UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc.	)	**Docket No. ER17-386-000**

REQUEST FOR LEAVE TO ANSWER AND ANSWER OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

Pursuant to Rules 212 and 213 of the Rules of Practice and Procedure promulgated by the Federal Energy Regulatory Commission ("Commission"), 18 C.F.R. §§ 385.212 and 385.213, the New York Independent System Operator, Inc. ("NYISO") hereby submits this Request for Leave to Answer and Answer in response to certain protests and comments filed in response to the NYISO's proposal submitted in this proceeding on November 18, 2016 ("2016 DCR Filing").[1] The following parties filed protests and comments in response to the 2016 DCR Filing: (i) Consolidated Edison Company of New York, Inc. ("Con Edison") and Orange and Rockland Utilities, Inc. ("Orange and Rockland");[2] (ii) Entergy Nuclear Power Marketing, LLC;[3] (iii) Independent Power Producers of New York, Inc. ("IPPNY");[4] (iv) Multiple Intervenors and the City of New York;[5] (v) Niagara Mohawk Power Corporation d/b/a National

[1] Docket No. ER17-386-000, *New York Independent System Operator, Inc.*, Proposed ICAP Demand Curves for the 2017/2018 Capability Year and Parameters for Annual Updates for Capability Years 2018/2019, 2019/2020 and 2020/2021 (November 18, 2016).

[2] Docket No. ER17-386-000, *supra*, Comments of Consolidated Edison Co. of New York, Inc. and Orange and Rockland Utilities, Inc. (December 9, 2016) ("Con Edison Comments").

[3] Docket No. ER17-386-000, *supra*, Motion to Intervene and Comments of Entergy Nuclear Power Marketing, LLC (December 9, 2016).

[4] Docket No. ER17-386-000, *supra*, Limited Protest and Comments of Independent Power Producers of New York, Inc. (December 9, 2016) ("IPPNY Limited Protest").

[5] Docket No. ER17-386-000, *supra*, Motion to Intervene, Comments and Protest of the City of New York and Multiple Intervenors (December 9, 2016) ("MI/City Protest").

Grid ("National Grid");[6] (vi) the New York State Department of State Utility Intervention Unit ("UIU");[7] (vii) the New York State Public Service Commission ("NYSPSC") and the New York State Energy Research and Development Authority ("NYSERDA");[8] (viii) the New York Transmission Owners;[9] and (ix) Potomac Economics, Ltd. ("Potomac Economics"), the NYISO's Market Monitoring Unit ("MMU").[10]

Representing the culmination of the more than year long periodic review process (commonly referred to as the "ICAP Demand Curve reset" or "DCR" process) required by the Market Administration and Control Area Services Tariff ("Services Tariff"), the 2016 DCR Filing proposes to establish the parameters of the ICAP Demand Curves for the 2017/2018 Capability Year.[11] The 2016 DCR Filing also proposes the methodologies and inputs that will be used in conducting the tariff-required annual updates to determine the ICAP Demand Curves for the 2018/2019 through 2020/2021 Capability Years.

[6] Docket No. ER17-386-000, *supra*, Comments of Niagara Mohawk Power Corporation d/b/a National Grid (December 9, 2016) ("National Grid Comments").

[7] Docket No. ER17-386-000, *supra*, Motion to Intervene, Comments, and Protest of the New York State Utility Intervention Unit (December 9, 2016) ("UIU Protest").

[8] Docket No. ER17-386-000, *supra*, Notice of Intervention and Protest of the New York State Public Service Commission and New York State Energy Research and Development Authority (December 9, 2016) ("NYSPSC/NYSERDA Protest").

[9] Docket No. ER17-386-000, *supra*, Motion to Intervene and Protest of the New York Transmission Owners (December 9, 2016) ("NYTO Protest"). The New York Transmission Owners are comprised of: (i) Central Hudson Gas & Electric Corporation; (ii) Con Edison; (iii) National Grid; (iv) New York Power Authority; (v) New York State Electric & Gas Corporation; (vi) Orange and Rockland; (vii) Power Supply Long Island; and (viii) Rochester Gas and Electric Corporation.

[10] Docket No. ER17-386-000, *supra*, Motion to Intervene and Comments of the Market Monitoring Unit on the New York ISO's ICAP Demand Curve Reset (December 9, 2016) ("MMU Comments").

[11] Capitalized terms not otherwise defined herein shall have the meaning specified in the Services Tariff and the NYISO Open Access Transmission Tariff ("OATT").

The NYISO's proposal is designed to ensure that the ICAP Demand Curves fulfill their fundamental objective of attracting new and retaining existing capacity supply necessary to achieve New York's statewide and locational minimum Installed Capacity requirements. The NYISO's proposal also represents a reasonable balance between the divergent interests of the opposing parties.

Although parties do not agree with all aspects of the NYISO's proposal, the 2016 DCR Filing, together with the supplemental information provided herein, demonstrate that the proposal is just and reasonable. Accordingly, the NYISO respectfully reiterates its request: (i) that the Commission issue an order on or before January 17, 2017 accepting the ICAP Demand Curves proposed by the NYISO for the 2017/2018 Capability Year, as well as the NYISO's proposed methodologies and inputs for conducting the annual updates to establish the ICAP Demand Curves for the 2018/2019 through 2020/2021 Capability Years; and (ii) for an effective date of January 17, 2017 for the proposed revisions to Section 5.14.1.2 of the Services Tariff to reflect the parameters of the ICAP Demand Curves for the 2017/2018 Capability Year.

I. REQUEST FOR LEAVE TO ANSWER

Rule 213 of the Commission's Rules of Practice and Procedure generally prohibits answers to certain pleadings, including protests.[12] The Commission, however, has discretion to waive such prohibition.[13] The Commission has previously determined that a waiver is appropriate in circumstances where an otherwise prohibited answer: (a) will lead to a more accurate and complete record; (b) helps the Commission understand the issues; (c) clarifies

[12] *See* 18 C.F.R. § 385.213(a)(2). The Commission's Rules of Practice and Procedure authorize answers to pleadings stylized as "comments," such as the Con Edison Comments, National Grid Comments and MMU Comments.

[13] *Id*.

matters in dispute or errors; or (d) provides information that will assist the Commission in rendering a decision.[14] This answer clarifies matters in dispute, provides additional information that will assist the Commission, and will otherwise be helpful in the development of a complete record in this proceeding. Accordingly, the Commission should accept this answer.

II. ANSWER

The positions of various parties, if adopted, would result in either placing downward or upward pressure on the ICAP Demand Curve reference point values proposed by the NYISO. Although consensus among divergent interests was ultimately not achieved with respect to all aspects of the DCR, the NYISO's proposal strikes a fair and reasonable balance between these divergent positions.[15] The NYISO's proposal results in establishing ICAP Demand Curves that are designed to provide appropriate price signals as to the locational value of capacity based on the state's applicable minimum Installed Capacity requirements.

A. Peaking Unit Technology and Design

The 2016 DCR Filing proposes to maintain nearly the same peaking unit technology and plant design for all the ICAP Demand Curves as was approved by the Commission in the last reset.[16] For the Long Island ("LI"), New York City ("NYC") and G-J Locality ICAP Demand Curves, the NYISO proposes the continued use of a simple cycle, dual fuel F class frame turbine equipped with selective catalytic reduction ("SCR") emissions controls. For the NYCA ICAP

[14] *See*, *e.g.*, *New York Independent System Operator, Inc.*, 99 FERC ¶ 61,246 (2002) (accepting answers to protests that helped to clarify issues and did not disrupt the proceeding); *Morgan Stanley Capital Group, Inc. v. New York Independent System Operator, Inc.*, 93 FERC ¶ 61,017 (2000) (accepting an answer that was helpful in the development of the record); and *New York Independent System Operator, Inc.*, 91 FERC ¶ 61,218 (2000) (accepting an answer deemed useful in addressing issues arising in the proceeding at issue).

[15] *Supplemental Affidavit of Paul J. Hibbard, Dr. Todd Schatzki, and Craig Aubuchon*, attached hereto as Attachment I, at ¶ 3-6 ("Supplemental AG Affidavit").

[16] 2016 DCR Filing at 6-22.

Demand Curve, the NYISO proposes continued use of a simple cycle, gas-only F class frame turbine. Due to changes in the applicable environmental requirements since the last reset, however, the NYISO now proposes that the NYCA ICAP Demand Curve peaking plant include SCR emissions controls.

