



Proposed Change to the Calculation of SCR Model Values for IRM Studies

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Topics

- **Overview of the existing methodology**
- **Problem statement**
- **Proposed change**
- **Next steps**

Overview of the Existing Methodology for Determining SCR Model Values

- The NYISO calculates the SCR zonal performance factors for IRM studies based on SCR performance from the prior year using
 - *Resource's best four hour performance during each mandatory event, if any*
 - *Performance during SCR performance tests*
 - For example: The upcoming IRM studies would consider SCR performance during Summer 2015 and Winter 2014-2015. During this timeframe there were two one-hour SCR performance tests and no mandatory events
- ICS applies additional adjustment factors (see Appendix for details)
 - *ICS adjusts these factors up/down based on SCR event response from the prior year (when data is available):*
 - *Translation Factor*
 - *Effective Capacity Value*
 - *Fatigue Factor*

Effective Performance Factor = Zonal Performance Factor * Translation Factor * Effective Capacity Value * Fatigue Factor

SCR Model Value MW = SCR ICAP MW * Effective Performance Factor

Problem Statement

- **The existing methodology to determine SCR model values using only the prior year's dataset results in year-to-year variability depending upon whether mandatory SCR events were called during the prior year**
- **To minimize year-to-year variability and better represent the expected SCR performance for reliability planning studies the NYISO is proposing one change to the existing methodology**

Proposed Change

- **Use five years of data rather than only one year of data to determine SCR zonal performance factors**
 - *This proposed timeframe for SCRs aligns with the five-year timeframe used to determine generator availability for IRM studies*
 - *Using the five-year time period reduces the variations that occur based upon whether or not events are called during a given year and results in more accurate representation of SCR performance for the purpose of reliability planning studies*
 - *ACL baseline was solely used to measure performance starting with 2012, and therefore the NYISO is proposing to limit the look back window to Summer 2012*
 - *Considering performance during events and performance tests reflects SCR's performance during both peak and non-peak conditions*

Proposed Change – Preliminary Data for Zone J

SCR Model Values for IRM Studies for Zone J			
Methodology	July 2015 ICAP MW	Effective Performance Factor	SCR Model Value MW
2015: Effective Performance Factor - Existing Methodology	386.1	55.5%	214.3
2016: Existing Methodology	386.1	71.9%	277.6
2016: Proposed Methodology	386.1	62.5%	241.3
Impact of Proposed Change	0.0	-9.4%	-36.3

Notes:

- 1) July 2015 ICAP MW is used to enable better comparison of the changes
- 2) "2015: Effective Performance Factor - Existing Methodology": based on performance in 20 mandatory event hours and 2 one-hour tests during Summer 2013 and Winter 2012-2013
- 3) "2016: Existing Methodology": based on performance in 2 one-hour tests during Summer 2014 and Winter 2013-2014
- 4) "2016: Proposed Methodology": based on performance in 36 mandatory event hours and 7 one-hour tests from Summer 2012 through Summer 2015

Next Steps

- ✓ **March 29, 2016 ICS**
 - ✓ *Discuss proposed changes to the methodology for determining the SCR model values for IRM studies*
- **May 4, 2016 ICS**
 - *Continue discussion on the proposed changes*
- **June 1, 2016 ICS**
 - *Seek ICS approval of the proposed changes*
 - *Present preliminary SCR Model Value MW based on Gold Book forecast*
- **August 3, 2016 ICS**
 - *Update the SCR Model Value MW based on the actual July 2016 enrollment data*

Appendix

SCR Adjustment Factors used in IRM Studies

- **Translation Factor (ACL to CBL)**
 - *The Translation Factor is used to adjust performance based on ICAP measures to a CBL equivalent*
- **Effective Capacity Value**
 - *The Effective Capacity Value adjustment factor is used to account for performance changes beyond the minimum required 4-hour performance period during an event*
- **Fatigue Factor**
 - *The Fatigue Factor adjustment factor is applied to address concerns that fatigue may occur if SCRs are deployed frequently*

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- *Providing factual information to policy makers, stakeholders and investors in the power system*

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