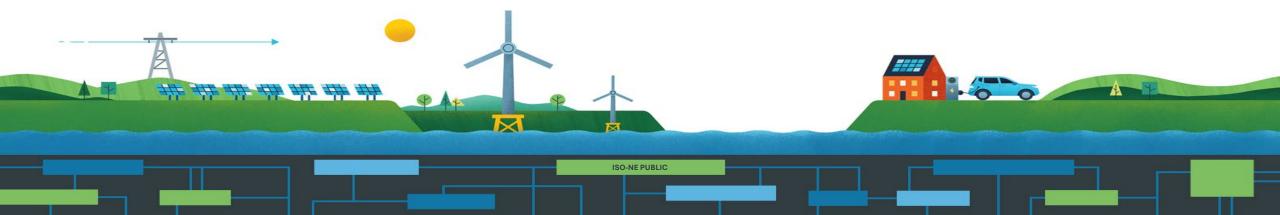


Capacity Auction Reforms: Prompt/Deactivation (CAR-PD)

Overview of CAR-PD Proposal

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Proposed Effective Date: Q2-Q3 2026

- CAR-PD includes changes to run the capacity auction shortly before the start of the delivery period and reform the process by which resources exit from the ISO markets
- The ISO aims to better ensure power system reliability and costefficiency as New England's resource mix evolves
- The move from a forward to a prompt market with the requisite changes to the deactivation (retirement) process should help the region reflect more accurate information and more efficiently project and clear capacity
- This presentation provides an overview of the changes proposed under CAR-PD



Purpose of Today's Presentation

- Provide a higher-level overview of the CAR-PD proposal to date
- Pull together the various design components to illustrate how pieces of the proposal fit together
- Highlight some of the benefits of moving to a prompt auction, and how they are achieved with the ISO's proposal
- This discussion aims to focus on key themes and changes, rather than focusing on every design detail
 - Design details are covered in discussions of specific design areas and the corresponding Tariff language
- Complements <u>CAR Proposal Information summary</u>, which the ISO has been providing ahead of each Markets Committee to help summarize the many design components of the project

Background: Region's Decision to Pursue CAR

- The ISO began exploring the move to a prompt auction during its earlier efforts in Resource Capacity Accreditation (RCA), which found synergies between the accreditation changes and other capacity market reforms, including prompt and seasonal markets
- In evaluating how to proceed, the ISO asked the Analysis Group (AGI) to assess the merits of moving to a prompt and seasonal auction
- AGI's analysis found numerous benefits to such reforms

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AGI's Analysis Supported Move to a Prompt and Seasonal Capacity Market

- AGI's analysis found several benefits associated with moving to prompt related to the improved information available to the ISO and market participants in a prompt timeframe, including:
 - Reduced risk for capacity sellers due to having better information about market conditions and operational characteristics (<u>ISO's April 2024 MC presentation</u> expanded on this to show how this could improve market efficiency, see slides 10 to 12)
 - Numerous benefits associated with ensuring all participating capacity is commercial
- AGI estimated that this reduction in risk may lead to lower capacity market prices and costs across a range of conditions
- More detail is available in <u>AGI's report</u>

Capacity Auction Further Delay Filing

- Based on the ISO's assessment, AGI's recommendation, and discussions with stakeholders, the ISO filed Tariff changes to further delay the primary auction for CCP 19 to allow time to develop broad reforms including:
 - Move to a prompt market
 - Introduction of seasonal commitment periods and auctions
 - Accreditation reforms based on capacity's marginal reliability value
- The filed Tariff provisions do not include the design of a prompt auction, and instead simply push back the existing Forward Capacity Auction calendar by three years for FCA 19
- Proposal was 'overwhelmingly approved' by stakeholders, and the joint ISO and NEPOOL filing was approved by FERC

CAR Schedule

- Upon FERC approval of the Further Delay Filing, the ISO began working with stakeholders to develop capacity market reforms
 - Scoping discussions began in Q3 of 2024
 - Detailed discussion of the proposal began in Q1 of 2025
- Plan to split CAR components into two filings:
 - CAR-PD: Includes the move to a prompt auction and deactivation reforms, targeting a filing in late 2025
 - CAR-SA: Includes the seasonal commitment periods and accreditation enhancements, with a targeted filing in late 2026
- Provides opportunity to get feedback from the FERC in response to the first filing