1. The H Class Frame Turbine Is Not a Viable Candidate Technology for this DCR

In response to requests during the DCR process, the NYISO and the independent consultant engaged for this DCR ("Independent Consultant")[17] assessed the viability of a simple cycle H class frame turbine to serve as the peaking unit technology in New York for this DCR.[18] Due to the absence of any H class frame turbine currently operating in a simple cycle configuration with SCR emissions controls,[19] this technology is not economically viable, as required by the Services Tariff. As such, it does not qualify as a viable peaking unit technology at this time.

The UIU Protest contends that the H class frame turbine should serve as the peaking unit technology for the NYCA and G-J Locality ICAP Demand Curves.[20] To support its position, the UIU points to recent events in ISO New England, Inc. ("ISO-NE").[21]

These factors were fully considered by the NYISO and the Independent Consultant in determining that, for this DCR, the simple cycle H class frame turbine does not qualify as

[17] Analysis Group, Inc. ("AG"), together with Lummus Consultants International, Inc. ("Lummus"), was selected to serve as the tariff-required independent consultant for this DCR. AG, together with Lummus, is referred to herein as the "Independent Consultant."

[18] 2016 DCR Filing at 7-9.

[19] The applicable New Source Performance Standards ("NSPS") requirements mandate the inclusion of SCR emissions controls for a H class frame turbine regardless of location or whether the plant is gas-only or dual fuel. (2016 DCR Filing at 10.)

[20] UIU Protest at 4-7.

[21] *Id*.

economically viable, as required by the Services Tariff. Although the NYISO and the Independent Consultant fully considered the ongoing events in the ISO-NE capacity market related to the simple cycle H class frame turbine, these circumstances do not overcome or otherwise satisfy the economic viability requirement of the Services Tariff.[22] The ICAP Demand Curves have never been established using a technology design that is without any actual commercial operating experience.[23] The simple fact remains that the H class frame turbine has not, to date, operated commercially in a simple cycle configuration with SCR emissions controls. Therefore, it currently does not qualify for consideration as a viable peaking unit technology.

Until such time as a simple cycle H class frame turbine with SCR emissions controls achieves sufficient commercial operating experience to demonstrate that the technology is proven and reliable, its consideration as a peaking unit technology in New York remains premature. Accordingly, the Commission should approve the NYISO's proposal to continue use of a simple cycle F class frame turbine as the appropriate peaking unit technology for this DCR.

2. Changes in the Applicable Environmental Requirements Now Dictate Inclusion of SCR Emissions Controls for the NYCA ICAP Demand Curve Peaking Plant

The proposal to include SCR emissions controls in the peaking plant design for the NYCA ICAP Demand Curve represents a material change from the last reset. This change, however, is driven by the underlying changes in the applicable environmental requirements that have occurred since the last reset.[24]

[22] 2016 DCR Filing at 7-9.

[23] *Id*.

[24] *Id*. at 9-15.

Certain parties contend that the NYISO's proposal is based upon speculation and conjecture about future environmental requirements.[25] Accordingly, these parties request that the Commission reject the NYISO's position and, instead, allow for continued reliance on an annual operating hours limitation for the NYCA ICAP Demand Curve peaking plant to achieve compliance with the applicable nitrogen oxides ("NOx") emissions requirements.[26]

Contrary to the assertions of these parties, the assessment undertaken by the NYISO and the Independent Consultant is not based upon speculation as to future environmental requirements. The NYISO and the Independent Consultant considered the currently applicable environmental regulatory framework in determining that these requirements, as changed since the last reset, now dictate that the NYCA ICAP Demand Curve peaking plant design include SCR emissions controls.[27]

The changes in the applicable environmental requirements since the last reset now result in an uncontrolled unit subject to an annual operating hours limitation producing 2.5 times more NOx emissions on an annual potential to emit basis than a unit that includes SCR emissions controls.[28] This presents a material risk to the ability of an uncontrolled unit to obtain the necessary approvals to operate in New York, including obtaining a certificate from the New

[25] NYSPSC/NYSERDA Protest at 30-34; MI/City Protest at 21-35; UIU Protest at 7-9; and National Grid Comments at 4-8.

[26] *Id*.

[27] 2016 DCR Filing at 10-15.

[28] *Id*. at 12-14. Contrary to the allegations in the NYSPSC/NYSERDA Protest, NYISO staff and the Independent Consultant did discuss the alternative approach of an operating hours cap in lieu of installing SCR emissions controls with the New York State Department of Environmental Conservation. (NYSPSC/NYSERDA Protest at 17.) The parties discussed that this approach had been applied in the last reset for the NYCA ICAP Demand Curve peaking plant and it was confirmed that this alternative remained available under the applicable regulations and, therefore, would be reevaluated by the NYISO and the Independent Consultant during this DCR. The parties also discussed changes in the applicable environmental requirements since the last reset. (2016 DCR Filing at 4.)

York State Board on Electric Generation Siting ("Siting Board") pursuant to Article 10 of the New York Public Service Law ("PSL").[29] This risk, coupled with the continued tightening of NOx emissions restrictions for electric generators in New York, undermines the continued viability of relying on an annual operating hours limitation in lieu of installing SCR emissions controls.[30]

Certain opposing parties also contend that the Siting Board is either without authority to rule in a manner that is inconsistent with any draft permits that may be issued to a proposed project by the New York State Department of Environmental Conservation ("NYSDEC") and/or that the Siting Authority will always defer to the NYSDEC with respect to determinations regarding emissions requirements and mitigation of adverse emissions.[31] To support their position, these parties cite to certain precedent from the Siting Board.[32] These cases, however, were issued under the predecessor to the current Article 10 statute and may no longer be relevant to determinations of the Siting Board under the current regulatory paradigm. Unlike its predecessor, the new Article 10 statute that was enacted in 2011 provides the Siting Board with

[29] 2016 DCR Filing at 12-14. To issue a certificate under Article 10, the Siting Board must determine that "the adverse environmental effects of the construction and operation of the facility will be minimized or avoided to the maximum extent practicable." (PSL § 168(3)(c).)

[30] *Id*. at 14-15. Certain parties contend that the additional environmental regulations cited by the NYISO may not be applicable to the emissions requirements of a peaking plant in Load Zones C, F and G (Dutchess County). (NYSPSC/NYSERDA Protest at 27-29; and MI/City Protest at 31-35.) The NYISO clearly noted that the examples cited demonstrate the general trend of ever more stringent NOx emissions requirements in New York for electric generation facilities. This regulatory environment coupled with the material risk that a new gas fired generator, such as a peaking plant, may be unable to obtain the necessary permits and approvals for construction and operation in New York absent the installation of backend control technology demonstrates the need for the peaking plant to include SCR emissions controls in all locations regardless of whether the facility is gas-only or dual fuel. (2016 DCR Filing at 14-15.)

[31] NYSPSC/NYSERDA Protest at 30-34; and MI/City Protest at 24-31.

[32] NYSPSC/NYSERDA Protest at 31-34; and MI/City Protest at 29-30.

additional authority to act irrespective of any draft permits and conditions relating thereto that may be issued by the NYSDEC.[33] This new authority expressly provides that:

> issuance by the department of environmental conservation of [air and other required] permits shall in no way interfere with the required review by the [Siting Board] of the anticipated environmental and health impacts relating to construction and operation of the facility as proposed, **or its authority to deny an application for certification** ….[34]

This new, independent authority clearly authorizes the Siting Board to depart from the findings of the NYSDEC and potentially require more stringent emissions controls, if necessary, or simply deny an application, thereby preventing construction of a facility. Proceedings under the predecessor statute that did not expressly provide such authority to the Siting Board may no longer be relevant or representative of the actions that may be taken by the Siting Board under the current Article 10 process.

The NYSPSC/NYSERDA Protest also cites to certain facilities constructed in New York without SCR emissions controls to support their claim that the NYISO's proposal is unwarranted.[35] The facilities referenced, however, are irrelevant to the current conditions faced by a new peaking plant development in New York. The Danskammer facility commenced commercial operations in 1951 and was recently converted from primarily operating on coal to using natural gas as its primary fuel source.[36] The ReEnergy Black River generation facility is a

[33] *See* 2016 DCR Filing at 12-13; and PSL § 172.

[34] PSL § 172 (emphasis added).

[35] NYSPSC/NYSERDA Protest at 17-18.

