Katherine E. Smith
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Public Service Electric and Gas Company
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January 15, 2025

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

In the Matter of the Petition of
Public Service Electric and Gas Company for
Approval of an Increase in Electric and Gas Rates
and for Changes in the Tariffs for Electric and Gas Service,
B.P.U.N.J. No. 17 Electric and B.P.U.N.J. No. 17 Gas,
and for Changes in Depreciation Rates,
Pursuant to J.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
BPU Docket Nos. ER23120924 and GR23120925

VIA ELECTRONIC MAIL
Stacy Peterson
Deputy Executive Director
New Jersey Board of Public Utilities
44 South Clinton Ave.
P.O. Box 350
Trenton, NJ 08625

Brian Lipman
Director
New Jersey Division of Rate Counsel
140 East Front Street, 4th Floor
P.O. Box 003
Trenton, NJ 08625

Re: Advanced Metering Infrastructure (AMI) Program – Final Report

Dear Ms. Peterson and Mr. Lipman:

Pursuant to the Board's January 7, 2021 Order in BPU Docket No. EO18101115 and pursuant to Paragraph 15 of the Stipulation of Settlement approved by the Board's October 9, 2024 Order in BPU Docket Nos. ER23120924 and GR23120925, enclosed is the Public Service Electric and Gas

1 *In the Matter of the New Jersey Board of Public Utilities' Response to the Covid-19 Pandemic For a Temporary Waiver of Requirements for Certain Non-Essential Obligations*, Docket No. EO20030254, p 3 (March 19, 2020 Order).

Advanced Meter Infrastructure (AMI) Program's final report. The report includes data for the final semi-annual reporting period of July 1, 2024 through the conclusion of the program on November 30, 2024, as well as final program details for reporting metrics and details indicating activation of AMI meters and percentage of AMI meters being used for remote meter reading and billing and deployment of AMI Use Cases.

As is demonstrated in the attached report, as of November 30, 2024, PSE&G has achieved full completion of accelerated AMI meter deployment for the meter population, excluding opt-outs, and deployment of all twenty-two (22) AMI Use Cases that were approved in Docket No. EO1810115.

Copies of the Report will be served upon all entities legally required to be noticed. Service will occur via e-mail, only, pursuant to the Board's March 19, 2020 Order in Docket No. EO20020254. [1] In addition, the report will be posted at www.pseg.com/ev.

Please contact me if you have any questions or comments.

Very truly yours,

Katherine Smith

C:
Service List – Docket Nos. ER23120924 and GR23120925
Carol Artale
Alice Bator
Cindy Bianco
David Brown
Robert Brabston
Sherri Golden
Charles Gurkas
Scott Hunter
Sherri Jones
Bart Kilar
Christine Lin
Sri Medicherla
Jackie O'Grady
Stacy Richards
Christine Sadovy
Benjamin Witherell
Tylise Hyman
Christine Juarez
Debora Layugan
Kurt Lewandowski
Maria Novas-Ruiz
Henry Odgen
Brian Weeks

Clean Energy Future-Energy Cloud

Advanced Metering Infrastructure (AMI) Program

Final Report to the Board of Public Utilities

Docket Numbers QO23120874, EO18101115

Reporting Metric Tables:

Metric Description	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Current Reporting Period 7/1/2024 - 11/30/2024	Project Final 1/7/2021 - 11/30/2024
Residential Meters Installed	37,329	31,023	22,345	22,603	16,581	129,881	1,942,734
Commercial Meters Installed	7,158	6,677	5,663	5,402	2,662	27,562	258,839
Network Installed							See Note A
Number of opt-out customers	202	198	84	193	219	896	9,083
Number of actual reads recorded from AMI meters each month	127,668,584	130,342,086	127,929,655	132,789,676	135,384,068	654,114,069	See Note B
Number of meter reading staff employed by PSE&G each month	212	205	202	201	194	See Note C	See Note C
Number of total visits by customers to AMI portal.	41,089	38,674	34,164	32,401	25,414	171,742	509,668
Number of unique monthly Login's to AMI portal.	28,605	27,167	22,605	20,947	16,978	116,302	N/A
Number of customers receiving energy saving messages.	2,262,300	43,075	2,574,000	6,123,500	3,988,000	14,990,875	See Note D
Number of customers who have authorized third party supplier access to their energy usage data	N/A	N/A	N/A	N/A	N/A	N/A	See Note E
Third Party Program-to-date customer engagement efforts undertaken by the Company	N/A	N/A	N/A	N/A	N/A	N/A	See Note F
Number of AMI meters replaced due to functioning errors	58	41	43	44	28	214	754
Number of remote connects/disconnects performed	30,696	45,269	57,852	55,348	30,460	219,625	523,843
Number of AMI meter tampering cases found	54	56	61	96	68	335	See Note G
CEF-EC project completion date						11/30/2024	11/30/2024

