Update on Inputs for Upcoming June FPR/ELCC Run

RAAS

June 24, 2025

Overview

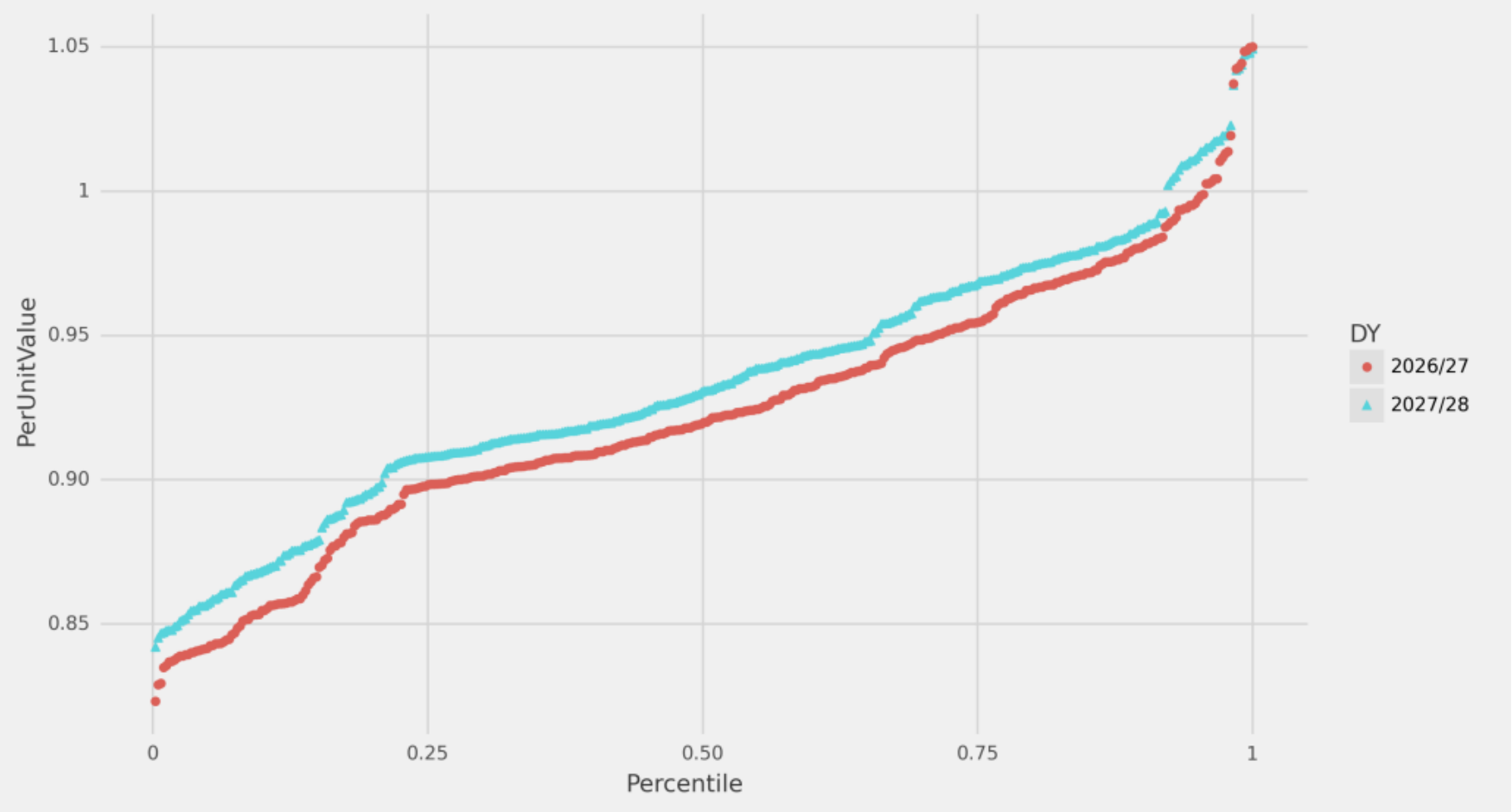
- The June 2025 FPR/ELCC run will calculate planning parameters (ELCC Class Ratings, AUCAP, FPR) for the following auctions:
  - 2027/28 BRA
- The following rules are new:
  - DR changes recently accepted by FERC in Docket No. ER25-1525 (i.e., no DR Performance Window, changes to DR winter performance shape)
  - Two new ELCC Classes in the Unlimited Resources category
    - Oil Fired Combustion Turbine Class
    - Waste to Energy Steam Class

