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Independent System Operator

Demand Response: Final Model Values for 2023 IRM Studies & SCR Performance Analysis

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Agenda

- Background
- Final SCR model values for 2023 IRM studies
- Appendix
  - Description of ICS Adjustment Factors

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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
    - 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

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Final SCR Model Values

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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 82 event hours for Zone K
  - All performance test hours from Summer 2012 through Summer 2021
    - 19 Performance Test hours

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For 2023 IRM - Final SCR Model Values

Program	Super Zone	Superzone Performance Factor	ICS Adjustment Factors		Effective Performance Factor	SCR ICAP MW based on July 2022	Final Model Values MW
			ACL to CBL Factor	Fatigue Factor			
SCR	A-F	87.3%	93.6%	100%	81.7%	694.5	567.7
SCR	G-I	76.8%	84.2%	100%	64.7%	79.1	51.2
SCR	J	70.5%	74.4%	100%	52.5%	417.5	219.1
SCR	K	69.6%	76.3%	100%	53.1%	33.7	17.9
Total						**1224.8**	**855.9**
							69.9%

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Comparison of 2023 with 2022 SCR Values

For 2023 IRM - Final 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 2022 Enrollment Data	Final Model Values MW	Effective Performance Factor	July 2021 MW	Final Model Values MW	Effective Performance Factor	July 2022 vs July 2021 MW	Model Value MW
SCR	A-F	81.7%	694.5	567.7	81.8%	636.0	520.3	-0.1%	58.5	47.4
SCR	G-I	64.7%	79.1	51.2	64.9%	84.9	55.1	-0.2%	-5.8	-3.9
SCR	J	52.5%	417.5	219.1	52.3%	406.5	212.4	0.2%	11.0	6.7
SCR	K	53.1%	33.7	17.9	60.4%	36.8	22.2	-7.3%	-3.1	-4.3
Total			**1224.8**	**855.9**		**1164.2**	**810.0**		**60.6**	**45.9**
				69.9%			**69.6%**			**0.3%**

- 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
- Increase in Model Value MW is driven by an increase in the July 2022 SCR Enrollments

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DER Aggregations

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DER Aggregations

- **DER Aggregations will be required to make an Annual Election for each Capability Year**
  - Annual Elections will be considered “non-binding” for Capability Year 2023-2024
- **As a result, the elections made by DER Aggregations for Capability Year 2023-2024 will not be modeled in the 2023-2024 IRM**

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SCR Capacity Accreditation Factors

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SCR Capacity Accreditation Factor Discussions

- Capacity Accreditation discussions are ongoing between the NYISO and Stakeholders at ICAPWG/MIWG/PRLWG meetings
- Preliminary SCR Capacity Accreditation Factors have been presented at the July 28th ICAPWG
- SCR modeling for the 2023-2024 IRM will not be impacted

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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 - 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%

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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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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

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