



COMMONWEALTH OF PENNSYLVANIA

March 25, 2025

E-FILED

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Petition of PPL Electric Utilities Corporation for Approval of its Second Distributed Energy Resources Management Plan / Docket No. P-2024-3049223

Dear Secretary Chiavetta:

Enclosed please find the Main Brief, on behalf of the Office of Small Business Advocate (“OSBA”), in the above-captioned proceeding.

Copies will be served on all known parties in this proceeding, as indicated on the attached Certificate of Service.

If you have any questions, please do not hesitate to contact me.

Sincerely,

/s/ Steven C. Gray

Steven C. Gray
Senior Attorney
Assistant Small Business Advocate
Attorney I.D. No. 77538

Enclosures

cc: Justin B. Farr
Kevin Higgins
Parties of Record

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PPL Electric Utilities : **Docket No. P-2024-3049223**
Corporation for Approval of its Second :
Distributed Energy Resources Management :
Plan :

**MAIN BRIEF
ON BEHALF OF THE
OFFICE OF SMALL BUSINESS ADVOCATE**

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Date: March 25, 2025

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I. INTRODUCTION

On May 24, 2024, PPL Electric Utilities Corporation (“PPL” or the “Company”) filed a Petition of PPL Electric Utilities Corporation for Approval of its Second Distributed Energy Resources (“DER”) Management Plan.

On June 7, 2024, the Office of Small Business Advocate (“OSBA”) filed a Notice of Intervention in this proceeding.

On August 6, 2024, a Prehearing Conference was held before Administrative Law Judge (“ALJ”) John M. Coogan.

On August 7, 2024, ALJ Coogan issued his Scheduling Order.

On September 17, 2024, the OSBA served the Direct Testimony of Justin B. Farr.

On October 21, 2024, ALJ Coogan issued his Order Modifying Scheduling Order.

On October 22, 2024, ALJ Coogan issued his Corrected Order Modifying Scheduling Order.

On January 22, 2025, the OSBA served the Surrebuttal Testimony of Justin B. Farr.

On February 11 and 12, 2025, an Evidentiary Hearing was held before ALJ Coogan.

On February 13, 2025, ALJ Coogan issued his Briefing Order.

The OSBA submits this Main Brief in accordance with the procedural schedule set forth in the ALJ Coogan’s Briefing Order.

II. SUMMARY OF ARGUMENT

PPL's annual reports are of limited use in vetting the Company's proposed Second DER Plan.

PPL's annual reports contained limited, detailed information upon which analysis of the Company's Pilot Program can be judged.

PPL's annual reports also contain insufficient information to conduct a full cost-benefit analysis of the Pilot's active management.

In this proceeding, PPL claims that interconnection fees are decreasing. However, information provided by PPL in an interrogatory response shows that interconnection fees are, in fact, increasing.

PPL should provide a cost-benefit analysis that projects the impacts of expanding the program to existing DERs that are not currently monitored or actively managed, as well as the costs and benefits as new DERs are added to PPL's distribution system.

PPL's cost-benefit analysis, which first appeared in the Company's rebuttal testimony, is only forward-looking and of little use in this proceeding.

PPL's cost-benefit analysis includes a significant number of assumptions that warrant further study and validation.

PPL should conduct a cost-benefit analysis as outlined by OSBA witness Justin B. Farr.

III. ARGUMENT

A. PPL's Pilot Program

PPL's initial DER pilot program began with Program Year 0 on January 1, 2021, and continues through Year 3, ending on March 21, 2025.¹

¹ OSBA Statement No. 1, at 6.

PPL stated the goal of the pilot program, as follows:

[T]est and evaluate (1) the costs and benefits to the distribution system operation and design of monitoring DERs through the DER Management Devices as compared to maintaining distribution system status visibility through other means (e.g. automated meter reading equipment, ADMS systems, modeling) and (2) the costs and benefits to the distribution system operation of active management of DERs through DER management devices as compared to the benefits available through the use of inverter autonomous grid support functions.

OSBA Statement No. 1, at 7.