[36] Notably, coal-to-natural gas conversions present a uniquely different scenario in which the decreases in the level of adverse pollutants that result from the conversion are considered in the

60 MW facility that initially commenced operations in 1988 operating on coal. In 2014, after retrofitting and upgrades, the facility recommenced operations using biomass as its primary fuel source.[37] The Indeck-Oswego Energy Center is a 50 MW natural gas fired cogeneration facility that initially commenced operations in 1990.[38] The applicable environmental requirements and state of backend control technology were fundamentally different more than 25 years ago and are not informative as to current requirements. The Samuel A. Carlson facility is a less than 100 MW cogeneration facility that initially commenced operations in 1951 operating on coal. The plant was later upgraded and converted to operating on both coal and natural gas with the installation of a natural gas fired combustion turbine engine in 2002.[39] Similar to the Indeck-Oswego facility, the applicable state of control technology and environmental requirements applicable more than 15 years ago are not informative as to current conditions and requirements. Given the vintage and nature of the facilities cited, as well as the fundamental differences in environmental requirements and control technology that existed when these facilities initially commenced operations, they are neither relevant nor informative to current environmental requirements and the application thereof to a new peaking plant design consistent with those proposed by the NYISO.

The NYISO's proposal to include SCR emissions controls in the peaking plant design for the NYCA ICAP Demand Curve for this DCR appropriately accounts for the changes in the

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permitting process. The improvements that result solely from the fuel conversion may produce sufficient levels of emissions reductions to avoid the need for including backend controls.

[37] Notably, the ReEnergy Black River facility consists of circulating fluidized bed ("CFB") boilers. There are unique challenges to the use of SCR emissions controls on CFB boilers that are irrelevant to the use of such backend controls on a gas fired combustion turbine, such as the proposed peaking plants.

[38] NOx emissions at the Indeck-Oswego facility are controlled with steam injection.

[39] NOx emissions associated with the combustion turbine are controlled using water injection.

applicable regulatory requirements since the last reset. These changes now demonstrate that a representative peaking plant design should include SCR emissions controls in all locations throughout New York. The Commission should approve the NYISO's proposal, which seeks to ensure that the peaking plant design is able to achieve compliance with all applicable environmental requirements.

3. Continued Inclusion of Dual Fuel Capability in the Peaking Plant Design for the G-J Locality Remains Appropriate, and a Gas-Only Plant Design Remains Viable for the NYCA ICAP Demand Curve

The NYISO and the Independent Consultant assessed whether the peaking plant design for all locations should include dual fuel capability for this DCR.[40] This assessment included consideration of many factors, such as economics, reliability benefits, tariff and other requirements that mandate dual fuel capability, siting flexibility, and market conditions.[41] Based on this assessment, the NYISO proposes to maintain dual fuel capability as part of the peaking plant designs for NYC, LI and the G-J Localities and continue use of a gas-only design for the NYCA ICAP Demand Curve.[42]

Certain parties oppose the continued inclusion of dual fuel capability as part of the peaking plant design for the G-J Locality.[43] These parties attempt to re-litigate essentially the

[40] 2016 DCR Filing at 15-18.

[41] *Id*. Contrary to the assertion of certain parties, the NYISO's proposal does not assume that the G-J Locality ICAP Demand Curve peaking plant connects to a local distribution company ("LDC") gas system. (NYSPSC/NYSERDA Protest at 8; and MI/City Protest at 14). The peaking plant design and cost estimates are based on generic site conditions. The NYISO clearly stated that the inclusion of dual fuel capability in the peaking plant design for the G-J Locality ICAP Demand Curve improves siting flexibility by accommodating a connection to either a LDC gas system or an interstate gas pipeline. (2016 DCR Filing at 18.)

[42] 2016 DCR Filing at 15-18.

[43] NYSPSC/NYSERDA Protest at 6-16; MI/City Protest at 13-20; UIU Protest at 9-10; and National Grid Comments at 14-15.

same arguments considered and ultimately rejected by the Commission in the last reset.[44] As indicated by the NYISO's assessment in this DCR, the circumstances and conditions present in the G-J Locality have not changed. In the absence of changed circumstances, it is not appropriate to alter the Commission's prior determination that the peaking plant design for the G-J Locality should include dual fuel capability in order to qualify as economically viable.[45]

A primary contention of the parties opposing dual fuel capability for the G-J Locality is the absence of a mandatory dual fuel requirement as part of electric reliability, interconnection or other capacity market participation requirements.[46] In absence of such a mandatory requirement, these parties contend that dual fuel capability should only be included as part of the peaking plant design if the incremental revenues associated with such capability fully offset the costs thereof for the three year historic period used in estimating net Energy and Ancillary Services ("EAS") revenues for the 2017/2018 Capability Year.[47] Because the incremental costs of

[44] *See New York Independent System Operator, Inc.*, 146 FERC ¶ 61,043 at P 78-83 (2014) ("2013 DCR Order").

[45] 2016 DCR Filing at 16-18.

[46] NYSPSC/NYSERDA Protest at 6-7; MI/City Protest at 13; UIU Protest at 9; and National Grid Comments at 14-15. In their comments, Con Edison and Orange and Rockland contend that the NYISO's proposal to include dual fuel capability in the peaking plant designs for the NYC and G-J Locality ICAP Demand Curves should be conditioned on revisions to the NYISO's tariffs to include a mandatory dual fuel requirement for all new generators interconnecting within these capacity regions. (Con Edison Comments at 5.) In contrast, IPPNY contends that the Commission should direct the NYISO to revise the Services Tariff to include an automatic revision to the NYCA ICAP Demand Curve upon implementation of capacity market performance rules that "effectively require dual fuel capability or firm gas arrangements." (IPPNY Limited Protest at 14.) As noted in the 2016 DCR Filing, the NYISO already has a project slated for 2017 to examine fuel/performance assurance in the capacity market. (2016 DCR Filing at 16.) The Commission should not prejudge the outcome of this upcoming initiative, or otherwise unnecessarily constrain the NYISO's normal shared governance stakeholder process in addressing these matters. Accordingly, the Commission should reject the requests of Con Edison and Orange and Rockland and IPPNY. Any implications on the ICAP Demand Curves should be evaluated and discussed as part of this separate initiative.

[47] NYSPSC/NYSERDA Protest at 9-12; MI/City Protest at 13-14 and 16-17; UIU Protest at 9-10; and National Grid Comments at 15.

including dual fuel capability in the peaking plant design for the G-J Locality are not fully offset by the incremental net EAS revenues associated therewith for the 2017/2018 Capability Year, these parties allege that the NYISO's proposal to include such capability is inappropriate.[48]

The NYISO's consideration of multiple factors, including economics, reliability and other benefits and costs, in assessing whether an economically viable peaking plant should include dual fuel capability is consistent with Commission precedent.[49] The NYISO's assessment did specifically consider the economics of including dual fuel capability. For the G-J Locality, however, the NYISO determined, consistent with the last reset, that consideration of a broader set of relevant factors favors inclusion of dual fuel capability for this capacity region.[50]

In contrast, for the NYCA ICAP Demand Curve, the NYISO concluded that continued use of a gas-only peaking plant design remained reasonable for this DCR.[51] Unlike the G-J Locality, the NYISO concluded that the consideration of other relevant factors did not indicate a need for the NYCA ICAP Demand Curve to include dual fuel capability at this time. This conclusion, in part, recognizes that the current economics of dual fuel capability for the NYCA ICAP Demand Curve favors retaining use of a gas-only peaking plant design for this DCR.[52]

Accordingly, the Commission should approve the NYISO's proposal to maintain dual fuel capability for the G-J Locality ICAP Demand Curve, while continuing to utilize a gas-only peaking plant design for the NYCA ICAP Demand Curve.

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[48] *Id*.

[49] *See*, *e.g.*, 2013 DCR Order at P 83.

[50] 2016 DCR Filing at 16-18.

[51] IPPNY and the MMU (as it relates to Load Zone F) oppose the NYISO's proposal to continue use of a gas-only peaking plant design for the NYCA ICAP Demand Curve. (IPPNY Limited Protest at 7-14; and MMU Comments at 7-8.)

[52] 2016 DCR Filing at 18.

