

Resource Adequacy Conceptual Design CIFP Stage IV / MC Presentation

Steve Lieberman, Lynn Horning, Dr.
Paul Sotkiewicz (JPower)

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AMP / JPower Proposal

- Sponsors: AMP and JPower USA.
- AMP and JPower still believe that any reform, both near-term and long-term, needs to adhere to long-standing guiding principles of capacity market design.
- AMP provided proposed enhancements to the SCM at the 7/12 meeting.
 - Many have been incorporated by the IMM into their final proposal.
- Why the IMM's Sustainable Capacity Market (SCM) design?
 - PJM Markets need reliability to survive.
 - The IMM's Sustainable Capacity Market (SCM) design is a stable market-based structure for long term reform.
- Problems with PJM's proposed designs:
 - Complexity and risk of not being able to implement in a timely manner.
 - Does not provide the granularity needed for a changing resource mix toward increasing variable and intermittent resources.
 - Does not address the known challenges with stressed operating conditions that impact reliability.
 - Potential to increase market costs.

AMP / JPower Proposal

For the October Filing, a phased implementation approach for market reform is needed to ensure stable market-based structures that can meet the reliability needs of the evolving resource mix.

- This approach will provide new mechanisms that can begin to minimize the risk of participation in the PJM Capacity and Energy markets while providing incentives to be available and perform when needed.
- The mechanism proposed herein addresses the realities of potential resource retirements leading to tightening reserve margins, changing resource mix toward increasing variable and intermittent resources, increasingly stringent environmental policy at state and federal level, load growth, evolving transmission infrastructure, and increasing Distributed Energy Resources (DERs).
- All elements in this approach satisfy the four directives from the PJM Board [letter](#) dated 02/24/2023.
- Many of the elements in this approach address issues raised in PJM's [Energy Transition in PJM: Resource Retirements, Replacements & Risks](#) whitepaper report.
- This approach provides a reasonable, achievable, and timely implementation plan for filing, technical design, and readiness in anticipation of the projected future challenges that will impact resource and energy adequacy.

Phase I (DY 2025/2026 and DY 2026/2027)

- Market Reforms in the current construct to address lessons learned from extreme weather events since January 2014.
 - Transition rules in IMM Package 1:
 - Modified Capacity Performance structure (CP), based on Member-Supported Solution from May 2023.
 - Align CP Penalties and Stop Loss to LDA Clearing Price.
 - Maintain Status Quo Trigger Definition as approved by FERC in [Docket No. ER23-1996](#) on July 28, 2023, at the Primary Reserve Requirement (Reliability Requirement, not Extended Requirement).
 - Additional Capacity Market Reforms in Phase I:
 - Include Net Exports in Balancing Ratio such that when PJM is exporting energy the Balancing Ratio declines to reflect PJM is not serving only its own native load paying for CP resources.
 - Modify triggers for curtailing non-firm exports that are not used for resource adequacy in external balancing authorities.
 - Possible additions of export triggers to include curtailment of all non-capacity backed exports, or consistent with the tariff curtailment of exports to ensure not going short the primary reserve requirement.
 - Institute that all committed capacity (including DR) has a must offer requirement on a daily basis into the energy market.
 - FRR Entities and their committed FRR Capacity Resources will face financial penalties on par with RPM resources and no longer have the option for “physical” penalty commitments to be made in subsequent years.

Phase I (DY 2025/2026 and DY 2026/2027)

- Status Quo rules to be retained during Phase I:
 - Maintain Status Quo Capacity Must Offer rules into the RPM Capacity Market including categorical exemptions.
 - For the transition Delivery Years, retain the status quo accreditation, based on Average ELCC methodology for ELCC Resources up to the CIR level, for all resource types rather than making a change for a single year and then another change in the subsequent year.
 - Continue the evaluation in the Resource Adequacy Analysis Subcommittee (RAAS) of the Capacity Benefit Margin, including the Capacity Benefit of Ties (CBOT) and any other metric to determine the quantifiable impact of exporting capacity and energy-only resources during emergency conditions.
 - No modifications to the Market Seller Offer Cap or the Calculation of CPQR.

