



# New York Battery and Energy Storage Technology Consortium, Inc.

September 24, 2021

## Via e-mail

Zach T. Smith  
Manager, Capacity Market Design  
NYISO  
[ztsmith@nyiso.com](mailto:ztsmith@nyiso.com)

RE: NY-BEST comments on Capacity Accreditation

Dear Zach:

New York Battery and Energy Storage Technology Consortium (NY-BEST)<sup>1</sup> appreciates the opportunity to provide feedback on the NYSIO's Capacity accreditation proposal, as requested at the August 31<sup>st</sup> ICAP/MIWG meeting. As a supplement to the comment letter NY-BEST submitted on September 13<sup>th</sup>, we would like to provide the following additional feedback.

The letter demonstrates why it is imperative that NYISO adopt the average ELCC approach to capacity accreditation over the marginal ELCC approach. At a high level, the marginal approach will jeopardize the State's ability to meet its mandated clean energy goals, jeopardize reliability, and significantly and unnecessarily increase ratepayer costs. Pursuing the marginal approach would also contradict a recent FERC decision in PJM endorsing the average approach.

## **1. Marginal ELCC Capacity Accreditation would result in unequal Resource Compensation for providing the same service**

As a key principle of a fair and efficient capacity market, all resources should be compensated for their contribution to the resource adequacy reliability of the system. No set of resources that clears the market should be advantaged over another so long as they are providing the same value. Value is measured relative to a resource type's capacity contribution towards the total capacity requirement which is set based on maintaining system reliability of 0.1 LOLE.

Utilizing a marginal ELCC approach to determine the capacity accreditation for each variable energy or limited duration resource class violates this principle by failing to recognize and compensate the total value of the overall resource portfolio to maintaining 0.1 LOLE.

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<sup>1</sup> NY-BEST comments represent the interests of the organization as a whole and not the views of any particular member. Our members have diverse interests and the organization's views are intended to be reflective of the energy storage industry interests collectively.

To illustrate the difference between average and marginal, NY-BEST offers the following hypothetical example of a system that has a portfolio of 8-hour duration storage resources. If measured at the margin, the next small increment added to the portfolio would add reliability equal to 70% of its nameplate rating. But if measured in aggregate, the 2,950MW (nameplate) of storage is equal to 2,500MW of ‘perfect capacity,’ or 85% of nameplate rating. Failing to compensate the resources for the aggregate contribution to reliability violates the principle of ‘equal pay for equal work.’

As another example, assume a system with a portfolio of solar resources with an aggregate nameplate rating of 8,300MW. If the portfolio is evaluated in total, its contribution to reliability is equivalent to 2,500MW of ‘perfect capacity,’ or 30% of nameplate. Measuring the solar resource at the margin however, the next increment would only contribute 15% of its nameplate rating.

The following Table further illustrates these examples and compares the revenues that each class of resources would receive if valued based on marginal contribution to reliability or based on average. As shown in the Table, the storage and solar portfolios provide equivalent Resource Adequacy Contributions to the system of 2,500MW each, which is equivalent to 2,500MW of ‘perfect capacity.’ However, if valued at the margin, storage would be compensated for only ~80% and solar only half of the respective portfolio’s actual contribution to system reliability. The appropriate way to compare and compensate all resources’ contributions to system reliability is on the basis of the aggregate, to account for all of the interactions through which a collection of resources can be more than the sum of the parts.<sup>2</sup> To suggest otherwise is to fall for the grade school question: ‘what weighs more: a ton of bricks or a ton of feathers?’ An effective and efficient capacity market relies on compensating the overall contributions of all resources to meeting the system reliability needs. Every MW of effective capacity should be eligible for the same revenue regardless of the technology that supplies it.

	8 Hr Duration Storage	Solar	‘Perfect Capacity’	
Average ELCC	85%	30%	100%	[A]
Marginal ELCC	70%	15%	100%	[B]
Nameplate MW Cleared	2,950	8,300	2,500	[C]
Resource Adequacy Contribution	2,500	2,500	2,500	[D] =[A] * [C]
Clearing Price	\$100/kW-Yr	\$100/kW-Yr	\$100/kW-Yr	[E]
Revenue Based on Marginal ELCC Capacity Accreditation	\$207M	\$125M	\$250M	[F] =[B] * [C] * [E]
Revenue Based on Resource Adequacy Contribution	\$250M	\$250M	\$250M	[G] = [D] * [E]

<sup>2</sup> This statement is made with respect to value ascribed to resource types, NY-BEST agrees that individual resource performance can and should be reflected in the particular resource’s compensation.

## 2. FERC has approved average ELCC capacity accreditation methodology as Just and Reasonable

Further supporting the fairness issues identified above, there is an established precedent that utilizing the average ELCC for capacity accreditation is just and reasonable based on a recent FERC filing related to PJM's average ELCC accreditation proposal (Docket No. ER21-2043-000<sup>3</sup>). FERC has accepted a proposal from PJM which determines the average ELCC for each resource class using probabilistic hourly system reliability modeling while adjusting for diversity impacts (known as the "Delta Method") and is the basis for accredited capacity in the PJM capacity auction. From the filing (underlining added for emphasis):

*"We find that PJM's ELCC methodology is a just and reasonable approach to determining the capacity value of Variable Resources, Limited Duration Resources, and Combination Resources... We also find that the ELCC construct is a practicable approach to ensuring that ELCC resources are allocated Accredited UCAP in a manner that reflects their overall reliability contribution and contribution to serving the system's resource adequacy needs."*

We also believe there are reliability implications of the marginal capacity accreditation proposal put forward by the NYISO as addressed by Astrapé Consulting Director Kevin Carden in the following:

*"Astrapé Consulting performs reliability consulting using its proprietary SERVIM model for ISOs, RTOs, regulators, utilities, and developers across North America and worldwide. Part of that consulting effort focuses on designing market constructs that procure adequate resources to supply system reliability. We have significant concerns with constructs that disconnect capacity accreditation from aggregate supply. Accrediting capacity on the basis of marginal reliability contribution creates distortions that could lead to wild swings in participation. Very adverse reliability conditions are possible in an environment where a variable energy fleet that provides thousands of MW of aggregate reliability is only eligible for a de minimis payment based on the technology's marginal reliability contribution and therefore retires prematurely. While we believe there are appropriate but nuanced applications of both marginal and average ELCC methods in capacity market design, we agree with NY-BEST's position that the incipient NYISO capacity market proposal that relies on marginal accreditation has not yet aligned reliability and economic objectives."*

In summary, utilizing a marginal ELCC for capacity accreditation violates a key market principle by providing unequal revenues to portfolios that have equal levels of contribution to system reliability. In the interest of reliability and competition, NYISO must utilize an average ELCC for capacity accreditation to better align value and revenue across all resource classes and better reflect the overall value of all technology types in meeting reliability.

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<sup>3</sup> [https://elibrary.ferc.gov/eLibrary/filelist?document\\_id=14974090&optimized=false](https://elibrary.ferc.gov/eLibrary/filelist?document_id=14974090&optimized=false)

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "William Acker". The signature is fluid and cursive, with a long horizontal stroke at the end.

William Acker  
Executive Director