Load Scenario Updates

- The upcoming FPR/ELCC run will use load scenarios derived for Delivery Year 2027/28 from the 2025 PJM Load Forecast
  - The previous FPR/ELCC run also used scenarios from the 2025 PJM Load Forecast but for Delivery Year 2026/27
  - Summer extreme loads are lower in 2027/28 than 2026/27
  - Winter extreme loads are higher in 2027/28 than 2026/27

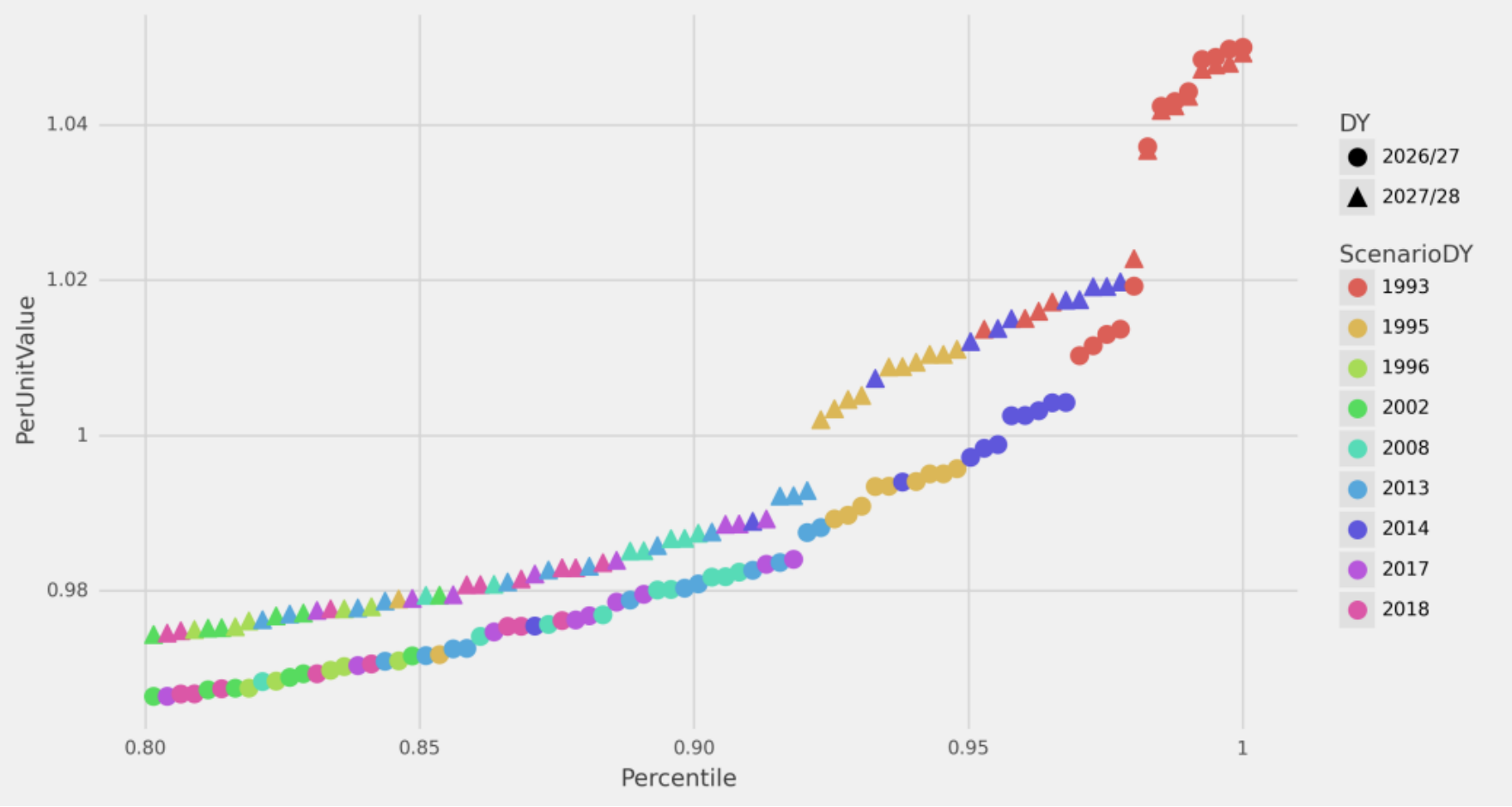
Potential Impact: Could lead to more winter risk in model

