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Public Utility Division -Large Load Research

To: Commissioners

From: Public Utility Division

Date: June 3, 2025

Re: Regulatory Considerations for Large Loads including Data Centers and AI Infrastructure

Executive Summary

Oklahoma is experiencing rising electricity demand from large-scale data centers and AI infrastructure. These loads, typically exceeding 100 MW per site, are unique in their scale, consistency, and demand for high reliability. While touted as offering economic development opportunities, these opportunities appear to be limited because they do not require many employees, and these facilities will not spur other facilities based on their existence unlike other large electricity loads such as a car manufacturing facility. They also raise regulatory concerns related to grid reliability, ratepayer fairness, and prudent infrastructure investment.

This research outlines key regulatory risks and offers actionable recommendations for the Oklahoma Corporation Commission ("OCC") when considering large load. It also summarizes how other states are proactively managing similar challenges. The OCC has a unique opportunity to implement policies that ensure cost transparency, prevent cross-subsidization, and align electric utility investments with long-term state goals.

I. Purpose

This research provides the OCC with a regulatory framework to assess and manage the implications of data center and artificial intelligence ("AI") driven load growth. It identifies current risks to grid reliability and rate structures, reviews policy actions in other states, and recommends regulatory strategies to protect Oklahoma ratepayers and ensure responsible utility planning. While this research focuses on data center and AI driven load growth, Oklahoma utilities are also seeing large loads from manufacturing, refineries, federal entities, and crypto currency mining that may require the attention of the OCC as well.

II. Key Regulatory Issues

1. Load Forecasting and Infrastructure Planning

- Utilities may overestimate demand due to speculative or overlapping data center proposals.
- Unverified projections may be used to justify large capital investments in generation and transmission. Historically only around thirty percent (30%) of generation projects in the Southwest Power Pool generation interconnection queue are built and come online.

2. Cost Allocation and Ratepayer Fairness

- Utilities may socialize infrastructure costs across all customer classes.
- Residential and small commercial customers may bear increased rates without benefiting from these developments.
 - Large loads may curtail usage and avoid demand charges that will be shouldered by other rate classes.

3. Special Contracts and Tariffs

- Discounted or custom rates for data centers may lack transparency and may not cover their marginal costs.
- Inconsistent contract terms complicate planning and can shift risk to other customers.
- Interruptible rates are not favored because operations require extremely high reliability and involve long lead times to shift or curtail load. Therefore, data centers are not viable demand-side management tools which may aggravate grid constraints in high congestion times.
- Some states have suggested large loads self-supply power to island them from the grid and to address grid congestion. Oklahoma has attempted to address this issue by creating a behind the meter statute. This statute eliminates the obligation to serve and alleviates the associated reserve requirement at Southwest Power Pool ("SPP"). However, Oklahoma's statute does not require the large load to supply its own power. It does allow the large load customer to market to other businesses the rate that it has from the utility. This would appear to aggravate congestion, but not to help to mitigate congestion and further complicates cost shifting issues.
 - o A barrier to this self-supply option is that the data center is not in the power production business. Hence the data center may look to the local utility to oversee the construction and operation of the energy producing facility for a contracted period with the local utility purchasing the unit(s) at an agreed upon price at the end of the contract (e.g. 20 years).

4. Risk of Stranded Assets

- Infrastructure built for short-term or mobile data center loads may become underutilized.
- Large load customers may exit before full cost recovery, leaving ratepayers with stranded costs.

5. Reliability

- Maintaining a supply and demand balance on the grid is of upmost importance as utilities in Oklahoma have an obligation to serve. This obligation also comes with FERC mandated planning reserve margins from SPP.
- Data centers/large loads could switch offline and create a load shedding event in the SPP regional transmission system ("RTO").
 - o Increased RTO transmission expenses could also be passed on to other customers from increased pricing during load shedding events.

III. Recommended Options for the OCC

- 1. Require third-party validation of large load forecasts in high-load applications.
- 2. Require utility to provide the stage of development e.g. inquiry or under contract.
- 3. Require the utility to identify that contribution in aid of contraction ("CIAC") has been established or paid.
- 4. Mandate that data center infrastructure costs be ring-fenced or directly assigned to beneficiaries.
- 5. Mandate that all infrastructure costs be verified by a third party.
- 6. Mandate minimum contract time frames and exit fees if contract time is not met to mitigate stranded investment and ratepayers' subsidization.
- 7. Require standardized tariffs for high-load customers to replace the need to use special contracts.
- 8. If special contracts are used, ensure they are in alignment with long-term planning and do not shift risk allocation.
- 9. Inquire about tax incentives and grid impact.

