FOR APPROVAL at 9/4/2019 ICS Meeting: 2020 IRM Parametric Results

Case Number	Description	Margin at 0.1 LOLE		
		NYCA	NYC	LI
0	IRM 2019 Final Base Case	116.7%	82.5%	101.5%
1	IRM20 topology update (CVEC + Jamaica ties)	-0.788	0.100	-1.200
2	IRM20 topology update (Case S1 + IP2 retirement)	0.180	0.500	1.000
3	Gold Book 2019 DMNCs	0.131	0.470	0.051
4	Non-SCR EOPs	0.087	0.060	0.085
5	2020 Fixed Maintenance	0.142	0.098	0.137
6	Summer LFU	1.077	0.745	1.047
7	SCRs	-0.085	-0.130	-0.006
8	Retirements (not including IP2; IP2 shown in Case 2)	-0.048	-0.073	0.064
9	Cable Transition Rates	-0.053	-0.350	0.230
11	Generator Transition Rates	0.284	0.203	0.266
	Sum of Non Material Changes (next page)	0.043	-1.097	3.025
	7/30 results (without all cases run):	117.7%	83.0%	106.2%

Cases run since 7/30:

Case Number	Description	NYCA	NYC	LI
12	Update Wind and Run-of-River Shapes (from 2013-2017 data to 2014-2018 data)	0.375	0.000	0.000
13	5 MW Battery as a resource	0.015	0.000	0.096
14	Update external Control Areas (incl. HQ Wheel)	0.681	0.458	0.646
15	Perform Policy 5 Adjustments	0.040	0.026	0.008
16	Replace incorrect maintenance schedule	-0.240	0.000	0.000
	2020 IRM parametric study result	**118.5%**	**83.1%**	**106.1%**

Note: After a system change, both the parametric study and Tan45 process return the system to the LOLE criterion. However, each uses a different method of adding (or removing) capacity to return the system to the LOLE criterion. Illustratively, a parametric case might cause the IRM to increase by 1.0 percentage points and NYC to increase by 0.2 percentage points, while the Tan45 might cause the IRM to increase by 0.8 percentage points and NYC to increase by 0.4 percentage points; both result in a system that meets the reliability criterion. Thus, while we routinely compare a series of parametric cases, this year is different. We have a mix of parametric cases and Tan45 cases. As a result, the changes across the 16 cases cannot be summed to get a final parametric result (given that not all the cases are parametric cases).

As discussed during the 7/30 meeting, when the "study year" was changed from 2019 to 2020 (with no change in underlying data) a change in LOLE was observed. For the 2020 IRM, GE recommended the NYISO keep the 2019 study year. Concurrently, GE has deployed (and the NYISO is currently testing) a software solution to mitigate year-over-year LOLE changes. The results reported in this spreadsheet maintain the 2019 study year. The NYISO recommends the NYSRC establish the 2020 IRM using this assumption.

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Case	Non Material Changes	Margin at 0.1 LOLE		
		NYCA	NYC	LI
a	Initial IRM Database Check with Selkirk	-0.018	-0.013	-0.017
b	Set 5-digit LOLE/Prob	0.000	0.000	0.000
c	Update Winter LFU	0.000	0.000	0.000
d	Add EOP steps 11 & 12	0.000	0.000	0.000
e	Remove EDRP	0.000	0.000	0.000
f	NYPA Sales	-0.005	0.000	0.000
g	2019 Gold Book Forecast & Shapes*	-0.007	-1.063	2.681
h	Winter LFU	0.014	0.010	0.013
i	Update Solar Shape (2014 - 2018)	0.000	0.000	0.000
j	New Solar (Riverhead)	0.038	-0.031	0.348
k	LFG Shapes 2014-2018	0.021	0.000	0.000
	Sum of Non Material Changes	0.043	-1.097	3.025

* Margin, defined as ICAP divided by Load, changed in large part becuase the denominator of the equation (load) changed. In Long Island, a lower load value caused an increase in the quotient of ICAP divided by Load. In NYC, a higher load value decreased the quotient of ICAP divided by Load. Thus, in this case, the change in margin is largely an outcome of the reporting method and not necessarily a representation of the impact on resource adequacy requirements.