

Matthew M. Weissman
General State Regulatory Counsel

Law Department
PSEG Services Corporation
80 Park Plaza – 15, Newark, New Jersey 07102-4194
tel : 973-430-7052 fax: 973-430-5983
email: matthew.weissman@pseg.com

RECEIVED
CASE MANAGEMENT

OCT 15 2018

BOARD OF PUBLIC UTILITIES
TRENTON, NJ

October 11, 2018

 PSEG
Services Corporation
RECEIVED
MAIL ROOM

OCT 15 2018

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

BPU Docket No. EO18101115

VIA BPU E-FILING SYSTEM & HARD COPY

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

Dear Secretary Camacho-Welch:

Enclosed for filing are the original and two copies of the Verified Petition of Public Service Electric and Gas Company (“PSE&G” or the “Company”) in the above-entitled matter, along with the attachments and appendix thereto. PSE&G originally filed this matter with the Board of Public Utilities (“BPU” or the “Board”) on September 26, 2018, along with its Clean Energy Future – Energy Efficiency (“CEF-EE”) and Clean Energy Future – Electric Vehicle and Energy Storage (“CEF-EVES”) Programs. However, per the BPU’s request, PSE&G is now filing these three Clean Energy Future Programs separately, with their own petitions and docket numbers.

In support of PSE&G’s CEF-EC Petition, attached and filed herewith are the Direct Testimonies and Schedules of the following witnesses.

<u>Attachment</u>	<u>Witness</u>	<u>Area of Responsibility</u>
1	Gregory C. Dunlap, Vice President, Customer Operations, PSE&G	The Energy Cloud, including advanced metering infrastructure
2	Donna M. Powell, Assistant Controller – PSE&G, PSEG Services Corporation	Stranded asset costs associated with removed analog electric meters

cms

Legal
DAG
RPA
S. Peterson

3	Stephen Swetz, Senior Director, Corporate Rates and Revenue Requirements, PSEG Services Corporation	Revenue requirements, cost recovery methodology, and rate design
---	--	--

PSE&G respectfully requests that the Board retain jurisdiction over this CEF-EC filing. Copies of the Petition and supporting documentation will be served upon all entities legally required to be noticed.

We look forward to the opportunity to actively participate in these upcoming proceedings and putting New Jersey on a path to a Clean Energy Future.

Respectfully submitted,



Matthew M. Weissman

Attachments

C Attached Service List (E-Mail Only)

BPU

Alice Bator
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 943-5805
alice.bator@bpu.nj.gov

BPU

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

BPU

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

BPU

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

BPU

Bethany Rocque-Romaine Esq.
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-1496
bethany.romaine@bpu.nj.gov

DAG

Jenique Jones
NJ Dept. of Law & Public Safety
Division of Law
124 Halsey Street, 5th Flr.
P.O. Box 45029
Newark NJ 07101
jenique.jones@dol.lps.state.nj.us

BPU

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

BPU

Noreen M. Giblin Esq.
Board of Public Utilities
44 South Clinton Avenue, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
noreen.giblin@bpu.nj.gov

BPU

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

BPU

Jacqueline O'Grady
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-2947
jackie.ogrady@bpu.nj.gov

BPU

Scott Sumliner
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-4519
scott.sumliner@bpu.nj.gov

DAG

Patricia A. Krogman DAG
NJ Dept of Law & Public Safety
Division of Law
124 Halsey Street, 5th Flr.
P.O. Box 45029
Newark NJ 07101
(973) 648-3441
patricia.krogman@dol.lps.state.nj.us

BPU

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

BPU

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

BPU

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

BPU

Stacy Peterson
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton NJ 08625-0350
(609) 292-4517
stacy.peterson@bpu.nj.gov

DAG

Geoffrey Gersten
NJ Dept. of Law & Public Safety
Division of Law
124 Halsey Street, 5th Flr.
P.O. Box 45029
Newark NJ 07101
(973) 648-3510
geoffrey.gersten@dol.lps.state.nj.us

DAG

Andrew Kuntz Esq.
NJ Department of Law & Public Safety
124 Halsey Street
Post Office Box 45029
Newark NJ 07101
Andrew.kuntz@lps.state.nj.us

