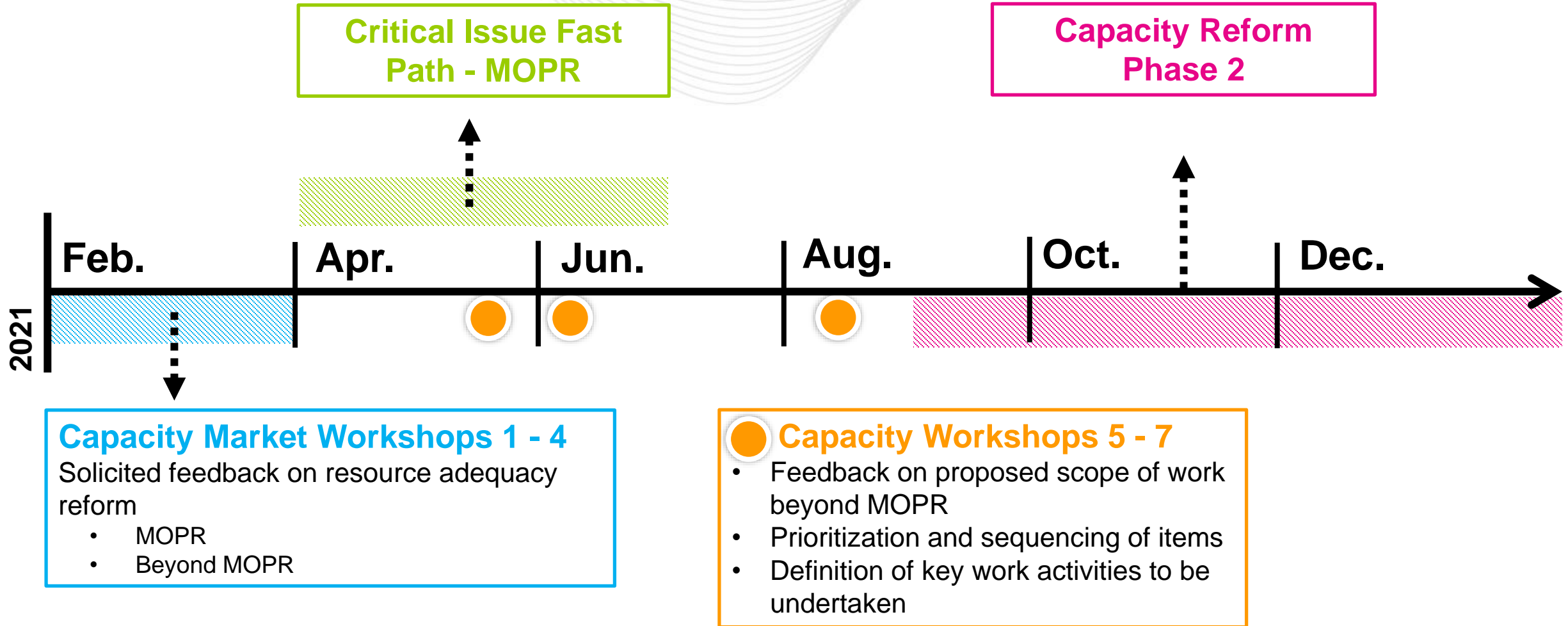


# Capacity Market Reform: Phase 2

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## April 6, 2021 Letter:

*“Additionally, the PJM Board believes changes to capacity market design should be focused on and limited to the specific problems we are trying to solve.”*

*“...we urge stakeholders to address the remaining capacity market topics once the CFP MOPR process has concluded. It is imperative that these items are devoted the appropriate level of attention and that necessary reforms are made to ensure that the capacity market continues to function appropriately to drive reliability in a cost-effective manner.”*

However, as we have noted in our dialogue of late, the PJM Board acknowledges that our industry continues to evolve rapidly. The capacity market should be part of this evolution. While it has served its originally stated purpose and achieved sound results, it is now timely to consider whether certain elements of it need to change to continue to meet our collective future needs. Specifically, we believe the topics related to the capacity market that should be pursued include:

- ~~Implementing changes to the Minimum Offer Price Rule (MOPR) to ensure the capacity market accommodates state policy choices related to resource mix, as well as long established self supply business models, while adequately mitigating buyer-side market power~~
- Evaluating all aspects surrounding the appropriate level of capacity procurement
- Examining the need to strengthen the qualification and performance requirements on capacity resources
- Considering clean capacity/energy auctions as an option to allow for procurement of clean resources
- Evaluating the need for PJM's procurement of additional reliability-based services, with a particular focus on reliability needs in the face of the changing resource portfolio and increased penetration of intermittent resource technologies

*“The PJM Board reiterates the importance of all of the issues related to the capacity market as outlined in our April 6 correspondence, and looks forward to our stakeholders promptly addressing these issues in Phase 2 of these capacity market discussions.”*