N/A – Not applicable

Average Installation Costs (Per Unit Cost in USD)			Current Reporting Period 7/1/2024 - 11/30/2024	Project Final 1/7/2021 - 11/30/2024
Average Cost Residential Meters Installed –Total			**$272**	**$195**
Average Cost Residential Meters Installed – Labor *(1)			$157.2	$80.6
Average Cost Residential Meters Installed – Materials			$114.9	$114.1
Average Cost Commercial Meters Installed – Total			**$290.7**	**$267.2**
Average Cost Commercial Meters Installed – Labor *(1)			$154.7	$110.2
Average Cost Commercial Meters Installed – Materials			$136.0	$157.0

	FORECAST		ACTUALS	
Metric Description (USD in Millions)	**Current Reporting Period 7/1/2024 - 11/30/2024**	**Project Final 1/7/2021 - 11/30/2024**	**Current Reporting Period 7/1/2024 - 11/30/2024**	**Project Final 1/7/2021 - 11/30/2024**
CEF-EC Capital Costs - Total	**$64.8M**	**$564.5M**	**$65.1M**	**$552.6M**
CEF-EC Capital Costs - Labor *(2)	$7.3M	$65.6M	$3.8M	$56.6M
CEF-EC Capital Costs – Material	-	$163.8M	$19.0M	$250.1M
CEF-EC Capital Costs – Other *(3)	$57.5M	$335.1M	$42.3M	$246.0M
CEF-EC Deferred O&M Expenses - Total	**$7.6M**	**$62.2M**	**$7.4M**	**$51.0M**
CEF-EC Deferred O&M Expenses - Labor *(2)	$1.8M	$13.8M	$2.0M	$10.7M
CEF-EC Deferred O&M Expenses – Material	-	$0.6M	$0.3M	$1.4M
CEF-EC Deferred O&M Expenses – Other *(3)	$5.9M	$47.8M	$5.1M	$38.9M
Stranded Costs Deferred			**$29.1M**	**$140.5M**

*(1) Average Installation costs - Internal and External Labor.

*(2) Labor - Internal PSE&G Labor.

*(3) Other - Includes all contractors and Outside services.

Reporting Metric Notes:

A. Network Installation

Network Complete: 159 new poles and three radio gateways, 53 single-radio network gateways and 2207 routers have been installed to support the expansion of the existing RF Network

B. Actual Reads Recorded from AMI Meters

Actual read number is inclusive of large commercial AMI meters installed prior to start of current AMI Project.

C. Meter Reading Staff

Meter reading staffing fluctuates for various reasons. Permanent Meter Readers continues to decline month over month via natural attrition.

D. Number of customers receiving energy saving messages

In this report, this metric indicates how many PSE&G electric customers with AMI meters have received messages based on the implementation of use cases 1, 2, 3, 4, 5 and 7.

E. Customers who have authorized third party supplier access to their energy usage data

The development of a Data Access Plan has been deferred pending the statewide proceeding in Docket No. EO20110716. PSE&G is participating in that Board Staff proceeding.

Currently, the MyMeter portal allows a customer to designate a secondary user on their MyMeter account to view usage only, and this permits customers to provide access to their AMI usage data to third party suppliers. This secondary account has no access to other MyAccount data and only allows access to the meter usage data in the MyMeter portal. Since the go live of the functionality (July 2023) through November 30, 2024 over 3,300 secondary accounts have been added by customers. The company does not have the ability to determine whether the access provided by a customer is a third party supplier or some other person or entity.