DAG

Caroline Vachier DAG
NJ Dept. of Law & Public Safety
Division of Law
124 Halsey Street, 5th Flr.
P.O. Box 45029
Newark NJ 07101
(973) 648-3709
caroline.vachier@dol.lps.state.nj.us

PSE&G

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

PSE&G

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

Rate Counsel

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

Rate Counsel

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

Rate Counsel

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

DAG

Peter VanBrunt
NJ Dept of Law & Public Safety
124 Halsey Street
P.O. Box 45029
Newark NJ 07101
Peter.VanBrunt@law.njoag.gov

PSE&G

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

PSE&G

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

Rate Counsel

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

Rate Counsel

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

Rate Counsel

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

DAG

Emma Xiao DAG
NJ Dept of Law & Public Safety
Division of Law
124 Halsey Street, 2nd Floor
Newark NJ 07101
emma.xiao@law.njoag.gov

PSE&G

Justin Incardone Esq.
PSEG Services Corporation
80 Park Plaza, T5
P.O. Box 570
Newark NJ 07102
(973) 430-6163
justin.incardone@pseg.com

PSE&G

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

Rate Counsel

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

Rate Counsel

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

Rate Counsel

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

Rate Counsel

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

Rate Counsel

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

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

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

PETITION

BPU Docket No. _____

I. INTRODUCTION

Public Service Electric and Gas Company (“PSE&G” or the “Company”), a corporation of the State of New Jersey, having its principal offices at 80 Park Plaza, Newark, New Jersey, respectfully petitions the New Jersey Board of Public Utilities (“Board” or “BPU”) pursuant to N.J.S.A. 48:2-21, N.J.S.A. 48:2-21.1, N.J.A.C. 14:3-2A, and any other statute or regulation the Board deems applicable, as follows:

1. Petitioner is a public utility engaged in the distribution of electricity and the provision of electric Basic Generation Service (“BGS”), and the distribution of gas and the provision of Basic Gas Supply Service (“BGSS”), for residential, commercial, and industrial purposes within New Jersey. PSE&G provides service to approximately 2.2 million electric and 1.8 million gas customers in an area having a population of approximately six million people, which extends from the Hudson River opposite New York City, southwest to the Delaware River at Trenton and south to Camden, New Jersey.

2. PSE&G is subject to regulation by the Board for the purposes of setting its retail distribution rates and to assure safe, adequate, and reliable electric distribution and natural gas distribution service pursuant to N.J.S.A. 48:2-21 et seq.

3. Through this Petition and the accompanying schedules and testimonies, PSE&G seeks BPU approval for The Clean Energy Future – Energy Cloud Program (“CEF-EC

Program”) which, together with two other programs that PSE&G is filing at this time (“Other Programs”), under separate Petitions and docket numbers, forms the basis for a clean and resilient energy future. The CEF-EC Program, the foundation of which is the deployment of advanced metering infrastructure (“AMI”) throughout the Company’s electric service territory, will be the technological platform that strengthens and modernizes the electric grid and the PSE&G customer experience.

4. This Program, along with the Other Programs, will form a Clean Energy Future for New Jersey. This EC Program in particular furthers the State’s goals by, among other benefits: (a) lowering energy consumption and customer bills; (b) reducing greenhouse gas emissions; (c) making the electric grid more reliable, resilient, and safe; and (d) enabling a number of customer, community, and company smart energy capabilities. This EC Program, taken together with the Other Programs will allow New Jersey to take the first steps toward becoming a leader in the development of a Clean Energy Future.

II. THE CEF-EC PROGRAM

A. Background

5. PSE&G submits the CEF-EC Program pursuant to the Board’s rules on Infrastructure Investment Programs (“IIPs”), *N.J.A.C.* 14:3-2A. Consistent with the IIP regulations, the CEF-EC Program proposes infrastructure investments to enhance the safety, reliability, and resiliency of the electric grid through the deployment of AMI throughout PSE&G’s electric service territory.¹ As set forth in more detail below and in the Direct Testimony of Gregory C. Dunlap, this is the appropriate time for PSE&G to install advanced electric meters because:

¹ PSE&G at this time is not seeking to install AMI in its gas service territory.