4. The Capital Cost Estimates Developed by the Independent Consultant Are Reasonable and Appropriate for New York

The NYISO proposes to adopt the peaking plant capital investment cost estimates developed by the Independent Consultant. These estimates were fully vetted with stakeholders throughout the DCR process and were developed by the Independent Consultant using their proprietary power plant cost and performance models, updated vendor budgetary cost estimates, updated labor wage rates and the Independent Consultant's prior experience with the development of generation projects in New York, including New York City.[53]

Certain parties contend that the Independent Consultant's cost estimates may overstate the cost of constructing a new peaking plant in New York.[54] To support their position, these parties compare the cost estimates developed for this DCR with those developed in the last reset, as well as recent cost estimates developed for a simple cycle H class frame turbine in ISO-NE.[55]

Simple comparisons between cost estimates developed in the last reset to those developed in this DCR fails to recognize changes in costs that have occurred over the intervening period. Pricing and estimates for many of the cost categories related to power plant construction vary with time and market conditions, such as the pricing estimates for equipment (including the turbine generator set) and bulk materials.[56] Such changes in cost over time must be considered when attempting to compare cost estimates from different time periods.[57]

[53] *Id*. at 18-19; and *Supplemental Affidavit of Thomas A. Vivenzio* attached hereto as Attachment II, at ¶ 3-5 ("Supplemental Lummus Affidavit").

[54] NYSPSC/NYSERDA Protest at 53-55; and UIU Protest at 10-11.

[55] *Id*.

[56] Supplemental Lummus Affidavit at ¶ 3.

[57] *Id*.

The Independent Consultant has also noted that differences in the assumed costs for interconnection (both electric and gas) are a major driver of the cost differentials between last reset and this DCR.[58] Although the estimated interconnection costs for this DCR are higher than last reset, the cost estimates developed by the Independent Consultant are reasonable and appropriate. The Independent Consultant conducted a rigorous and detailed assessment to determine the appropriate electrical interconnection costs for each location that included a review of certain recent facility interconnections in New York.[59] Gas interconnection costs were estimated using an industry standard average cost per inch diameter per mile of the interconnection length.[60] This average cost was then multiplied by an assumed interconnection length for each location that was derived from a review of recent gas interconnections for generation facilities interconnecting in New York.[61] The sound analytic approach utilized by the Independent Consultant resulted in the development of reasonable and appropriate estimates of the likely cost to interconnect a new peaking plant in New York.

In addition, certain of the assumptions from the last reset have also changed, resulting in additional costs. For example, the assumed on-site fuel storage for the peaking plant designs that include dual fuel capability was increased from a three day on-site reserve to the equivalent of a four day reserve for this DCR.[62] This increase in on-site fuel reserves placed upward pressure on the cost of dual fuel capability for this DCR compared to the last reset due to increased tank

[58] *Id*. at ¶ 5.

[59] *Id*.

[60] *Id*.

[61] *Id*.

[62] 2016 DCR Filing at 32.

sizing to accommodate the additional on-site reserves and related costs to provide on-site storage availability, including the initial cost to purchase the additional on-site fuel reserve volume.

Although the capital investment cost estimates produced for this DCR are greater than those developed last reset, the Independent Consultant's estimates are reasonable and appropriate and represent current market conditions and the requirements attendant to power plant construction in New York. Notably, the Independent Consultant concluded that the difference between the estimates from the last reset and this DCR are within the accuracy of the type of project cost estimates produced for the DCR.[63]

Furthermore, it is not appropriate to compare capital investment cost estimates to develop projects in different states and control areas unless it can be demonstrated that the assumptions upon which each estimate are based are identical. The Independent Consultant has developed its cost estimates to be specific to construction in New York, accounting for the applicable costs and requirements in New York.[64] Costs to develop a project in a different region, such as ISO-NE, are likely to vary from the cost estimates for a similar project in New York due to differences in the assumptions related to plant design and site conditions, construction approach, electric and gas interconnection design, and labor costs and productivity.[65]

Despite the existence of multiple factors that would tend to undermine the validity of cost comparisons from different regions that are developed by different companies, the Independent Consultant did conduct a high level review of the simple cycle H frame turbine cost estimates recently developed in ISO-NE. For purposes of comparison, the Independent Consultant

[63] Supplemental Lummus Affidavit at ¶ 9.

[64] *Id*. at ¶ 7.

[65] *Id*.

determined that the capital investment cost estimates it developed for Load Zone F would likely be most comparable to the ISO-NE cost estimates.[66] Without determining whether any such cost comparison was valid or informative, the Independent Consultant did conclude that the cost difference between the estimates developed for ISO-NE and its cost estimate for Load Zone F are within the accuracy of the type of estimates developed for the DCR.[67]

Parties contending that the Independent Consultant's capital investment cost estimates for the peaking plant are too high have not provided an alternative, contemporaneous estimate of the cost to construct such a plant in New York to demonstrate any material deficiency in the Independent Consultant's methodology or estimates. Notably, however, a developer assessing construction of a project at a specific site in New York City did provide the Independent Consultant with confidential data regarding the estimated cost for its project.[68] The project was based on generally the same plant design proposed by the NYISO for the NYC ICAP Demand Curve in this DCR (*i.e.*, a simple cycle, dual fuel F class frame turbine equipped with SCR emissions controls).[69] Although the confidential cost estimate for the specific project exceeded the estimated costs developed by the Independent Consultant for the NYC ICAP Demand Curve peaking plant, the cost differential is, in part, likely related to site and project specific costs and circumstances that are not directly accounted for in the generic site cost estimates developed for the DCR.[70] Moreover, the difference between the cost estimate developed by the Independent

[66] *Id*.

[67] *Id*.

[68] *Id*. at ¶ 6.

[69] *Id*.

[70] *Id*.

Consultant for the proposed peaking plant in NYC and the specific NYC project are within the accuracy of the type of estimates developed for the DCR.[71]

The capital investment costs developed by the Independent Consultant are reasonable and appropriate. These estimates reflect current market conditions and the likely cost of construction in New York based on the Independent Consultant's experience with power plant construction projects. The Commission should approve the NYISO's proposal to adopt the cost estimates developed by the Independent Consultant.

5. The 0.75% Property Tax Rate Outside NYC Is an Appropriate Value for a Peaking Plant

For all locations outside New York City, the NYISO proposes to maintain the 0.75% property tax rate that was approved by the Commission in the last reset.[72] This rate assumes that a peaking plant outside New York City will enter into a payment in lieu of taxes ("PILOT") agreement.[73] Continued use of the previously approved 0.75% rate is supported by analysis conducted by the NYISO and the Independent Consultant of publicly available PILOT data for several natural gas fired generators in New York.[74]

The New York Transmission Owners and National Grid contend that the Commission should reject the NYISO's proposal and instead require use of a property tax rate closer to 0.5% for the G-J Locality and NYCA ICAP Demand Curves.[75] To support their position, these parties advocate for using only a subset of the data relied upon by the NYISO and the Independent

[71] *Id*.

[72] 2016 DCR Filing at 21-22.

[73] *Id*.

[74] *Id*.

[75] NYTO Protest at 15-19; and National Grid Comments at 12-14.

Consultant.[76] They allege that excluding certain data points from the analysis will likely produce a more appropriate estimate of the likely property tax rates to be paid by a peaking plant pursuant to a PILOT agreement.[77] Notably, adopting the data segmentation and data point exclusions advocated for by the New York Transmission Owners and National Grid would essentially result in relying on the same data that the Commission determined in the last reset supported the use of a 0.75% property tax rate for locations outside New York City.[78]

Although the data set relied upon for this DCR is significantly greater than that used in the last reset, it still represents a fairly small overall set of data points from which to derive conclusions.[79] Further segmentation of the data, as recommended by the New York Transmission Owners and National Grid, may result in a set of data points that may not be representative of the proposed peaking plants, thereby undermining confidence in any conclusions that may be drawn from such a data set.[80]

Analyzing the entire data set yields effective property tax rates that range from 0.2% to 2.01%, with a median value of 0.83%, without any adjustments to the underlying value of the capital cost expenditure for each facility to be in common year dollar terms with the year in which the examined PILOT payments were made.[81] Including such an adjustment to the capital

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[76] *Id*.

[77] *Id*.

