2019 Alternative LCRs as Calculated Using the 2019 IRM Preliminary Base Case

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Objective & Background

- On June 5, 2018, the NYISO filed with FERC tariff revisions that would put in place an alternate method of calculating LCRs

- On August 9, 2018, the NYISO filed its response to FERC's deficiency letter regarding the Alternative LCR proposal

    - The NYISO has requested that these tariff revisions become effective on October 9, 2018 following the statutory 60-day notice period

- The NYISO will periodically provide the NYSRC ICS inputs, preliminary results, and public procedures related to the filed alternate LCR method

    - This presentation provides illustrative alternate LCRs based on the ICS inputs currently available

    - The ICS inputs and results shown in this presentation are for information only, are not final, and will change

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Alternate LCR process

- As noted on the prior slide, the NYISO has filed the alternate method of calculating LCRs with FERC
- Moving forward, the NYISO will produce alternate LCR estimates for certain IRM cases to inform the ICS and stakeholders
  - All such results will be informational only
- Over the coming months, the NYISO will update necessary parameters and documentation in order to arrive at a final set of LCR inputs for use in the January 2019 calculation of the 2019 LCRs that will be recommended to the NYISO Operating Committee for approval.
  - NYISO to post a procedure outlining the process used to determine LCRs using the alternate LCR method
    - NYISO will post a draft of this procedure by mid-November
  - Alternate LCR software
    - Expected to remain consistent with the market design software. Necessary updates and bug fixes may occur
  - MARS database
    - Final LCRs are based on the NYSRC's established IRM
    - The database will start with the IRM Final Base Case, incorporate the December load forecast, and update for any material changes (per existing processes)
  - Net CONE Curves
    - 2019 Net CONE Curves will be calculated consistent with the above procedure
  - Transmission Security Limits
    - 2019 Transmission Security Limits will be calculated consistent with the above procedure

Inputs used to develop LCRs in this presentation

- **Alternate LCR software**
  - The results presented were produced using software consistent with the market design proposed in the NYISO's filing
  - The software has been subject to further internal testing, revisions, and procedural controls
- **A MARS database (*i.e.,* Master Input File - MIF)**
  - This presentation uses the IRM Preliminary Base Case (PBC) MIF as discussed during the August 21, 2018 ICS conference call
- **Net CONE Curves**
  - This presentation uses the 2018 Net CONE Curves as posted for the market design
  - Slide 17: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_icapwg/meeting_materials/2018-02-06/ICAPWG_2-06-18_AlternativeMethodsforLCRs_Final.pdf
- **Transmission Security Limits ("TSLs")**
  - This presentation uses Transmission Security Limits, as updated from previously calculated limits, on the next slide
  - Previously calculated limits from the 2018 market design are found on Slide 18, here: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_icapwg/meeting_materials/2018-02-06/ICAPWG_2-06-18_AlternativeMethodsforLCRs_Final.pdf

Updated TSL details

Preliminary Base Case TSL calculations

Transmission Security Requirements	Formula	GHIJ	NYC	LI	Source
Load Forecast (MW)	[A] = Given	15,815	11,474	5,323	2019 load from 2018 GB
Transmission Security Limit (MW)	[B] = Given	3,000	3,175	350	2018 transfer limits
Minimum UCAP Needed (MW)	[C] = [A]-[B]	12,815	8,299	4,973	
UCAP Needed Percent	[D] = [C]/[A]	81.03%	72.33%	93.42%	
5 Year EFORd	[E] = Given	9.63%	9.67%	9.79%	8/21 PBC EFORd
ICAP Needed (MW)	[F] = [D]/(1-[E])	14,181	9,187	5,513	
ICAP Floor Requirement (TSLs)	[G] = [F]/[A]	**89.67%**	**80.07%**	**103.56%**	2019 PBC TSLs

Informational alternate LCR results

Case	NYCA	G-J	NYC	LI	LOLE	Total Cost (MM$)**
8/21 2019 PBC	116.9%	94.9%*	79.2%	100.7%	0.100	$4,980.1
Alternate LCRs	116.9%	89.7%***	80.1%***	103.6%***	0.100	$4,973.2
deltas	0.0%	-5.2%	0.9%	2.9%	-	-$6.9

* As-found condition for the G-J Locaity given the PBC IRM and LCRs.

** Total Cost as calcuated by the alternate LCR software, at the level of excess, considering Net CONE Curves.

*** The alternate LCR software rounds LCRs to the nearst 0.1%. The TSL limit was binding for all locations.

- The alternate LCR method identified a lower cost set of LCRs while satisfying the LOLE and TSL constraints.
- These results were produced using the New York Balancing Authority means to identify the locations used to measure LOLE. That means was discussed in the NYISO's August 1, 2018 presentation to the ICS.

Questions?

Questions or comments can be sent to Nathaniel

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- 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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