NEW YORK INDEPENDENT SYSTEM OPERATOR
10 Krey Boulevard ♦ Rensselaer, NY 12144

May 20, 2016

By Electronic Delivery

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: *New York Independent System Operator, Inc.*, Docket No. ER16-___-000; Proposed Services Tariff Revisions to Implement Enhancements to the Periodic Reviews of the ICAP Demand Curves**

Dear Secretary Bose:

In accordance with Section 205 of the Federal Power Act[1] and Part 35 of the regulations of the Federal Energy Regulatory Commission ("Commission"), the New York Independent System Operator, Inc. ("NYISO") respectfully submits proposed amendments to its Market Administration and Control Area Services Tariff ("Services Tariff") to implement certain enhancements to its process for conducting periodic reviews of the ICAP Demand Curves.[2]

The NYISO Management Committee approved the proposed tariff revisions with a vote of 69.68% in favor. The NYISO respectfully requests: (i) an order accepting the proposed tariff revisions by July 19, 2016 (*i.e.*, sixty days from the date of this filing letter); (ii) an effective date of July 19, 2016 for all of the proposed revisions, except for the modifications to Attachment H of the Services Tariff; and (iii) a flexible effective date to be established upon at least two weeks' prior notice for the proposed revisions to Attachment H of the Services Tariff.[3] The proposed tariff revisions, if accepted by the Commission, will inform the ICAP Demand Curve parameters that are currently being developed through the tariff mandated periodic review process and will ultimately be filed with Commission on or before November 30, 2016.

## I. Documents Submitted

[1] 16 U.S.C. § 824d.

[2] Capitalized terms not otherwise defined herein shall have the meaning specified in the Services Tariff.

[3] The requested flexible effective date for the proposed revisions to Attachment H of the Services Tariff will facilitate aligning the effective date for these revisions with the issuance of an order by the Commission accepting proposed tariff revisions to be submitted in November 2016 in order to establish the ICAP Demand Curves beginning with the 2017/2018 Capability Year. The NYISO currently anticipates that the effective date for the proposed revisions to Attachment H of the Services Tariff will be mid-February 2017.

1. This filing letter;

2. A clean version of the proposed revisions to the Services Tariff ("Attachment I");

3. A blacklined version of the proposed revisions to the Services Tariff ("Attachment II"); and

4. An Affidavit from Paul J. Hibbard of Analysis Group, Inc., the NYISO's independent consultant for the current periodic review of the ICAP Demand Curves ("Attachment III").

## II. Background

Pursuant to Section 5.14.1.2 of the Services Tariff, the NYISO conducts periodic reviews of the parameters of the ICAP Demand Curves in order to determine the ICAP Demand Curves that will apply for certain future Capability Years. Currently, these periodic reviews (commonly referred to as the ICAP Demand Curve reset ["DCR"] process) are conducted every three years and establish ICAP Demand Curves for the subsequent three Capability Years. In accordance with the requirements of the Services Tariff, the NYISO conducted the process to select an independent consultant for purposes of the DCR related to the ICAP Demand Curves beginning with the 2017/2018 Capability Year.[4] In August 2015, the NYISO selected Analysis Group, Inc. ("AG") to serve as the independent consultant for this DCR.[5]

As part of the ongoing reset, the NYISO proposed to its stakeholders that it would review the current DCR process and identify potential enhancements thereto, including an assessment of increasing the period between resets. The NYISO and its stakeholders requested that AG facilitate this review and make recommendations with regard to the following: (i) whether there were identifiable benefits to changing the period between resets to four, five or six years; and (ii) approaches and methodologies to determining ICAP Demand Curves to account for changes in market conditions over time, including enhancements to market rules. The NYISO directed AG to finalize recommendations for potential enhancements to the DCR process by the end of the first quarter of 2016 and conduct analyses to help inform stakeholder decisions relating thereto.

AG commenced discussions with stakeholders regarding potential enhancements to the DCR process in October 2015. AG established certain guiding principles to inform its review and recommendations relating thereto.[6] Over the course of six months, AG developed recommended process changes, which it presented to the Installed Capacity Working Group.[7]

[4] The Commission-accepted ICAP Demand Curves resulting from the last DCR run through the end of the 2016/2017 Capability Year.

[5] Lummus Consultants International ("Lummus") serves as a subcontractor to AG to assist AG in the development of certain data and information related to the DCR.

[6] *Affidavit of Paul J. Hibbard*, Attachment III at ¶ 14-15 ("Hibbard Affidavit").

[7] *Id*. at ¶ 12-13.

The recommendations evolved over time based on incorporating feedback from stakeholders and the results of certain analyses conducted to support such recommendations.[8]

Based on its analyses, AG and the NYISO ultimately recommended certain enhancements to the current DCR process. The NYISO developed tariff revisions to implement these enhancements and discussed the proposed revisions with its stakeholders. The draft tariff revisions were revised based on feedback from stakeholders. The process culminated in a stakeholder vote approving the proposed tariff revisions described herein.

## III. Overview of Proposed Changes to DCR Process

The proposed tariff revisions would implement the following changes to the DCR process: (i) increase the period between DCRs to four years; and (ii) provide for the NYISO to conduct formulaic and transparent annual updates to certain parameters of the ICAP Demand Curves for the second through fourth Capability Years covered by each reset period.[9] To facilitate a more formulaic and transparent reset process, the revisions also provide for the implementation a more transparent and predictable methodology to estimate net Energy and Ancillary Services ("EAS") revenues expected to be earned by a "peaking plant" from participation in the NYISO-administered markets.[10] The proposed alternative methodology would replace the econometric modeling utilized by the DCR independent consultant for the past three resets. The proposed net EAS revenue estimation approach not only significantly improves transparency, but it also critical to enabling the implementation of formulaic annual updates.[11]

The proposed changes to the DCR process will provide for increased transparency. The proposed enhancements also will improve stability and predictability of capacity market outcomes because they will more timely capture changes in market conditions over time.[12] Accordingly, these changes will significantly improve the NYISO-administered capacity market.

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[8] *Id*. at ¶ 12, 16 and 37-44.

[9] *Id*. at ¶ 8-10 and 17-28. Reference to the term "reset period" herein means the period of Capability Years for which ICAP Demand Curves resulting from methodologies and inputs established during each DCR are in effect. For example, under the proposed quadrennial reset process, the reset period associated with the current ongoing DCR would encompass the 2017/2018 through 2020/2021 Capability Years. As described in Section III.C.3 below, as part of the initial transition to the annual update process, stakeholders developed and approved a temporary collaring mechanism. This transitionary mechanism is intended to reduce the potential for unanticipated, significant volatility in reference point values resulting from the annual updates for the 2018/2019, 2019/2020 and 2020/2021 Capability Years.

[10] *See* Section 5.14.1.2 of the Services Tariff. The Services Tariff requires use of the costs and projected net EAS revenues for a "peaking plant" in determining the values of the ICAP Demand Curves. A "peaking unit" is defined as "the unit with technology that results in the lowest fixed costs and highest variable costs among all other units' technology that are economically viable." The Services Tariff defines a "peaking plant" to mean "the number of units (whether one or more) that constitute the scale identified in the periodic review."

[11] Hibbard Affidavit at ¶ 19-21 and 32.

### A. Frequency of Periodic Reviews

Various lengths of time between DCRs were assessed, including: (i) maintaining the current three year period between resets; and (ii) increasing the period between resets to lengths of four, five or six years. Stakeholders expressed limited interest in pursuing a period of five or six years at this time and AG identified various potential concerns with periods of five or six years between resets.[13] Stakeholders, however, expressed interest and support for further assessing an increase in the period between DCRs to four years.

Increasing the period between DCRs to four years is not expected to meaningfully increase the risk that the technology selected to serve as the peaking unit will change between resets, as compared to the current triennial review process.[14] Compared to the current three year period between DCRs, increasing the periodicity to four years is also expected to increase market certainty and stability, especially when combined with inter-reset period updates of certain key ICAP Demand Curve parameters.

