



**COMMONWEALTH OF PENNSYLVANIA**  
PENNSYLVANIA PUBLIC UTILITY COMMISSION  
COMMONWEALTH KEYSTONE BUILDING  
400 NORTH STREET  
HARRISBURG, PENNSYLVANIA 17120

July 7, 2025

*By Electronic Filing*

Honorable Debbie-Anne A. Reese, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

***Re: Meeting the Challenge of Resource Adequacy in Regional  
Transmission***  
**Docket No. AD25-7-000**

Dear Secretary Reese:

Please find for e-filing the Pennsylvania Public Utility Commission's Comments in the above-referenced proceeding.

Copies of this document have been served upon all parties designated on the Commission's official service list, in accordance with Rule 2010 of the Commission's Rules of Practice and Procedure.

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

Respectfully submitted,

**Elizabeth H. Barnes**

Elizabeth H. Barnes  
Deputy Chief Counsel  
Pennsylvania Public Utility Commission  
(717)772-5408

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

	)	
Meeting the Challenge of Resource	)	
Adequacy in Regional Transmission	)	Docket No. AD25-7-000
Organization and Independent System	)	
Operator Regions	)	
	)	

**COMMENTS OF THE PENNSYLVANIA PUBLIC UTILTIY COMMISSION**

Pursuant to the Federal Energy Regulatory’s Commission’s (“FERC” or the “Commission”) June 5, 2025, Supplemental Notice of Commissioner-Led Technical Conference, the Pennsylvania Public Utility Commission (“PA PUC”) files these comments.

As a restructured state, Pennsylvania has largely turned over planning and reliability to PJM Interconnection (PJM). Consequently, the PA PUC is highly invested in efficient PJM markets that deliver reliable capacity and energy at reasonable prices. Given the resource adequacy concerns raised by PJM, the PA PUC supports policies that encourage large load customers, including data centers locating in resource deficient zones, to bring new, additive generation to the grid. Additionally, locating load near generation brings stability to the grid and lowers electricity loss through transit over high-voltage transmission lines. Locating load near generation also reduces the need to build new transmission infrastructure, keeping transmission costs increases in check and reducing impacts such facilities have on landowners’ property rights, farms and other businesses, tourism, schools, local governments, historical sites, and the environment along their routes. If that generation is new and additive, rather than near existing resources, it also enhances resource adequacy across the entire grid.

Second, the PA PUC shares the concerns expressed by Governor Josh Shapiro’s Office at the Technical Conference about the pace of interconnection of new generation versus the rate of planned and actual retirement of generation in Pennsylvania. An increasing number of large generating plants in Pennsylvania have retired. This includes approximately 20 major plants that have deactivated in the last decade. Each of these

locations have robust transmission infrastructure created to support the delivery of large quantities of energy to the grid. While the plants themselves may no longer generate electricity, the existing transmission infrastructure can support future re-development of new generation to meet the demands of new load growth in a least cost and expedited manner. Finding productive means to redevelop these sites, and efficiently utilizing the existing transmission capacity are essential goals for Pennsylvania in the upcoming decade.

PJM's Open Access Transmission Tariff allots an exclusive power to member states with regards to transmission development. Only the states may expedite state-directed and funded transmission development that will advance their policy goals through a State Agreement Approach (SAA). Historically, the SAA has been invoked only once, by New Jersey to support ongoing development of offshore wind projects. Innovative uses of the SAA can serve as a regional model as load growth increases.

We thank the Commission for this opportunity to comment regarding national plans to address resource adequacy and offer the following responses to several questions posed to panelists at the June 4-5, 2025 Resource Adequacy Technical Conference.

## **Panel 2: PJM's Resource Adequacy Challenge**

**Question 1.** What is the state of resource adequacy in PJM in the near term (e.g., over the next five years) and over the longer term (e.g., ten years and beyond)?

