BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

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

COMMENTS OF
MCR PERFORMANCE SOLUTIONS

I. INTRODUCTION

On April 24, 2025, the Pennsylvania Public Utility Commission ("Commission" or "PUC") convened an *En Banc* hearing as part of Docket No. M-2025-3054271. Interested parties were invited to file written comments on the prudent design of a large load customer tariff model. MCR Performance Solutions ("MCR") appreciates the opportunity to provide comments on this issue and respectfully submits these comments.

Pennsylvania faces the rapid growth of large load customers, primarily data centers, on the electric system. To provide scale, Jamie Davis, director of rates, energy procurement, and federal/RTO affairs for Duquesne Light Company stated that hyperscale data centers have the potential to scale up to 37% of Duquesne's Network Service Peak Load.[1] PECO has stated that they have four projects in an advanced stage which will result in an almost 40% increase in distribution system load.[2] PPL has noted that the new data center requests in Pennsylvania would more than double PPL's system peak within the next 5 to 6 years.[3] The PUC seeks model tariffs

[1] Testimony of C. James Davis, Docket No. M-2025-3054271, page 1.
[2] Testimony of Richard G. Webster, Jr, Docket No. M-2025-3054271, page 2.
[3] Testimony of Joseph Lookup, Docket No. M-2025-3054271, page 1.

that ensure fair, transparent cost recovery that protect existing customers from undue cost burdens. The development of appropriate tariffs will need to be carefully aligned with Pennsylvania Statutes Title 66 Pa.C.S.A. Public Utilities § 1501 given the size of these data centers. Tariff design for these customers must follow fundamental rate-making principles, such as cost causation, non-discrimination, and efficiency. Any large load tariff should be just and reasonable, aligning charges with the costs that customers covered by them impose. In other words, existing customers ought not to be negatively impacted by the implications to the system of large new loads.

II. TARIFF PRINCIPLES

At the core of rate design lies the principle of cost causation. As recognized by regulatory standards across the United States, costs should be borne by those who cause them to be incurred. This ensures fairness and also sends the correct price signals to consumers. In the context of hyperscale data centers, this means that the utility costs associated with system upgrades triggered by these facilities must be recovered directly from those customers, not shifted onto smaller or existing ratepayers. The Commission's mandate to establish just and reasonable rates, and to protect customers from undue cost burdens, demands that large load tariffs be crafted so that each customer pays for its fair allocation of the costs to serve the electricity it consumes. Otherwise, the benefits of economic development could come at the expense of cost increases for other businesses and residents.

In line with this, MCR supports a fully transparent cost of service approach for large loads. Fixed and common costs (e.g., transmission and distribution capacity, reliability enhancements, etc.) should be recovered through demand-based charges, while energy costs should be aligned with usage patterns. A tariff for this type of load differs from smaller

customers, whose fixed and common costs are generally recovered through energy-only rates. Conversely, for large loads such as data centers, with their high load factors and peak loads, tariffs should emphasize demand charges so that the transmission and distribution capacity investments required to serve them are paid by them.

Cost recovery for large load customers must also account not just for current costs, but future costs that could be incurred. Tariffs should be designed to recover the costs associated with initial required infrastructure investments and additional contract payments should recover expected additional investment needed for anticipated additional load growth. This aligns with PUC policy of matching revenues to costs and guidance to limit or eliminate cost shifting between classes.

III. RATE DESIGN ANALYSIS

Demand charges (levied on peak kW or ratcheted kW) are specifically designed to recover the portion of system costs driven by a customer's peak load and are therefore typically applied to large customers due to the increased infrastructure they require. For example, a data center that contributes 200 MW to system peak should be responsible for the incremental transmission and distribution capacity needed for that load. Consistent demand charges ensure that a large customer covers the cost of facilities needed to serve its maximum demand, rather than shifting those costs onto other customers.