The analysis conducted by AG demonstrated that the current triennial process has exhibited the potential for significant step changes in the ICAP Demand Curves values from one reset to the next.[15] Extending the period between DCRs will provide greater certainty to Market Participants and developers of new capacity resources.[16] Increasing the period between DCRs to four years is also anticipated to reduce both NYISO and stakeholder resources that would otherwise be dedicated to the DCR process.[17]

Notably, several stakeholders expressed that their comfort with, and willingness to support, the proposed increase to the period between DCRs was linked to the implementation of annual updates, as further described in Section III.C below. Such stakeholders noted that the inclusion of annual updates for the intervening Capability Years helped reduce their concerns regarding the transition to a longer period between resets.

### B. Net EAS Revenue Estimation Methodology

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[12] *Id*. at ¶ 10 and 29-30.

[13] *Id*. at ¶ 31.

[14] *Id*.

[15] *Id*. at ¶ 30, 35 and 44. Such step changes can result from changes to the technology selected to serve as the peaking unit from one reset to the next, as well as changes in market conditions that result in significant changes to net EAS revenue projections made during the prior reset.

[16] *Id*. at ¶ 31.

[17] *Id*.

The Services Tariff mandates that the NYISO estimate the annual level of net EAS revenue that a peaking plant is likely to earn from participation in the ISO-Administered Markets as part of each reset. For the past three resets, the DCR independent consultant has utilized an econometric modeling approach to forecast these revenues.[18]

In assessing potential enhancements to the DCR process, a primary objective of the NYISO was to increase transparency and predictability of outcomes. Increased transparency and predictability should improve the ability of Market Participants and potential developers to more readily forecast future capacity prices and aid in assessing investment decisions.

AG analyzed alternative methodologies for determining net EAS revenue projections.[19] This assessment examined whether an alternative methodology could produce a similar level of accuracy to the current econometric approach, while increasing transparency and predictability of developing such projections. Additionally, given concerns expressed by some stakeholders regarding an extension of the period between DCRs in the absence of inter-reset period updates of key ICAP Demand Curve parameters, it was imperative that the net EAS estimation methodology be capable of facilitating formulaic and transparent annual updates.

Potential alternative methodologies assessed included one based solely on actual historic market prices and costs, as well as a variant that would couple the historical projection with an adjustment based on Energy futures trading for forward periods.[20] Further analysis of the liquidity of Energy futures trading in New York resulted in abandonment of the futures adjustment concept. This analysis indicated that, at this time, liquidity of trading in several Load Zones for New York is not robust enough to ensure that market manipulation concerns may not arise.[21]

AG ultimately concluded that use of a historic methodology would be beneficial.[22] Use of a historic methodology is intended to increase the transparency of the resulting revenue

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[18] *See*, *e.g.*, Docket No. ER08-283-000, *New York Independent System Operator, Inc.*, Tariff Revisions to Implement Revised ICAP Demand Curves for Capability Years 2008/2009, 2009/2010 and 2010/2011 at 16-18 (November 30, 2007); *New York Independent System Operator, Inc.*, 122 FERC ¶ 61,064 at P 47 (2008); Docket No. ER11-2224-000, *New York Independent System Operator, Inc.*, Tariff Revisions to Implement Revised ICAP Demand Curves for Capability Years 2011/2012, 2012/2013 and 2013/2014 at 19-20 (November 30, 2010); *New York Independent System Operator, Inc.*, 134 FERC ¶ 61,058 at P 136 (2011); Docket No. ER14-500-000, *New York Independent System Operator, Inc.*, Proposed Tariff Revisions to Implement Revised ICAP Demand Curves and a New ICAP Demand Curve for Capability Years 2014/2015, 2015/2016 and 2016/2017 and Request for Partial Phase-in and for any Necessary Tariff Waivers at 28-29 (November 27, 2013); and *New York Independent System Operator, Inc.*, 146 FERC ¶ 61,043 at P 2 (2014).

[19] Hibbard Affidavit at ¶ 19-21 and 32-34.

[20] *Id*. The purpose of the futures adjustment was to, in part, address the potential for differences between historical market prices and market expectations of future prices resulting from a variety of changes including the underlying costs to produce Energy, changes in market rules and structural changes in market topology (*i.e.*, resources additions and market exits, as well as changes is transmission facility infrastructure).

[21] *Id*. at ¶ 34.

projections, while also improving the ability to forecast future outcomes.[23] A historic approach also presents the opportunity to improve net EAS projections by more readily allowing for co-optimization between Energy and Ancillary Services directly within the model used to determine such projections. Such co-optimization is generally more difficult to model using the econometric approach. Thus, in past resets, the DCR independent consultant has accounted for Ancillary Services revenues through the use of a static adder to the net Energy revenues determined based on the results of the econometric model.[24] The proposed historic approach more readily allows for the model itself to project net Ancillary Services revenue based on actual, historic market outcomes.

The historic approach is also critical to facilitating the implementation of a formulaic and transparent annual update process.[25] Unlike the econometric approach, which is heavily reliant on forecasts of future conditions, the historic methodology is straightforward. Its reliance on actual, historic market outcomes eliminates the need to develop forecasts of the future market conditions. By their very nature, these forecasts require the application of reasonable judgment and include an inherent degree of subjectivity. These features often give rise to controversy and significant divergence of opinions, which could undermine the ability to conduct formulaic and transparent annual updates of net EAS revenue projections. Thus, continued use of the econometric approach is less compatible with the desired formulaic and transparent annual update procedures than a historic methodology.

The econometric approach can also be highly sensitive to modeling assumptions and forecasting decisions. The econometric methodology is founded upon an assumed set of future conditions with pricing outcomes derived, in part, based on the historic, observed relationships between price and certain key drivers relating thereto (*e.g.*, temperature and load levels). The potential for changes in modeling assumptions from one reset to the next can result in material changes in the revenue estimates derived from the econometric approach over time. Such uncertainty may negatively impact the ability for Market Participants and potential developers to reasonably estimate future capacity market outcomes beyond the period covered by each reset, with resulting impacts on investment decisions. Additionally, the forecasted conditions underlying the econometric approach risk the potential for increased divergence from actual conditions over time. Therefore, increasing the period of time over which a set of static assumptions underlying the econometric approach are held constant could adversely impact the accuracy of the revenue projections resulting therefrom.

A historical approach, however, could present the ability for anomalous, short-term market conditions to bias projections. To address this concern, the proposed historical methodology will utilize the most recent three years of historical data in developing net EAS revenue projections. Developing an average annual net EAS revenue value based on three years

[22] *Id*. at ¶ 9, 19-20, 32 and 57.

[23] *Id*. at ¶ 32.

[24] The value of this adder was determined by the DCR independent consultant based on historic average Ancillary Services revenues earned by units in the New York Control Area ("NYCA").

[25] Hibbard Affidavit at ¶ 32.

of data can aid in reducing the impacts of shorter-term market fluctuations that may otherwise unnecessarily bias the resulting projections. Use of a historical approach also reduces the potential for forecast errors to impact results due to reliance on actual historical market prices and the underlying costs that prevailed during the historical period.

Implementation of a historical methodology furthers the NYISO's ability to conduct transparent and formulaic updates to net EAS revenue estimates over time, as described in Section III.C below.[26] The annual updates provide an opportunity for net EAS revenue projections to reflect changes in market rules and underlying market conditions over time.[27]

### 1. Level of Excess Adjustment

The Services Tariff requires that, in developing estimates of the annual net EAS revenues to be earned by a peaking plant, such revenues reflect market conditions in which the level of available capacity is equal to the applicable minimum Installed Capacity requirement,[28] plus the MW value of the relevant peaking plant's capacity. The purpose of this requirement is to ensure that the ICAP Demand Curves are established at a level that provides sufficient revenues to cover the costs of a peaking plant when market entry by such facility is required in order to maintain reliability.[29]

Historically, market conditions in the NYCA have tended to exhibit levels of available capacity that have exceeded the level of excess utilized to establish the ICAP Demand Curves. Accordingly, past resets have included an adjustment to net EAS revenue estimates in order to forecast the level of earnings that reflect the tariff-prescribed level of excess.