Themes from Scope Discussions

- Keep scope narrow where possible
 - Even with a narrow scope, ISO is proposing three very significant changes, each of which is its own large body of work
 - CAR reforms must be completed in time to be in effect for CCP 19
 - The ISO plans to continue pursuing capacity market enhancements after the initial CAR filings are submitted
- Prioritize 'bang for buck' in design items
 - Means not focusing on design elements that are not strictly necessary and are expected to materially change under CAR-SA
- Simplicity

Key Design Changes Under CAR-PD

- Development of a new deactivation process for exiting the capacity market
- Qualification rules require resources to be commercial in order to sell capacity
 - Reactivation rules outline how a resource that has deactivated may return to the capacity market
- Competitive offer and price formation; mitigation rules
- Auction format and process, including:
 - Move from a descending clock auction to a sealed bid auction
 - Elimination of reliability reviews for resources that do not sell capacity, but are not deactivating
- Creation of a new capacity market activity schedule
- Changes align with CAR-PD topic areas introduced at the <u>December 2024 Markets</u>
 Committee

Key Benefit: Prompt Auction Improves Auction Efficiency Through More Accurate Inputs

- A prompt auction allows the ISO to derive capacity demand using up-to-date forecasts and information
- Capacity sellers can develop offers based on more recent information about resource capabilities and market conditions
- Particularly important with the rate of technological change and evolving public policies

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Key Benefit: Prompt Auction Addresses Phantom Entry Concern

- Requiring resources to be operational to sell capacity eliminates concerns regarding phantom or delayed entry, where the region may have procured capacity that is not available for the commitment period
- Phantom entry adversely impacts:
 - Buyers via the purchase of capacity not received
 - Other sellers via depressed capacity prices
 - Market efficiency as it may prevent other cost-effective capacity providers from selling capacity

Key Benefits: Additional Perspectives

- AGI report and <u>summary presentation</u>
- IMM memo and comments on further delay filing
- <u>EMM memo</u>, <u>comments on further delay filing</u>, and <u>Annual Markets Report</u> (AMR)
 - Changes help address several AMR recommendations
 - Move to prompt addresses one of EMM's 'high benefit' recommendations (2021-1)
 - Developing a sealed bid auction structure, as proposed under CAR-PD, will address another EMM recommendation (2015-7)
 - Accreditation reforms being pursued under CAR-SA will address another 'high benefit' recommendation (2020-2)

DEACTIVATING RESOURCES

Prompt Auction Allows for More Efficient Deactivation Design

- Under the forward market, resources considering deactivation give notice to the market more than four years ahead of their intended deactivation date
- Key prompt benefit: Allows resources to make this determination much closer to the intended deactivation date
- Participants can consider more up-to-date information about resource operating characteristics and market conditions in deactivation decisions, leading to more efficient outcomes
- The ISO's deactivation proposal includes several changes and enhancements based on valuable stakeholder feedback

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CAR-PD Proposes a One-Year Deactivation Notification Timeline

- Participants would give Deactivation Notification one year ahead of the intended commitment period
- In response to stakeholder feedback, timing was shortened (originally proposed a two-year notice) to reflect further consideration of tradeoffs between:
 - Longer deactivation timeline, which gives market time to respond and may reduce duration of any RMRs, and
 - Shorter deactivation timeline, which allows participants to use better information about market conditions and resource operational capabilities to make a deactivation decision
- The shortened notification timeline leverages the benefits of the improved information available to the market ahead of a prompt capacity auction

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Deactivating Resource Reliability Reviews are Similar to Today

- If a resource that submits a Deactivation Notification is needed for local transmission security, the ISO will seek to retain the resource via an out-ofmarket contract to allow time for a solution to be developed before the resource deactivates
- At the end of the resource's contract, it would deactivate
- This process would be similar to current rules
- Note: As discussed later, the ISO is proposing under CAR-PD to discontinue reliability reviews for resources participating in the prompt auction that are not proposing to deactivate

