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May 15, 2025

VIA ELECTRONIC FILING

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

RE: Interconnection and Tariffs for Large Load Customers;
Docket No. M-2025-3054271

Dear Secretary Homsher:

Attached for filing with the Pennsylvania Public Utility Commission are the Comments on behalf of the Industrial Energy Consumers of Pennsylvania, in the above-referenced proceeding. Thank you.

Sincerely,

Susan E. Bruce
MCNEES WALLACE & NURICK LLC

Counsel to the Industrial Energy Consumers of Pennsylvania

c: James A. Mullins, Asst. Counsel, Law Bureau (via email)
Scott J. Thomas, Asst. Counsel, Law Bureau (via email)

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Interconnection and Tariffs for Large Load Customers	))	Docket No. M-2025-3054271

COMMENTS OF THE
INDUSTRIAL ENERGY CONSUMERS OF PENNSYLVANIA

I. INTRODUCTION

On March 27, 2025, Pennsylvania Public Utility Commission ("Commission" or "PUC") Chairman Stephen M. DeFrank raised a Motion in the above-captioned docket ("Large Load Docket") requesting that interested parties provide testimony and comments on various issues regarding Tariffs for Large Load Customers. The Chairman stated that the goal of the Commission is to develop a proposed model tariff for large load customers seeking interconnection in the Commonwealth ("Large Load Model Tariff" or "Model Tariff") that would be available to all electric distribution companies ("EDCs"). The Model Tariff would represent a preferred set of best practices based on the perspectives shared with the Commission by stakeholders.

II. BACKGROUND

The Industrial Energy Consumers of Pennsylvania ("IECPA") is a coalition, formed in 1982, of energy-intensive businesses in Pennsylvania. IECPA's members include manufacturers and processors doing business in a variety of industries, including food, paper, pharmaceuticals, tools, building materials, and more. By and large, IECPA members are long-term customers of Pennsylvania's EDCs who are deeply invested in their communities as job creators, economic drivers, innovators, and taxpayers, and who depend on the Commonwealth's infrastructure, workforce, and economy to succeed.

As a group of large energy users, IECPA has a unique vantage point on the issues in the Large Load Docket. IECPA's mission is to support the formation and implementation of energy

policies in the Commonwealth that enable energy-intensive enterprises to thrive, expand, and attract new business. IECPA views its mission to be aligned with the Commission's initiative to support an orderly approach to attract new types of large load customers to thrive within the Commonwealth, consistent with cost-of-service and cost-causation principles.

IECPA appreciates the opportunity to provide its input on these topics facing Pennsylvania energy stakeholders and offers the following Comments for the Commission's consideration.

III. COMMENTS

A. The Commission should develop a Model Large Load Tariff as a prudent and proactive step to address the unique characteristics of load growth in the 2020s.

In the future, when energy stakeholders look back on the 2020s, they will undoubtedly consider the rise of large data center loads as a defining trend. Data center loads share some similar characteristics with large energy-intensive businesses but also exhibit additional features that warrant close consideration. Central chapters to that story will describe the explosion in load growth driven by data centers, crypto mining, and artificial intelligence (the "data center boom")—leading to both challenges and opportunities that were unanticipated just a few years before. These challenges and opportunities include: ensuring transparency and accurate load forecasting for data center load; ensuring sufficient generation to match accelerating demand; ensuring adequate infrastructure to support such demand (without overbuilding); and fairly allocating the costs associated with load studies and infrastructure upgrades.

Any well-designed policy addressing these challenges should be rooted in an understanding of why, despite some common characteristics, the data center boom is fundamentally different from the evolution of other large loads—differences of scale, speed-to-market requirements, load

profile, and risk profile. It is these unique characteristics that warrant the Commission's valuable attention and guidance.

