

2021-2025 ICAP Demand Curve Reset: Stakeholder Proposed Tariff Revisions

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Agenda

- **Background**
- **Discussion of Current Methodologies and Proposed Revisions**
 - Composite escalation factor for gross cost of new entry (Gross CONE)
 - Escalation of net Energy and Ancillary Services (Net EAS) revenue estimates
 - Extension of a collar mechanism to annual updates performed in the next reset period (annual updates for the 2022-2023, 2023-2024, and 2024-2025 Capability Years)
- **Next Steps**

Background

Background

- At the August 23, 2019 ICAPWG/MIWG/PRLWG meeting, stakeholders requested that Analysis Group prioritize identifying any proposed tariff changes early on during the current ICAP Demand Curve reset (DCR) process
- At the September 5, 2019 TPAS/ICAPWG meeting, the NYISO solicited written feedback and comments from stakeholders pertaining to potential proposed tariff revisions related to the ICAP Demand Curves and DCR
 - Written feedback was requested by September 19, 2019

Background

- **In response to the NYISO's request, the New York Transmission Owners (NYTOs) submitted the following proposals:**
 - Address three specific, technical aspects of the methodology for escalating Gross CONE and Net EAS revenue values
 - Modify the Gross CONE composite escalation rate methodology to account for relative changes in the weightings of the four component costs (Labor, Materials, Turbine, General/Other) over the course of the reset period
 - Modify the Gross CONE escalation methodology to account for revisions in publically available cost indices selected for use
 - Modify the method of escalating Net EAS revenue values
 - Extend the collar mechanism to apply to the annual updates performed for the 2022-2023, 2023-2024, and 2024-2025 Capability Years (CY)

Discussion of Current Methodologies and Proposed Revisions

Gross CONE Composite Escalation Factor

Gross CONE Escalation: Weighting Factors

- **The first proposed change identified by the NYTOs pertains to the weightings of the four components used to determine the Gross CONE composite escalation rate**
 - As part of the annual update process, the then current Gross CONE value underlying each ICAP Demand Curve is adjusted based on a statewide composite escalation factor
 - The composite escalation factor measures year-over-year changes in indices that relate to major cost components of the peaking plant
 - As part of the DCR, the cost to build the peaking plant is broken down into four cost components (Labor, Materials, Turbine, General/Other) to determine the relative percentage of the total cost each component comprises. This cost breakdown is used to establish the weighting factors assigned to each cost component
 - For example, if the cost breakdown determined that each cost component represents approximately $\frac{1}{4}$ of the total cost of the peaking plant, each cost component would be assigned a weighting factor of 25%
 - Per the tariff, the weighting factors determined as part of the DCR remain fixed throughout the four year reset period

Gross CONE Escalation: Weighting Factors

Table 20: Composite Escalation Rate Indices and Component Weights

Cost Component	Index Value	Interval	Component Weight SGT6- 5000F(5)
Construction Labor Cost	BLS Quarterly Census of Employment and Wages, New York - Statewide, NAICS 2371 Utility System Construction, Private, All Establishment Sizes, Average Annual	Annually	28%
Materials Cost	BLS Producer Price Index for Commodities, Not Seasonally Adjusted, Intermediate Demand by Commodity Type (ID6), Materials and Components for Construction (12)	Monthly	37%
Gas and Steam Turbine Cost	BLS Producer Price Index for Commodities, Not Seasonally Adjusted, Machinery and Equipment (11), Turbines and Turbine Generator Sets (97)	Monthly	20%
GDP Deflator	Bureau of Economic Analysis: Gross Domestic Product Implicit Price Deflator, Index 2009 = 100, Seasonally Adjusted	Quarterly	15%

Gross CONE Escalation: Weighting Factors

Escalation Rate for
the 2016-2017
Capability Year

		Construction Labor Cost	Materials Cost	Gas and Steam Turbine Cost	GDP Deflator
Year 1	[A]	92,531	229	232	109.9
Year 2	[B]	97,529	228	233	111.3
Growth Rate	[B]/[A]-1	5.40%	-0.58%	0.39%	1.22%
Weights (By Technology)		28%	37%	20%	15%
Escalation Factor:		$28\% * 5.40\% + 37\% * -0.58\% + 20\% * 0.39\% + 15\% * 1.22\% =$ 1.57%			