PPL's pilot program broke its DER customers into four groups for testing and evaluation. The grandfather group was not provided a DER device. The control group 1 had DER devices but were in "monitor-only" mode and operated with autonomous grid support functions with no control of those devices available to PPL. Control group 1 members were located on 75 specific circuits that were selected based on the first applicants on or after January 1, 2021. The control group 2 also had DER devices connected in "monitor-only" mode and operated using their autonomous grid support functions. Control group 2 was composed of the first 1,000 DER participants regardless of location on the system. The actively managed group, as the name implies, was provided with actively managed DER devices, which were controlled by PPL's Distributed Energy Resource Management Systems ("DERMS").

The results of PPL's pilot program will greatly inform whether PPL's proposed Second DER Program should be approved. Unfortunately, there is insufficient evidence to indicate how well, or how cost-effective, the Company's pilot program was.

Specifically, PPL has filed two annual reports on its pilot program, to date. The most recent annual report is dated April 22, 2024.² The April report provided a degree of helpful

² OSBA Statement No. 1, at 7-8.

information, but it mostly focused on promoting PPL's style of active management compared to any other alternatives.³ Thus, the April report was of limited use in this proceeding.

The data provided by PPL in this proceeding also is of limited use. For example, PPL claims that the monitoring conducted during the pilot program helped to reduce interconnection costs.⁴ While PPL provided evidence that interconnection costs were reduced for three customers, it is unclear whether only those three customers experienced the reduction, or whether they were representative of the all the customers in the pilot program.⁵

In his direct testimony, OSBA witness Justin B. Farr included Table JBF-1.⁶ That Table, based upon data from PPL, shows that interconnection costs have been consistently increasing, not decreasing, throughout the duration of PPL's pilot program.

B. The Need for a Full Cost-Benefit Analysis

In his direct testimony, Mr. Farr observed that PPL had not conducted a detailed cost-benefit analysis to support its proposed Second DER Plan.⁷ PPL did state that the Company was undertaking a "preliminary" analysis of its current DER distribution network.⁸ However, as Mr. Farr pointed out, a "preliminary" analysis is an insufficient basis for approval of PPL's Second DER Plan.⁹ Mr. Farr stated the type of analysis that is needed, as follows:

[W]hat is needed is a cost-benefit analysis that projects not only the impacts of expanding the program to existing DER's not currently monitored or actively managed, but also the costs and benefits as new DER's are added to the distribution system.

OSBA Statement No. 1, at 10.

³ OSBA Statement No. 1, at 8.

⁴ OSBA Statement No. 1, at 8.

⁵ OSBA Statement No. 1, at 8.

⁶ OSBA Statement No. 1, at 9, Table JBF-1 "Annual Average Residential Interconnection Costs."

⁷ OSBA Statement No. 1, at 10.

⁸ OSBA Statement No. 1, at 10.

⁹ OSBA Statement No. 1, at 10.

C. PPL's Initial Cost-Benefit Analysis

In response to concerns raised by OSBA and other parties in direct testimony regarding the lack of a meaningful cost-benefit analysis, the Company hired Steven Wishart to prepare a *forward-looking* cost benefit analysis.¹⁰ His analysis was introduced for the first time in the Company's rebuttal testimony. Although the OSBA does appreciate Mr. Wishart's work, the cost-benefit analysis in its current state fails to provide the necessary evidence that the benefits of active management outweigh the costs.¹¹

Specifically, Mr. Wishart's forward-looking CBA focuses on active management for the years 2025-2030.¹² Mr. Wishart's forward-looking CBA addresses new DER installations, with each new DER device installed being owned by PPL.

Mr. Farr reviewed and summarized Mr. Wishart's forward-looking CBA¹³ and identified five major problems with it.

First, PPL has not applied for Commission approval to use DER monitoring devices for conservation voltage reduction services as required by a previous Commission Order.¹⁴ The benefits of this service are not properly included in the forward-looking CBA and must be removed. This reduces the net benefits from active management by \$7.8 million.¹⁵ Mr. Farr's Table JBF-1SR summarizes this reduced benefit.

Second, in the forward-looking CBA, PPL claims a large share of the net benefits from active management to be "incremental hosting capacity." The assumption made by PPL is that each DER device that is installed will provide an additional 3.3 kW of hosting capacity.¹⁶

¹⁰ OSBA Statement No. 1-SR, at 1.

¹¹ OSBA Statement No. 1-SR, at 1.

¹² OSBA Statement No. 1-SR, at 2.

