David E. Mills
Chair, PJM Board of Managers

PJM Interconnection
2750 Monroe Blvd.
Audubon, PA 19403

June 3, 2025

Dear Respected Legislators of the New Jersey Senate Select Committee, Assembly Telecommunications and Utilities Committee,

Thank you for your correspondence dated April 21, 2025, wherein you asked a number of questions following the testimony of Asim Z. Haque, Sr. Vice President of Governmental & Member Services at PJM at the Select Committee's hearing on March 28, 2025. We have attempted to answer your questions in this response. PJM stands ready to assist New Jersey policymakers in maintaining reliable and cost-effective power delivery as you advance your policy efforts.

1. Can you elaborate on how the categorical "must offer" requirement exemption that was in place during the capacity auction for delivery year 2025/2026 could be responsible for the exercise of market power?

PJM's capacity market rules require resources with Capacity Injection Rights to offer their capacity into PJM's capacity auctions ("must offer" requirement). In 2015, an exemption to this rule was established for intermittent (solar and wind) and capacity storage (pumped hydro and batteries) resources.[1] This "must offer" exemption was created while PJM was putting in place rules that would assign penalties to committed capacity that does not perform. Due to the limited availability of these exempted resources and concern from the renewable industry about being penalized for failing to produce power at certain times (i.e., a solar generator not performing when the sun is not shining), the "must offer" exemption was established. This categorical exemption was still in place for the 2025/2026 auction. That exemption has now been lifted per a recent decision from the Federal Energy Regulatory Commission (FERC);[2] therefore, all resources are now subject to the "must offer" requirement. Intermittent Resources and Capacity Storage Resources will offer into the auction for 2026/2027.

The categorical "must offer" exemption was appropriate because of two conditions valid at the time. Firstly, mandating intermittent resource participation in the capacity market – and, thus, mandating exposure of these resources to non-performance penalties – could have chilled investment of these nascent resources, working against various states' policy interests. Secondly, in recognition of this consequence, such a categorical exemption could be allowed because these new technology resources did not pose the same physical withholding threat on the market as existing generation resources. This was because ownership in these technologies was not concentrated, and the overall volume was relatively small.

[1] Effective, through the 2025/2026 BRA auction, Intermittent Resources (wind and solar), Capacity Storage Resources (battery and pumped hydro), and Hybrid Resources (combination of wind/solar and battery) were exempted from the requirement that all capacity resources in PJM offer into the Base Residual Auction (BRA).

[2] FERC Order Accepting Tariff Revisions, Docket No. ER25-785.

In the decade since this exemption went into place, both of these underlying conditions are evolving. As described in PJM's December must-offer filing,[3] these resources are no longer nascent. Intermittent Resources and Capacity Storage Resources currently represent 97% of PJM's interconnection queue. What's more, PJM is seeing many categorically exempt resources offer into the capacity market – 9,334 MW resources that qualified under the categorical exemption offered into the 2025/2026 Base Residual Auction. Additionally, due to other capacity market rule changes, specifically to the Capacity Performance construct, the risk of financial penalties to capacity resources has reduced.

PJM has not seen evidence of market power being exercised by these renewable or limited-duration resources for the 2025/2026 Base Residual Auction. Any such concerns should be addressed to FERC and PJM's Independent Market Monitor.

2. Do you believe market power was exercised during the capacity auction for delivery year 2025/2026? If not, what would market power being exercised over the capacity market auction look like?

Out of a total of 11,689 MW of capacity resources that were renewable or limited duration and covered by the categorical must offer exemption, 10,245 MW offered into the 2025/2026 Base Residual Auction,[4] while 1,444.3 MW[5] did not offer. To screen for market power abuse, at a minimum two additional questions should be asked – 1) for the capacity owners who chose not to offer their capacity, was this decision economically rational on a stand-alone basis (i.e. without considering the impact of this decision on the rest of their portfolio); and 2) did the decision not to offer create a net portfolio benefit to that party?

PJM's Independent Market Monitor is tasked with monitoring potential market power abuse and referring suspected cases to the FERC Office of Enforcement. PJM is not aware of any such referrals related to the 2025/2026 Base Residual Auction. Several market participants who did not offer their capacity into the 2025/2026 Base Residual Auction have indicated to PJM that the risk of capacity performance penalties drove their decision to not offer. PJM has not seen evidence of the abuse of market power in the 2025/2026 Base Residual Auction.

3. Given the tight reserve conditions present during the capacity auction for delivery year 2025/2026, do you believe that physical withholding had an impact on clearing prices?

For the sake of clarity, PJM interprets this question as referring to market power abuse. PJM has not seen evidence that market power abuse impacted market clearing prices in the 2025/2026 BRA. Such concerns should be referred to the Independent Market Monitor for PJM and FERC, and PJM will comply with any FERC directives it receives.

---

[3] PJM Tariff Filing Extending Capacity Must-Offer Requirement to All Generation Capacity Resources, FERC Docket No. ER25-785 (PDF).
[4] PJM 2025/2026 Base Residual Auction Report (PDF).
[5] Independent Market Monitor for PJM Analysis of the 2025/2026 RPM Base Residual Auction, Part A: "If the capacity categorically exempt from the RPM must-offer requirement that did not offer had been offered in the 2025/2026 RPM Base Residual Auction and everything else had remained the same, total cleared UCAP MW in the 2025/2026 RPM Base Residual Auction would have been 137,128.3 UCAP MW, an increase of 1,444.3 UCAP MW, or 1.1 percent, compared to the actual results."

4. Would prices have been lower if the proposed modifications to the "must offer" rule were in place?

Directionally, all things being equal, more supply should result in lower prices. Therefore, the 1,444.3 MW of categorically exempt resources that did not offer resulting from the "must offer" exemption had been required to offer into the market, the clearing price would have likely been lower. Additionally, over 10,000 MW of categorically exempt resources did offer into the auction, without those resources the resulting clearing price would have been higher.