- AMI enhances storm restoration efforts at a time when the northeastern area of the country faces increasingly more challenging weather events;
- AMI offers significant value through customer benefits and operational savings, which will be realized more quickly given PSE&G's accelerated five-year deployment plan;
- New Jersey is considerably behind almost the entire country with respect to AMI;
- PSE&G is expecting to replace nearly one third of its electric meter population in the near future (~700,000 meters) given their length of service; and
- The price of an AMI meter is now comparable to the price of an automated meter reading ("AMR") device.

6. PSE&G anticipates the CEF-EC Program will be deployed over a five-year period (2019-2024), subject to Board approval. The CEF-EC Program proposes estimated investment of approximately \$721 million and operations and maintenance ("O&M") costs of \$73 million, from 2019 to 2024. Appendix A attached to this Petition sets forth the location in this filing of all minimum filing requirements per the Board's IIP regulations.

7. PSE&G also submits the CEF-EC Program in accordance with Recommendation #12 of Board Staff's investigative report regarding the performance of the state's electric distribution companies ("EDCs") during the March 2018 Nor'easters (the "Investigative Report"). Recommendation #12 of the Investigative Report requires PSE&G and the two other EDCs currently without AMI to "submit a plan and cost benefit analysis for the implementation of AMI. The EDCs' plans should focus on the use and benefits of AMI for the purpose of reducing customer outages and outage durations during a major storm event."² A cost-benefit analysis and the uses and benefits of AMI for the purpose of reducing outages (as well as other

² See *Order Accepting Staff's Report Requiring Utilities to Implement Recommendations*, BPU Docket No. EO18030255, (July 25, 2018), at p. 13.

CEF-EC Program benefits) are set forth below and in Mr. Dunlap’s testimony.

B. Use Case Overview

8. The CEF-EC Program in total will consist of 70 applications or “use cases.” This filing seeks BPU approval of the initial phase of the CEF-EC Program, referred to in this filing as “Release 1,” that features 22 of the 70 use cases. These 22 use cases focus on customer engagement, network operations and planning, and new utility products and services. Release 1 will establish the foundation for the CEF-EC Program, including the platform that is comprised of advanced electric meters as well as communications and back-office systems.

9. The table below summarizes the 22 use cases that are part of Release 1:

Use Case #	Use Case Name	Use Case Overview and Value
1	Enhanced Customer Engagement and Communications	A set of customer-benefiting functions and analytic applications that provide visualizations and information to customers, through bi-directional communications channels, including mobile and web portals
2	Rate Analyzer and Comparator	The ability to analyze customers’ usage profile and provide rate options that would fit that profile and meet customer needs for green outcomes, reduced bills, etc.
3	Usage and Bill Alerts, Saving Tips, Interactive Bill Presentment	Alerts that would be set by the customer and PSE&G to warn or notify customers of usage outside normal parameters, tips within their current rates to reduce bills, etc.
4	Interactive Energy Demand and Bill Management	Customer analytics capabilities that allow the customer to interrogate their energy and billing profile with the aim of the customer becoming informed and engaged, and then be able to leverage the use cases above to make required changes
5	Customer Segmentation and Behavioral Analysis	Provides the ability to develop highly targeted customer segmentation models based on more granular usage data
6	Customer Power Quality	Allows PSE&G to obtain voltage, load, and alert data directly from the meter to analyze customer power quality issues
7	Customer Energy Efficiency Programs	Data that gives the customer the ability to make more educated energy efficiency-related decisions, and change energy consumption habits
8	Customer Service and Call Center Performance	Enables the use of broader range of information to increase call center personnel knowledge, improve service, improve customer satisfaction, and lower customer costs

