

IRM 2022 Preliminary Base Case Parametric Results on LOLH and EUE						
With Material Changes on Magins						
Group	Group Description	Cases	Margin Change	Movement of LOLH and EUE		
			NYCA (pct pts)	NYCA LOLE (Days/yr)	NYCA LOLH (Hours/yr)	NYCA EUE (MWH/yr)
<b>0</b>	<b>Starting Point</b>	IRM 2021 Final Base Case	<b>20.70</b>	<b>0.10</b>	<b>0.36</b>	<b>243.68</b>
<b>1</b>	<b>MARS Versions &amp; GE Code Updates</b>	<b>Change only (delta)</b>		0.24	0.77	114.10
		Drastic change in EUE due mainly to updating energy limitations in Ontario's model <sup>1</sup> .				
		<b>Adjust to LOLE Criteria (delta)</b>	<b>-0.16</b>	N/A	0.00	3.26
<b>2</b>	<b>New Summer LFU</b>	<b>Change only (delta)</b>	-	-0.03	-0.11	-133.48
		Drop in all indices aligned with lower IRM				
		<b>Adjust to LOLE Criteria (delta)</b>	<b>-1.23</b>	N/A	0.00	-0.92
<b>3</b>	<b>Thermal Outage Rates (2016-2020)</b>	<b>Change only (delta)</b>	-	-0.01	-0.04	-14.43
		Drop in all indices aligned with lower IRM				
		<b>Adjust to LOLE Criteria (delta)</b>	<b>-0.32</b>	N/A	0.00	9.91
<b>4</b>	<b>Wind Shapes (2016-2020)</b>	<b>Change only (delta)</b>	-	0.00	0.00	-2.38
		A drop in unserved energy should align with a lower IRM. This mismatch in IRM vs other metrics could be explained by the addition of the year 2020 wind shape having better <i>off peak</i> assistance than the <i>on peak</i> hours, compared to the dropped year 2015. The shifting method could also be involved.				
		<b>Adjust to LOLE Criteria (delta)</b>	<b>0.09</b>	N/A	0.00	-7.16

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5	ROR Shapes (2016-2020)	<b>Change only (delta)</b>	-	0.00	0.00	-4.25	
		Drop in all indices aligned with lower IRM					
		<b>Adjust to LOLE Criteria (delta)</b>	<b>-0.06</b>	N/A	0.00	-1.18	
6	DMNC Value Update per Gold Book 2021	<b>Change only (delta)</b>	-	0.00	0.00	7.71	
		Mismatch in IRM lowering while EUE increases needs to be explained.					
		<b>Adjust to LOLE Criteria (delta)</b>	<b>-0.34</b>	N/A	0.00	9.75	
7	Update to ELR Units	<b>Change only (delta)</b>		0.00	0.00	-4.50	
		Drop in all indices aligned with lower IRM					
		<b>Adjust to LOLE Criteria (delta)</b>	<b>-0.05</b>	N/A	0.00	-1.42	
8	New Reserve Allocation	<b>Change only (delta)</b>	-	0.00	0.00	0.04	
		This EUE recently changed. Mismatch in IRM and EUE needs to be explained.					
		<b>Adjust to LOLE Criteria (delta)</b>	<b>0.09</b>	N/A	0.00	-6.04	
9	Capacity Addition: <i>New Wind Resource</i>	<b>Change only (delta)</b>	-	0.00	0.00	-3.06	
		The addition of any resource with no corresponding adjustment will lower indices. The wind addition is less effective on peak than more traditional resources, making the adjusted metrics higher. Not sure if this pattern is confirmed by the high renewable cases.					
		<b>Adjust to LOLE Criteria (delta)</b>	<b>0.47</b>	N/A	0.00	1.55	
10	Topology	<b>Change only (delta)</b>	-	0.00	0.00	-0.81	
		Marginal mismatch is not of concern					
		<b>Adjust to LOLE Criteria (delta)</b>	<b>0.03</b>	N/A	0.00	-0.81	



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The IRM movement due to the database changes of the entire group is included in the column "Margin Change" for reference. These results are consistent with the PBC results presented at the June 29 ICS meeting.

The reported metrics aim to demonstrate the isolated impacts due to the group of database changes, to the extent possible. Therefore, the movement of LOLH and EUE, i.e. the delta, compares the at-criteria results against the previous at-criteria case results before the database changes are applied.

The results are based on parametric analysis. The Tan45 process will be conducted on the final PBC database, and the LOLH and EUE statistics are expected to change post Tan 45 process.