PJM regularly conducts scenario analyses on Base Residual Auctions wherein supply additions and subtractions are varied.[6] Again, please note that the "must offer" exemption applied to renewable and capacity storage resources, which were free to offer into the market, or not. Going forward, that exemption has been removed, and these resources must offer into the market.

5. In a press release from April 14, it was announced that PJM's President and CEO, Manu Asthana, has decided to step down from his role at the end of 2025. The press release states that, "The PJM Board has formed a CEO Search Committee and has engaged Korn Ferry to assist with the search.

The PJM Board intends to solicit input from PJM members and stakeholders as part of its search process, which is targeted to conclude later this year."

a. Will the transition process give consideration to a candidate's plan to address the failings and issues found during the most recent capacity auction?

b. Will a potential candidate be required to provide a plan focused on addressing these issues?

c. Will PJM consider a candidate's state regulatory experience when making a selection?

PJM disagrees with the premise of this question. PJM's capacity market is fully regulated by FERC, and its rules were developed through public processes at PJM and FERC. FERC considered a large amount of input from a range of stakeholders and approved PJM's capacity auction rules, and the auction sent a clear investment price signal to indicate a rapidly tightening supply-demand situation, which is in fact what we believe we are facing. PJM has been warning of this coming supply-demand crunch for over two years, driven by generators being driven to retire prematurely primarily due to environmental policy pressures, accelerating demand from data center growth, and the slow pace of new generation entry.

The Search Committee will evaluate many factors, including the relevant experience of the candidates, the candidates' views on the PJM region's current state of affairs, management abilities and their perspective on leadership direction.

[6] 2025/2026 Scenario Analysis for Base Residual Auction, Sep. 24, 2024, Scenario Analysis (XLS).

6. How does the projected development of data centers and similar high electricity demand end users (collectively, "data centers") affect the capacity auction?

Data centers will increase the demand side of the supply/demand equation and have the ability to increase pricing assuming that there is not a commensurate increase in supply. Demand is also increasing due to expansion of the electric vehicle market, electrification of building heating systems and growth in U.S. manufacturing.[7] Demand increased in the last capacity auction, and we are forecasting a dramatic increase in demand over the next 15 years. This reflects supply/demand concerns that PJM has been expressing for several years.[8] Rising capacity prices are indicative of the tight supply/demand environment the region is experiencing and could rise further should existing conditions persist or worsen.

7. How does PJM estimate the number of data centers that will be developed in the future? What entities provide that information? Are there any criteria that the entities have to employ to calculate the number of data center projects? If so, please describe the criteria. Do the entities have to certify the number of projected data center developments to PJM?

PJM creates a baseline economic forecast to predict trends in economic development and consumer behavior that lead to changes in electric demand. To account for data center build-out, PJM annually solicits information from its Member transmission owners for large load shifts (either positive or negative) that are known to the transmission owners through their (typically state regulated) electric distribution companies (EDCs) but may be unknown to PJM (large load adjustments).

The EDCs each have their own processes for collecting data and creating load forecasts for their respective regions; these forecasts form the basis for what is submitted to PJM as large load adjustments. Some EDCs have implemented processes that ensure that large loads included in the forecast are likely to materialize, through documentation requirements to prove the feasibility of the project (i.e., construction contracts).

PJM vets the requests and gauges their significance, and is able to holistically analyze the large load addition requests received across the footprint and discount certain requests pursuant to that analysis. Throughout this process, information is shared and refined publicly through PJM's Load Analysis Subcommittee.[9] This committee prepares PJM reports, technical analysis and coordination of information related to the electric peak demand and energy forecasts, interruptible load resources for capacity credit, weather and peak load studies. PJM also has the ability to utilize third-party analysis to inform the forecast. In the past, PJM has utilized S&P Global to provide electric vehicle forecasting data. These sessions yield meaningful opportunities for all stakeholders to understand the forecasting process and provide feedback that shapes the overall load forecast adopted by PJM.

---

[7] Asim Testimony to U.S. Energy & Commerce Committee.

[8] Energy Transition in PJM: Resource Retirement, Replacements & Risk Report (PDF).

[9] PJM Load Analysis Subcommittee.

8. Please provide a list of PJM's committees, subcommittees, boards, and the rosters of their membership. Please provide copies of the bylaws for PJM and its committees, subcommittees, and boards, and an official description of each committee, subcommittee, and board. Please provide a description of the specific role each entity maintains within PJM's decision-making process.

PJM has an independent Board of Managers that has no financial interest in any PJM Member, including generators and utilities. PJM also has 15 committees, 16 subcommittees and various task forces and user groups that may emerge on specific topics, from time to time. The Committee Structure Diagram is a helpful visualization of how these groups work together. PJM Members, of which there are over 1,000, are all automatic members of all such groups. Subject to limited circumstances, all meetings of the PJM Members are open to public participation. PJM holds over 400 public meetings annually, with agendas and minutes available for each meeting. PJM Committees, as well as rules regarding stakeholder meetings and processes are ultimately governed by PJM's Operating Agreement (PDF). The bylaws and descriptions for each committee are linked below with the PJM decision-making process.

PJM Board of Managers

The PJM Board of Managers, comprising 10 members, is responsible for maintaining PJM's independence and, by exercising their prudent business judgment, ensuring that PJM fulfills its business obligations and legal and regulatory requirements.[10] The Board also is responsible for ensuring that PJM maintains the reliability of the power grid and operates a robust, competitive and nondiscriminatory electric power market, preventing any Market Participants from having undue influence over the operation of PJM. The responsibilities and expectations of the Board are set forth in the PJM Operating Agreement references above, as well as the Bylaws (PDF) of the Board of Managers. To establish PJM's neutrality, among other criteria, the Board members must adhere to a strict Code of Conduct (PDF). The PJM Board Members are also members and participants of certain PJM Standing Committees, as outlined in the PJM Board Committee Charter (PDF).

[10] PJM Operating Agreement, section 7.7.