Market Power Assessment for Deactivating Resources is Similar to Today

- Review includes two distinct components:
 - Assessment will look at whether deactivation appears to be economically sensible (conduct test); results of this assessment are confidentially filed with FERC
 - Whether a market participant has an incentive to physically withhold the deactivating resource (impact test)
- If a resource fails both tests, a proxy supply offer at the competitive price is entered on behalf of the deactivating resource, like today
 - Competitive price considers costs that would be avoided if the resource deactivates, much like with the current proxy Retirement De-List bid
- Use of proxy supply came after stakeholder feedback on the earlier Market Power Charge design concept
 - Use of proxy supply protects the market from higher prices in cases where an exercise of market power is suspected, but does not provide a price signal reflecting the resource's exit to the market

CAR-PD Deactivation Proposal: Other Key Mechanics

- Deactivations cannot be revoked
 - Shortening the deactivation notification timeline to one year and the allowance of reactivations (discussed further in the next section) help to reduce any impacts associated with making deactivations irrevocable
 - Allows the market to respond to deactivations with more certainty
 - Allowing revocability would raise a number of challenging design questions related to interconnection service, study assumptions, allocation of costs, etc.
 - The ISO understands interest in exploring this idea further in the post-CAR roadmap
- Deactivations can be accelerated if the resource does not have any outstanding CSO positions, if it is not needed for reliability, and if it is not deemed to be exercising market power

CAR-PD Deactivation Proposal: Market Impacts

- Many elements of deactivation align with current retirement rules, including:
 - Assessment of market power and remedy if found
 - Reliability review criteria and remedy
- Key changes include timing and the fact that a decision is now made ahead of the market
- The ISO does not expect these changes to lead to systematically higher or lower capacity market prices and costs
 - If CAR-PD's shorter notification timeline leads a resource that would otherwise exit to remain in the market and sell capacity, this could decrease capacity prices and costs
 - If CAR-PD's shorter notification timeline leads a resource that would otherwise remain in the market and sell capacity to exit, this could increase capacity prices and costs

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QUALIFICATION RULES

CAR-PD: Qualification Overview

- Interconnection service will generally be established outside of (and ahead of)
 the capacity market, as outlined in FERC Order No. 2023
- Process to establish QC will broadly be consistent with current rules, and in many cases, will be based on the resource's Seasonal Claimed Capability (SCC) ratings from recent audits
- Two key changes:
 - 1. Timing: QC values will be established closer to the CCP given the prompt auction timing
 - 2. Basis: QC values for all resources are established using observed resource performance

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Key Benefit: A Prompt Auction Allows Qualification to Better Align with Resource Capabilities

- Timing allows for QC values to more accurately reflect resource capabilities leading into the CCP
- Requiring all resources to be commercial addresses an existing concern regarding phantom capacity, where the forward auction procures capacity from non-commercial resources that do not become commercial for the CCP
 - Phantom capacity results in consumers paying for capacity that does not provide reliability value to the region
- Improves market efficiency and system reliability
- Also reduces risk to capacity suppliers

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CAR-PD Enhances Ability of Deactivated Resources to Reactivate

- Resources that have chosen to deactivate and wish to reenter can do so
 - No longer subject to an investment threshold
- With the elimination of the new versus existing distinction under CAR-PD, concerns about 'toggling' no longer exist
- Any reactivating resources that had a Cost-of-Service Agreement (COSA)
 would be subject to a claw-back provision regarding certain payments
 associated with the COSA
- Must follow the same process as other new resources, including:
 - Go through a cluster study to establish CNRC
 - Demonstrate that they are commercial
- Reduces barriers to entry, which improves market efficiency

Repowering Provisions

- Participants can continue to modify an interconnection agreement as allowed under current rules
 - Enables the participant to transfer the portion of the CNRC/CNRIS that is not being modified from the old resource to the new resource
 - These provisions, which relate to the interconnection process, are not impacted by CAR
- Resources that undergo a material change including repowering will need to meet the same criteria as all other resources before participating in a prompt auction
 - Establish interconnection service
 - Demonstrate commerciality to get a QC value
- Resources that repower in the interconnection space will no longer be subject to an investment threshold in the capacity market, thereby reducing barriers to entry
- For more information, see the <u>ISO's March 2025 memo on repowering</u> and the August detailed design deck on qualification

CAR PD Qualification Rules: Market and Reliability Impacts

- Establishing QC values shortly before the CCP will improve market efficiency by more accurately aligning how much capacity resources can sell with their actual capability
- This could increase or decrease market prices and costs
 - If using more accurate data allows resources to sell more capacity (e.g., improved performance or new resources that become commercial ahead of schedule), this will tend to decrease prices and costs
 - If using more accurate data leads resources to sell less capacity (decreased performance or phantom entry), this will tend to increase prices and costs
- Using more accurate qualification values will decrease the risk that system reliability is adversely impacted by phantom entry

