Demand Response: Final Model Values for 2021 IRM Studies & SCR Performance Analysis

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Agenda

- Background
- Final SCR model values for 2021 IRM studies
- Appendix
  - Description of ICS adjustment factors

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Background

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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
    - 2021 IRM study data set includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2019
- **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 2021 IRM Studies

- **Additional inputs since 2020 IRM studies**
  - Winter 2018-2019 and Summer 2019 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 2019
    - Range from 20 event hours for Zone A to 64 event hours for Zone J
  - All performance test hours from summer 2012 through summer 2019
    - 15 performance test hours

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FOR 2021 IRM - Final SCR Model Values

Program	Super Zone	Superzone Performance Factor	ICS Adjustment Factors		Effective Performance Factor	SCR ICAP MW based on July 2020 Enrollment Data	Final Model Values MW
			ACL to CBL Factor	Fatigue Factor			
SCR	A-F	86.2%	94.9%	100%	81.8%	622.8	509.5
SCR	G-I	74.7%	85.1%	100%	63.6%	102.0	64.9
SCR	J	69.3%	75.2%	100%	52.1%	427.3	222.7
SCR	K	70.6%	82.1%	100%	58.0%	43.0	24.9
Total						**1195.1**	**822.0**
							68.8%

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Comparison of 2021 with 2020 SCR Values

FOR 2021 IRM - Final SCR Model Values					2020 IRM - Final SCR Model Values			Comparison of 2021 with 2020 IRM		
Program	Super Zone	Effective Performance Factor	SCR ICAP MW based on July 2020 Enrollment Data	Final Model Value MW	Effective Performance Factor	July 2019 MW	Final Model Value MW	Effective Performance Factor	July 2020 vs July 2019 MW	Model Value MW
SCR	A-F	81.8%	622.8	509.5	81.7%	629.3	514.2	0.1%	-6.5	-4.7
SCR	G-I	63.6%	102.0	64.9	64.3%	125.5	80.7	-0.7%	-23.5	-15.8
SCR	J	52.1%	427.3	222.7	52.0%	478.9	249.0	0.1%	-51.6	-26.3
SCR	K	58.0%	43.0	24.9	59.1%	48.2	28.5	-1.1%	-5.2	-3.5
Total			**1195.1**	**822.0**		**1281.9**	**872.4**		**-86.8**	**-50.4**
				68.8%			**68.1%**			**0.7%**

- No significant change in Effective Performance Factor since 2020 IRM
- Decrease in Model Value MW is driven by a decline in the July 2020 SCR Enrollments

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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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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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Comparison - 2021 vs 2020 ACL to CBL Translation Factor				
Program	**Zone**	**2021**	**2020**	**Difference**
SCR	A-F	94.9%	94.1%	0.8%
SCR	G-I	85.1%	85.1%	0.0%
SCR	J	75.2%	75.3%	-0.1%
SCR	K	82.1%	82.3%	-0.2%

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The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- 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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