

Capacity Auction Reforms (CAR)

WMPP ID: 184

Earliest Target Effective Date: Q2-Q3 2026

- The CAR project includes a change in auction timing, where a prompt auction held shortly before the start of the Capacity Commitment Period (CCP) would replace the Forward Capacity Auction that has been used to date
- The move to a prompt capacity market is expected to send more accurate price signals, recognizes changing market conditions and helps prevent resources from selling capacity they can't deliver
- Today's discussion builds upon the high-level overview from March, and provides further details on several key prompt topic areas including competitive offer and price formation, mitigation in the prompt market, reliability reviews, and the ICR process



Anticipated Capacity Market Reforms under CAR

- The ISO plans to make three sets of foundational changes to its capacity market for the Capacity Commitment Period (CCP) that begins in June 2028
 - Change the auction timing from 3+years forward to prompt
 - Move from an annual auction that procures capacity for a 12month period to seasonal auctions
 - Introduce accreditation reforms to better align how much capacity a resource can sell with its contributions to resource adequacy
- Each of these changes is a significant body of work in and of itself

Objectives of the CAR-PD Phase of Work

- Facilitate change to a prompt auction, including necessary updates to auction processes and administration to make such an auction framework function effectively
- Where possible, simplify and streamline auction processes and procedures for the ISO and Market Participants
- Focus design work on changes that are necessary to develop a functional prompt design or that are needed to create a foundation upon which CAR-SA proposal can be built
- Using these objectives to guide the CAR-PD work will allow the ISO to complete this first phase of design work in 2025, thereby allowing the time necessary to complete the CAR-SA design by late 2026



CONTINUED DISCUSSION OF COMPETITIVE OFFER AND PRICE FORMATION

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Key Topics Discussed Today

- Summary of key takeaways from March
- Considering prompt's impact on social surplus
- Example: A forward versus prompt market for an existing resource
- Discussion of the example in the context of today's (long) market

Summary of Key Takeaways: Demand

- The fundamentals of the demand curve are unchanged with the move to a prompt market
- The design for demand will continue to be based on capacity's marginal reliability impact (MRI) value
- Demand curve specifies a willingness to pay for capacity based on the degree to which an increment of capacity would reduce expected energy not served
- This means that if a forward and prompt auction clear the same quantities of capacity, the clearing price will generally be the same
 - If the highest priced cleared supply offer falls below the corresponding demand curve quantity, the clearing price will be set using the demand curve



Summary of Key Takeaways: Supply

- Auction timing means that some costs which may be avoidable in a forward market may no longer be avoidable in a prompt market
- It is not consistent with competitive offer behavior for a resource to include costs that are not avoidable in a resource's offer price in a prompt market
- In either a forward or prompt market, investment decisions will be made based on whether the resource expects to recoup the costs of the investment via the markets
- This includes capacity, energy, and ancillary service markets
- In many cases, these costs would be recovered over a multiyear time horizon

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Summary of Key Takeaways: Capacity Prices

- Taken together, we would expect similar capacity clearing prices and total levels of capacity to be sold under a prompt or forward market
- This is consistent with the findings of the <u>2023 Analysis Group</u> <u>report</u>, assessing the move to a prompt and seasonal capacity market
- Report "conclude[s] that meaningful differences in long-run price formation between forward and prompt markets are unlikely to emerge" (page 56)

Evaluating Impact of Prompt Market on Social Surplus

- At the March MC, stakeholders asked if the move from a forward to a prompt market may impact social surplus
- Broadly, social surplus represents the gains from trade accrued to buyers and sellers
- In this discussion, it was noted that a prompt auction may reduce the risk associated with selling capacity for some suppliers, as they no longer need to make capital investment decisions 3+ years in advance
- The potential for this reduced risk in a prompt market is discussed in the <u>Analysis Group report</u> (page 34)

Prompt's Impact on Social Surplus

- Consider the impact on social surplus using a simple graphical example
- In this example, we assume resources A, B, and C each reduce their offer price under prompt to reflect a reduced risk associated with shorter period between the auction and commitment period
- This results in lower offer prices in the prompt market for each of these resources, corresponding with the reduced risk

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• *Next*: Show impact on social surplus

Social Surplus Increases Under Prompt

- Social surplus is shown as the shaded region in each figure
- When resource A, B, and C's costs to selling capacity decrease under prompt due to lower risk, social surplus increases by the blue shaded area



Existing Resource Example: Set Up

- Recall: At the March MC, the ISO walked through an example where a potential new resource was considering whether to enter the market under a forward and prompt market
- Key takeaway: The resource was extramarginal in the forward market and would not enter
 - Anticipating that it would not recover its costs in a prompt market, it would not get built
- Next: Discussion of how this logic extends to existing resources



Existing Resource Example: Fundamentals

- In the March example, the new resource considers these investment costs in its offer price in the forward market
 - It determines a capacity offer price based on its investment costs and how much capacity revenue it requires in year one
 - The offer price considers expectations about other market revenues including energy and ancillary service revenues across many years, capacity revenues beginning in year two
 - If it does not sell capacity in the forward market, the project does not move forward
- In the prompt market, the new resource instead makes its investment decision based on the expectation of capacity market revenues
 - In addition to expectations about energy and ancillary service revenues and capacity revenues from year two onwards, expectations now also include year one capacity revenues
 - If it does not expect to recover its investment costs, then it does not
 offer to sell capacity and the project does not move forward

