Demand Response: ACL to CBL Translation Factors

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Agenda

- Background

- Calculated ACL to CBL Translation Factors

- Next Steps

Background

Overview of ACL to CBL Translation Factors as they currently stand in the IRM and history of why other calculation methods are being explored

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
    - 2019 IRM study data set includes all event hours from mandatory events and performance tests from Summer 2012 through Summer 2017
- **ICS applies additional adjustment factors**
  - ACL to CBL Translation Factor
  - Fatigue Factor

Effective Performance Factor = Zonal Performance Factor * ACL to CBL Translation Factor * Fatigue Factor
SCR Model Value MW =   SCR ICAP MW * Effective Performance Factor

Background

- **ACL to CBL Translation Factor**
  - The ACL to CBL Translation Factor is used to adjust performance based on ACL baseline to a CBL equivalent
  - Current value of ACL to CBL Translation Factor is 0.90
  - Usage of 0.90 ACL to CBL Translation Factor established at 6/27/2012 ICS meeting
- **During the last ICS meeting, stakeholders requested the NYISO review the methodology for ACL to CBL Translation Factors**

Calculated ACL to CBL Translation Factor

Based on historical CBL response of SCRs

Methodology

- Used same methodology as used in calculating SCR Performance Factors
- The data set consisted of
  - All event hours, by zone, from mandatory events from summer 2012 through winter 2017-2018
    - Range from 20 event hours for Zone A to 52 event hours for Zone J
  - All performance test hours from summer 2012 through winter 2017-2018
    - 12 performance test hours
- Only used responses from resources reporting their CBL

Comparison – Fixed vs Calculated

Program	Super Zone	Current[1] ACL to CBL Translation Factor	CBL Reporting (as a % of MW obligated)	Calculated ACL to CBL Translation Factor	Comparison ACL to CBL Translation Factor
SCR	A-F	90%	94.3%	93.4%	3.4%
SCR	G-I	90%	91.8%	85.2%	-4.8%
SCR	J	90%	86.3%	78.0%	-12.0%
SCR	K	90%	83.5%	84.2%	-5.8%

[1] ACL to CBL Translation Factor value as decided at 6/27/2012 ICS Meeting

Observations from Comparison

- For resources reporting optional CBL data:
  - High rate of data submittals in all zones
  - Consistent submittal rate over 5 year period

- Analysis shows regional diversity of resource CBL response as compared to ACL response:
  - Comparable to 90% across all zones put together
    - slightly higher than 90% for resources in zones A-F
    - slightly lower than 90% for resources in zones G-K

Comparison: Fixed vs Calculated

Program	Super Zone	Superzone Performance Factor	ACL to CBL Translation Factor	Fatigue Factor	Effective Performance Factor	SCR ICAP MW based on July 2018 Enrollment Data	Preliminary Model Values MW	ACL to CBL Translation Factor	Effective Performance Factor	SCR ICAP MW based on July 2018 Enrollment Data	Preliminary Model Values MW	ACL to CBL Translation Factor	Effective Performance Factor	Preliminary Model Values MW
			ICS Adjustment Factors											
			FOR 2019 IRM - Preliminary SCR Model Values - Current					**- Calculated**				**Comparison**		
SCR	A-F	86.3%	90%	100%	77.6%	655.1	508.6	93.4%	80.5%	655.1	527.6	3.4%	2.9%	19.0
SCR	G-I	74.6%	90%	100%	67.1%	111.4	74.8	85.2%	63.5%	111.4	70.8	-4.8%	-3.6%	-4.0
SCR	J	71.3%	90%	100%	64.1%	494.1	316.9	78.0%	55.5%	494.1	274.5	-12.0%	-8.6%	-42.4
SCR	K	70.9%	90%	100%	63.8%	48.5	30.9	84.2%	59.7%	48.5	28.9	-5.8%	-4.1%	-2.0
Total						1309.1	931.2			1309.1	901.8			-29.4
							71.1%				68.9%			-2.2%

A 2.2% decrease in Model Value MW across NYCA when utilizing the Calculated ACL to CBL Translation Factor

NYISO's Recommendation

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NYISO's Recommendation

- **Current Method:**
  - SCR ICAP MW * Zonal Performance Factor * ACL to CBL Translation Factor * Fatigue Factor
  - ACL to CBL Translation Factor = 0.90
- **NYISO's Recommendation:**
  - Maintain current formula, but use calculated ACL to CBL Translation Factor in lieu of current 0.90 value
  - Results in SCR Model Value more representative of resource response across different zones

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- Planning the power system for the future

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

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Appendix

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SCR Baselines

- **ACL:**
  - Capacity Baseline for resources participating in the SCR program
  - Required for all resources participating in the SCR Program
  - Used for Capacity Market participation
- **CBL:**
  - Energy Baseline for resources participating the SCR programs
  - Optional submission following a NYISO Test or Event
  - Used for Energy Payments

Results – Impact on 2019 IRM

			FOR 2019 IRM - Preliminary SCR Model Values				
			ICS Adjustment Factors				
Program	**Super Zone**	**Superzone Performance Factor**	**ACL to CBL Translation Factor**	**Fatigue Factor**	**Effective Performance Factor**	**SCR ICAP MW based on July 2018 Enrollment Data**	**Preliminary Model Values MW**
SCR	A-F	86.3%	93.4%	100%	80.5%	655.1	527.6
SCR	G-I	74.6%	85.2%	100%	63.5%	111.4	70.8
SCR	J	71.3%	78.0%	100%	55.5%	494.1	274.5
SCR	K	70.9%	84.2%	100%	59.7%	48.5	28.9
Total						**1309.1**	**901.8**
							68.9%