

ICS Meeting Notes for August 30, 2016

Status of Studies for 2017 IRM Study

Emergency Assistance (EA) Model: NYISO White Paper – G. Drake

NYISO Staff Review of ICS Comments & Conclusions – G. Drake

NYISO did not review the ICS comments again. It is around 2 months since comments were sent by members to the NYISO.

Analysis of Neighboring CA Excess Operating Reserves – N. Whitney

The NYISO expanded the number of days for inclusion in their top days' analysis from 5 top days for 2013 to 2015 to 20 and 30 days. This was done to give a more expand the analysis of our neighbors' excess reserves.

AI asked if more years could be included in an analysis. NYISO did say that it would be difficult, but they believe that more years could be included in a future analysis.

NYISO Presentation of excess reserves:

N C V S C r e	<p>Observed Trends</p> <p>When actual load is near 100% of forecast peak load, the available surplus appears to average between 2,000 and 2,500 MW.</p> <p>When actual load is close to 87% - 95% of forecast peak load, the available surplus appears to average between 2,500 – 3,000 MW.</p>
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of the ICS members believe that the NYISO's suggested 2620 MW for EA is too large based on the observed trends.

AI points out that if we go to the low 2000's will push the IRM to around 20%.

For this reason, ICS is doing multiple sensitivities on EA from 2750 and 2250.

Wheel Question – Does the fire at the Ramapo PAR impact the IRM analysis

NYISO was asked to develop a new topology with one Ramapo PAR out of service. Con Ed does not believe that a sensitivity is not needed as there is a lot more transfer availability. NYISO believes that the fire will have a reduction of 500 MW of transfer ability.

Parametric Study Results – G. Drake

8/25/2016

Preliminary Base Case

Draft ICS results - For discussion purposes only

Case
Number Description

Case Number	Description
0	Run Initial Base Case check
1	MARS Version 3.20 w/wo H5 load shape
2	PJM 4 vs. 5 bubble model
3	Retirements
4	Multiple Wind Shapes
5	Add Marble River + Orangeville Rerate
6	Multiple Solar Shapes
7	Gold Book Forecast 2017
8	Cable Transition Rates
9	Gen Transition Rates
10	Update non-SCR EOPs
11	Update SCRs
12	Gold Book DMNC
13	Update Maintenance Schedules
14	Remove PJM Wheel
15	Update Topology
16	Ginna and Fitz back in
17	Update IESO, PJM, and Quebec
18	Update ISONE

NYCA	Zone J	Zone K	Actual Change
RM	RM	RM	
17.4	80.8	102.4	
17.4	80.8	102.4	0.0
17.3	80.7	102.3	-0.1
18.6	79.7	102.5	1.3
18.4	79.7	102.5	-0.2
19.0	79.7	102.5	0.6
19.0	79.7	102.5	0.0
18.7	79.3	102.8	-0.3
18.7	79.3	102.9	0.0
19.3	79.8	103.5	0.6
19.2	79.7	102.4	-0.1
19.1	79.6	103.2	-0.1
19.1	80.4	103.5	0.0
19.1	80.4	103.5	0.0
19.2	80.5	103.6	0.1
19.2	80.5	103.6	0.0
18.1	80.5	103.6	-1.1
18.3	80.6	103.7	0.2
18.8	81.0	104.2	0.5

IRM Delta: **1.4**

Note that this is before a tan45 curve has been performed

Case 10 zone K should have an LCR of 103.4.

Ginna and Fitzpatrick were taken out of the model in step 3. Case number 16 put the units back in the model. The reason that putting the two nukes back in the model did not return the IRM to 17.3 was due to other retirements.

Case 14 was related to changes in SENY related to the wheel. Case 15 was basically upstate topology changes.