Winter Peak Distribution: 2026/27 vs 2027/28



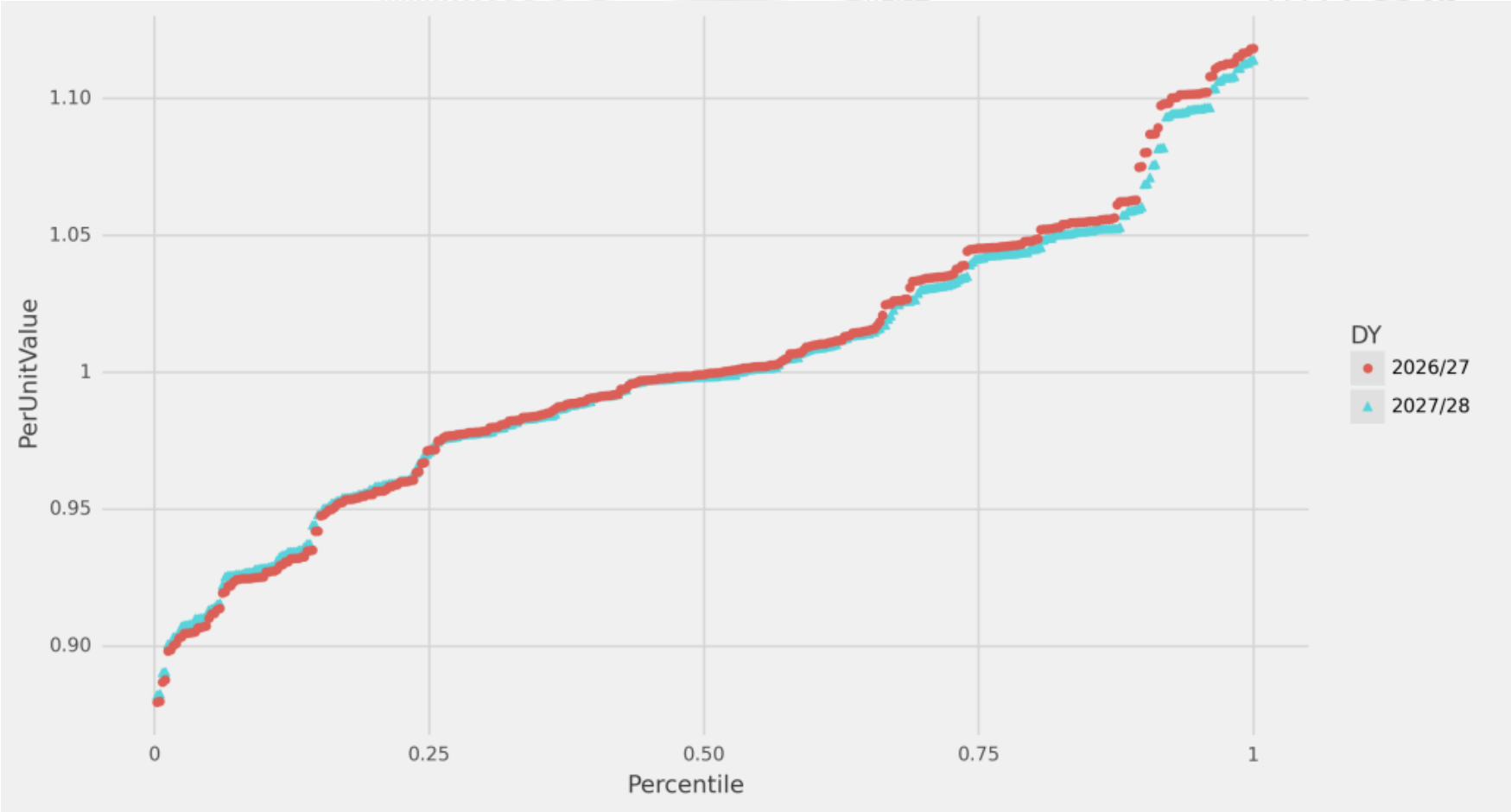
Values per-unitized on the annual peak

Winter Peak Distribution – Upper 20th Percentile: 2026/27 vs 2027/28



