



# **Class Year 2019 NYC Additional SDU Study Renewable Exemption Limit Assumptions and Calculations, Bank Update**

**June 14, 2021**

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## Objective

This document fulfills the requirements specified in Section 23.4.5.7.13.5 of the Market Services Tariff (MST),<sup>1</sup> which states: *“The ISO will post on its website the assumptions and calculations made for the Renewable Exemption Limit available in each Class Year Study, Additional SDU Study, and Expedited Deliverability Study with its posting of the BSM Forecast inputs in accordance with Section 23.4.5.7.15 of this Services Tariff, subject to any restrictions on the disclosure of Confidential Information or Critical Energy Infrastructure Information.”*

A list of Class Year 2019 (“CY2019”) Examined Facilities that requested a Renewable Exemption can be found on the NYISO website.<sup>2</sup> This list includes interconnection queue position #737, which is included in the Class Year 2019 NYC Additional SDU Study.

## Renewable Exemption Limit Overview

The formula for calculating the Renewable Exemption Limit (“REL”) is specified in Section 23.4.5.7.13.5 of the MST. The REL is calculated separately for each Mitigated Capacity Zone in UCAP MW as the greater of:

- a) the UCAP MW associated with the Minimum Renewable Exemption Limit as described in Section 23.4.5.7.13.5.1 or
- b) the sum of
  - i. the UCAP MW associated with the change in forecasted peak Load calculated by the ISO in accordance with Section 23.4.5.7.13.5.2,
  - ii. the UCAP MW value identified by the ISO associated with the Incremental Regulatory Retirements calculated by the ISO in accordance with Section 23.4.5.7.13.5.3,
  - iii. the URM impact of the Qualified Renewable Exemption Applicants in the Class Year Study, Additional SDU Study, or Expedited Deliverability Study calculated by the ISO in accordance with Section 23.4.5.7.13.5.4, and

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<sup>1</sup> Terms with initial capitalization not defined herein shall have the meaning set forth in the Services Tariff.

<sup>2</sup> Available at: <https://www.nyiso.com/market-monitoring> → ICAP Market Mitigation → Buyer Side Mitigation → Class Year 2019 → [Class Year 2019 Exemption Requests](#).

- iv. the UCAP MW in the Renewable Exemption Bank for each Mitigated Capacity Zone determined in accordance with Sections 23.4.5.7.13.5.5.

Each of these components is discussed in further detail below.

## Minimum Renewable Exemption Limit

The Minimum Renewable Exemption Limit is equal to the UCAP MW value that is forecasted to cause a price decrease to the Installed Capacity Spot Auction results of \$0.50/kW-month. This value is determined by the slope of the applicable demand curve. For each Mitigated Capacity Zone, a demand curve slope was forecasted for every year of the Mitigation Study Period and then averaged together. The CY2019 limits are shown below in Table 1. Full data inputs for the BSM Forecast for CY2019 are located on the NYISO’s website.<sup>3</sup> As specified in Section 23.4.5.7.13.5.1 of the MST, the Minimum Renewable Exemption Limit calculated in the preceding Class Year Study carries forward to subsequent Additional SDU Studies that are completed prior to the start of the Initial Decision Period for the following Class Year Study.

**Table 1: Minimum Renewable Exemption Limit**

	NYC Locality	G-J Locality
Minimum Renewable Exemption Limit <sub>UCAP</sub> [MW]	35.4	53.9

## Change in Forecasted Peak Load

The UCAP MW associated with the change in forecasted peak Load is calculated as specified in Section 23.4.5.7.13.5.2 of the MST. For the current Additional SDU Study, it is the difference between the peak load for 2020, published in the ISO’s 2020 Load and Capacity Report (“Gold Book 2020”), and the forecasted peak Load for the last year of the applicable Mitigation Study Period (“MSP”). Gold Book 2021 is now the latest published Load and Capacity Report. The current Additional SDU Study MSP remains unchanged from Class Year 2019, therefore the last Capability Year would use the peak Load for Summer 2024 from the 2021 Gold Book. These values are presented in Table 2.

