

Demand Response: Final Model Values for 2025 IRM Studies

Mary McColgan

Distributed Resources Operations Engineer

NYSRC – Installed Capacity Subcommittee

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Agenda

- **Background**
- **Final SCR values for 2025 IRM studies**
- **Appendix I - Description of Translation Factors**

Background

Overview of the SCR zonal response rate calculation methodology as accepted at the 1/30/2024 ICS meeting

Background - Purpose

- This presentation will walk through the SCR modeling methodology and final values for the 2025 IRM studies
- The NYISO's recommended SCR modeling changes for the Modeling Improvements for Capacity Accreditation project were approved at the 1/30/2024 ICS meeting and are being implemented in the 2025 IRM studies.
 - The modeling enhancements are intended to better reflect the expected performance and obligations of SCRs and will allow the NYISO to value SCRs in the ICAP Market based on their specific marginal reliability contribution

Background – Data Set Overview

- **The NYISO calculates zonal SCR response rates by hour of event based on historical SCR performance. The data set includes:**
 - All event hours, by zone, for each mandatory event from the most recently completed five years in which a mandatory event was initiated by the NYISO (but not older than summer 2012)
 - The hourly response rates for each hour simulate the aggregated performance and staggered responses of individual SCRs during mandatory events and reflect the percentage of obligated SCR MW that responded during that hour across all mandatory events in the relevant zone(s)
- **The NYISO additionally calculates Translation Factors (see Appendix for details). The data set includes:**
 - All event hours, by zone, for each mandatory event from the most recently completed five years in which a mandatory event was initiated by the NYISO (but not older than summer 2012)
 - All performance test hours that occur between the first Capability Period in the above timeframe and the most recent Summer Capability Period

SCR Response Rates – Duration Limit

- **The SCR modeling approach utilizes a new energy limited resource (ELR) functionality to model SCRs as duration limited resources with hourly response rates**
 - The duration limits reflect the expected maximum mandatory SCR event length based on historically observed calls in the NYISO market. Calls have historically ranged from 1-7 hours
 - The duration limit of the zonal SCR resources will vary by load zone based on the maximum historical call length that has occurred in the zone since 2012
- **Because SCR performance is captured in the hourly response rates in the enhanced SCR modeling approach, the maximum modeled SCR capacities are calculated based solely on July 2024 zonal SCR enrollment and the zonal ACL to CBL factors**

July Max Modeled Capacity (MWs) = SCR ICAP MW * ACL to CBL Translation Factor

Final SCR Model Values

Inputs for 2025 IRM Studies

- **Additional inputs since 2024 IRM studies**
 - Winter 2022-2023 and Summer 2023 SCR Performance Test hours – total of 2 hours
- **The data set consists of**
 - All event hours, by zone, from mandatory events from Summer 2012 through Summer 2022
 - Range from 20 event hours for Zone A to 82 event hours for Zone K
 - Used in calculating the zonal response rates and ACL to CBL translation factors
 - All performance test hours from Summer 2012 through Summer 2023
 - 23 Performance Test hours
 - Used in calculating the ACL to CBL translation factors
- **2025 IRM values are based on the following Duration Limits**
 - The below values represent the maximum event duration in each grouping of zones since Summer 2012. These Duration Limits will remain unchanged until an event exceeds the historical duration in any zone

	SCR Activation Duration Limit by Zone (hours)			
	A-E	F	G-J	K
Duration Limit	5	7	6	7

Response Rate by Hour of SCR Activation

- The response rates have remained unchanged since the preliminary values were presented – there is no new event data to include in the analysis

Zones	Event Hour 1	Event Hour 2	Event Hour 3	Event Hour 4	Event Hour 5	Event Hour 6	Event Hour 7
A-E	77.85%	83.57%	82.28%	70.24%	69.18%	-	-
F	75.94%	82.20%	85.24%	86.18%	85.54%	70.40%	66.99%
G-I	58.45%	67.53%	70.20%	71.94%	73.63%	71.48%	-
J	55.04%	60.60%	65.47%	67.78%	68.80%	66.09%	-
K	49.71%	56.72%	62.12%	64.63%	64.66%	63.36%	52.65%

Final Max Modeled Capacity (MWs)

Capacity Region	SCR ICAP MW based on July 2024	ACL to CBL Factor	July Max Modeled Capacity (MWs)
A-E	783.4	93.5%	732.0
F	103.5	90.6%	93.7
G-I	90.6	84.1%	76.1
J	478.7	74.3%	355.7
K	30.6	76.1%	23.3

Final Max Modeled Capacity (MWs)

Final vs. Preliminary values

- Final SCR Max Modeled Capacity has changed since the preliminary values were presented
 - Changes in enrollment and Declared Values

Capacity Region	Final (MW)	Preliminary (MW)	Difference (MW)
A-E	732.0	556.3	175.7
F	93.7	112.1	-18.4
G-I	76.1	71.0	5.1
J	355.7	328.5	27.1
K	23.3	26.9	-3.6

Appendix I – Description of Translation Factors

SCR Baselines

- **Average Coincident Load (ACL):**

- Capacity Baseline for resources participating in the SCR program
- Required for all resources participating in the SCR Program
- Used for Capacity Market participation

- **Customer Baseline Load (CBL):**

- Energy Baseline for resources participating the SCR programs
- Optional submission following a NYISO Test or Event
- Used for Energy Payments

ACL to CBL Translation Factor 2025 vs 2024

Program	Zone	2025	2024	Difference
SCR	A-E	93.5%	93.4%	0.1%
SCR	F	90.6%	90.9%	-0.3%
SCR	G-I	84.1%	84.2%	-0.1%
SCR	J	74.3%	74.5%	-0.2%
SCR	K	76.1%	76.2%	-0.1%

SCR Translation Factors used in IRM Studies

■ Translation Factor (ACL to CBL)

- The Translation Factor is used to adjust performance based on ACL baseline to a CBL equivalent
- Transition from fixed to calculated Translation Factor established during 9/5/2018 ICS Meeting
- Calculated value from:
 - All event hours, by zone, for each mandatory event from the most recently completed five years in which a mandatory event was initiated by the NYISO (but not older than summer 2012)
 - All performance test hours accumulated during the above timeframe even when there were no mandatory events
 - 2025 IRM ACL to CBL data set includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2023
- Only uses responses from resources reporting their CBL

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