Senior Committees

PJM's two senior committees are the Members Committee (MC), which in fact is the full assembly, and the Markets and Reliability Committee (MRC).

Members Committee (MC)

The Members Committee is the final stakeholder stop for all major changes to the governing documents that have completed the stakeholder process. Members are sorted into five sectors: Transmission Owner, Generation Owner, Electric Distributor, End-Use Customer and Other Supplier. Each sector represents a different aspect of the industry. The MC includes the full body of stakeholders. It considers all issues related to planning and operating a safe and reliable electric grid, as well as the creation and operation of a robust, competitive and nondiscriminatory electric power market. The MC works to prevent any undue influence over PJM's operations by any one Member or group.

- Members Committee Charter (PDF)
- Members Committee Roster (PDF)

Markets and Reliability Committee (MRC)

The **Markets and Reliability Committee** is the body that determines which issues need to be studied by standing committees, subcommittees or task forces. The MRC is responsible for ensuring the continued viability and fairness of the PJM markets, as well as the reliable operation and planning of the PJM grid. The MRC, which reports to the MC, reviews proposed changes to the rules and procedures in the PJM governing documents and the PJM manuals.

- Markets and Reliability Committee Charter (PDF)
- Markets and Reliability Committee Roster (PDF)

Standing Committees

There are four standing committees that are permanent at PJM. These committees all report to the MRC.

The **Market Implementation Committee (MIC)** initiates and develops proposals to advance and promote competitive wholesale electricity markets in the PJM region for consideration by the MRC. Some of the topics that fall under the MIC's purview relate to improvements to the capacity market, energy market, ancillary services markets and Auction Revenue Rights/Financial Transmission Rights.

- Market and Implementation Committee Charter (PDF)
- Market and Implementation Committee Roster (PDF)

The **Operating Committee (OC)** reviews system operations from season to season, identifying emerging demand, supply and operating issues. The OC reports to the MRC. Some of the topics that fall under the OC's purview include gas and electric coordination, emergency operations and cold-weather resource improvement.

- Operating Committee Charter (PDF)
- Operating Committee Roster (PDF)

The **Planning Committee (PC)** has the responsibility to review and recommend system planning strategies and policies as well as planning and engineering designs for the PJM bulk power supply system to assure the continued ability of the member companies to operate reliably and economically. Additionally, the PC makes recommendations regarding generating capacity reserve requirement and demand-side valuation factors.

- Planning Committee Charter (PDF)
- Planning Committee Roster (PDF)

The **Risk Management Committee (RMC)** discusses and recommends courses of action to address credit and risk management issues pursuant to PJM's responsibilities for consideration by the MRC.

- Risk Management Committee Charter (PDF)
- Risk Management Committee Roster (PDF) Other PJM Committees

The **Audit Advisory Committee (AAC)** reviews and monitors external audits of PJM's market settlement process. It provides input to the Audit Committee of the PJM Board on the scope and timing of Statement on Standards Attestation Engagements 16 audits and suggests changes, as needed.

- Audit Advisory Committee Charter (PDF)
- Audit Advisory Committee Roster (PDF)

The **Finance Committee (FC)** regularly reviews PJM's consolidated financial statements, budgeted and actual capital costs, as well as operating budgets and expenses. In an advisory capacity, it submits to the PJM Board of Managers its analysis of and recommendations about PJM's annual budgets, amended budgets and other matters related to the appropriate level of PJM's rates.

- Finance Committee Charter (PDF)
- Finance Committee Roster (PDF)

The **Liaison Committee (LC)** provides for direct communication between the members and the PJM Board of Managers.

- Liaison Committee Charter (PDF)
- Attendance is limited to the PJM Board, the LC membership, PJM Members, the LC secretary and PJM audiovisual staff.

The **Market Monitoring Unit – Advisory Committee (MMUAC)** shall act as a liaison between stakeholders and the MMU and shall provide advice from time to time on matters relevant to the MMU's responsibilities under this plan. The MMU Advisory Committee shall have no authority to direct, supervise, review or otherwise interfere with the functions of the MMU under this plan, nor any authority to terminate or propose to terminate the Market Monitor. The MMUAC reports to the MC.

- Market Monitoring Unit – Advisory Committee Charter (PDF)
- Market Monitoring Unit – Advisory Committee Roster (PDF)

The **Nominating Committee** nominates candidates to serve on the PJM Board of Managers and reports to the MC.

The **Transmission Expansion Advisory Committee (TEAC)** provides advice and recommendations to aid in the development of the Regional Transmission Expansion Plan (RTEP).

- Transmission Expansion Advisory Committee Charter (PDF)
- Transmission Expansion Advisory Committee Roster (PDF)

The **Subregional RTEP Committees (SRRTEP)** reviews and provides input on subregional RTEP projects and provides recommendations to the TEAC concerning subregional RTEP projects.

- Subregional RTEP Committee – Mid-Atlantic Roster (PDF)
- Subregional RTEP Committee – Southern Roster (PDF)
- Subregional RTEP Committee – Western Roster (PDF)

Subcommittees

The **Cost Development Subcommittee (CDS)** reports to the MIC. The CDS is responsible for developing, reviewing and recommending to the MIC standard procedures for calculating the costs of products or services provided to PJM when those products and services are required to be provided to PJM at a cost-based rate.

- Cost Development Subcommittee – Charter (PDF)
- Cost Development Subcommittee – Roster (PDF)

The **Distributed Resources Subcommittee (DISRS)** is an ongoing subcommittee established by the MIC at its Nov. 2, 2022, meeting. The purpose of the DISRS is to provide a stakeholder forum to investigate and resolve specific issues and procedures in accordance with PJM stakeholder process protocols related to the evolution of distributed resources and inverter-based resources. The subcommittee reports to the MIC.

- Distributed Resources Subcommittee – Charter (PDF)
- Distributed Resources Subcommittee – Roster (PDF)

The **Designated Entity Design Standards Subcommittee (DEDSS)** was established to maintain the minimum engineering design standards, developed by the Designated Entity Design Standards Task Force. The group members should have experience with design standards for substations, transmission lines and system protection to develop standards that will ensure a minimum level of robustness, reliability and performance of the interconnected bulk electric system.

