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August 4, 2020

Hon. Michelle L Phillips
Secretary to the Commissions
NYS Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Submitted electronically to: secretary@dps.ny.gov

Re: **Case 19-E-0530 – Questions Regarding the Brattle Group Analyses of Resource Adequacy Structures**

Pursuant to the Notice Soliciting Comments issued on July 20, 2020 in the above-referenced case, Independent Power Producers of New York, Inc. (“IPPNY”) submits the following questions on the Brattle Group’s analyses of existing and potential resource adequacy structures, which were initially filed on May 19, 2020, updated on July 1, 2020, and presented at the July 10, 2020 Technical Conference. Prior to the Technical Conference, IPPNY informally submitted questions to Department of Public Service (“DPS”) Staff which were intended to obtain additional information from the qualitative and quantitative analyses to provide a stronger and more transparent foundation upon which stakeholders and decisionmakers may consider the merits of the existing resource adequacy structure versus potential alternatives.

Subsequent to submitting the questions but prior to the Technical Conference, the Brattle Group posted an updated version of the quantitative analysis. The updated analysis, and conversation during the Technical Conference, answer some but not many of the questions that IPPNY had posed. In the interest of developing a robust record upon which stakeholders may fully evaluate the Brattle Group’s analyses, and upon which the Commission may issue an informed ruling, IPPNY respectfully requests that the attached questions be answered, and the requested information provided, by the Brattle Group or DPS Staff prior to the August 21 comment deadline for submitting comments in response to the July 20 Notice. The requested information should be provided far enough in advance such that the information may inform stakeholder comments submitted by August 21.

Respectfully,

Matthew Schwall

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Questions on Qualitative Analysis of Resource Adequacy Structures for New York

1. The Brattle Group states on page 16 of its Qualitative Analysis that moving to a bilateral market will move New York State effectively back to relying on a vertical demand curve. The NYISO implemented a sloped demand curve almost 20 years ago to provide more rationality to the capacity market. Did the Brattle Group identify or analyze the negative impacts of effectively returning to a vertical demand curve? If yes, what were the negative impacts identified by Brattle?
2. The Brattle Group states on Page 4 of the Qualitative Analysis: “If the capacity market produces low prices, this is correctly signaling an oversupply of capacity, that no more investments are needed for resource adequacy.” See also pages 11 and 13 claiming, “The prevailing prices may be low for a period as more clean energy and storage resources come online to meet CLCPA mandates, but this would not be considered a problem to address.” Three studies – Con Edison & the Long Island Power Authority’s Peaker studies, the NYISO’s Comprehensive Reliability Plan study, and the New York State Reliability Council’s High Intermittent Renewable Resources whitepaper – collectively indicate that dispatchable resources will be needed to maintain reliability, particularly as more intermittent renewables come online. How can the system maintain the needed dispatchable resources if the capacity prices reach these very low prices absent Reliability Must Run contracts?
3. The Brattle Group states on Page 8 of the Qualitative Analysis that Brattle’s initial “base BSM” analysis did not reflect the NYISO’s proposed Renewable Exemption Cap and proposed tariff revisions to the Part A BSM exemption test which were expressly designed to accommodate public policy resources. Brattle’s updated analysis, issued on July 1, 2020, revised the assumptions for which units would be exempted under NYISO rules. Please identify which resources, or the quantity of resource types, Brattle assumed would be exempted because of the renewable exemption? Please identify which resources, or the quantity of resource types, Brattle assumed would be exempted because of the Part A exemption? In each case please provide a complete explanation of how Brattle determined the amount of resources that would be exempt and provide any workpapers underlying those assumptions.
4. Brattle acknowledges on page 16, footnote 16, of the Qualitative Analysis that banking is not a viable mechanism in the context of the Resource Adequacy Credit (“RAC”) structure which would be applied on an annual basis. Brattle then highlights other alternatives, but which of these does Brattle propose to mitigate volatility and to what degree will they mitigate volatility? One option Brattle presents is a forward market, but hasn’t Brattle previously found that a forward market would not provide sufficient benefits to be undertaken in New York? Is Brattle now supporting forward markets? If yes, is that only in the context of the RAC proposal and/or the hybrid proposal (Option 5), and if so, why? Are there mechanisms to pay for reliability provided to the system beyond the minimum reliability requirements in each area and, if not, how does Brattle address or otherwise account for the reduced reliability available under this model?
5. Brattle states on page 18 of the Qualitative Analysis that a primary advantage of the LSE-contracted RAC approach (Option 4) is “Price certainty for the subset of capacity resources (*likely new resources*) that could be achieved through multi-year forward contracts for RACs that do not exist today.” How would existing dispatchable resources needed to maintain

resource adequacy remain economic under this structure? How did Brattle account for costs associated with reallocating risk associated with resource entry choices from suppliers to loads?

