UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc	**)**	**Docket No. ER22-772-000**

MOTION FOR LEAVE TO ANSWER AND ANSWER OF THE NYISO MARKET MONITORING UNIT

Potomac Economics as the Market Monitoring Unit ("MMU") for the New York Independent System Operator, Inc. ("NYISO") respectfully submits this Motion for Leave to Answer and Answer[1] to the comments that the Clean Energy Advocates ("CEA") filed on January 26, 2022, including the reports by Astrape Consulting and Telos Energy provided as Exhibits B and C of the CEA Comments (the "Astrape Report" and "Telos Energy Report").

On January 26, 2022, Potomac Economics filed a motion to intervene and initial comments supporting NYISO's proposed tariff filing on January 5, 2022 in the above captioned proceeding.

[1] Pursuant to Commission Rules of Practice and Procedure 212 and 213. Rule 213 authorizes answers to pleadings styled as "comments" as a matter of right.

I. INTRODUCTION AND SUMMARY

In our initial comments in this proceeding, we supported NYISO's proposal as a whole, including its proposal to use marginal capacity accreditation. CEA argues that NYISO's capacity accreditation proposal lacks necessary detail to meet Section 205 requirements. CEA further argues that NYISO's proposal would not result in just and reasonable rates.[2] In these comments, we address five arguments made by CEA and their consultants:

First, CEA argues that NYISO has not adequately defined the concept of marginal reliability contribution. However, NYISO's proposal relies on the well-known economic concept of marginal value and specifies the major parameters of its calculation, including the reliability model database and starting point from which marginal values will be derived. CEA states that marginal ELCC can have many different meanings, but the alternative approaches they cite to support this point are categorically *not* examples of marginal approaches.

Second, CEA argues that marginal accreditation will erroneously undercount resources' reliability contributions, leading to over-procurement in capacity auctions. This is false because NYISO will calculate its capacity requirements in a way that avoids distortion of market outcomes from changes in accreditation. The effect of marginal accreditation will be to scale resources' capacity *payments* so that they reflect marginal value; it will not significantly change the amount of capacity NYISO procures in a given auction.

Third, CEA claims that marginal accreditation will jeopardize reliability because resources receiving lower marginal capacity payments will lack incentives to perform when needed. This is inaccurate because NYISO's energy and reserve markets are designed to provide strong incentives for resources to be available during tight operating conditions.

[2] CEA Comments at p. 64.

Fourth, CEA argues that marginal accreditation will systematically discriminate against resources with declining marginal ELCC values, resulting in distorted auction outcomes and unfair treatment of equivalent resources. Compensation based on a resource's marginal contribution to the underlying objective is both fair and efficient when this standard is applied to all suppliers, as NYISO proposes to do.

Finally, CEA argues that the market impact analysis performed in NYISO's stakeholder process does not support NYISO's proposal as just and reasonable. CEA is correct that the analysis relied on simplifying assumptions and techniques, but none of CEA's proposed changes would change the key finding that marginal accreditation is an efficient means to determine capacity market payments.

In summary, CEA does not show that NYISO's proposal would result in unjust and unreasonable rates. Broadly, CEA's arguments fall flat for two general reasons. First, CEA does not account for features of NYISO's particular market construct that address the concerns they raise. In effect, they analyze the effects of the proposal as if it were applied to a different capacity market than the NYISO's actual market. Second, CEA makes arguments that could be applied to *any* marginal accreditation approach, not just NYISO's proposal. The notion that marginal value is not an appropriate standard for market pricing and procurement is at odds with decades of wholesale market design experience and economic theory in general. We answer each of these arguments by CEA in detail in the next section.