# Start a Capacity Market Design Senior Task Force (CMDSTF)?

- Put this work into one new Senior Task Force
- Address supply and demand sides of capacity market together
- Some work items may impact the QR and therefore would make sense to address first(\*)

## ***Procurement Level***

- Resource adequacy metric (EUE, LOLE, LOLH)\*
- Reserve margin calculation assumptions\*
- Seasonal capacity market design\*
  - There is a lot to this topic! More discussion later.
- Load forecasting enhancements (Delegate to LAS)

## ***Qualifications/Obligations***

- Capacity resource qualification and accreditation
- Capacity resource obligations
  - Should reliability services fit here? Pre-work may be required. More discussion on next slide.
- Performance requirements and penalties

Board request highlighted promptly addressing these topics.

**Q1: What are stakeholders' expectation for the time it will take to tackle this workload?**

**Q2: What should be defined as out-of-scope?**

There are high-level questions regarding additional reliability services that require discussion/analysis and therefore it may make sense to answer these initial questions outside of a capacity market STF.

1. Is there a need to explicitly procure/compensate/maintain additional reliability services (frequency response, ramping, etc.)?
2. Which services are needed and how much?
3. At what point in the future does maintaining the current market/compensation structure create reliability concerns?
4. Where is the best place to require/incentivize these services? Capacity market? Real-time ancillary services?

Addressing questions #1-3 requires additional discussion and analysis that will take time and may not be directly focused on the capacity market. Could we start this discussion at the Operating Committee?

**Q: Do stakeholders support starting discussion on this topic outside of the capacity market group, possibly at the Operating Committee, and including it if/when appropriate?**



Similar to reliability attributes, there are high-level questions that will likely require discussion prior to advancing this topic.

1. If the product to be procured clean energy or clean capacity?
2. What types of resources can provide this product?
3. Over what footprint would the procurement take place?
4. Is integration with the capacity market required?

**Q: Do stakeholders support starting discussion on this topic outside of the capacity market group, possibly at the Carbon Pricing Senior Task Force, and including it if/when appropriate?**



## QR discussion is occurring at MIC Special Sessions

- QR has timeline to file in October 2022
- Kickoff meeting with stakeholders was held August 6
- As noted, topics of the QR are very directly related to procurement level
  - Reference technology and cost
  - Demand curve shape
- Updates on QR findings will be made at the Capacity Market Design STF

**Q: There is an opportunity to incorporate some potential changes up for discussion in the CMDSTF in the QR if we can make the timing work. What are our options?**

STAKEHOLDER GROUPS			
Capacity Market Design Senior Task Force	Operating Committee	Carbon Pricing Senior Task Force	MIC Special Sessions
Capacity Resource Qualification and Performance Requirements + Capacity Procurement Level	Initial discussion on Additional Reliability Services	Initial discussion on Clean Capacity/Energy Procurement	Quadrennial Review

\*Load Analysis Subcommittee not shown here.

←----- Report outs between groups, as necessary -----→

There are design topics that would be beneficial to decide a path early as they impact many other areas of the capacity market. Some examples are...

- Seasonal capacity
- Capacity Performance incentive structure
  - Under-performers pay a penalty to over-performers per interval
  - Penalty levels, triggers, etc. would be open for discussion
- Are there others?

**Q: What information would be required and what stakeholder process can be used to make high-level decisions on these topics early in the process?**

Work	Venue	Timing
Qualifications/Procurement + Performance	Senior Task Force? (load forecast at LAS)	ASAP
Additional Reliability Services	OC to start?	Discussion on further analysis in Fall 2021?
Clean Procurement	CPSTF to start?	Initial discussions in Fall 2021?
Quadrennial Review	Special MIC	Started Aug 6; filing due Oct 2022

## Timing Beyond MOPR

### Auction Timing and Potential “File By” Dates for Reference

Auction	Run Date	File By *
23/24 BRA	12/21	7/21
24/25 BRA	6/22	10/21 (~ 2 months from now)
25/26 BRA	1/23	5/22 (~ 9 months)
26/27 BRA	7/23	10/22 (~ 1.2 years)
27/28 BRA	5/24	9/23 (~ 2 years)
28/29 BRA	5/25	9/24 (~ 3 years)

**Note: File By** dates may vary by a few months depending on the topic(s) and revisions. The dates shown in the table provide 2 months to receive a FERC order, and about 1 month to digest that order and finish any necessary implementation prior to the major pre-auction activities (condensed to ~4.5 months through the 26/27 BRA)

The dates do not consider the full implementation time needed for system revisions, which may be substantial for certain topics and enhancements, and may require the above dates be backed up further to account for implementation.

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## Capacity Market Workshop - Session 7



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