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COMPETITIVE OFFER AND PRICE FORMATION AND MITIGATION

Stakeholders Identified Competitive Offer and Price Formation as a Priority Item in CAR-PD Discussions

- A number of stakeholders across a range of sectors highlighted competitive offer and price formation as key items to discuss as part of CAR
- ISO noted this priority in its scope discussions
 - See slide 20 of its August <u>2024 MC presentation</u>

ISO Assessment: Competitive Offers

- The same logic that informs competitive offers under a forward auction applies to a prompt auction
- Competitive offers are based on the resource's next best alternative
- This may consider capacity costs that can be avoided as well as opportunity costs (e.g., forgone PFP revenues due to having a CSO)
- Importantly, competitive offers should not include costs that can no longer be avoided
- Like today, Market Participants may need to forecast expected future costs and revenues when making long-term investment decisions
- Discussed in ISO's <u>March 2024 MC presentation</u>, slides 25 through 39

ISO Assessment: Competitive Capacity Clearing Prices

- Some resources may offer their capacity at lower prices in a prompt market if costs that would have been avoidable in a forward setting are now sunk (if incurred)
- However, the ISO does not expect capacity clearing prices to be systematically higher or lower in a prompt market
- Resources will continue to make investments if they expect to recover these costs through the energy and capacity markets
- The capacity market demand curve will continue to be derived based on capacity's marginal reliability impact (MRI)
- In other words, the ISO expects the same resources to sell capacity in a prompt or forward setting, and this would result in similar capacity prices
- Discussed in ISO's March 2025 MC presentation, slides 40 through 53

Seller-Side Market Power: Cost Workbook

- Capacity sellers submitting a price at or offer above the Capacity Offer Price
 Threshold (COPT) (discussed further in a couple of slides) will be required to
 submit a cost workbook that supports this price
- The cost workbook will continue to use the logic that a competitive offer price is based on the change in costs/revenues if the resource did not sell capacity and instead pursued its next best alternative
- Market Participants will have the opportunity to consult with the IMM with the aim of reaching an agreement on the cost workbook ahead of submission

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Seller-Side Market Power: Pivotal Supplier Test

- Like today, if the IMM concludes that a resource's submitted offer ceiling price exceeds its competitive value, it conducts a pivotal supplier test (PST)
- The PST assesses if the Market Participant's portfolio is sufficiently large that without it, the ISO would procure less capacity than its Net Installed Capacity Requirement (NICR) or relevant Capacity Zone's Local Sourcing Requirement
- If a resource fails both tests, its offer price is replaced with the IMM's determination of its competitive offer price
- As part of the post-CAR roadmap, the ISO plans to assess whether further changes to the PST (e.g., to an impact test) should be pursued

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Buyer-Side Market Power: Nature of Review is Unchanged

- The ISO is not proposing to change the set of resources subject to buyer-side market power (BSMP) review (Lane 3)
 - Have not previously sold capacity
 - Above 5 MW threshold
 - Not a sponsored policy resource
 - Not Seasonal Peak DR or On-Peak DR
 - Participant and its Affiliates or partners are a load serving entity or are receiving out-of-market revenues from a load serving entity
 - Appendix includes more information on the criteria governing lanes
- Such resources will be subject to an offer floor price based on the estimated competitive costs of developing the resource

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Buyer-Side Market Power: Timing

- Currently, the BSMP process is conducted in advance of the forward auction
- Move to a prompt auction affords more flexibility with regards to when this determination would occur
 - Aligns with the fact that resources will have different development timelines
- With the prompt design, the ISO will allow resources to submit cost information and receive their offer floor price nearly as early as under the current rules (3+ years ahead of the CCP), but will also allow participants to request their offer floor price up until one year before the start of the CCP
 - Allows resources that can be developed over shorter timeframes to get an offer floor price that more accurately reflects their expected costs and revenues

Other Mitigation Mechanics

- All resources that have qualified to participate in the prompt auction are effectively existing resources because of the requirement to achieve commercial operation ahead of the auction
- Therefore, all resources are subject to the seller-side market power review process
- Offers will be reviewed by the IMM if they are priced at or above the COPT, which will be developed in a manner consistent with the current Dynamic Delist Bid Threshold (DDBT)

