Capacity Auction Reforms

Discussion of Project Scope, Schedule, and Introduction of Future Roadmap

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Capacity Auction Reforms (CAR)

WMPP ID: 182

Earliest Target Effective Date: Q2-Q3 2026

- The ISO is proposing CAR to transition the Forward Capacity Market to a prompt and seasonal market with accreditation reforms
- Today's discussion is focused on refining and finalizing the proposed CAR scope, reviewing the anticipated project schedule, and outlining the ISO's roadmap for future reforms

Overview of Today's Discussion

- CAR project scope summary
- Further discussion of project scope
- Roadmap for future capacity reforms

Scope Development Timeline

- **July**: MC kick-off discussions, the ISO outlines project objectives and highlights some key areas of consideration for project scope; stakeholders provide feedback
- **August**: The ISO shares ‘straw scope’ and design objectives for stakeholder feedback at MC
- **September**: The ISO responds to feedback on its straw scope and potential refinement of scope
- **October**: Finalize scope, outline CAR project schedule, and introduce roadmap for future reforms

CAR SCOPE SUMMARY

CAR Scope Development

- The ISO worked closely with stakeholders to develop and refine the CAR scope
  - In response to stakeholder feedback, ISO incorporated further accreditation modeling enhancement assessments and developed a roadmap for future assessments
- ISO appreciates stakeholder input and understanding in determining a scope that ensures project viability for CCP 19
- Not all items could fit within the initial CAR Scope, therefore a number of items will be assessed as areas for potential future improvements for CCP 20 and beyond

Summary: CAR Scope (*1 of 2*)

Scope Item(s)*	P/S/A	Comments
Core Prompt	P	Timing, treatment of new resources, retirement process, activity schedule
Core Seasonal	S	Define seasons, activity schedule, seasonal demand curves, update 'annual' features
Core Accreditation	A	Finalize accreditation framework and design, conform to prompt and seasonal
Gas Market Constraint	S/A	Develop framework, treatment of firm gas
Impact Analysis	P/S/A	Estimate regional cost impacts and revenue affects by resource class, break out key drivers

* See the July, August, and September MC materials for additional context on these items

Summary: CAR Scope (*2 of 2*)

Scope Item(s)*	P/S/A	Comments
Offer Price Formation and Mitigation	P/S/A	Cost components in competitive offers, mitigation framework, price impacts
Move to Sealed Bid	P/S	Change auction platform
Data System and Implementation	P/S/A	Update or replace existing data systems used to administer capacity market
Assess Further Accreditation Modeling Enhancements	A	Assess further RAA modeling and accreditation enhancements
Seasonal Tie Benefits	S	Develop estimates of seasonal tie benefits values

* See the July, August, and September MC materials for additional context on these items

ADDITIONAL SCOPE DISCUSSION AND STAKEHOLDER FEEDBACK

Considerations for CAR Scope

- As outlined in the project scope objectives, the top priorities when determining scope are:
  1. Complete the work in time for CCP 19 to facilitate benefits of CAR to region and confidence to marketplace
  2. Prioritize design work that provides the most value to the region in the shortest time
  3. Avoid project scope expansion or changes that risk Objectives 1 and 2

Considerations for CAR Scope (con't)

- These aims are in tension, as the scope cannot include every design element that may improve the performance of the capacity market
- Such items may be considered for future capacity market reforms and enhancements, where CAR can be viewed as the first step in the region's move to a **prompt** and **seasonal** capacity market with **accreditation** reforms
- Later today, the ISO will discuss its roadmap regarding potential work that could follow the CAR filing

Modeling of Correlated Outages for Gas Resources

- CAR will include a gas constraint for the winter, which will reflect the potential for correlated outages amongst gas resources due to infrastructure limitations
  - Novel approach will more accurately reflect expected availability of gas generation during tight winter conditions
- This work will leverage data available about the gas supply available to the region's electric supply and help address a major reliability risk associated with correlated outages
- Beyond the inclusion of a gas constraint, the ISO will not be able to model correlated outages for CCP 19

Modeling Other Correlated Outages

- The ISO identified several reasons why the costs and risks of modeling correlated outages more generally outweighed the benefits
  - CAR will account for a major source of risk associated with correlated outages by developing a gas constraint
  - There are various practical challenges to estimating correlated outages related to data availability and the ISO's resource adequacy platform cannot currently model such correlations in a sensible manner
- As noted in the roadmap, the ISO will further assess the potential impact of, and potential approaches to correlated outages (beyond the gas market constraint) after the CAR design is completed
  - This work will inform whether the ISO will develop approaches to further address correlated outages in future work