- Designated Entity Design Standards Subcommittee – Charter (PDF)
- Designated Entity Design Standards Subcommittee – Roster (PDF)

The **Dispatcher Training Subcommittee (DTS)** promotes and enhances the reliability of high-quality, system-wide training programs for bulk power system operators and operating personnel within the PJM system. The DTS reports to the OC.

- Dispatcher Training Subcommittee – Charter (PDF)
- Dispatcher Training Subcommittee – Roster (PDF)

The **Electric Gas Coordination Subcommittee (EGCS)** is a standing subcommittee established by the MRC. The primary objective of the EGCS is to provide a forum to engage on gas-electric coordination issues with stakeholders and the gas industry. The EGCS will drive discussions on gas-electric challenges and identify paths forward for improving PJM wholesale markets and operations. The EGCS reports to the MRC.

- Electric Gas Coordination Subcommittee – Charter (PDF)

The **Governing Document Enhancement & Clarification Subcommittee (GDECS)** was approved in July 2015 as a conversion of the Tariff Harmonization Senior Task Force to address inconsistencies and any confusing, ambiguous and inaccurate provisions in PJM's governing documents. The GDECS reports to the MRC.

- Governing Document Enhancement & Clarification Subcommittee – Charter (PDF)
- Governing Document Enhancement & Clarification Subcommittee – Roster (PDF)

The **Interconnection Planning Subcommittee (IPS)** is a subcommittee established by the PC. The purpose of the IPS is to provide a stakeholder forum to investigate and resolve specific issues related to the interconnection process and associated agreements, governing documents and manuals. The interconnection process includes generation interconnections, merchant transmission interconnections, upgrade requests and those requests seeking long-term firm transmission service that are evaluated in the planning process.

- Interconnection Process Subcommittee – Charter (PDF)
- Interconnection Process Subcommittee – Roster (PDF)

The **Load Analysis Subcommittee (LAS)** prepares PJM reports, technical analysis and coordination of information related to the electric peak demand and energy forecasts, interruptible load resources for capacity credit, and weather and peak load studies. The LAS reports to the PC.

- Load Analysis Subcommittee – Charter (PDF)
- Load Analysis Subcommittee – Roster (PDF)

The **Market Settlements Subcommittee (MSS)** facilitates the direct communication of settlements-related issues between the PJM Market Settlements Department and PJM customers' settlement experts. The MSS proposes, discusses and solicits feedback on enhancements to the current PJM Market Settlements business application and data interface. This committee reports to the MIC.

- Market Settlements Subcommittee – Charter (PDF)
- Market Settlements Committee – Roster (PDF)

The **Relay Subcommittee (RS)** ensures that all PJM bulk power electrical equipment is adequately protected. The RS focuses on all matters related to the application, design, performance, testing and operation of relay systems and associated equipment on the interconnected bulk power system of PJM member companies. This committee reports to the PC.

- Relay Subcommittee – Charter (PDF)
- Relay Subcommittee – Roster (PDF)

The **Relay Testing Subcommittee (RTS)** is a technical task force that takes assignments from and advises the Relay Subcommittee in matters involving protection system maintenance and testing.

- Relay Testing Subcommittee – Charter (PDF)
- Relay Testing Subcommittee – Roster (PDF)

The **Reliability Standards and Compliance Subcommittee (RSCS)** provides a common platform for PJM and its Member companies to discuss and collaborate on North American Electric Reliability Corporation (NERC) and regional standards, compliance issues and the production and evaluation of quality evidence of compliance.

- Reliability Standards & Compliance Subcommittee – Charter (PDF)
- Reliability Standards & Compliance Subcommittee – Roster (PDF)

The **Resource Adequacy Analysis Subcommittee (RAAS)** reviews the modeling and analysis techniques used in the annual Reserve Requirement Study (RRS) and Capacity Emergency Transfer Objective (CETO) studies. The RAAS reports to the PC.

- Resource Adequacy Analysis Subcommittee – Charter (PDF)
- Resource Adequacy Analysis Subcommittee – Roster (PDF)

The **Systems Operations Subcommittee (SOS)** ensures the implementation of all system reliability functions. It recommends revisions to PJM operating principles, practices and procedures to assure the safe, reliable and efficient operation of PJM. The SOS reports to the OC.

- System Operations Subcommittee – Charter (PDF)
- System Operations Subcommittee – Generation Roster (PDF)
- System Operations Subcommittee – Transmission Roster (PDF)

The **TO/TOP Matrix Subcommittee (TTMS)** ensures the TO/TOP Matrix is up to date with the current NERC Reliability Standards applicable to PJM as the transmission operator. The matrix is intended to clarify the assignment of tasks based on the unique relationship between PJM and its member transmission owners as defined in the Transmission Owners Agreement, Operating Agreement and PJM manuals. The matrix is simply a cross-reference to indicate where the assignment of various reliability tasks is documented. The TTMS reports to the Transmission Owners Agreement-Administrative Committee (TOA-AC).

- TO/TOP Matrix Subcommittee – Charter (PDF)
- TO/TOP Matrix Subcommittee – Roster (PDF)

The **Transmission and Substation Subcommittee (TSS)** serves as a technical advisory committee regarding the design, installation and maintenance of all PJM bulk power facilities. The TSS reports to the PC.

- Transmission & Substation Subcommittee – Charter (PDF)
- Transmission & Substation Subcommittee – Roster (PDF)

The PJM Stakeholder Process at Glance (PDF): PJM stakeholders drive a significant amount of decision-making at PJM. When a PJM stakeholder finds a problem or opportunity they want addressed at PJM, they introduce the topic to stakeholders through drafting a Problem Statement, Issue Charge and Charter for a group to address the problem. PJM and the stakeholders then strive to achieve consensus on these issues through a documented process called Consensus Based Issue Resolution (CBIR). Voting starts at the appropriate lower-level standing committee, goes to the MRC for vote, and then the MC for confirmation to move forward with implementation of the solution (with a FERC filing, if necessary).