Although PJM has stated that it currently has enough resources to meet the region's needs in the near term, the future is uncertain. PJM projects that the summer peak load will grow at an annual rate of 3.1% over the next 10 years and 2.0% over the next 20 years. The summer peak is forecasted to reach 209,923 MW by 2035, representing a 10-year increase of 55,779 MW. By 2045, it is expected to rise to 228,544 MW, a 20-year increase of 74,400 MW. This growth corresponds to an average annual increase of 3.8% over the next 10 years and 2.4% over the next 20 years. Meanwhile, the PJM winter peak load is projected to reach 198,175 MW in 2034/35, a 10-year increase of 62,048 MW, and grow to 218,760 MW by 2044/45, marking a 20-year increase of 82,633 MW.<sup>1</sup>

There are potential dangers in the long-term structure of resource adequacy in PJM (ten years and beyond) given the complex nature of increased loads on the system. Current constraints on the system are exacerbating the already growing resource adequacy challenges most notably highlighted within PJM's Resource Retirements, Replacements,

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<sup>1</sup> See PJM Interconnection, 2025 Long-Term Load Forecast Report (Jan. 2025) at p. 6, <https://www.pjm.com/-/media/DotCom/library/reports-notice/load-forecast/2025-load-report.pdf>.

and Risks Report issued in February 2023 and the installation of generation behind the meter (or off the grid) can add complexity to resource adequacy concerns. Recent record high capacity clearing prices in PJM's 2025/2026 Base Residual Auction reflect these risks. The PA PUC views this as both an affordability and adequacy crisis that requires urgent structural reforms.

**Question 2.** Going forward, what steps will PJM need to take to ensure resource adequacy? Is PJM's resource adequacy construct adequate to determine resource adequacy needs given changing circumstances (e.g., unforeseen load growth, changes in state public policy requirements, faster-than-anticipated retirement of resources)?

PJM should reform its capacity market design and streamline rules to add electrons to the grid. The continuous build out of high-voltage transmission lines to fix a generation problem is costly and often not the best utilization of resources.

PJM should take steps to modernize its resource adequacy construct. The PA PUC supports PJM implementing a sub-annual capacity market, accelerating interconnection reform, and ensuring that new large loads are sited responsibly. Load forecasts should be verified to prevent duplication of reported load demands that may be reported multiple times across utility service areas. Additionally, PJM must recognize the evolving potential of flexible loads to participate in demand side peak shaving that can substantially reduce capacity needs. These steps are critical to adapting PJM's resource adequacy framework to meet evolving conditions.

**Question 4.** To what extent are barriers to entry (e.g., the interconnection queue backlog, supply chain limitations, siting and permitting delays, etc.) impeding the ability of the capacity market to achieve resource adequacy at just and reasonable rates? What opportunities are there to address these barriers to entry?

PJM should continue exploring alternative approaches, such as Surplus Interconnection Service, innovative use of Virtual Power Plants to shave peak load, and expedited deployment of cost-effective Grid-Enhancing Technologies across the PJM region can all help temporarily fill in for a lack of new projects entering service.<sup>2</sup>

**Question 6.** To what extent does the availability of regional and interregional transmission capability affect resource adequacy planning in PJM? How can PJM better address the effect of transmission capability on resource adequacy?

Transmission limitations directly affect regional resource adequacy, especially when new large loads are sited in already constrained areas. In 2024, the North American Electric

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<sup>2</sup> *Id.*, pages 4 and 5.

Reliability Corporation (NERC) issued its Long Term Reliability Assessment, stating, in part, "NERC finds that most of the North American [bulk power system] faces mounting resource adequacy challenges over the next 10 years as surging demand growth continues and thermal generators announce plans for retirement."<sup>3</sup> Decisions on where these large loads are sited often trigger costly system wide upgrades that burden ratepayers. Pennsylvania recommends PJM implement siting incentives that guide large loads to generation rich zones with available transmission capacity. Large loads should also be encouraged to bring their own generation in constrained areas to minimize the impact their increased load has on resource adequacy and market costs.