F. Third Party Customer Engagement Efforts:

PSE&G has utilized social media outlets for third party customer engagement efforts to date. The activities and results are as follows[1]:

Project Final 1/7/2021 - 11/30/2024

1. Published messages:

a) 2 paid Facebook ads,

b) 30 organic messages on Facebook, Twitter/X, Instagram, and LinkedIn:

(1) 9 on Facebook,

(2) 18 on Twitter/X,

(a) 12 on PSEGDelivers,

(b) 6 on PSEGNews.

(3) 1 on Instagram

(4) 2 on LinkedIn

2. The social media posts generated:

a) 2,394,567 impressions (how many times an AMI social message was displayed),

b) Reached 820,813 Facebook users and Instagram users.

3. Channel followers (as of November-end 2024):

a) Facebook: 123K followers

b) PSEGDelivers (Twitter/X): 98K followers

c) PSEGNews (Twitter/X): 20K followers

d) Instagram: 5K

G. AMI Metering Tampering Cases

Use Case has gone live but has not detected any instances of tampering as of November 30, 2024.

[1] For December, PSE&G proactive social media posted one (1) tweet on @PSEGNews – this message generated 363 impressions and a potential reach of 21K, with 4 active engagements.

Final Report on Meter Installation/Functionality and Use Case Deployment

A. Percentage of AMI Meters Used for Remote Meter Reading and Billing

Following installation of a meter, PSE&G verified that the meter is communicating with the Company's systems. After three successful days communicating, the billing system utilizes the AMI read to bill the customer. As of the end of the deployment in November, 99.8% of AMI meters are utilizing AMI for remote reading which has been a consistent trend. The Company has achieved a sustained AMI actual read billing rate of over 99 percent concluding the program with a billing rate of 99.7% in November 2024. Where there have been a small number of communication issues, these are addressed expeditiously. As illustrated below PSE&G has maintained an AMI utilization rate and billed rate of over 99% for the past year.

After each meter is installed, the customer receives an accurate bill utilizing an AMI meter read

	January	February	March	April	May	June	July	August	September	October	November	December
% Meters Utilizing AMI	99.7%	99.7%	99.6%	99.8%	99.6%	99.6%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%
% Billed AMI Read	99.4%	99.7%	99.5%	99.7%	99.7%	99.7%	99.2%	99.7%	99.7%	99.6%	99.5%	99.7%

B. Use Case Deployment

Use Case #	Use Case Name	Deployment Status	Use Case Overview & Value
1,2,3,4	1. Enhanced Customer Engagement & Communications	**Deployed Q3, 2023** (customer access to usage data via portal) **Deployed Q2, 2024** (enable customer inquiries via portal)	A set of customer benefiting functions and analytic applications that provide visualizations and analytics across a variety of customer and iESP data combined with other data – bills, usage, prices, tips, alerts, energy efficiency, appliance profiles, new products and services, notifications, and available through mobile and web portals.
	2. Rate Analyzer & Comparator	**Deployed Q3, 2024** (customers analyze rate options in MyMeter) **Deployed Q4, 2024**	

