Attachment IV

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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

AFFIDAVIT OF RANA MUKERJI

Mr. Rana Mukerji declares:

1. I have personal knowledge of the facts and opinions herein and if called to testify could and would testify competently hereto.

I. Introduction

2. I am Rana Mukerji, Senior Vice President, Market Structures, of the New York Independent System Operator ("NYISO"). My business address is 10 Krey Boulevard, Rensselaer, NY 12144.

3. I have been in my current role as Senior Vice President Market Structures of the NYISO for 15 years. I have responsibility for Market Design of Energy, Capacity and Ancillary Services including mitigation regimes; Product and Project Management; Strategic and Business Planning; Research and Development; and Market Training. In this capacity, I oversaw the evolution of the Installed Capacity ("ICAP") Market over the last fourteen years and led the development and enhancements of the "buyer side" capacity market power mitigation measures in New York (the "BSM Rules") since their inception. I am currently involved in shaping the evolution of wholesale electricity market design in New York State to address the major clean energy policy mandates that are being established under New York State's Climate Leadership and Consumer Protection Act of 2019 ("CLCPA").

4. Prior to joining the NYISO, I was with ABB and GE. At ABB I was responsible for the company's global Utility Services, Asset Management and Consulting services. At GE, I was General Manager of GE's Power Systems Energy Consulting organization and helped establish the GE-MAPS software as an industry standard tool for evaluating competitive power markets. I have over thirty publications on power engineering and electricity markets in peer-reviewed journals and have presented widely in industry conferences and university forums both nationally and globally. I am a Professional Engineer registered in the State of New York and hold a Bachelor's degree in Electrical Engineering from the Indian Institute of Technology, a Master of Engineering degree in Electric Power Engineering, and a Masters of Business Administration from Rensselaer Polytechnic Institute. I also am a graduate of Harvard Business School's Advanced Management Program.

5. The purpose of my affidavit is to support the NYISO's proposed tariff revisions in this proceeding. The NYISO filing contains three elements: (i) revisions to exclude certain

resources that serve CLCPA goals ("Excluded Facilities") from the BSM Rules; (ii) introducing a new marginal capacity accreditation design to compensate capacity resources based on a more accurate evaluation of their marginal contribution to reliability; (iii) and an adjustment to the NYISO's approach to computing the reference price levels used to establish ICAP Market Demand Curves to better reflect the changes proposed in this filing and the impacts of the CLCPA.

6. The purpose of the NYISO's proposed revisions to the BSM Rules is to adapt them to avoid unnecessary interference with the CLCPA's mandates while ensuring that the BSM Rules continue to avoid both the "under-mitigation" and "over-mitigation" of buyer-side market power.

7. The purpose of the proposed marginal accreditation design is to more accurately reflect the marginal reliability contribution of the ICAP Suppliers within each resource class towards meeting resource adequacy requirements. Marginal accreditation will provide forward investment signals that preserve reliability and reduce consumer costs. Moving to a marginal design that re-evaluates capacity resources more frequently will be increasingly important as clean energy transition advances, the resource mix evolves, and zero-emission resources proliferate.

8. This affidavit emphasizes that NYISO's proposed capacity accreditation improvements are not just a critically important market enhancement in their own right. Marginal accreditation also validates the NYISO's proposal to excuse Excluded Facilities from the BSM Rules.

9. The NYISO retained the Analysis Group, Inc. to study the future operation of the NYISO-administered capacity market if the NYISO's proposed tariff revisions are implemented. The Affidavit of Paul J. Hibbard and Charles Wu describes the Analysis Group's study ("AGI Study") and summarizes its conclusions. The Hibbard/Wu Affidavit and AGI Study are attached to the NYISO's filing letter as Attachments III and III-A, respectively. The AGI Study's results demonstrate that the NYISO's proposed changes to the BSM Rules will not prevent the NYISO-administered capacity auctions from producing results consistent with competitive market outcomes or meeting resource adequacy requirements. But those conclusions are premised on the AGI Study's assumption that a more robust capacity accreditation design will be in place.