9. Please indicate which members are employed in New Jersey or have a relationship or other affiliation to an entity that conducts business in New Jersey.

The transmission affiliates of the four New Jersey EDCs along with the New Jersey municipals and co-ops are Members of PJM. Generation Owners and other Market Participants physically located in New Jersey (competitive suppliers, financial traders, etc.) are Members of PJM. New Jersey Division of Rate Counsel is a Member of PJM. As far as specific addresses, we cannot disclose those due to confidentiality restrictions, but the above should give you a sense of who from New Jersey is a Member of PJM. A listing of all PJM Members is available at the following link: PJM Members List.

10. Please include a CV and/or employment history for each member of the Board of Managers and provide the name of the person or entity who nominated them to serve on a PJM committee, subcommittee, or board.

The PJM Board of Managers comprises nine voting members and one ex officio member. All voting members were nominated by the PJM Nominating Committee described above.

Manu Asthana, President & CEO, ex officio Member, Board of Managers

Manu Asthana is the president, chief executive officer and a member of the Board of Managers of PJM Interconnection, which oversees the largest power grid in North America and one of the largest electricity markets in the world. He is responsible for the reliable operations, competitive markets and transmission planning for the organization serving 67 million people in 13 states and the District of Columbia.

Asthana has extensive leadership experience across the electricity industry, including the areas of electricity and natural gas trading, power generation, competitive retail electricity, grid operations and risk management.

Asthana earned a Bachelor of Science in economics from The Wharton School of the University of Pennsylvania, where he was a Benjamin Franklin Scholar and a Joseph Wharton Scholar. He served as a member of the President's National Infrastructure Advisory Council. Additionally, he is a member of the Electricity Subsector Coordinating Council, a trustee at Texas Children's Hospital and a member of the board at The Chamber of Commerce for Greater Philadelphia.

Paula Conboy, Chair of Regulatory Committee

Member of Board Governance Committee, Competitive Markets Committee, Finance Committee

Paula Conboy is an energy economist with more than 25 years of experience as an executive, consultant and regulator in Canada, Australia and Singapore. She currently sits on the board of directors at the Energy Market Authority of Singapore. She recently served as chair of the Australian Energy Regulator and board member of the Australian Energy Security Board, established to help steer the transformation of the Australian energy sector. In 2024, Conboy was appointed to an expert panel leading a review of Australia's National Electricity Market.

Conboy holds undergraduate and master's degrees in agricultural economics from the University of Guelph, Ontario (Canada) and the GAICD designation from the Australian Institute of Corporate Directors. She is also certified by the National Association of Corporate Directors (NACD).

Jeanine Johnson, Chair of Nominating Committee

Member of Reliability & Security Committee, Risk & Audit Committee, Human Resources Committee, Finance Committee

Jeanine Johnson brings over two decades of experience designing products and managing cybersecurity at NETGEAR, Apple, Amazon, Microsoft and others through McKinsey & Co. Johnson's hands-on technology and strategy leadership led to being short-listed as "Entrepreneur of the Year" at Silicon Valley's Women in IT Awards for cofounding SunToWater.com, which is commercializing a device that uses patented technology to create drinking water from outdoor air. She previously won first prize for the concept at Singularity University's Impact Challenge to solve California's water shortages.

Johnson earned two Bachelor of Science degrees, in computer science and engineering, from the University of Missouri, and an MBA from Cornell University.

Margaret Loebl, Chair of Risk & Audit Committee

Member of Competitive Markets Committee, Regulatory Committee

Margaret Loebl joined the PJM Board of Managers in 2020 and chairs the Risk & Audit Committee, where she has overseen improvements in the "Know Your Customer," Enterprise Risk Management and Credit programs. She most recently served as executive vice president and chief financial officer of AgroFresh Solutions, Inc. She has over 30 years of professional experience holding executive employment with Fortune 500 companies in the areas of finance, accounting and risk management.

With six years of CFO experience in complex global environments, Loebl has worked closely with the boards of AgroFresh, Quaker Chemical Corporation and TechTeam Global on acquisitions, strategy, controls infrastructure and risk management, while they confronted transformational events within the companies or disruptions in the economic markets, such as the 2008 financial crisis and increasing shareholder activism.

Previously, Loebl held officer positions in finance with Archer Daniels Midland Company (ADM), Nike, Inc. and General Motors Corporation. Loebl holds a Bachelor of Arts in German from Wellesley College and an MBA from the University of Chicago. While attending graduate school, she completed applied microeconomic analysis supporting antitrust litigation, and then moved to a second position as an options specialist working for the Chicago Mercantile Exchange while wrapping up her MBA. Loebl has earned both the National Association of Corporate Directors (NACD) Directorship Certification and the NACD/Carnegie Mellon Cybersecurity Certification.

David E. Mills, Chair of Board of Managers and Chair of Competitive Markets Committee

Member of Nominating Committee

David E. Mills is an energy consultant with a demonstrated track record of strategic leadership in the power and natural gas industries. He is the former senior vice president of policy and energy supply with Puget Sound Energy, where he also served as chief strategy officer. Mills previously worked for the U.S. Department of Energy's Bonneville Power Administration (BPA). Mills is a veteran of the United States Navy, serving as a helicopter aircrewman and rescue swimmer from 1975 to 1979.

Mills holds a Bachelor of Science in economics from Portland State University and is certified by the National Association of Corporate Directors (NACD), with the NACD Carnegie Mellon Cybersecurity Certification.

Charles F. Robinson, Chair of Board Governance Committee

Member of Competitive Markets Committee, Nominating Committee

Charles F. Robinson serves as the vice president of legal affairs and general counsel for the Regents of the University of California, where he is the chief legal officer. He previously served for seven years as vice president, general counsel and corporate secretary for the California ISO. Prior to that, Robinson was assistant general counsel and director of litigation for Packard Bell NEC, division counsel for Raychem Corporation, and a partner at the Heller Herman White and McAuliffe law firm.