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<sup>3</sup> Available at: <https://www.nyiso.com/market-monitoring> → ICAP Market Mitigation → Buyer Side Mitigation → Class Year 2019

**Table 2: Forecasted Peak Load**

	NYC Locality	G-J Locality
2020 Peak Load (MW) <sup>4</sup>	11,477	15,695
2024 Peak Load (MW) <sup>5</sup>	11,203	15,286

The nominal differences in peak Load values are converted to UCAP using the zonal Summer 2021 ICAP/UCAP translation factors. The UCAP associated with the Class Year 2019 change in peak load is then subtracted to ensure that the resulting bank is consistent with a running total. The calculated Change in Forecasted Peak Load values are shown in Table 3:

**Table 3: Change in Forecasted Peak Load**

	NYC Locality	G-J Locality
$\Delta PeakLoad_{ICAP}$ [MW]	-274	-409
ICAP/UCAP Translation Factor	2.69%	3.61%
CY 2019 $\Delta PeakLoad_{UCAP}$ [MW]	77.2	36.4
<b>NYC ASDU <math>\Delta PeakLoad_{UCAP}</math> [MW]</b>	<b>-343.8</b>	<b>-430.6</b>

## Incremental Regulatory Retirements

The UCAP MW value associated with the Incremental Regulatory Retirements is calculated as specified in Section 23.4.5.7.13.5.3 of the MST. The value is a subset of Generator Retirements, forecasted in accordance with Sections 23.4.5.7.15.6 and 23.4.5.7.15.7, and only reflect the units that have retired or are planning to permanently cease operation in response to regulatory action. Only incremental MW of Generator Retirements that have not previously been accounted for in prior BSM determinations are included in this component. There have been no additional Incremental Regulatory Retirements identified that coincide with the MSP of the current Additional SDU study since CY 2019. Therefore, this value is unchanged and does not contribute to Renewable Exemption Limit associated with the current Additional SDU study.

<sup>4</sup> Gold Book 2020 Tables I-4a and I-5, available at: <https://www.nyiso.com/documents/20142/2226333/2020-Gold-Book-Final-Public.pdf>

<sup>5</sup> Gold Book 2021 Tables I-4a and I-5, available at: <https://www.nyiso.com/documents/20142/2226333/2021-Gold-Book-Final-Public.pdf>

## URM Impact

The UCAP MW value associated with the Unforced Capacity Reserve Margin (“URM”) impact of the Qualified Renewable Exemption Applicants (“QREAs”) is calculated as specified in section 23.4.5.7.13.5.4 of the MST. The impact on the URM due to the entry of QREAs being evaluated in the Additional SDU Study is forecasted using similar methods as those used to calculate the zonal Locational Minimum Installed Capacity Requirements (“LCRs”). Two cases were run to identify the difference in the UCAP requirement with and without the QREAs. For each case, the Installed capacity Reserve Margin (“IRM”) and optimized LCRs were determined using the NYISO Optimized LCR method. The LCR optimizer calculated the individual zonal contributions to meet the forecasted NYCA requirement. The resulting URM impact values for the Mitigated Capacity Zones are shown in Table 4.

**Table 4: URM Impact UCAP**

	NYC Locality	G-J Locality
URM Impact [UCAP MW]	107.9	98.0

## Prior Class Year Renewable Exemption Bank

The Renewable Exemption Bank for the NYC Locality and the Renewable Exemption Bank for the G-J Locality were calculated at the conclusion of Class Year 2019. However, an omission in that calculation has subsequently been discovered. Section 23.4.5.7.13.5.5 requires that the UCAP equivalent of CRIS MW that receive exemptions pursuant to Section 23.4.5.7.2(a) (“Part A Exemptions”) be deducted from the Renewable Exemption Bank. Part A Exemptions were not included in the previously posted calculation. Also, an incorrect value was utilized in the change in peak load calculation. Corrected values for the Class Year 2019 Renewable Exemption Bank are shown in Table 5.

