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File #: 207296

June 5, 2026

VIA ELECTRONIC FILING

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

**Re: Petition of PPL Electric Utilities Corporation for Approval of its Act 129 Phase V
Energy Efficiency and Conservation Plan
Docket No. M-2025-3057329**

Dear Secretary Homsher:

Enclosed for filing on behalf of PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) is the Implementation Plan for the Window Saddle Heat Pump Pilot program (“Pilot”) for the Company’s Phase V Energy Efficiency and Conservation (“EE&C”) Plan. The Company’s Phase V EE&C Plan, as approved by the Commission on March 26, 2026, contains information on the Pilot’s design, hypotheses being tested, budget, participation estimates, and savings estimates, in line with the Commission’s Final Implementation Order issued June 18, 2025, at Docket No. M-2025-3052826. The Implementation Plan contains supplemental details regarding the Pilot that are being provided at the request of the Commission’s Bureau of Technical Utility Services.

Copies of this filing will be provided as indicated on the enclosed Certificate of Service.

Matthew L. Homsher, Secretary
June 5, 2026
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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'M E Rulli', written in a cursive style.

Megan E. Rulli

MER/sll
Enclosures

cc: Amy E. McMullen, Bureau of Technical Utility Services (*via email, w/ attachment*)
Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of this filing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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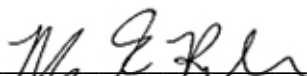
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Megan E. Rulli

PPL Electric Utilities Window Heat Pump Pilot Phase V Implementation Plan

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Objective

To implement a strategic Window Heat Pump (WHP) installation initiative across multifamily homes in the PPL Electric Utilities (PPL EU) territory. This pilot aims to replace the use of installed electric baseboard resistance heating but can also replace electric resistance space heating being used as a primary heating source when the installed home heating system, electric or fossil fuel, is no longer operable. In addition to replacing the heating load, the installed window heat pump units will also replace window-installed room air conditioning, thereby offsetting the cooling load as well. By providing a more energy-efficient heating and cooling solution, the window heat pump pilot intends to enhance the overall energy efficiency of multifamily homes served by PPL EU's Resource Constrained Energy Efficiency Program and reduce heating and cooling electrical usage for residents served by the pilot.

Overview

Window heat pumps offer greater energy efficiency compared to electric resistance heating systems, as they extract thermal energy from the outside air and transfer the heat to the indoor environment, according to the U.S. Department of Housing and Urban Development¹. These heat pumps also provide cooling by transferring thermal energy from the inside air to the outside.

PPL Electric Utilities' Resource Constrained Energy Efficiency Program routinely encounters homes that could benefit from the installation of a ductless heat pump system when resistance heating is present, however often these systems cannot be installed for reasons such as job cost, building infrastructure upgrades required, structure limitations, and building configuration. With the development and availability of window heat pumps, multifamily homes can get the benefits of a heat pump system installed directly into the areas of their home where they need it most.

Homes with room air conditioning units will be prioritized over those with central air or no air conditioning. This will ensure that both heating and cooling electric load are being replaced and also helps to ensure that a properly rated and operable grounded outlet exists since the window heat pump will be installed in the same window as the window air conditioner in most homes.

Customers will be clearly instructed that the existing resistance electric heating system should not be used following the installation of the window heat pump. This helps ensure the new system operates as designed and delivers the expected comfort and efficiency benefits. If customers have concerns regarding the heating performance, they will be encouraged to contact us for support rather than reverting to the previous system.

While not currently part of the WHP pilot, there are two notable opportunities for potential enhancement of the pilot, should it be extended beyond this initial phase. The pilot is focused on multi-family housing only, however many of the same installation opportunities exist in single-family homes served by the program. So long as equivalent conditions exist (resistance heating and window air conditioner present, building layout suitable, conditioned volume within range) the window heat pump units can deliver the same ease of installation, efficiency, and energy

¹ US Department of Housing and Urban Development study on window heating ventilation and air conditioning systems. <https://technicalreports.ornl.gov/2003/3445606042421.pdf>

savings as it would for a multi-family home. This makes single family application a logical next step should pilot results support expansion.

The second potential enhancement for the WHP pilot would be pairing the window heat pump installation with the installation of an outdoor temperature lockout on the existing resistance baseboards to prevent their use when the window heat pump would be the most efficient heating option. The pilot relies on customer education to prevent the use of the resistance heating after the installation of the WHP. The outdoor temperature lock out device would prevent use of the resistance heating system until the outdoor temperature falls below a setpoint when the window heat pump would become less effective. By utilizing an outdoor temperature lockout in addition to customer education, energy savings may be able to be increased, and more predictable in evaluation.