- As currently applied, the weighting remains consistent as index values change year-to-year
 - The NYTOs contend that as the index values change from year-to-year at different rates, the relative weighting between the four indices should also change

Gross CONE Escalation: Revisions to Index Values

- **The second proposed change identified by the NYTOs pertains to the process for handling revisions to historical index data used in calculating the Gross CONE composite escalation factor**
 - MST Section 5.14.1.2.2.1 states that “The applicable values to be used by the ISO shall be the available finalized values established by the publisher for each index as of October 1st” of the applicable year.
 - All relevant data used in the calculation reflects the values published as of October 1st of each year, which may include updates by the publisher to data for prior years
 - For example: if a 2016 value for an index is 84, but then changes to 86 when the data for 2017 is released, the updated 2016 value (86) is used in the 2017 annual update
 - This may distort the composite escalation rate by not properly assigning such changes to the appropriate years (see the illustrative example on the next slide)

Gross CONE Escalation: Revisions to Index Values

Escalation Rate for the 2016-2017 Capability Year

		Construction Labor Cost	Materials Cost	Gas and Steam Turbine Cost	GDP Deflator
Year 1	[A]	92,531	229	232	109.9
Year 2	[B]	97,529	228	233	111.3
Growth Rate	[B]/[A]-1	5.40%	-0.58%	0.39%	1.22%
Weights		28%	37%	20%	15%
Escalation Factor:		$28\% * 5.40\% + 37\% * -0.58\% + 20\% * 0.39\% + 15\% * 1.22\% =$ 1.57%			

Escalation Rate for the 2017-2018 Capability Year

		Construction Labor Cost	Materials Cost	Gas and Steam Turbine Cost	GDP Deflator
Year 1	[A]	97,529	228	232	111.2
Year 2	[B]	102,788	233	224	113.0
Growth Rate	[B]/[A]-1	5.39%	2.41%	-3.49%	1.60%
Weights		28%	37%	20%	15%
Escalation Factor:		$28\% * 5.39\% + 37\% * 2.41\% + 20\% * -3.49\% + 15\% * 1.60\% =$ 1.92%			



- When performing the annual update for the 2017-2018 CY, some of the prior year values had been revised
 - Both numbers reflect the best available data as of October 1st of the applicable year
 - This can, however, create a temporal disconnect when escalating from one year to the next given that the revised values if properly assigned to the prior year would have resulted in a different starting point for applying the escalation factor in the annual update

Gross CONE Escalation

- **The NYISO is proposing the following methodological change to the calculation of the Gross CONE composite escalation factor in response to the NYTOs' comments**
 - Calculate the growth rate for all indices as the difference between the available data, as of October 1, for the first year underlying the calculation that would have applied in Year 1 of the reset period (“DCR Year”) and the applicable annual update year, divided by the DCR Year values (see example on the next slide)
 - This will better account for any revisions to historic data while using best available data and retaining a consistent baseline based on Year 1 of the reset period
 - By measuring all changes relative to the DCR Year values, this will also obviate the need to adjust weighting factors over time
 - The calculated composite escalation rate for each annual update would then be applied to the Gross CONE values from the initial year of the reset period to determine the adjusted value for the applicable annual update
 - For example, for the 2021-2025 reset period, the composite escalation rate determined in each annual update would be applied to the applicable Gross CONE values underlying the 2021-2022 CY ICAP Demand Curves

Gross CONE Escalation

Modified Data
Unused Data

Period	Cal. Year	CY	Construction	Materials	Turbine	GDP	Formula
DCR Yr	2015	2016-2017	92,531	229	232	109.9	A
Reset Yr	2016	2017-2018	97,529	228	233	111.3	B
Growth Rate	2016	2017-2018	5.40%	-0.58%	0.39%	1.22%	
	Weight		28%	37%	20%	15%	
Reset Yr	Esc %	2017-2018	1.57%				

This period remains locked as the baseline for measuring changes

Escalation factor is the change from the DCR year to the applicable reset or annual update year

