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5/21/2025

Sent by Certified Mail and Email

Pennsylvania Public Utility Commission
400 North Street
Keystone Bldg.
Harrisburg, PA 17120

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

To the Pennsylvania Public Utility Commission (PUC) Chairman, Vice Chairman, and Commissioners,

Please accept this comment on behalf of Protect PT, our members, and our partner organizations. Protect PT is a nonprofit dedicated to ensuring the safety, security, and quality of life from the effects of unconventional gas development for residents in Westmoreland and Allegheny Counties. We seek to defend the health of Pennsylvania residents, conserve water resources, reduce pollution, and educate and empower our community members. In order for Pennsylvanians to thrive for generations to come, industry needs to operate responsibly, which is why strong regulations to safeguard our water, air, land, and energy are so important.

Protect PT's environmental policy advocate can be reached at (412) 307-7099 and lauren@protectpt.org. Our business address is 3344 Route 130, PO Box 137, Harrison City, PA 15636. This comment addresses the PUC En Banc Hearing on Interconnection and Tariffs for Large Load Customers at Docket No. M-2025-3054271.

Protect PT is joined on this comment by 14 partner organizations: Clean Air Council, Breathe Project, PennFuture, Environmental Health Project, Rail Pollution Protection Pittsburgh (RP3), Center for Oil and Gas Organizing, Move Past Plastic (MPP), Three Rivers Waterkeeper, Putting Down Roots, No False Climate Solutions PA, Better Path Coalition, Mountain Watershed Association, Physicians for Social Responsibility PA (PSR PA), and the south-central PA chapter of Climate Reality Project.

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We urge the Pennsylvania PUC Chairman and Commissioners to exercise the utmost caution, care, and restraint in integrating data centers and other large load customers. Hyperscale data centers are profoundly different from other customers and present numerous, wide-ranging impacts on other ratepayers and Pennsylvania residents as a whole:

Data Center Concerns and Impacts

1. High demand for electricity from U.S. data centers has delayed the planned closures of fossil fuel power plants and led to an increase in natural resource extraction.

   In Pennsylvania, bringing hyperscale data centers online would mean expanded fracking of shale gas, which often results in disturbances, stress, pollution, and negative health impacts for local residents. This has certainly proved true for members of Protect PT. We are based in Westmoreland County, and our members live with fracking well pads close to their residences, schools, churches, and hospitals. Proximity to fracking has been shown to lead to migraine headaches, severe fatigue, difficulty breathing, poor pregnancy and birth outcomes, and increased childhood cancer rates.[1] Our members are also faced with the issue of fracking waste, which ends up in local landfills or faulty injection wells, where it can leach into our soil and water supply. There is currently no good option for safe, long-term disposal of fracking wastewater. Injection wells can leak, and treatment plants often fail.[2] We are concerned that data center development would be a significant roadblock to moving in the right direction for a clean and healthy energy future. To say nothing of the health impacts of the facilities themselves, data centers could at least have indirect negative effects on our health due to the rise in fracking to support them.

2. These large load customers are highly likely to cause increased electric rates.

[1] Clark, Cassandra J. et al. (2022). *Unconventional Oil and Gas Development Exposure and Risk of Childhood Acute Lymphoblastic Leukemia: A Case Control Study in Pennsylvania, 2009-2017.* Environmental Health Perspectives. Volume 130, Issue 8. Retrieved from https://ehp.niehs.nih.gov/doi/10.1289/EHP11092

[2] Nobel, Justin (2025). *Radioactive Shadow Workers.* Sierra Magazine. Retrieved from https://www.sierraclub.org/sierra/2025-1-spring/feature/radioactive-oil-gas-shadow-workers#:~:text=His%20introduction%20to,contaminate%20drinking%20water.

We trust that the PUC wants to protect consumers from undue burdens like rate hikes and energy scarcity as a result of integrating these large load consumers. However, at the En Banc Hearing, PUC Chief Prosecutor Allison Kaster said data centers' effect on rates might be unavoidable. Is that a risk that the PUC is willing to force Pennsylvania residents to take? Ms. Kaster pointed to the projected 180% increase in energy usage by 2040 for Virginia, which is due almost exclusively to data centers. A typical residential ratepayer in Virginia could see their bill increase by $14 to $37 per month in constant dollars by 2040 (independent of inflation).[3] Additionally, Vice Chair Barrow cited an article from Harvard Law School, which stated that ratepayers may end up footing the bill for data centers' transmissions. This is unacceptable to Pennsylvanians. Ordinary people should never have to subsidize the costs of multimillion dollar corporations.

We were also concerned by industry representatives' answers to the PUC commissioners' question on load shedding. They claimed that their data centers cannot shed load and must be online 99.9% of the time. We are worried by this fixed demand on the grid. If these data centers can't, or won't, shed load when demand is too high, will they be given preferential treatment? Will other businesses or residences lose their power instead or before these data centers do? We know that with the right measures, such as high energy efficiency standards, small amounts of load shedding, and bringing more renewables online, we can mitigate the demand increase of integrating large load customers. However, strong regulations, such as mandatory load shedding requests, need to be in place for this to work. Data center corporations will not take the right steps on their own.

