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Good afternoon, Chairman Miller and members of the Democratic Policy Committee. Thank you for the opportunity to testify on behalf of PPL Electric Utilities on the impacts, operations, and policy considerations of data centers in Pennsylvania. My name is Shelby Linton-Keddie, and I am Senior Director of Government, Regulatory and External Affairs for PPL Electric Utilities ("PPL Electric"). PPL Electric serves 1.5 million customers in 29 counties in central and eastern Pennsylvania. PPL Electric owns and maintains 50,000 miles of regulated transmission and distribution lines, infrastructure that is vital to the economic vitality of the Commonwealth and the communities we serve.

We applaud the Committee for taking the time to discuss data center development in the Commonwealth and the state's role in ensuring a secure, affordable, and sustainable electricity supply while accommodating an acceleration of electricity demand and load growth that we have not seen in decades. Data centers represent a significant opportunity for Pennsylvania, supporting job growth and economic development, and technological advancement. In addition, these load additions have the potential to drive down costs for all existing customers, while enhancing reliability through infrastructure improvements. In eastern and central Pennsylvania, our service territory is on the verge of remarkable growth—we

anticipate that our peak energy demand of 7.5 GW will double in just the next five to six years. In practical terms, we are doubling the energy demand that took more than 100 years to reach.

Pennsylvania is uniquely positioned to lead the next wave of data center expansion. Our Commonwealth offers a rare combination of natural resources, critical infrastructure, and proximity to major population centers. Additionally, our state's skilled workforce and elite research institutions make us a magnet for innovation and talent.

This surge in growth requires a modern, resilient power grid that is ready to meet the needs of Pennsylvanians today and for generations to come. For more than a decade, PPL Electric has been proactively strengthening and modernizing our distribution and transmission systems. By leveraging industry-leading technology and automation, as well as hardening our grid against increasingly extreme weather, we're ensuring that our grid remains both smart and robust.

These investments are about more than just wires and substations—they directly benefit our customers by enhancing reliability, driving down costs, and delivering a grid that can power opportunity for households, communities, and businesses.

In addition, PPL Electric has been, and continues to be, a valuable community partner for more than a century. Our employees serve on local and statewide boards and volunteered more than 15,000 hours in 2024. PPL Electric and our parent company, PPL Corporation, both headquartered in Allentown, also make substantial financial contributions to our 29 counties throughout central and eastern Pennsylvania through various channels each year. Please find a breakdown of these efforts below:

- **PPL Foundation Grants:** The PPL Foundation is an independent nonprofit funded by PPL Corporation. In 2025, the Foundation expects to award over $1 million in grants and scholarships. Since 2015, the Foundation has contributed more than $35 million to communities served by PPL Electric and Rhode Island Energy.
- **Employee-led Charitable Giving Campaign:** Pennsylvania employees and retirees of PPL, along with matching contributions from the PPL Foundation, contributed nearly $6.5 million in 2025 through an annual giving campaign which supports nonprofits throughout our Company's service territory.
- **Good Neighbor Energy Fund and Operation HELP:** The PPL Foundation increased its annual donation to the Good Neighbor Energy Fund to $400,000 in 2025, which assists low-income families in central and eastern Pennsylvania with their energy bills. In addition, PPL Electric also annually contributes approximately $600,000 a year for Operation HELP, which provides assistance to eligible customers struggling with their electric bills. This million-dollar annual financial commitment is just one of the ways that we are making a difference for our customers in need.

PPL Electric Utilities Has Infrastructure That's Ready to Meet Demand

PPL Electric is prepared and capable of connecting this new load and more as a result of significant investments in the reliability and resiliency of its transmission and distribution system to better serve its customers. A robust transmission grid has proven integral in attracting large load customers to the Keystone State. Over the past decade, PPL Electric has built one of the smartest and most resilient grids in the nation.

First, let me highlight the fact that PPL Electric has been nationally recognized for its work incorporating Grid Enhancing Technologies (GETs) on its system. We have done this without a mandate and to cost effectively expand the capacity of our assets when technology makes this possible. A few of PPL Electric's GETs that maximize the transmission of electricity across the grid include sensors, power flow control devices, and analytical tools. For a number of years, PPL Electric has leveraged a combination of GETs to increase capacity on our transmission system and eliminate or delay transmission infrastructure build-out that otherwise would be required to meet additional load.

