



IMM Quarterly Markets Performance Report

Spring 2025 Report Highlights
March 2025 – May 2025 outcomes

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Summary for Spring 2025

- **Wholesale market costs** totaled \$1.64bn, a 48% increase (up \$530m) on Spring 2024 costs of \$1.1 bn, due to higher energy and capacity costs
 - Energy market costs made up 73% of total wholesale costs; capacity costs made up 22%
- Increase in **energy costs** (totalled \$1.19bn, up by \$430m or 57%), driven by higher natural gas prices
 - Energy market outcomes were generally consistent with changes in input costs, resource mix and load levels; slightly higher level of structural market power (particularly local) than previous spring, but mitigation occurred infrequently
 - Avg. day-ahead and real-time **Hub LMPs** were \$41.19/MWh and \$39.25/MWh; both 60% higher than in Spring 2024
 - Avg. **natural gas price** was \$3.40/MMBtu, up 113% on the Spring 2024 price of \$1.60/MMBtu; due to increased prices at natural gas basins (Marcellus), driven by tighter overall gas supplies than last year
 - **RGGI program** costs added \$9.35/MWh to the average production cost of a typical combined cycle, up 6% (\$0.54/MWh) on last spring
 - Effect of higher gas prices on LMPs was partially offset by lower loads and increased net imports which were up 251 MW on last spring; decrease at Phase II but larger increase at NYN
 - Slightly lower average **loads** (down 115 MW per hour) than Spring 2024; Record low hourly load occurred during Spring 2025 due to mild weather and high BTM solar generation (lowest hourly load was 7,665 MW on April 20)
- **Capacity market costs** were up by 38% (totalled \$358m, up by \$99m) on Spring 2024 due to higher clearing prices in FCA 15 (conducted in Feb. 2021)
 - Spring 2025 was the last quarter of the FCA 15 commitment period, with clearing prices of \$2.61/kW-mo, higher than the FCA 14 price of \$2/kW-mo

Seasons: Winter: Dec-Feb **Spring: Mar-May** Summer: Jun-Aug Fall: Sep-Nov



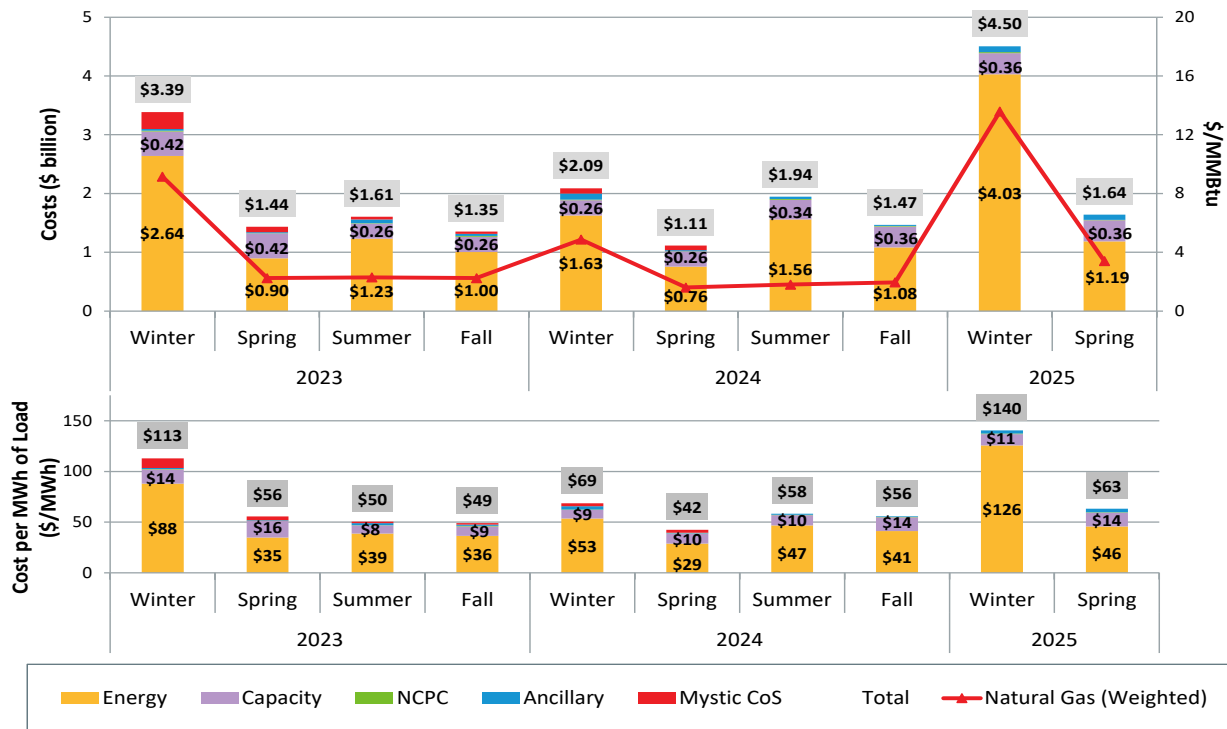
Summary for Spring 2025 (cont.)