Tan 45 Analysis & Preliminary Base Case IRM – G. Drake

Preliminary Base case results – 2017 IRM Study

IRM17 PBC01 (0824)				
Average IRM	18.29			
	ax²	bx	c	LCR
J LCR	0.1469	-6.3685	149.2660	81.92
K LCR	0.0520	-2.9048	139.9696	104.23
	IRM	J LCR	K LCR	G-J
Average IRM	18.29	81.92	104.23	
J - IRM	18.27	81.95		
K - IRM	18.32		104.21	

IRM17 PBC02 (0829) Ginna/Fitz Out				
Average IRM	18.84			
	ax^2	bx	c	LCR
J LCR	0.4171	-16.5091	245.2558	82.27
K LCR	0.3351	-13.7947	245.4477	104.50
	IRM	J LCR	K LCR	G-J
Average IRM	18.84	82.27	104.50	
J - IRM	18.59	82.49		
K - IRM	19.09		104.23	

NYISO is looking into why with the nukes out of the model the LCRs for J and K went up (very slightly for K).

Parametric IRM Impact Comparison – Final 2016 IRM vs. Preliminary 2017 IRM

Parameter	Estimated IRM Change (%)	IRM (%)	Reasons for IRM Changes
2016 IRM Study – Final Base Case		17.4	
2017 IRM Study Parameters that Increased the IRM			
Updated PJM, IESO, NE and Quebec Models	+0.5		
Updated Generating Unit EFORd's	+0.4		
New Wind Capacity	+0.4		
Retirements	+0.1		
PJM Wheel Removed	+0.1		
Total IRM Increase	+1.5		
2017 IRM Study Parameters that Decreased the IRM			
Updated Load Forecast (Gold Book)	-0.2		
Updated Non-SCR EOPs	-0.1		
Replace PJM 4-Bubble with 5-Bubble Model	-0.1		
Updated SCRs	-0.1		
Multiple Wind Shape Model Update	-0.1		
Total IRM Decrease	-0.6		
2017 IRM Study Parameters that do not change the IRM			
Multiple Solar Shapes	0		
Updated Maintenance Schedules	0		
Updated Cable Outage Rates	0		
Updated Topology	0		
Updated DMNC Ratings	0		
Net Change from 2016 Study		+0.9	
2017 IRM Study – Preliminary Base Case		18.3	

Proposed 2017-18 IRM Study Sensitivity Cases

Case	Description
1	NYCA isolated
2	No internal NYCA transmission constraints
3	No load forecast uncertainty
4	No wind capacity
5	No SCRs
6	New emergency assistance model under consideration at 2750 MW limit
6a	New emergency assistance model under consideration at 2250 MW limit
7	Indirect Energy Assistance eliminated
8	Retire Indian Point 2 and 3, w/o replacing capacity (LOLE)
9	Forward Capacity Market – MW leaving NY
10	Ginna and Fitzpatrick retired using normal sensitivity method
10a	Ginna and Fitzpatrick retired performing Tan 45
10b	Ginna and Fitzpatrick retired using A, C, D
11	Determine IRM and emergency assistance while including all NYCA capacity resources
12	One Ramapo PAR out of service

Locational Export Capacity Proposal – J. Boles

NYISO proposes that capacity sales from a constrained zone (their constrained zone) will only be removed to the extent that it has a reliability impact. For the amount that does not affect reliability, the NYISO will remove capacity from the non-constrained zone. ICS and the EC need to understand how the power will flow from a constrained area to a neighboring control area. This may be of concern for the 2017 IRM as units in NY will be able to sell into the NE reconfiguration auction in March of 2017 that were not eligible to do so in the past. NE has requested rule changes to their capacity market that would affect our study if accepted by FERC. The rule change will allow any unit that is capable of providing capacity to sell in any NE auction. NYISO does not believe that we (ICS) needs to take and actions at this time since FERC has not ruled on the NE change. Also, NYISO plans to intervene in NE filing and request that FERC delay the request to some later period. However, NY's Roseton unit would be qualified

to sell into NE's reconfiguration auction, as perhaps other NY units may be able to do as well. I proposed, but not accepted by ICS, to do a sensitivity on fully loading the interface at Sandy Pond with NY MWs to NE for 2017. The reason for the requested the sensitivity is due to NE's higher capacity prices compared to NY's, which could lure NY units to NE. An exodus of NY units to NE would reduce our summer capacity levels.