

Revisiting Root Causes and Their Implications in PJM's Powering Reliability Through Market Design

Pennsylvania Office of Consumer Advocate (PA OCA)

Frank A. Felder, Independent Electricity Consultants

Mel El Atieh, Deputy Consumer Advocate

Oct. 1-2, 2026

Introduction and Disclaimer

- Thank you, PJM for hosting these workshops and publishing its Powering Reliability Through Market Design (PRTMD)
 - “May 6th Paper”
- PA OCA is still considering different proposals, so these remarks and our August 31, 2026, position paper, are preliminary and subject to change.
- PJM requested presentations on the root causes of resource adequacy issues in PJM:

“The stakeholder community has consistently generated analysis and proposals that have advanced our collective understanding, and we expect this process to be no different. We welcome challenge, refinement and alternatives that this paper has not considered.”

(David Mills, May 6th Paper, p. 3)

Executive Summary

Problem: Growing resource adequacy shortage within PJM

Root cause of the problem **is**:

Accommodating the requests of data centers to rapidly interconnect massive amounts of load and managing the timing of electric infrastructure readiness.

Root cause of the problem **is not**:

Wholesale market pricing, lack of long-term contracting, or policymakers unwilling to accept high prices.

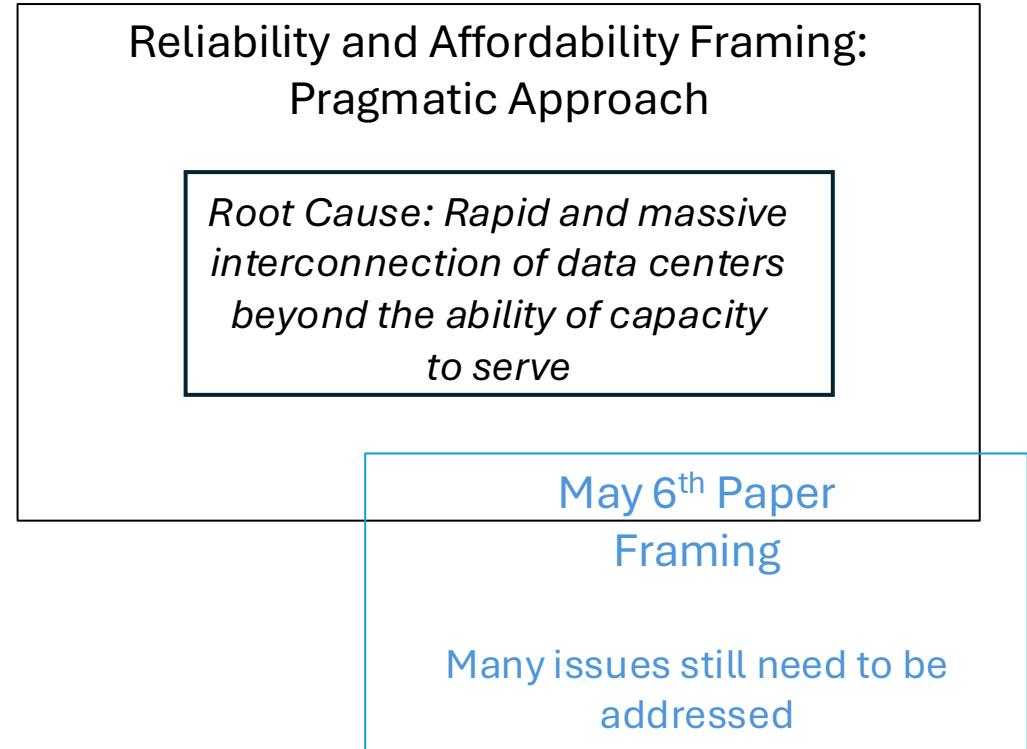
- Managing electricity infrastructure readiness to meet new electricity demand is not a new concept, and it must be recognized for what it plainly is.
- While we are facing a new challenge – an amount and speed of new demand from data centers that outpaces the speed at which electricity infrastructure can be constructed and integrated – managing integration is not a new concept.
- Energy utility industries – electric and gas – at interstate and intrastate levels – traditionally have managed this risk through administrative means, including interconnection queues and/or mandatory interruptible rates until necessary infrastructure is available at full capacity to protect critical load.
- Like residential customers in natural gas, who receive protection from curtailments over dual fuel customers, residential customers in electricity deserve protection over large loads with backup supply during this transition given that residential customers are neither the causers of the problem nor in the best position to bear/manage the risk of decreased reliability.