Resource Operational Characteristics

- Stakeholders asked for further information about the ISO's thinking with regards to modeling resource start times
- As discussed previously, it is not feasible to consider resource start times for CCP 19 due to technical limitations
- While the ISO intends to focus on designing CAR for CCP 19, it will further consider whether it is sensible to evaluate approaches to model resource operational characteristics such as start-up times after CAR is completed

Employing a Sequential Auction Structure

- For CCP 19, the capacity auction for each season will be conducted independently (i.e., sequentially)
- ISO assessed the possibility of developing a simultaneous auction framework that spanned multiple seasons, and concluded that the risks of pursuing this approach for CCP 19 outweighed the benefits:
  - **Scope Objective 1**: Uncertainty regarding the feasibility of developing a complete and fully vetted simultaneous clearing design for CCP 19 (e.g., rules governing capacity awards and prices)
  - **Scope Objective 2**: The time and resources needed to pursue such a design would take away from other parts of CAR, including the RAA modeling and accreditation efforts

Employing Sequential Auction Structure (con't)

- The ISO is interested in exploring the feasibility and pros/cons of simultaneous clearing for future auctions
  - For example, what other changes to offer parameters, pricing rules, and the auction schedule may be necessary to accommodate a simultaneous clearing approach
- The ISO plans to continue assessing the feasibility and pros/cons of a simultaneous clearing after the CAR design for CCP 19 is completed
- This assessment will inform whether the ISO pursues a simultaneous auction structure for future CCPs

Obligations of Resources with Reliability Must Run (RMR) Contracts

- Participants have inquired about when the ISO can “call” on resources with RMR agreements
- Resources with RMR agreements are expected to offer into the day-ahead and real-time energy markets in a manner similar to other capacity resources
- In the operating timeframe, resources are economically committed and dispatched based on their energy supply offers
  - This commitment and dispatch includes resources with RMR agreements

Maintaining Current Retained Resource Pricing Rules

- At the September MC, the ISO outlined its rationale for maintaining its current pricing rules that treat resources retained for local transmission security as price takers in the capacity auction
- Following up on stakeholder comments and questions, we have published a memorandum that further explains the basis for the ISO's view on this matter

Transmission Security Retained Resource Treatment

- The ISO does not currently anticipate RMR retentions
- As described in the Annual Work Plan, the ISO will make any conforming changes to the RMR pricing framework after the initial CAR project is completed
- These changes will aim to ensure that there are not adverse impacts to pricing or market outcomes that arise from the prompt, seasonal, and accreditation reforms

Retained Resource Treatment: Energy Security Considerations

- The logic outlined in the posted memo is most applicable to retentions for local transmission security, where the reliability need is specific to a localized area
- As described in the Annual Work Plan, for energy security retentions, the reliability need that triggers the retention is likely broader and likely could be met by many resources that may not be paid comparably to the retained resources, if the price taker treatment was extended to such retentions

Retained Resource Treatment: Energy Security Considerations (con't)

- The ISO does not plan to resurrect those retention provisions; however, if it ever found itself in a future situation where it needed to again consider retaining resources for energy security, it commits to simultaneously assessing and including a different pricing mechanism for stakeholder consideration
  - Once the CAR design is filed with FERC, the ISO may have more information on CCP 19 retirements that could guide the need for and timing of an assessment and stakeholder discussion
  - The ISO's reflection on this item should not be construed as a signal of the need for any energy security retentions

Requests Related to Impact Assessment

- With the CAR effort in front of us, ISO does not plan to revisit earlier Impact Analysis (IA) results
- The expected changes to the accreditation modeling, seasonal demand curves, and other key features mean the earlier IA results are no longer applicable
- While the ISO will focus its attention on the CAR proposal, the stakeholder IA feedback is appreciated, and we will strive to provide information responsive to this feedback including:
  - Providing qualitative (directional) guidance on design components as they are discussed
  - Providing quantitative market impacts as soon as they become available
  - Explaining the drivers behind market changes observed in the IA

OVERVIEW OF CAR SCHEDULE

Today's Schedule Discussion is Preliminary

- Schedule shown today reflects the ISO's current thinking based on the information presently available
- Given that the work is in its early stages, the schedule for some items is likely to shift as we learn more about the work involved
- The ISO will update stakeholders if/when such schedule changes are identified