¹³ OSBA Statement No. 1-SR, at 2-4.

¹⁴ Order, Docket P-2019-3010128 (Order entered December 17, 2020).

¹⁵ OSBA Statement No. 1-SR, at 4-5.

¹⁶ OSBA Statement No. 1-SR, at 6.

The problem with PPL's assumption is that it is simply "the best available" guesstimate of the hosting capacity currently.¹⁷ Mr. Farr's Table JBF-2SR provides a detailed breakdown of the impact of PPL's assumption.

Third, the forward-looking CBA fails to include various capital expenses that should have been included. Specifically, PPL concludes that \$5.11 million in estimated start-up costs are "sunk costs" and shouldn't be included in the CBA. The OSBA disagrees.¹⁸ PPL also admits that it does not know "how much distribution infrastructure investment" will be necessary for its proposed DER plan. However, 100% of those possible costs are not included in the forward-looking CBA.¹⁹

Fourth, PPL's forward-looking CBA includes a sensitivity analysis that concludes that there is no possibility that the costs of active management will ever be higher than benefits. Mr. Farr created four sensitivity scenarios and summarized the results in his Table JBF-3SR.²⁰

While Mr. Wishart's forward-looking CBA develops a cost-benefit ratio of 1.81, Mr. Farr's four scenarios demonstrate significantly different outcomes. As Table JBF-3SR shows, Mr. Farr's cost-benefit ratios range from 0.91 to 1.03. Those results are based upon plausible scenarios, and call into question whether there is any benefit to PPL's proposed Second DER Plan.

Fifth, Mr. Wishart's forward-looking CBA is narrowly focused on illustrating the benefits from active management. However, his analysis precludes considering autonomous smart inverters or even other technical solutions that simply do not require the installation of DER devices. Mr. Wishart's analysis is simply too confined to be of use.

¹⁷ OSBA Statement No. 1-SR, at 8.

¹⁸ OSBA Statement No. 1-SR, at 9.

¹⁹ OSBA Statement No. 1-SR, at 9-10.

²⁰ OSBA Statement No. 1-SR, at 10-12.

Finally, Mr. Farr observes that certain cost-benefit methodologies used in the Company's application to analyze the Pilot program, versus those used in rebuttal testimony for the forward-looking CBA, were significantly different and raise concerns. Mr. Farr provided the following example:

Furthermore, assumptions used to model certain benefits are dramatically different. For example, the main benefit identified in the DER Management Pilot Plan was the avoided cost of truck rolls to fix voltage violations valued at \$13.6 million based on the assumptions that 23,272 truck rolls were avoided between 2002 and 2024 at an average cost of \$587 per truck roll.

This amount is equal to 89% of the \$15.33 million in savings referenced by Mr. Salet in his direct testimony.

However, adopting the more conservative assumptions used by Mr. Wishart of 0.017 truck rolls per customer and the number of DER management devices installed during the Pilot Plan, the value of avoided truck rolls would be closer to \$75,000.

These methods and assumptions lead to dramatically different results attempting to model the same benefit.

OSBA Statement No. 1-SR, at 13-14 (citations omitted) (formatting added).

IV. CONCLUSION

The Office of Small Business Advocate respectfully requests that the ALJ and the Commission:

Deny PPL's Second DER Plan without prejudice;

Extend PPL's Pilot Program for any additional two years beyond March 21, 2025;

Order PPL to perform a full cost-benefit analysis as outlined by Mr. Farr so that all interested parties can fully review any future DER Program proposed by PPL.