At the same time, energy charges should recover variable fuel and energy procurement costs. For data centers with relatively flat consumption profiles (i.e., high load factors), energy charges may be comparatively small; however, applying time-varying energy rates (e.g., TOU pricing) still signals the cost of energy procurement at various times and can reward any load flexibility that may exist. When data centers can shift load or reduce peaks, time-differentiated

pricing, such as time-of-use or seasonal rates, is appropriate. By raising electricity prices during system peak periods, tariffs reflect the higher cost of energy at those times. Similarly, higher seasonal charges during tight capacity months mirror the actual cost of supply and promote economic efficiency. Such structures incentivize large customers to align their consumption with system conditions and help avoid hidden subsidies. In sum, rate structures should more closely resemble marginal cost where feasible, so that the price of electricity is higher during peak periods because the cost of meeting that demand is higher. The challenge for the customer may be its ability to align response to such price signals with the demand from its internal customers.

Regarding minimum billing commitments, experience elsewhere shows that utilities often include minimum load guarantees or contractual demand clauses in large customer agreements to limit risk to the utility and other ratepayers. For instance, one utility proposed that a data center pay for at least 90% of its contracted demand even if actual usage falls short; this was challenged on cost causation grounds because general service customers only face a 60% minimum requirement.[4] However, to ensure that a customer with such a large impact on the system's load is paying its fair share of costs, these guarantees may have to break prior precedent. However, MCR recommends that any minimum billing provisions be reasonable and transparent. Large load customers are, or are partnered with, sophisticated developers and can be expected to manage project risk. To protect other ratepayers, the tariff should include an appropriate minimum usage obligation (or deposit) commensurate with the facilities reserved. This prevents a scenario where a large customer's actual load is materially lower than that projected and sized to by the utility in terms of transmission and distribution infrastructure investment. In this scenario, absent minimum billing commitments, the large customer would pay only for modest

[4] Chris Nagle and Anant Kumar, "Win-Win Tariff Design for Data Centers and Utilities," *T&D World*, April 9, 2025.

consumption while leaving fixed costs associated with infrastructure investment to serve the anticipated substantial consumption stranded.

As this design is so fully aligned with cost causation, rate filings for these rates should explain fully how costs are allocated and how the new tariff reflects these allocated costs. Transparency in the underlying cost of service study's methodology, and in any resulting new charges, is essential to ensure that the Commission is comfortable with such a firm cost causative route.

IV. CONTRIBUTIONS IN AID OF CONSTRUCTION

It is important to consider how best to calculate an appropriate level of contributions in aid of construction ("CIAC"). MCR agrees that CIAC will be a key tool to ensure large customers shoulder the capital costs their interconnections impose. In general, CIAC should recover the portion of upgrade costs that cannot reasonably be included in rates. For example, if a new data center requires building new substations, line extensions, or other substation upgrades, those costs should be funded upfront by the customer. In practice, this means CIAC based on engineering estimates of the incremental cost of the interconnection project, less the part that would be recovered through system usage charges. These calculations should be transparent and based on cost causation. MCR also urges the Commission to consider appropriate adjustments. For instance, if a project's load is lower than anticipated (or a project withdraws), additional CIAC may be required so that existing customers do not bear previously incurred costs. Mechanisms such as usage guarantees or refunds can help tailor CIAC to actual usage over time, reducing stranded costs.

There are concerns about CIAC that do need to be addressed. It is important to balance CIAC requirements between utility need and the data center customer's will to invest. High

requirements may discourage data center investment in Pennsylvania or shift it to neighboring states with less onerous investment requirements. Estimating required facilities can also be uncertain. If the CIAC collected based on forecast capacity is later not needed, refunds or credits become complex. Conversely, if future upgrades needed to serve loads exceed initial estimates, disputes can arise about imposition of supplemental CIAC.

