



2020 IRM Parametric Study: Supplemental Analysis Results

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Teleconference

Purpose and Agenda

- **Review how the Parametric Study and 2021 IRM Preliminary Base Case (PBC) diverged**
 - Review the Parametric Case results when Indian Point 3 was retired and the MARS transmission topology was updated
 - Review previous analysis
- **Review today's supplemental analysis**
- **Next Steps**

Background

- **Draft parametric study results were discussed with stakeholders at the 8/5/2020 and 8/17/2020 NYSRC ICS meetings.**
 - http://nysrc.org/PDF/MeetingMaterial/ICSMeetingMaterial/ICS%20Agenda%20234/AI%2012%20-%20IRM21_PBC_Results.pdf
 - <http://nysrc.org/PDF/MeetingMaterial/ICSMeetingMaterial/ICS%20Agenda%20235/AI%203.0%20-%20IRM%202021%20Preliminary%20Base%20Case%20Parametric%20Results.pdf>
- **These parametric results included a run retiring Indian Point 3 and increasing the UPNY-CONED limit from 6,000 MW to 7,000 MW.**
 - This run showed a decrease in the NYCA reserve margin (-0.7 percentage points) and an increase in the NYC and LI reserve margins (+4.3 and +5.8 percentage points, respectively).
 - This run produced the largest change in requirements of all parametric runs and was the main driver of the final parametric study result (i.e., a lower NYCA reserve margin and higher NYC/LI reserve margins).

	Margin / Impact on Margin		
	NYCA	NYC	LI
IRM 2020 Final Base Case	18.9	83.7	101.8
Topology + Retire IP3	-0.68	4.26	5.76
All other changes	-0.27	-0.88	-2.51
IRM 2021 Parametric Study	17.9	87.1	105.1

Background, cont'd

- The 2021 IRM PBC Tan45 analysis was conducted after the completion of the parametric study. The results of the parametric study and the Tan45 differed substantially and were not anticipated by stakeholders.

Case	NYCA	NYC	LI
2021 Parametric Study	17.9	87.1	105.1
2021 IRM PBC Tan45	20.1	82.7	97.3
<i>Delta</i>	<i>+2.2</i>	<i>-4.4</i>	<i>-7.8</i>

Background, cont'd

- **At the September 2nd NYSRC ICS meeting, the NYSIO review an additional Tan45 analysis**
 - The NYISO began with the 2021 IRM PBC, returned Indian Point 3 to service, reduced the UPNY-CONED rating from 7,000 MW to 6,000 MW, and performed a Tan45 analysis.
 - This effectively “backs out” the parametric run that had the largest impact on final parametric study results.

Case	NYCA	NYC	LI
IP3 in-service, UPNY-CONED = 6000, Tan45	19.6	82.8	97.3
2021 PBC Tan45 (IP3 retired, UPNY-CONED = 7000)	20.1	82.7	97.3
<i>Delta</i>	+0.5	-0.1	0.0

York ISO

Background, cont'd

- The supplemental Tan45 presented at the September 2nd NYSRC ICS reconciled the Parametric Study and the IRM Preliminary Base Case Tan45 results.

Additional analysis

- **The NYISO performed three additional Tan45 analyses**
 1. After Parametric Case 8 (i.e., cable transition rates update)
 2. Case 1, above, plus all topology updates*
 3. Case 2 above, plus the IP3 retirement

*Includes QA/QC updates discussed with ICS. See the 9/16/20 Parametric Results meeting materials and associated QA/QC discussion for further information

Results and Discussion

Case	Description	IRM	J Tan45 Reserve Margin	K Tan45 Reserve Margin
1	Tan45 on Parametric Case 8	20.6	83.9	97.3
2	Tan45 on Case #1 (above), updating all topology	20.8	85.3	95.9
3	Tan45 on Case #2 (above), retiring IP3	20.9	85.8	98.8

- **The first case demonstrates an increase in the IRM and a decrease in the LI reserve margin as of Parametric Case 8, i.e., before the topology and IP3 changes, confirming that prior Parametric Cases contributed to the observed LI reserve margin reduction**

 - An additional presentation posted with the September 16, 2020 meeting materials provides further information on the LI reserve margin and next steps
- **The second case demonstrates the topology updates did not materially change the LOLE, but instead shifted capacity requirements**

 - The J reserve margin increased by 1.6 points while the K reserve margin decreased by 1.6 points. Recall, at the Tan45 point, a one percentage point change in the NYCA, J, and K reserve margins all have the same impact on reliability
- **The net effect (Case 1 to Case 3) confirms the conclusion from the September 2nd meeting: the Parametric Study results did not accurately capture changes in the IRM and locational reserve margins associated with the retirement of IP3 (i.e., locational reserve margins did not increase dramatically due to the IP3 retirement)**

 - These results do show an increase in the locational reserve margins when IP3 is retired. However, it is reasonable to expect variation in Tan45 results when differing base cases are used (i.e., Parametric Case 8 + topology vs. Preliminary Base Case)

Next Steps

- **Work towards achieving upcoming IRM Study milestones**
 - Perform sensitivity cases
 - Submit masked database to ConEd and LIPA for review
 - Construct the Final Base Case

Questions?

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit 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 policymakers, stakeholders and investors in the power system

