New York ISO
Independent System Operator

Demand Response: Preliminary Model Values for 2023 IRM Studies

Mitchell Braun

Associate Distributed Resources Operations Engineer

NYSRC – Installed Capacity Subcommittee

June 1, 2022

Agenda

- Background
- Preliminary SCR model values for 2023 IRM studies
- Next steps
- Appendix
  - Description of ICS Adjustment Factors

New York ISO

Background

Overview of the SCR zonal performance factor calculation methodology as accepted at the 5/4/2016 ICS meeting

New York ISO

Background

- **NYISO calculates SCR zonal performance factors for IRM studies 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)
  - All performance test hours accumulated during the above timeframe even when there were no mandatory events
    - 2023 IRM study data set includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2021
- **ICS applies additional adjustment factors (see Appendix for details)**
  - Translation Factor
  - Fatigue Factor

Effective Performance Factor = Zonal Performance Factor * Translation Factor * Fatigue Factor
SCR Model Value MW = SCR ICAP MW * Effective Performance Factor

New York ISO

Preliminary SCR Model Values

*Based on Gold Book estimates for SCR ICAP MW before actual July 2022 enrollment information is available

New York ISO

Inputs for 2023 IRM Studies

- **Additional inputs since 2022 IRM studies**
  - Winter 2020-2021 and Summer 2021 SCR Performance Test hours – total of 2 hours
  - Summer 2021 SCR Event hours – total of 40 hours
- **The data set consists of**
  - All event hours, by zone, from mandatory events from Summer 2012 through Summer 2021
    - Range from 20 event hours for Zone A to 64 event hours for Zone J
  - All performance test hours from Summer 2012 through Summer 2021
    - 19 Performance Test hours

New York ISO

For 2023 IRM - Preliminary SCR Model Values

Program	Super Zone	Superzone Performance Factor	ICS Adjustment Factors		Effective Performance Factor	SCR ICAP MW based on July 2021	Final Model Values MW
			ACL to CBL Factor	Fatigue Factor			
SCR	A-F	87.3%	93.6%	100%	81.7%	636.0	519.9
SCR	G-I	76.8%	84.2%	100%	64.7%	84.9	54.9
SCR	J	70.5%	74.4%	100%	52.5%	406.5	213.4
SCR	K	69.6%	76.3%	100%	53.1%	36.8	19.5
Total						**1164.2**	**807.7**
							69.4%

New York ISO

Comparison of 2023 with 2022 SCR Values

For 2023 IRM - Preliminary SCR Model Values					For 2022 IRM - Final SCR Model Values			Comparison of 2023 with 2022 IRM		
Program	Super Zone	Effective Performance Factor	SCR ICAP MW based on July 2021 Enrollment Data	Final Model Values MW	Effective Performance Factor	July 2021 MW	Final Model Values MW	Effective Performance Factor	SCR ICAP MW	Model Value MW
SCR	A-F	81.7%	636.0	519.9	81.8%	636.0	520.3	-0.1%	0.0	-0.5
SCR	G-I	64.7%	84.9	54.9	64.9%	84.9	55.1	-0.2%	0.0	-0.1
SCR	J	52.5%	406.5	213.4	52.3%	406.5	212.4	0.2%	0.0	0.9
SCR	K	53.1%	36.8	19.5	60.4%	36.8	22.2	-7.3%	0.0	-2.7
Total			**1164.2**	**807.7**		**1164.2**	**810.0**		**0.0**	**-2.3**
				69.4%			**69.6%**			**-0.2%**

- Minor change in Effective Performance Factor for Zone K due to the inclusion of multiple Zone K events since 2022 IRM SCR values were finalized

New York ISO

Next Steps

- Replace Gold Book SCR ICAP MW estimates with actual July 2022 enrollments once they become available on July 07, 2022

New York ISO

Appendix

New York ISO

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

New York ISO

Comparison - 2023 vs 2022 ACL to CBL Translation Factor

Program	Zone	2023	2022	Difference
SCR	A-F	93.6%	93.6%	0.0%
SCR	G-I	84.2%	84.5%	-0.2%
SCR	J	74.4%	74.6%	-0.1%
SCR	K	76.3%	82.2%	-5.8%

New York ISO

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 same data set used for Zonal Performance Factors
  - Only uses responses from resources reporting their CBL
- **Fatigue Factor**
  - The Fatigue Factor is applied to address concerns that fatigue may occur if SCRs are deployed frequently
  - Current value of Fatigue Factor is 1.00

New York ISO

Our Mission & Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

New York ISO