- **DA A/S related costs totaled \$88m (~5% of total wholesale costs)**
 - Flexible Response Services and Energy Imbalance Reserve Costs of \$13.1m
 - Forecasted Energy Requirement costs of \$74m
- **Real-time reserve payments** were low at just \$0.7m, up from \$0.6m in Spring 2024, and reflective of high margins and the absence of major instances of stressed conditions
 - Most payments (87%) were for ten-minute spinning reserves (avg. TMSR price of \$6.87/MWh)
 - Less than \$0.1 million in combined payments were made for non-spinning reserves (10-min offline product); Only 1.2 hours of non-zero pricing for 10-min (avg. price of \$54/MWh) and 0.3 hours of non-zero 30-min pricing (avg. price of \$169/MWh)
- Total **regulation payments** were \$1.8m, down by \$0.7m (27%) compared to Spring 2024
 - Decrease primarily reflected lower regulation capacity prices (down 46%), as alternative technology regulation resources continue to make up a larger share of the regulation mix
- Day-ahead and real-time **congestion revenue** was \$20.4m, up from only \$3.1m last Spring
 - Increased congestion costs driven by transmission outages and corresponding export congestion in Maine related to maintenance and upgrades to accommodate construction of the New England Clean Energy Connect (NECEC) line
- **Uplift or Net Commitment Period Compensation (NCPC)** costs totaled \$6.8m, up by 45% (by \$2.1m) on the prior spring due to increase in economic payments

