

Demand Response: Preliminary Model Values for 2025 IRM Studies

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Agenda

- **Background**
- **Preliminary SCR values for 2025 IRM studies**
- **Next steps**
- **Appendix I - Description of ICS Adjustment 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 preliminary 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– SCR Modeling

- **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

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

- 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)
- **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 the zonal SCR enrollment from the prior year and the zonal ACL to CBL factors**

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 recent five years in which a mandatory event was initiated by the NYISO (but not older than summer 2012)
 - The 2025 IRM study response rate data set includes all event hours from mandatory events from Summer 2012 through Summer 2022 (no NYISO events have taken place since Summer 2022)
- **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 recent 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
 - 2025 IRM study Translation Factor data set includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2023

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

Preliminary SCR Model Values

***Based on Gold Book estimates for SCR ICAP MW
before actual July 2024 enrollment information is
available**

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

Response Rate by Hour of SCR Activation

Zones	Event Hour 1	Event Hour 2	Event Hour 3	Event Hour 4	Event Hour 5	Event Hour 6	Event Hour 7
A-F	77.49%	83.31%	82.83%	73.23%	72.34%	70.40%	66.99%
G-I	58.46%	67.53%	70.21%	71.95%	73.62%	71.50%	-
J	55.04%	60.60%	65.47%	67.78%	68.80%	66.09%	-
K	49.72%	56.73%	62.13%	64.63%	64.66%	63.35%	52.63%

Preliminary Max Modeled Capacity (MWs)

Capacity Region	SCR ICAP MW based on July 2023	ACL to CBL Factor	July Max Modeled Capacity (MWs)
ROS	719.1	92.9%	668.3
GHI	84.5	84.1%	71.0
J	442.2	74.3%	328.5
K	35.3	76.1%	26.9

Next Steps

- Replace Gold Book SCR ICAP MW estimates with actual July 2024 enrollments once they become available

Appendix I – Description of ICS Adjustment 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-F	92.9%	92.9%	0.0%
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 Adjustment 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 recent 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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