II. ANSWER TO CEA'S CRITIQUES OF NYISO'S PROPOSAL

A. NYISO's Proposal Is Not Overly Vague

CEA argues that NYISO's proposed capacity accreditation changes are overly vague, particularly the term "marginal reliability contribution". According to CEA, NYISO leaves this

key term unspecified despite its large impact.[3] CEA claims that there are a wide variety of ways to ascertain the marginal contribution to reliability, including considerable variety even within "Marginal ELCC" methodologies.[4] Consequently, according to CEA, NYISO's proposal does not provide adequate notice to market participants of how the proposed rate change will affect them. More generally, CEA contends that NYISO fails to specify key features of its approach, including "what the methodology will be, who it will affect and how it will affect them, how it will interact with reliability standard requirements, or even when it will go into effect".[5]

1. NYISO's Proposal Provides Sufficient Information to Market Participants

NYISO's proposal provides sufficient information for stakeholders to anticipate its likely impacts on different classes of resources. The economic concept of marginal value is well known and there is existing literature on how marginal capacity accreditation differs from other accreditation approaches, including studies cited by CEA.[6] NYISO noted that it will be evaluating two accreditation techniques, referred to as Marginal Reliability Improvement ("MRI") and marginal ELCC, but these are simply alternative techniques to quantify the same marginal contribution to system reliability. While there are multiple techniques for quantifying the marginal reliability value of different types of units, the specific details would be beyond what would ordinarily or reasonably be included in a tariff. It is common practice for such details to be documented in an RTO's business practice manuals as NYISO proposes to do in this case. For example, the NYISO Tariff requires the use of a least-cost optimization to clear the

3 CEA Comments at p. 54.

4 CEA Comments at p. 55.

5 CEA Comments at p. 4.

6 For example, CEA includes appendices to studies by the consulting firms Astrape Consulting and Energy + Environmental Economics, both of which extensively discuss the concept of marginal ELCC as a particular methodology and include quantitative simulations of it.

real-time market, but it is silent about the specific methodology or techniques NYISO is to employ.[7] Likewise, we find no compelling practical reason to require NYISO to document such methodological details in its tariff in this area as long as the methodologies or techniques employed with accurately capture the marginal contribution of each resource to reliability.

NYISO's proposed tariff language is clear that it will quantify marginal value for meeting specific reliability standards as defined by the New York State Reliability Council (NYSRC) and that it will do so beginning in 2024:

> "Starting with the Capability Year that begins in May 2024 and occurring every year, the ISO shall review the existing Capacity Accreditation Factors established for each Capacity Accreditation Resource Class and assess for the upcoming Capability Year the marginal reliability contributions of each Capacity Accreditation Resource Class toward meeting NYSRC resource adequacy requirements".[8]

NYISO's capacity market is designed to satisfy resource adequacy requirements established by NYSRC, which mandates a loss of load expectation (LOLE) of 0.1 days per year. A resource adequacy model is used to set ICAP requirements that satisfy this criterion. The NYISO will use the resource adequacy model to assess marginal reliability contributions of individual resource classes. A resource's marginal contribution to NYSRC requirements is the effect that a small incremental quantity of the resource would have on the target metric, which is LOLE. If an incremental amount of Resource X would cause LOLE to decline by twice as much as an incremental amount of Resource Y, then the marginal reliability contribution of Resource X is twice that of Resource Y.[9]

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[7] See the NYISO MST 4.4.2.1 that requires least cost optimization, but it does not specify whether NYISO is to employ a Lagrangian relaxation, mixed integer programming, or other technique to satisfy this requirement.

[8] See NYISO's proposed tariff revisions, MST Section 5.12.14.3.

[9] This example illustrates the MRI (marginal reliability improvement) technique, which estimates the marginal reliability value of Resource Y from the ratio of: (a) the impact on LOLE from a given quantity of Resource Y to (b) the impact on LOLE from an equivalent quantity of Resource X. Alternatively, in the marginal ELCC

NYISO's proposal specifies the key features of the marginal accreditation calculation. It will be performed every year, will be applied to all resource types, and will produce a separate set of accreditation factors for each of NYISO's four capacity zones. It will use the same resource adequacy model database that is used to establish the Installed Reserve Margin and Locational Capacity Requirements annually.