Executive Summary (cont'd)

- There is a Public Policy Consensus:
 - Ordinary consumers and their representatives **do not want consumers to pay more for less reliability** when there are ways to accommodate reliably data center loads and have them pay for new capacity.
- Affordability and reliability should be the focus of PJM and stakeholder efforts.
- For PJM to work for ordinary ratepayers, data center interconnections need to be managed, new capacity resources installed, and transmission planning and cost allocation reformed.
- Market reforms may help and should be considered if they address the root cause.
- Higher wholesale market prices that transfer a large amount of wealth from ordinary ratepayers to suppliers without solving the shortage of supply given demand growth are not the solution.

Recommendation 1: Re-Framing the Problem

- Replacing the May 6th Paper's Framing with the “Reliability and Affordability Path/Consumer Benefits Path”
- Within the May 6th Paper's Framing, many issues still need to be addressed



The May 6th Paper's Framing Should be Changed

- The problem is not higher prices; the problem is that higher prices will not solve the problem.
 - The May 6 paper does not address the rapid and massive interconnection of data centers without new capacity and the likelihood that this will continue.
 - The core of the May 6 paper is that higher energy, capacity, and ancillary service prices at politically untenable levels are needed.
 - The May 6 paper does not demonstrate that higher prices and a longer-term capacity product solves the reliability problem and brings on new supplies that will restore the PJM wholesale markets to a more politically acceptable equilibrium.
- The PJM framing does not address how non-market forces are hindering new supply (permitting, interconnection queues, transformer shortages, etc.) should be considered.
- Any load, especially data centers, can and are entering into bilateral contracts that are not limited by price caps, and furthering such arrangements, including via mandatory connect and manage, is critical.
- Some of the Paths that the May 6th Paper considers exacerbates the credibility trap by increasing wholesale prices.
- Instead, PJM and stakeholders have before them other Paths that address the root cause and protects ordinary ratepayers.

Recommendation 2: Path A Should Not be Pursued

- In Path A, Stabilized Markets, “the capacity market continues, but the vast majority of load is required to be covered through long-term forward commitments either through mandatory Load Serving Entity (LSE) hedging requirements or through a PJM-administered, long-term procurement, such as a tiered, multiyear capacity market.”
- Path A intrudes on the roles of states, does not solve the supply shortage problem, conflicts with the Public Policy Consensus, exacerbates market power, locks in high capacity prices for multiple years, and potentially creates large, stranded costs.
- OCA Position Paper, pp. 3-6.

Recommendation 3: Revise Path B

- Reliability is a common good. This means that without reliability requirements, the PJM wholesale market would under-procure resources to meet resource adequacy. Path B proposes allowing for differential reliability, perhaps by geography (e.g., different states or zones procuring different levels of reliability) or by customer class (e.g., residential loads curtailed after new large loads). Such implementation entails practical challenges and additional costs to ensure that loads actually curtail when required.
- The PA OCA supports different levels of service, such as the IRAS proposal and various co-location options, but it does not support reducing PJM-wide reliability and resource adequacy standards.
- Instead of suggesting different levels of reliability and resource adequacy, Path B should consider different levels of service and build off ongoing efforts along these lines, including considering whether IRAS should be permanent.
- OCA Position Paper, pp. 6-7.

Recommendation 4: Path C Should Not be Pursued

- Path C is “an explicit and progressive shift of revenue recovery from the capacity market to the E&AS [energy and ancillary services] markets through an increase in the E&AS market price limits (i.e., scarcity prices).”
 - Unlike Path A, Path C does not have a hedging mechanism and does not even satisfy the PRTMD Whitepaper’s view that longer-term financial commitments are needed.
 - Like Path A, Path C relies on an administratively constructed demand curve (the operating reserve demand curve [ORDC] instead of the Variable Resource Requirement [VRR]) and is therefore also susceptible to “stroke of the pen” regulatory changes.
- Shifting revenues is not based on power system and market fundamentals; instead, it is an explicit attempt to engineer outcomes, not achieve reliable and efficient markets.
 - As part of Path C, the May 6th Paper supports adopting PJM Staff’s Reserve Certainty Senior Task Force (RCSTF) proposal with urgency.
 - It does not, however, consider the litany of concerns stakeholders have expressed with PJM Staff’s proposal in the (RCSTF) process including being counter to the Public Policy Consensus, increasing energy prices without reducing capacity prices, partial testing, the lack of cost analysis, being susceptible to market power, increasing scarcity pricing without justification, reducing market efficiency, and procuring reserves beyond what is required by NERC.
 - The RCSTF effort should not be part of the PRTMD effort.
- OCA Position Paper, pp. 7-8.