10. This affidavit also endorses and adopts capacity accreditation analyses conducted by the independent market monitoring unit for the NYISO ("MMU") and the NYISO itself. As discussed below, these analyses presented the benefits of a marginal accreditation design and showed that it would be superior to other potential accreditation options. The MMU analyses are Attachments V and VI to the NYISO's filing letter, and the NYISO analysis is Attachment VII.

II. Evolving the NYISO's Capacity Market Design In Light of the Clean Energy Transition and CLCPA Mandates

11. The NYISO's filing letter describes in detail the history of the BSM Rules, the Commission rulings that have guided their development and evolution, and the emergence of the CLCPA as a principal driver of the resource mix in New York State. I will briefly touch on that history to provide context for the opinions that I express herein.

12. The BSM Rules have been in effect since 2008. At the outset, the BSM Rules targeted only "net buyers" of capacity that sought to exercise buyer-side market power, an approach that was quickly abandoned because of implementation difficulties and the ease with which such an approach could be gamed.

13. In the order directing the NYISO to revise the "net buyer" approach, the Commission stated that "all uneconomic entry has the effect of depressing prices below the competitive level and . . . this is the key element that mitigation of uneconomic entry should address."[1] Price suppression resulting from uneconomic entry was determined to harm consumers in the long-run because it can drive prices below competitive levels, and thereby interfere with the price signals that the market is sending to suppliers.

14. Since the issuance of that order in 2008, the Commission has upheld this ruling, and required the NYISO, in its development of the BSM Rules, to focus primarily on the mitigation of price suppression resulting from uneconomic entry.

15. My understanding is that the Commission and courts have also ruled that not all price suppression is inherently unlawful. Thus, the Commission held that entry by intermittent renewables into the NYISO-administered capacity market should not be mitigated, because such resources lack both the incentive and ability to suppress prices, unless the aggregate impact of large scale entry by such resources would significantly impact prices.

16. In its implementation of the BSM Rules, the NYISO has consistently attempted to strike an appropriate balance in the mitigation of buyer-side market power. Not enough mitigation of buyer-side market power – "under-mitigation" – would open the ICAP Market to the risk of price suppression caused by "economically inefficient entry," and the negative implications of price suppression (especially higher consumer costs and lower reliability in the long-run). On the other hand, excessive mitigation – "over-mitigation" – can discourage new entry and result in consumers paying too much for capacity. Ultimately, the goal of the BSM Rules, in conjunction with the rest of the NYISO capacity market design, has been to ensure that the ICAP Market "encourage[s] new investment, retain[s] existing needed capacity, and signal[s] when capacity is sufficient or when additional resources are needed."[2]

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[1] *N.Y. Indep. Sys. Operator, Inc.*, 124 FERC ¶ 61,301, at P 29 (2008).

[2] *See, e.g., N.Y. State Pub. Serv. Comm'n, et. al. v. N.Y. Indep. Sys. Operator, Inc.*, 173 FERC ¶ 61,060 at P 16 (2020).

17. Under the existing BSM Rules, there are two Mitigated Capacity Zones – Load Zone J (New York City) and the Load Zone G-J Locality (Lower Hudson Valley). The existing BSM Rules require that new generation, demand response, and controllable transmission projects that are seeking to provide ICAP in a Mitigated Capacity Zone be subject to an Offer Floor unless they qualify for one of the exemptions established by the Services Tariff. The two core exemptions available to generators and controllable transmission are the "Part A Exemption Test" and the "Part B Exemption Test." Demand response seeking to participate as Special Case Resources are currently evaluated pursuant to a comparable economic test.

18. The Part A Exemption Test currently compares the forecast of capacity prices in the first year of the Mitigation Study Period of an Examined Facility's operation to the Default Offer Floor, which is 75 percent of the Net CONE of the hypothetical unit modeled in the most recent ICAP Demand Curve Reset, such that a new entrant is exempted if the price forecast for the first year is higher than the Default Offer Floor. The test therefore does not focus on the economics of an individual entrant. Instead, it allows new entrants to avoid an Offer Floor at times when the market is approaching the minimum required level of capacity needed in a Locality regardless of whether this is due to load growth or the exit of existing resources.

19. Under the Part B Exemption Test, the NYISO examines the economics of individual entrants. For each Examined Facility, it compares a forecast of capacity prices in the three year Mitigation Study Period, which is assumed to be the first three years of an Examined Facility's operation, to the Net CONE of the Examined Facility, so that a new entrant will be exempted "if the price forecast for the three years is higher than the Net CONE of the Examined Facility."