Use Case #	Use Case Name	Deployment Status	Use Case Overview & Value
		(automation of process to update rates via flat file within MyMeter)	
	3. Usage & Bill Alerts, Saving Tips, Interactive Bill Presentment	**Deployed Q2, 2024**	
	4. Interactive Energy Demand & Bill Management (Portal part of Meter Data Management System - MDMS project)	**Deployed Q2, 2024**	
5	Customer Segmentation & Behavioral Analysis	**Deployed Q4, 2023** (pull system) **Deployed Q2, 2024** (push system)	Provides the ability to develop highly targeted customer segmentation models based on more granular energy usage data and customer interactions to improve customer service, marketing, time of use ("TOU") rates, new products and services, and planning load forecasts. Capability depends on data integration to PSE&G systems to enable usage via "pull system" and "push system"
6	Customer Power Quality	**Deployed Q3, 2024**	Capability that allows PSE&G to obtain voltage, load, and alert data directly from the meter to analyze customer power quality issues (flicker, sag, swell), without the need for further instrumentation, and can also help ensure appropriate corrective actions are taken (utility or customer side of the meter).
7	Customer Energy Efficiency Programs (Thermostats & Supporting CEF-EE Filing)	**Deployed Q4, 2023**	iESP data gives the customer the ability to make more educated energy efficiency related decisions, change energy consumption habits, and ultimately lower utility bills. This is enabled by providing customers with detailed iESP data through web or mobile portals, smart devices and in-home devices. PSE&G can also use this iESP data to design and offer energy efficiency products and services.
8	Customer Service & Call Center Performance	**Deployed Q3, 2024**	Enables the use of broader range of information (including iESP) to increase call center knowledge, improve service, improve customer satisfaction, and lower customer costs by bringing together historical and real-time information to support decision analysis and improve the customer experience.
9	Customer DER/PV/EV	**Deployed Q4, 2023**	Services and systems that will use iESP data to help assist customers with DER (solar, EV, energy storage) installations and the management of any power quality issues that occur as a result of variable DER load
10	Customer Device Safety	**Deployed Q3, 2024**	Enhances customer safety by using iESP data, such as alerts and voltage data to detect safety issues relating to customer meters and power connections such as hot sockets and fallen wires, and provide alerts to customers and PSE&G.

Use Case #	Use Case Name	Deployment Status	Use Case Overview & Value
11	iESP Sensor, Network & Data Operations	**Deployed Q3, 2023**	Back office processes and systems that manage the initial iESP infrastructure deployment and the ongoing and updated Meter Operations business function including acquisition, warehousing, testing, installation, maintenance, data streams and quality, alarm management, and meter data management.
12	Automated Move in/Move out & Remote Disconnect/ Reconnect	**Deployed Q3, 2023**	This use case addresses the messages exchanged between Customer Operations processes and Smart Meter through the HeadEnd and Network when a customer move in or out request is issued by Customer Operations or other customer processes. PSE&G currently sends a metering service employee to move a customer in or out for a variety of reasons. With iESP, the turn on functions and on demand read functions to support these processes can be automated and performed remotely and instantaneously, thereby increasing customer satisfaction and efficiency across various customer processes. • Electric operations reduction due to MIMO and Collection activity automated. • Gas operations reduction due to remote MIMO and Collection activity automated: • Cost reduction due to 85k avoided truck roll costs for move in move outs
13	Remote Disconnect/ Reconnect	**Deployed Q3, 2023**	This use case addresses the messages exchanged between Customer Operations processes and Smart Meter through the HeadEnd and Network when a meter connect/disconnect request is issued by Customer Operations or other processes. PSE&G currently sends a metering service or collections employee to connect or disconnect the meter for a variety of reasons. With iESP, the reconnect/disconnect functions to support these processes can be automated and performed remotely and instantaneously, thereby increasing customer satisfaction and efficiency across various customer processes. • Electric operations reduction due to remote turn-on/off of electric meters • Gas operations reduction due to remote turn-on/off of gas meters: • Cost reduction due to 171k avoided truck roll costs for move in standard turn on/turn offs • Cost reduction due to avoided truck roll costs for turn on/turn off type events • Reduction in writes offs due to energy consumed on inactive accounts. Being able to remotely detect and disconnect will reduce the occurrence. $20m written off yearly. Assuming 70% reduction due to iESP capabilities
14	Next Generation Meter-to-Cash	**Deployed Q3, 2023** (enables billing department to provide revised bills via AMI data)	With more granular and quality iESP data available, alongside numerous other internal data sources, PSE&G can optimize and re-invent their meter-to-cash processes and drive out inefficiencies, increase service, and reduce costs. The iESP data is significantly more accurate at the source and by mapping the data from the iESP to its end use, leakage can be detected