CEA does not show that marginal accreditation could refer to many diverse approaches. In fact, CEA's discussion of accreditation methods shows that marginal accreditation is distinctly different from other ELCC-based methods. CEA cites the "marginal", "vintaged marginal", "class average" and "adjusted class average" ELCC approaches to illustrate the variety of ELCC-based accreditation approaches.[10] However, NYISO's proposal cannot be construed as following any of these approaches except for the "marginal" approach. CEA also notes how some ELCC frameworks, such as the "delta approach", require credit to be allocated among resources in a way that has no single correct approach.[11] But marginal accreditation notably does *not* create the need for subjective allocation of portfolio capacity value; this is one of the advantages of the marginal approach. Hence, we recommend that the Commission reject these arguments.

B. Marginal Accreditation Does Not Lead to Over-Procurement of Capacity

CEA claims that NYISO's proposal to use marginal capacity accreditation will result in incorrect counting of the amount of capacity needed for reliability. CEA notes that the sum of marginal ELCC values of all individual resources is less than the aggregate ELCC of the entire portfolio. Hence, according to CEA, the use of marginal accreditation will cause total accredited

technique, the marginal reliability value of Resource Y is estimated from the ratio of: (a) the quantity of benchmark Resource X having a given impact on LOLE to (b) the quantity of Resource Y having an equivalent impact on LOLE. Hence, one technique compares quantities while holding LOLE constant, while the other compares LOLE impacts while holding quantity constant.

[10] CEA Comments at p. 62.

[11] CEA Comments at p. 61.

UCAP supply to erroneously under-count the aggregate reliability value of the resource mix.[12] According to CEA, the capacity market will make up these 'missing megawatts' by procuring more capacity than is actually needed for reliability, resulting in higher capacity prices and inflated costs to consumers.[13] As we describe below, this is not a credible concern as it is based on a mistaken understanding of NYISO's planning process and capacity market rules.

1. NYISO's Capacity Market Rules Address CEAs Mistaken Concern

Marginal capacity accreditation will not result in over-procurement because the demand for unforced capacity (UCAP) is adjusted to account for the effects of the marginal accreditation and all other relevant factors.

Each year, the NYSRC and NYISO establish a minimum Installed Reserve Margin (IRM) and Locational Capacity Requirements (LCRs) in ICAP terms that are designed to satisfy the ISO's 1-day-in-10 year reliability standard. These requirements are derived from NYISO's resource adequacy model that includes all resources expected to be in service for the upcoming capability year. This model produces requirements in terms of installed capacity (ICAP) that are not affected by changes in accreditation methods, which affect resources' UCAP levels.

NYISO's spot capacity market transacts in terms of UCAP. Hence, both ICAP supply and the ICAP demand must be converted to UCAP terms. On the supply side, each resource's ICAP is converted to UCAP using a factor that reflects its reliability value. To the extent that marginal accreditation reduces UCAP levels, one could imagine that more resources must be procured to satisfy the same ICAP requirements as CEA argued. However, this is mistaken because it ignores the demand side of the capacity market. On the demand side, NYISO

[12] CEA Comments at p. 64.

[13] CEA Comments at p. 65-66 and p. 77.

calculates the UCAP demand as the ICAP requirement multiplied by the average ratio of UCAP to ICAP for all suppliers.[14]

This translation of ICAP values to UCAP values on both the supply and demand side ensures that utilizing marginal accreditation will not meaningfully affect the quantity of installed capacity or the level of reliability that is procured in a given auction, or the resulting capacity prices. NYISO's proposal simply ensures that each resource will receive capacity revenues that reflect the resource's marginal value to the system.

2. Example Showing that Accreditation Affects Capacity Payments, Not Resource Adequacy Requirements or Outcomes

The following example illustrates why, considering the mechanics above, NYISO's proposal to use marginal accreditation will not affect the installed capacity procurements in a given auction.