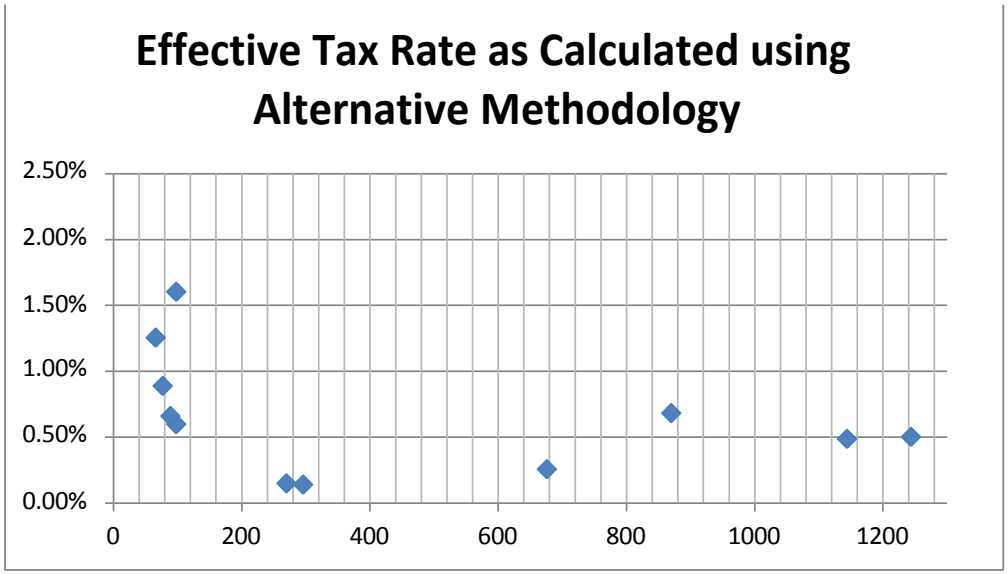
[78] *See*, *e.g.*, NYTO Protest at 18.

[79] In the last reset, PILOT payment data for three recent combined cycle facilities constructed in New York was utilized to inform the 0.75% property tax rate approved by the Commission for locations outside New York City. For this DCR, the Independent Consultant obtained publicly available PILOT payment data for 11 natural gas fired generators in New York.

[80] The average MW size of the facilities that would be encompassed by the data set advocated for by the New York Transmission Owners and National Grid is more than four times greater than the MW size of the NYISO's proposed peaking plants.

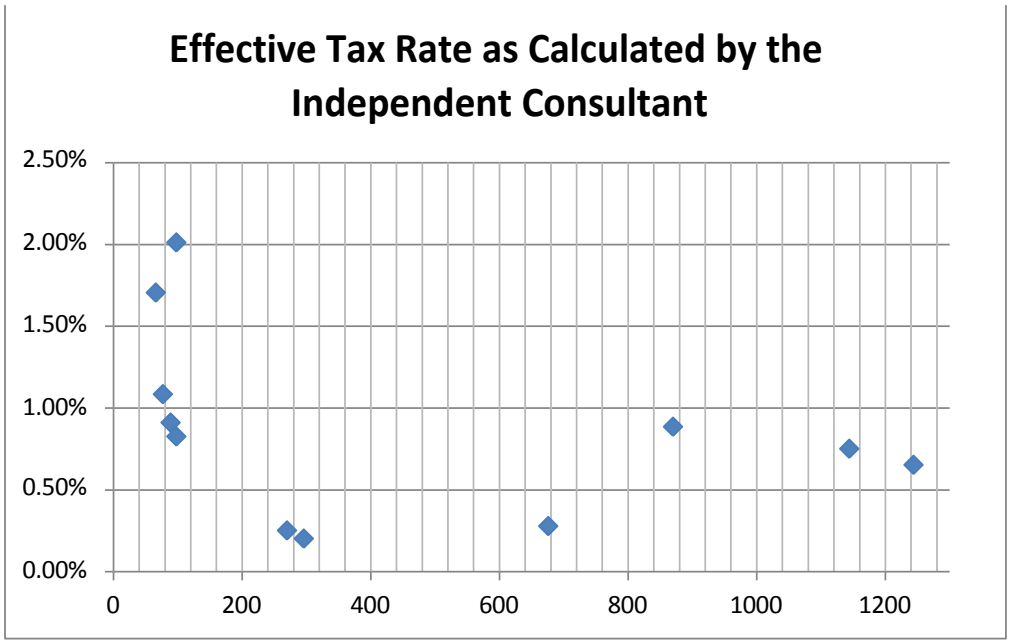
[81] 2016 DCR Filing at 21.

cost expenditure values yields effective property tax rates that range from 0.15% to 1.6% for all facilities that are located outside New York City.[82] The data set showed substantial variability across projects as to the effective property tax rates paid under PILOT agreements. However, the data demonstrates a general trend of higher effective property tax rates for smaller size units as demonstrated in the figures below.[83]



[82] *Id*. at 22.

[83] *Id*., *Affidavit of David Allen* (Attachment V) at Exhibit A, p. 50. The Y-axis in the figures represents the effective tax rate for the units included in the data set developed by the Independent Consultant, while the X-axis represents the MW size of such units.



This trend supports the selection of a property tax rate that is toward the higher end of the range values encompassed by the data. Accordingly, continued use of the 0.75% property tax rate approved by the Commission in the last reset for locations outside New York City remains reasonable and appropriate.

The NYISO's proposed 0.75% property tax rate for peaking plants located outside New York City is consistent with recent data regarding PILOT payments by natural gas fired generators in New York. This value represents a reasonable approximation of the property tax rates that are likely to be incurred by new peaking plants constructed outside New York City and should be accepted by the Commission.

B. Net EAS Revenue Offset

The enhancements to the DCR process approved earlier this year by the Commission included the use of a more formulaic, transparent and predictable methodology for estimating the

net EAS revenues earned by a peaking plant from participation in the NYISO markets.[84] The new methodology relies on actual historic data inputs to derive estimated net EAS revenues. The net EAS revenues model logic, assumptions and data inputs were thoroughly vetted with stakeholders throughout the DCR process. In certain instances, stakeholders advocated for modifications to the model logic and/or inputs and assumptions that were not adopted.[85] All such recommendations were fully considered by the NYISO and the Independent Consultant as part of the model's development. In some cases, suggested modifications were not adopted because it is not anticipated that their adoption would materially change the net EAS revenue estimates produced by the model, while requiring significant additional complexity to implement. Such additional complexity, without material improvements in accuracy, could result in undermining the transparent, predictable and formulaic nature of the net EAS revenues model. These critically important attributes of the revised methodology are intended to improve the ability of market participants to better understand and forecast future capacity market outcomes. In other cases, certain changes to the data inputs advocated by stakeholders were not adopted because they could result in adversely impacting the revenues estimated by the model for this DCR.[86]

The net EAS revenues model developed by the Independent Consultant fairly balances the competing views expressed by stakeholders, while producing reasonable and appropriate net EAS revenue estimates based on actual historic data and market outcomes.[87] The net EAS

[84] Docket No. ER16-1751-000, *New York Independent System Operator, Inc.*, Proposed Services Tariff Revisions to Implement Enhancements to the Periodic Reviews of the ICAP Demand Curves at 5-7 (May 20, 2016); and *New York Independent System Operator, Inc.*, 156 FERC ¶ 61,039 at P 16 (2016).

[85] *See*, *e.g.*, 2016 DCR Filing at 30-33.

[86] *See*, *e.g.*, *id*. at 25-26.

[87] *Id*. 22-35.

revenues model and associated data inputs and assumptions are designed to comport with the overarching objectives of increased transparency and predictability with respect to DCR outcomes, while simultaneously providing an understandable model that is capable of being used by market participants to develop forecasts of future outcomes, including the tariff-prescribed annual updates. As such, the Commission should accept the proposed net EAS revenues model without modification.