3. The strain on our water resources must also be taken into account, especially in the incidence of drought.

   Hyperscale data centers consume massive amounts of water — up to five million gallons per day — to cool their servers.[4] Not all water authorities may be capable of or suitable

[3] *Data centers in Virginia* (2023). Joint Legislative Audit and Review Commission. Retrieved from https://jlarc.virginia.gov/landing-2024-data-centers-in-virginia.asp#:~:text=A%20typical%20residential%20customer%20of,owned%20by%20their%20member%20customers

[4] Osaka, Shannon (2023). *A new front in the water wars: Your internet use.* The Washington Post. Retrieved from https://www.washingtonpost.com/climate-environment/2023/04/25/data-centers-drought-water-use/

for serving these data centers. We want water for Pennsylvania homes, families, and businesses, not Google AI or Chat GPT. Fracking in Pennsylvania has already permanently removed over 65.8 billion gallons of water from our water table in the past 17 years alone.[5] An increase in fracking to support the energy demands of data centers, combined with the data center's daily operations, would siphon ever-increasing, astonishing quantities of water away from our communities and into the hands of energy and tech corporations.

4. Data centers use large swaths of land and make controversial neighbors.

   People living near data centers are sometimes affected by noise and light pollution. Data centers emit constant, low-frequency noise, which some residents living near data centers in Virginia have said affects their well-being.[6] The type of activity that a data center is used for can also affect how much sound it produces. For example, residents living near cryptocurrency mines have reported noise as high as 91 decibels, which is nearly as loud as a chainsaw.[7] Not all data centers produce sound that affects residents, depending on their design and location, but this potential impact is important to take into account.

5. Industry representatives may overstate the economic benefit of their facilities.

   Data centers provide tax revenue but do not create many long-term jobs. There will be a short-term increase in construction jobs to build the facilities, but once a data center is built, it only employs a skeleton crew of technology and maintenance workers. We are concerned that these companies and their data centers will consume a wealth of resources while providing little long-term benefit to the communities they are located in. The PUC should conduct a complete study on the economic benefits and environmental impacts of data centers before any are permitted in Pennsylvania.

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[5] Kelso, Matt (2020). *Fracking Water Use in Pennsylvania Increases Dramatically*. FracTracker Alliance. Retrieved from https://www.fractracker.org/2020/05/fracking-water-use-in-pennsylvania-increases-dramatically/

[6] *Data centers in Virginia* (2023). Joint Legislative Audit and Review Commission.

[7] Good, Quentin, Johanna Neumann, Abe Scarr, and R.J. Cross (2025). *Big data centers, big problems: The surging environmental and consumer costs of AI, crypto and big data.* Retrieved from https://publicinterestnetwork.org/wp-content/uploads/2025/01/Big-data-centers-big-problems-January-2025.pdf

6. Hyperscale data centers are still very new, and there is no guarantee of their longevity.

   As mentioned during the En Banc Hearing, it used to take rooms full of servers to contain the computing power that we now hold in the palm of our hands in the form of a cell phone. In a matter of ten or fifteen years, perhaps the need for hyperscale data centers will be a thing of the past. It brings to mind the estimated 300,000+ abandoned and unplugged wells in PA, left behind by companies that dissolve once the profits dry up. Will looming, empty data center structures eventually join their ranks, resulting in brownfields that Pennsylvania taxpayers will pay to tear down or remediate? We are concerned that this may be just another boom and bust cycle. According to the Joint Legislative Audit and Review Commission, the data center industry "presents additional financial risks to electric utilities [...] because of the sheer size of the industry's energy demand. One risk is that utilities will build more generation and transmission infrastructure than is needed if forecast demand does not materialize, or several large data centers close. This could strand utilities with infrastructure costs that would have to be recouped from their existing customer base."[8] It is also possible that in the rush to get in on the data center game, companies will build more facilities than there is true demand for. The PUC needs to be prepared for the potential rapid obsolescence – or oversaturation – of hyperscale data centers.

<u>Large Load Customers and Fair Ratepayer Protections</u>

The PUC's first priority in this process should be protecting ordinary ratepayers and small businesses. We urge the PUC to conduct thorough research and planning before attempting to integrate large load customers. During the En Banc Hearing, multiple parties voiced the need for further studies on this subject, including FirstEnergy Pennsylvania, PECO Energy Company, and the PUC Office of Consumer Advocate. Allison Kaster, the Chief Prosecutor from the PUC's Bureau of Investigation & Enforcement, emphasized the need for analysis from district utilities on whether they can even accommodate data centers in certain areas. In the words of Tamela Trussell, founder of Move Past Plastic (MPP) and one of the signatories of this letter, "Large data centers pose potential environmental harms to communities and their watersheds that warrant an environmental impact study before any other permitting." We also urge the PUC to display discretion in the amount of large load customers it connects.

[8] *Data centers in Virginia* (2023). Joint Legislative Audit and Review Commission.