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CAR-PD: Offer/Price Formation and Mitigation Market Impacts

- As explained in earlier materials, the ISO does not expect changes in the offer timing to materially impact capacity prices
 - If the timing reduces risks for capacity suppliers because of improved information regarding market conditions or operational capabilities, this could result in lower costs due to the corresponding efficiency gains
- The mitigation rules are largely consistent with those that exist today and are not expected to materially impact market outcomes relative to current rules

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AUCTION MECHANICS AND ACTIVITY SCHEDULE

Move to a Sealed Bid Auction

- Under CAR-PD, the ISO would discontinue the use of a descending clock auction (DCA) structure
- This change in auction format impacts how resource offers to sell capacity are collected
 - Auction clearing and pricing rules are unchanged from those used today with the DCA
- Not expected to materially impact market outcomes, although this could reduce the likelihood that participants can exercise market power to increase capacity prices by leveraging information made available during the auction
- This change is consistent with the EMM's recommendation, is responsive to stakeholder input regarding the auction structure, and simplifies elements of the auction administration

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Priced Capacity Offers

- All participating resources are expected to make priced offers
- Will allow resources to submit up to 10 price-quantity pairs associated
 - Increase from the 5 price-quantity pairs initially proposed (and used today)
 - This increased functionality was requested by stakeholders
- Numerous rules are consistent with those used today, including:
 - If a participating resource does not submit an offer, it is (generally) treated as a price taker in the auction (e.g., it is willing to sell its capacity at any price)
 - Allowance of self-supply (though timing is updated to allow maximum flexibility to use this provision)
 - Allowance of composite offers
 - Treatment of deactivating resources retained for local transmission security

Eliminate Reliability Reviews from Primary and Monthly Auctions

- The change in auction timing allows the ISO to leverage its outage coordination process as the basis for reliability reviews
 - The ISO will continue to work closely with participants to schedule outages during periods that address their needs while maintaining system reliability
 - The ISO cannot require a resource to reschedule an outage if it does not have a CSO
 - Eliminates need for outage blackout periods
- Decoupling reliability reviews from the capacity market also allows the auctions (annual and monthly) to be held closer to the delivery period
 - Helps facilitate more participation and allows resources to use more up-to-date information
- Reliability reviews will continue for deactivation notifications that would otherwise result in the resource permanently exiting the capacity market

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Discontinue Annual Reconfiguration Auctions

- No longer necessary with the move to a prompt auction
- The ISO understands that some participants are interested in exploring additional opportunities to trade CSO MW before the prompt auction within the commitment period
- The ISO plans to assess further as part of the post-CAR roadmap
- See <u>July 2025 Markets Committee</u> materials for further discussion of trading opportunities

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Information Publication and Filings

- Proposal continues with several FERC filings, including:
 - Market power review associated with deactivations
 - ICR and related values
- The ISO will continue to provide information regarding auction parameters and results through public postings
- Allows for shorter pre-auction activity schedule and for the auction to be run as close to the commitment period as possible
- Helps facilitate the benefits of moving to prompt
 - Most up-to-date inputs and information used for the auction
 - Supports participation of recently commercial resources
- Will also help as the ISO moves to seasonal auctions

Capacity Activity Schedule

- Order No. 2023 means the interconnection process is largely separate from the capacity market
 - Resources will generally obtain CNRC before participating in the capacity auction
- Pre-auction activity schedule includes many of the same activities and processes that occur with today's 3+ year forward FCA, including:
 - Buyer-side market power review (1 to 3.5 years ahead of CCP)
 - Deactivation notifications (1 year ahead of CCP)
 - Development of ISO-administered auction demand parameters such as Net ICR, MRI-based demand curves, zonal modeling determinations (15 months to 6 months ahead of CCP)
 - Determination of ISO-administered supply parameters, including the COPT, Capacity Auction Offer Price Cap and resource qualification values (9 months to 2 months ahead of CCP)
 - Participant-submitted supply parameters, including priced supply offers, self-supply and composite offer designations (4 months to 1 month ahead of CCP)
- Prompt auction is run <1 month before the start of the CCP
- Monthly reconfiguration auctions are run ~1 week ahead of the relevant month

