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E-File

April 23, 2025

Matthew Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17120-3265

**Re: En Banc Hearing on Interconnection and Tariffs for Large Load
Customers
Docket No. M-2025-3054271**

Dear Secretary Homsher:

Enclosed for filing on behalf of PPL Electric Utilities Corporation ("PPL Electric") please find the testimony of Joseph B. Lookup, Vice President-Transmission & Distribution Planning and Asset Management, in the above-captioned proceeding. This testimony is being filed pursuant to the March 27, 2025 Motion of Pennsylvania Public Utility Commission Chairman Stephen DeFrank and April 12, 2025 Secretarial Letter issued in this matter.

Pursuant to 52 Pa. Code § 1.11, the enclosed document is to be deemed filed on April 23, 2025 which is the date it was filed electronically using the Commission's E-filing system.

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

Respectfully submitted,

A blue ink signature of Michael J. Shafer, written in a cursive style.

Michael J. Shafer

Enclosure



Testimony of Joseph Lookup
Vice President – Transmission & Distribution Planning, and Asset Management
PPL Electric Utilities
Before the Pennsylvania Public Utility Commission
En Banc Hearing on Data Center Tariff Design
April 24, 2025

Good afternoon, Chairman DeFrank, Vice Chair Barrow, and Commissioners. Thank you for the opportunity to testify on behalf of PPL Electric Utilities Corporation (“PPL Electric”) on issues around interconnection and possible tariff considerations for large load customers.

Background

As recognized in the Motion, data centers and their load represent a significant opportunity for Pennsylvania, including job growth, economic development, and bolstering our national security. In addition, these load additions also have the potential to lower rates for all existing customers, while enhancing reliability and rate stability. Accordingly, the Public Utility Commission (“PUC”) is right to consider how this substantial influx of load will be interconnected, ensuring that the process is conducted in a fair and equitable manner.

PPL Electric is directly seeing the growth of data center development in Pennsylvania, with requests in advanced stages in excess of 9 GW of new load as reported during PPL Corporation’s year-end earnings call. To put this into perspective, PPL Electric’s current summer peak is 7.5 GW, and the new data center requests are poised to more than double PPL Electric’s system peak within the next 5-6 years. PPL Electric has invested in the reliability and resiliency of its transmission system to better serve its customers. An additional benefit of this investment is that PPL Electric now stands ready to serve this influx of load with large load customers only having to cover the incremental cost of interconnecting their facilities.

It is important to note the potential positive impact that connecting large load customers may have on other customers’ transmission rates. Through PPL Electric’s FERC formula rate it recovers an appropriate revenue requirement to cover the investment in and cost of operating the transmission system. These costs are allocated to individual customers based on a customer’s contribution to the system peak. It is anticipated that large load customers will make up a significant portion of PPL Electric’s system peak once interconnected. What this means from a practical perspective is that PPL Electric will generally receive the same amount of revenue from transmission rates, but an increasingly larger portion of that revenue will be received from large load customers thereby reducing other customers’ portion. In real terms the Company estimates that the first gigawatt of interconnected load will reduce other customers’ transmission costs by 10%.

When interacting with prospective large load customers, perhaps the biggest question that we hear is not about transmission capacity, but whether generation capacity will be sufficient to serve this increased load. While not directly the subject of this hearing, any PUC policies that arise from this docket should also consider the impact that data centers will have on resource adequacy, particularly the effects on capacity costs and system reliability. To that end, I'd refer you to PPL's comments on resource adequacy and EDC investment in generation related to the PUC's November technical conference at Docket No. M-2024-3051988.

PPL Electric Policies on Interconnecting Large Load Customers

PPL Electric has been addressing the issue of interconnecting large load customers, specifically data centers, through its existing retail tariff. Data centers with large load requirements predominantly take service at or above 69 kV. Under our current retail tariff, this level of service is provided under the LP-5 rate schedule, which generally requires the customer to pay for all interconnection costs. Historically, this approach has worked well, as the system upgrade facilities needed to interconnect the LP-5 customer only benefited the interconnecting customer, justifying the customer covering the cost.

