

To: Chris Geisler, James Woods
From: Alex Lawton, Advanced Energy United
Date: 08/14/2024
Re: United feedback on CAR straw scope

Last week, ISO-NE presented its [straw scope](#) on the workplan for its Capacity Auction Reforms (“CAR”), outlining which items will likely be in the core scope, which items are still being assessed, and which items will be omitted. Advanced Energy United (“United”) commends ISO-NE for providing opportunities for stakeholder feedback after each discussion and encourages this practice moving forward as it is essential the ISO considers alternative perspectives when making decisions that will impact the efficacy of the region’s wholesale markets for many years to come. Specifically, it is crucial that the CAR project produces an efficient, just, and reasonable capacity market that incents the future resource mix our region needs to ensure reliability at least cost, especially as the New England states seek to decarbonize the electricity grid. United thanks ISO-NE for considering the following comments that outline how the scope of the CAR project can align with this vision of the capacity market.

General Procedure

After its first discussion on CAR in July, ISO-NE acknowledged stakeholder feedback concerning the need for design objectives for the project as well as developing a high-level roadmap for the CAR project and beyond. United is glad to hear ISO intends to discuss a project roadmap in more detail later this year, and we encourage that discussion as soon as practicable. The roadmap will provide highest value if it outlines several potential filing approaches with corresponding timelines for stakeholders to provide feedback on. Similarly, as decisions on which items will be included or excluded from the CAR project scope are finalized, we request that ISO refine its roadmap by indicating its initial views on whether there is merit in pursuing those additional items deemed out of scope after the CAR project’s conclusion or whether it believes they are best not pursued at all. In the latter cases, an explanation will help stakeholders understand why the ISO has concluded that certain issues should remain out of scope.

With respect to design objectives, United notes that the [goals for capacity market design](#) that ISO proposes to apply to the CAR project were initially proposed in 2015, and proffers it would be appropriate to update these. For instance, since those capacity market objective slides came out, the ISO has made it part of its mission statement to support the transition to a clean energy system, and therefore tying in language about the transitioning resource mix should be inherent to the “sustainability” objective of the market. Since design objectives will be instrumental for measuring the success of the CAR project, we recommend that ISO-NE update them to reflect the objective of producing an overall market outcome that aligns with the energy transition.

In Scope Items

United commends ISO-NE for including in its straw scope (1) the development of the Market Constraint approach to gas availability on the system, (2) assessment of price formation in the market and auctions, and (3) the plan to complete an updated Impact Analysis. Fuel availability has become a constraint in the region, representing one of greatest limitations to gas unit performance. Concerningly, the current accreditation proposal's blunt derating of gas does not accurately capture the fuel actually available to these units. Therefore, it is essential that the ISO model this limitation to ensure reliability and compensate resources fairly. With respect to price formation, market participants will require transparency and predictability on what cost components they can include in their offer and have insight upfront into how a prompt and seasonal capacity market may impact price formation. Critically, the redesigned capacity market must provide revenue adequacy, in long-run expectation, to the marginal resource needed to provide resource adequacy. Lastly, the Impact Analysis will need updating at least once when other conforming changes are made for prompt and seasonal. These three items will be crucial to the success of the CAR project and United strongly supports keeping them in scope.

Capacity Accreditation

Given the paramount role that RCA plays in the efficacy of the capacity market and in facilitating the resource mix our region needs, United urges ISO-NE to include in the CAR workplan scope further time to address accreditation reforms. United is troubled by the lack of a clear intent from the ISO to address stakeholder feedback on the complex, opaque, and highly consequential framework for RCA. For many months, United and other stakeholders have shared and reiterated concerns regarding the transparency of the RCA framework. Specifically cited are concerns that without examples which simply and clearly demonstrate how the methodology and modeling assumptions impact a resource's accreditation value, uncertainty will persist and sow mistrust in the ultimate impact analysis' values. While RCA discussions have been ongoing for years, stakeholders received updated impact analysis results only recently, and there has been very limited opportunity since release of those results to unpack the relative impact of the underlying assumptions and design decisions on ultimate accreditation values. Indeed, when ISO released the first revised Impact Analysis earlier this year, it signaled that RCA reforms were ongoing and gave the impression there would be much more discussion and iteration on the RCA design, with subsequent Impact Analysis to be released. Moreover, in [ISO-NE's filing](#) to FERC requesting the delay to FCA 19, it indicated clearly that it would need to "further refine its approach to capacity accreditation" and would use this delay to "complete the combination of prompt seasonal market *and* accreditation reforms" in time for CCP 19.

Now approaching Q4 of 2024 as we embark on the expanded workplan enabled by the FCA 19 delay, we are hearing that there will be very limited time to revisit the RCA framework, despite numerous concerns flagged by stakeholders. This marks a sharp contrast from the expectations set on RCA earlier this year as part of the decision to delay FCA 19. Correctly reforming accreditation is integral to the broader capacity market reforms ISO is undertaking. We therefore strongly urge the ISO to reflect its commitment to getting RCA right by dedicating time for further RCA discussions in the workplan scope.