Stakeholder Feedback is Valued

- Feedback has been appreciated and has been incorporated throughout the CAR-PD process. The following examples are not an exhaustive list of contributions to the design but show the ISO's continued collaboration and openness:
 - Shortening the deactivation notification timeframe
 - Changing the market power charge for deactivations to proxy-bid treatment
 - Changing the deactivation nomenclature for ease of stakeholder reference
 - Updating buyer-side market power timeline to reflect resource development timelines
 - Continuing CPS monitoring
 - Increasing the number of price quantity pairs that can be submitted

Conclusion

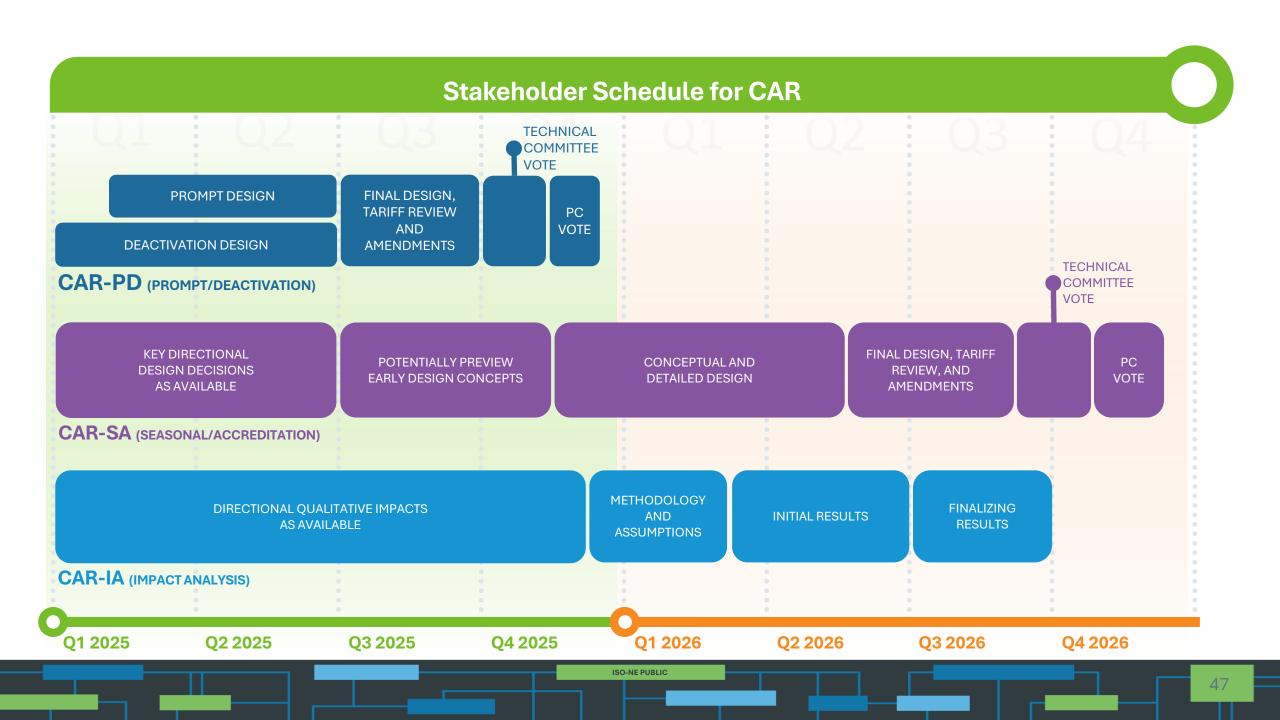
- The ISO is finalizing its CAR-PD proposal
- The proposal has been discussed across a number of NEPOOL meetings and has benefited greatly from thoughtful stakeholder feedback
- The proposed changes offer many benefits, including:
 - Ensures that all resources that sell capacity are commercial, thereby addressing the 'phantom entry' concern
 - Improves the accuracy of information used to determine auction inputs, parameters, and costs, leading to more efficient outcomes
 - Simplifies many auction participation and administration elements
 - Helps facilitate the move to seasonal markets with accreditation reforms
- These benefits are expected to facilitate the region's transition to the future grid
- The ISO looks forward to continued stakeholder discussion and feedback
- Please submit any additional questions or feedback following the meeting in writing to James Woods (<u>iwoods@iso-ne.com</u>) by August 19, 2025