Proposed Plan

Two hundred Window Heat Pump units are planned for installation during the pilot. Individually metered multifamily (IMMF) homes with resistance space heating will be considered for the pilot. Two eligible multifamily buildings have been identified. Schedules for in-unit work and for the target completion of the two target properties will be finalized when expected delivery times are provided by the WHP manufacturer. In coordination with the building management, technicians will be scheduled to complete the in-unit assessments and the window heat pump installations. In a case where the multifamily assessments have already been completed, a follow-up project will be initiated to install the window heat pump units.

Proposed Strategy:

- Two Initial Target Properties Identified:
 - Electric resistance heating & room air conditioning units present
 - Install two window heat pumps per unit (Bedroom + Common Area)
 - Properties:
 - 48-unit multifamily in Danville, PA
 - Signed landlord consent obtained
 - 96 WHP units projected
 - 34-unit multifamily property in Sunbury, PA
 - Signed landlord consent obtained
 - 68 WHP units projected
 - Additional properties will be evaluated for remaining portion of pilot
- Implementation Timeline:
 - Preparation:
 - Manufacturer to supply demonstration units for installer training
 - Coordination with multifamily property management

- Training:
 - Estimated three days of technician training with demonstration unit.
- Installation:
 - Estimated 2-3 months to complete initial two buildings. This is subject to supplier availability, technician schedules, and technician training needs.
- Support & Structure:
 - Technician Training:
 - Training and installation guidelines are expected to be provided by WHP manufacturer along with an installation demonstration for application comprehension.
 - Program support training to assist with customer inquiries regarding unit operation and manufacturer mobile app.
 - Dedicated Multifamily Coordinator
 - Installation Team: Experienced comprehensive measure crew
 - Quality Control Inspections and Customer Survey Feedback
- Safety:
 - The CSP will exercise a commitment to safety during installation
 - Utilize a two-person crew to ensure proper and safe handling of equipment and materials.
 - Team members are expected to follow correct lifting techniques to reduce the risk of injury and promote a safe working environment.
 - Enforce safety protocol on all jobs to maintain safety standards and ensure consistent compliance with company procedures including the use of PPE such as gloves, back braces, or lifting belts.
 - Provide a dolly or lift onsite for technicians to limit lifting and carrying of the units to only when necessary.
- Evaluation:
 - Customer acceptance and satisfaction with heat pump technology.
 - Internally track customer callbacks and other service items to gauge customer acceptance and measure the reliability of the product.
 - Post-installation performance review with quality assurance inspections.
 - Savings analysis to inform potential future pilots or programs.
 - Pilot findings will be subject to evaluation by PPL EU's third-party evaluator.

Marketing

There is no anticipated need for broad marketing or customer recruitment during the launch stage of the pilot.

As time progresses, marketing may be used to target certain homes previously identified as suitable for installation

- If low customer response rates are experienced
- If the pilot is expanded

Customer Education

A complete demonstration of the controls, maintenance, and operation of the window heat pump will be provided to the customer at the time of installation by the installation team. Customers will be clearly instructed that the existing heating system is not to be used once the WHP has been installed.

Educational leave behinds will be provided to each customer specific to the equipment installed, including the devices owner's manual.

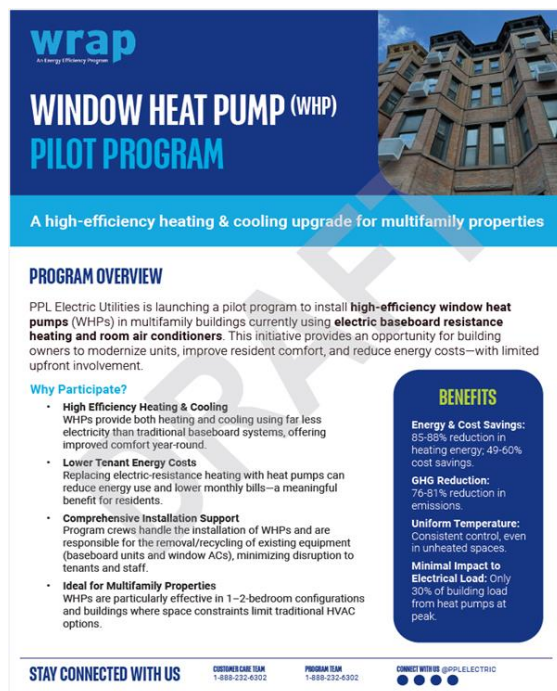
The leave behind will also include the following system use guidelines:

- Do not use the existing heating system after installation of the WHP.
- Use only the new system to heat your home.
- If your home feels too cold or the system seems different than expected contact our team for help with any concerns or questions.
- Using the old system may reduce efficiency.

Ease of use will be demonstrated to the customer for the following features:

- Use of the remote control and the built-in control panel on the WHP.
- Demonstration of the WHP manufacturer mobile app features and controls

Clear communication and ongoing customer support will be provided to ensure customers are confident in operating the new window heat pump and understand the importance of utilizing the new system. A trained representative will be available to assist customers with questions or concerns.



wrap
An Energy Efficiency Program

WINDOW HEAT PUMP (WHP) PILOT PROGRAM

A high-efficiency heating & cooling upgrade for multifamily properties

PROGRAM OVERVIEW

PPL Electric Utilities is launching a pilot program to install **high-efficiency window heat pumps (WHPs)** in multifamily buildings currently using **electric baseboard resistance heating and room air conditioners**. This initiative provides an opportunity for building owners to modernize units, improve resident comfort, and reduce energy costs—with limited upfront involvement.