Period	Cal. Year	CY	Construction	Materials	Turbine	GDP	Formula
DCR Yr	2015	2016-2017	92,531	229	232	109.9	C
Reset Yr	2016	2017-2018	97,529	228	232	111.2	D
AU 1	2017	2018-2019	102,788	233	224	113.0	E
Growth Rate	2017	2018-2019	11.08%	1.82%	-3.53%	2.83%	=(E/C)-1
	Weight		28%	37%	20%	15%	
AU 1	Esc %	2018-2019	3.48%				

Use best available data to calculate escalation factor

Period	Cal. Year	CY	Construction	Materials	Turbine	GDP	Formula
DCR Yr	2015	2016-2017	92,531	229	232	104.7	F
Reset Yr	2016	2017-2018	97,529	228	232	105.8	G
AU 1	2017	2018-2019	102,788	233	224	107.6	H
AU 2	2018	2019-2020	101,108	244	219	110.3	I
Growth Rate	2018	2019-2020	9.27%	6.30%	-5.62%	5.28%	=(I/F)-1
	Weight		28%	37%	20%	15%	
AU 2	Esc %	2019-2020	4.55%				

Not used in the calculation



Net EAS Revenue Escalation

Net EAS Revenue Escalation

- **The third proposed change identified by the NYTOs relates to the methodology for adjusting the Net EAS revenue values to “current” year dollars**
 - The current demand curve model logic escalates the Net EAS revenue values from the midpoint of the historic three-year period by applying the current annual percentage change in GDP (“general component” of the composite escalation rate) twice
 - For example, the annual update for the 2020-2021 CY uses historic data from 9/1/2016 – 8/31/2019 to calculate the Net EAS revenue value
 - The midpoint of this period is 3/2/2018, which occurs during the 2017-2018 CY
 - As this value will be used for the 2020-2021 CY ICAP Demand Curves, the Net EAS revenue values are escalated from 2018 dollars to 2020 dollars
 - Currently, this is accomplished by applying the most recently calculated annual GDP growth rate twice
 - Notably, at the time the annual update is conducted, there is no historic GDP data that represents an adjustment to 2020 dollars

Net EAS Revenue Escalation

- **The NYTOs have proposed that the Net EAS revenue value escalation methodology be modified**
 - In their written proposal, the NYTOs propose that the Net EAS revenue values be escalated based on using two years of historic GDP data
 - For example, for the annual update for the 2020-2021 CY, the NYTOs' proposal would determine the escalation rate based on the change from 2017 to 2019, as shown below

Current Methodology (2020-2021 CY)

Net EAS Escalation Rate = $(2019 \text{ GDP} / 2018 \text{ GDP})^2$

NYTO Proposed Methodology (2020-2021 CY)

Net EAS Escalation Rate = $2019 \text{ GDP} / 2017 \text{ GDP}$

Collar Mechanism

Reference Point Collar Mechanism

- **As part of the proposed process enhancements implemented during the last reset, a stakeholder developed transitional collaring mechanism was included**
 - The collaring mechanism 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
 - This mechanism was intended to be transitional with a hardcoded sunset in the tariff, providing that the current collar mechanism expires after the annual update for the 2020-2021 CY
 - This transitional mechanism was designed to minimize the potential for unanticipated, significant volatility in ICAP Demand Curve values upon the initial implementation of the annual update procedures

Reference Point Collaring Mechanism

- **The NYTOs proposed to extend a collar mechanism to apply to the annual updates for the next reset period**
 - The proposal would apply to the reference point values determined by the annual updates for the 2022-2023, 2023-2024, 2024-2025 CYs
 - Consistent with the current collar mechanism, the proposal would not apply to the ICAP Demand Curve reference point values determined by the 2019-2020 DCR for the 2021-2022 CY
- **At this time, the NYISO is continuing to evaluate the appropriateness of extending the collar**

Next Steps

Next Steps

- The NYISO intends to further discuss potential enhancements in response to the NYTOs' proposal (including tariff revisions relating thereto) at the ICAPWG in November/December 2019
- Currently, the NYISO would intend to seek stakeholder approval of any proposed process enhancements at BIC and MC in December 2019/January 2020
- In addition to feedback provided at today's meeting, please feel free to submit any additional feedback to rpatterson@nyiso.com

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