6. Beginning on page 18 of the Qualitative Analysis, Brattle sets forth a structure calling for co-optimizing RACs and Renewable Energy Credits (“RECs”). How could dispatchable resources be committed in this structure? Brattle also suggests at page 26 that a primary advantage of Structural Option 5 is “Enhanced competition across resources types, vintages, and across products that may achieve lower total costs by enabling more direct competition within one auction.” How can these auctions ensure that adequate dispatchable resources clear the auctions to meet resource adequacy? Specifically, Brattle claims that “[t]here would be as many different demand curves as there are individual LSE requirements” but then only includes various clean energy demand curves (e.g., RECs and even a subset for OSW and distributed solar, an energy storage resource requirement and potentially a separate clean energy curve to account for Zero Emissions Credits in the future). Why doesn’t Brattle include dispatchable products as a separate curve? How would such a curve be applied in combination with the levels of renewables being procured? How would this structure assure that sufficient resources were maintained and compensated to assure reliability?
7. Brattle states on page 23 of the Qualitative Analysis that “RACs would be treated on an entirely resource-neutral basis, with no preference among resource types.” However, Brattle then notes this would mean the State may not achieve its predefined MW totals for certain resource types mandated in the CLCPA and proposes options to address that fact. Why doesn’t Brattle propose an option to address the need for dispatchable resources? Doesn’t the use of all of these sub-auctions even further dwindle “room” for dispatchable resources to clear the market? Would Brattle’s proposal for RECs be improved by incorporating the price of carbon into the markets to provide a better signal on the carbon displacement potential for resources in different locations and with different generation profiles? Does Brattle believe this is a more efficient way to reduce carbon emissions than setting a cap on the amount of carbon that could be emitted and then letting the market price, including the impacts of the carbon price, determine the location and type of resources that should be procured?

Questions on Quantitative Analysis of Resource Adequacy Structures

1. Please identify each constraint that was used in the GridSIM analysis for this study to assure that the CLCPA targets for renewable resources were met including, but not limited to, the following:
 - a. Constraint(s) to assure 70% of load met by renewable resources by 2030 (presentation, p. 3);
 - b. Constraint(s) to assure at least 6,100 MW of offshore wind (presentation, p. 3);
 - c. Constraint(s) to assure at least 3,000 MW of storage (presentation, p. 3); and
 - d. Constraint(s) to assure at least 7,500 MW of behind-the-meter solar (presentation, p. 3).
2. Please provide the shadow price that the model estimated for each constraint above.
3. If any of the constraints were met by assuming or forcing in a type of renewable addition, please state so and explain why the model was not allowed to choose between that resource and other options.
4. Please provide output files for each of the “future wholesale markets” that were modeled by Brattle. Please provide all workpapers supporting key assumptions.
5. Please identify each technology type that was considered by the model as an option to meet the CLCPA targets and provide the assumed cost and operating characteristics of the resource.
6. Please identify any documents that more fully explain the proposal for a Centralized RAC Market. Would Brattle’s proposal for the Centralized RAC Market be improved by including carbon costs in the market to provide a better signal on the carbon displacement potential for resources in different locations and with different generation profiles?
7. The Quantitative Analysis states that “Available output data had low CF% and output diversity, making impact estimates conservative.” It is IPPNY’s understanding that the Brattle study included the assumption that the reliability benefit of renewables and storage declined as additions increased and that this is based on analysis that Brattle has done here and or elsewhere.
 - a. Please explain whether IPPNY’s understanding is correct, and, if it is not, please clarify what Brattle meant.
 - b. If the quoted statement above is based on Brattle having modeled the declining reliability value of renewables and storage, please explain why that makes the results “conservative”.
8. Page 3 of the Quantitative Analysis states that the “analysis does not recognize that transmission constraints could make the local J/K value fall faster with penetration.”
 - a. Has Brattle performed or reviewed any analyses that indicates how much faster the value could fall with penetration? If yes, please provide such analyses.

- b. Please explain why Brattle did not attempt to estimate the further reduction in J/K value as a result of transmission constraints.
9. Page 12 of the July 1, 2020 updated Quantitative Analysis states that “half of existing hydro fleet assumed to be mitigated under Expanded BSM”.
 - a. Please explain why Brattle or the State team believes that half the hydro resources have going forward costs that are either now uneconomic based on market revenues or would become uneconomic based on market revenues.
 - b. Please explain how much of the mitigation costs are the result of this assumption.
10. The Quantitative Analysis assumes that all the remaining nuclear units are mitigated under Expanded BSM.
 - a. Please explain why Brattle or the State team believes that all of the nuclear resources have going forward costs that are either now uneconomic based on market revenues or would become uneconomic based on market revenues.
 - b. Please explain how much of the mitigation costs are the result of this assumption.
 - c. Please identify how much mitigation costs would change if only the two smallest units were found to be uneconomic.
 - d. Please identify how mitigation costs would change if only the single unit Ginna plant were found to be uneconomic.
11. For Status Quo BSM, Expanded BSM, and No BSM cases, please provide the 2030 model estimates for the capacity clearing price for the New York Control Area, the Lower Hudson Valley, New York City, and Long Island capacity Localities.
 - a. Please provide the monthly capacity price.
 - b. Please also provide the Summer and Winter capacity monthly prices if calculated by the model.
 - c. Please identify if the analysis identified any other capacity prices and provide those as well.
12. Please provide the annual and, if available, the monthly average energy price (LBMP) for each zone or superzone for each of the three scenarios.
13. Please explain why Solar Behind-the-Meter is assumed to have a BSM related cost impact in the Expanded BSM case.
14. Please explain why Existing Tier 1 Renewables are assumed to have a BSM related cost impact in the Expanded BSM case.