1. The Proposed Natural Gas Hub Pricing Points Are Reasonable and Appropriate

Fuel costs are a primary driver of the variable costs to produce energy for fossil fuel fired generators, such as the proposed peaking plants. Therefore, the selection of appropriate fuel prices for each location is critically important to the accuracy of the net EAS revenues produced by the model. The NYISO and the Independent Consultant conducted a rigorous, multi-factor assessment to determine the appropriate natural gas hub pricing point for each location evaluated in this DCR.[88] The factors considered were: (i) market dynamics, including the relationship between gas hub prices and LBMPs for a given location; (ii) the liquidity and depth of trading activity at the hub; (iii) the use of the hub in past resets or other NYISO studies and assessments; and (iv) the geographic proximity of the hub to a given location. The multi-factor assessment is intended to assist in the selection of gas hub pricing points that provide a reasonable approximation of marginal fuel supply costs in the NYISO-administered wholesale energy market, while simultaneously ensuring that the gas hub pricing points exhibit sufficient robustness and liquidity of trading to provide the necessary certainty as to the stability and reasonableness of their respective gas price values on a going forward basis. The table below

[88] *Id*. at 25-30; and Supplemental AG Affidavit at ¶ 7-12.

provides the applicable natural gas hub pricing points that were determined as a result of this assessment and proposed by the NYISO.[89]

Load Zone	Natural Gas Hub
Load Zone C	TETCO M3
Load Zone F	Iroquois Zone 2
Load Zone G	Iroquois Zone 2
Load Zone J	Transco Zn 6 NY
Load Zone K	Transco Zn 6 NY

Certain parties oppose several of the NYISO's proposed natural gas hub pricing points.[90] The primary gas hub pricing points of concern are those proposed for Load Zones C and G (Rockland County).[91] Certain of these parties advocate for use of Dominion as the appropriate gas hub pricing point for Load Zone C and Millennium for Load Zone G (Rockland County).[92] Alternatively, certain other parties contend that blended gas hub prices should be used for Load Zones C and G.[93] In advocating for alternative gas hub pricing points for these locations, many

[89] 2016 DCR Filing at 25-30. Contrary to the allegations of certain parties, the proposed use of TETCO M3 for Load Zone C and Iroquois Zone 2 for Load Zone G are not based on the use of forecasted gas prices. (NYTO Protest at 8-9; MI/City Protest at 38-40; and National Grid Comments at 10-11). In compliance with the requirements of the Services Tariff, the NYISO and the Independent Consultant used the actual, historic gas prices as published by SNL Financial for purposes of estimating the net EAS revenues for the 2017/2018 Capability Year. The multi-factor assessment utilized to determine the appropriate gas hubs for each location likewise relied strictly on actual, historical gas prices for each candidate gas hub pricing point as reported by SNL Financial.

[90] NYTO Protest at 2-14; NYSPSC/NYSERDA Protest at 37-48; MI/City Protest at 35-44; National Grid Comments at 8-12; UIU Protest at 11-12; and MMU Comments at 2-5 (limited to addressing the gas hub pricing point selection for Load Zone G).

[91] *Id*.

[92] *Id*.

[93] NYSPSC/NYSERDA Protest at 47-48; and MMU Comments at 2-5 (limited to addressing the use of a blended gas hub price for Load Zone G). The MMU also argues that, in light of the dynamics and pricing differences between Load Zones C and F, the Commission should direct the NYISO to alter its current rules for determining whether New Capacity Zones are necessary. (MMU Comments at 5-7.) The request to alter the rules for developing New Capacity Zones is beyond the scope of this proceeding and, therefore, should be rejected by the Commission. In accordance with the requirements of the

of the opposing parties contend that the multi-factor assessment used by the NYISO and the Independent Consultant is not appropriate. These parties allege that geography should be most important, if not the sole, selection criterion. Certain of these parties also contend that the Section 5.14.1.2.2.2 of the Services Tariff requires that gas hub pricing point selection be based primarily, if not solely, on geography.[94]

The NYISO does not agree with the tariff interpretation proffered by certain opposing parties.[95] The relevant language in Section 5.14.1.2.2.2 is intended to recognize that the DCR involves an assessment of multiple potential locations for a peaking plant. Accordingly, it is necessary, as part of the DCR, to determine appropriate gas hub pricing points for each of the locations evaluated. This language is not intended to prescribe the methodology or factors to be considered in making such determinations. Rather, as was the case here, these are decisions to be made as part of the extensive stakeholder process required by the DCR. Ultimately, the appropriate gas hub pricing points for each location and the manner in which they should be selected are driven by the DCR process and the Commission's determinations relating thereto. This provides the necessary flexibility for determinations made from DCR-to-DCR to evolve and appropriately account for the conditions and circumstances attendant to each reset.

Services Tariff, the NYISO recently conducted the required New Capacity Zone study. This assessment determined that there is no need to create any New Capacity Zones in New York at this time. (Docket No. ER16-1280-000, *New York Independent System Operator, Inc.*, Report of the Results of Triennial NCZ Study (March 28. 2016).) Furthermore, as required by Commission precedent, the NYISO conducted a deliverability assessment for each of the peaking plants assessed as part of this DCR. This assessment determined that the peaking plants for Load Zones C and F were fully deliverable. (2016 DCR Filing at 19-20.)

[94] NYTO Protest at 4-6; NYSPSC/NYSERDA Protest at 38-39 and 42-43; MI/City Protest at 35, 37-38 and 40-42; and National Grid Comments at 8-9.

[95] 2016 DCR Filing at 30.

The multi-factor assessment conducted by the NYISO and the Independent Consultant determined that, for this DCR, the alternative gas hub pricing points advocated for by the opposing parties for Load Zones C and G (Rockland County) are not appropriate. In fact, the assessment demonstrates that the use of these alternatives for this DCR may adversely affect, potentially significantly, the accuracy and reasonableness of the net EAS revenue estimates for the peaking plants.

For this DCR, the relationship between a candidate gas hub's prices and LBMPs within a given location is a very important factor.[96] A weak relationship with LBMPs for a location indicates that a candidate gas hub pricing point likely is not reflective of marginal fuel supply costs in the electricity market. This relationship is especially important during periods of gas price spikes that cause coincident spikes in LBMPs, such as during the winter 2013/2014 period. The assessment demonstrated that over the past nearly four years of historical data regarding gas hub prices and LBMPs, Dominion and Millennium exhibited very little relation to the trends in LBMPs for Load Zones C and G, especially during critically important periods such as winter 2013/2014.[97]

The use of gas hub pricing points that lack a historical relationship with electricity market dynamics presents a significant risk of undermining the accuracy and reasonableness of the net EAS revenue estimates produced by the net EAS revenues model.[98] The use of such gas hubs may overstate, significantly, the net EAS revenues of the peaking plants. In fact, sensitivity

[96] *Id*. at 25-28; and Supplemental AG Affidavit at ¶ 10-11. Notably, TETCO M3 is commonly used proxy for gas prices in Load Zone C across multiple NYISO studies, including prior and the most recent Congestion Assessment Resource Integration Study ("CARIS") and past DCRs.

[97] Data and information reviewed by the Independent Consultant indicates that the current pricing reported for the Millennium gas hub pricing point does not fully reflect the conditions present on this pipeline in Load Zone G. (Supplemental AG Affidavit at ¶ 9.)

[98] 2016 DCR Filing at 25-26.

analysis conducted by the NYISO demonstrated that due to the substantial increase in net EAS revenues that would result from using these gas hubs that lack a historical relationship with LBMPs, the resulting ICAP Demand Curves that would be produced using these hubs would consist of a reference point price that is 40% lower than the currently effective value (*i.e.*, the value for the 2016/2017 Capability Year approved by the Commission in the last reset) for the NYCA ICAP Demand Curve and 60% lower than the currently effective value for the G-J Locality ICAP Demand Curve.[99]

Furthermore, the introduction of annual updates to the ICAP Demand Curves and the tariff requirement that gas hub pricing point selections remain fixed for the four year period covered by each reset, underscore the critical importance of ensuring that the gas hub pricing points selected are liquid and exhibit a strong history of robust trading activity.[100] Such liquidity helps to ensure that the pricing produced by a gas hub is likely to remain reasonable and appropriate on a going forward basis.

The opposing parties advocating for the use of Millennium for Load Zone G (Rockland County) are forced to acknowledge the shortcomings with respect to this gas hub pricing point as it relates to its history of trading activity.[101] These parties correctly acknowledge that the Millennium gas hub pricing point's historic pricing data, as reported by SNL Financial, fails to provide enough historical data to calculate net EAS revenues for the 2017/2018 Capability Year. These parties attempt to gloss over this deficiency by suggesting that it can be remedied by

[99] *Id*. at 26. As noted below, the Millennium gas hub pricing point data reported by SNL Financial is insufficient to accurately calculate the net EAS revenues for the 2017/2018 Capability Year using this pricing point alone.

[100] *Id*. at 29.

[101] NYTO Protest at 11; NYSPSC/NYSERDA Protest at 43-44; MI/City Protest at 43; and UIU Protest at 12.

utilizing a combination of gas hubs in order to determine net EAS revenues for the 2017/2018 Capability Year.[102] The inability of the available data for Millennium from SNL Financial to provide sufficient historic data clearly demonstrates its insufficiency at this time. This relative paucity of sufficient and reliable trading history, especially in comparison to readily available and reasonable alternatives, underscores the inappropriateness of using the Millennium gas hub pricing point at this time.