He graduated with his Juris Doctor from Yale University and earned his Bachelor of Arts from Harvard University.

Vickie A. VanZandt, Chair of Reliability & Security Committee and Human Resources Committee

Member of Board Governance Committee

Vickie A. VanZandt is an energy consultant and president of VanZandt Electric Transmission Consulting, Inc. Previously, she served as senior vice president and chief engineer of transmission services of the U.S. Department of Energy's Bonneville Power Administration (BPA) where she was responsible for the planning, design, construction, operation, maintenance, marketing and management of the high-voltage transmission system covering four states in the Pacific Northwest. VanZandt previously served on the ISO New England Board of Directors, the Bipartisan Policy Initiative on Clean Energy and Reliability, and the Secretary of Energy's Electricity Advisory Council.

VanZandt holds a Bachelor of Science degree in electrical engineering from the University of Washington, is a registered professional engineer and life member of the IEEE, and has been inducted into the National Academy of Engineering. She is certified by the National Association of Corporate Directors (NACD), with the NACD Carnegie Mellon Cybersecurity Certification.

Matthew Nelson, Board Member

Member of Reliability & Security Committee, Risk & Audit Committee, Human Resources Committee, Regulatory Committee

Mr. Nelson is currently a principal of regulatory strategy at Apex Analytics, LLC. Prior to Apex, he served as the chair of the Department of Public Utilities for the Commonwealth of Massachusetts. Prior to serving as the chair, he was on staff at the department serving as the director of the Electric Power Division. Matt also spent four years at Eversource in regulatory policy. He brings a valuable combination of understanding from both the industry and regulatory perspectives. He is an economist by training with a Master of Arts in economics from Tufts University as well as a Bachelor of Arts in economics from Stonehill College.

11. Please describe the process for the nomination and selection of members for each committee, subcommittee, and board.

Board member qualifications can be found in the PJM Operating Agreement, under Section 7.2.

No later than 30 days prior to each Annual Meeting of the Members, the Nominating Committee[11] shall distribute to the representatives on the Members Committee one nominee from among the list proposed by the independent consultant for each vacancy or expiring term on the PJM Board, along with information on the background and experience of the nominees appropriate to evaluating their fitness for service on the PJM Board; provided, however, that the Nominating Committee in its discretion may nominate, without retaining an independent consultant, a Board member whose term is expiring and who desires to serve an additional term. Elections for the PJM Board shall be held at each Annual Meeting of the Members, for the purpose of selecting the initial PJM Board in accordance with the provisions of Operating Agreement, section 7.3(a), or selecting a person to fill the seat of a Board member whose term is expiring. Should the Members Committee fail to elect a full PJM Board from the nominees proposed by the Nominating Committee, then the Nominating Committee shall propose a further nominee from the list prepared by the independent consultant (or a replacement consultant) for each remaining vacancy on the PJM Board for consideration by the Members at the next regular meeting of the Members Committee.

A Board member shall not be, and shall not have been at any time within two years of election to the PJM Board, a director, officer or employee of a Member or of an affiliate or related party of a Member.

Of the nine independent Board members, four shall have expertise and experience in the areas of corporate leadership at the senior management or board of directors level or in the professional disciplines of finance or accounting, engineering, or utility laws and regulation; one shall have expertise and experience in the operation or concerns of transmission-dependent utilities; one shall have expertise and experience in the operation or planning of transmission systems; and one shall have expertise and experience in the area of commercial markets and trading and associated risk management.

12. Which committees, subcommittees, or boards make recommendations and/or decisions concerning interconnection? Which committees, subcommittees, or boards make recommendations or decisions concerning grid enhancement or grid upgrades? Please specify the role of each entity.

Processes governing interconnection of resources are discussed under the oversight of the PJM Planning Committee and mostly, as appropriate, within the PJM Interconnection Process Subcommittee.

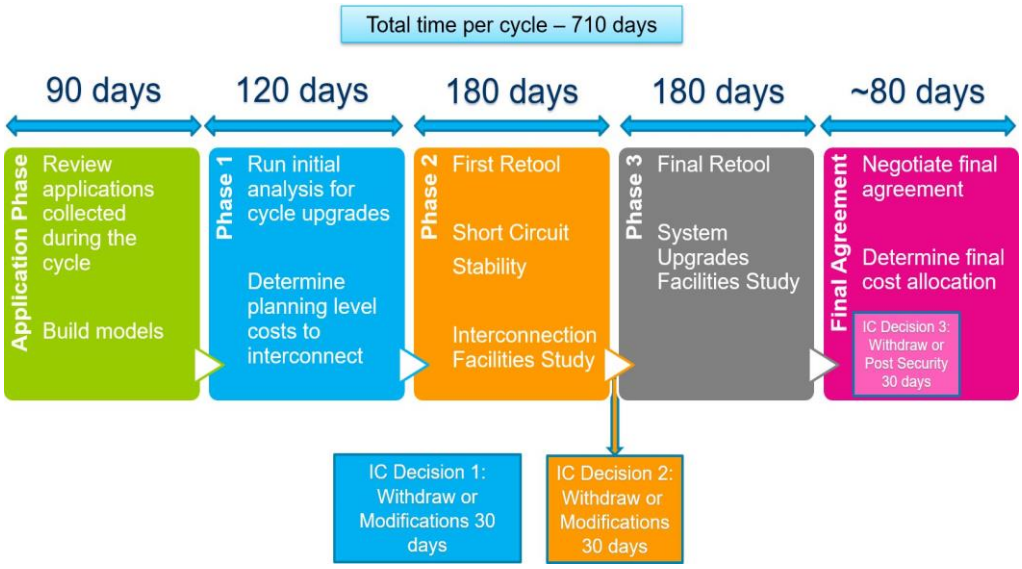
Processes governing grid enhancements and grid upgrades are discussed under the oversight of the PJM Members Committee, as appropriately assigned to the Transmission Expansion Advisory Committee and Subregional RTEP Committees.