**Question 7.** Is the PJM capacity market adequately designed to provide correct signals for needed capacity additions? Given the degree to which the capacity market rules have changed in recent years, is the PJM capacity market producing stable investment signals? How have these frequent rule changes affected market participants and consumers? How has PJM sought to maintain stable investment signals in the face of these changes?

The PJM capacity market is currently failing to produce clear and stable investment signals. Frequent changes to the market construct, underperforming forecasting assumptions, and a lack of forward visibility have reduced investor confidence. The balance between working speedily towards reforms when they become apparent and maintaining market confidence is a difficult one. Pennsylvania supports stabilizing the auction structure following some necessary reforms, including the adoption of a sub-annual model to allow the market to send price signals that reflect real system needs and restore trust in consumers and developers. Further extended auction delays are not advisable except in the most extenuating circumstances.

**Question 10.** Several states in PJM have public policy requirements that drive resource entry and exit decisions. How does PJM work with the states and the District of Columbia to identify and meet the region's resource adequacy needs at just and reasonable rates? Has PJM studied the effects of state public policy on either resource adequacy or capacity market outcomes? What are the effects of state policies on resource adequacy in PJM?

PJM has not yet provided an adequate framework for coordinating with states on resource adequacy. The PA PUC supports expanding the State Agreement Approach (SAA) into an enhanced SAA+ construct that would allow states to back key projects and move them up in the interconnection queue. The PA PUC also encourages PJM to improve its transparency around how public policies interact with market outcomes and ensure that their planning processes reflect state policy mandates.

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<sup>3</sup> NERC 2024 Long-Term Reliability Assessment, Page 6.

### **Panel 3: PJM States' Perspectives**

**Question 1.** What should be the allocation of roles and responsibilities between PJM and the states to ensure resource adequacy in the PJM region? Please explain the role your state takes on with regard to the procurement of capacity to meet resource adequacy requirements, including with respect to bilateral contracting, self-supply, and/or purchases from the PJM capacity market. Do states in PJM have appropriate opportunities to participate in PJM decisions regarding resource adequacy? Are there different, or greater, responsibilities that states should assume to ensure resource adequacy?

As a restructured state, Pennsylvania relies fully upon PJM's market to meet its resource adequacy needs. All of our certificated electric distribution companies (EDCs) have structurally separated from their generation operations. No EDCs currently own generation and it would take an act of our General Assembly and Governor to permit ownership again. This makes PJM's performance and responsiveness to state input crucial for restructured states like Pennsylvania. The PA PUC believes creating a formal state sector in PJM governance, such as giving OPSI the right to submit alternative Section 205 filings like ISO-NE provides its members, could be considered. States must have a more meaningful role if they are to regain confidence in PJM's ability to balance affordability and reliability. As PJM attempts to function as a pseudo-regulatory body in its regional planning role, states, through their membership in OPSI, should have more of a say in how PJM conducts its planning role.

**Question 4.** Are changes necessary to ensure that the PJM capacity market process delivers resource adequacy at just and reasonable rates?

Yes, PJM capacity market processes require changes. The PA PUC recommend the implementation of a sub-annual capacity construct and improvements to resource accreditation methods. These changes, along with a period of market stability, are essential to ensuring that capacity procurement reflects real system needs while supporting reliability at reasonable cost.

### **Further Comments**

In addition to the pre-conference directed questions of the Commission, Panelists and Commissioners at the hearing raised several issues for which further comment is justified.

- In response to Commissioner Rosner's request for the number one thing that FERC, the RTOs, and the states should do to maintain resource adequacy. The PA

PUC agrees with Manu Asthana's comments that we need to hang onto resources, interconnect new resources, and use demand flexibility in new and innovative ways. But further, these goals are downstream of more fundamental market points: We need to get load forecasting correct, get accreditation correct, as well as stabilize and lower barriers to entry of both generation and demand-side options. These three foundations would be critical to accomplishing Mr. Asthana's three points.