Moreover, data regarding historic trading activity raises material concerns regarding the current liquidity and robustness of trading at the alternative gas hub pricing points recommended by the opposing parties. The NYISO's review of proprietary gas hub trading data strongly supports the use of the NYISO's proposed gas hub pricing points for this DCR. Over the past four years, both TETCO M3 and Iroquois Zone 2 have demonstrated persistent levels of substantial trading activity that are far more robust than the alternatives of Dominion North and Millennium, respectively. For example, the volume of gas traded at the TETCO M3 gas hub was more than 200 times greater than the volume of gas traded at Dominion North in 2013. While trading activity at the Dominion North gas hub has increased in more recent years, the volume of gas traded at TETCO M3 was still more than four times greater than Dominion North in 2014 and more than double the volume traded at Dominion North in 2015. With respect to Load Zone G (Rockland County), similar to Load Zone C, the level of trading activity at the Millennium gas hub has increased in recent years. However, over the past four years, the volume of gas traded at Iroquois Zone 2 is nearly double the volume of gas traded at Millennium. The more robust and persistent trading activity exhibited by TETCO M3 and Iroquois Zone 2 provide far greater

[102] NYTO Protest at 11-12; NYSPSC/NYSERDA Protest at 44-45; MI/City Protest at 43; and UIU Protest at 12.

confidence in the sustained liquidity and stability of these gas hub pricing points for the four year period encompassed by this DCR.[103]

The use of "blended" gas hub prices is also not appropriate at this time. The appropriateness of any price blending requires significant evaluation and discussion with stakeholders prior to being pursued further.[104] Such comprehensive analysis is necessary in order to determine whether the concept of blending is appropriate for any given location, and, if so, what the appropriate methodology for any such blending should be. Such methodology would need to determine for a given location the correct mix of gas hub pricing points that should be included in any such blending, as well as the appropriate weight to be assigned to each such hub. Furthermore, analysis would need to be conducted to verify that any such methodology is likely to continue to yield appropriate and reasonable prices over the entirety of the four year period encompassed by the reset. Unfortunately, the concept of blended gas prices was not introduced by stakeholders in this DCR until the tail end of the process and after the Independent Consultant had already issued its final report, thereby preventing the necessary assessment, analysis and stakeholder discussions described above.[105] As a result, the NYISO is without any principled rationale, at this time, for developing what, if any, "blend" may be

[103] The NYISO shares the MMU's desire to ensure that the ICAP Demand Curves, over the longterm, produce efficiency pricing signals to guide investment decisions. (MMU Comments at 3-5.) For this DCR, the NYISO has proposed the most appropriate gas prices for each location based on the conditions present at this time. However, as has been previously recognized by the Commission, the potential for changed circumstances over time is a primary reason for conducting periodic reviews of the ICAP Demand Curves. (2013 DCR Order at P 74.) As part of the next DCR, the NYISO will again review all of the relevant data and information regarding the conditions present at such time, including the manner in which such conditions may have evolved or otherwise changed since the prior reset, and determine anew the most appropriate gas prices for each location.

[104] 2016 DCR Filing at 30; and Supplemental AG Affidavit at ¶ 13-16. [105]

Supplemental AG Affidavit at ¶ 14.

appropriate for any given location that would ensure that such calculated, blended pricing outcomes would be appropriate and sustainable for this four year reset period.

Certain parties advocate that use of blended prices is simple and arbitrarily recommend certain blending methodologies that would merely equally weight historic prices from certain gas hub pricing points.[106] It is important to recognize that the use of blended prices is far more complex than suggested by these parties. While it is easy to simply put forth an arbitrary methodology to accomplish a blended price, this does not mean that such methodology will result in producing appropriate or reasonable prices and results. Simply developing an average of the prices from two potential gas hub pricing points does not necessarily result in the production of an outcome where the net EAS revenue estimates produced using such a blended price and the resulting reference point price of the ICAP Demand Curve is equal to the average of the results produced by independent use of the underlying gas hub pricing points.[107] Instead, the concept of blending is akin to the creation of a new, artificial gas hub pricing point with its own historic pricing. Because gas prices serve as a critical component to the variable costs of the peaking plant, the new gas prices produced by any blending methodology may result in fundamental alteration of the commitment and dispatch of the peaking plant that bears little resemblance to the commitment and dispatch produced using each of the underlying gas hub pricing points independently. Absent a comprehensive assessment of the historic gas prices that

[106] *See*, *e.g.*, NYSPSC/NYSERDA Protest at 47-48. These parties advocate for the use of gas hub pricing points (*i.e.*, Dominion and Millennium) in developing blended prices that were determined by the multi-factor assessment to be inappropriate for use at this time and/or materially inferior compared to readily available, reasonable alternatives. (NYSPSC/NYSERDA Protest at 47-48; and MMU Comments at 3.) It is unclear why gas hub pricing points that are materially deficient with respect to several of the factors considered by the Independent Consultant's and the NYISO's assessment should be deemed appropriate or reasonable to use in the context of any price blending at this time. (Supplemental AG Affidavit at ¶ 14.)

[107] Supplemental AG Affidavit at ¶ 16.

would be produced from any given blending methodology, similar to the multi-factor assessment that was conducted to derive the gas hub pricing points proposed by the NYISO herein, there is relatively little, if any, certainty that the unit commitment and dispatch produced by a blended price and resulting net EAS revenue estimates will be appropriate and reasonable.

Furthermore, the NYISO has concerns that the concept of blending could result in a process that materially departs from a principled approach to determining the appropriate and representative gas hub pricing point for each location and, instead, become more of a results oriented exercise. The multi-factor assessment conducted by the NYISO and the Independent Consultant is intended to derive the selection of appropriate and reasonable gas hub pricing points that, among other matters, exhibit: (i) pricing that is reflective of electricity market dynamics for a given location; and (ii) robust trading that provides confidence as to the sustainability and stability of prices going forward. The use of blending, however, as evidenced by the positions of certain parties in this proceeding, may be more results oriented and driven toward the achievement of certain reference point price values for the ICAP Demand Curves. The NYISO believes that such results oriented decision making could produce outcomes that undermine market confidence in the DCR process and resulting ICAP Demand Curves to the determinant of all market participants.

Lastly, as the Commission is aware from prior resets, the NYISO's processes and procedures to begin preparation for the Summer 2017 Capability Period capacity auctions commence in February 2017. Accordingly, the NYISO needs certainty with respect to the ICAP Demand Curves that will apply for the 2017/2018 Capability Year within this timeframe. Given the relative lack of time available, if, *arguendo*, the Commission was to determine that the use of blended pricing for Load Zone G (Rockland County) and/or Load Zone C should be further

considered, the NYISO does not envision that sufficient time would be available to conduct the necessary analysis, as described above, to determine whether any such blending is appropriate and, if so, what the correct methodology would be to ensure that any resulting blended prices are appropriate, sustainable and produce reasonable and accurate results.

Based on all the foregoing reasons, the NYISO and the Independent Consultant submit that the concept of blending is not ripe for consideration as part of this DCR and should be rejected by the Commission at this time.[108] Any further discussions related to the use of blended gas hub prices should be deferred until the next DCR to ensure that this complex topic can be appropriately evaluated and explored with stakeholders.

The multi-factor assessment used for this DCR has resulted in the selection of appropriate gas hub pricing points for each location. The selected gas hub pricing points are intended to represent liquid pricing locations that have a rich history of robust trading activity, while simultaneously providing a reasonable approximation of the likely marginal fuel supply costs underlying historic LBMPs for each location. Therefore, the NYISO's proposed natural gas hub pricing points should be accepted by the Commission.