Suppose that for the upcoming capability year, the ICAP requirement is 100 MW and there is 100 MW of ICAP supply available. This implies that the system has exactly enough capacity to satisfy reliability criteria, since the calculation of the ICAP requirement considers the characteristics of the supply mix. If the total accredited UCAP of the supply mix is 90 MW (implying a 90 percent average UCAP-to-ICAP ratio), NYISO will calculate a UCAP requirement of 90 MW (100 MW ICAP requirement times 90 percent). On a UCAP basis, total capacity remains equal to the requirement. Now, suppose that a marginal accreditation method is

[14] To be clear, when calculating the UCAP requirement, it is appropriate to multiply the ICAP requirement by the average ratio of UCAP to ICAP (and not *Adjusted ICAP*). In this way, all factors that affect resources' UCAP (including the applicable Capacity Accreditation Factors and the individual derating factors) are accounted for when deriving a UCAP requirement. As NYISO proceeds with developing the implementation of its proposal, we suggest making clarifying tariff changes as needed to ensure that the terms ICAP and Adjusted ICAP are used correctly with respect to this calculation. The calculation of the UCAP requirement as we describe it here has been clearly illustrated to stakeholders in our August 30 ICAPWG presentation (link, see slides 7-9) and NYISO's August 30 ICAPWG presentation (link, see slides 17-21). Note that these presentations were made before the precise terminology of the proposal was finalized and use the phrase 'derating factor' to refer to the total difference between ICAP and UCAP.

used that instead calculates 80 MW of total accredited UCAP for the same 100 MW of ICAP supply (implying an 80 percent average UCAP-to-ICAP ratio). In this case, NYISO will calculate a UCAP requirement of 80 MW (100 MW ICAP requirement times 80 percent). On a UCAP basis, total capacity again remains equal to the requirement.

In the above example, the use of lower accredited UCAP ratings does not change the capacity surplus relative to the requirement (in this case, this surplus is zero percent). As a result, UCAP supply in both cases will intersect with the UCAP demand curve at the same value, so the capacity price will be identical. NYISO will procure the same set of resources and have the same level of reliability, defined by the capacity surplus relative to the requirement.[15] The only difference between the two cases is that the same set of resources receive lower payments on average if total accredited UCAP is 80 MW instead of 90 MW.

CEA describe the possibility that total accredited UCAP of a resource class will decline as more of that resource enters the system, citing this as evidence that marginal accreditation will undercount resource adequacy.[16] But as seen above, a reduction of total accredited UCAP for a given resource mix would result in a proportionate reduction of the UCAP requirement without affecting underlying resource adequacy. CEA's example simply illustrates that if a resource class is saturated to the point of providing little or no marginal value, capacity payments to that resource class will fall.

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[15] Note that in this example we assume that suppliers in NYISO act as price takers in the capacity market. This is consistent with behavior of the vast majority of NYISO market participants historically. Because NYISO operates its capacity market on a prompt basis for the following month – much shorter than the lead time to develop or retire a unit – most suppliers have no incentive to submit price-sensitive bids. This is different from the forward capacity markets used in PJM and ISO-NE where the use of price-sensitive bidding is widespread.

[16] CEA Comments at p. 65-66.

3. *CEA's Analysis Misinterprets Key Features of NYISO's Capacity Market*

The error in CEA's analysis stems from incorrect assumptions about how NYISO's capacity market operates. In particular, CEA applies the concept of UCAP in a different way than it is applied in NYISO's market.

CEA assumes an equivalence between UCAP and total ELCC that is not part of NYISO's capacity market design. CEA incorrectly asserts that to produce correct resource adequacy outcomes, the sum of accredited UCAP values for a portfolio of resources must be equal to the portfolio's total ELCC.[17] But this would be true only if the UCAP requirement was derived in terms of total ELCC. As discussed above, NYISO's capacity requirements are based on a reserve margin calculated in ICAP terms.[18] If NYISO began with a UCAP requirement defined in terms of total ELCC and proposed to calculate suppliers' UCAP on a marginal basis, CEA would be correct that the NYISO would tend to over-procure capacity in the auction. But this is not how NYISO determines its requirements.

The term "UCAP" does not necessarily have the same meaning in every capacity market or study. We agree with CEA that UCAP is a measure that is used to compare contributions of different resources using 'perfect capacity' as a benchmark. However, in the NYISO's proposed approach, a unit of accredited UCAP provides the same *marginal* reliability value as a unit of perfect capacity. By contrast, CEA assumes that the *total* quantity of accredited UCAP should equal the *total* quantity of perfect capacity that provides the same reliability. The Commission

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[17] CEA Comments at p. 64.