Use Case #	Use Case Name	Deployment Status	Use Case Overview & Value
		Deployed Q3, 2024	more easily. The cost of these losses is spread across the customer base so any improvement ultimately reduces customer bills. • Billing cost reduction due to a decline of billing irregularities and analysis work • Collection cost reduction due to a decline of backoffice collection workload • Reduction in bad debt due to improvement in field collections. Being able to remotely detect and disconnect will reduce the occurrence. $60m written off yearly. Assuming 31% reduction due to iESP capabilities
15	Network Connectivity Analysis	**Deployed Q2, 2024**	PSE&G's electricity network is complex, covers a large area, and provides power to different customers at different voltage levels. Ensuring that the required sources and end-use loads are correctly represented in operations systems is often very difficult. The iESP end-point meters can extend the network model and enable a high level of accuracy of connections and phasing, which in turn results in better planning and operations performance, and enables many other network dependent use cases.
16	Outage Detection & Analysis	**Deployed Q2, 2024**	Uses outage data from operations systems and smart meters to identify and verify possible outage locations, as well as identify network sections and specific customers (and numbers) that are out of power. This data is provided and displayed in real-time, to allow analysis, fast response, and crew dispatch to the precise location (down to meter) with information on the potential cause of the outage in order to more quickly restore power and ensure all customers are restored.
17	Outage Response Notification (ETR)	**Deployed Q2, 2024**	Use iESP outage data to calculate and communicate reasonable, more accurate, and acceptable outage status and restoration times to customers in real time. This largely eliminates one of the most common customer complaints about utility service, *i.e.,* inaccurate estimated restoration times. Messaging solutions within scope of this use case include Interactive Voice Response (IVR), web portals, text messaging, social media, mobile applications, and press releases.
18	Voltage Monitoring & Analysis	**Deployed Q3, 2024**	Using iESP data and other network data sources, voltage readings are captured, visualized, and system-wide analysis is run to determine locations where voltage violations exist both above and below nominal voltage. Utilities can utilize this information for accurate analysis of voltage issues and a base for voltage planning and optimization across the network. Further, this information can help planners identify strategic locations for deployment of Volt/VAR optimization equipment.

Use Case #	Use Case Name	Deployment Status	Use Case Overview & Value
19	Asset Load/Phase Management, Balancing & Power Analysis (incl. Transformer Load Monitoring & Customer Load Curtailment/Limiting)	**Deployed Q3, 2024**	Using iESP data and other network data sources, load data is imported, aggregated, and visualized. Power flow analysis is run to examine and monitor loading profiles of every network asset along the feeder from the substation to the smart meter. This use case gives visibility of loading profiles and load flows of all network assets and customers with real-time or overnight iESP data updates. This information can be used by planners and operators to determine areas of overloading of assets on the system, plan responses to major events, execute asset balancing, and customer load curtailment.
20	Load Profiling & Forecasting	**Deployed Q3, 2024**	Capability that would enhance load profiles and forecasts by using iESP data in combination with network, customer billing or other data (*e.g.*, weather) to perform more detailed usage analysis. This is beneficial to customers and PSE&G planners by supporting optimized planning of load growth, which in turn leads to optimized capital spending and reliability of the network.
21	Distribution Losses	**Deployed Q3, 2024**	Distribution losses can be identified by comparing the iESP end-point meter usage data with usage data at the distribution entry point (*i.e.*, substation). Areas of high losses or network sections with particularly high losses can be identified through the analysis. Further analysis on the causes of the high losses will shed light into the different types of corrective / mitigating actions that can be taken to reduce the technical losses. Technical losses are spread across the customer base, so any improvement in this area could reduce customer bills.
22	Revenue Protection & Assurance	**Deployed Q4, 2024**	Revenue protection refers to the prevention, detection, and recovery of losses caused by interference with or theft of utility service. This use case will leverage smart meter consumption, as well as voltage and event data, to detect energy theft and meter tampering by employing multiple screening techniques, including cross-service correlations. Energy theft is spread across the customer base, so any improvement reduces customer bills.

CERTIFICATION

I, David Johnson of full age, certifies as follows:

1. I am Senior Vice President, Chief Customer Experience Officer of PSE&G.
2. I have read the contents of the foregoing Report, and the information contained therein are true and correct to the best of my knowledge, information, and belief.

Dated: 1/15/2025 BY *David Johnson*