V. REGULATORY SAFEGUARDS

Regulatory safeguards are essential for large load projects, which often involve long development lead times and significant uncertainty. Requiring deposits, letters of credit, or performance bonds helps ensure that customers fulfill interconnection commitments and provide the utility with funds if a customer cancels or delays a project. MCR recommends that the tariff specify that a large customer provide refundable deposits or equivalent credit in an amount tied to the estimated cost exposure, for example, a percentage of the required CIAC or a percentage of projected revenue. By statute and practice, financial security should be held in a manner that will not result in costs being transferred to other ratepayers. These deposits should be fully refundable, with interest, if the customer achieves the load levels that triggered the infrastructure investment. In short, reasonable security provisions are an accepted part of allocating risk for any major customer project.

In addition to security deposits, the large load tariff should include other tools to mitigate risk for both the utility and other customers. Minimum contract terms (e.g., multi-year service commitments) and early termination fees are common in special contracts for large customers, and therefore they should be included in the tariffs for data center customers as well. For example, an agreement could require a ten-year minimum term or an early exit payment that covers unrecovered costs if the customer leaves the system early. Ramp-up schedules can be

incorporated so that a project increasing load in phases must pay a proportionate share of CIAC or deposits at each stage. If large customers bring on-site generation or storage, standby rates should apply for the grid service they reserve, often at cost based levels. All such provisions serve the same underlying goal: ensuring that a large customer's growth or retreat does not leave costs stranded such that they must be recovered from other customers. These mechanisms complement the tariff's rate design by assigning clear financial responsibility for planning, study, and construction costs. The Commission's inquiry rightly identifies many of these tools, from deposits to minimum contracts to fees.

VI. POTENTIAL BENEFITS

The protection of incumbent utility customer interests is clearly important, but the potential benefits of adding large, well-capitalized users to a shared utility network should not be overlooked. In addition to the large energy users, data center operators—particularly the hyperscalers—are very profitable enterprises with effectively unlimited access to capital in both the public and private markets. At a time when investment is needed in utility systems to improve reliability, resilience and security while keeping energy access affordable, the potential to partner with these large users to finance and develop solutions should be considered.

For example, a hyperscaler could underwrite the development of new generating capacity and associated transmission and distribution infrastructure needed to serve its load. While that investment might be dedicated to serving the new load, those resources could be made available at certain times or circumstances to broadly benefit the utility system. Examples include responding to extreme weather or unusually high peak loads. Clearly, the economic and rate design issues around such an arrangement would be complicated, for example, determining an

economic value for enhanced reliability and determination of avoided costs, while the potential benefits such a creative approach could provide to all customers should not be overlooked.

Another area where hyperscalers could partner with utilities in support of public policy lies in addressing the considerable and pressing needs of lower income energy consumers and environmental justice communities. Threats to safety net programs such as LIHEAP underscore the urgency of this need. Underwriting efforts ranging from energy efficiency to appliance upgrades (and even distributed resources and energy storage) would not only directly address affordability for the most vulnerable utility customers but would further drive benefits across the entire utility system through improved efficiency and mitigation of the many challenges stemming from rising and shifting peak demand. Here again, the devil lies in the details, but the potential benefits and needs are real.

VI. RECOMMENDATIONS

MCR Performance Solutions believes that the Commonwealth of Pennsylvania can develop a just and workable large load tariff by firmly grounding the design in cost causation and cost of service principles. Large customers, including data centers, have legitimate needs for transparent and efficient interconnection processes, but they must also be responsible for the infrastructure costs they impose. By employing appropriate demand-based rates, time-varying energy pricing, CIAC contributions, and financial security measures, the tariff can accommodate growth while protecting existing customers from cross-subsidies.

MCR respectfully recommends that the Commission convene a technical conference to explore and invite comment from interested parties on this issue. The rapid demand growth stemming from data center development brings many challenges but could also provide pathways to address other initiatives as well. MCR appreciates the opportunity to comment.

Respectfully submitted,

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