[18] The Astrape report appears to misunderstand this feature of NYISO's resource adequacy process. Astrape claims that the planning reserve margin must be calculated in technology-normalized terms, such that the appropriate planning reserve margin (PRM) remains static as the resource mix changes. See Astrape Report at p. 10-11. It is important not to import concepts that may be used in other systems to the context of NYISO, which determines its IRM using a different approach.

should consider NYISO's proposal to use marginal accreditation in the context of NYISO's capacity market design and not the alternative design assumed by CEA.

C. Marginal Accreditation Does Not Compromise Reliability

The Astrape Report argues that marginal accreditation will compromise reliability by failing to incentivize performance by capacity suppliers. Astrape notes that resources may have low marginal ELCC even if they are expected to contribute to meeting the system's gross peak load. Astrape asserts resources will lack incentives to maximize their availability at times when they are implicitly relied upon by the system.[19] This assertion is premised on an assumption that the capacity market plays a pivotal role in motivating generators to perform, which is simply not true as we discuss below.

1. NYISO Markets Incentivize Performance Even When Capacity Payments Are Low

Astrape fails to recognize that energy and ancillary service prices play the primary role in the NYISO markets of providing efficient incentives for generators to be available and perform. Shortage pricing in these markets, in particular, are essential for providing these incentives. When conditions are tight and NYISO lacks sufficient available resources to satisfy all of its requirements, NYISO will begin going short of operating reserves. This causes its operating reserve demand curves to contribute to set energy and ancillary services real time prices that are many times higher than normal levels. While these revenues may not be sufficient to encourage new entry (hence the need for a capacity market), they provide strong incentives for existing resources to be available during critical hours. These incentives dwarf any potential effects on a generator's capacity revenues associated with not being available during such conditions.

[19] Astrape Report at 8 and 15.

In fact, the modest effects on capacity revenues of not performing during tight conditions exist today without the NYISO's proposed marginal capacity accreditation framework. NYISO's spot capacity market sets prices on a marginal basis. A capacity zone with surplus supply will generally exhibit very low capacity prices, even though resources in that zone supply a large portion of the reserve margin requirement. Similarly, winter capacity prices are often much lower than summer prices, even though resources that supply capacity in winter are still expected to be available when needed. Nonetheless, low marginal capacity prices have not led to widespread poor performance because the NYISO energy and ancillary services markets incentivize these resources to be available during critical hours.

D. Marginal Accreditation Fairly Compensates All Resources

CEA argues that NYISO's proposal to use marginal accreditation will systematically discriminate against resource types with declining marginal ELCC values. CEA argues that by accrediting all resources of a given class at their marginal value, NYISO will place those resources at an artificial disadvantage in capacity auctions. CEA claims that this will cause capacity auctions to fail to select the optimal mix of resources.[20]

More generally, CEA suggests that NYISO's proposal is unfair because groups of resources providing the same *total* ELCC may not receive the same total capacity payment.[21] According to CEA, there is a "potential conflict between economic efficiency, which would credit resources based on marginal value, and equal value for equal services, which would allocate total resource adequacy value to all resources contributing to that value".[22] As we discuss below, this argument is misguided because the CEA fails to recognize that the value of

[20] CEA Comments at p. 67-69 and Astrape Report at p. 8.

[21] CEA Comments at p. 59.

[22] CEA Comments at p. 59-60.

reliability services being provided by a resource is entirely based on its marginal contribution to reliability.

1. NYISO's Proposal is Both Fair and Efficient

We agree that the capacity market rules should be non-discriminatory. A well-functioning capacity market provides the same compensation to resources that provide the same value regardless of their technology, location, or age. Because two resources may be equal in terms of one metric but not another, it is critical to be clear on what standard of value should be used to compare resources. NYISO proposes to compare resources on the basis of marginal reliability contribution because this is the only appropriate standard from both an economic and equity standpoint. This explains why marginal valuation and pricing is ubiquitous in other NYISO and RTO electricity markets, as well as the markets for all other products.