In recent years, levels of capacity excess in New York have been shrinking as a result of resources exiting the market.[30] In response to declining levels of excess capacity and the potential for further declines over the coming years, certain stakeholders urged removal of any level of excess adjustment from the DCR process.[31]

The NYISO is not proposing to modify the requirement to ensure that the ICAP Demand Curve values are established under conditions where the level of available capacity is equal to the sum of the applicable minimum Installed Capacity requirement and the MW value of the relevant peaking plant's capacity. For purposes of net EAS revenue estimates, the NYISO

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[26] *Id*.

[27] *Id*. at ¶ 36.

[28] The NYCA Minimum Installed Capacity Requirement for the NYCA, and the Locational Minimum Installed Capacity Requirement for each Locality.

[29] Hibbard Affidavit at ¶ 45 and 48.

[30] *See*, *e.g.*, NYISO, *Power Trends 2015: Rightsizing the Grid* (June 2015) at 16-17 and 24-25, available at: http://www.nyiso.com/public/webdocs/media_room/publications_presentations/Power_Trends/Power_Trends/ptrends2015_FINAL.pdf.

[31] Hibbard Affidavit at ¶ 22 and 49-50.

proposes to adjust historic market prices by a level of excess adjustment factor reflecting the tariff-prescribed excess level. The level of the adjustment factor values will be determined during each DCR and remain fixed for the four year period covered by the reset (*i.e.*, the annual updates for the intervening three Capability Years will use the same adjustment factor values utilized in determining net EAS revenue projections for the first Capability Year covered by the reset period). Holding the adjustment factor values constant for the reset period is consistent with the manner in which this adjustment has been applied in past resets.[32]

As a result of the proposal to conduct annual updates, as described in Section III.C below, certain stakeholders raised concerns regarding the proposal to fix the level of excess adjustment factor values for the four year period covered by the reset. Specifically, these stakeholders raised concerns about the potential for changes in actual system conditions over the four year period covered by the reset to result in adjustment factor values that may understate or overstate the magnitude of adjustment required. Therefore, these stakeholders recommended that the NYISO determine the appropriate level of adjustment factor values on an annual basis as part of the proposed annual update process.[33]

It is important to recognize that the process of developing these adjustment factors is relatively complex and no single methodology is likely to achieve absolute precision in deriving the values of the adjustment factors.[34] Thus, the assessment of potential alternatives must recognize these factors and seek to achieve a result that appropriately balances the economic rationale for the adjustment with the competing objectives of transparency, stability, feasibility and understandability.[35]

The suggestion by some stakeholders to determine the values of the adjustment factor as part of the annual update process would, if adopted, add an unnecessary level of complication to the annual update process, which is designed to be formulaic, transparent, simple and predictable.[36] This complexity could result in controversy and increase the potential for litigation involving the results of the annual updates, thereby undermining the stability and predictability that this process is intended to provide.[37] Moreover, the incremental degree of accuracy to be gained by such an approach, as compared to the proposal, is questionable.[38]

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[32] *See*, *e.g.*, Docket No. ER14-500-000, *New York Independent System Operator, Inc.*, Proposed Tariff Revisions to Implement Revised ICAP Demand Curves and a New ICAP Demand Curve for Capability Years 2014/2015, 2015/2016 and 2016/2017 and Request for a Partial Phase-in and for any Necessary Tariff Waivers at 28-29 (November 27, 2013); and *New York Independent System Operator, Inc.*, 146 FERC ¶ 61,043 at P 2 (2014).

[33] Hibbard Affidavit at ¶ 22 and 51-52.

[34] *Id*. at ¶ 48 and 54.

[35] *Id*. at ¶ 53.

[36] *Id*. at ¶ 55.

[37] *Id*.

[38] *Id*.

After assessing the potential alternatives, AG ultimately concluded that the proposal to establish level of excess adjustment factor values during each DCR and hold these values constant for the four year reset period provides for a directionally appropriate adjustment to historic prices that is consistent with the intent of the adjustment.[39] AG further concluded that the proposed approach "represents an appropriate and reasonable balance of the principles of economics, transparency, accuracy, and feasibility."[40]

### C. Annual Updates

Under the current triennial reset process, the primary objective of each DCR is to determine the values of the ICAP Demand Curves for the first Capability Year covered by the reset period. The values of the ICAP Demand Curves for the remaining two Capability Years covered by the reset period are determined by application of a fixed escalation factor. Therefore, the current construct produces the values of the ICAP Demand Curves for all three Capability Years at the conclusion of the DCR. While this construct provides certainty as to values of the ICAP Demand Curves for three years at a time, it also has potential drawbacks.

Under the current construct, to the extent that the established three-year ICAP Demand Curve values diverge from actual market outcomes, whether as the result of underlying changes in prices and costs or changes in market rules, it creates the potential for significant step changes in the values of the ICAP Demand Curves from one reset to the next. In part, such step changes may be required in order to correct for differences between actual outcomes and the forecasted outcomes underlying the previously established ICAP Demand Curves. The potential for significant step changes from one reset to the next may adversely impact the predictability and stability of capacity market pricing outcomes.

The current triennial review process also results in reliance on market data that becomes significantly outdated by the end of the reset period. For example, in determining net EAS revenue projections, the prior econometric approach has relied on three years of historical market data. For the first Capability Year covered by the reset period, this data set encompasses a period that dates back to approximately four years prior to the commencement of such Capability Year. By the time of the third Capability Year, which continues to use the same data set as the first year, the underlying data set is approximately six years in the past and reflects only data as recent as approximately three years prior to such year. The degree of changes in market conditions, including implementation of market rule enhancements, which can occur during the intervening period that is not reflected in the data set underlying the ICAP Demand Curves could be significant and may undermine the accuracy of projections based on such data. To address these concerns, the proposed annual update process is intended to provide for ICAP Demand Curves that evolve with changing market conditions and reflect the impacts of market rule enhancements implemented by the NYISO over time.

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[39] *Id*. at ¶ 56.

[40] *Id*.

The annual updates will provide a mechanism for more timely reflection of changes in market conditions (including those that result from the implementation of market rule changes), thereby reducing the potential for step changes in the values of the ICAP Demand Curves from one reset to the next.[41] The annual updates thus will promote greater stability and predictability of future capacity market outcomes to the benefit of all Market Participants and potential developers.[42] Enhanced stability and predictability should improve Market Participants' and potential developers' opportunity to better forecast future market outcomes used to inform investment decisions.[43]

**1. Annual Update Process**

Consistent with the current tariff process, the DCR will result in development of the values of the ICAP Demand Curves for the first Capability Year covered by each reset period. The proposed tariff revisions provide that the DCR will also result in establishing the methodologies and inputs that will be used in conducting formulaic and transparent annual updates to establish the ICAP Demand Curve values for each of the subsequent three Capability Years covered by each reset period. The ICAP Demand Curve values for the first Capability Year, together with the methodologies and inputs used in conducting the annual updates, will be provided in the filing submitted to the Commission on or before November 30th of the year prior to the commencement of the first Capability Year covered by each reset period. This process will ensure that the annual updates conducted by the NYISO are executed in a formulaic and transparent manner utilizing methodologies and data inputs approved by the Commission quadrennially.

The annual update process will, as further described herein, consist of updates to the following parameters each year: (i) adjusting the levelized localized embedded cost of the peaking plant for each ICAP Demand Curve ("gross cost of new entry ["CONE"]") based on a composite escalation factor; (ii) determining new net EAS revenue estimates for each peaking plant using updated cost and market price information; and (iii) determining the revised values of the ICAP Demand Curves utilizing the updated gross CONE and net EAS revenue values, and updated winter-to-summer ratio ("WSR") values when calculating the reference point for each ICAP Demand Curve.[44] Given the formulaic and transparent nature of the annual updates and the fact that such updates are executed using methodologies and data inputs previously approved by the Commission, the tariff revisions provide that the NYISO will post the results of annual updates to its website on or before November 30th of the calendar year prior to the

[41] *Id*. at ¶ 30, 35 and 44.