Scale. First and foremost, the large data center loads coming online today are massive in scale. As a representative from a large EDC testified at the En Banc Hearing,[1] the smallest data center project that the EDC is currently addressing is 150 MW—an amount comparable to the combined load of residential customers in the City of Pittsburgh[2] or more than the peak load of Pennsylvania's three smallest EDCs combined.[3] It is worth emphasizing that 150 MW is considered a relatively *small* data center project. Many projects are several times that scale.

Speed-to-Market. A second characteristic that is unique to the data center boom is the speed at which data centers are seeking to be built and go "online." Unlike traditional factories or universities, which typically grow over time or have a lengthy on-ramp to become operational, data centers often have aggressive timelines to achieve operational status.[4] While even one new large load customer, whether a data center or industrial, creates significant planning for an EDC,

[1] Richard Webster, Vice President, Regulatory Policy & Strategy at PECO, indicated this during the En Banc Hearing, which was held on April 24, 2025 in the Large Load Docket ("En Banc Hearing").

[2] A data center running consistently at 150 MW would, uninterrupted, consume 1,314,000 MWh over the course of a year. Assuming an average of 10,500 kWh per year per household, this small data center would consume the same amount of power as over 125,000 households. The City of Pittsburgh contains approximately 138,000 households. *See* U.S. Census Bureau QuickFacts: Pittsburgh City, Pennsylvania (last visited June 3, 2025), https://www.census.gov/quickfacts/fact/table/pittsburghcitypennsylvania/PST045223.

[3] See *Electric Power Outlook for Pennsylvania 2023-2028* (August 2024), https://www.puc.pa.gov/media/3124/2024-epo-2023-2028-7-2024_final.pdf, at 46-49. Citizens' Electric Company of Lewisburg, PA had a 41.7 MW peak load in 2023; Pike County Light & Power Company reached 19.6 MW; and Wellsboro Electric Company's system peak was 18.9 MW.

[4] Applications for data centers have expanded dramatically. Reuters reported this spring that in a survey of 13 major U.S. electric utility earnings transcripts, "nearly half have received inquiries from data center companies for volumes of power that would exceed their peak demand or existing generation capacity." *US Utilities Grapple with Big Tech's Massive Power Demands for Data Centers,* Reuters.com (April 7, 2025), https://www.reuters.com/business/energy/us-utilities-grapple-with-big-techs-massive-power-demands-data-centers-2025-04-07/. During the En Banc Hearing in this docket, Michael Fradette, Principal, Energy Services, Amazon Web Services, indicated that speed-to-market is a priority.

the fact that many data center projects are being studied and developed simultaneously makes it even more challenging to prepare for and facilitate such growth.

Load profile. Most large, AI-driven data centers have not typically had the capability or interest in their power supply being "interruptible."[5] They do not close for a third shift or holidays. By design, many data centers generally require consistent, high levels of demand with minimal outages. Once built, data centers may support real-time government and industry functions that do not allow for downtime. Furthermore, data centers may provide essential government functions and contribute to national security, thereby increasing the importance of maintaining data center uptime. In contrast, many other types of large load customers can reduce demand. They may do so in response to pricing or grid prompts (e.g., demand response).

Risk profile. At this stage of the data center boom, considerable uncertainty exists regarding the short- and long-term load requirements of data centers. In the short term, EDCs are already being challenged by "phantom projects" – that is, projects that initiate the study process but are not completed. For example, project developers regularly apply for the same project in multiple locations, making it opaque which projects are "phantom projects" and which will be developed. Unfortunately, utilities are put into a position of competing with one another, creating a temptation to offer special deals to attract data center businesses or fail to insist on sufficient guarantees. Long-term, the uncertainty is focused more on the durability of the load. With the data center boom in its infancy, while many expect large data center loads to persist, it is unclear what factors may cause significant load reductions and what political or regulatory pressures may be exerted in the

[5] At the En Banc Hearing, Lucas Fykes, Director of Energy Policy, Data Center Coalition discussed the difficulty of load shedding, depending on factors such as who owns the servers, the data center's business model, and its number of tenants. Brendon Baatz, Energy Market Development, Google, indicated that capabilities for demand response or interruption are being developed, but that shedding load on short notice is difficult.

years to come.[6] Even technology changes could rapidly alter load requirements—for example, if processing chips become twice as efficient, a facility's load could drop significantly. Supply chain constraints (e.g., rare minerals) may also affect long-term demand if there are pressures on chip manufacturing. All of these factors create the risk of stranded costs to other customers on the system.

