

Demand Response: 2026-2027 IRM Study Final Base Case Values

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Agenda

- **Background**
- **Final Special Case Resource (SCR) values for 2026-2027
IRM Study**
- **Distributed Energy Resource (DER) Aggregation
Enrollments**
- **Appendix I - Description of SCR Adjustment Factors**

Background

Overview of the SCR zonal response rate methodology

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
 - 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 further 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
 - 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 current SCR modeling approach for the installed reserve margin (IRM) study utilizes 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 activations. Activations 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

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

- Because SCR performance is captured in the hourly response rates in the SCR modeling approach, the maximum modeled SCR capacities are calculated based solely on July zonal SCR enrollment and the zonal Average Coincident Load (ACL) to Customer Baseline Load (CBL) translation factors

$$\text{July Max Modeled Capacity (MW)} = \text{SCR ICAP MW} * \text{ACL to CBL Translation Factor}$$

2026-2027 IRM Study: Final SCR Model Values

*Based on July 2025 enrollments

Inputs for 2026-2027 IRM Final Base Case (FBC)

- **Additional data inputs since 2025-2026 IRM Final Base Case (FBC)**
 - Winter 2023-2024 and Summer 2024 SCR performance test hours – total of 2 hours
 - Summer 2024 SCR event hours – total of 15 hours
- **The additional data inputs consist of**
 - All event hours, by zone, from mandatory events from Summer 2012 through Summer 2024
 - Range from 35 event hours for Load Zone A to 97 event hours for Load Zone K
 - Used in calculating the zonal response rates and ACL to CBL translation factors
 - All performance test hours from Summer 2012 through Summer 2024
 - 25 performance test hours
 - Used in calculating the ACL to CBL translation factors
- **The inclusion of the additional data inputs leads to updates to the SCR activation hourly response rate and maximum modeled capacity compared to the modeling assumptions used for the 2026-2027 IRM Preliminary Base Case (PBC)**

Updated Response Rate by Hour of SCR Activation

- The response rates have remained unchanged since the preliminary values that were presented at the April 29, 2025 ICS meeting, which are reflected in the 2026-2027 IRM PBC
 - There is no new event data available at this time 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	82.33%	85.85%	85.54%	79.20%	75.61%	-	-
F	72.95%	79.54%	82.43%	83.29%	83.40%	70.40%	66.99%
G-I	61.08%	69.85%	72.12%	73.52%	74.47%	71.50%	-
J	57.53%	62.61%	66.97%	70.70%	72.29%	66.09%	-
K	51.20%	57.99%	63.12%	65.49%	64.82%	63.35%	52.63%

Final Max SCR Modeled Capacity (MW)

Capacity Region	SCR ICAP MW based on July 2025	ACL to CBL Factor	July Max Modeled Capacity (MW)
A-E	389.3	91.9%	357.6
F	87.8	89.2%	78.3
G-I	73.9	83.5%	61.7
J	453.0	72.9%	330.3
K	23.1	75.1%	17.4

Final Max SCR Modeled Capacity (MW)

Final vs. Preliminary Values

- Final SCR max modeled capacity has changed since the preliminary values were presented
 - Updates reflect changes in enrollment and declared values for ICAP, as well as the transition of certain resources to the DER participation model

Capacity Region	Final Max Modeled Capacity (MW)	Preliminary Max Modeled Capacity (MW)	Difference (MW)
A-E	357.6	719.5	-361.9
F	78.3	92.3	-14.0
G-I	61.7	75.6	-13.9
J	330.3	349.1	-18.8
K	17.4	23.0	-5.6

DER Aggregation Enrollments

DER Aggregations

- The DER participation model for the NYISO markets became available on April 16, 2024 and allows certain resources to aggregate and sell energy, capacity and/or ancillary services
- The table below reflects DER Aggregations that have passed Distribution Utility review as of August 2025

Capacity Region	DER Aggregation ICAP (MW)	Technology Type
A-E	361.4	Demand Side Resource (DSR)
F	0	-
G-I	0	-
J	0	-
K	0	-

DER Aggregations

- **The NYISO recommends modeling the enrolled DERs in the 2026-2027 IRM FBC, consistent with the modeling framework identified in the Phase 1 “DER Whitepaper”**
 - Phase 1 DER Whitepaper is available at: <https://www.nysrc.org/wp-content/uploads/2025/03/DER-Modeling-Whitepaper-Phase1-ICS04022025.pdf>
 - For DSR Aggregations, the Phase 1 DER Whitepaper recommended modeling DERs as ELRs, aggregated by Load Zone and duration
 - For example, all DSR Aggregations in Load Zone A subject to the same duration limit (e.g., 4 hours) would be modeled as a single ELR with the applicable duration limit
- **The NYISO recommends applying the NYCA average Equivalent Demand Forced Outage Rate (EFORd) to new DERs modeled in the 2026-2027 IRM FBC**

Appendix I – Description of SCR 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 program
- Optional submission following a NYISO-called SCR program test or event
- Used for energy payments

ACL to CBL Translation Factor

2026-2027 vs 2025-2026 IRM Studies

Program	Zone	2026-2027 IRM FBC	2025-2026 IRM FBC	Difference
SCR	A-E	91.9%	93.5%	-1.7%
SCR	F	89.2%	90.6%	-1.4%
SCR	G-I	83.5%	84.1%	-0.6%
SCR	J	72.9%	74.3%	-1.4%
SCR	K	75.1%	76.1%	-1.0%

SCR Adjustment Factors used in IRM Studies

■ Translation Factor (ACL to CBL)

- The translation factor is used to adjust performance based on the ACL baseline to a CBL equivalent
- Transition factor calculated annually since the 2019-2020 IRM study
- 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
 - Data set for the 2026-2027 IRM FBC includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2024
- Only uses responses from resources reporting CBL data

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