[42] *Id*. at ¶ 10, 30, 35-36 and 42-44.

[43] *Id*. at ¶ 36.

[44] *Id*. at ¶ 23-27. The reference point for each ICAP Demand Curve represents the price at the point where the amount of available capacity is equal to the applicable minimum Installed Capacity requirement. The WSR is the value used in the calculation of the reference point that accounts for seasonal differences in the amount of capacity that is available in the Summer Capability Period versus the Winter Capability Period as part of translating the annual net CONE value for each ICAP Demand Curve into a monthly value.

commencement of the Capability Year for which the updated ICAP Demand Curves apply (*e.g.*, the updated ICAP Demand Curves for the 2018/2019 Capability Year would be posted to the NYISO's website on or before November 30, 2017).[45]

The gross CONE value for each ICAP Demand Curve will be updated annually using a composite escalation factor.[46] A single composite escalation factor for the NYCA will be developed. The composite escalation factor will measure the year-over-year percentage change in values for certain publicly available inflation indices that relate to the costs of building a new power plant. The composite escalation factor will consist of four components: (i) changes in construction material costs ("materials component"); (ii) changes in turbine generator costs ("turbine component"); (iii) changes in labor costs ("labor component"); and (iv) changes in the general cost of goods and services ("general component"). The costs of the peaking plant used to establish each ICAP Demand Curve will be broken down into each of these general cost categories in order to derive weighting factors that should be applied to each component (*e.g.*, if it were determined that labor costs accounted for approximately 25% of the average total costs of the peaking plants used to establish the ICAP Demand Curves, the labor component of the escalation factor would be assigned a weighting factor of 25%).

The value of the escalation factor for a given annual update will be based on the most recent year-over-year percentage change in values published by the index for each component, multiplied by the applicable weighting factor for each component and summed across the resulting values for all four components. The year-over-year percentage change in the values published by the index for each component will be determined using finalized data published by the indices as of October 1st of the calendar year prior to the beginning of the Capability Year for which the updated ICAP Demand Curves will apply. The applicable indices for each of the components, as well as the weighting factors for each component will be determined as part of each DCR and remain fixed for the four year period covered by each reset.

Net EAS revenue projections for each peaking plant will also be refreshed as part of the annual update process. As described in Section III.B above, the annual net EAS revenue projections will represent an average over a three year historic period. This period will encompass the most recent 36 months ending with August of the calendar year prior to the beginning of the Capability Year to which the applicable ICAP Demand Curves will apply (*e.g.*, the net EAS revenue projections for the 2017/2018 Capability Year will be based on market prices and costs for the period from September 1, 2013 through August 31, 2016). For purposes of the annual updates, the NYISO will utilize the same model used to determine the net EAS revenue projections for the first Capability Year covered by a reset period, updating the model to replace the oldest twelve month period in the underlying data set with the most recent twelve month period ending in August (*e.g.*, for the annual update to determine ICAP Demand Curve values for the 2018/2019 Capability Year, the annual net EAS revenue projection will be based on cost and pricing data for the period from September 1, 2014 through August 31, 2017).[47]

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[45] This provides for consistency with the timing of the NYISO's required filing with Commission to establish the ICAP Demand Curves for the first Capability Year covered by each reset period.

[46] Hibbard Affidavit at ¶ 9 and 26.

The model used for projecting net EAS revenues, the commitment and dispatch logic of that model (including the manner in which the model will account for the operating characteristics of each peaking unit technology and any operating hours restrictions or limitations relating thereto), and the data inputs used for determining the applicable market prices and costs used by the model will be developed as part of each DCR and remain fixed for the four year period covered by each reset.[48]

The tariff revisions provide that the NYISO will utilize the updated gross CONE values and annual net EAS revenue projections to derive the updated values of the ICAP Demand Curves.[49] The maximum value of each ICAP Demand Curve is set at an amount equal to the monthly value of the updated gross CONE for the applicable peaking plant, multiplied by 1.5. The reference point is set at the annual net CONE value for each peaking plant (*i.e.*, gross CONE less the annual projection of net EAS revenues), translated into a monthly value that accounts for seasonal differences in capacity availability and the tariff-prescribed level of capacity excess conditions. Calculations of the reference point value will use annually updated WSR values, as described in Section III.C.2 below. The applicable capacity ratings for each peaking plant used in calculating the reference point price will be determined as part of each DCR and remain fixed for the four year period of the reset. The zero-crossing point for each ICAP Demand Curve will also be established as part of each DCR and remain fixed for the four year period covered by each reset.

The table below provides a representative overview of the factors that will be used by the NYISO in conducting the annual updates to the ICAP Demand Curves.[50] The proposed tariff revisions provide that these factors will be developed as part of the quadrennial DCR and remain fixed for the four year period covered by each reset.

| Factor Used in Annual Updates for Each ICAP Demand Curve | Type of Value |
|---|---|
| ***Peaking Unit Technology*** | |
| Technology Type | Fixed for Reset Period |
| ***Gross CONE Escalation Factor*** | |
| Materials Component Values | Publicly Available Inflationary Index |
| Materials Component Weighting Factor | Fixed Value (Fixed for Reset Period) |
| Turbine Component Values | Publicly Available Inflationary Index |
| Turbine Component Weighting Factor | Fixed Value (Fixed for Reset Period) |
| Labor Component Values | Publicly Available Inflationary Index |
| Labor Component Values | Fixed Value (Fixed for Reset Period) |
| General Component Values | Publicly Available Inflationary Index |

[47] *Id*. at ¶ 24.

[48] In certain circumstances, these factors will represent a value that will remain fixed for the four year reset period. In other instances, these factors will relate to a data source that will be used for determining applicable market price or cost information used by the model.

[49] Hibbard Affidavit at ¶ 9 and 23-26.

[50] Depending on the final model developed as part of each DCR for projecting net EAS revenues and the commitment and dispatch logic thereof, certain additional factors may also need to be established.

| | |
|---|---|
| General Component Weighting Factor | Fixed Value (Fixed for Reset Period) |
| ***Net EAS Revenue Projections*** | |
| Net EAS Revenue Model | Fixed for Reset Period |
| Commitment and Dispatch Logic | Fixed for Reset Period |
| Peaking Plant Physical Operating Characteristics (*e.g.*, start time requirements, minimum down time and run time requirements, and any operating hours restrictions and/or limitations) | Fixed for Reset Period |
| Energy Prices (Day-Ahead and Real-Time) | NYISO Published Values |
| Operating Reserves Prices (Day-Ahead and Real-Time) | NYISO Published Values |
| Level of Excess Adjustment Factor Values | Fixed Value (Fixed for Reset Period) |
| Annual Value of Other Ancillary Services Not Determined by Net EAS Model (*e.g.*, voltage support service) | Fixed Value (Fixed for Reset Period) |
| Peaking Plant Heat Rate | Fixed Value (Fixed for Reset Period) |
| Peaking Plant Primary and Secondary (if any) Fuel Type | Fixed for Reset Period |
| Fuel Tax and Transportation Cost Adder | Fixed Value (Fixed for Reset Period) |
| Real-time Fuel Cost Premium Adder | Fixed Value (Fixed for Reset Period) |
| Fuel Pricing Point (*e.g.*, natural gas trading hub) | Fixed for Reset Period |
| Fuel Price | Subscription Service Data Source or Publicly Available Data Source |
| Peaking Plant Variable Operating and Maintenance Cost | Fixed Value (Fixed for Reset Period) |
| Peaking Plant Start-up Cost | Fixed for Reset Period |
| Peaking Plant $CO_2$ Emissions Rate | Fixed Value (Fixed for Reset Period) |
| $CO_2$ Emission Allowance Cost | Subscription Service Data Source or Publicly Available Data Source |
| Peaking Plant $NO_x$ Emissions Rate | Fixed Value (Fixed for Reset Period) |
| $NO_x$ Emission Allowance Cost | Subscription Service Data Source or Publicly Available Data Source |
| Peaking Plant $SO_2$ Emissions Rate | Fixed Value (Fixed for Reset Period) |
| $SO_2$ Emission Allowance Cost | Subscription Service Data Source or Publicly Available Data Source |
| NYISO Rate Schedule 1 Charges | NYISO Published Values |
| ***ICAP Demand Curve Values*** | |
| Zero-Crossing Point | Fixed for Reset Period |
| *Reference Point Calculation* | |
| Peaking Plant Net Degraded Capacity | Fixed Value (Fixed for Reset Period) |
| Peaking Plant Summer Capability Period Dependable Maximum Net Capability (DMNC) | Fixed Value (Fixed for Reset Period) |
| Peaking Plant Winter Capability Period DMNC | Fixed Value (Fixed for Reset Period) |
| Monthly Available Capacity Values for Use in Calculating WSR | NYISO Published Values |