9	Customer DER/PV/EV	Services and systems that will use data to help assist customers with distributed energy resources or “DER” (<i>i.e.</i> , solar, EV, energy storage) installations, and the management of any power quality issues that occur as a result of variable DER load
10	Customer Device Safety	Enhances customer safety by using data -- such as alerts and voltage data -- to detect safety issues relating to customer meters and power connections, and provide safety alerts to customers and PSE&G (<i>e.g.</i> , Hot Sockets)
11	Sensor, Network, and Data Operations	Back office processes and systems that manage the initial infrastructure deployment and the ongoing and updated meter operations business function
12	Automated Move in/Move out	Automation of service related to customer requested move-in and move-outs
13	Remote Disconnect/Reconnect	Automation of service related to the reconnecting and disconnecting of customers
14	Next Generation Meter-to-Cash	Enables PSE&G to optimize and re-invent its meter-to-cash processes and drive out inefficiencies, increase service, and reduce costs
15	Network Connectivity Analysis	Advanced meters can extend the network model and enable a high level of accuracy of connections and phasing, which in turn results in better planning and operations performance
16	Outage Detection and Analysis	Uses outage data from operations systems and advanced meters to identify and verify possible outage locations, as well as identify network sections and specific customers (and numbers) that are without power
17	Outage Response Notification/Estimated Time of Restoration (ETR)	Uses outage data to calculate and communicate reasonable, more accurate, and acceptable outage status and ETR to customers
18	Voltage Monitoring and Analysis	Using data and other network data sources, voltage readings are captured, visualized, and system-wide analysis is run to determine locations where voltage violations exist both above and below nominal voltage
19	Asset Load/Phase Management, Balancing and Power Analysis	Provides information that helps determine areas of overloading of assets on the electric system, plan the response to major events, execute asset balancing, and customer load curtailment
20	Load Profiling and Forecasting	Enhances load profiles and forecasts by using data in combination with network, customer billing, or other data to perform more detailed usage analysis
21	Distribution Losses	Distribution losses can be identified and remedied by comparing the end-point meter usage data with usage data at the distribution entry point (substation)
22	Revenue Protection and Assurance	This use case will leverage advanced meter consumption, as well as voltage and alert data, to detect energy theft and meter tampering

10. In accordance with IIP project requirements, the CEF-EC Program through these use cases promotes the safety, reliability, and resiliency of the electric grid, and consists of non-revenue producing infrastructure. *N.J.A.C.* 14:3-2A.2(a)(1)-(2). The IIP rules consider “[e]lectric distribution automation investments, including, but not limited to...voltage and reactive power control [and] communications networks” to be projects eligible for IIP treatment. *N.J.A.C.* 14:3-2A.2(b)(4). The CEF-EC Program establishes the communication network that enables the electric distribution automation described in the use cases. Moreover, Use Case #18 gives PSE&G the opportunity to determine with better efficiency where voltage violations exist, both above and below nominal voltage. Thus, the CEF-EC Program is within scope of the IIP rules.

C. CEF-EC Program Benefits and Costs

11. The CEF-EC Program is cost effective. During the deployment and benefit realization period of nearly 20 years (*i.e.*, 2019-2037, subject to BPU approval), the CEF-EC Program will deliver an estimated \$1.73 billion of customer and operational benefits, versus \$794 million of costs, for total net benefits of \$937 million. Qualitative benefits are not included in this calculation, but are instead discussed in the EC Business Case. *See* Schedule GD-CEF-EC-2.

12. The customer benefits will be realized via: (a) increased participation in existing Time of Use rate; (b) improved storm response (including up to an estimated 2% improvement in reliability metrics, specifically System Average Interruption Duration Index or “SAIDI”); (c) reduction in use from inactive accounts; (d) reduction in write-offs; (e) avoided energy theft; and (f) recovered line loss due to slow meters.

13. With respect to operational benefits, the remote data and connection capabilities provided by the CEF-EC Program will eliminate the need for nearly all manual meter reads, as well as certain call center and field collection responsibilities.³ These capabilities will also increase the data accuracy of meter reads from 91% to at least 99%, thereby reducing the amount of estimated reads, increasing bill accuracy, and lowering customer complaints. AMI will also help the Company improve in the customer service metrics agreed upon in PSE&G's 2009/2010 base rate case; for example, meter reads on cycle, customer rebills, and BPU complaints.

14. Savings will also be achieved due to reduced workloads and truck rolls; more specifically, remote and instantaneous disconnect and reconnect activities, avoided customer power quality visits and investigation, and outage management improvement. These benefits will free up field personnel, thereby improving PSE&G's performance in another customer service metric agreed upon in its 2009/10 base rate case, *i.e.*, customer service appointments met.

15. The CEF-EC Program will also result in environmental benefits, helping to put New Jersey back on track to satisfy the NJGWRA's GHG reduction standards. This phase alone of the CEF-EC Program will result in the reduction of carbon dioxide emissions by 2,761 tons through fewer truck rolls.