IV. Actions Taken by Other States

State	Key Action	Implication for Oklahoma
Arizona	Allows Small Modular	Alternative generation
	Reactors ("SMR's") without	flexibility
	full environmental review	
California	Requires full cost recovery	Cost containment
	from data centers	
Kentucky	Limits special contracts and	Ratepayer protection
	mandates fixed cost recovery	
Virginia	Legislation to evaluate data	Proactive subsidy
	center subsidies	oversight
Texas	Transmission charges shared	Equity issue in recovery
	even with behind-the-meter	
	generation	
Georgia	Allows minimum usage	Supports utility cost
	contracts and long terms	planning
Ohio	Implements structured data	Transparency and
	center tariff	consistency in pricing
Oregon	Requires 10-year minimum	Discourages speculative
	usage contracts	load

V. Appendix - Source References for State Actions

Arizona

- Legislation on Small Modular Reactors (SMR's): A proposed bill aimed to exempt certain SMR projects from environmental reviews. However, Governor Katie Hobbs vetoed this legislation in April 2025.
 - Source: Ariz. governor vetoes "fast track" bill for nuclear

California

- PG&E's Electric Rule 30: Pacific Gas and Electric Company introduced Rule 30 to streamline the interconnection process for large customers, such as data centers, ensuring cost recovery mechanisms are in place.
 - o Source: PG&E Accelerating Connection of New Data Centers

Kentucky

- Louisville Gas and Electric ("LG&E") and Kentucky Utilities ("KU's") Certificate of Public Convenience and Necessity ("CPCN") Application: In response to increasing data center loads, KU and LG&E submitted a CPCN application for new natural gas generation capacity.
 - o Source: ELECTRONIC APPLICATION OF KENTUCKY UTILITIES COMPANY

Virginia

- Dominion Energy's Chesterfield Energy Reliability Center: Dominion filed for approval to construct a 944 MW natural gas-fired power plant to meet growing energy demands, including those from data centers.
 - o Source: <u>Dominion files for SCC approval of Chesterfield gas-fired plant</u>

Texas

- Senate Bill 6 ("SB6"): This bill proposes that customers with behind-the-meter generation pay a minimum transmission rate and allows the Public Utility Commission to reevaluate transmission cost allocations.
 - o Source: 89(R) SB 6 Senate Committee Report version Bill Text

Georgia

- Public Service Commission ("PSC's") New Billing Rules for Data Centers: The Georgia PSC approved rules allowing utilities to impose minimum billing requirements and longer contract terms for large-load customers, such as data centers.
 - o Source: PSC Approves Rule to Allow New Power Usage Terms for Data Centers

Ohio

- American Electric Power ("AEP") Ohio's Data Center Tariff Proposal: AEP proposed a tariff requiring large data centers to commit to paying for a significant portion of their projected energy usage to ensure cost recovery for infrastructure investments.
 - o Source: Data Center Costs 24-0508-EL-ATA Ohio Consumers' Counsel

Oregon

- Legislation on Data Center Energy Costs: The Oregon House passed a bill mandating that large energy users, including data centers, sign contracts of at least 10 years to cover infrastructure costs and protect other ratepayers.
 - o Source: Oregon House Passes Bill to Shift Energy Costs onto Data Centers

VI. Appendix - Additional Sources

- <u>Utilities may subsidize data center growth by shifting costs to other ratepayers: Harvard Law paper | Utility Dive</u>
- A fraction of proposed data centers will get built. Utilities are wising up. | Utility Dive
- <a href="https://www.utilitydive.com/news/sustainable-ai-requires-close-collaboration-between-data-centers-grid-st/747014/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202025-05-02%20Utility%20Dive%20Newsletter%20%5Bissue:72830%5D&utm_term=Utility%20Dive
- <a href="https://www.utilitydive.com/news/exelon-data-center-pipeline-pjm-maryland-earnings/746971/?utm-source=Sailthru&utm-medium=email&utm-campaign=Issue:%202025-05-02%20Utility%20Dive%20Newsletter%20%5Bissue:72830%5D&utm-term=Utility%20Dive
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- https://www.utilitydive.com/news/a-fraction-of-proposed-data-centers-will-get-built-utilities-are-wising-up/748214/
- https://www.datacenterdynamics.com/en/news/virginia-narrowly-avoided-power-cuts-when-60-data-centers-dropped-off-the-grid-at-once/