Notably, the quadrennial reset process with annual updates proposed by the NYISO is substantially similar to the procedures the Commission has already approved for PJM Interconnection, L.L.C ("PJM") in conducting periodic reviews of its Variable Resource Requirement ("VRR") Curve parameters.[51] Similar to NYISO's proposal, the process approved by the Commission for PJM relies on periodic reviews to establish VRR Curve values for the first year (*i.e.*, referred by PJM as a "Delivery Year") covered by each periodic review process. The parameters of the initial year VRR Curves are filed with the Commission for approval. For

[51] *See* Section 5.10 of Attachment DD of the PJM Open Access Transmission Tariff; Docket No. ER14-2940-000, *PJM Interconnection, L.L.C.*, Filing Letter (September 25, 2014); and *PJM Interconnection, L.L.C.*, 149 FERC ¶ 61,183 (2014).

the intervening years, PJM determines updated VRR Curve values by: (i) adjusting the CONE values of the reference resource underlying the VRR Curves by application of a composite escalation factor; and (ii) calculating updated net EAS revenue offset values using a historic methodology based on the most recent three years of data. The updated VRR Curve values for the intervening years that result from PJM's annual updating process are not filed with the Commission for approval. Such VRR Curve values are posted on PJM's website in advance of the base residual auction for the year to which such curves apply.

**2. Winter-to-Summer Ratio**

Because the NYISO operates a capacity market with two distinct six-month Capability Periods, in calculating the reference point for each ICAP Demand Curve, the NYISO accounts for seasonal differences in capacity availability. This seasonal adjustment is intended to reflect the fact that differences in capacity availability between the Summer Capability Period and Winter Capability Period contribute to differences in capacity prices throughout the year. To provide for revenue adequacy for the peaking plant when needed to maintain the applicable minimum capacity requirements, these seasonal differences must be accounted for as part of translating the annual net CONE value for each ICAP Demand Curve to a monthly value for use in the NYISO's ICAP Spot Market Auctions.[52]

Changes in the resource mix over time can produce changes to the WSR. Such changes to the WSR could also have a material impact on the values of the ICAP Demand Curves. Accordingly, under the proposed tariff revisions, the NYISO will update the WSR value annually as part of its annual update procedures. Annual updating of the WSR value is designed to provide for ICAP Demand Curves that reflect changes in resource mix over time.[53] Updated WSR values will be based on capacity available for sale in the ICAP Spot Market Auctions.[54] For consistency of data periods, the WSR values will be based on available capacity values for the same 36-month period utilized to estimate net EAS revenues (*e.g.*, the ICAP Demand Curves for the 2017/2018 Capability Year would utilize a WSR value based on available capacity during the period from September 2013 through August 2016).[55]

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[52] *See*, *e.g.*, Docket No. ER08-283-000, *New York Independent System Operator, Inc.*, Tariff Revisions to Implement Revised ICAP Demand Curves for Capability Years 2008/2009, 2009/2010 and 2010/2011 at 21 (November 30, 2007); *New York Independent System Operator, Inc.*, 122 FERC ¶ 61,064 at P 63 (2008); Docket No. ER11-2224-000, *New York Independent System Operator, Inc.*, Tariff Revisions to Implement Revised ICAP Demand Curves for Capability Years 2011/2012, 2012/2013 and 2013/2014 at 22-23 (November 30, 2010); and *New York Independent System Operator, Inc.*, 135 FERC ¶ 61,170 at P 95 (2011).

[53] Hibbard Affidavit at ¶ 27.

[54] This information is identified in monthly capacity market reports published by the NYISO and posted to its website. The proposal to continue use of available capacity rather than capacity sold or forecasts of capacity sales is consistent with the current tariff requirements and precedent regarding the WSR. *See*, *e.g.*, *New York Independent System Operator, Inc.*, 122 FERC ¶ 61,064 at P 63-66 (2008); and *New York Independent System Operator, Inc.*, 134 FERC ¶ 61,058 at P 161 (2011).

[55] Notably, because the ICAP Demand Curve for the G-J Locality did not exist prior to May 1,

The NYISO proposes to calculate the WSR value as the average of the WSR calculated for each of the 12-month periods (*i.e.*, September through the following August) encompassed by the data set utilized to calculate the value.[56] The proposed WSR enhances the methodology utilized in the last two resets. The proposed revisions will account for the impacts of Special Case Resources on the WSR. Historically, greater capacity has been enrolled in the Special Case Resource program in the Summer Capability Period than the Winter Capability Period. As such, SCRs would tend to have the opposite effect on the WSR that a temperature-sensitive generator would have.[57] Excluding Special Case Resource capacity from the WSR calculation, therefore, tends to overstate the WSR value and the resulting adjustment to the reference point price to account for seasonal differences in capacity availability. Moreover, by tracking changes in the resource mix over time through the annual update process, the WSR values will more timely and accurately reflect changes in system conditions and their resulting impact on seasonal capacity availability.

Some stakeholders commented that certain market entry and exit actions by resources had the potential to adversely affect the calculation of annually updated WSR values. Specifically, resource exit and entry actions might not be reflected uniformly throughout a given 12-month period covered by the WSR calculation. These stakeholders contended that absent an adjustment, such market exit and entry actions could result in misstating the WSR value. Other stakeholders, however, contend that this entry and exit behavior is market driven and, therefore, should be captured in the WSR value.

The NYISO noted that market entry and exit actions that do not coincide with the start and end of each 12-month period could have the potential to create "transitory volatility" in the WSR for the affected 12-month period.[58] In recognition of this possible impact, the proposed tariff revisions provide for the NYISO to make certain adjustments to the available capacity values reflected in the historic data set. For each 12-month period covered by the WSR calculation, the NYISO will examine the data set to identify instances in which a resource either entered the capacity market for reasons other than returning from an Inactive Reserves state or

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2014, the WSR value used for the 2017/2018 Capability Year for the G-J Locality will be based on two years of historical data (*i.e.* September 2014 through August 2016). Beginning with the 2018/2019 Capability Year and going forward, the WSR value for the G-J Locality will, consistent with all other ICAP Demand Curves, be based on three years of historical data.

[56] For each 12-month period, the NYISO will calculate the WSR by summing the total available capacity of resources for each of the six Winter Capability Period months included in the 12-month period and dividing this value by the sum of the total available capacity of resources for the six Summer Capability Period months included in the same period.

[57] Temperature-sensitive generators generally have an ability to produce more Energy in the Winter Capability Period than the Summer Capability Period.