Existing Resource Example: Fundamentals (con't)

- We now consider existing resource E which could make performance-related investments that would occur after the forward auction, but must be made before the prompt auction
- Investment would improve its performance and reduce its risk (and overall cost) to selling capacity
 - Costs to selling capacity with investment are \$7
 - Costs to selling capacity without investment are \$10
- Investment may include capital improvements to increase or maintain the resource's ability to perform and respond to PFP events
- Resource E would not incur these costs if it did not sell capacity (otherwise they are not avoidable)

Existing Resource Example: Forward Market

- We first consider resource E's decision in a forward market
- Resource E will offer its capacity at the lower price of \$7 and if it sells capacity, it will then make the investment
- In the forward market, the capacity clearing price is \$5 and resource E does not sell capacity because its costs to doing so exceed the reliability value provided
- Because it does not expect to recover the costs associated with the investment, resource E does not incur the costs

Existing Resource Example: Prompt Market

- We now consider resource E's decision in a prompt market
- Resource E now makes the decision about whether to make the costly investment before the prompt auction is run
- If resource E does not expect the capacity clearing price to be sufficiently high to recover the costs associated with the investment, would it incur them?
- No, resource E would not incur costs of \$7 in order to sell capacity at a price of \$5

What Does this Mean for E's Prompt Offer Price

- Resource E does not incur these costs because it does not expect to recover them via the capacity market
- As a result, E offers its capacity at a price of \$10, its costs to providing capacity when it does not make the investment
- This means E will again not sell capacity as its costs to doing so are greater than the clearing price (and reliability value, as implied by the capacity demand curve)

This Example In the Context of Today's Existing Extramarginal Capacity Resources

- Stakeholders noted that some existing resources have been extramarginal in recent capacity auctions
- For such resources, it is not economic to sell capacity because the costs to doing so exceed the capacity clearing price
- In some cases, this higher cost may reflect the fact that the resource would incur investment costs if it sold capacity (e.g., resource E)
- We would not expect such resources to sell capacity in a prompt market because, given that they do not expect to recover these investment costs, they would not incur them

This Example In the Context of Today's Existing Extramarginal Capacity Resources (cont.)

- Other extramarginal resources may not sell capacity because it is simply expensive for them to do so (say because of their performance and risk profiles)
- For such resources, the costs to selling capacity may not materially depend on the auction timing as they would not incur avoidable costs between the forward and prompt auctions
- We'd generally expect their offer price to be similar in a forward or prompt market
- If such a resource does not sell capacity in a forward market, the resource also would not be expected to sell capacity in a prompt market

This Example In the Context of Today's Long Market Conditions

- Stakeholders also noted that in recent capacity auctions, the market has cleared more capacity than the 1-in-10 Net ICR value
- There were questions about whether these market conditions impact the logic and expected outcomes associated with a move to a prompt market
- Generally, the ISO does not expect the current market conditions to meaningfully impact these outcomes

This Example In the Context of Today's Long Market Conditions (cont.)

- Logic noted in the discussion and examples is equally applicable under long or short market conditions
- In each case, we expect potential new resources to make entry decisions based on their expectations of future market conditions, and whether they'll recover their investment costs
 - If long conditions suggest lower market revenues, potential new resources would be similarly unlikely to enter under a forward or prompt market
- Similarly, expectations of lower capacity revenues may reduce the likelihood that some existing resources sell capacity if they do not expect to recover their costs
 - This occurs under either the current forward market or proposed prompt market



Key Takeaways From This Example

- Expect resources to make costly investments if and only if they expect to recover these costs through the wholesale markets
 - Includes energy, ancillary services, and capacity markets
 - This cost recovery may occur over several years
- This property applies to both new and existing resources
- There may be costs that are avoidable in a forward market that are no longer avoidable in a prompt market
- However, the ISO does not expect this to change the capacity clearing price or the set of resources that sell capacity



Summary and Next Steps

- This presentation provides additional details and explanation on the expected similarities and differences to competitive price- and offer-formation under a Prompt capacity market timeframe
- If you have further questions on this subject, please submit them to James Woods (<u>jwoods@iso-ne.com</u>) by April 23, 2025
- The ISO will continue to provide overviews on the key CAR-PD design areas and deliver further details on previously initiated design topics

Questions





STAKEHOLDER SCHEDULE









CAR-Prompt Topic Schedule

The list below provides a preliminary projection of when committee discussions will begin on the following CAR-Prompt topics:

Prompt Topic	Projected Start of Committee Discussions
Price Formation and Offer Formation	March 2025
Non-Commercial Participation	March 2025
Auction Design and Structure	March 2025
Activity Schedule Overview	March 2025
ICR Process	April 2025
Market Power and Mitigation	April 2025
Capacity Interconnection Service	May 2025
Resource Qualification Criteria & Process	May 2025
Activity Schedule Details	May 2025
Resource Auditing, Financial Assurance, Settlements, CSO Trading Activities	June 2025

CAR-Deactivation Topic Schedule

The list below provides a projection of when committee discussions will begin on topics related to the deactivation framework:

Deactivation Topic	Projected Start of Committee Discussions
Introduction and notification timeframe	January 2025
Additional design details on notifications and information release	February 2025
Reliability reviews	March 2025
Market power evaluation framework	March 2025
Market power evaluations detail	April 2025
Follow-ups and additional design details	May 2025
Introduce Tariff Changes	June 2025

