CITY	28,482
WASHINGTON TWP MER	4,325
WEST WINDSOR TWP	9,171
CARTERET BORO	8,329
CRANBURY TWP	1,390
DUNELLEN BORO	2,596
EAST BRUNSWICK TWP	12,879
EDISON TWP	37,271
HELMETTA BORO	
HIGHLAND PARK BORO	6,231
JAMESBURG BORO	
OLD BRIDGE TWP	
METUCHEN BORO	5,708
MIDDLESEX BORO	5,315
MILLTOWN BORO	
MONROE TWP MID	
NEW BRUNSWICK CITY	15,108
NORTH BRUNSWICK TWP	15,104
PERTH AMBOY CITY	16,206
PISCATAWAY TWP	18,078
PLAINSBORO TWP	10,088
SAYREVILLE BORO	
SOUTH AMBOY CITY	
SOUTH BRUNSWICK TWP	16,286
SOUTH PLAINFIELD BORO	8,312
SOUTH RIVER BORO	
SPOTSWOOD BORO	
WOODBRIIDGE TWP	36,495
ALLENTOWN BORO	769
MILLSTONE TWP	
ROOSEVELT BORO	
UPPER FREEHOLD TWP	624
BUTLER BORO	
CHATHAM BORO	
CHATHAM TWP	
CHESTER BORO	
CHESTER TWP	
DENVILLE TWP	
EAST HANOVER TWP	
FLORHAM PARK BORO	
HANOVER TWP	
HARDING TWP	
KINNELON BORO	
LINCOLN PARK BORO	60
MADISON BORO	
MENDHAM BORO	
MENDHAM TWP	

MORRIS TWP	
MORRIS PLAINS BORO	
MORRISTOWN TOWN	
PARSIPPANY-TROY HILLS TWP	
LONG HILL TWP	
PEQUANNOCK TWP	
RANDOLPH TWP	
RIVERDALE BORO	
JACKSON TWP	
PLUMSTED TWP	
BLOOMINGDALE BORO	
CLIFTON CITY	32,274
HALEDON BORO	2,998
HAWTHORNE BORO	7,703
LITTLE FALLS TWP	4,787
NORTH HALEDON BORO	3,145
PASSAIC CITY	18,741
PATERSON CITY	43,367
POMPTON LAKES BORO	
PROSPECT PARK BORO	1,925
RINGWOOD BORO	
TOTOWA BORO	3,956
WANAQUE BORO	
WAYNE TWP	16,240
WEST MILFORD TWP	
WEST PATERSON BORO	5,454
BEDMINSTER TWP	
BERNARDS TWP	
BERNARDSVILLE BORO	
BOUND BROOK BORO	4,186
BRANCHBURG TWP	57
BRIDGEWATER TWP	13,252
FAR HILLS BORO	
FRANKLIN TWP SOM	26,644
GREEN BROOK TWP	2,454
HILLSBOROUGH TWP	14,117
MANVILLE BORO	4,127
MILLSTONE BORO	177
MONTGOMERY TWP	8,099
NORTH PLAINFIELD BORO	7,772
PEAPACK-GLADSTONE BORO	
RARITAN BORO	3,195
ROCKY HILL BORO	309
SOMERVILLE BORO	5,066
SOUTH BOUND BROOK BORO	1,902
WARREN TWP	1,028
WATCHUNG BORO	2,147

BERKELEY HEIGHTS TWP	
CLARK TWP	6,066
CRANFORD TWP	8,668
ELIZABETH CITY	42,633
FANWOOD BORO	2,686
GARWOOD BORO	1,957
HILLSIDE TWP	7,418
KENILWORTH BORO	2,941
LINDEN CITY	15,687
MOUNTAINSIDE BORO	2,339
NEW PROVIDENCE BORO	
PLAINFIELD CITY	15,771
RAHWAY CITY	11,083
ROSELLE BORO	7,900
ROSELLE PARK BORO	5,205
SCOTCH PLAINS TWP	9,010
SPRINGFIELD TWP UNI	
SUMMIT CITY	
UNION TWP UNI	20,263
WESTFIELD TOWN	10,758
WINFIELD TWP	697
Overall Result	1,910,574