D. Electric AMI Deployment

16. PSE&G will install approximately 2.2 million advanced (or "smart") meters throughout its electric service territory over the course of a five-year period, beginning in 2019. PSE&G's entire customer base will receive an advanced electric meter (*i.e.*, residential, commercial, and industrial customers). PSE&G proposes that residential customers seeking to

³ PSE&G's intention is to offer employment elsewhere in the Company for any permanent employee that is displaced because of AMI.

opt-out of an advanced meter pay a \$20.00 monthly fee for meter reading services. Residential customers seeking to replace an installed AMI meter with a non-AMI meter will be assessed a one-time fee of \$45.00. Commercial and industrial customers will not be permitted to opt out of an AMI meter.

17. As set forth in more detail in Mr. Dunlap's testimony, the Company has created a communications strategy to keep customers informed at each step of the AMI implementation, *i.e.*, the pre-deployment, deployment, and post-deployment stages. The communications strategy addresses objectives, key messages, audiences, communication channels, and supporting materials. (*See* Schedule GD-CEF-EC-3).

18. With respect to Recommendation #12 of the Investigative Report, the CEF-EC Program -- and its AMI enabling capabilities -- will allow PSE&G greater visibility of its distribution system. PSE&G system operators will have the ability to "see" the status of the network down to the customer meter level, including which customers are still without power during an outage. This increased level of visibility will allow PSE&G to make more informed restoration decisions, which will lead to better resiliency and customer service, and fewer truck rolls.

19. CEF-EC Program restoration improvements will include faster identification of "nested outages" (*i.e.*, secondary outages that are not identified or fixed during initial restoration activities). Quicker identification can reduce outage periods, as well as shorten the tail end of major storm event restoration activities. Without the CEF-EC Program, PSE&G is dependent on customers calling to report an outage, adding significant delay in restoration and customer frustration.

20. The CEF-EC Program can also assist with the ETR communications-related

concerns Board Staff identified in the Investigative Report. More specifically, Recommendation #15 calls for PSE&G to provide an ETR for each of its four operating divisions within 24 hours after a weather event or other major event has exited its service territory.⁴ Use Case #17 incorporates analytics and automation to improve PSE&G's ETR calculations and communications.

21. PSE&G respectfully submits that now is the time for the Company -- the state's largest electric utility -- to install electric AMI. New Jersey has fallen behind nearly the entire nation with respect to AMI and the customer and operational benefits it provides. According to a December 2017 report from the Federal Energy Regulatory Commission, the number of advanced meters in the United States grew ten-fold from 2007 to 2015.⁵ Yet, at the end of 2016, New Jersey had less than 50,000 advanced meters deployed, and ranked 47th out of 50 states in terms of advanced meter penetration.⁶ Only three states other than New Jersey -- West Virginia, New York, and Rhode Island -- had less than 1% advanced meter penetration and New York, with its Reforming the Energy Vision initiative,⁷ will have widespread AMI adoption in short order. A review of 2016 U.S. Energy Information Administration data reveals that the number of AMI meters deployed nationwide had increased to more than 70 million,⁸ which accounted for approximately 47% of utility customers. However, in September 2018, no PSE&G residential

⁴ See the July 25, 2018 Order, *supra*, at p. 14.

⁵ <https://www.ferc.gov/legal/staff-reports/2017/DR-AM-Report2017.pdf> (at p. 4)

⁶ <https://www.eia.gov/electricity/data/cia861/>

⁷ <https://static1.squarespace.com/static/576aad8437c5810820465107/t/5aec725baa4a99171e5890d4/1525445212467/REV-fm-fs-1-v8.pdf>

⁸ <https://www.eia.gov/tools/faqs/faq.php?id=108&t=3>

customer has an advanced meter.⁹

22. It is also the appropriate time for PSE&G to install AMI given that approximately 700,000 of its electric meters (almost one-third of the Company's entire electric meter population) will soon be replaced given the length of time that they have been in service. The cost of an AMI meter is now comparable to that of an AMR meter (PSE&G's current replacement meter), and analog (mechanical) meters are no longer being manufactured. Replacement of aged, analog meters with non-AMI meters would add stranded costs -- as AMI is the present and future of metering technology -- and merely replace one meter with limited functionality with another. Furthermore, the timing for electric AMI deployment coincides with full deployment of AMR in PSE&G's gas service territory, meaning customers who receive electric and gas service from the Company would benefit from automated meter reading for both services.

