# Demand Response: Preliminary Model Values for 2022 IRM Studies

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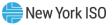
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# Agenda

- Background

- Preliminary SCR model values for 2022 IRM studies

- Next steps

- 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

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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
    - 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 |
|---|

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# Preliminary SCR Model Values

*Based on Gold Book estimates for SCR ICAP MW before actual July 2021 enrollment information is available

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# 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

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# For 2022 IRM - Preliminary SCR Model Values

| Program | Super Zone | Superzone Performance Factor | ICS Adjustment Factors | | Effective Performance Factor | SCR ICAP MW based on July 2020 | Final Model Values MW |
|---|---|---|---|---|---|---|---|
| | | | ACL to CBL Factor | Fatigue Factor | | | |
| SCR | A-F | 87.4% | 93.6% | 100% | 81.8% | 622.8 | 509.5 |
| SCR | G-I | 76.8% | 84.5% | 100% | 64.9% | 102.0 | 66.2 |
| SCR | J | 70.1% | 74.6% | 100% | 52.3% | 427.3 | 223.3 |
| SCR | K | 73.5% | 82.2% | 100% | 60.4% | 43.0 | 25.9 |
| Total | | | | | | 1195.1 | 824.9 |
| | | | | | | | 69.0% |

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# Comparison of 2022 with 2021 SCR Values

| For 2022 IRM - Preliminary 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 2020 Enrollment Data | Final Model Values MW | Effective Performance Factor | July 2020 MW | Final Model Values MW | Effective Performance Factor | SCR ICAP MW | Model Value MW |
| SCR | A-F | 81.8% | 622.8 | 509.5 | 81.8% | 622.8 | 509.5 | 0.0% | 0.0 | 0.0 |
| SCR | G-I | 64.9% | 102.0 | 66.2 | 63.6% | 102.0 | 64.9 | 1.3% | 0.0 | 1.3 |
| SCR | J | 52.3% | 427.3 | 223.3 | 52.1% | 427.3 | 222.7 | 0.2% | 0.0 | 0.6 |
| SCR | K | 60.4% | 43.0 | 25.9 | 58.0% | 43.0 | 24.9 | 2.4% | 0.0 | 1.0 |
| Total | | | 1195.1 | 824.9 | | 1195.1 | 822.0 | | 0.0 | 2.9 |
| | | | | 69.0% | | | 68.8% | | | 0.2% |

- **No significant change in Effective Performance Factor since 2021 IRM**

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# Next Steps

- Replace Gold Book SCR ICAP MW estimates with actual July 2021 enrollments once they become available on July 08, 2021

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# Appendix

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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 - 2022 vs 2021
## ACL to CBL Translation Factor

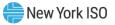| Program | Zone | 2022 | 2021 | Difference |
|---------|------|-------|-------|------------|
| SCR | A-F | 93.6% | 94.9% | -1.3% |
| SCR | G-I | 84.5% | 85.1% | -0.6% |
| SCR | J | 74.6% | 75.2% | -0.6% |
| SCR | K | 82.2% | 82.1% | 0.1% |

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# 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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- Planning the power system for the future

- Providing factual information to policymakers, stakeholders and investors in the power system