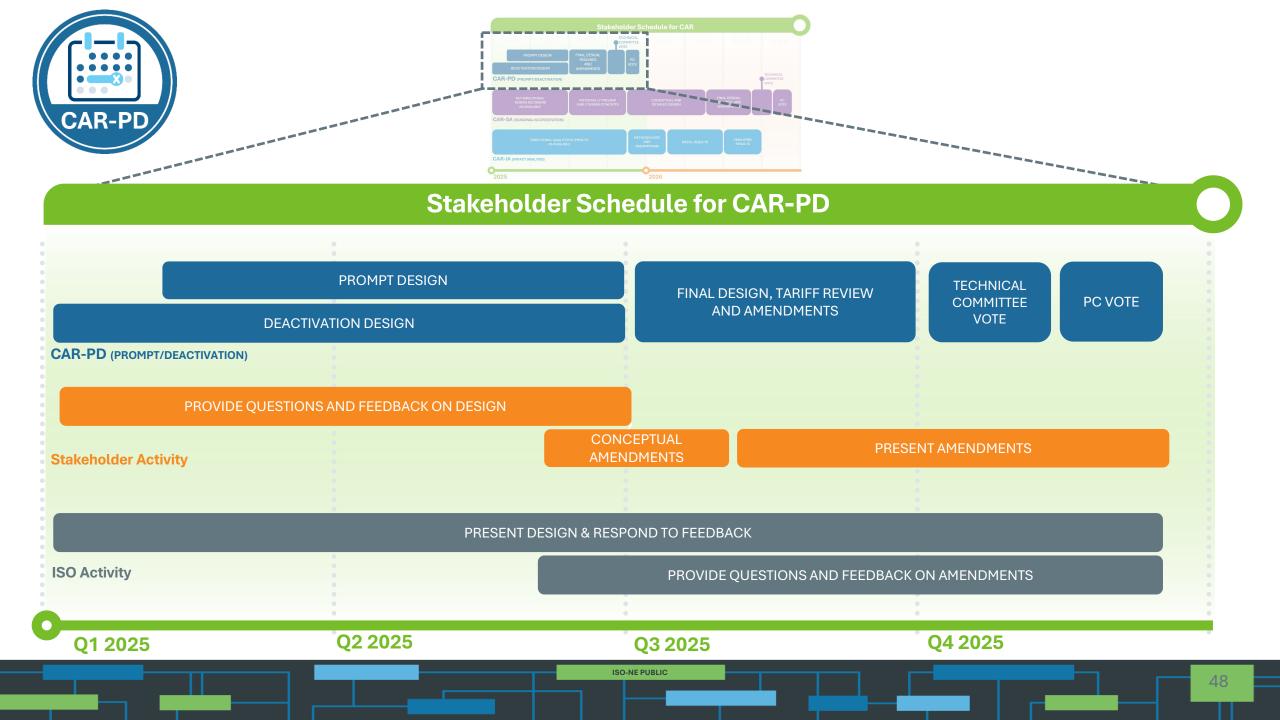
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Questions



STAKEHOLDER SCHEDULE





CAR-PD Schedule Projection

August

 MC/RC/TC Joint Meeting: A summary of the CAR-PD design will be provided, along with a review of detailed design refinements and a review of core Prompt Tariff revisions.

September

- MC: Review design refinements and continue review of Tariff revisions. Stakeholders proposing amendments should contact the MC Secretary for time on the agenda by August 27, 2025
- RC: Review design refinements and continue review of Tariff revisions. Stakeholders proposing amendments should contact the RC Secretary for time on the agenda by August 27, 2025
- TC: Review design refinements and continue review of Tariff revisions. Stakeholders proposing amendments should contact the TC Secretary for time on the agenda by August 27, 2025
- October Technical Committee Votes
- November Participants Committee (PC) Vote

All NEPOOL members are invited to attend meetings where CAR topics are discussed

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APPENDIX

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Buyer-Side Market Power: Determination of Lanes

- Lane 1: New resources that are less than 5 MW or are passive demand
- Lane 2: Competitive entrants or Sponsored Policy Resources
- Lane 3: New resources that do not fit into Lane 1 or Lane 2
- For more information on lanes, see the <u>ISO's May 2025 presentation on mitigation</u>, slides 10 to 14