- **Dynamic Line Rating (DLR**) - DLR is hardware and software used to update the calculated thermal limits of existing transmission lines based on real-time and forecasted weather conditions. DLR allows more energy transfer across our existing transmission lines. PPL Electric currently has DLR technology in place on nine transmission lines in Pennsylvania, all coordinated with the PJM day-ahead market to capture congestion savings for customers. Average ratings on lines with DLR technology are more than 16% higher than standard ratings before the implementation of the technology. It is estimated that targeted use of DLR technology has saved our customers approximately $23 million in generation congestion costs annually.[1]
- **Conductors** - The conductors we use today have significantly more capacity than the conductors that are being replaced. We use Aluminum Conductor Steel Supported

[1] *See* Dumitriu, N. (2021, March 9). Market Efficiency Update - Transmission Expansion Advisory Committee. PJM Interconnection. 20210309-item-03-market-efficiency-update.pdf

(ACSS) conductors, which offer a higher current carrying capacity than traditional Aluminum Conductor Steel Reinforced (ACSR) conductors due to their higher conductivity aluminum wires and the ability to operate at higher temperatures. ACSS conductors can be operated continuously at temperatures up to 250 degrees, while ACCSR typically operates at a maximum of 100 degrees.

- **Super-conductors -** We continue to vet cases for "super conductors" where the cables have a composite core instead of steel. While these cables are effectively used in warmer regions of the country, we are confirming conductor strength considering icing. We see benefits for the application of super-conductors and aim to eventually test them through a pilot project.

Since 2013, PPL Electric has invested $13 billion in our grid, and we have plans to invest an additional $7 billion through 2028. These investments are already paying off, with strong reliability, faster interconnections and readiness for large-scale load. This is why data center developers are choosing to work with us and why we have been able to maintain first quartile reliability for our customers.

PPL Electric Utilities is Ready for Business

The reliability and capacity of our system is just the start of what makes PPL Electric stand out to businesses choosing to locate in the Commonwealth. We work to understand the needs of our prospective customers and provide fast response times to meet their evolving demands. In the case of data centers, we work closely with developers and hyperscalers to review, identify, and propose project sites, meet timelines, and navigate complexity. PPL Electric collaborates closely with developers and PJM to validate the load of proposed data

center projects. Our industry-leading interconnection process is streamlined and responsive, typically we deliver a high-level scope and estimate in 5-10 business days and a full feasibility report in just 45-60 days. Often construction begins in just 6-12 months. We have a dedicated team working directly with these and other large load customers on requests. Developers begin by submitting their interconnection requests to PPL Electric, detailing their project requirements. In response, PPL Electric conducts a high-level analysis to provide initial feasibility insights. In addition, PPL Electric reviews a developer's proposal during initial discussions to ensure that they have technical and financial feasibility, as well as established land control. PPL Electric conducts a detailed engineering analysis, offering developers precise estimates for cost, timeline, and preliminary engineering requirements for interconnection. Before construction begins, developers must execute an Electric Service Agreement (ESA), which outlines the project's costs, schedules, and additional pertinent details. To ensure an accurate representation of this emerging load, only data center projects with advanced agreements are included in PPL's annual load forecast.

PPL Electric isn't just providing power—we're a proactive partner in economic development.

Interconnection of Data Center Load Benefits All Customers

It is important to note the positive impact that connecting large load customers may have on other customers' transmission rates. Through PPL Electric's FERC formula rate, we recover 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 demand. 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, we estimate that the first gigawatt of interconnected load will reduce other customers' transmission costs by approximately 10%.