Values per-unitized on the annual peak

Summer Peak Distribution: 2026/27 vs 2027/28



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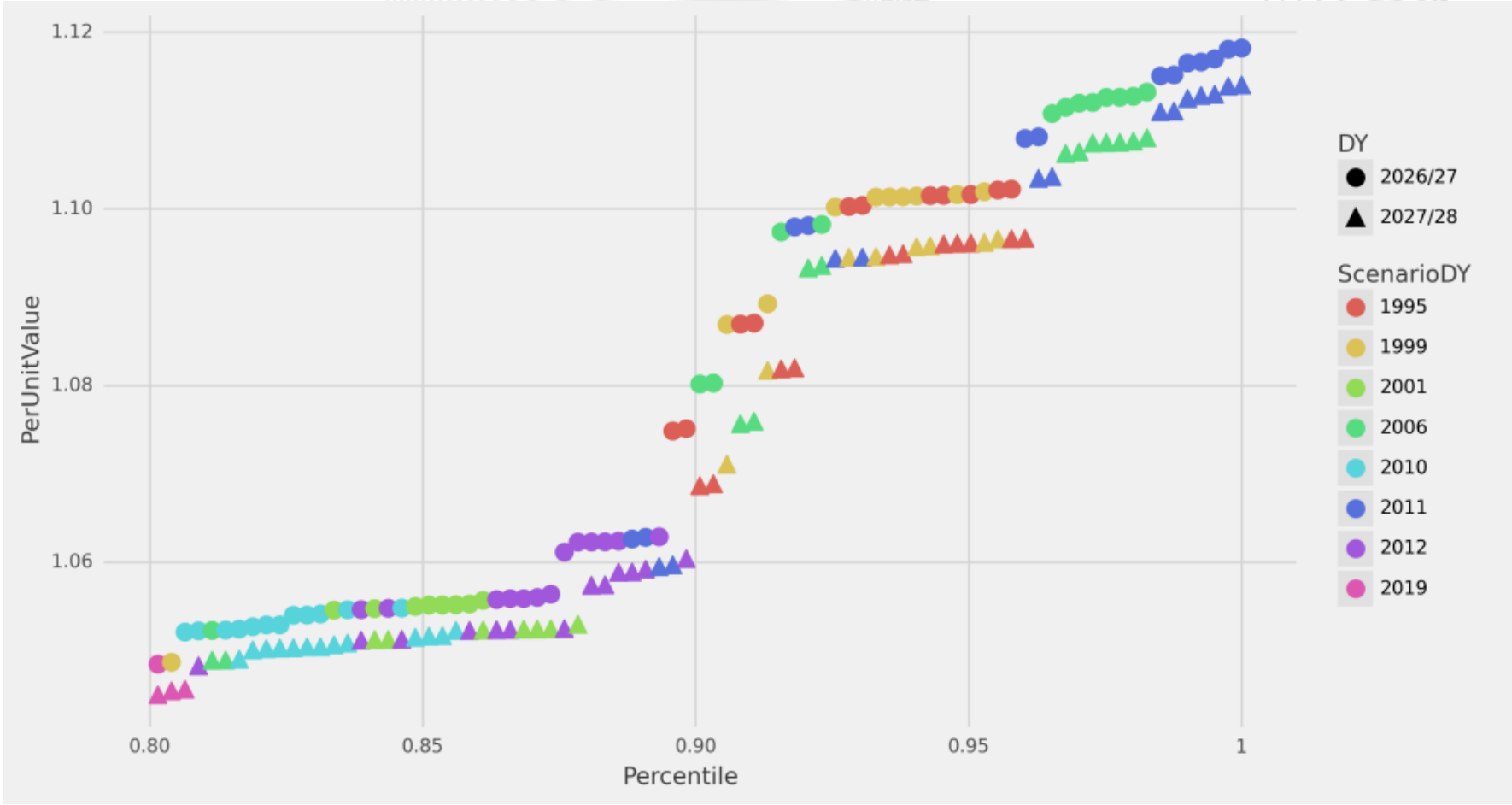