**Table 5: Class Year 2019 Corrected Renewable Exemption Bank**

NYC Locality Renewable Exemption Limit [UCAP MW]	651.5
Subtract NYC Locality Awarded QREA and Part A Exemptions [UCAP MW]	-37.7
<b>NYC Locality Future Renewable Exemption Bank [UCAP MW]</b>	<b>613.8</b>
G-J Locality Renewable Exemption Limit [UCAP MW]	554.2
Subtract G-J Locality Awarded QREA and Part A Exemptions [UCAP MW]	-124.4
Subtract Remaining NYC Locality Exemption Bank [UCAP MW]	-613.8
<b>G-J Locality Future Renewable Exemption Bank [UCAP MW]</b>	<b>-184.0</b>

## Renewable Exemption Limit Calculation

For the Class Year 2019 NYC Additional SDU Study, the REL for each of the Mitigated Capacity Zones is summarized in Table 6 below. Due to the fact that the URM Impact for the G-J Locality did not overcome the negative bank associated with that Locality, the Minimum Renewable Exemption Limit is in effect for that Locality.

**Table 6: Renewable Exemption Limit**

	NYC Locality	G-J Locality
Minimum Renewable Exemption Limit <sub>UCAP</sub> [MW]	35.4	53.9
$\Delta PeakLoad_{UCAP}$ [MW]	-343.8	-430.6
Regulatory Retirement UCAP [MW]	0	0
URM Impact [UCAP MW]	107.9	98.0
Renewable Exemption Bank [UCAP MW]	613.8	-184
<b>Renewable Exemption Limit [UCAP MW]</b>	<b>377.9</b>	<b>53.9</b>

## Renewable Exemption Bank Update

Concurrent with the conclusion of the Class Year 2019 NYC Additional SDU Study (“CY 2019 ASDU”), the Renewable Exemption Bank that will be applied to future QREAs has been calculated in accordance with Section 23.4.5.7.13.5.5 of the MST. At the conclusion of the CY 2019 ASDU, one QREA remained in Zone J,<sup>6</sup> with a total requested summer CRIS of 816.0 MW. As specified in Section 23.4.5.7.13.6 of the MST, requested CRIS MW for each QREA is converted to a UCAP MW equivalent using the applicable UCAP Deration Factor (“UCDF”). When the applicable UCDF for Class Year 2019<sup>7</sup> is applied the result is 310.1 MW of total awarded Renewable Exemption UCAP. The resulting bank values for the NYC and G-J Localities are summarized in table 7.

<sup>6</sup> List of QREAs available at: <https://www.nyiso.com/market-monitoring> → ICAP Market Mitigation → Buyer Side Mitigation → Class Year 2019 → Renewable Exemption Determinations

<sup>7</sup> Class Year 2019 UCDF values were presented at the May 21, 2020 meeting of the Operating Committee: [www.nyiso.com/documents/20142/12632536/O9c\\_CY19\\_PreliminaryDIS\\_Report\\_vo\\_O-C-May212020\\_Draft\\_Rev.pdf](http://www.nyiso.com/documents/20142/12632536/O9c_CY19_PreliminaryDIS_Report_vo_O-C-May212020_Draft_Rev.pdf), page 15.

**Table 7: Renewable Exemption Bank Update**

NYC Locality $\Delta$ PeakLoad + Regulatory Retirements + URM Impact Running Total [UCAP MW]	415.6
Subtract NYC Locality Previously Awarded QREA and Part A Exemptions [UCAP MW]	-37.7
Subtract NYC Locality CY 2019 ASDU Awarded QREA [UCAP MW]	-310.1
<b>NYC Locality Renewable Exemption Bank [UCAP MW]</b>	<b>67.8</b>
G-J Locality $\Delta$ PeakLoad + Regulatory Retirements + URM Impact Running Total [UCAP MW]	221.5
Subtract G-J Locality Previously Awarded QREA and Part A Exemptions [UCAP MW]	-124.4
Subtract G-J Locality CY 2019 ASDU Awarded QREA Exemptions [UCAP MW]	-310.1
Subtract Remaining NYC Locality Exemption Bank [UCAP MW]	-67.8
<b>G-J Locality Renewable Exemption Bank [UCAP MW]</b>	<b>-280.8</b>