20. In the last half-decade, the NYISO has added a Competitive Entry Exemption, a Renewable Exemption, and a Self-Supply Exemption to its BSM Rules. All three are designed to exclude from Offer Floor mitigation Resources that are not deemed to pose a significant risk of price suppression in the ICAP Market.

21. New York State has pursued increasingly ambitious climate change related initiatives over the entire period since the BSM Rules were first implemented. There has been significant tension over the last twelve years regarding the potential for the BSM Rules to interfere with state programs.

22. The potential for conflict between the currently effective version of the BSM Rules and New York State policies has never been greater than it is now and that tension will only intensify in the future.

23. In 2019, New York State adopted the CLCPA. Among other things, the CLCPA required that 70 percent of New York State load be served with renewable resources by 2030, and that 100 percent of the load be served with zero-carbon resources by 2040. The CLCPA also directs the deployment of minimum amounts of certain resources – six GW of photovoltaic resources by 2025, three GW of energy storage resources by 2030, and nine GW of offshore wind resources by 2035.

24. Various state regulatory initiatives have already been launched under the auspices of the CLCPA. A Climate Action Council established under the CLCPA is working on a scoping plan, which is to be released in draft form by January 1, 2022, that will ultimately guide the State efforts to implement the CLCPA.

25. In the most recent NYISO "Class Year" interconnection cost allocation process, certain new storage resources were subject to an Offer Floor. If the BSM Rules do not evolve, they are likely to more significantly interfere with CLCPA policies by mitigating new entrants that are necessary to the achievement of New York State's policy objectives. In particular, the currently effective version of the BSM Rules could result in over-mitigation of new intermittent and storage resources entering the capacity market as part of the NYISO's Class Year 2021 interconnection cost allocation process.

26. In my opinion, the BSM Rules must evolve to account for the CLCPA. The NYISO must recalibrate the appropriate balance between protecting against buyer-side market power and the rapid, CLCPA driven transformation of the New York Control Area ("NYCA") resource mix. Our challenge is to accommodate resources that are entering the market based on incentives structured to meet the State's environmental goals while still ensuring the capacity markets produce competitive outcomes and support reliability.

III. The NYISO's Proposed Revisions to the BSM Rules

27. After substantial consultation with its stakeholders, the NYISO has adopted tariff revisions that would exclude from the BSM Rules any Resource that supports the goals of the CLCPA (an "Excluded Facility"). This broad exclusion will automatically apply to Resources using solar, wind, geothermal, storage, non-fossil fueled fuel cell, and hydroelectric power, all of which are currently identified in the CLCPA. The proposed changes to the NYISO tariff also allow the NYISO to exclude additional resources that will satisfy CLCPA goals, including Resource types explicitly identified in the CLCPA or that are otherwise included, by New York State, as part of the CLCPA regulatory programs. Under this provision, the BSM exclusion also includes Demand Response Resources, which may currently participate as Special Case Resources and, in 2022, will also be able to participate as part of a Distributed Energy Resource Aggregation.

28. I believe that introducing the Excluded Facilities concept should effectively eliminate the conflict between the NYISO's FERC-jurisdictional capacity market rules and New York's CLCPA priorities. Rather than narrow the definition of the types of buyer-side market power that will trigger mitigation, the NYISO and its stakeholders have determined that Resources that are part of the CLCPA implementation should simply be excluded from the BSM Rules. Such an exclusion will help to ensure that the BSM Rules do not conflict with New York State policies and will avoid over-mitigation that could make the prices paid by consumers unnecessarily high.

29. At the same time, the NYISO will retain the existing BSM Rules for resources that do not qualify as Excluded Resources ("other resources"). This means that other resources will be evaluated for whether they qualify for an exemption from the Offer Floor under the Part A Exemption Test and the Part B Exemption Test. Excluded Facilities would be

included in the price forecasts used in these exemption tests, to ensure that those prices accurately reflect anticipated market conditions. Other resources also will be evaluated for eligibility for the Competitive Entry Exemption and the Self-Supply Exemption. If a resource that is not an Excluded Facility is not eligible for an exemption, it will be subject to the Offer Floor. Thus, the BSM Rules will continue to provide a safeguard against exercises of buyer-side market power.