Why Participate?

- **High Efficiency Heating & Cooling**
WHPs provide both heating and cooling using far less electricity than traditional baseboard systems, offering improved comfort year-round.
- **Lower Tenant Energy Costs**
Replacing electric-resistance heating with heat pumps can reduce energy use and lower monthly bills—a meaningful benefit for residents.
- **Comprehensive Installation Support**
Program crews handle the installation of WHPs and are responsible for the removal/recycling of existing equipment (baseboard units and window ACs), minimizing disruption to tenants and staff.
- **Ideal for Multifamily Properties**
WHPs are particularly effective in 1–2-bedroom configurations and buildings where space constraints limit traditional HVAC options.

BENEFITS

- Energy & Cost Savings:** 85-88% reduction in heating energy, 49-60% cost savings.
- GHG Reduction:** 76-81% reduction in emissions.
- Uniform Temperature:** Consistent control, even in unheated spaces.
- Minimal Impact to Electrical Load:** Only 30% of building load from heat pumps at peak.

STAY CONNECTED WITH US CUSTOMER CARE TEAM 1-888-322-6002 PROGRAM TEAM 1-888-322-4302 CONNECT WITH US @PPL-ELECTRIC

Property management and maintenance workers will also be provided with product demonstrations and educational leave behinds so they can be available to provide assistance to residents and be confident in the proper use, operation and maintenance of the new systems in their building. Building maintenance will also be provided access to the window heat pump supplier's helpline and be encouraged to contact the program team for any questions or needed support.

Appliance Recycling Coordination

The PPL EU Resource Constrained Energy Efficiency Program Appliance Recycling component intends to offer the ability for the window air conditioners removed during the pilot to be responsibly recycled and processed for a rebate to the customer.

Pilot Budget

Target Admin Budget Breakdown	
Total Admin Budget	\$ 247,500
Incentive Budget	\$ 750,000
Total Pilot Budget	\$ 1,000,000
Expected # of Units	200
Incentive per Unit	\$3,750

Health and safety costs, such as electrical updates, required for the safe installation of the WHP, will be evaluated for funding through the separate health and safety budget allocations to support the installation of the WHP, a comprehensive measure.

- Minimal health and safety costs are expected due to presence of existing operable window air conditioner indicating that a suitable outlet is within distance
- Subject to health and safety measure eligibility guidelines.

Monitoring and Reporting

Customer Satisfaction

A survey will be conducted and emailed to customers within five days of their WHP installation. Additionally, two seasonal surveys will be distributed annually, one in April to capture winter usage and one in September to capture summer usage.

The surveys will be developed in coordination with PPL EU's third-party evaluator. Results will be reviewed to inform project improvements and refine customer education at the time of installation, as needed.

Seasonal surveys will be sent once each April and September, beginning after the first full heating or cooling season following installation. Surveys will only be issued when a full season of usage can be evaluated.

Data Collection

Quantitative reporting for kWh and kW savings will be supplied monthly. A qualitative progress report documenting product function, installation barriers, and ease of installation data will also be gathered and reported monthly. Savings estimates as found the Company’s can be found in the table below.

Table 1. Estimated Savings and Participation

Window Heat Pump	2.2.9	Energy Savings (MWh)	19.83	16.47	13.42	9.76	6.10	65.59
		Summer Demand Reduction (MW)	0.0028	0.0023	0.0019	0.0014	0.0009	0.0092
		Winter Demand Reduction (MW)	0.1287	0.1069	0.0871	0.0634	0.0396	0.4257
		Projected Participation	65	54	44	32	20	215

Reporting

Weekly updates during installation and monthly reporting as applicable will be provided to PPL Electric Utilities on installation progress and customer satisfaction. Energy savings will be reported via database uploads.

Proposed Reporting Requirements

- MF Assessment Data (*all data gathered during original assessment*)
 - Demographics
 - Building type, heating type, heating fuel, cooling type, etc.
 - Sq ft of installation area
- Installed equipment
 - Make, model, ESID or AHRI
 - Quantity, type, location
 - Before/after photos - this will be collected and available upon request.
- Removed Equipment
 - Cooling
 - Quantity, BTU size, EER
 - Heating
 - If space heating removed, type and size
 - Proper use and maintenance will be reinforced with the customer.
- Pre-Post weather normalized usage comparison by PPL EU’s third-party evaluator
- Customer Survey
- Building Operator Survey
- Signed agreements
 - LL permission will be required
 - Verbal consent from the customer after education session