These unique characteristics of the data center boom are generating an unprecedented set of challenges, including significant risk of stranded investments, resource adequacy constraints, risk of overbuilt (or underbuilt) infrastructure, and increased costs to other customer classes *if* cost-of-service ratemaking principles are not fully utilized. Due to the complexity of these issues, even good faith efforts at allocating costs may fall short without appropriate consideration of risks throughout the entire development lifecycle, including (1) study process and costs; (2) distribution and transmission infrastructure investments needed to support new load; (3) risk of overestimated/overbuilt infrastructure based on over-projections; (4) potential increases to load after a data center customer is online; (5) risk of stranded costs because of projects that are never built; and (6) risk of stranded costs due to closure or downsizing.

The speed at which the data center boom is affecting the energy grid—and the substantial risks it poses to existing customers and utilities—creates a scenario that requires statewide leadership. The Commission has already entered the picture proactively by launching this Large Load Docket. Now, the Commission has an opportunity to develop a Model Tariff that provides rules of the road that *implement* cost-of-service principles across the lifecycle of a data center

[6] As an example of volatility, over a recent six-month period, Microsoft withdrew from leases and abandoned data center projects set to consume 2,000 MW of power. These moves appear to have stemmed from one business decision regarding Microsoft's relationship with OpenAI. *Microsoft Pulls Back from More Data Center Leases in US and Europe, Analysts Say*, Reuters.com (Mar. 26, 2025), https://www.reuters.com/technology/microsoft-pulls-back-more-data-center-leases-us-europe-analysts-say-2025-03-26/.

project. A well-designed Model Tariff will protect consumers while providing significant benefits to all stakeholders. These benefits include:

- *Clear rules of the road to facilitate investment.* Developers and investors are attracted to transparent regulatory processes and pricing, as such clarity substantially reduces uncertainty and risk.

- *Preventing cost shifts.* This has the dual benefit of keeping Pennsylvania a competitive place to live and do business while minimizing unnecessary friction between data centers and the surrounding communities.

- *More certainty for utilities and regulators.* A model tariff reduces the need for every utility and every regulatory proceeding to "re-invent the wheel."

- *Minimized risk of "forum shopping."* Forum shopping reduces the clarity of load forecasts. It also could tempt utilities to shift costs to other consumers to "compete" for data center business.

Pennsylvania has much to offer those willing to invest in our Commonwealth—natural resources, energy infrastructure, affordable cost of doing business, and a skilled workforce. With clear rules of the road and robust consumer protection, a well-designed Model Tariff should encourage prudent investment in Pennsylvania while protecting all stakeholders.

B. Provisions of a Model Large Load Tariff should ensure cost-of-service principles are respected, accounting for both short-term and long-term costs and risks.

As discussed above, a well-designed Model Large Load Tariff offers benefits to both current stakeholders and new data center developers by establishing clear rules of the road, facilitating development in a just and reasonable manner. IECPA believes the Model Tariff should be drafted with sufficient precision to provide direction to all EDCs and their customers. Below are provisions and conditions respectfully presented for the Commission's consideration.

i. Applicability

The Model Tariff should apply to customers who: (1) have a projected planned load above a substantial threshold (e.g., 100 MW); (2) represent new load, not existing customer load; and (3) meet data centers' power quality, reliability, and speed-to-market requirements. Because of data centers' unique energy requirements, with power quality and reliability needs differing from other "large loads" like manufacturers, IECPA supports the model tariff being available to data centers and similar users to support adherence to appropriate cost-of-service principles.