The Reliability & Security Committee of the Board has Board purview over transmission planning.

[11] The Nominating Committee consists of seven total voting representatives – one from each of our five member sectors (End Use Customer, Electric Distributor, Other Supplier, Generation Owner, Transmission Owner) – and two existing PJM Board members.

13. How are projects selected for interconnection? How are applications prioritized? Please provide a list of generation facilities that have been connected to the grid over the last five years and the source of generation for each project (e.g., nuclear, gas, solar, etc.).

PJM's interconnection process is nearing the close of a major reform effort that should more efficiently review and integrate interconnection of New Service Requests. Information regarding PJM's new process and the transition phase can be found here (PDF). In summary, the new process will review projects for interconnection based on their applications being completed by the annual deadline, along with submission of adequate financial, Site Control and readiness requirements.



Projects are not selected, per se, for interconnection. Instead, projects are studied for their electrical impact onto the grid in order to ensure the reliable delivery of electric generation with their inclusion onto the system. If the interconnection customer's project induces a negative impact, the customer must fund reconciliation upgrades to the system in order to allow the project generator to deliver power reliably.

PJM has an interconnection queue in which projects are reviewed to allow for safe and reliable interconnection to the region. Historically, PJM reviewed interconnection customers on a first-come, first-served basis. PJM is currently in the transition phase of reforming its interconnection review processes. The current transition and ongoing new process now review interconnection requests in annual clusters. An interconnection cluster is open to all developers that can submit an adequate interconnection application by the close of the annual application window. All projects, subject to application completeness and applicable requirements, will be reviewed simultaneously with all other projects within its cluster.

There is also an active, one-time interconnection pathway to help alleviate the resource adequacy threat we are faced with today, as discussed above. The Reliability Resource Initiative (RRI) is an interconnection queue process, proposed by PJM in December[12] and approved by FERC in February,[13] to address significant near-term resource adequacy concerns in PJM. The RRI established a very limited injection of 51 projects, ranked by reliability criteria, to be studied in the current interconnection cluster in order to bring more megawatts to the grid faster. The reliability ranking criteria is based on project size, reliability contribution, location, completion date and feasibility of project completion.

[12] PJM Tariff Filing Reliability Resource Initiative Proposal, FERC Docket No. ER25-712.
[13] FERC Order Approving PJM Reliability Resource Initiative, FERC Docket No. ER25-712.

Figure 1. New Generation Service in PJM 2020–2025 *(data obtained on April 29, 2025)*

	In Service	
	Project Count	**MW In Service**
Total Projects That Went Into Service in PJM 2020–2025	**322**	**21,736.3**
Coal	1	11
Diesel	1	4
Hydro	1	2.4
Natural Gas	67	9,275.3
Hybrid	4	22
Offshore wind	1	12
Oil	8	13
Solar	207	10,359.5
Storage	13	105.3
Wind	19	1,931.8

Figure 2. New Generation Service in New Jersey 2020–2025 *(data obtained on April 24, 2025)*

	In Service	
	Project Count	**MW In Service**
Total Projects That Went Into Service in NJ 2020–2025	**40**	**1,084.3**
Natural Gas	13	955.6
Nuclear	1	18
Solar	22	96.7
Storage	4	14

Many of the projects that get studied through PJM's interconnection process do not result in in-service generation. Below is a summary of PJM's most recent efforts in reviewing projects in its queue through the interconnection process transition. Many of the projects in PJM's queue today are not materializing due to supply chain constraints, financial infeasibility and developers shopping around interconnection spots. The effort summarized below represents PJM's work in reviewing new service requests, even if they don't result in megawatts on the system. This transition effort kicked off in 2022.

Figure 3. PJM Interconnection Process Transition: Projects Withdrawn, Under Review and In Service *(data obtained March 31, 2025)*

	Fast Lane		Transition Cycle 1		Transition Cycle 2		New Cycle 1		Total	
	Project Count	MW	Project Count	MW	Project Count	MW	Project Count	MW	Project Count	MW
In Service	2	20							2	20
Partially In Service	1	20							1	20
Construction Phase	177	16,559	1	20					178	16,579
Issued for Execution	19	2,875	1	500					20	3,375
Agreement Negotiation	1	38							1	38
Studies in Progress			127	17,332	498	45,127	891	56,727	1,516	119,186
Total Active/ In Service	**200**	**19,512**	**129**	**17,852**	**498**	**45,127**	**891**	**56,727**	**1,718**	**139,218**
Withdrawn During Construction	5	370	1	70					6	440
Withdrawn After Completed Studies	48	2,817							48	2,817
Withdrawn During Study Phase	47	3,507	302	34,212	708	51,486	234	17,698	1,291	106,903
Total Withdrawn	**100**	**6,693**	**303**	**34,282**	**708**	**51,486**	**234**	**17,698**	**1,345**	**110,160**
Total	**300**	**26,205**	**432**	**52,134**	**1,206**	**96,613**	**1,125**	**74,425**	**3,063**	**249,378**

Additionally, since 2020, 1,341.9 MW of electric generation, primarily natural gas and coal units, have deactivated within the state of New Jersey. Additional generation in the state is slated to retire in the near term due to New Jersey's CO_2 regulations. This will continue to place upward pressure on pricing. New Jersey has been planning to replace this capacity with 11,000 MW of offshore wind generation. PJM has worked hard to support New Jersey's offshore wind efforts; specifically, PJM spent many years planning with and supporting the NJBPU to make the transmission system ready for the integration of offshore wind generation. Unfortunately, offshore wind has not materialized to date.