Schedule Summary

The ISO plans to pursue two filings under CAR

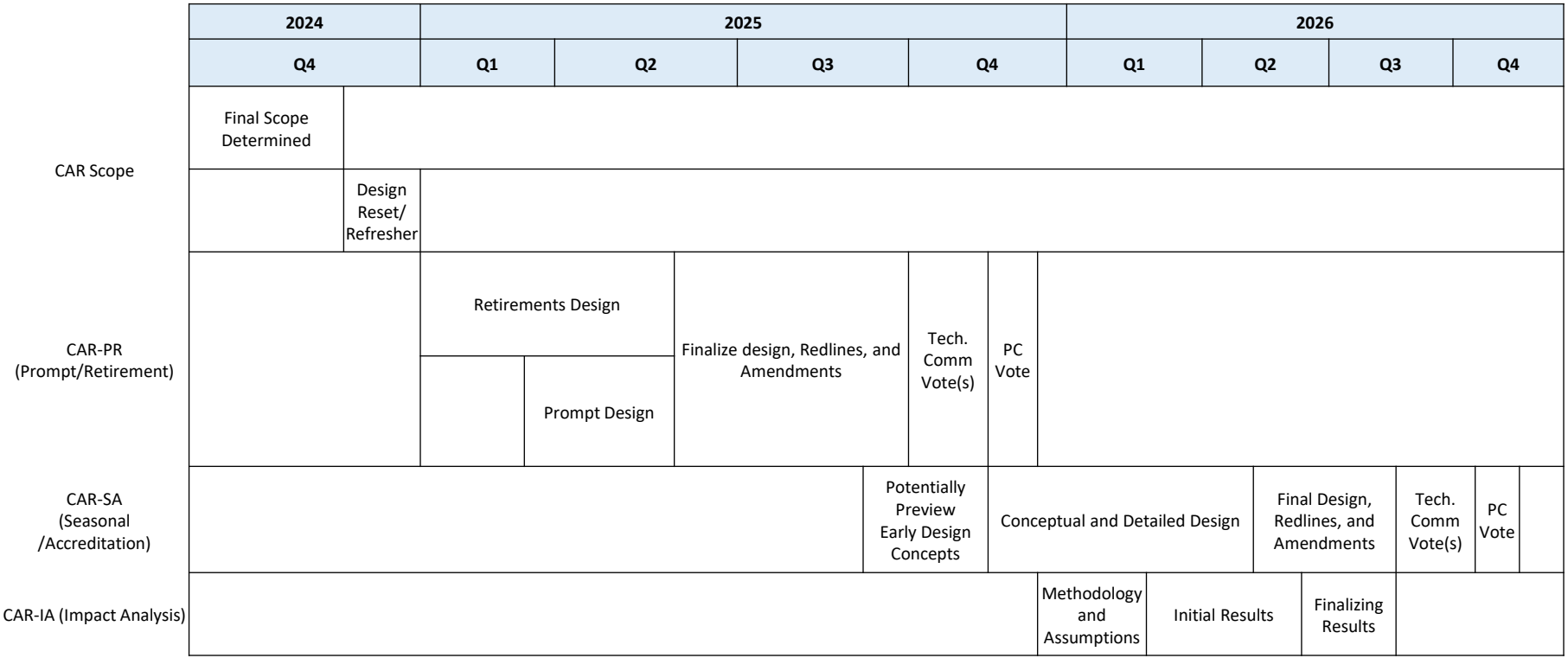
- Filing 1: Prompt market and retirement reforms
  - Start discussion of proposed design in Q1 of 2025
  - Target filing date: Q4 of 2025
- Filing 2: Seasonal market and accreditation reforms
  - Start discussion of proposed design in late 2025
  - Target filing date: Q4 of 2026
- Next: Further detail on preliminary schedule

Current Thinking: Stakeholder Process - Overview

There are several broad phases laid out in the anticipated stakeholder process:

- Capacity Auction Reforms - Prompt and Retirements (CAR-PR)
  - Final scope and design reset/refresher: Q4 2024
  - Conceptual & Detailed Design: Q1 2025 – Q2 2025
  - Finalize Design, Review Tariff Language, and Stakeholder Amendments: Q2 2025 – Q3 2025
  - Voting: Q4 2025 (Technical Committees) and Q4 2025 (Participants Committee)
- Capacity Auction Reforms – Seasonal Accreditation (CAR-SA)
  - Conceptual & Detailed Design: Q3/Q4 2025 – Q2 2026
  - Finalize Design, Review Tariff Language, and Stakeholder Amendments: Q2 2026 – Q3 2026
  - Voting: Q3/Q4 2026 (Technical Committees) and Q4 2026 (Participants Committee)
- Capacity Auction Reforms – Impact Analysis (CAR-IA)
  - Projected earliest review of methodology and assumptions: Q4 2025
  - Projected earliest review of initial results: Q1 2026
  - Final Results: Q3 2026