[58] The NYISO refers to such impact as "transitory volatility" because once the market entry or exit is reflected uniformly within a future 12-month period, the WSR tends to return to a value that is more akin to the WSR for the 12-month period prior to the occurrence of the applicable entry or exit action.

exits the capacity market because it is Retired or enters a Mothball Outage or ICAP Ineligible Forced Outage. Where one of these circumstances occurs and persists for the remaining months of a given 12-month period, the NYISO will adjust all months of the 12-month period to reflect that resource's state uniformly across all such months.[59]

As indicated above, some stakeholders indicated that they thought the historic data set should not be adjusted. These stakeholders contended that the WSR values calculated absent any adjustment provide for a more accurate reflection of changes in the resource mix and system conditions as they actually occur. The NYISO believes its proposed adjustments are reasonable and appropriate. As adjusted, the WSR values calculated by the proposed tariff methodology will provide an accurate reflection of changes in system conditions as such changes are expected to persist in future years. Absent other changes in an affected resource's status, the proposed adjustments to the historic data set reflect how that resource's available capacity would be reflected in the next 12-month period.

### 3. Transitional Reference Point Collaring Mechanism

Although supportive of the proposal to increase the period between resets to four years and include annual updates to the ICAP Demand Curves, certain stakeholders raised concerns about the potential for volatility introduced by the transition to this new process. In response to these concerns, a stakeholder proposed the inclusion of a collaring mechanism to limit the allowable year-to-year change in reference point values calculated as part of the annual updates.

The collaring mechanism established in the proposed revisions limits the allowable annual change in the reference point values for each ICAP Demand Curve, as calculated for the first three annual updates, to a maximum increase of 12% or a maximum decrease of 8%, compared to the prior year's applicable reference point value.[60] In applying the collaring mechanism, the NYISO would conduct the annual update process and determine the reference point values for each ICAP Demand Curve without any adjustment. The NYISO would then compare the resulting values to the currently effective reference point values for each ICAP Demand Curve. If the reference point value calculated as the result of the annual update process exceeds either the maximum allowable increase (*i.e.*, +12%) or the maximum allowable decrease (*i.e.*, -8%) compared to the then currently effective reference point value for the applicable ICAP Demand Curve, the NYISO will apply the collar and set the applicable reference point value for

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[59] In the case of a qualifying market entry action, the affected resource's available capacity value will be included in all months of the 12-month period at issue. In the case of a qualifying market exit action, the affected resource's available capacity value will be excluded from all months of the applicable 12-month period.

[60] The collaring mechanism is designed to provide for a nominal allowable annual change in reference point values of +/- 10% before accounting for expected inflation of approximately 2% over the coming years. *See*, *e.g.*, Federal Reserve Bank of Philadelphia, Research Department, *Survey of Professional Forecasters* at 4-5 (February 12, 2016), available at https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/2016/survq116.

the Capability Year to which the annual update applies to a value equal to the applicable maximum allowable change pursuant to the collaring mechanism.[61]

If the collaring mechanism is binding on the reference point value of an ICAP Demand Curve for a given Capability Year, the adjusted reference point value resulting from application of the collaring mechanism will be the value used for the affected ICAP Demand Curve in the ICAP Spot Market Auctions during the Capability Year at issue. When the NYISO conducts the annual update process for the following Capability Year, for purposes of determining whether the collaring mechanism is binding, the NYISO will compare the reference point value calculated as a result of the annual update process to the adjusted reference point value that reflects application of the collaring mechanism for the then currently effective ICAP Demand Curve at issue.

Stakeholders generally supported this mechanism as a means to reduce the potential for reference point value volatility resulting from the annual update process. This construct, however, is intended to be a transitional measure only. Accordingly, the proposed tariff revisions provide that the collaring mechanism will only apply to the reference point values resulting from the annual updates for the 2018/2019, 2019/2020 and 2020/2021 Capability Years. It will not apply to reference point values that will be proposed for the 2017/2018 Capability Year nor is this mechanism intended to apply to any period after the 2020/2021 Capability Year. This transitionary mechanism is reasonable and designed to minimize the potential for unanticipated, significant volatility in ICAP Demand Curve values upon the initial implementation of the annual update procedures.[62]

## IV. Description of Tariff Amendments

### A. Section 5.14 of the Services Tariff

The NYISO proposes to revise Section 5.14.1.2 of the Services Tariff to reflect the proposed enhancements to the DCR process described in Section III above. To reflect the new procedures, the NYISO proposes to add a new Section 5.14.1.2.2. The existing triennial reset process is retained as a new Section 5.14.1.2.1. The tariff provisions describing the existing process are primarily unchanged, except for two minor, editorial corrections and the renumbering of certain provisions to reflect the creation of Section 5.14.1.2.1.

Section 5.14.1.2.2 contains several subsections that address various aspects of the proposed quadrennial reset with intervening annual updates: (i) Section 5.14.1.2.2.1 describes the procedures for annually updating the gross CONE value for each of the ICAP Demand Curves; (ii) Section 5.14.1.2.2.2 describes the annual update process for net EAS revenue projections for

[61] Depending on which binding limit of the collaring mechanism is triggered, the resulting reference price would either be set at a value equal to: (i) the then currently effective reference point value for the applicable ICAP Demand Curve, plus 12%; or (ii) the then currently effective reference point value for the applicable ICAP Demand Curve, minus 8%.

[62] Hibbard Affidavit at ¶ 28.

each ICAP Demand Curve; (iii) Section 5.14.1.2.2.3 describes the procedures for determining the values of the ICAP Demand Curves as part of the annual update process; and (iv) Section 5.14.1.2.2.4 describes the overall process and timeline for the quadrennial DCR process.

The initial paragraphs of Section 5.14.1.2.2 provide an overview of the quadrennial DCR process and the annual update procedures. This language largely tracks the existing language (relocated to Section 5.14.1.2.1) that describes the DCR process. Unlike the existing language, the provisions describing the quadrennial reviews provide that at the conclusion of each DCR, only the ICAP Demand Curves for the first Capability Year covered by the reset period will be established.

The language also clearly indicates that the DCR process will determine the methodologies and inputs that will be used by the NYISO to conduct the annual updates for the remaining three Capability Years covered by the reset period. These methodologies and inputs will be included as part of the filing by the NYISO to establish the ICAP Demand Curves for the first Capability Year covered by the reset period. Once accepted by the Commission, these methodologies and inputs will remain fixed for the four year period covered by each reset.[63]

These provisions also establish the requirement that the annual updates are conducted using methodologies and inputs that have been accepted by the Commission. Thus, the annual updates are a purely formulaic and transparent exercise. Consistent with the timing of the filing with the Commission to establish the ICAP Demand Curves for the first Capability Year, the NYISO will complete the annual update process for each of the remaining three Capability Years and post the updated ICAP Demand Curves on its website on or before November 30th of the calendar year prior to the commencement of the Capability Year for which the updated ICAP Demand Curves will apply (*e.g.*, the ICAP Demand Curves for the 2018/2019 Capability Year will be posted to the NYISO's website on or before November 30, 2017).[64]

Section 5.14.1.2.2.1 establishes the procedures used for updating the gross CONE value for each ICAP Demand Curve as part of the annual update process. These updated values are determined by application of a composite escalation factor, as described in Section III.C.1 above. This section describes the four components of the composite escalation factor, the manner for determining the most recent year-over-year percentage change in values published by inflation indices of varying data periodicity,[65] and the calculation of the value of the composite escalation

[63] The tariff revisions establish that for data inputs that rely on a published index or data source, such index or data source will remain fixed for the four year period covered by each reset, unless the index or data source is terminated or discontinued by its publisher. If this were to occur, the NYISO is to rely on a replacement or successor index or data source established by the same publisher. In the absence of the publisher establishing a replacement or successor, the NYISO will select a substantially similar index or data source to serve as a replacement for such terminated or discontinued index or data source.

[64] Unlike the ICAP Demand Curves for the first Capability Year covered by each reset period, the ICAP Demand Curves for the remaining three Capability Years covered by the reset period will not be filed with the Commission. The values of these ICAP Demand Curves will be determined as part of the formulaic and transparent annual update procedures using the methodologies and data inputs that have previously been accepted by the Commission.

factor.[66] In determining year-over-year changes in a given index, the NYISO will only utilize finalized data published by an index. The value resulting from adjustment of the then-effective gross CONE value for each ICAP Demand Curve by the composite escalation factor is the updated gross CONE value for each peaking plant.