Phase II (DY 2027/2028)

- Implement Sustainable Capacity Market (SCM) to improve capacity market for future needs of evolving resource mix. Framework includes (refer to IMM memo with detailed overview – August 16):
 - Elimination of Capacity Performance paradigm (CP). No more CPQR.
 - Implementation of “Pay-As-You-Go compensation” (PAYG) based on hourly availability.
 - Risk Modeling on a locational and seasonal basis that is automatically incorporated into the model and market clearing mechanism, as this looks at hourly availability based on season, weather, and other conditions.
 - Improved Accreditation based on Modified Equivalent Availability Factor (MEAF).
 - Maintain the scheduling, commitment, and dispatch requirements of Phase I transition.
 - Modeling enhancements to model CETO/CETL hourly.
 - Maintain Demand Resources that are Capacity Resources energy market must offer requirement.
 - Biannual Testing Requirements.
- Proposed Enhancements to SCM to explore during implementation process of the SCM.
 - Implement 2-year auction procurement horizon. Two Incremental Auctions.
 - Modified Energy Must Offer Obligations.

Indicative Voting Options

For the indicative voting during Stage 4 of the CIFP, AMP and JPower are offering the following three options for consideration:

1. **AMP / JPower 1 (Transition)** – Transition rules in IMM Package 1.
2. **AMP / JPower 2 – (Staggered Filing Strategy)** – IMM’s SCM with proposed modifications. Two explicit phases of implementation and filing. Transition rules in IMM Package 1 with additional market reforms in Phase I for operational transparency.
 - a. Phase I has a target filing date of 10/1/23, with anticipated FERC Order by 12/1/23.
 - b. Phase II has a target filing date of 12/31/23 (and no later than 2/1/2024), after a stakeholder process to develop the implementation details and evaluate proposed enhancements, with anticipated FERC order by 3/1/2024.
3. **AMP / JPower 3 (Phase I Only)** – Market reforms proposed in Phase I, only. Transition rules in IMM Package 1 with additional market reforms in Phase I for operational transparency.
 - a. Phase I has a target filing date of 10/1/23, with anticipated FERC Order by 12/1/23.
 - b. Stakeholders may indicate their willingness to endorse the proposed market reforms in Phase I, only, for Delivery Years 2025/2026 and 2026/2027.

Implementation and Filing Timeline

- Restart the RASTF to initiate a stakeholder process to finalize the implementation details for the SCM design with a target filing deadline of 12/31/23, but no later than 2/1/24.
 - Prior to a FERC filing, PJM and the IMM must provide stakeholders analysis of sensitivities and scenarios to allow evaluation of cost impacts.
- Illustration of the implementation timeline with a 2-Year Auction Horizon and elimination of one Incremental Auction.
 - If the SCM is implemented for 2027/2028 Delivery Year, then the Auction Schedule will be back on track sooner.

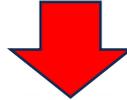
		Phase I - Order on 12/1/2023			Phase II - Order on 3/1/2023		
Delivery Year	Auction	Auction Open Date	Order -> Auction (Months)	Auction Results (Months)	Auction Open Date	Order -> Auction (Months)	Auction Results (Months)
2025/2026	BRA	Jun-24	6	12			
	3rd IA	Feb-25		4			
2026/2027	BRA	Dec-24	12	18			
	3rd IA	Feb-26		4			
2027/2028	BRA				Jun-25	15	24
	3rd IA				Feb-27		4
2028/2029	BRA				Jun-26	27	24
	3rd IA				Feb-28		4

*** Back on Track for 27/28 DY

Implementation Timeline

The implementation timeline aligns with the projected tightening of PJM reserve margins in 2027, as illustrated below in PJM’s [Energy Transition in PJM: Resource Retirements, Replacements & Risks, February 24, 2023](#).

Table 1. Reserve Margin Projections Under Study Scenarios



Reserve Margin	2023	2024	2025	2026	2027	2028	2029	2030
Low New Entry								
2023 Load Forecast	23%	19%	17%	15%	11%	8%	8%	5%
Electrification	22%	18%	16%	13%	10%	7%	6%	3%
High New Entry								
2023 Load Forecast	26%	23%	21%	19%	17%	16%	17%	15%
Electrification	25%	22%	20%	18%	15%	14%	14%	12%



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