IV. The NYISO's Proposed Marginal Capacity Accreditation Design

A. The Benefits of Marginal Capacity Accreditation

30. FERC has been exploring changes to capacity market mitigation measures and capacity market designs more broadly with an eye towards "modernizing" them to better reflect clean energy policies and a changing resource mix. Much of the discussion of these topics has taken place in FERC's proceeding on "Resource Adequacy in the Evolving Electricity Sector" (FERC Docket No. AD21-10-000).

31. The MMU has been actively involved in that proceeding. At a May 2021 technical conference, the MMU argued that all Independent System Operators and Regional Transmission Organizations "need to substantially improve how they accredit resources to sell capacity."[3] The MMU has described this improvement as the single most important market design change needed to move beyond buyer-side capacity market power mitigation rules as the means of ensuring that legitimate state resource policy choices do not disrupt Commission-jurisdictional markets.

32. The MMU has also formally recommended that the NYISO adopt a marginal capacity accreditation approach. The MMU's most recent annual *State of the Market Report* noted that the NYISO's current capacity accreditation methods "do not accurately reflect the marginal reliability value of certain resource types." It warned that "[c]urrent accreditation methods will become more outdated and inaccurate as the resource mix shifts towards intermittent and duration-limited resources." In the MMU's view, the key issue was that the "marginal reliability value of resources varies according to their availability during hours when capacity margins are tightest – resources with long lead times and low availability tend to provide less reliability value." Moreover, "the capacity value of renewables, storage, and demand response resources vary with increased penetration of these resources." Accordingly, the MMU recommended that the NYISO "revise its capacity accreditation rules to compensate resources in accordance with their marginal reliability value."[4]

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[3] *Transcript March 23, 2021 Technical Conference regarding Resource Adequacy in the Evolving Electricity Sector*, Docket No. AD21-10-000, Tr. 143-44

[4] *See 2020 State of the Market Report for the New York ISO Markets*, Potomac Economics at (May 2021) ("2020 State of the Market Report") *available at* <https://www.potomaceconomics.com/wp-content/uploads/2021/05/NYISO-2020-SOM-Report.pdf>.

33. The NYISO stakeholder process that culminated in the NYISO's filing in this proceeding featured multiple discussions of different potential accreditation enhancements.

34. The terminology used in these discussions, as with similar debates in other regions, can be complex and inconsistent. For purposes of this affidavit, I am adopting the MMU's nomenclature which refers to "marginal accreditation" as a market design in which resources are compensated based on the observed system reliability benefit that the next incremental unit of that resource class would provide. Marginal valuations are calculated from the impact of an incremental quantity of a given resource type on a reliability metric e.g., the once in ten years loss-of load expectation ("LOLE"), relative to that of "perfect capacity."

35. Marginal capacity accreditation will send the proper price signals for each class of resources based upon the current system configuration and which resource class is best suited to support grid reliability. It will do so regardless of whether those resources receive out-of-market payments or rely more heavily on capacity market revenues because it will properly signal which resource types are best suited to support grid reliability.

36. It is also my view that the NYISO's proposal to study "Capacity Accreditation Factors" to redetermine capacity values annually is an important improvement over the currently effective quadrennial review process. It will be increasingly important to conduct valuations more frequently as the clean energy transition under the CLCPA accelerates.

37. The MMU presented an analysis in August 2021 of the advantages of marginal accreditation over averaging based models (Attachment V). The MMU supported marginal accreditation because it concluded that average accreditation would result in severe inefficiencies and long-term overpayment.

38. The MMU emphasized that the core principle of the NYISO's overall wholesale market design is marginal cost scheduling and pricing. Marginal accreditation is fundamentally consistent with this foundational market structure.

39. The MMU further explained that a marginal design would not result in capacity over-procurement because ICAP requirements are determined independently of the capacity accreditation methodology. In addition, the MMU showed that: (i) marginal accreditation would not excessively discount intermittent and storage resources; and (ii) marginal accreditation was not in conflict with CLCPA priorities because accurate investment signals will continue to be important in New York.