As described in Sections III.B and III.C.1 above, Section 5.14.1.2.2.2 provides the procedures for determining updated net EAS revenue projections for each ICAP Demand Curve as part of the annual updates. The annual updates will utilize the same net EAS revenue projection model used to estimate net EAS revenues for each peaking plant in determining the ICAP Demand Curves for the first Capability Year covered by the reset period. In conducting the annual updates, the NYISO will execute the model using an updated data set that includes the most recently completed 12-month period (*i.e.*, September through the following August), while rolling off the oldest such 12-month period used in the prior projection of net EAS revenues.

Net Energy revenues for any hour will be determined by the model in a manner that is consistent with the formula set forth in Section 5.14.1.2.2.2. This formula provides for the determination of the net Energy revenue for a given hour by subtracting the variable (or short-run marginal) cost incurred by a peaking plant to produce Energy from the revenues that could be earned by the peaking plant for such hour in the applicable market (Day-Ahead or real-time). The results of the model will be used to calculate an average annual net revenue value earned by each peaking plant during the historic 36-month period at issue. To the extent that certain net Ancillary Services revenues are not determined by the model, the NYISO will increase the average annual net revenue value determined by the model by a pre-established adder to account for such net Ancillary Services revenues.[67] The resulting value represents the updated net EAS revenue projection for each peaking plant.

Section 5.14.1.2.2.3 establishes the annual update procedures for determining revised values for the ICAP Demand Curves utilizing the updated gross CONE values and net EAS revenue projections determined pursuant to Sections 5.14.1.2.2.1 and 5.14.1.2.2.2, respectively. The determination of the updated ICAP Demand Curve values pursuant to the annual update procedures is described in Sections III.C.1, III.C.2 and III.C.3 above.

The first paragraph of Section 5.14.1.2.2.3 establishes the methodology for calculating updated WSR values for use in determining the reference point values for each ICAP Demand Curve. This methodology is described in Section III.C.2 above.

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[65] Depending on the inflation index that is selected during each quadrennial review to measure year-over-year changes in the cost for each component, it is possible that each index may provide data at differing periodicities. Accordingly, Section 5.14.1.2.2.1 establishes the methodology for determining the most recent year-over-year change for indexes that publish values on a monthly, quarterly or annual basis.

[66] The composite escalation factor for each annual update is established by multiplying the most recent year-over-year percentage change in the values of the index for each component by the applicable weighting factor for each component and summing the resulting values for all four components.

[67] The value of any such adder would be determined during each DCR and remain fixed for the four year period covered by each reset.

The transitional reference point collaring mechanism and application thereof to reference point values calculated pursuant to the annual updates for the 2018/2019, 2019/2020 and 2020/2021 Capability Years is described in the second paragraph of Section 15.14.1.2.2.3. Details regarding this mechanism are set forth in Section III.C.3 above.

The third paragraph of Section 5.14.1.2.2.3 provides a reference resource. This paragraph identifies the gross CONE values and net EAS revenue projections used in establishing the values of the ICAP Demand Curves for the first Capability Year covered by each reset period. The NYISO will propose the values to be inserted into the table for the 2017/2018 Capability Year as part of its filing due to the Commission on or before November 30, 2016.

Section 5.14.1.2.2.4 provides an overview of the timeline and process for each DCR from the process of selecting an independent consultant through the filing of proposed ICAP Demand Curves for acceptance by the Commission. This language is substantially similar to the existing language describing the DCR process and timeline for the triennial reviews (*see* renumbered Sections 5.14.1.2.1.1 through 5.14.1.2.1.11). Modifications to the existing language were made to: (i) reflect increasing the period between DCRs to four years; (ii) clarify that under the new quadrennial review process with annual updates, the filing with the Commission at the conclusion of the DCR will propose the ICAP Demand Curves for the first Capability Year covered by the reset period; and (iii) clarify that the DCR will also establish the methodologies and inputs that will be used to conduct the annual updates for the remaining three Capability Years covered by the reset period.

Consistent with the existing language describing the triennial review process,[68] proposed Section 5.14.1.2.2.4.11 describes the requirement for the filing to the Commission at the conclusion of each DCR to identify the inflation rate component of the escalation factor. The Services Tariff requires that the NYISO use the inflation rate component and the escalation factor used in determining the ICAP Demand Curves in certain aspects of the NYISO's buyer-side capacity market mitigation measures ("BSM Rules").[69] Proposed Section 5.14.1.2.2.4.11 continues the requirement that the filing to the Commission identify the inflation rate component and specifies that it will be the most recent year-over-year percentage change in the values of the index for the general component of the composite escalation factor. Because the composite escalation factor is not utilized for the first Capability Year covered by the reset period, under the proposed revisions, the NYISO will calculate its value for the initial year using the same methodology that would be used as part of the annual update process so that it is available for use when required by the BSM Rules. The use of this inflation rate is discussed in Section IV.B below.

### B. Section 23.4.5 of Attachment H of the Services Tariff

[68] *See* renumbered Section 5.14.1.2.1.11 (previously numbered as Section 5.14.1.2.11).

[69] The BSM Rules are set forth in Section 23.4.5.7 *et seq.* of Attachment H of the Services Tariff.

The BSM Rules require the use of the inflation rate component of the escalation factor used in determining values of the ICAP Demand Curves in certain circumstances. The inflation rate is used to account for the "time value" of dollars when costs and revenues are calculated at a period of time different than that to which they will be applied.[70] Inflation adjustments are required with respect to: (i) annual adjustments to Offer Floors;[71] (ii) annual adjustments to Mitigation Net CONE over a Mitigation Study Period;[72] (iii) adjustments to Offer Floors if the affected Installed Capacity Supplier first offers capacity either prior to or after the first Capability Year of the Mitigation Study Period;[73] (iv) adjusting Unit Net CONE values over a Mitigation Study Period;[74] and (v) adjusting Unit Net CONE of an existing Generator or UDR project that requests Additional CRIS.[75]

The BSM Rules also require that the NYISO use the escalation factor for purposes of determining ICAP Spot Market Auction price forecasts for future Capability Years of a Mitigation Study Period in which ICAP Demand Curves have not yet been established.[76] Where ICAP Demand Curve values have not been established for a Capability Year within a Mitigation Study Period, the Services Tariff requires that the NYISO forecast the ICAP Spot Market Auction prices by applying the currently-effective escalation factor for the Commission-approved ICAP Demand Curves to the applicable ICAP Demand Curves for the last year in which approved curves exist.[77]

In order to continue to apply the inflation rate component and escalation factor used in determining the values of the ICAP Demand Curves, the NYISO proposes revisions to certain provisions of Section 23.4.5 of Attachment H of the Services Tariff. These proposed revisions would address inflation adjustments or adjustments using the escalation factor to reflect the proposal to implement a quadrennial reset with annual updates. In contrast to the current process, ICAP Demand Curves will no longer be established for all Capability Years covered by a reset period at a single point in time. Under the proposed structure, ICAP Demand Curve values are established for one Capability Year at a time. The escalation factor (and the inflation rate component thereof) used in determining the values of the ICAP Demand Curves will also no longer be established in advance and fixed for the period covered by each reset. Instead, as

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[70] *See*, *e.g.*, *New York Independent System Operator, Inc.*, 139 FERC ¶ 61,244 at P 52, 60-62 and 72-75 (2012); and *New York Independent System Operator, Inc.*, 151 FERC ¶ 61,043 at P 20-22, 25 and 29 (2015).

[71] *See*, *e.g.*, Section 23.4.5.7 of Attachment H of the Services Tariff.

[72] Section 23.4.5.7.3.2 of Attachment H of the Services Tariff.

[73] Section 23.4.5.7.3.7 of Attachment H of the Services Tariff.

[74] Section 23.4.5.7.4 of Attachment H of the Services Tariff.

[75] Section 23.4.5.7.6.2 of Attachment H of the Services Tariff.