Now, however, hyperscalers and their load often require upgrades to the 500 kV and 230 kV bulk electric system, which benefit not only these customers directly but also the transmission and distribution system as a whole. Additionally, adding this amount of load to the system has the potential to significantly reduce other customers' transmission costs. Consequently, when determining cost allocation, PPL Electric evaluates necessary system upgrades and segregates the costs into customer-specific costs which will be paid through a contribution in aid of construction ("CIAC") and costs that will be socialized through rates. This case-by-case determination is based on whether the specific upgrade provides reliability benefits to the grid as a whole or if it only benefits the new customer.

Customer Load Commitment and Security

PPL Electric shares the Commission's desire to protect ratepayers against the risk of stranded costs associated with large load customers. While it is our intent to memorialize large load interconnection rules in the retail tariff at some point in the future, to accommodate data center customers' speed to market needs in the interim, the Company has been extending service under its LP-5 rate schedule and including load commitment guarantee terms in the customer's electric service agreement ("ESA").

The load commitment language in the ESA mirrors the Company's line extension guarantee terms in Rule 3 of the tariff for lower voltage service extensions. In addition to the customer's CIAC obligation, the customer guarantees to take service in an amount that the customer will pay electric service rates equal to the upgrade costs that are socialized through transmission rates. This is to ensure that the investments to interconnect these customers are justified and that other customers will not be left paying for stranded assets. This obligation will be secured by a letter of credit or

other form of security in the event of a breach of contract. The termination fee is the difference between the costs placed into rates less the revenues received from the interconnecting customer. These are important protections for our broader customer base.

PPL Electric does not evaluate projects based solely on MW size but rather on whether upgrades will be placed into rates and socialized. Practically, this means that only very large customers requiring upgrades to the bulk electric system will need to provide a minimum load guarantee.

The Company also does not have set minimum contract terms. Rather, each customer's guarantee length is dependent on the amount of costs placed into transmission rates, load ramp schedules, and the monthly revenues received by the Company. PPL Electric believes that this approach strikes the right balance of encouraging data center growth while adequately protecting other customers from the risk of the load not materializing.

PPL Electric has been monitoring how other jurisdictions are handling data center growth, and the Company believes its policies are in alignment with industry best practices. The specific details of large load interconnection requirements differ from jurisdiction to jurisdiction, but the general goal of balancing data center growth while mitigating existing customer risk is present in all policies. PPL Electric has designed its data center interconnection policies with this goal in mind.

Model Tariff vs. Policy Statement Guidelines

PPL Electric supports the goal of this inquiry and welcomes general guidance from the PUC on interconnecting large load customers, such as data centers. However, because of the latency of the market and the issues that are still emerging, PPL EU recommends that the PUC consider issuing guidelines through a policy statement rather than adopting a model tariff at this time.

Pursuing a model tariff that acts as a one-size-fits all regulatory regime may be too restrictive, which hinders innovation and flexibility when designing demand response or interruptible load provisions. Having a policy statement that outlines minimum requirements can provide boundaries that offer direction for developers while ensuring the right level of consumer protections. For example, articulating minimum provisions that must be included in a tariff, such as the ESA provisions noted above, which are based on an existing PUC-approved tariff, can provide the transparency that the PUC is seeking in this exercise. While data centers are driving the most investment in the near term, this may not always be the case – technological innovations and advancements in the manufacturing sectors may contemplate other needed solutions that we aren't contemplating at the moment.

Ultimately, data centers are retail customers, and provisions, at some point, will need to be incorporated into an Electric Distribution Company's ("EDC") existing retail tariff. Due to the speed at which data centers wish to interconnect in Pennsylvania and the quickly changing environment resulting from this load growth, PPL Electric encourages the Commission to allow for flexibility in EDC tariff development to both support this growth while protecting customers.

Conclusion

PPL Electric is committed to ensuring a fair and efficient process for interconnecting large load customers, including data centers. To that end, we support policies and methodologies that strike the right balance between encouraging data center development and protecting customer interests. Thank you for the opportunity to provide this testimony. I am happy to answer any questions you may have.