ii. Cost of Service

The Model Tariff should require transparency, and large load contracts should not be permitted to bypass cost-of-service principles. Direct interconnection costs associated with a data center becoming a retail customer of an EDC should be allocated to the data center customer, following the same approach as for other new retail customers. On a related note, IECPA understands that the scale of data center loads may require costly upstream transmission upgrades through the PJM Regional Transmission Expansion Plan, the costs of which are generally socialized to all PJM loads, not just those of data center customers. While this Commission does not have jurisdiction over transmission cost allocation, which falls within FERC's purview, IECPA raises this concern for the Commission's consideration as it develops a model tariff and considers future engagement at FERC. Whether distribution- or transmission-related, cost allocation should adhere to the principles of cost of service.

iii. Study Fees.

As mentioned above, the data center boom is vulnerable to phantom projects—projects that never get built, often because they are proposed in multiple locations and only one is selected.

Consequently, large load study fees should be sufficient to reimburse utilities for upfront time and costs.[7]

iv. Contract Requirements: Performance Assurance, Minimum Demand, Contract Length, and Change in Load

Contracts under the Model Tariff should be required to adhere to specified standards regarding performance assurance, minimum demand, contract length, and early exit or change in load. If a large load contract does not meet all requirements, it should be subject to Commission review and approval. Contract components should include the following:

(a) Adequate Performance Assurance. Assurance should include deposits, guarantees, or other mechanisms to ensure costs are covered if facts on the ground change.

(b) Minimum Billing Demand. IECPA supports inclusion in the Model Tariff of a minimum billing demand requirement to ensure that investments in the system will be utilized and paid for by the data centers that create the need for such investments, even if the data center has lower usage than anticipated.[8]

(c) Contract Length. Default minimum contract lengths (either a fixed amount or one determined by a formula) should be specified. Other provisions could be included that require a

[7] This year, the Indiana Utility Regulatory Commission ("IURC") approved a tariff provision providing that "Full Planning Studies, including steady-state and dynamic studies, [that are] required because of the potential addition of a Large Load Customer shall be paid solely by the Large Load Customer." *Order of the Commission, In the Matter of the Verified Petition of Indiana Michigan Power Company for Approval of Modifications to Its Industrial Power Tariff – Tariff I.P.*, IURC Cause No. 46097 (Feb. 19, 2025), at 41.

[8] By way of reference, in Ohio, Ohio Power's Data Center Tariff settlement agreement (pending approval) proposes that "[c]ustomers have an 85% minimum demand provision to incentivize accurate load estimates." *Electricity Rate Designs For Large Loads: Evolving Practices and Opportunities*, Berkeley Lab (Jan. 2025), https://eta-publications.lbl.gov/sites/default/files/2025-01/electricity_rate_designs_for_large_loads_evolving_practices_and_opportunities_final.pdf, at 6. In Michigan, Consumers Energy proposed that new data center customers be required to pay for a monthly Minimum Billing Demand for the term of their rate contract, to be 80% of the data center's Contract Capacity and applied to their Maximum Demand and On Peak Demand. *In the Matter of the Application of Consumers Energy Company for Ex Parte Approval of Certain Amendments to Rate GPD*, Michigan Public Service Commission, Case No. U-21859, at 2.

reasonable exit ramp before leaving the market. For example, in Michigan, industrial customers supported requiring five-year evergreen provisions under which the term of each customer's full-service contract would be automatically extended at its end by an additional five years unless the customer provides a written notice of termination of the full-service agreement to the utility at least five years before the current contract term end date.[9]

(d) Early Exit/Change in Load. Substantial increases in load requirements should undergo a review process or be reported to the Commission. Similarly, exit fees should be included for early exits or closures that would result in cost shifts to other customers. In this respect, industrial customers can be distinguished from data centers that may leave the system before they have contributed to the embedded cost of the system. Generally speaking, industrial customers have contributed significantly to the embedded cost of the system over several decades.

v. Reporting.