40. The MMU refuted several claims that have been offered in support of average accreditation. The MMU explained that averaging approaches: (i) can result in inefficient incentives for investment because compensation does not align with a resource's impact on improving reliability; and (ii) excess payments under average accreditation can lead to inflated consumer costs.

41. In November 2021, the MMU presented an analysis to the NYISO's stakeholders, of the long-term impacts of capacity accreditation on consumer costs and the NYISO-

administered markets (Attachment VI). The MMU reached three main conclusions. First, that marginal accreditation would result in more efficient signals for investment and lower consumer costs. Second, that marginal accreditation could help guide investment in policy resources at the lowest cost to consumers even when state subsidies supplement resources' market revenues. Third, that the advantages of marginal accreditation will become more significant and impactful as the CLCPA requires larger quantities of investment in intermittent resources.

42. The NYISO conducted its own analysis of marginal accreditation and reached conclusions similar to the MMU's (Attachment VII). It shows that a marginal accreditation design would bring benefits with respect to: (i) reliability; (ii) cost impact/market efficiencies; (iii) environment/new technology; and (iv) transparency.

43. Marginal accreditation will result in the compensation paid to a Resource participating in the ICAP Market being closely tied to the reliability contributions of incremental increases in quantity of that resource. Such marginal accreditation provides the correct market signals for needed investments to maintain reliability and to minimize consumer costs. For intermittent resources such as onshore and offshore wind and solar, marginal accreditation will accurately signal the declining reliability contributions of incremental additions and provide signals when other resource types such as storage may provide more cost-effective incremental reliability contributions.

44. Marginal accreditation will provide the correct market signals for needed investments to maintain reliability and to minimize consumer costs. It will clearly indicate the value of gaining or losing capacity of a resource type, given all the other resources in the system. It therefore accurately signals (a) diminishing returns of resources with correlated availability, and (b) the value of adding capacity of a type that complements other resources in the system and provides a greater marginal reliability contribution. Thus, a marginal design will encourage investments in new flexible resources when and where needed and incentivize inflexible conventional resources that cannot help to support intermittent and duration-limited resources to exit the market. A marginal design should also achieve the necessary level of reliability at the lowest cost.

45. I have independently reviewed the MMU's arguments in Docket No. AD21-10-000 and other proceedings, the *State of the Market Report* recommendation, the MMU presentations during the NYISO stakeholder process, and the NYISO staff analysis. I agree with and adopt their conclusions and recommendations regarding marginal accreditation. I also endorse the statements made in the NYISO's filing letter regarding the importance of introducing robust capacity accreditation improvements and the superiority of a marginal accreditation design for the NYISO.

46. Specifically, I agree that capacity accreditation improvements are a necessary response to the clean energy transition. As the supply mix on the grid is evolving more and more rapidly, a proper valuation of the reliability contribution of all capacity Resources, particularly intermittent renewables and duration-limited resources, becomes more critical to the proper operation of the ICAP Market. I have concluded that a marginal

accreditation design that accurately values each resource's incremental contribution to resource adequacy is the best option for New York.

47. By contrast, I have concluded that the use of an average accreditation framework in the NYISO would over-value significant quantities of capacity. The result of such overvaluation would be excessive investment in certain resources – and higher consumer costs – that do not contribute to incremental resource adequacy.

48. I note that the opinions that I express in this Section apply only to the NYISO region. I take no position at this time on whether a marginal or average accreditation methodology would be a better option for any other region.

B. A Robust Capacity Accreditation Design Is Necessary to Justify Relieving Excluded Facilities from the BSM Rules

49. As noted above, the NYISO retained the Analysis Group to evaluate the impacts of revised BSM Rules. The AGI Study concluded that the capacity markets would continue to produce competitive outcomes and provide for resource adequacy in the years after the NYISO's proposals are implemented. But as discussed in Attachment III to the NYISO's filing, the AGI Study expressly "modeled the future operation of the NYISO capacity market under conditions consistent with NYISO's implementation of its proposed changes to the BSM rules and capacity accreditation paradigm . . . ."[5] That is, the AGI Study's conclusions are based on an assumption that a robust capacity accreditation regime, such as the NYISO's proposed marginal accreditation design, will be in place. Consequently, capacity accreditation improvements are necessary to justify relieving Excluded Facilities from the BSM Rules.