/s/ Steven C. Gray

Steven C. Gray

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Dated: March 25, 2025

APPENDIX A

Proposed Findings of Fact

Proposed Findings of Fact

1. PPL's initial DER pilot program began with Program Year 0 on January 1, 2021, and continues through Year 3, ending on March 21, 2025. OSBA Statement No. 1, at 6.
2. PPL has filed two annual reports on its pilot program, to date. The most recent annual report is dated April 22, 2024. OSBA Statement No. 1, at 8.
3. The April report provided a degree of helpful information, but it mostly focused on promoting PPL's style of active management compared to any other alternatives. Consequently, the April report was of limited use in this proceeding. OSBA Statement No. 1, at 8.
4. Data from PPL shows that interconnection costs have been consistently increasing, not decreasing, throughout the duration of PPL's pilot program. OSBA Statement No. 1, at 9.
5. In response to concerns raised by OSBA and other parties regarding the lack of a meaningful cost-benefit analysis, the Company prepared a forward-looking cost benefit analysis. OSBA Statement No. 1-SR, at 1.
6. The forward-looking cost-benefit analysis was introduced for the first time in the Company's rebuttal testimony. OSBA Statement No. 1-SR, at 1.
7. The cost-benefit analysis in its current state fails to provide the necessary evidence that the benefits of active management outweigh the costs. OSBA Statement No. 1-SR, at 1.
8. OSBA witness Justin B. Farr identified five major defects with the Company's forward-looking cost-benefit analysis. OSBA Statement No. 1-SR, at 2-4.
9. PPL has not applied for Commission approval to use DER monitoring devices for conservation voltage reduction services as required by a previous Commission Order. OSBA Statement No. 1-SR, at 4-5.
10. In the forward-looking CBA, PPL claims a large share of the net benefits from active management to be "incremental hosting capacity" based upon a guesstimate. OSBA Statement No. 1-SR, at 6,8.
11. The forward-looking CBA fails to include various capital expenses that should have been included. OSBA Statement No. 1-SR, at 9-10.
12. PPL's forward-looking CBA includes a sensitivity analysis that concludes that there is no possibility that the costs of active management will ever be higher than benefits. OSBA witness Justin B. Farr demonstrated that the actual cost-benefit ratio could be

significantly lower than that set forth in the Company's CBA. OSBA Statement No. 1-SR, at 10-12.

13. PPL's forward-looking CBA is narrowly focused on illustrating the benefits from active management and precludes considering autonomous smart inverters or even other technical solutions that do not require the installation of DER devices. OSBA Statement No. 1-SR, at 12-13.

14. Certain cost-benefit methodologies used in the Company's application to analyze the Pilot program, versus those used in rebuttal testimony for the forward-looking CBA, were significantly different. OSBA Statement No. 1-SR, at 13-14.

APPENDIX B

Proposed Conclusions of Law

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1. Section 1301 of the Public Utility Code, 66 Pa. C.S. § 1301, provides that “every rate made, demanded, or received by any public utility, or by any two or more public utilities jointly, shall be just and reasonable, and in conformity with regulations or orders of the commission.”

2. Section 5.41 of the Commission’s regulations state that “[p]etitions for relief under the act or other statute that the Commission administers, must be in writing, state clearly and concisely the interest of the petitioner in the subject matter, the facts and law relied upon, and the relief sought.” 52 Pa. Code § 5.41(a).

3. Electric distribution companies are required to “file a tariff with the Commission that provides for net metering consistent with” Chapter 75 of the Commission’s regulations. 52 Pa. Code § 75.13(c).

4. An Electric distribution company and default service provider “may not require additional equipment or insurance or impose any other requirement” on a net metering customer generator “unless the additional equipment, insurance or other requirement is specifically authorized under this chapter or by order of the Commission.” 52 Pa. Code § 75.13(k).

5. PPL has not applied for Commission approval to use DER monitoring devices for conservation voltage reduction services as required by Commission Order. Order, Docket P-2019-3010128 (Order entered December 17, 2020), approving the October 5, 2020, *Joint Petition for Settlement of All Issues*.

6. The October 5, 2020, *Joint Petition for Settlement of All Issues* included Paragraph 60, which stated, in part, that “Monitoring and/or management of DER inverters by the Company during the pilot program to support distribution grid services beyond system safety and reliability (e.g., conservation voltage reduction) shall only be permitted after separate application by the Company and approval by the Commission.”

APPENDIX C

Proposed Ordering Paragraphs

Proposed Ordering Paragraphs

1. PPL's Second Distributed Energy Resource Plan is denied without prejudice.
2. In its next Distributed Energy Resource Plan filing, PPL shall include a detailed cost-benefit analysis as outlined in this Recommended Decision.
3. PPL's current Distributed Energy Resource Pilot Program shall be extended an additional two years from March 21, 2025.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PPL Electric Utilities : **Docket No. P-2024-3049223**
Corporation for Approval of its Second :
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CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of the foregoing have been served via email (*unless otherwise noted below*) upon the following persons, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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