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June 13, 2025

VIA eFILING

Matthew Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

Re: **PECO Energy Company De Facto Pilot Analysis**
Docket No. R-2021-3024601

Dear Secretary Homsher:

Please find enclosed the De Facto Pilot Analysis by PECO Energy Company (“PECO”), which has been filed pursuant to Paragraph 36 of the approved Joint Petition for Settlement of Rate Investigation in Docket No. R-2021-3024601.

If you have any questions or concerns, please feel free to contact me at 267-533-1775.

Very truly yours,

A handwritten signature in black ink, appearing to read "C. Choi".

Caroline S. Choi

Enclosure

cc: Certificate of Service

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

PENNSYLVANIA PUBLIC UTILITY COMMISSION :
: **DOCKET NO. R-2021-3024601**
vs. :
PECO ENERGY COMPANY – :
ELECTRIC DIVISION :

CERTIFICATE OF SERVICE

I hereby certify and affirm that I have on this day served a copy of the **PECO Energy Company De Facto Pilot Analysis** on the following persons in the manner specified in accordance with the requirements of 52 Pa. Code § 1.54:

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Dated: June 13, 2025

*Assistant General Counsel for PECO Energy
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Date: June 12, 2025

To: Julia De Valdenebro
cc: Gregory Luehrs

From: Jackie Berger, Megha Datta, and Naina Bhargava

Subject: PECO De Facto Heating Pilot Evaluation

I. Introduction

In 2018, PECO designed a De Facto heating pilot to test a method for addressing the energy efficiency and heating needs of low-income customers who do not have access to their main source of heat. Customers with non-working combustion heating equipment often turn to electric space heaters or other unsafe and expensive methods to keep their homes warm. This can pose dangers to the household and drive up their utility bills to unaffordable levels. Use of these supplemental heating devices increases customers' energy burden and places them at risk of default on their PECO bills.

Often customers continue to use these alternative heating methods because they cannot afford to repair or replace their primary heating equipment and cannot find a program that will support the remediation of the situation.

The pilot aimed to restore the primary heating service, reduce electric usage, educate customers, and improve energy affordability and bill payment practices for impacted customers. The Pilot served 376 customers between 2018 and 2023. About 70 percent of these customers were provided with replacement furnaces or boilers.¹

II. Program Design and Implementation

Customers were eligible for the De Facto Program if they met the following criteria.

- Income at or below 200 percent of the Federal Poverty Level (same as LIURP).
- A disabled primary heating system.
- Use of supplemental heating through oil or non-PECO gas service.
- Homeowner or tenant with utility approval.
- Utility service that has not been terminated for lack of payment.

APPRISE conducted an assessment of customers who participated in the De Facto Pilot along with delivery of LIURP and/or Act 129 services.

PECO initially selected G&C Environmental Services to perform the De Facto heating Pilot installations. The vendor was replaced with CMC in 2019. Utilization of CMC, who was already responsible for

¹ Data were projected for 124 participants with missing measure data.

identifying the De Facto leads, as well as performing LIURP and Act 129 measures, simplified the process. It also provided improved work quality, increased the pace of service delivery, and reduced the complexity of service delivery.

Table II-1 displays the number of De Facto jobs completed by year.

**Table II-1
 DeFacto Jobs by Participation Year**

DeFacto Year	Number of Jobs	Percentage of Jobs
2018	121	32%
2019	37	10%
2020	53	14%
2021	75	20%
2022	49	13%
2023	41	11%
Total	376	100%

The De Facto Pilot provided repair or replacement of the primary heating system, as well as De Facto Weatherization to improve the energy efficiency of the home.

III. Methodology

Electric usage was analyzed for the year prior to when the first services were delivered to the customer and the year after service delivery was completed. The services included De Facto, LIURP, and Act 129. The analysis included as close to a full year of data pre- and post- treatment as possible. Table III-1 displays the attrition statistics for the usage analysis. Customers were included in the analysis if they had at least six bills in the year before and the year after services. Some additional customers were removed from the analysis if their change in normalized usage was greater than 65 percent. After these eliminations, we included 69 percent of the De Facto jobs in the analysis.