23. PSE&G is aware of the moratorium on EDCs filing for "pre-approval" of AMI that the Board outlined in its August 23, 2017 Order authorizing RECO to proceed with its AMI program.¹⁰ However, as the BPU and Board Staff implicitly recognized as part of the Investigative Report, AMI is a key component to improving resiliency and customer satisfaction. Without AMI, customers face longer restoration times and increased frustration. Moreover, AMI -- with the near real-time usage data it provides to customers in the literal palms of their hands -- can reduce energy consumption and lower customers' utility bills, consistent with the policies underlying the Clean Energy Law, enacted by the Legislature well after the AMI moratorium

⁹ PSE&G is aware of the Rockland Electric Company ("RECO") AMI initiative to install approximately 72,000 advanced meters throughout its electric service territory. Even considering the RECO AMI Program, New Jersey remains well behind the vast majority of the nation with respect to AMI.

¹⁰ See Decision and Order, *In the Matter of the Petition of Rockland Electric Company for Approval of an Advanced Metering Program; and for Other Relief*, BPU Docket No. EO16060524, p. 24 (August 23, 2017 Order).

was announced. AMI also benefits the environment by reducing the vehicle emissions caused by unnecessary truck rolls. Thus, AMI deployment is a matter of sound public policy and in the best interests of New Jersey. This is perhaps why -- in the colloquy surrounding the Investigative Report at the BPU's July 25, 2018 agenda meeting -- Commissioner Chivukula appropriately questioned Staff as to whether it should assess the moratorium's continued viability.¹¹ At a minimum, PSE&G's deployment of AMI across its vast and diverse service territory can provide the BPU with additional information -- beyond that provided by RECO's program -- about AMI deployment in the state, including in its most populated and urban areas, as well as the benefits AMI can provide to low income customers. PSE&G submits that the moratorium should be lifted.

E. CEF-EC Program Cost Recovery

24. PSE&G is proposing a cost recovery mechanism for the CEF-EC Program that is consistent with the BPU's IIP regulations, as addressed in detail in Mr. Swetz's CEF-EC testimony.

25. The cost recovery method will involve the potential of semi-annual base rate adjustment filings, consistent with the IIP regulations and the same approach used for PSE&G's Energy Strong (electric) and GSMP II programs. The proposed schedule for these potential filings is shown in the chart below:

Potential EC Rate Roll-in Schedule				
Roll-in #	Rates Effective	Initial Filing	Investment as of	True-up Filing
1	6/1/20	12/31/19	2/29/20	3/15/20
2	12/1/20	6/30/20	8/31/20	9/15/20
3	6/1/21	12/31/20	2/28/21	3/15/21
4	12/1/21	6/30/21	8/31/21	9/15/21

¹¹ Transcript, July 25, 2018 Board Agenda Meeting, BPU Docket No. EO18030255, Item 6A, page 33, lines 9-15.

5	6/1/22	12/31/21	2/28/22	3/15/22
6	12/1/22	6/30/22	8/31/22	9/15/22
7	6/1/23	12/31/22	2/28/23	3/15/23
8	12/1/23	6/30/23	8/31/23	9/15/23
Final	1/31/24	7/31/24	3/31/24	4/15/24

26. Since the IIP rules limit each base rate adjustment request to a minimum investment level of 10 percent, PSE&G projects that its filings for such increases will be less often than the potential semi-annual filings and that the first base rate adjustment filing in the CEF-EC Program will be in December 2020.

27. Consistent with GSMP, GSMP II, Energy Strong, and the Company's Energy II Strong filing, PSE&G proposes that the costs to be included in rates will include: depreciation/amortization expense providing for the recovery of the invested capital over its useful book life; return on the net investment, where net investment is the capital expenditures less accumulated depreciation/amortization, less associated accumulated deferred income taxes; and the impact of any tax adjustments applicable to the CEF-EC Program. The return on net investment will be based upon a WACC. The Company proposes a WACC for the CEF-EC Program based upon the most recent WACC for base rates approved by the Board. Since the 2018 Rate Case is still pending and PSE&G anticipates approval of that matter before the first CEF-EC Program rate adjustment filing, the WACC utilized for forecasting purposes is the WACC proposed in the 2018 Rate Case. PSE&G proposes that any change in the WACC authorized by the Board in the pending or any subsequent base rate case be reflected in the subsequent revenue requirement calculations.