C. Description of the Proposed Marginal Accreditation Design

50. While the NYISO currently uses GADS data or the equivalent to calculate UCAP for the majority of the supply currently supporting system reliability, the NYISO has a different system of measuring the UCAP value of intermittent wind, solar and run of river hydro resources. Currently the UCAP for wind and solar resources for the first year these resources are in service is assigned based upon historic data regarding the performance of these technologies during the periods of expected peak demand. Once these resources have been participating in our markets commercially, however, the NYISO looks at metered performance during the months of expected peak load periods and peak load hours. The performance of each resource is looked at during the prior two like-Capability Periods and it is weighted in accordance with Section 5.12.6.2 of the Services Tariff for actual performance during the different hours in the Peak Load Wind. Limited Control Run of River Hydro resources have their UCAP calculations determined by the metered performance during the top twenty load hours in the Capability Period. These processes fail to capture in the UCAP measurement the ability of these resources to support resource adequacy in the remaining 8760 hours of the year. While the IRM and LCR set the minimum requirements for ICAP to maintain resource adequacy based upon the

[5] Attachment III at P 9.

probabilities that load is being served over 8760 hours of the Capability Year, the contributions of these intermittent resources during all other hours throughout the year is not captured in the current UCAP calculation processes.

51. The NYISO proposes to create an annual process, beginning for the Capability Year starting on May 1, 2024, that utilizes the base case system conditions adopted annually by the New York State Reliability Council ("NYSRC") for the upcoming Capability Year as representative of the capacity supply mix, and model the system to determine the contribution to resource adequacy of incremental supply from each Capacity Accreditation Resource Class for each applicable Capacity Region (*i.e.*, Long Island, NYC, Zones G thru I, and Zones A thru F). This process will determine Capacity Accreditation Factors that will be assigned to all ICAP Supply and used in calculating their UCAP MW in the upcoming Capability Year. The accreditation calculations will be based upon the marginal reliability contribution of the ICAP Suppliers within each Capacity Accreditation Resource Class toward meeting NYSRC resource adequacy requirements for the upcoming Capability Year.

52. The NYISO proposes to apply the marginal capacity accreditation design to all resource types and not restrict its use to emerging wind, solar and storage resources. This creates a uniform methodology which is robust and technology independent. As the MMU has observed, the NYISO's existing processes use resource adequacy modeling to inform the capacity credit determinations. But those determinations are "not guaranteed to align with a resource's impact on LOLE in each year."[6] Specifically, the forced outage rates that are used to determine capacity credit do not necessarily align with, or produce credit values that accurately reflect, a Resource's true marginal value for resource adequacy. For this reason:

> the UCAP rating of some existing resources is overvalued. Since the capacity planning requirements are based on models that do not consider the reduced availability of long lead time units, it results in the appearance of surplus capacity which reduces incentives for new investment when it is needed and leads to the retention of older units that provide little or no value. Current accreditation methods will become more outdated and inaccurate as the entry of intermittent and duration-limited resources makes reliability planning more complex.[7]

53. Under the marginal capacity accreditation proposal, the NYISO will annually establish the "Capacity Accreditation Factors" for each "Capacity Accreditation Resource Class." Under the proposed definition set forth in Section 2.3 of the Services Tariff, the Capacity Accreditation Factors are the "factors . . . that reflect the marginal reliability contribution of the ICAP Suppliers within each Capacity Accreditation Resource Class toward meeting NYSRC resource adequacy requirements for the upcoming Capability Year."

[6] 2020 State of the Market Report at A-236.

[7] 2020 State of the Market Report at 57.

Importantly, this study will be performed at the applicable Capacity Region level (*i.e.*, Long Island, NYC, Zones G thru I, and Zones A thru F) in order to reflect the impact of transmission constraints, and the varying capacity benefits of Resources in different geographic locations. The assessment will be performed for each resource type in each applicable Capacity Region, as reflected in the proposed definition of "Capacity Accreditation Resource Class," which consists of a "defined set of Resources and/or Aggregations . . . with similar technologies and/or operating characteristics which are expected to have similar marginal reliability contributions toward meeting NYSRC resource adequacy requirements for the upcoming Capability Year." The assessments will be performed using the study models used by the NYSRC to develop the Installed Reserve Margin and the Locational Capacity Requirements that are the basis for the ICAP Market Requirements.

