Shell Energy North America (US), L.P.
1000 Main Street, Level 12
Houston, TX 77002
Tel +1 713-230-3340

August 31, 2026

VIA Electronic Delivery Only

Jennifer Tribulski
Matthew Connolly
PJM Interconnection, L.L.C.
2750 Monroe Boulevard
Audubon, Pennsylvania 19403

Re: PJM Powering Reliability Through Market Design

Dear PJM, stakeholders, and state representatives:

Shell Energy North America (US), L.P. ("Shell Energy")[1] appreciates the opportunity to provide input on the scope, priorities and stakeholder process for consideration of wholesale market design reforms. PJM's *Powering Reliability Through Market Design* paper identifies rising demand, constrained supply, the "credibility trap", and the need to stimulate investment to support reliability.[2]

The paper presents an important opportunity to evaluate how the capacity, energy, and ancillary service markets work together to support resource adequacy, operational reliability, and efficient investment. Because resource investment decisions depend on the full revenue stack, reforms should be assessed holistically and evaluated based on their effects on reliability, price formation, transparency, liquidity, hedge-ability, investment incentives, consumer costs, and regulatory certainty.[3]

As discussed below, durable, transparent market rules and liquid forward markets support efficient price discovery, risk management, and investment.[4] Frequent rule changes and administrative interventions can undermine those objectives, creating uncertainty that discourages

---

[1] Shell Energy is one of the largest traders of electricity, natural gas, and environmental products in North America and actively participates in wholesale electric markets across North America, including markets administered by PJM. Shell Energy has affiliates that invest in, develop, own, and operate storage, natural gas, and clean energy resources, supply retail power to customers, and are commercial and industrial end users.

[2] PJM Interconnection, L.L.C., *Powering Reliability Through Market Design: Addressing Rising Demand and Constrained Supply, and Stimulating Investment To Support Durable Reliability*, at 3–7, 25–27 (May 6, 2026) ("PJM Powering Reliability Paper").

[3] *Meeting the Challenge of Resource Adequacy in Regional Transmission Organization and Independent System Operator Regions*, Docket No. AD25-7-000, Pre-Technical Conference Comments of Shell Energy North America (US), L.P., at 3–5 (May 21, 2025) ("Shell AD25-7 Pre-Conference Comments").

[4] *Id.*

investment.[5] PJM's review should therefore focus on market-based reforms that create transparent, durable market signals that attract investment and strengthen reliability. The stakeholder process should be guided by clearly defined problems and objective evaluation criteria rather than preconceived outcomes, with reforms evaluated through a transparent and holistic process.

1. Overall Direction of the Review

The process should evaluate the capacity, energy, and ancillary service markets together and consider how the full revenue stack provides signals for resource entry, life-cycle viability, and exit. PJM recognizes that E&AS reform is relevant under each of the paths identified in its paper and that the appropriate allocation of revenues between E&AS and capacity requires further evaluation.[6]

This review should also examine whether E&AS markets appropriately value scarcity and the operational capabilities needed for reliability, while preserving an appropriate residual role for the capacity market. Capacity, energy, and ancillary service markets work together to provide operational signals and signals for resource entry, life-cycle viability, and exit.[7] Focusing on capacity revenues alone may not encourage the range of resources and operating capabilities needed for reliability. Scarcity pricing also serves to supplement missing money that can incent investments in generation and load curtailment while mitigating the need for out-of-market commitments and related uplift.[8]

Administrative complexity, rule intervention, and regulatory uncertainty also warrant consideration because of their effects on market signals, liquidity, hedging, and investment.[9] Market rules should provide sufficient transparency and clarity for participants to evaluate risks and make commercial decisions. The available options should be evaluated without assuming that every element of a particular path, market construct, or revenue allocation must be adopted.

2. State Policies, Contracting, and Risk Allocation

States retain authority over retail rates and cost allocation, energy policy, and other decisions affecting the resources used to serve their customers. Nothing in this review should displace that authority. The interaction between state policy decisions and wholesale price formation, resource entry, life-cycle viability, and exit incentives, retail choice, and customer risk should nevertheless be considered.

---

[5] *Meeting the Challenge of Resource Adequacy in Regional Transmission Organization and Independent System Operator Regions*, Docket No. AD25-7-000, Post-Technical Conference Comments of Shell Energy North America (US), L.P., at 2–3 (June 27, 2025) ("Shell AD25-7 Post-Conference Comments").

[6] PJM Powering Reliability Paper at 7, 39–47.