In competitive markets, the debate between total/average value and marginal value never arises because competitive markets always value products at their marginal value. For example, the value of an additional deli in New York City is clearly contingent on the other delis that already exist. It would be misguided for one to estimate the value of one deli by estimating the lost value of closing every deli in the City and dividing by the total number of delis (which is a total/average valuation). While this may indicate the average overall value of having delis in New York City, it does nothing to estimate the value of the single deli in question. Further, the fact that every new deli will likely reduce the value and revenues of the existing delis is simply the fundamental result of competitive markets. While this may seem obvious in the context of delis, it should be no less obvious for the accreditation of capacity.

Hence, arguments that groups of resources providing the same *total* ELCC must receive the same revenue are arbitrary and not founded on sound economics.[23] Instead, payments should always track the value that different resources provide, which is best measured by their marginal value.

Measuring value at the portfolio-level as Astrape proposes rather than the individual resource-level necessarily requires the market operator to separate resources into arbitrary groups. These groupings seem straightforward when the choices are between monolithic categories such as: conventional, land-based wind, and solar. However, the choice becomes complicated when considering where to draw lines between groups that can have very different values, such as: land-based wind and offshore wind, solar in one region and solar in a region with different weather patterns, 4-hour batteries and 6-hour batteries, etc. When resources are compensated based on "average" value rather than marginal value, resource owners generally benefit financially from being in larger groups, which leads to the definition of heterogenous portfolios for which there is little theoretical basis.

Furthermore, the principle that payments to capacity suppliers should be differentiated based on marginal value is already applied on a locational basis. NYISO sets marginal capacity prices for its four capacity zones using its demand curves. All suppliers in a zone are paid the marginal price for each MW of UCAP. When a zone has a large amount of surplus capacity and the marginal value of capacity is low, suppliers receive low capacity payments even though the aggregate reliability benefit they provide is very high.

For example, suppose there is a large statewide capacity surplus, resulting in a price of $0 per kW-month outside local capacity zones, but only a small surplus in New York City, resulting

[23] For example, see the Astrape Report at p. 8.

in a price of $12. These prices indicate that additional capacity in New York City will improve reliability, while additional capacity upstate will not. The *total* reliability benefit of upstate capacity is much greater than zero – a large quantity of it is needed to satisfy the IRM, and reliability would be greatly affected if all upstate resources were to retire. In this sense, upstate resources as a group are paid less for the total reliability benefit they provide than New York City resources. But this difference is not discriminatory, because it reflects the real difference in marginal value between the two locations. NYISO's proposal would apply this same standard to distinct resource classes in the accreditation process.

In summary, CEA introduces an artificial conflict between efficiency and fairness. Markets are generally designed to provide efficient incentives, which avoid discriminating between resources for arbitrary reasons. NYISO proposes to establish a market framework that provides efficient incentives to satisfy resource adequacy criteria. This is because marginal capacity accreditation provides efficient economic signals to guide investment decisions, a point that CEA does not dispute.[24] Fairness requires that this framework be applied in a non-discriminatory fashion to all resources, as NYISO proposes to do.

2. Marginal Accreditation Does Not Bias Capacity Auction Results

CEA and Astrape's argument that under marginal accreditation the market will fail to "select" resources with declining marginal values is mistaken given the details of the NYISO's market rules.[25] CEA appears to confuse NYISO's spot capacity market with forward capacity markets that select potential projects three years in advance based on price-sensitive offers. Instead, developers in NYISO invest in new resources based on expectations of future revenues,

[24] CEA states that an economically efficient capacity market "would credit resources based on marginal value". CEA Comments at p. 59.

[25] Astrape Report at p. 7.

including both wholesale market revenues and/or forward contract revenue. Such new resources only clear in the NYISO capacity market once they are in service. Owners of in-service resources generally have incentives to offer as price-takers, so the vast majority of resources clear in every spot auction in which they participate.

Importantly, the NYISO's proposal to use marginal accreditation will not prevent resources that are available to participate in an auction from receiving a capacity payment.[26] It simply aligns the payment the resource receives with its marginal reliability value.

