

# **Demand Response: Final Model Values for 2022 IRM Studies & SCR Performance Analysis**

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**Samantha Bergami**

Associate Engineer, Distributed Resources Operations

**NYSRC – Installed Capacity Subcommittee**

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# Agenda

- **Background**
- **Final SCR model values for 2022 IRM studies**
- **Appendix**
  - Description of ICS adjustment factors

# Background

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

# 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
  - 2022 IRM study data set includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2020
- **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

# Final SCR Model Values

# Inputs for 2022 IRM Studies

- **Additional inputs since 2021 IRM studies**
  - Winter 2019-2020 and Summer 2020 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 2020
    - Range from 20 event hours for Zone A to 64 event hours for Zone J
  - All performance test hours from summer 2012 through summer 2020
    - 17 performance test hours

# For 2022 IRM - Final SCR Model Values

Program	Super Zone	Superzone Performance Factor	ICS Adjustment Factors		Effective Performance Factor	SCR ICAP MW based on July 2021 Enrollment Data	Final Model Values MW
			ACL to CBL Factor	Fatigue Factor			
SCR	A-F	87.4%	93.6%	100%	81.8%	636.0	520.3
SCR	G-I	76.8%	84.5%	100%	64.9%	84.9	55.1
SCR	J	70.1%	74.6%	100%	52.3%	406.5	212.4
SCR	K	73.5%	82.2%	100%	60.4%	36.8	22.2
<b>Total</b>						<b>1164.2</b>	<b>810.0</b>
							<b>69.6%</b>

# Comparison of 2022 with 2021 SCR Values

For 2022 IRM - Final SCR Model Values					For 2021 IRM - Final SCR Model Values			Comparison of 2022 with 2021 IRM		
Program	Super Zone	Effective Performance Factor	SCR ICAP MW based on July 2021 Enrollment Data	Final Model Values MW	Effective Performance Factor	July 2020 MW	Final Model Values MW	Effective Performance Factor	July 2021 vs July 2020 MW	Model Value MW
SCR	A-F	81.8%	636.0	520.3	81.8%	622.8	509.5	0.0%	13.2	10.8
SCR	G-I	64.9%	84.9	55.1	63.6%	102.0	64.9	1.3%	-17.1	-9.8
SCR	J	52.3%	406.5	212.4	52.1%	427.3	222.7	0.2%	-20.8	-10.3
SCR	K	60.4%	36.8	22.2	58.0%	43.0	24.9	2.4%	-6.2	-2.7
<b>Total</b>			<b>1164.2</b>	<b>810.0</b>		<b>1195.1</b>	<b>822.0</b>		<b>-30.9</b>	<b>-12.0</b>
				<b>69.6%</b>			<b>68.8%</b>			<b>0.8%</b>

- No significant change in Effective Performance Factor since 2021 IRM
- Decrease in Model Value MW is driven by a decline in the July 2021 SCR Enrollments



# Appendix

# 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

# 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

## Comparison - 2022 vs 2021 ACL to CBL Translation Factor

Program	Zone	2022	2021	Difference
SCR	A-F	93.6%	94.9%	-1.3%
SCR	G-I	84.5%	85.1%	-0.6%
SCR	J	74.6%	75.2%	-0.6%
SCR	K	82.2%	82.1%	0.1%

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- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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