

Capacity Market Reform: Phase 2

Patrick Bruno – Sr. Lead, Market Design Capacity Market Workshop #9 September 28, 2021

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- At the last meeting, PJM had proposed "sequencing" of various Phase 2 topics into near-term, longer-term, and startup issues
- For this workshop, we removed that grouping to help clarify our intent to begin the discussions and work in parallel on the topics, and will provide our thoughts on possible target completion dates here and in the draft work plan
- Some of the other feedback expressed at the last meeting included requests to clarify scope of various topics and further consider the timing to address certain issues



Energy Market Must Offer for ELCC Resources

- Phase II of the Capacity Capability Senior Task Force Issue Charge* had committed to discussion of energy market must offer rules for limited duration resources (e.g., energy storage resources).
 - The Members Committee had approved a similar commitment that also includes operational requirements for such resources participating in the capacity market**.
- PJM proposes to move this scope to a standalone Issue Charge and solution matrix under the RASTF, and expand the scope to cover all resource types in order to also incorporate intermittent resources, etc.
- In order to ensure that the operational reliability benefits of energy storage resources better
 align with the assumptions of the ELCC model, such rules should be in place by the start of
 the 2023/24 delivery year (the first year that ELCC applies to).
 - PJM proposes that such rules be in place before the corresponding 3rd Incremental Auction to be run in February, 2023.

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^{*} https://www.pjm.com/-/media/committees-groups/task-forces/ccstf/postings/issue-charge.ashx

^{**} https://www.pjm.com/-/media/committees-groups/committees/mc/2020/20200917/20200917-item-01-alternate-motion-amendment-to-joint-stakeholder-package.ashx



Scope and Proposed Target "File By" Dates

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Performance Assessments (RASTF)	 Review performance assessments for capacity resources: Evaluate performance penalties, including triggers for assessments, excusals for non-performance, penalty rate, stop-loss provisions, etc. Explore opportunities to provide more transparency & predictability in performance expectations Consider impact of any reform on market seller offer caps 	Target filing by May-2022 for 25/26 BRA
Quadrennial Review (MIC)	 Examine the key parameters that impact the VRR curve: Choice of reference technology, CONE, E&AS offset methodology Shape of the VRR curve 	Req. to file by Oct-2022 for 26/27 BRA
Energy Market Must Offer Obligation (RASTF)	Review the energy market must offer rules for all resource types • Scope moved and expanded from CCSTF (details on prior slide)	Target filing by Q4-2022 for 23/24 3rd IA
Load Forecast (LAS)	Continue to explore enhancements to PJM's load forecast model and inputs with stakeholders	Continuous

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Scope and Potential Target "File By" Dates

 Evaluate whether additional requirements should be a part of the qualification of capacity resources 	
 Explore improvements to the ELCC methodology and accreditation of all resource types (including thermals) 	
 Explore the qualification requirements and accreditation of capacity resources on a seasonal basis 	Potential target dates to file by:
 Examine obligations of capacity resources in the energy and ancillary services markets (e.g. operating to parameter limits, staffing requirements, etc.) other than must offer 	Q4-2022 for 26/27 BRA or Q3-2023 for 27/28 BRA
 Explore reliability metrics beyond LOLE Examine seasonal risk and variation in seasonal capacity needs Consideration of a seasonal market construct and reliability targets 	
	 the qualification of capacity resources Explore improvements to the ELCC methodology and accreditation of all resource types (including thermals) Explore the qualification requirements and accreditation of capacity resources on a seasonal basis Examine obligations of capacity resources in the energy and ancillary services markets (e.g. operating to parameter limits, staffing requirements, etc.) other than must offer Explore reliability metrics beyond LOLE Examine seasonal risk and variation in seasonal capacity needs Consideration of a seasonal market construct

Consider potential reforms needed to related Planning studies (e.g. CETL)



Timing of Capacity Resource Accreditation

- Some stakeholders have expressed an interest in prioritizing a review of accreditation sooner rather than later
 - Interest in re-examining some of the current details of the ELCC model (e.g. dispatch assumptions, portfolio forecasts, marginal vs. average, etc.)
 - Interest in expanding the application of ELCC to all resource types
- PJM is recommending to have the timing of that work stream align with the broader discussions that relate to seasonality
 - The question of how we calculate ELCC and who it applies to is certainly on the table,
 but so is whether an annual accreditation amount is appropriate
 - The discussions on correlated outage risks and extreme weather go beyond just accreditation and can impact the model and inputs that set the reliability targets
 - Expansion of the ELCC model is not a simple change to make, and will likely require some complex design to be done and software to be built

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Scope and Proposed Target Dates for Initial Discussions

Additional Reliability-based Services (OC to start)	Evaluate the need for the procurement and compensation of additional reliability-based services in PJM's markets, particularly any additional flexible products or services that PJM will need to maintain reliability given a fleet with an increasing level of intermittent and distributed resources	Initial direction determination by Q1-2022
Procurement of Clean Resource Attributes (RASTF to start)	Evaluate procurement of forward clean energy and/or capacity as an option to allow states and customers to procure the desired level of clean resources	Initial direction determination by Q1-2022

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