Figure 4. New Jersey Deactivated Generation Units Since January 1, 2020 *(data obtained May 28, 2025)*

	Deactivations	
	Project Count	**MW**
Total Generator Deactivations Jan. 2020 – May 2025	**23**	**1,341.9**
Coal	2	459
Methane	7	16.2
Natural Gas	12	843
Oil	1	21.1
Solar	1	2.6

14. Please provide the vote tallies (including the specific vote for each member), minutes, and agendas for each committee from 2020 to the present.

Please find the accompanying folder marked "Attachment 1" for all Senior and Parent Committee votes for meetings January 1, 2020, through May 1, 2025.

15. How many generators bid into each auction for the years 2020-2025? Please list the generators, including the owners of the generators that provided the bids for each auction and the sources of generation for each generator (e.g., nuclear, gas, solar, etc.).

PJM is presuming this request is focusing on participation in the capacity auction and, more specifically, the Base Residual Auction.

Consistent with federal rules and regulations on protection of market-confidential data, information about actual participation in the auction is confidential. However, the full list of capacity resources qualified to offer into every delivery year is publicly available. The 2025/2026 Base Residual Auction Report (PDF) includes details of the results of the auction and the full list of eligible generators, including fuel type and zone of the resources, which can be found at the 2025/2026 RPM Existing Resource List (XLS).

It is important to note this list sums to nearly 179,000 MW of total supply, while total offered capacity in the 2025/2026 BRA was closer to 136,000 MW. In large part, this is due to the public list reporting generators' megawatt value in Installed Capacity (ICAP) terms. ICAP is a representation of a generator's maximum potential output. For capacity planning purposes, the industry rates generators based on their Unforced Capacity (UCAP) – a statistical representation of a generator's capability during times of capacity emergencies.

Consistent with federal rules and regulations on protection of market-confidential data, the UCAP of each generator for each delivery year is not publicly available information given its commercial sensitivity to the Market Participant.

Figure 5. 2025/2026 RPM Existing Resource List (ICAP) and Megawatts Offered Into the 2025/2026 BRA (UCAP)

Eligible Capacity Resources 2025/2026 BRA	ICAP	Count
Storage	5,587.4	27
Coal	35,536.2	68
Diesel Utility	333.2	43
Gas CC	57,463.3	174
Gas CT	25,436.3	283
Hybrid	10.2	1
Hydro	2,608.9	59
Landfill Intermittent	126.5	33
Nuclear	32,535.2	31
Wind	2,211.4	97
Other	2,840.6	114
Solar	4,293.3	242
Steam	9,857.1	47
Total Supply	178,839.60	ICAP MW
Supply Offered in the 2025/2026 BRA	135,692.30	UCAP MW

Detailed reports of the 2021/2022 Base Residual Auction (PDF), 2022/2023 Base Residual Auction (PDF), 2023/2024 Base Residual Auction (PDF), 2024/2025 Base Residual Auction (PDF) and 2025/2026 Base Residual Auction (PDF) can be found on PJM's RPM website.

16. Please provide a complete list of rule changes that occurred between the Base Residual Auction for Delivery Year 2024/2025 and the Base Residual Auction for Delivery Year 2025/2026? Additionally, can you provide a complete list of rule changes that have occurred since the Base Residual Auction for Delivery Year 2025/2026? Was PJM required to submit any of these rule changes to FERC for approval? If so, indicate which rules were mandates.

In recent years, PJM has undergone many capacity market rule reforms to enhance the ability to maintain and incent reliability as system conditions continue to evolve. While this is not an exhaustive list of all changes to market rules and implementation changes, major changes into the capacity market rules in recent years are listed below.

Major PJM capacity market rule changes between 2024/2025 BRA and the 2025/2026 BRA[14]

- PJM replaced its adjusted class average Effective Load Carrying Capability (ELCC) capacity accreditation approach with a marginal ELCC approach; and extended ELCC accreditation to all Generation Capacity Resources. The ELCC accreditation was previously only applicable to Intermittent and Storage Resources.PJM updated the resource

[14] FERC Docket No. ER24-99.

adequacy risk modeling used to set the market parameters to evaluate risk on a more granular, hourly level. This meant moving from the Loss of Load Expectation analysis, a daily metric, to the Expected Unserved Energy analysis, an hourly metric.

- PJM enhanced capacity resource testing requirements to ensure capacity resources are able to provide reliability value to the system.
- PJM implemented an indexed non-performance charge limit (stop loss) to the BRA clearing price rather than Net Cost of New Entry (Net CONE).
- PJM implemented reforms that better align the Fixed Resource Requirement (FRR) alternative rules with the capacity auction rules.
- PJM required planned generation capacity resources to submit a bidding notice of intent to offer before the capacity auction parameters are posted that commit resources to offering in before PJM finalized auction parameters.

Major PJM capacity market rule changes between 2025/2026 BRA and the 2026/2027 BRA:

- PJM will reflect qualifying resources that are retained under a "Reliability Must-Run" agreement as capacity resources that can contribute to meeting the system reliability needs. This reform is only in effect for the 2026/2027 and 2027/2028 BRAs.[15]
- PJM will retain the use of a dual-fuel-fired combustion turbine plant as the reference resource; absent this change the reference resource for this auction would have been a combined cycle natural gas unit.[16]
- PJM updated the non-performance charge to be uniform across the region based on the RTO net CONE.[17]
- PJM removed the categorical "must offer" exemption, which will require all existing generation capacity resources to offer into the capacity auctions.[18]
- PJM enhanced the Market Seller Offer Cap (MSOC) to allow sellers to request segmented offer caps and request resource-specific offer caps using Capacity19 Performance Quantifiable Risk as the minimum offer cap value.[20]
- PJM will implement a symmetrical price cap and price floor. This reform is only in effect for the 2026/2027 and 2027/2028 BRAs.[21]

Sincerely,
David E. Mills

David E. Mills
Chair, PJM Board of Managers

---

[15] FERC Docket No. ER25-682
[16] *Id.*
[17] *Id.*
[18] FERC Docket No. ER25-785
[19] *Id.*
[20] *Id.*
[21] FERC Docket No. EL25-46