PPL Electric protects ratepayers against the risk of stranded costs associated with large load customers. There are two main components to connecting a data center to the grid. There is the cost specific to the data center, which is the data center's responsibility. There are also infrastructure upgrade costs that all customers benefit from, and those costs are recovered through the FERC Formula Rate and shared across all customer groups. Our ESA requires data center customers to pay a set amount based on their committed peak usage, even if they use less electricity, until the shared costs are fully recovered. These are important protections for our broader customer base in the event that large load customers, like data centers, no longer have the original load requirements. To determine whether minimum payment commitments are necessary, PPL Electric does not evaluate projects based solely on megawatt 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. PPL Electric 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. PPL Electric believes that this approach

strikes the right balance for encouraging data center growth while adequately protecting other customers from the risk of the load not materializing.

Infrastructure Needed to Serve Data Center Load

Even with our infrastructure investments highlighted above, the increased demand for electricity at current forecasts will require the need to site new transmission lines and, in some cases, will also require the construction of additional substations. As a general rule, the closer the large load customer is to the generation facility, the lower the transmission development costs. The Pennsylvania Public Utility Commission (PUC) is charged with oversight of the siting and construction of electric transmission lines. They do this through evaluation of Full Siting Applications or through review of Letters of Notification. Both types of proceedings are transparent, open to the public, and require PUC approval. The PUC evaluates the need for the new line and whether the proposed route is the preferred option when compared to alternative locations. Where possible, PPL Electric aims to leverage brownfield rights-of-way or rights-of-ways along highway corridors and seeks to have positive relationships with landowners. We have a well-established process to answer questions and educate customers on project needs and impact through open houses in communities where a new or expanded transmission line is proposed.

A robust, efficient, and cost-effective electric grid is a key component to long-term economic growth for the state by delivering new energy sources to our homes and businesses, reducing costly power outages, and lowering energy prices. Economic development and the load growth it brings always requires infrastructure improvements – it is the price of progress. Pennsylvania

has shown that it is an attractive location for large load customers, which is open for business, and we have responded to this increased demand for power with transmission buildout when needed, particularly for large load customers, including data centers.

Resource Adequacy Remains a Concern

Electric distribution companies, including PPL Electric, have a statutory duty to provide adequate, efficient, safe, reliable, and reasonable service. However, EDCs are reliant on the procurement of sufficient supply resources through markets to meet that obligation now and in the future. The availability of supply to meet forecasted demand is called resource adequacy and resource adequacy must be sustained, especially in the face of electric demand growth that has not been seen in decades, and certainly not since Pennsylvania enacted the Competition Act back in 1996.

The importance of resource adequacy cannot be overstated. The public relies on safe, reliable, and affordable electric service, which necessarily requires adequate electric generation supply. However, due to a convergence of factors including the retirement of baseload dispatchable generation, the introduction of significant amounts of intermittent resources, and unprecedented load growth from data centers and electrification, the Commonwealth is at serious risk of lacking the adequate electric generation supply to meet future demand. PPL Electric, therefore, recommends that the General Assembly authorize EDC investment in generation, up to and including ownership and operation, as a flexible and appropriate tool for the Commonwealth to support system reliability and economic growth, and reduce price volatility. The legislation also encourages utilities to partner with IPPs to help derisk their new

generation investment. Although this would require legislative change as proposed in SB 897, which we strongly support, it neither necessitates a full rollback of the Competition Act or regulation of existing merchant-owned generation plants.

To meet the challenges of unprecedented load growth and limited generation, we need an all of the above approach – which includes maximizing the efficiency of the transmission grid and supporting initiatives like SB 897 that allows for EDCs to invest in generation as a backstop to help address resource inadequacies when the market either cannot or will not be able to meet projected demand.

Conclusion

Pennsylvania has historically been a leader in the energy space and is experiencing a unique economic opportunity. To continue playing a leading role, the Commonwealth must be proactive by modernizing its energy policy and developing solutions that balance the impact of data centers while also addressing today's challenges and maximizing potential opportunities. PPL Electric looks forward to continued collaboration with this committee, the General Assembly, and other interested stakeholders to develop collective, forward-thinking, and innovative solutions to ensure sustainable long-term reliability of electricity supply and delivery that drives economic growth and prosperity in the Commonwealth at reasonable customer cost.

Thank you for the chance to provide this testimony, and I am happy to answer any questions.