[7] *Modernizing Wholesale Electricity Market Design*, Docket No. AD21-10-000, Report of PJM Interconnection, L.L.C., app. A at 20-21 (Oct. 18, 2022).

[8] Shell AD25-7 Pre-Conference Comments at 8–9.

[9] Letter from Shell Energy North America (US), L.P. to the PJM Board of Managers, *Re: Critical Issue Fast Path ("CIFP") Capacity Market Reforms and Looking Beyond*, at 2–4 (Sept. 18, 2023) ("Shell 2023 CIFP Letter").

Voluntary bilateral contracts and other hedging arrangements can support the financing and development of merchant resources. Shell Energy has provided long-term hedges to PJM generators for this purpose. These arrangements depend on price discovery, forward-market liquidity, and confidence in the durability of market rules.[10]

PJM, stakeholders, and states should examine why forward transactions have become more difficult and whether market design changes could improve liquidity and hedge-ability. PJM's capacity market lacks liquidity due to constant litigation, delays, and tweaking and lacks sufficient depth and length to support the investments the system will need.[11] The proposal for a Reliability Backstop Procurement offering commitments of up to 15 delivery years may itself indicate that the existing market does not provide sufficient regulatory certainty to incent needed investment.[12] Investors rely on all components of the revenue stack, and confidence in the durability of market rules is critical to investment. Regulatory certainty attracts buyers and sellers, creates liquidity in forward markets, and allows for efficient price discovery. It also enables market participants to provide hedges that facilitate financing and help manage risk for consumers.[13]

States may determine that longer-term procurement or contracting approaches are appropriate for their customers or policy objectives. In evaluating those approaches, policymakers should consider the allocation of forecast, technology, performance, and stranded-cost risk. The focus at the wholesale level should be on establishing market conditions that support voluntary transactions rather than presuming that mandatory contracting or RTO-level hedging requirements are necessary.

3. Market Design Issues for Evaluation

E&AS markets address energy adequacy and operational reliability closer to real time, while the capacity market provides residual revenues to support resource adequacy. Scarcity pricing, dynamic reserve procurement, value beyond minimum reserves, and transparent products should value needed capabilities, including ramping, response time, start time, deployment duration, and reserve capability. These components should be reviewed together to assess their combined effects on reliability, price formation, and resource incentives.[14]

Operator actions, load reductions, and out-of-market pricing rules raise related price distortion issues. Demand response, price-responsive demand, curtailment bids, and reserve offers allow load

---

[10] *Id.*

[11] *PJM Capacity Market Forum*, Docket No. AD23-7-000, Comments of Shell Energy North America (US), L.P., at 8–10 (Aug. 14, 2023) ("Shell AD23-7 Comments").

[12] PJM Interconnection, L.L.C., *Reliability Backstop Procurement To Address Resource Adequacy Concerns Stemming From Large Loads*, Docket No. ER26-3380-000, proposed Tariff, Attachment DD § 18.4(a) (July 31, 2026); PJM Powering Reliability Paper at 5 ("During the shale boom of the early 2010s, institutional capital was willing to finance generation projects on a largely merchant basis, accepting the uncertainty of future energy and capacity market revenues. That era is over.").

[13] Shell AD23-7 Comments at 12.

[14] Shell AD25-7 Pre-Conference Comments at 7–9.

to respond economically, while reliability-directed curtailment may occur without regard to price. Similarly, treating resources procured through the Reliability Backstop Procurement as price takers could suppress capacity-market clearing prices and distort resource entry, life-cycle viability, and exit signals. Pricing, settlement, and deployment rules should provide transparency, preserve appropriate scarcity signals, reduce uplift, and reflect the system conditions that require operator action, while recognizing that capacity responsibility and retail cost allocation raise separate issues.[15]

Potential capacity-market changes include prompt auctions, seasonal or sub-annual designs, auction timing, Net Cost of New Entry ("CONE") methodology, market power mitigation, Capacity Performance incentives, and accreditation. A prompt auction could use more current information about load, resources, retirements, fuel supply, and interconnection status, but any shorter procurement period should be evaluated for whether it improves liquidity and hedge-ability or shifts additional risk to consumers.[16] Seasonal or sub-annual designs may add administrative complexity and accreditation volatility without necessarily improving outcomes as well.[17] Capacity accreditation via marginal Effective Load Carrying Contribution should provide transparent and predictable resource entry, life-cycle viability, and exit signals without using capacity-market assumptions to value capabilities that E&AS markets could address more directly.[18]

In evaluating these changes, the process should account for the substantial increase in CONE over the past several years, because that change materially affects market outcomes, costs, and the level of market revenues needed to support new entry.[19] Any revised market construct should be assessed against whether it can produce durable resource-adequacy signals if current cost conditions persist, rather than assuming a return to prior conditions.