At the hearing, industry representatives claimed that utilities should not "discriminate" against large load customers and should instead treat them like any other customer. This is the claim of a cuckoo sitting in the nest of a sparrow. If these large load customers are profoundly unlike any other customer; if they are asking for as much energy as an entire mid-size city; if they present enough substantial risks and concerns to warrant a special hearing—then they *should* be treated differently, because they *are* different. It is unfair to other ratepayers to put hyperscale data centers on the same playing field as residential customers and small businesses. The demand that hyperscale data centers present is unprecedented.

At the En Banc Hearing, some industry representatives even suggested that they should receive preferential treatment or incentives if they cover infrastructure costs or bring in new power generation. These efforts still do not negate all the challenges of interconnection, or the impacts on PA residents. The PUC should take the story of Elon Musk's company xAI as a warning.

xAI recently brought a new hyperscale data center online in Memphis, Tennessee, to support the third version of Grok, an AI chatbot. In only a matter of months, the data center has become one of the county's largest emitters of smog-producing nitrogen oxides, responsible for more pollution than nearby gas-fired power plants or oil refineries.[9] This is due to 35 gas-powered turbines, unequipped with pollution controls, that the company brought in because its appetite for energy has outpaced electric utilities' ability to serve it.[10] Residents with asthma and other preexisting conditions have said their symptoms have been exacerbated by this pollution. When the data center deal first became public, residents worried about how xAI's power use would affect them, since as recently as 2022, high demand during winter storms has forced Tennessee Valley Authority (TVA) to undergo rolling blackouts on very cold days.[11] Memphis Light, Gas and Water officials responded by saying xAI had brought its own gas generators to power the data center before the TVA board voted on the power request, although initially, xAI claimed it was only bringing 15 generators in, not 35.[12]

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[9] Wittenberg, Arial (2025). *'How come I can't breathe?': Musk's data company draws a backlash in Memphis.* Politico. Retrieved from https://www.politico.com/news/2025/05/06/elon-musk-xai-memphis-gas-turbines-air-pollution-permits-00317582

[10] *See id.*

[11] *See id.*

[12] *See id.*

This goes to show that companies bringing in their own generation may seem like a good thing, but if they do it quickly, dishonestly, recklessly, without permits, and without consideration for nearby residents, it can be great cause for concern. The PUC should not provide a fast track to market for large load customers who offer to provide their own generation. These companies should still undergo a careful and fair regulatory process before going online, not be encouraged to cut corners.

We echo the advice of Darryl Lawrence, Acting Consumer Advocate for the PUC, and Allison Kaster, Chief Prosecutor for the PUC. We ask for strong tariffs and separate rate classes for these large load customers, so that their costs are directly allocated to themselves and kept separate from other ratepayers. We ask for minimum contractual terms, exit fees, fees for notifications of changes in the required load, and cash collateral. We also strongly recommend further research, economic studies and environmental impact studies, and regional studies that assess which areas in Pennsylvania are capable or incapable of supporting the demands of large data centers.

We also support brief and reasonable yet mandatory load shedding requirements during peak grid usage periods. This could be essential for lessening the burden on the grid and preventing rampant fossil fuel expansion. A 2025 study from the Nicholas Institute of Energy, Environment and Stability at Duke University found that the United States could add 76 gigawatts of new load — about a tenth of the peak electricity demand across the whole country — without having to upgrade the electrical system or add new generation.[13] This is possible, but only if those new loads are curtailed for up to 0.025% of their maximum time online.[14] This would also shorten the time to power for data centers. If they want to integrate sooner and lighten their burden on the grid, they need to agree to load shed.

We want to clarify that we do not support payment incentives for data center companies that agree to shed load. Programs like this often backfire and actually increase the stress on the grid due to companies' efforts to circumvent them. Companies will simply raise their baseline usage to above what they need, and then drop their usage down to their actual minimum requirement in order to pocket the monetary incentive for "shedding load" and appear as if

[13] Norris, Tyler, Timothy Profeta, Dalia Patino-Echeverri and Adam Cowie-Haskell (2025). *Rethinking Load Growth: Assessing the Potential for Integration of Large Flexible Loads in US Power Systems*. Retrieved from https://hdl.handle.net/10161/32077.
[14] *See id.*

they're doing their part to ease demand. In actuality, the data center just ends up using more energy than it would have if no such load shedding incentive program was in place. We want to reiterate that even if the PUC accommodates these large load customers, it should not cater to them. If load shedding requirements are in place, it should simply be a mandatory request, not an incentive program. The incentive is allowing these data centers to join the grid – if they want to join, they need to be willing to be flexible and work with the system in times of great stress.

Conclusion

In conclusion, the impacts of data centers and other large load customers are significant, wide-ranging, and to some extent, unavoidable. If the PA PUC is going to connect these customers, it needs to create new regulatory frameworks to do so as safely, fairly, and sustainably as possible. We ask that the PUC take time to conduct further analysis and ensure that its stance is sufficiently protective. We know that rushing this policy-making process can only hurt, not help. We appreciate the opportunity to submit this comment and ask that you take our feedback into account. Protect ratepayers from undue costs, protect utilities from substantial burdens, protect yourselves from stranded investment, protect us.

Sincerely,

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