As CEA notes, there is some risk that the assumed resource mix used to calculate *ex ante* capacity accreditation factors will differ from the actual resource mix that clears the auction.[27] This is a known issue that affects *any* ELCC-based capacity accreditation framework and could only be addressed by dynamic calculation of capacity credit ratings during the auction itself. Such an approach would be extremely technically complex and has not been applied in any existing capacity accreditation framework, including the one recently approved by FERC in PJM. Further, this concern is much less significant in NYISO than in regions with forward capacity markets. This is because the vast majority of resources do not submit price-sensitive offers in the NYISO spot market and the resource mix assumed in planning studies for the coming year typically closely resembles the actual resource mix.

3. CEA Is Merely Arguing for Average ELCC

CEA states that this proceeding is not a referendum on marginal vs. average ELCC. However, the substance of its critique of the fairness of NYISO's proposal is just that it does not propose average ELCC. CEA's requirement that groups of resources with the same total ELCC

[26] Even if some offers are price-sensitive, NYISO's proposal will not inappropriately discriminate against them. If a resource's price-sensitive offer (based on its marginal value) is above the clearing price, the auction still produces correct outcomes because the payment that resource requires would exceed the value it provides.

[27] CEA Comments at p. 69 and Astrape Report at p. 24.

receive the same total capacity payment can only be satisfied by an average ELCC methodology.[28] As such, this is less an argument that NYISO's approach is discriminatory than it is a preference for an alternative and much less efficient accreditation methodology.

E. Quantitative Modeling Supports NYISO's Marginal Accreditation Proposal

CEA points to supposed "limitations" in the consumer impact analysis we performed in support of NYISO's proposal in their criticism of marginal capacity accreditation. CEA notes that our study a) used a deterministic model instead of GE MARS, b) modeled a different reliability metric than the one used in NYISO's market, c) did not evaluate additional scenarios of renewable energy growth beyond CLCPA requirements, d) did not model potential future transmission projects, and e) used a limited set of load and resource profiles. According to CEA, our analysis does not provide support that NYISO's proposed changes are just and reasonable because of these limitations.[29]

1. *Our Model Illustrates Key Features of Marginal Capacity Accreditation and Is Not Intended to Forecast Market Outcomes*

We agree with CEA that our study used simplifying assumptions and modeling techniques. For example, we used a simplified resource adequacy model instead of GE MARS. Using GE MARS would not have been feasible in combination with our iterative capacity expansion model because of the computation times required. As with any modeling exercise, one must develop a feasible analytic approach, which may require some simplifications. Importantly, our approach focuses on the question of interest in this case: *which of the alternative accreditation methodologies provide the most efficient investment incentives?*

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[28] The Astrape report is explicit about this: "With an understanding of reliability planning in place, it will be clear that the most efficient design will ensure that reliability is procured in aggregate while pricing is set on the margin and that this can only be implemented with average ELCC accreditation." Astrape Report at p. 7.

[29] CEA Comments at 69-72 and Telos Energy Report at 11-18.

Our analysis demonstrated that marginal accreditation provides more efficient incentives for investment than alternative approaches, even when resources receive substantial revenues from state programs. Changing the values of model inputs such as the target reliability level or clean energy requirements would have produced different values for capacity accreditation factors and consumer costs, but they would not have changed the fundamental conclusions of the analysis. We encourage the Commission to regard this analysis as supporting evidence of the reasonableness of a marginal approach, but not as a prediction of actual outcomes.

III. CONCLUSION

CEA does not demonstrate either that NYISO's proposal is unacceptably vague or that it would result in unjust and unreasonable rates. Accordingly, we respectfully recommend that the Commission reject the arguments made by CEA and accept NYISO's proposal.

Respectfully submitted,

/s/ David B. Patton

David Patton
President
Potomac Economics, Ltd.

February 11, 2022

CERTIFICATE OF SERVICE

I hereby certify that I have this day e-served a copy of this document upon all parties listed on the official service list compiled by the Secretary in the above-captioned proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated this 11th day of February 2022 in Fairfax, VA.

/s/ David B. Patton

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