Considering reforms to the capacity and E&AS markets together will help PJM, the states, and stakeholders identify how changes in one market affect the incentives and outcomes produced by the others. This coordinated evaluation can help stabilize PJM's wholesale markets and support resource adequacy in the region by improving operational price formation while preserving transparent and predictable resource entry, life-cycle viability, and exit signals.[20] A well designed

---

[15] PJM Interconnection, L.L.C., *Proposal to Establish Interim Resource Adequacy Service and a Large Load Registry to Address System Reliability*, Docket No. ER26-3515-000, at 1–3 (Aug. 13, 2026).

[16] Shell AD23-7 Comments at 14–16.

[17] Shell AD25-7 Post-Conference Comments at 7–9.

[18] *Id.* at 7–9.

[19] PJM Interconnection, L.L.C., *Periodic Review of Default Gross CONE and Gross ACR Values*, Members Committee, at 5–6 (Aug. 19, 2026); The Brattle Group, *Fifth Review of the Variable Resource Requirement Curve: Preliminary Gross CONE and E&AS Draft Results Update*, Market Implementation Committee, at 6–7 (Dec. 8, 2021), ("showing that Brattle's December 2021 preliminary Rest-of-RTO 2026/27 Gross CONE estimate was $289/MW-day for a gas CT and $400/MW-day for a 1x1 gas CC, compared with PJM's 2026 proposed 2030/31 Gross CONE values of $640/MW-day for a CT and $814/MW-day for a CC").

[20] PJM Powering Reliability Paper at 39–49.

market will provide the most efficient, reliable least cost solution that benefits consumers long-term.

4. Scope, Process, and Supporting Analysis

The review should consider interactions among the capacity, energy, and ancillary service markets, and overall system reliability. Participants should prioritize issues affecting price formation, operational reliability, resource entry, life-cycle viability, and exit, liquidity, hedge-ability, and regulatory certainty.

Issues being addressed in other PJM or FERC proceedings, including co-location, large-load interconnection, transmission, and cost allocation, should be considered only to the extent necessary to understand their wholesale market design implications. This review should avoid duplicating those proceedings.

The stakeholder process should begin with clear problem definitions and common criteria for evaluating alternatives. PJM, the states, and stakeholders should have meaningful opportunities to present and compare proposals, with sufficient transparency concerning the assumptions, cost benefit analysis, and information supporting each alternative.

PJM should also retain an independent consultant to evaluate barriers to merchant investment, forward-market liquidity, hedge-ability, and regulatory uncertainty. Shell Energy recommended such an assessment in its September 2023 letter to the PJM Board.[21]

Related reforms should be evaluated together where necessary to understand their interactions. The process does not have to determine in advance that all reforms must be submitted in a single filing but should consider whether advancing individual measures before completing the broader review could change the analytical baseline or make achieving consensus of holistic reforms more difficult.

Conclusion

The stakeholder process should consider how the capacity, energy, and ancillary service markets can work together to provide operational signals and resource entry, life-cycle viability, and exit signals. It should evaluate price formation, scarcity pricing, demand response, capacity-market design, and forward-market liquidity as interconnected elements of a durable market framework.

The process should begin with clear problem statements and objective evaluation criteria rather than assumptions about any preferred market construct, contracting model, or outcome. Participants should use a transparent process to compare alternatives and consider whether proposed reforms support reliability, efficient market outcomes, and market driven rates.

---

[21] Shell 2023 CIFP Letter at 2 ("Such a consultant could identify analytical gaps and inform the stakeholder process, but its role should be advisory and should not replace the independent judgment of PJM, the states, or stakeholders. Shell Energy understands that PJM retained an independent consultant recently to advise the Board directly, so the recommendation herein is to inform discussions within the stakeholder process.").

Shell Energy appreciates the opportunity to provide these comments and looks forward to working with PJM, stakeholders, and state representatives on these market design issues.

Respectfully submitted,

/s/ Sean Chang

Sean Chang
Director, Regulatory Affairs
Shell Energy North America (US), L.P.
1000 Main Street, Level 12
Houston, TX 77002
Tel +1 713-230-3340
Sean.Chang@shell.com