Required reporting should be specific, detailed, regular, and in a format that allows for aggregation, enabling reporting across all EDCs and facilitating rigorous analysis of data and improved load forecasting. This topic is addressed further in Section D below.

C. The Model Large Load Tariff should prioritize interconnection for Large Load customers that bring generation with load.

A well-designed Model Tariff should not discourage prudent investment in the Commonwealth. Instead, as stated above, it should facilitate investment in the grid by providing clarity to all stakeholders. To successfully foster investment, the Commission should provide an expedited process for projects to come online when they bring their own generation.

[9] *Petition to Intervene and Motion for a Contested Case Proceeding of the Association of Businesses Advocating Tariff Equity, In the Matter of the Application of Consumers Energy Company for Ex Parte Approval of Certain Amendments to Rate GPD,* Michigan Public Service Commission, Case No. U-21859 (Feb. 20, 2025), ¶ 25.

As industry stakeholders are aware, due to substantial load growth, the grid is facing resource adequacy deficiencies. Expansion of generation provides significant benefits to the grid, including various reliability benefits. "Bring Your Own Generation" ("BYOG") reduces the strain on resource adequacy and can soften the impact on required infrastructure development. It can also ensure that the associated load can come online more quickly with less infrastructure investment.

Providing prioritization of study and interconnection processes for loads with BYOG is not undue discrimination because there is a just and reasonable basis for prioritizing such loads, as it provides significant system-wide reliability benefits, enhances resource adequacy, and can reduce delays in the queue for infrastructure build-out.[10]

D. The Model Large Load Tariff should require purposeful transparency and rigorous reporting.

When industry and policy leaders look back on the 2020s in ten or twenty years, they will have the benefit of hindsight to understand the growth trends of this decade. Now, however, as the data center boom materializes across the nation, industry stakeholders require good data that allows them to better forecast load, understand the likelihood of "phantom projects," and evaluate the risk profile of new projects.

Large load reporting requirements should accomplish two goals. *First*, reporting requirements should result in the provision of data to all stakeholders, aiding the Commission, utilities, PJM, and the industry in projecting load growth and changes. *Second*, reporting

[10] In the pending FERC proceeding concerning loads co-located with generation resources, PJM has proposed several co-location options, including Option 6 that would offer the project developer to bring its own networked generation with its large load in exchange for a faster interconnection. *See Answer of PJM Interconnection, L.L.C.*, *PJM Interconnection, L.L.C. et al.*, Docket Nos. EL25-49-000, AD24-11-000, and EL25-20-000 (filed Mar. 24, 2025). PJM Option 6 is explained on pages 16-18 in PJM's FERC Answer and summarized in Exhibit A to PJM's Answer.

requirements should ensure that large load pricing and contracts cover all incremental costs, providing accountability to utilities, customers, and regulators.

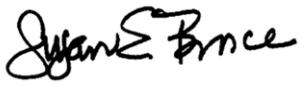
Because the data center boom will evolve and change—quite rapidly, in fact—the Commission should mandate relevant reporting to arm the Commission, regulators, developers, utilities, and other stakeholders with the information needed to respond in a prepared and prudent fashion. Reporting requirements should be imposed on both utilities and large load customers, addressing queue applications, load projections, load consumption, successful versus unsuccessful applications, time-to-market, and information on BYOG.

IV. CONCLUSION

WHEREFORE, the Industrial Energy Consumers of Pennsylvania respectfully requests that the Pennsylvania Public Utility Commission consider and adopt, as appropriate, the foregoing Comments.

Respectfully submitted,

McNEES WALLACE & NURICK LLC



By_____

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Dated: June 6, 2025