

# RESOURCE CAPACITY ACCREDITATION DESIGN PRINCIPLES AND OBSERVATIONS

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# PROVIDING FEEDBACK TO THE ISO

- RENEW does not have a position on ISO's current proposal
  - There are still many details to come that will significantly impact what this proposal means for new and existing renewable/clean resources and reliability/market efficiency.
- ISO's proposal may be an appropriate path forward; however, we believe it is valuable to share feedback early in process:
  - Helps find commonalities among stakeholders and the ISO.
  - If there are concerns with the direction ISO is heading, the further down the road they progress the harder it will be for them to address feedback.
  - If RENEW were to propose an amendment down the line, want stakeholders to understand RENEW's position and where the amendment is coming from.
- To provide a framework for our assessment, we have developed a set of RENEW design principles against which we will evaluate the ISO's Resource Capacity Accreditation (RCA) proposal or any stakeholder alternatives.
  - These principles are shown on the following slides

# ISO'S FCM DESIGN OBJECTIVES

*From ISO-NE's June 7, 2022 MC Presentation*

**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

- Design Objectives 1 and 2 are the ISO's current objectives for the FCM
  - Provided here as a reminder and as they relate to RENEW's Design Principles that follow
- ISO is not proposing changes to these objectives as part of the RCA reforms
- **RENEW does not seek to change or challenge these FCM Design Objectives with the following RCA Design Principles**
  - RENEW's Design Principles are specific to capacity accreditation and the RCA project



# RENEW DESIGN PRINCIPLES FOR RCA



# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

1. The total quantity of capacity procured by the market should meet ISO's Design Objective 1 (reliability).
  - a) Only supply resources procured by the market with a resulting obligation should be relied upon

Rationale:

The RCA design must align with ISO's reliability objective for the capacity market overall

Thoughts on ISO's Proposal so far:

We have concerns that between response to policy signals and the increased volatility of resources' rMRI values we could see larger shifts in the resource mix pre- to post-auction than have been observed so. These shifts can cause the reliability value of the cleared resource mix to differ from the expected reliability value for the point on the demand curve where the auction cleared (which is based on the pre-auction resource mix). We are concerned that the MRI design could result in a greater reliability difference than under today's market design. We have asked ISO to look at this in their impact analysis.

It's not clear to us that there is substitutability between 1 MW of CSO and 1 MW of tie benefits, as currently assumed, as tie benefits have no auditing or performance obligation.

# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

2. Resources should be compensated commensurate with their contribution to meeting the system's resource adequacy needs.
  - a) Resources that provide an equivalent contribution to meeting ISO's Design Objective 1 should receive the same accreditation.
  - b) Resources that provide a greater contribution to meeting ISO's Design Objective 1 should receive greater accreditation.
  - c) Individual resource performance must be distinguishable and recognized separately than class performance.

Rationale:

If resources are not compensated commensurate with their respective contribution, the auction will produce inefficient outcomes and needed resources may inefficiently retire or be unable to enter the market.

Thoughts on ISO's Proposal so far:

ISO's individual resource rMRI approach appears to meet this Design Principle for existing resources.



# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

3. Resources must be able to and are expected to perform consistent with the quantity described in Design Principle #2.

## Rationale:

The market should not rely on performance from a resource that the resource cannot achieve, and a resource should not be able to participate in the market at a level of performance it cannot achieve. Conversely, resources should not be expected to perform in excess of what the market procured and paid for.

## Thoughts on ISO's Proposal so far:

We are awaiting details from ISO on the obligations (must-offer requirements, PfP, etc.) under the new design approach as they relate to the CSO and new ECSO quantities procured to see if they meet this design principle.



# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

*We expect this to be an area of particular focus for RENEW*

4. A consistent methodology should be used for accreditation of all resources
  - a) Any method should focus on periods of greatest reliability need
  - b) Any method should appropriately account for the level of correlation in availability and output among resources during periods of greatest reliability need

## Rationale:

Accounting for resources differently leads to relative over- and under-accreditation, and therefore potentially inefficient market outcomes.

## Thoughts on ISO's Proposal so far:

An ELCC-style approach, if modeled correctly and modeled for all resources, would ensure that periods of greatest risk are addressed. ISO proposal seems conceptually to meet this part of the design objective.

Using profiles for intermittent generators will account for correlation among resources, but these profiles must recognize technology and locational differences between individual resources and must be weather-matched to load.

Gas availability and correlation must be appropriately accounted for in the model.





# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

*We expect this to be an area of particular focus for RENEW*

5. The accreditation methodology should treat the following factors that influence individual resource production capability consistently across resource types (i.e., either consider or exclude each factor for all resources):
  - a) Physical capability of the resource – maximum production capability under standard conditions, planned and forced outages, cycling or startup time, temperature operating envelope
  - b) Availability of fuel to the resource – whether wind, solar, water, gas, nuclear fuel rods, etc.
  - c) Impact of regulatory limitations – certain resources may face emissions or run-time limits while others may be limited during periods of bat activity or recreational river flow
  - d) Impact of transmission system limitations – certain resources may have their production reduced due to limitations on the transmission system
  - e) Resource economics – certain resources that offer at a higher price in the energy market may have their output reduced due to system-wide over-supply or transmission system congestion

# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

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## Rationale:

Under the current market rules, these factors are treated differently for different resource types. Because the Qualified Capacity of Intermittent Resources depends on actual, unadjusted historical production, all of the factors on the previous slide are accounted for in a resource's accreditation. Because Non-intermittent generator's qualified capacity values are based on results of a brief audit, they do not account for most of these factors. A new methodology should ensure that all resources are being assessed on the same set of factors. How those factors are assessed for each resource may vary slightly due to differences in technology.

## Thoughts on ISO's Proposal so far:

We are awaiting additional detail on ISO's design proposal, but if the intermittent generator QC calculation remains unchanged and QC impacts a resource's assumed production profile in the RAA model, these factors would all still be accounted for in intermittent generators' QMRIC values.

# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

6. The market should provide price signals upon which suppliers can reasonably make long-term financial decisions

Rationale:

If the market does not provide price signals upon which suppliers can make long-term financial decisions, suppliers may make ill-informed decisions leading to inefficient retirements or inclusion of significant price premiums for new entry.

Thoughts on ISO's Proposal so far:

Increased volatility is inherent in switching to an ELCC-style market, and more so for marginal ELCC.

Independent, accurate MRI modeling will be beyond the capability of most (all?) market participants.

Transparency will be key to addressing this challenge. We will be interested to see what information ISO can provide to the marketplace on an ongoing basis to help participants understand trends and expectations in MRI values and the QMRIC requirement.

# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

7. The accreditation process should be robust to resource mix changes to technologies known and unknown.

Rationale:

We should not have to completely overhaul the accreditation process again if there is a new technology type that enters the market or if the resource mix changes dramatically.

Thoughts on ISO's Proposal so far:

Hard to assess without the full design details for all technology types, though have concerns with ISO's stated intention to assign some sort of class-average value to new resources rather than attempting to model their reliability contribution.

# RENEW DESIGN PRINCIPLES FOR THE RCA PROJECT

8. The accreditation process should support the market's ability to achieve Design Objective #2 (cost effective)

Rationale:

The RCA project should not prevent the ISO from achieving Design Objective #2.

Thoughts on ISO's Proposal so far:

The ISO's proposal appears as though it may meet this design objective, so far.

# SUMMARY AND NEXT STEPS



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- RENEW does not have a position on ISO's current proposal
  - There are still many details to come that will significantly impact what this proposal means for new and existing renewable/clean resources and reliability/market efficiency.
- RENEW has developed this set of design principles against which we will evaluate the ISO's RCA proposal or any stakeholder alternatives.
  - Feedback/Questions on the design principles and our current thoughts on ISO's proposal are welcome
- RENEW will continue its evaluation of ISO's proposal based on these design principles
  - Continued dialogue with ISO staff, which has been productive and helpful so far
  - RENEW has provided ISO a list of questions regarding their proposal that we hope to see addressed at upcoming Markets/Reliability Committee Meetings

**THANK YOU.**





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  - c) Individual resource performance must be distinguishable and recognized separately than class performance.
3. Resources must be able to and are expected to perform consistent with the quantity described in #2 above.
4. A consistent methodology should be used for accreditation of all resources
  - a) Any method should focus on periods of greatest reliability need
  - b) Any method should appropriately account for the level of correlation in availability and output among resources during periods of greatest reliability need
5. The accreditation methodology should treat the following factors that influence individual resource production capability consistently across resource types (i.e., either consider or exclude each factor for all resources):
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6. The market should provide price signals upon which suppliers can reasonably make long-term financial decisions
7. The accreditation process should be robust to resource mix changes to technologies known and unknown.
8. The accreditation process should support the market's ability to achieve Design Objective #2 (cost effective)