28. BPU Staff and Rate Counsel will have an opportunity to review each rate adjustment filing to ensure that the revenue requirements and proposed rates are being calculated in accordance with the BPU Order approving the CEF-EC Program and the IIP rules. The

changes to base rates made through these rate adjustment filings would be subject to refund based upon a Board finding that PSE&G imprudently incurred capital expenditures in its implementation of the CEF-EC. The actual prudence of the Company's expenditures in CEF-EC Program will be reviewed as part of PSE&G's subsequent base rate case(s) following the rate adjustments. This is identical to the approach under the Energy Strong, GSMP, and GSMP II programs, and the Board's IIP regulation at *N.J.A.C. 14:3-2A.6(e)*. The Company proposes that it will file its subsequent base rate case no later than five years after the commencement of the CEF-EC Program.

29. In addition to limiting the base rate adjustment requests to a minimum investment level of 10 percent of the total program investment, PSE&G is also proposing to limit the amount of investment to be included in the rate base adjustments by an earnings test. Consistent with the IIP regulations, if the Company exceeds the allowed ROE from its last base rate case by 50 basis points or more for the most recent 12-month period, the pending base rate adjustment shall not be allowed for the applicable filing period. Details regarding application of the earnings test are set forth in Mr. Swetz's testimony.

30. Based upon the forecasted rates shown in Schedule SS-CEF-EC-3, the typical annual bill impacts for a residential customer as well as rate class average customers compared to rates as of September 8, 2018 are set forth in Schedule Attachment 4.¹² Based on the estimated roll-in revenue requirements provided in Schedule SS-CEF-EC-2, the initial annual impact of the proposed rates for the first roll-in period to the typical residential electric customer who uses 750 kilowatt-hours in a summer month and 7,200 kilowatt-hours annually is an increase of \$5.52 or approximately 0.45%. The maximum cumulative impact (impact from the

¹²The bill impacts assume that customers receive commodity service from PSE&G under the applicable BGS rate.

CEF-EC Program) on the typical residential electric customer is an average annual increase of approximately 3.29% or about a \$3.38 increase in their average monthly bill.

31. PSE&G seeks approval to defer as a regulatory asset the stranded costs associated with the removal of analog meters that have not fully depreciated. The net book value of PSE&G's electric meters as of June 30, 2018 is \$219 million. That amount will continue to decline over the next several years as the meters are depreciated, with the remaining investment stranded when those meters are replaced by AMI meters. The Company will seek to recover these stranded costs over a fixed, five-year period following PSE&G's next base rate case. The Direct Testimony of Donna M. Powell provides more detail regarding this proposal.

32. Deployment of the CEF-EC Program requires approximately \$73 million in O&M expenses over the five-year advanced meter deployment period. These costs are part of the overall Energy Cloud project and the Company is seeking recovery of these amounts. To better match recovery of investment and costs, PSE&G seeks approval to defer the project O&M costs as a regulatory asset and recover those costs over a five-year period following the Company's next base rate case. The Company also requests authority to accrue a carrying-cost on the deferred O&M balance, and approval to depreciate AMI meters over 20 years. More detail surrounding these proposals is set forth in Ms. Powell's testimony.

V. SUPPORTING TESTIMONY AND PUBLIC NOTICES

33. Below is a table listing the supporting testimony for this Petition and other attachments:

Appendix Letter or Attachment No.	Document Description
A	Location of MFRs – CEF-EC Program
1	Testimony of Gregory C. Dunlap in support of the CEF-EC Program
2	Testimony of Donna M. Powell describing cost recovery associated with the CEF-EC Program
3	Testimony of Stephen Swetz describing revenue requirement methodologies, cost recovery mechanisms, and bill impact analysis for the CEF-EC Program
4	Typical Residential Customer Bill Impacts – CEF-EC Program
5	Form of Notice of Filing and of Public Hearings – CEF-EC Program

34. The Form of Notice sets forth the requested changes to electric rates and will be placed in newspapers having a circulation within the Company's service territory upon receipt, scheduling, and publication of public hearing dates. Public hearings will be held in each geographic area within the Company's service territory, i.e., Northern, Central, and Southern. The Form of Notice will be served on the County Executives and Clerks of all municipalities within the Company's electric service territories upon receipt, scheduling, and publication of public hearing dates.

