Demand Response: Final Model Values for 2024 IRM Studies

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Agenda

- Background

- Final SCR model values for 2024 IRM studies

- Appendix I - Description of ICS Adjustment Factors

- Appendix II - Modeling Improvements for Capacity Accreditation

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Background

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

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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
    - 2024 IRM study data set includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2022

- **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

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Final SCR Model Values

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Inputs for 2024 IRM Studies

- **Additional inputs since 2023 IRM studies**
  - Winter 2021-2022 and Summer 2022 SCR Performance Test hours – total of 2 hours
  - Summer 2022 SCR Event hours – total of 13 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
  - All performance test hours from Summer 2012 through Summer 2022
    - 21 Performance Test hours

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For 2024 IRM - Final SCR Model Values

| Program | Super Zone | Superzone Performance Factor | ICS Adjustment Factors | | Effective Performance Factor | SCR ICAP MW based on July 2023 | Final Model Values MW |
			ACL to CBL Factor	Fatigue Factor			
SCR	A-F	87.3%	92.9%	100%	81.1%	719.1	583.4
SCR	G-I	77.4%	84.2%	100%	65.1%	84.3	54.9
SCR	J	70.6%	74.5%	100%	52.6%	442.4	232.7
SCR	K	69.8%	76.2%	100%	53.2%	35.3	18.8
Total						1281.0	889.7
							69.5%

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Comparison of 2024 with 2023 SCR Values

Program	Super Zone	For 2024 IRM - Final SCR Model Values			For 2023 IRM - Final SCR Model Values			Comparison of 2024 with 2023 IRM		
		Effective Performance Factor	SCR ICAP MW based on July 2023 Enrollment Data	Final Model Values MW	Effective Performance Factor	July 2022 MW	Final Model Values MW	Effective Performance Factor	SCR ICAP MW	Model Value MW
SCR	A-F	81.1%	719.1	583.4	81.7%	694.5	567.7	-0.6%	24.6	15.7
SCR	G-I	65.1%	84.3	54.9	64.7%	79.1	51.2	0.4%	5.2	3.7
SCR	J	52.6%	442.4	232.7	52.5%	417.5	219.1	0.1%	24.9	13.5
SCR	K	53.2%	35.3	18.8	53.1%	33.7	17.9	0.1%	1.6	0.9
Total			1281.0	889.7		1224.8	855.9		56.2	33.8
				69.5%			69.9%			-0.4%

- Minor change in Effective Performance Factor for Zone F due to the inclusion of multiple Zone F events since 2023 IRM SCR values were finalized

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Appendix I – Description of ICS Adjustment Factors

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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

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Comparison - 2024 vs 2023 ACL to CBL Translation Factor				
Program	**Zone**	**2024**	**2023**	**Difference**
SCR	A-F	92.9%	93.6%	-0.7%
SCR	G-I	84.2%	84.2%	0.0%
SCR	J	74.5%	74.4%	0.0%
SCR	K	76.2%	76.3%	-0.1%

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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

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Appendix II – Modeling Improvements for Capacity Accreditation

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Modeling Improvements for Capacity Accreditation

- As part of the NYISO's Modeling Improvements for Capacity Accreditation project, the NYISO and GE Energy Consulting are testing alternative techniques for modeling SCRs in the IRM model.

- At the conclusion of this testing, the NYISO will present any recommended SCR modeling changes to ICS for consideration in next year's IRM study.

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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

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