C. Levelized Fixed Charge and Financial Parameters

Conversion of the upfront capital investment costs for each peaking plant, inclusive of property taxes and insurance, into an annualized level requires the determination of several parameters: (i) the appropriate weighted average cost of capital ("WACC") required by a developer to recover its up-front investment costs, plus a reasonable return on that investment; (ii) the appropriate term in years over which this investment is recovered (*i.e.*, the "amortization period"); and (iii) the applicable tax rates. The NYISO proposes to adopt the financial

[108] *Id*. at ¶ 14 and 16.

parameters determined by the Independent Consultant for purposes of calculating an annualized value for each peaking plant's up-front investment costs.[109] The financial parameters developed by the Independent Consultant are reasonable and appropriate. The proposed financial parameters were derived based on relevant data and information, as well as the Independent Consultant's reasoned judgment and experience, and are intended to appropriately account for the risks that would be faced by a merchant developer constructing a peaking plant in New York.[110]

Certain parties contend that the Commission should revise certain aspects of the proposed financial parameters to produce a lower resulting WACC.[111] These parties advocate for reductions to the proposed return on equity ("ROE") and cost of debt ("COD") values.[112] These parties also contend that the proposed debt to equity ratio ("D/E ratio") should be increased.[113] In support of their positions, these parties allege that the NYISO and the Independent Consultant have failed to fully explain and justify the proposed values for these parameters. Contrary to these assertions, the Independent Consultant fully explained and justified each of the proposed values.[114]

The Independent Consultant clearly explained to stakeholders that it did not intend to utilize the exact same methodology used in prior resets for determining the appropriate ROE value. The Independent Consultant also explained that the appropriate cost of capital should

[109] 2016 DCR Filing at 36-38.

[110] *Id*.; and Supplemental AG Affidavit at ¶ 17-19.

[111] NYSPSC/NYSERDA Protest at 49-53; and MI/City Protest at 44-48.

[112] NYSPSC/NYSERDA Protest at 49-51 and 52-53; and MI/City Protest at 45-48.

[113] NYSPSC/NYSERDA Protest at 51-52; and MI/City Protest at 47-48.

[114] 2016 DCR Filing at 36-38; and Supplemental AG Affidavit at ¶ 17-28.

reflect the risks attendant to merchant investment in a peaking plant project in New York and not the risks associated with the broader company or investment portfolio of the entity developing that project. To that end, instead of relying solely on results produced using the capital asset pricing model ("CAPM") for certain publicly traded independent power producing companies ("IPPs") and applying an after-the-fact basis adjustment adder to such results as had been done in the last reset, the Independent Consultant relied on the CAPM data as one relevant data point in determining the appropriate ROE value for merchant development of a peaking plant in New York.[115] In addition, the Independent Consultant reviewed relevant data and information pertaining to the required ROE for a stand-alone project finance approach.[116] The Independent Consultant noted that the ROE values produced by the CAPM (*i.e.*, 10.0%-12.5%) represented the lower bounds of the appropriation ROE for a merchant peaking plant development project in New York, while the required ROE for a project finance approach (*i.e.*, 15% or greater) established the appropriate upper bounds for the appropriate value.[117] Ultimately, the Independent Consultant selected the proposed value of 13.4% as representing a reasonable and appropriate balance between the lower values calculated for IPP asset portfolios and the higher values associated with a stand-alone project finance approach.[118] The value selected by the Independent Consultant provides an appropriate reflection of the likely project-level ROE value required to support the merchant development of a new peaking plant in New York.[119]

[115] 2016 DCR Filing at 36-37; and Supplemental AG Affidavit at ¶ 22-25.

[116] 2016 DCR Filing at 37; and Supplemental AG Affidavit at ¶ 22-25.

[117] *Id*.

[118] *Id*.

[119] Supplemental AG Affidavit at ¶ 23-24.

In recommending a proposed COD value of 7.75%, the Independent Consultant reviewed recent data regarding debt costs for IPPs.[120] This data demonstrated that IPP debt costs have ranged between 5% and 8% since 2013.[121] The Independent Consultant selected a value of 7.75% as being consistent with generic debt costs incurred in more recent months by entities with similar credit ratings as IPPs (*i.e.*, B rated entities).[122] In fact, data presented by the Independent Consultant to stakeholders demonstrated that the median cost of debt for entities with similar ratings to IPPs over the twelve month period from May 2015 to May 2016 was 7.75%.[123]

The D/E ratio proposed by the Independent Consultant was developed after assessing IPP capital structures, as well as other independent data regarding capital structures for projects similar to the proposed peaking plants.[124] In proposing a capital structure consisting of 55% debt to 45% equity, the Independent Consultant acknowledged that current IPP capital structures indicated far greater leverage than historic trends.[125] Contrary to the allegations of the opposing parties that the Independent Consultant failed to justify departing from more recent IPP capital structure trends,[126] the Independent Consultant noted publicly available information indicating that these trends in corporate-wide capital structure are unlikely to persist.[127] Specifically, the Independent Consultant cited certain recent announcements that several IPPs will seek to

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[120] 2016 DCR Filing at 37; and Supplemental AG Affidavit at ¶ 21.

[121] *Id*.

[122] *Id*.

[123] Supplemental AG Affidavit at ¶ 21.

[124] 2016 DCR Filing at 37; and Supplemental AG Affidavit at ¶ 26-28.

[125] *Id*.

[126] NYSPSC/NYSERDA Protest at 52; and MI/City Protest at 47.

[127] 2016 DCR Filing at 37; and Supplemental AG Affidavit at ¶ 27.

deleverage their current capital structures, which would place greater pressure on limiting incremental debt for new projects.[128] The proposed D/E ratio value also reflects differences between project-level and corporate-level capital structures.[129] Use of a more leveraged D/E ratio, as recommended by the opposing parties, would result in placing upward pressure on the resulting WACC value.[130]

Although IPPNY recommends Commission approval of the proposed financial parameters and resulting WACC value, it alleges that the net EAS revenues model overstates the revenue earnings of the peaking plant and that this alleged overstatement of revenues, in part, supports the use of a slighter higher WACC value than approved by the Commission in the last reset.[131] The alleged concerns regarding the net EAS revenues model were fully considered during the DCR.[132] The assessment of each on these concerns ultimately concluded that adjusting the net EAS revenues model to account for them would be unlikely to materially affect the resulting net EAS revenue estimates produced by the model.[133] As such, it was determined that no adjustments to the model were necessary in response to these concerns.

Likewise, because these concerns are unlikely to materially impact the net EAS revenues estimates produced by the model, there is no need for the proposed financial parameters to expressly address them nor do they. Notably, however, the financial parameter values developed

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[128] *Id*.

[129] Supplemental AG Affidavit at ¶ 27. [130]

Id. at ¶ 28.

[131] IPPNY Limited Protest at 29-30. These concerns relate to the historic real-time energy prices used by the model, the lack of specific logic to address potential fuel availability issues for both gas-only and dual fuel peaking plant designs, and the real-time (or intraday) natural gas prices utilized by the model.

[132] 2016 DCR Filing at 30-33; and Supplemental AG Affidavit at ¶ 17.

[133] *Id*.

by the Independent Consultant are intended to account for the risks faced by a merchant developer constructing and operating a peaking plant in New York.[134] The proposed financial parameters already expressly account for certain risks to the revenue earnings of a merchant peaking plant project in New York over time, including the variability of fuel prices, impacts related to changes in the demand for energy, energy and environmental policies, and impacts related to potential changes in infrastructure (*e.g.*, generation resource mix changes, transmission infrastructure and natural gas pipelines).[135]

The proposed financial parameters are reasonable and justified based on the assessment conducted and data and information relied on by the Independent Consultant. These parameters result in the calculation of a WACC value that appropriately accounts for the conditions and risks attendant to merchant development of a new peaking plant in New York. Accordingly, the proposed financial parameters should be accepted by the Commission without adjustment.

The NYISO has demonstrated that its proposed ICAP Demand Curves for the 2017/2018 Capability Year and proposed methodologies and inputs for conducting the tariff-prescribed annual updates for the 2018/2019 through 2020/2021 Capability Years are just and reasonable. The NYISO's proposal represents a fair balance between the divergent interests presented in this proceeding and are designed to result in the establishment of ICAP Demand Curves that provide appropriate price signals regarding the locational value of the capacity in New York. The Commission should, therefore, approve the NYISO's proposal without modification.

[134] 2016 DCR Filing at 36.

[135] *Id*.

III. CONCLUSION

The NYISO respectfully requests: (i) that the Commission issue an order on or before January 17, 2017 approving its proposal; and (ii) an effective date of January 17, 2017 for the proposed revisions to Section 5.14.1.2 of the Services Tariff to reflect the parameters of the ICAP Demand Curves for the 2017/2018 Capability Year.

Respectfully submitted,

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Dated: December 22, 2016

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Jamie Simler
Gary Will

CERTIFICATE OF SERVICE

I hereby certify that the foregoing document has been served upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure.

Dated at Rensselaer, New York this 22nd day of December, 2016.

/s/_____

[Insert Name]
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