Values per-unitized on the annual peak

Inputs without Updates

- Binning Methodology
  - Relative to 26/27 BRA run, no new weather data has been rolled in
  - Bins are available at https://www.pjm.com/-/media/DotCom/planning/res-adeq/elcc/26-bra-bins.xlsx
- Forced Outages and Ambient Derates for Unlimited Resources as well as Availability Rates for Variable Resources remain based on data from June 1st 2012 – May 31st 2024

Updates to Demand Response in ELCC

	Prior Rules	Updated Rules	Potential Impact
Hourly DR Availability	Summer: 10AM-10PM EPT Winter: 6AM-9PM EPT	24/7	Increases Available MW which in turn should decrease system risk
Hourly Reduction Capability	Scaled proportional to system load: $\frac{Simulated\ Hourly\ Load}{50/50 Simulated\ Peak\ Load\ Forecast}$ x ICAP	Summer: No Change Winter: Based on aggregate hourly load profiles provided in support of WPL values from recent registrations	Enhances modeling of the DR reduction capability in the Winter Period

Aggregate average hourly DR reduction profile used in certain sensitivity runs and preliminary 10 year ELCC Class Ratings

HB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	62%	62%	62%	62%	64%	70%	86%	96%	100%	98%	96%	93%	93%	92%	91%	89%	87%	87%	85%	81%	80%	73%	70%	65%

DR Rule Change Impact on 26/27 BRA Case

ELCC Class	26-27 BRA (%)	26-27 BRA + DR Changes (%)	Difference (%)
10-hr Storage	72	78	6
4-hr Storage	50	56	6
6-hr Storage	58	65	7
8-hr Storage	62	69	7
Coal	83	83	0
Demand Response	69	88	19
Diesel Utility	91	91	0
Fixed-Tilt Solar	8	10	2
Gas Combined Cycle	74	75	1
Gas Combustion Turbine	60	62	2
Gas Combustion Turbine Dual	78	78	0
Hydro Intermittent	38	38	0
Landfill Intermittent	50	51	1
Nuclear	95	95	0
Offshore Wind	69	67	-2
Onshore Wind	41	39	-2
Steam	73	74	1
Tracking Solar	11	13	2

Metric	26-27 BRA	26-27 BRA + DR Changes	Difference
FPR	0.917	0.9335	0.0165
IRM (%)	19.1	18.8	-0.3
LOLH Winter %	82.4	78.2	-4.2
Avg. AUCAP Factor	0.7699	0.7858	0.0159

- Decrease in overall system risk (IRM drops and system is less tight)
- LOLH in winter slightly decreases
- Class ratings for storage and DR significantly increase

Demand Response Winter Performance Shape based on values shown on prior slide

Aggregate Average Hourly DR Shape for 2027/28 BRA

2027/2028 BRA Aggregate Average Hourly DR Reduction Profile																							
HB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
27/28 Winter Shape	78%	77%	77%	78%	80%	83%	93%	96%	100%	101%	102%	103%	102%	103%	100%	99%	97%	95%	94%	92%	91%	87%	84%	82%

2027/28 BRA Winter Shape is based on the 2025 Demand Response registration data

- Will be used in the ELCC Run for the 2027/28 BRA
- Overall increase in DR Availability should further reduce system risk

ELCC Class Updates

- Two new classes were accepted in FERC docket ER25-1813
  - Oil Fired Combustion Turbine Class
    - Moved resources from the Other Unlimited Resource Class to this new class
    - Estimated ELCC Class Rating based on a 25/26 Third IA sensitivity: **85%**
  - Waste to Energy Steam Class
    - Moved resources from the Steam Class to this new class
    - Estimated ELCC Class Rating based on a 25/26 Third IA sensitivity: **83%** (Steam remains relatively unchanged)

Additional Deadlines/Activities

Activity	Timing	Potential Impact
Dual Fuel Attestation	May 30th, 2025	Class Membership
Notice of Intent to Offer (NOI)	June 7th, 2025	Resource Portfolio
Transitional Deliverability Study	June 2025	Resource Portfolio
DR Winter Performance Shape	June 2025	DR Winter Availability
Announced Deactivation Review	June 2025	Resource Portfolio
IRM/FPR First Read/ Endorsement at MRC/MC	July 23rd, 2025	N/A

ELCC Parameter Schedule Available