Current Thinking: Stakeholder Schedule for CAR



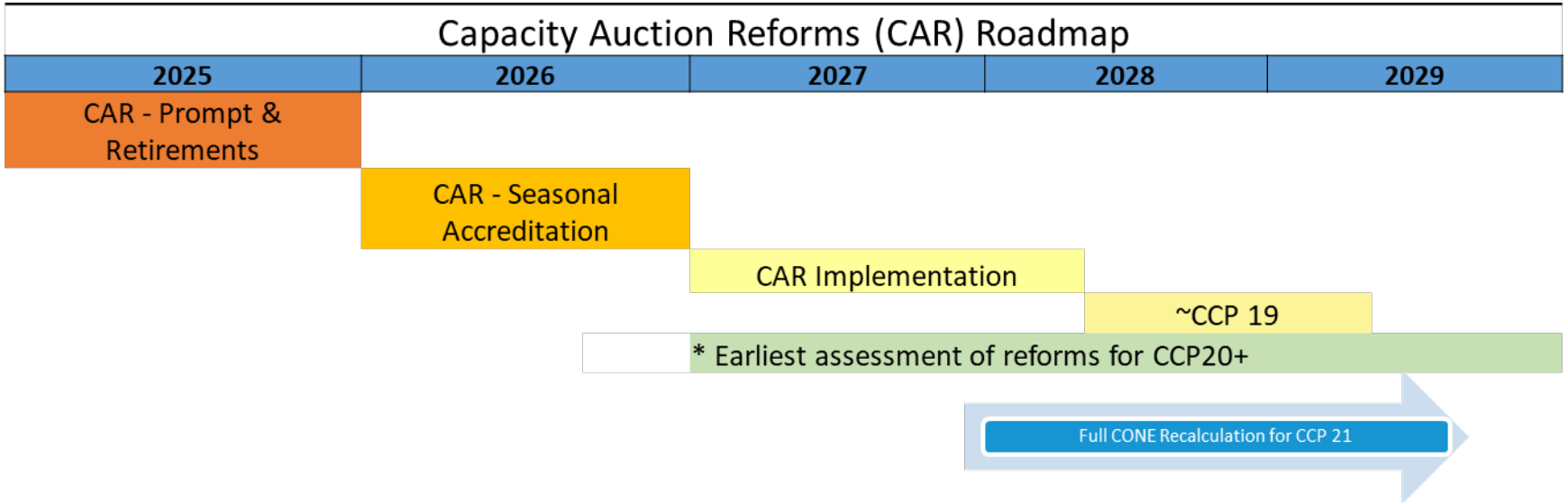
POTENTIAL POST-CAR ROADMAP

Anticipated Areas for Future Assessment

After CAR is completed, the ISO will assess the feasibility and potential benefits associated with various design additions, including:

- Development of simultaneous clearing of seasonal auctions
- Correlated outages for various resource types (beyond the gas constraint)
- Modeling of resource operational characteristics such as start-up time
- Full Cost of New Entry (CONE) Recalculation for CCP 21
- Conforming changes for transmission security retentions
- Treatment of resources retained for Energy Security, as needed

Potential Post-CAR Roadmap



Conclusion

- The ISO appreciates the feedback and priorities shared throughout the CAR scope development process
- The ISO looks forward to working with stakeholders to develop a CAR design that achieves the outlined scope for CCP 19
- The ISO also looks forward to continuing the work to develop capacity market reforms via future assessments that are not included in the CAR scope
- The earliest effective date for future assessments would be CCP 20 and beyond

Questions

APPENDIX

Full CONE Recalculations for CCP 21

- The ISO intends to develop a new set of auction parameters, including the determination of the reference technology, for the auction associated with CCP 21
- This periodic recalculation of the CONE is an estimate of the cost to build a new resource in New England, and Net CONE is an estimate of the net revenue needed for the resource to be economically viable
- As many stakeholders are aware, the full Net CONE recalculation process requires significant time but is critical to ensure that the capacity market meets its NPCC resource adequacy objective