United will refer ISO-NE to its [joint comments](#) submitted in July for a full explanation of its concerns on storage accreditation and will merely reiterate some key points. The current RCA Impact Analysis is producing accreditation values that significantly derate resources such as energy storage, demand response, hybrids, and DERs serving as Active Demand Capacity Resources (“ADCRs”). These resources all provide fast-responding, flexible capacity that will support our region as it transitions to a decarbonized grid. Yet, the results from the latest Impact Analysis accreditation results are counter-intuitive and instead imply that these resources have limited value in maintaining resource adequacy. This will risk providing inadequate revenue to advanced energy technologies that our region will rely on to maintain reliability through the energy transition. Storage in particular matches the low-emission, dispatchable resource profile our region will need to maintain reliability with an increasingly intermittent resource mix, but our capacity market design as proposed will not incent its deployment. For demand response, while it’s almost impossible to make a perfect comparison to other jurisdictions, which use alternative frameworks and methodologies for capacity accreditation (with results that we also have concerns over), it is noteworthy that demand response resources similar to ADCRs in ISO-NE have significantly higher values in [PJM](#) and [NYISO](#). Without the right market signals for advanced energy technologies, we greatly hinder the development of these resources and risk producing a resource mix that burdens consumers with unnecessary costs, is incompatible with state energy and climate policy requirements, and that undermines the ISO’s [mission statement](#).

Stakeholders deserve further information and dialogue with the ISO on how the extent of LOLE events and duration of LOLHs are affecting resource accreditation, how the load modeling balances meeting reliability standards while accurately forecasting realistic and probable grid conditions, and how other inputs and assumptions ultimately impact accreditation values. For instance, many stakeholders including United remain perplexed by how hybrid resources such as solar plus storage could stand to receive less revenue as a single resource than if they participated separately, given the inherent synergy and complementary attributes between these resource types. Similar questions and confusion remain for standalone energy storage, demand response, and ADCRs. Another example of unpacking accreditation results as they relate to the model inputs and assumptions is how we develop the resource profiles that underpin accreditation for each resource classes. Specifically, with so many emerging and nascent technologies increasingly participating in the market, there are open questions about how we can optimize resource profiles and how much historical data to use versus forward looking projections for resource performance.

At a certain stage in the process, stakeholders will need to accept the accreditation values resources are assigned. However, that cannot happen until there is clarity on the RCA framework and feedback is addressed. Achieving clarity means providing ample opportunity for stakeholders to meaningfully ascertain how the load modeling, other model inputs and assumption, and final calculations are made. Addressing feedback means giving stakeholders a reasonable opportunity to provide feedback for the ISO to consider. While challenging, ISO must explain all of this in a comprehensible manner, and, if necessary, complete adjustments and further iterations to address problem areas. Any approach neglecting these steps will undermine the robust stakeholder process ISO-NE is establishing, risk failing the CAR design objectives, and subvert the role of the region’s capacity market.



Additional Scope Items

Correlated Outages and Long-Start Time Resources: While United is encouraged that the item on ambient temperature adjustments and correlated outages is still being assessed for inclusion in the CAR workplan scope, we assert that any comprehensive and meaningful RCA reforms must include this item. United has discussed its concerns about correlated outages with the ISO at committee meetings and with other stakeholders to emphasize that during events like Christmas Eve of 2022 detailed in an [ISO-NE letter](#), extreme weather events can cause sweeping “mechanical problems” with thermal units and impact resource performance in a manner that is not captured in their accreditation value. A similar yet separate issue concerns the start-times of thermal units, which again accreditation does not consider when determining the ability of a resource to perform during reliability hours. Two papers, one by [Synapse](#) and another by the [EMM](#), have both cited the concern that failing to model the start-time for long-start time resources into our capacity market modeling produces a blind spot that can threaten system reliability and overcompensate thermal resources relative to their empirical performance. The cumulative effect of leaving correlated outages and long-start time resources unaccounted for in our resource adequacy standards and capacity accreditation is over-paying for capacity and heightened risk of capacity shortfalls that risk system outages. We urge ISO-NE to consider including them in the workplan, keep these issues on their radar, and noted in their roadmap, even if we cannot feasibly implement them within the CAR workplan so that we may address them as expediently as possible after.

Modeling Software: We appreciate ISO-NE’s candid preliminary assessment of the lift and tradeoffs involved in transitioning away from GE MARS. The ISO has stated that GE MARS limitations may impede a solution for modeling long-start time units, correlated outages, and other modeling improvements. United would appreciate more information on what is meant when ISO states other resource adequacy platforms have similar constraints to form a better assessment of the tradeoffs involved in transitioning software. While we respect the decision to omit an assessment of alternative software from the project scope, we encourage ISO-NE to return to stakeholders after CAR implementation with more explanation on the opportunities and challenges involved in using alternative software. We suggest adding this item to the capacity market reforms roadmap for discussion after the CAR project is completed.

Forward Capacity Deliverability Assessments: Finally, one issue not addressed in the straw scope or slides whatsoever that ISO-NE should consider in its project scope is improving the capacity deliverability process for state-jurisdictional interconnections. Designing the new capacity market qualification process is a necessary component of the CAR project scope and we strongly recommend ISO-NE design as part of that process the ability for resources subject to state-jurisdictional interconnection (i.e. not ISO-NE’s process) the ability to secure a CNRC value on a forward basis. Projects require information on capacity deliverability and their ability to participate in the capacity market to decide whether to develop the project in the first place. A forward construct for a capacity deliverability assessment aligns with how ISO-NE transmission level interconnections secure CNRIS via the new cluster process as well as with how resource obtain a CNRC under the existing FCA framework. Therefore, we urge ISO-NE to account for these changes in their workplan’s scope.



DERAs: Since the [2022 scoping memo on RCA](#), the region has more experience with Distributed Energy Resource Aggregation and is entering a world post Order 2222. The region must find a way to properly model accreditation for DERA resources, whether that is through the APCR resource class or the inception of a new resource class. We encourage more discussion on this, and hope ISO can address where in the workplan or broader capacity market reform's roadmap this piece fits in.

