



Load Forecast Uncertainty Modeling: Sensitivity Case

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Background

- **In last ICS, NYISO has presented Load Forecast Uncertainty Modeling: Phase 1 Study Results**
 - https://nysrc.org/PDF/MeetingMaterial/ICSMeetingMaterial/ICS%20Agenda%20245/AI%207.1%20-%20LFU_Study_Phase_1_Overview_ICs_20210330.pdf
- **Near-term recommendation for the 2022 IRM Study: Slightly update the standard normal distribution bin values used to better reflect the temperature probability distribution**
- **Perform impact analysis with MARS**

Proposed LFU Bin Structure

		Weight	Z	Area Left	Right	Percent Left	Right
LFU Bin	1	0.0062	2.74	0.0031	0.0031	50.0%	50.0%
	2	0.0606	1.79	0.0303	0.0303	50.0%	50.0%
	3	0.2417	0.89	0.1209	0.1209	50.0%	50.0%
	4	0.3830	0.00	0.1915	0.1915	50.0%	50.0%
	5	0.2417	-0.89	0.1209	0.1209	50.0%	50.0%
	6	0.0606	-1.79	0.0303	0.0303	50.0%	50.0%
	7	0.0062	-2.74	0.0031	0.0031	50.0%	50.0%

LFU Values Comparison

Current LFU

Bin	Probability	A-E	F&G	H&I	J	K	NYCA (Winter)
Bin 1	0.0062	1.1602	1.1717	1.1356	1.1073	1.1638	1.1222
Bin 2	0.0606	1.1111	1.1170	1.0946	1.0733	1.1197	1.0777
Bin 3	0.2417	1.0570	1.0570	1.0406	1.0289	1.0598	1.0369
Bin 4	0.3830	1.0000	0.9936	0.9768	0.9767	1.0000	1.0000
Bin 5	0.2417	0.9422	0.9289	0.9066	0.9191	0.9188	0.9669
Bin 6	0.0606	0.8858	0.8648	0.8335	0.8586	0.8234	0.9376
Bin 7	0.0062	0.8328	0.8033	0.7606	0.7979	0.7552	0.9122

Updated LFU

Bin	Probability	A-E	F&G	H&I	J	K	NYCA (Winter)
Bin 1	0.0062	1.1478	1.1585	1.1255	1.0995	1.1563	1.1101
Bin 2	0.0606	1.1001	1.1053	1.0840	1.0649	1.1073	1.0689
Bin 3	0.2417	1.0506	1.0501	1.0336	1.0233	1.0530	1.0325
Bin 4	0.3830	1.0000	0.9936	0.9768	0.9767	1.0000	1.0000
Bin 5	0.2417	0.9488	0.9361	0.9150	0.9258	0.9296	0.9705
Bin 6	0.0606	0.8973	0.8777	0.8489	0.8713	0.8432	0.9434
Bin 7	0.0062	0.8463	0.8188	0.7798	0.8138	0.7660	0.9185

Results

	NYCA	NYC	LI
IRM FBC	20.70%	82.60%	95.10%
IRM FBC with Updated LFU	19.40%	81.60%	93.90%
delta	-1.30%	-1.00%	-1.20%

- A parametric analysis is performed on 2021 FBC
- The updated LFU values has a -1.3% impact on IRM

Questions?