**Table III-1
 Electric Attrition Analysis**

	#	%
Original Population	376	100%
No usage data received	16	5%
No usage data in pre or post periods	18	5%
Fewer than six bills in pre or post	26	7%
Dropped during PRISM normalization	1	<1%
Change in degree-day normalized usage > 65%	39	10%
Change in PRISM normalized usage > 65%	16	4%
Final Sample	260	69%

Table III-2 provides information on whether the De Facto participant received Act 129 services, LIURP services, or both services where data were available. The table shows that the customers included in the usage impact analysis were very similar to the full population of customers served in terms of the other program services received. The analysis group was somewhat less likely to include customers

with missing data and somewhat more likely to include customers who were reported to participate in both Act 129 and LIURP.

Table III-2
DeFacto Jobs by LIURP and Act 129 Participation in Population and Analysis Group

Program Participation	Original Population		Analysis Group	
	#	%	#	%
Act 129 Only	33	9%	24	9%
LIURP Only	90	24%	58	22%
Both	197	52%	151	58%
No Data Available	56	15%	27	10%
Total	376	100%	260	100%

IV. Findings

Table IV-1 displays the estimated electric savings for the De Facto participants. Two methods were used for weather normalization to compare results and ensure that they are reliable.

- Degree Day Normalization: This is a proprietary method that APPRISE uses to calculate the relationship between energy usage and temperature and then standardize the usage to a 20-year weather history.
- PRISM Normalization: This is a statistical tool developed by Princeton University that develops weather-adjusted energy usage through modeling how usage relates to weather and the default temperature maintained in each home.

The table shows that on average, De Facto participants had annual savings of 2,681 kWh, or 19.6 percent of their pre-treatment electric usage. This compares to average annual savings of 335 kWh (three percent of pre-treatment usage) for electric baseload customers, as evaluated in the most recent 2023 LIURP evaluation and 832 kWh (or 7.8 percent of pre-treatment usage) average savings for electric baseload LIURP participants from 2000 through 2022.

Table IV-1
Mean Electric Usage and Savings

	Usage (kWh)		Annual Savings		
	Pre	Post	kWh	90% Confidence Interval	%
# Customers	260				
Raw Usage	13,138	10,158	2,982**	[2,507, 3,456]	22.7%
Degree Day Normalized	13,673	10,992	2,681**	[2,201, 3,160]	19.6%
PRISM Normalized	13,456	10,864	2,592**	[2,111, 3,074]	19.3%

**Denotes significance at the 95 percent level.

Table IV-2 displays the electric savings for the De Facto participants by contractor. The table shows that while CMC's savings averaged 3,329 kWh or 22 percent of pre-treatment usage, G&C savings averaged 986 kWh savings, or ten percent of pre-treatment usage. Some of the difference between

the contractors may be due to data limitations. The CMC estimate is a better predictor of the savings that could be achieved if the program was continued.

Table IV-2
Mean Weather-Normalized Electric Usage and Savings by Contractor

Contractor	# Customers	Usage (kWh)		Annual Savings		
		Pre	Post	kWh	90% Confidence Interval	%
CMC	188	15,048	11,719	3,329**	[2,763, 3,895]	22.1%
G&C	72	10,081	9,094	986*	[154, 1,819]	9.8%
Total	260	13,673	10,992	2,681**	[2,201, 3,160]	19.6%

**Denotes significance at the 95 percent level. *Denotes significance at the 90 percent level

Table IV-3 disaggregates the savings into heating, baseload, and cooling period savings. As expected, the majority of the savings, 79 percent, were accrued during the heating season.

Table IV-3
Mean Electric Usage and Savings by Type of Usage

Usage Type	Usage (kWh)		Annual Savings		Percent of Savings
	Pre	Post	kWh	90% Confidence Interval	
Baseload	6,590	6,099	491**	[239, 744]	18%
Heating	5,490	3,371	2,119**	[1,700, 2,537]	79%
Cooling	1,593	1,522	71	[-23, 165]	3%
Total	13,673	10,992	2,681**	[2,201, 3,160]	100%

**Denotes significance at the 95 percent level.

V. Summary

The De Facto Pilot provided important services to PECO customers to enable them to use their main heating equipment. As a result, they significantly reduced their electric usage and increased their health and safety, through reduced use of electric space heaters and improved heating capacity.

- De Facto participants reduced their electric consumption by 2,681 kWh annually.
- This represents an average of 19.6 percent of their previous electric usage.
- Program implementation in more recent years demonstrates that the majority of jobs experienced even higher savings, averaging 3,329 kWh or 22.1 percent of pre-treatment usage.
- These savings are significantly higher than those of the overall LIURP participants, and of LIURP electric heaters.

This Pilot provided important benefits to participants and assisted low-income customers in obtaining access to safe and affordable heating service.