35. Notice of this filing and two copies of the Petition will be served upon the Department of Law and Public Safety, 124 Halsey Street, P.O. Box 45029, Newark, New Jersey 07101 and upon the Director, Division of Rate Counsel, 140 East Front Street, 4th Floor, Trenton, New Jersey 08625. The Petition and supporting testimony and attachments will also be e-mailed to the persons identified on the service list provided with this filing.

VI. COMMUNICATIONS

Communications and correspondence related to the Petition should be sent as follows:

Matthew M. Weissman
PSEG Services Corporation
80 Park Plaza, T5
P. O. Box 570
Newark, New Jersey 07102
Phone: (973) 430-7052
Fax: (973) 430-5983
Matthew.Weissman@pseg.com

Justin B. Incardone
PSEG Services Corporation
80 Park Plaza, T5
P. O. Box 570
Newark, New Jersey 07102
Phone: (973) 430-6163
Fax: (973) 430-5983
Justin.Incardone@pseg.com

Joseph F. Accardo, Jr.
PSEG Services Corporation
80 Park Plaza, T5
P.O. Box 570
Newark, New Jersey 07102
Phone: (973) 430-5811
Fax: (973) 430-5983
Joseph.Accardo@pseg.com

Michele Falcao
PSEG Services Corporation
80 Park Plaza, T5
P.O. Box 570
Newark, New Jersey 07102
Phone: (973) 430-6119
Fax: (973) 430-5983
Michele.Falcao@pseg.com

Caitlyn White
PSEG Services Corporation
80 Park Plaza, T5
P.O. Box 570
Newark, New Jersey 07102
Phone: (973) 430-5659
Fax: (973) 430-5983
Caitlyn.White@pseg.com

VII. CONCLUSION AND REQUESTS FOR APPROVAL

For all the foregoing reasons, PSE&G respectfully requests that the Board retain jurisdiction of this matter and review and expeditiously issue an order approving the CEF-EC Program, specifically finding that:

1. The CEF-EC Program is in the public interest;
2. The CEF-EC Program, as described herein, is reasonable and prudent;
3. PSE&G is authorized to implement and administer the CEF-EC Program under the

terms set forth in this Petition and accompanying Attachments;

4. The cost recovery proposal and mechanism for the CEF-EC Program set forth in this Petition will provide for implementation of just and reasonable rates, and are approved; and

5. PSE&G may recover all prudently-incurred costs associated with the CEF-EC Program, on a full and timely basis, under the cost recovery mechanism set forth herein.

Respectfully submitted,

PUBLIC SERVICE ELECTRIC AND GAS COMPANY



Matthew M. Weissman
General State Regulatory Counsel
PSEG Services Corporation
80 Park Plaza, T5G
P. O. Box 570
Newark, New Jersey 07102
Phone: (973) 430-7052
Fax: (973) 430-5983

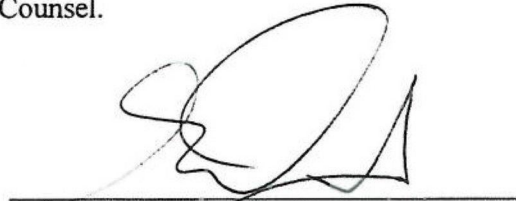
DATED: October 11, 2018
Newark, New Jersey

VERIFICATION

STATE OF NEW JERSEY)
:)
COUNTY OF ESSEX)

Gregory C. Dunlap, of full age, being duly sworn according to law, on his oath deposes and says:

- 1. I am Vice President, Customer Operations of Public Service Electric and Gas Company, the petitioner in the foregoing Petition.
- 2. I have read the annexed Petition, and the matters and things contained therein are true to the best of my knowledge and belief.
- 3. Copies of the Petition have been provided to the NJBPU, the Department of Law & Public Safety, and the Division of Rate Counsel.



Gregory C. Dunlap

Sworn and subscribed to)
before me this 10th day)
of October, 2018)



<p>MICHELE D. FALCAO Notary Public, State of New Jersey My Commission Expires November 14, 2021</p>