[76] *See*, *e.g.*, *New York Independent System Operator, Inc.*, 139 FERC ¶ 61,244 at P 87 (2012); and *New York Independent System Operator, Inc.*, 151 FERC ¶ 61,043 at P 21 (2015).

[77] *See* Section 23.4.5.7.4 of Attachment H of the Services Tariff.

described in Sections III.C.1 and IV.A above, these values will be determined annually using a prescribed methodology and data inputs accepted by the Commission.

To account for these structural differences, the NYISO proposes to revise certain provisions of the BSM Rules that address inflation adjustments and the use of the escalation factor to reflect that in each instance the applicable inflation rate or escalation factor value to be used will be the most recent such value calculated by the NYISO in accordance with the requirements of Section 5.14.1.2.2 of the Services Tariff. The proposed revisions specify that inflation rate value will be determined in accordance with Section 5.14.1.2.2.4.11 of the Services Tariff and the escalation factor will be determined in accordance with Section 5.14.1.2.2.1 of the Services Tariff. These proposed revisions are to Sections 23.4.5.7, 23.4.5.7.3.7, 23.4.5.7.4 and 23.4.5.7.6.2.

As described in Section IV.A above, the inflation rate that the NYISO proposes to utilize in connection with the BSM Rules will be the most recent year-over-year percentage change in the values of the index for the general component of the composite escalation factor. This component measures general inflation across the economy. Some stakeholders raised concerns regarding use of this inflation rate in connection with the BSM Rules because it is reflective of actual, historical inflation rather than a forecast of what general inflation may be in the future, based on a forecast at the time of the DCR. The NYISO's proposal is consistent with the Commission's requirement that "the inflation adjustment should be consistent with that used in the determination of the ICAP Demand Curve."[78]

It is also not clear that a fixed forecast of future inflation at the time of the DCR is likely to yield a more accurate or appropriate value. Forecasts are subject to the potential for significant variation over time. For example, in a single calendar quarter (*i.e.*, between the 4th quarter of 2015 and the 1st quarter of 2016), the forecasted value of future inflation published by the Federal Reserve Bank of Philadelphia was adjusted by 25%, resulting in a reduction in the forecasted value by 50 basis points.[79] Utilizing a rate that reflects actual inflation, therefore, may provide a more reasonable result that is more reflective of economic conditions at the time it is calculated.[80]

The NYISO also proposes a minor, clarifying revision to Section 23.4.5.7.2.2. The proposed revision updates a cross-reference to Section 5.14.1.2 of the Services Tariff to reflect the proposed addition of Section 5.14.1.2.2.4 relating to the proposed quadrennial DCR process.

### C. Additional Tariff Revisions

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[78] *See New York Independent System Operator, Inc.*, 139 FERC ¶ 61,244 at P 3 (2012).

[79] Federal Reserve Bank of Philadelphia, Research Department, *Survey of Professional Forecasters* at 4 (February 12, 2016), available at https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/2016/survq116.

[80] Notwithstanding the foregoing, the NYISO has committed to further assess the concerns raised by stakeholders regarding the proposed inflation rate to be used as part of certain pre-existing projects for 2016 to examine other potential enhancements to the BSM Rules.

The NYISO proposes certain other conforming revisions to the following tariff provisions in connection with the proposed enhancements to the DCR process: (i) Section 2.9 of the Services Tariff; (ii) Section 23.2.1 of Attachment H of the Services Tariff; and (iii) Section 30.4.6.3.1 of Attachment O of the Services Tariff.

To appropriately account for the proposal to relocate the existing language describing the triennial DCR process to Section 5.14.1.2.1 of the Services Tariff and add a new Section 5.14.1.2.2 to address the quadrennial DCR process with annual updates, the NYISO proposes conforming revisions to certain other provisions that cross-reference the description of the DCR process in Section 5.14.1.2 of the Services Tariff. These conforming revisions are proposed in Section 2.9 of the Services Tariff, the definition of "Indicative Mitigation Net CONE" in Section 23.2.1 of Attachment H of the Services Tariff and Section 30.4.6.3.1 of Attachment O of the Services Tariff.

## V. Effective Date

The NYISO respectfully requests Commission acceptance of the proposed revisions within sixty days from the date of this filing (*i.e.*, July 19, 2016). The NYISO requests an effective date of July 19, 2016 for all of the proposed tariff revisions (*i.e.*, Section 2.9 of the Services Tariff, Section 5.14 of the Services Tariff and Section 30.4.6.3 of Attachment O of the Services Tariff), except for the amendments to Attachment H of the Services Tariff (*i.e.*, Section 23.2.1 and Section 23.4.5).

The NYISO respectfully requests approval of a flexible effective date for the proposed revisions to Attachment H of the Services Tariff (*i.e.*, Sections 23.2 and 23.4.5). The NYISO proposes to submit a compliance filing at least two weeks prior to the proposed effective date for such revisions that will specify the date on which the revisions to Attachment H of the Services Tariff will take effect. The purpose of a flexible effective date for these revisions is to facilitate alignment of the effective date for the revisions to Attachment H of the Services Tariff with the issuance of a Commission order accepting tariff revisions to be submitted in November 2016 to establish the ICAP Demand Curves beginning with the 2017/2018 Capability Year. Based on the requirement to file such ICAP Demand Curves by no later than November 30, 2016, and Commission action by the sixtieth day thereafter, the NYISO currently anticipates that the effective date for the proposed revisions to Attachment H of the Services Tariff would be mid-February 2017. Consistent with Commission precedent, the subsequent compliance filing will provide adequate notice to the Commission and Market Participants of the implementation date for the amendments to Attachment H of the Services Tariff.[81]

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[81] *See*, *e.g.*, *New York Independent System Operator, Inc.*, 106 FERC ¶ 61,111 at P 10 (2004); Docket No. ER11-2544-000, *New York Independent System Operator, Inc.*, Letter Order at 1 (February 10, 2011); Docket No. ER15-485-000, *New York Independent System Operator, Inc.*, Letter Order at 2 (January 15, 2015); *New York Independent System Operator, Inc.*, 151 FERC ¶ 61,057 at P 20 (2015); and *New York Independent System Operator, Inc.*, 154 FERC ¶ 61,152 at P 19 and 25 (2016).

As it relates to the proposed revisions to Attachment H of the Services Tariff, to the extent necessary, the NYISO requests a waiver of the Commission's regulations to allow the NYISO to make this filing more than 120 days prior to the date on which certain aspects of the proposed service is to become operational.[82] No Market Participant will be prejudiced by this request because all stakeholders, including members of a Class Year that are Examined Facilities, will be aware of the proposed revisions as well as the proposed ICAP Demand Curves. Furthermore, as noted above, the NYISO will provide at least two weeks' prior notice before implementation of the revisions to Attachment H of the Services Tariff.

## VI. Requisite Stakeholder Approval

The proposed amendments were approved by the NYISO Management Committee on March 30, 2016 by a vote of 69.68% in favor. The NYISO's Board of Directors approved the proposed revisions on April 19, 2016.

## VII. Communications and Correspondence

All communications and service in this proceeding should be directed to:

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*Person designated for receipt of service.

## VIII. Service

The NYISO will send an electronic link to this filing to the official representative of each of its customers, to each participant on its stakeholder committees, to the New York State Public Service Commission, and to the New Jersey Board of Public Utilities. In addition, the complete filing will be posted on the NYISO's website at www.nyiso.com.

## IX. Conclusion

For the foregoing reasons, the NYISO respectfully requests that the Commission accept for filing the proposed revisions to the Services Tariff that are filed herewith within sixty days of the date of this filing (*i.e.*, by July 19, 2016) with an effective date of July 19, 2016 for all of the

[82] *See* 18 C.F.R. § 35.3(a)(1).

proposed modifications, except for the amendments to Attachment H of the Services Tariff. The NYISO respectfully requests that the Commission permit the NYISO to subsequently establish the effective date for the proposed revisions to Attachment H of the Services Tariff upon at least two weeks' prior notice, as described in Section V above.

Respectfully submitted,

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