54. The purpose of these annual assessments is to ensure that each capacity Resource is compensated in a manner that is commensurate with the marginal value that the Resources in its class are found to contribute to resource adequacy in the NYCA. Annual updates will ensure that capacity accreditations change in time to keep up with evolving realities on a fast-changing system. Capacity accreditation is not a Resource-specific measure, but rather a comparison of the reliability of the power system before and after the addition of a Resource or class of Resources.

V. Enhancements to the NYISO's Process for Establishing ICAP Market Demand Curves

55. The NYISO's ICAP Market Demand Curves are defined using ICAP reference point prices. These reference point prices are ultimately translated to UCAP reference point prices for use in the spot auction. The NYISO's current practice, in converting an ICAP reference point price to a UCAP reference point price, is to use a system-wide or applicable Locality-wide translation factor used to translate Capacity Requirements to UCAP, rather than the derating factor of the peaking plant used to determine the applicable reference point price.

56. The MMU has advised that the NYISO's current practice may result in future ICAP Demand Curves being set too high "leading to inefficiently high consumer payments."[8] The MMU explained that the peaking plant, as a new resource, generally has a lower forced outage rate than the translation factor. It warned that the "inconsistency will become more pronounced as additional intermittent resources are added to the system, which would tend to increase the regional average derating factor."[9]

57. Accordingly, the NYISO's filing proposes to modify Section 5.14.1.2 of the Services Tariff which governs the ICAP to UCAP translation that is done for the Proxy Peaking Plant used to set the ICAP Reference Price for the Demand Curves. This language provides: "[b]eginning with the 2024/2025 Capability Year, the aforementioned

[8] 2020 State of the Market Report at 63.

[9] *Id.*

translation shall utilize the applicable derating factor of the peaking plant used to establish each ICAP Demand Curve, as determined during the periodic review conducted pursuant to Section 5.14.1.2.2." Similar language would be added to the tariff in Section 5.14.1.2.2.4.11. Beginning with NYISO's next quadrennial ICAP Demand Curve Reset, which will establish ICAP Demand Curve beginning with the 2024/2025 Capability Year, the NYISO shall utilize the applicable derating factor of the peaking plant used to establish each ICAP Demand Curve, as determined during the periodic review conducted pursuant to Section 5.14.1.2.

58. As a greater penetration of wind, solar, energy storage and other CLCPA Resources come into the market, the ICAP/UCAP translation factor is expected to diverge from the technology-specific derating factor for the applicable proxy peaking plant technologies, regardless of whether that is a combustion turbine or an alternative peaking plant technology such as battery storage. Changing to a technology-specific derating factor will ensure accurate and robust ICAP Market Demand Curves as the grid's supply mix rapidly evolves going forward.

59. I have reviewed the MMU's recommendation on this point and I agree that the NYISO should adopt it.

60. In addition to developing tariff revisions to improve the accuracy of ICAP Market Demand Curve reference points, the NYISO and stakeholders also discussed concerns about impacts on the apparent regulatory risks to the proxy peaking plant in the capacity market. These risks are very likely to arise because the NYISO's proposed change to the BSM Rules will impact entry in Mitigated Capacity Zones, and there are expected to be large scale initiatives by New York State to incent investment in new ICAP Supply megawatts from CLCPA technologies throughout the NYCA,

61. The NYISO considered potential changes to the tariff to explicitly require that such risk factors be evaluated in a future demand curve reset. But the NYISO ultimately determined that the risk factors must already be accounted for under the existing tariff by the NYISO's independent consultant when it develops the gross costs associated with the proxy peaking plant for each technology considered.

62. Therefore, while no changes are being added to the tariff with respect to this potential risk, the NYISO believes that the changes to the BSM Rules and Capacity Accreditation will require that the independent consultant evaluate and specifically account for the additional investment risk introduced by CLCPA mandates in future Demand Curve resets. Appropriately accounting for this risk when establishing the proxy peaking plant technology is an important aspect of establishing the NYISO's ICAP Demand Curve parameters that will allow prices to remain competitive going forward

63. This concludes my affidavit.