



Capacity Auction Reforms (CAR) – Additional Thoughts

July 22, 2024

Per ISO's guidance in the July Markets Committee Kick-Off Discussion of Project Scope discussion, Calpine offers the following thoughts. We are available to discuss these thoughts further with ISO at your convenience.

Thoughts on a manageable work plan

Below are general suggestions on how the ISO might proceed with a proposal to transition the capacity market to a prompt, seasonal, marginal-accreditation based market. The ISO might consider assessing this project by:

1. Defining the goal of the project – what are we trying to accomplish?
 - a. A clear goal helps define the overall scope of the project. Anything that doesn't contribute toward the goal is clearly out-of-scope.
 - b. Knowing the overall scope of the project helps establish applicable design principles and objectives of the project.
 - c. The scope of the project establishes how the goal will be achieved. Limiting the scope due to time constraints, for example, would restrict the project from achieving the goal.
2. Setting the scope of the project based on all that is needed to meet goal.
 - a. Here it may be possible to segregate different components contained within the scope based on their relative importance towards meeting the goal.
 - b. In layperson terms, the project may be 'chunked' up provided the separate components work independently (*i.e.*, sans any other components) and does not create barriers to the remaining components.
3. Establishing a workplan (a roadmap) for the project.
 - a. Here it may be possible to arrange the work into distinct steps or phases based on a careful ordering of one or more design components or 'chunks.'
 - b. Each phase could possibly have different filing and implementation dates, and the ISO may find a particular design component itself may also be accomplished over one or more phases.

In summary, the scope of the CAR project should not be limited to what can be achieved in the limited time available. If necessary, the project should be implemented in stages, possibly spanning more than one capacity auction.

Thoughts on #1. Defining the goal of CAR

The CAR project should propose process improvements to ISO-NE's Capacity Market construct, including a transition to marginal-based resource adequacy and accreditation, to further support a reliable, clean-energy transition by implementing methodologies that will more appropriately accredit resource contributions to resource adequacy as the resource mix transforms.

What we (collectively) want from this new CAR capacity market re-design.

- A superior mechanism for satisfying the planning requirements of New England.
- More specifically, improved market entry and exit signals by
 - Improving price formation (*e.g.*, eliminating the impact of phantom capacity), and
 - More accurate accreditation determination of all measures used to meet the reliability criteria (LOLE, and now EUE).

The capacity market design objectives stated by the ISO are still relevant.

- **Design Objective 1:** To ensure the system has sufficient resources to meet the region's one-day-in-ten reliability requirement, where "sufficient" is defined as having enough resources that can perform as expected in the right locations.
- **Design Objective 2:** To ensure that Design Objective 1 is achieved in a cost-effective manner.

Suggested goal of CAR project: Improve cost-effectiveness via improvements in accreditation

- Improvements should reduce all resources and measures (*i.e.*, tie benefits) with disparate features that may have different contributions towards the region's one-day-in-ten reliability requirement to a common, uniform, substitutable contribution measure (accredited capacity).

Thoughts on #2. Setting the scope of CAR.

Below is a suggested high-level listing of component CAR scope items (how the scope might be 'chunked' up).

- Prompt components:
 - Timing (*i.e.*, how prompt?)
 - Qualification requirements
 - Retirement notification coordination w/auction
- Accreditation components:
 - Qualification accreditation – uniform consideration all resources and measures used to meet the region's one-day-in-ten reliability requirement.
 - More specifically:
 - Determine accredited value of all internal capacity resources, tie benefits, and capacity imports similarly.
 - Incorporate all measures used to meet the region's one-day-in-ten reliability requirement into delivery accountability (*i.e.* PFP).
 - *We elaborate on these two key components below.*
- Seasonal components:
 - Defining specific seasons
 - When/how to conduct seasonal auctions

- How to translate annual requirements into seasonal requirements
- Additional components that seem necessary to include in seasonal scope.
 - Using Net CONE to set seasonal demand curves.
 - Price formation, more specifically:
 - Allowed costs in offers in seasonal supply offers.
 - Allowing two offers for non-firm fuel resources: one offer with and one offer without fuel firming costs.
 - Simultaneous clearing of seasonal auctions, more specifically ensure that resources can recover costs if they were to clear in only one season.
 - If a workable clearing optimization problem is more easily solved/achieved in a sealed bid construct, auction format (descending clock vs. sealed bid) should also be in scope.
- Other scope items that could possibly be compartmentalized, and perhaps even implemented in phases:
 - Cost allocation
 - The treatment of retained resources (RMRs)
 - ELCC modeling of operationally inflexible resources
 - Model platform improvements (e.g., replace GE MARS)
 - Model correlated effects (effects on/across similarly affected resources)

Thoughts on #3. Establishing a roadmap for CAR.

As stated earlier, the scope of the CAR project should not be limited to only what can be achieved in the limited time available.

- If necessary, the project should be implemented in stages which may span across more than one capacity auction (*i.e.*, past the limited time available to make changes for a 2028-29 capacity auction).
- Each phase could possibly have different filing and implementation dates, and the ISO may find a particular design component itself may also be accomplished over one or more phases.
- We suggest the ISO compile a comprehensive long-range work plan for the CAR project, outlining how the various scope items will ultimately be achieved.
- In simple terms, create a roadmap to get us to our goal. Aim high. Taking only half-measures for the sake of expediency will result in failure to reach the goal.

Specific thoughts on two key components that should be included in CAR scope.

- **Tie benefits.**
 - A similar accreditation methodology must be applied to tie benefits as well as all internal capacity resources if CAR is to be a comprehensive a proposal. Alternatively, ISO should require imports to be contractually firm and with exposure to PfP penalties.
 - We believe the ISO will be compelled to either include tie benefits in the CAR scope or explain why the disparate treatment relative to internal capacity resource with regards to accreditation is appropriate.
- **Clearing of seasonal auctions, more specifically:**

- **Simultaneous clearing.**
 - We have grave concerns with a seasonal construct that does not allow or permit resource's the opportunity to recover full (annual) costs. ISO could review the simultaneous clearing design that was developed by PJM (but ultimately not filed) as part of its recent capacity market reform.
 - We believe that simultaneously clearing seasonal auctions, with offers for each season and the entire commitment period must be in CAR scope.
 - At a minimum, ISO should allow prices to rise sufficiently high in a season for a resource to recover its full annual costs in a season, as FERC recently approved for MISO.
- **Seasonal Offer price formation.**
 - We believe that a more cost-effective means to clear a seasonal auction would be to allow resources that can augment their contributions to reliability with fuel firming contracts (*e.g.*, LNG) to submit two offers.
 1. One offer would include the cost of the fuel firming, and at a higher accredited value relative to the value of the resource as a non-firm resource.
 2. The other offer would not include the cost of the fuel firming, and at the lower non-firm accredited value.
 3. This way the clearing algorithm would decide the optimal amount of fuel firm capacity to procure, and the cost of fuel firming would be incorporated in the auction clearing price.
 - To the extent that ISO differentiates between resources with and without firm fuel, resources should be able to reflect the costs of firm fuel in offers. (This probably raises similar issues to IEP with respect to what firm fuel costs are incremental with respect to meeting the firm fuel requirements specific to a CSO associated with firm fuel.). Ideally, we would like to be able to offer both ways, but if we are going to be forced to offer as firm, we need to be able to reflect those costs. Some overlap with considerations with respect to auction timing, i.e., auctions should be held in a time frame that allows suppliers to alter firm fuel decisions.
 - We understand this combination would require complex clearing logic. We suggest that if solving that problem is easier in a sealed-bid framework relative to the descending clock format, the ISO also consider converting formats.