Recommendation 5: Proposed Reliability and Affordability Path/Consumer Benefit Path

- The PA OCA proposes a Reliability and Affordability Path/Consumer Benefits Path.
- This path is a pragmatic approach to integrating large loads into PJM while mitigating their impact on increasing wholesale market and transmission costs.
- This path is comprehensive because it addresses reliability and all relevant costs and related allocation of costs, not just capacity and other wholesale market costs.
- It also underscores the governance and stakeholder reforms needed to implement the Public Policy Consensus.
- OCA Position Paper, pp. 8-10.

Recommendation 5: Proposed Reliability and Affordability Path/Consumer Benefit Path, cont.

- Implementing PJM and stakeholder governance reforms that ensure that PJM is abiding by the public interest and that its decision-making and stakeholder processes are independent, transparent, and efficient.
 - Such reforms are necessary so initiatives, such as the PRTMD, align with and are supported by the Public Policy Consensus.
- Expanding comprehensive and vigorous market power monitoring and mitigation.
 - During periods of capacity shortages, as presently exists in PJM, the ability to exercise market power in all markets increases dramatically because even a slight reduction in supply can boost energy, capacity, and ancillary service prices substantially.
 - The PJM Independent Market Monitor has continually raised market power concerns over the years, particularly in the capacity market.
 - All PRTMD elements that PJM advances should be subject to a complete market power analysis, including systems and processes, to monitor and mitigate each element.

Recommendation 5: Proposed Reliability and Affordability Path/Consumer Benefit Path, cont.

- Establishing an Independent Transmission Monitor (ITM) to review and assess all regional and supplemental transmission proposals for their impact on reliability, net benefits, wholesale market prices, and retail customer electricity costs.
 - The Public Policy Consensus, rate pledge and consumer cost protections include the transmission costs of both regional and supplemental projects; capacity market reforms and performance are inherently tied to transmission upgrades and cost allocation.
- Determine the costs of new regional and supplemental transmission projects due to large loads and the ability to allocate those costs to large loads as appropriate.

Recommendation 5: Proposed Reliability and Affordability Path/Consumer Benefit Path, cont.

- Supporting capacity market reforms that make the capacity market more predictable, transparent, and less costly to hedge.
 - Reforms to consider include making Effective Load Carrying Capability (ELCC) values more stable and predictable, administering the RPM auctions on a timely and consistent timeline, and improving the administration of the interconnection queue.
- Considering a permanent version of IRAS with a BYONC locational requirement.
 - Data center forecasts anticipate new large load additions with the risk that PJM will be short capacity for many future years.
 - A permanent version of IRAS with a BYONC locational requirement enables the region to address this possibility and ensures that the capacity new large loads bring is deliverable.

Recommendation 5: Proposed Reliability and Affordability Path/Consumer Benefit Path, cont.

- Excepting large loads that are subject to Interim Resource Adequacy Service (IRAS) from shortage pricing in the day-ahead and real-time markets.
 - Under the PJM IRAS proposal, IRAS load is included in the day-ahead and real-time markets as firm load.
 - It therefore can trigger scarcity pricing, which raises prices for energy and ancillary services.
 - This inclusion as firm load is inconsistent with IRAS load, which is essentially interruptible load.
- Incorporating explicit demand bids by large loads that BYONC into the Base Residual Auction (BRA) and any future RBP.
 - The BRA and RBP use a top-down, administrative forecast to set the amount of demand these auctions procure.
 - Given the substantial & unpredictable large-load forecasts, PJM risks substantially under- or oversupplying capacity.
 - Large large loads participating in the BRA or future RBP to submit price and quantity bids instead of using PJM's large load forecast.

Conclusion

- Thank you again to PJM for initiating this process.
- The focus should be on reliability and affordability for consumers.
- Properly framing the problem opens up additional Paths that address the root cause of resource inadequacy in PJM.
- The Reliability and Affordability Path/Consumer Benefit Path should be considered