- Gordon van Welie commented that we may need an updated and interconnection-wide standard on capacity benefit of ties (CBOT) between the RTOs.<sup>4</sup> The PA PUC strongly agrees. The evaluation of CBOT is outdated and stagnant. Interregional reliance is playing a larger role given resource-mix changes, and the extreme weather driving resource adequacy challenges does not occur simultaneously and uniformly across the Eastern Interconnection. Indeed, the nature of solar photovoltaic generation, for example, means that resource may still be operating well in MISO while it is ramping down further east. Reevaluating interregional coordination and accreditation is a fruitful opportunity for improved reliability while minimizing costs for end use customers.
- Commissioner Rosner asked if we need to perform accreditation on a more granular basis. The Commissioner specifically asked if natural gas should be accredited in accordance with their fuel arrangements. Although this was not asked of PJM, we can provide some information on the topic. PJM presently uses a mixed strategy of providing unit-specific accreditation, after starting from a class average approach. First, PJM defines a set of resource classes. There have been recent modifications to expand the set of resources that have their own class. PJM has been using multiple classes for natural gas based on whether they are dual fuel for some time now. A new unit, or a unit that may have changed classes, e.g. from single fuel CT to dual fuel CT, receives the class average ELCC value.

Next, if a unit has a performance history in a current class, then PJM provides a unit-specific adjustment based on the unit's performance relative to the class as a whole. A firm fuel natural gas resource would likely have a higher accreditation after the unit-specific adjustment is performed. In our understanding, the unit-specific adjustment is based on performance history, not on modelled differences between unit design within the same class.

However, the methodology of starting with class average also results in resources being affected by the performance or non-performance of other units in the class. While this can sometimes be beneficial in generating a larger performance sample for similarly situated units, it can also unnecessarily punish highly performing

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<sup>4</sup> Response to Commissioner See.

units. The PA PUC supports exploring more unit specific accreditation to determine if that method would improve performance.

- Chairman Christie asked in the MISO panel: When a large load requests to interconnect, they put money on the table for interconnection studies under state jurisdiction; how does this play into needing money on the table for load forecast certainty? First, we agree with the Chairman that this is a matter of state jurisdiction. As a result of our *en banc* hearing held in April on the topic of data centers, we heard many of the same comments regarding needing money on the table for load forecast certainty. Whether the initial money needed for interconnection studies is sufficient, or whether a further financial commitment is needed to produce certainty, is a question of scale and timing. The fees charged for interconnection studies alone may not be high enough to serve as validation as to whether the project will go forward. We are actively exploring appropriate financial structures for load forecast certainty, as well as fairness to ratepayers.

## Conclusion

Robust resource adequacy is fundamental to maintaining stable and affordable energy prices. When resources are adequate, the market operates with greater competition and less risk of scarcity, leading to more predictable and reasonable prices. Pennsylvania supports a collaborative, multistate system, but urgent reform is needed in the PJM framework to restore affordability, and ensure reliability.

Respectfully submitted,

*/s/ Elizabeth H. Barnes*

Elizabeth H. Barnes, Deputy Chief Counsel

Kriss E. Brown, Executive Deputy Chief Counsel

David E. Alexander, Assistant Counsel

Pennsylvania Public Utility Commission

P.O. Box 3265

Harrisburg, PA 17105-3265

Telephone: 717-787-5000

[ebarnes@pa.gov](mailto:ebarnes@pa.gov)

[kribrown@pa.gov](mailto:kribrown@pa.gov)

[davalexand@pa.gov](mailto:davalexand@pa.gov)

*Counsel for the Pennsylvania Public Utility Commission*

Dated: July 7, 2025

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am on this date serving a copy of the foregoing document upon each person designated on the official service list compiled by the Federal Energy Regulatory Commission in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure.

Respectfully submitted,  
Elizabeth H. Barnes  
Elizabeth H. Barnes  
Deputy Chief Counsel  
Pennsylvania Public Utility Commission  
400 North St., 3rd Floor  
Harrisburg, PA 17120  
Tel: (717) 787-5000

Dated: July 7, 2025