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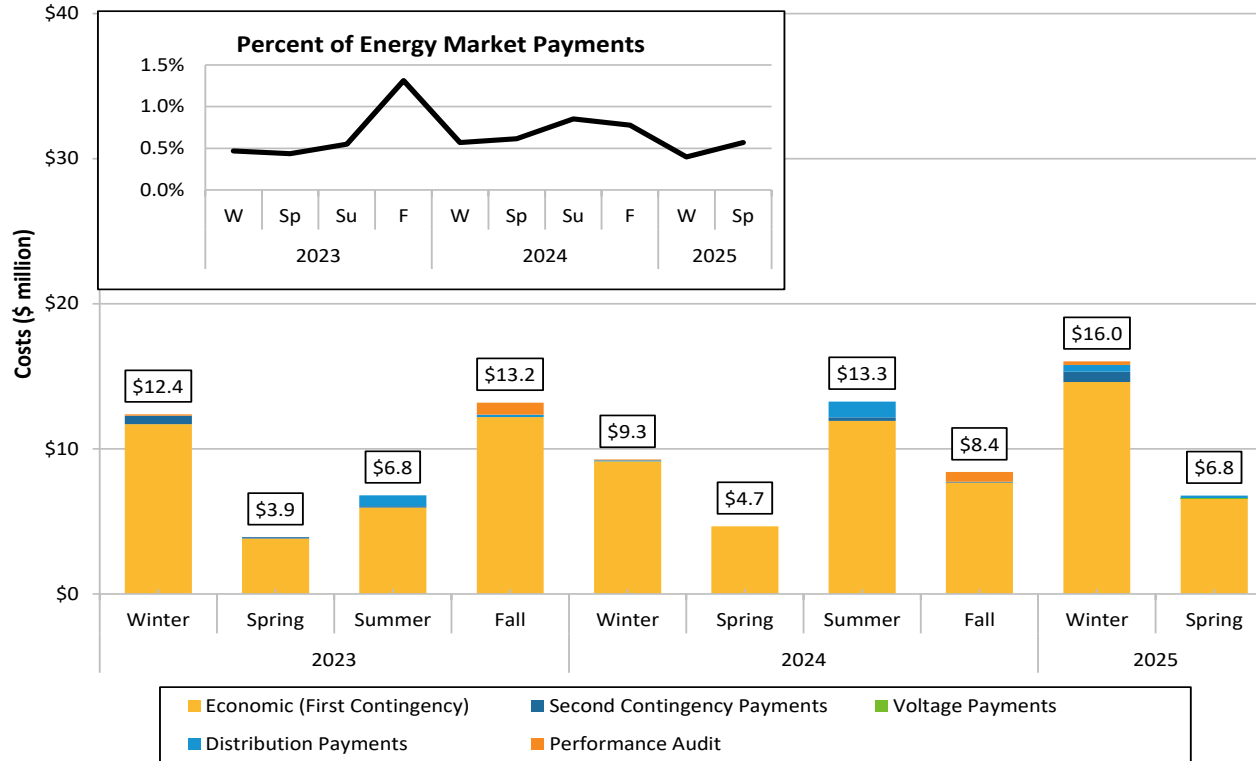


Wholesale electricity costs up 48% on prior Spring; higher energy and capacity costs



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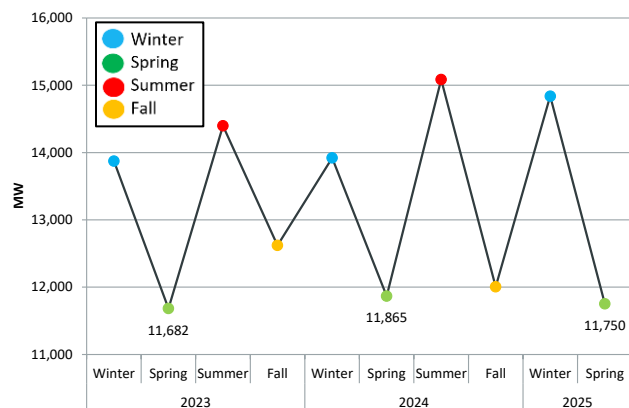
Uplift payments remained relatively low; most payments covered economic commitments and dispatch



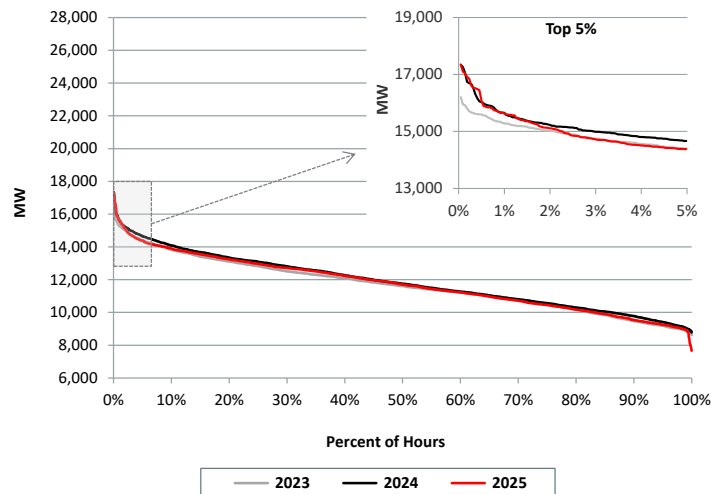
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Average Spring 2025 loads similar to Spring 2024; Record low hourly load driven by mild weather and high BTM solar generation

Average Hourly Load

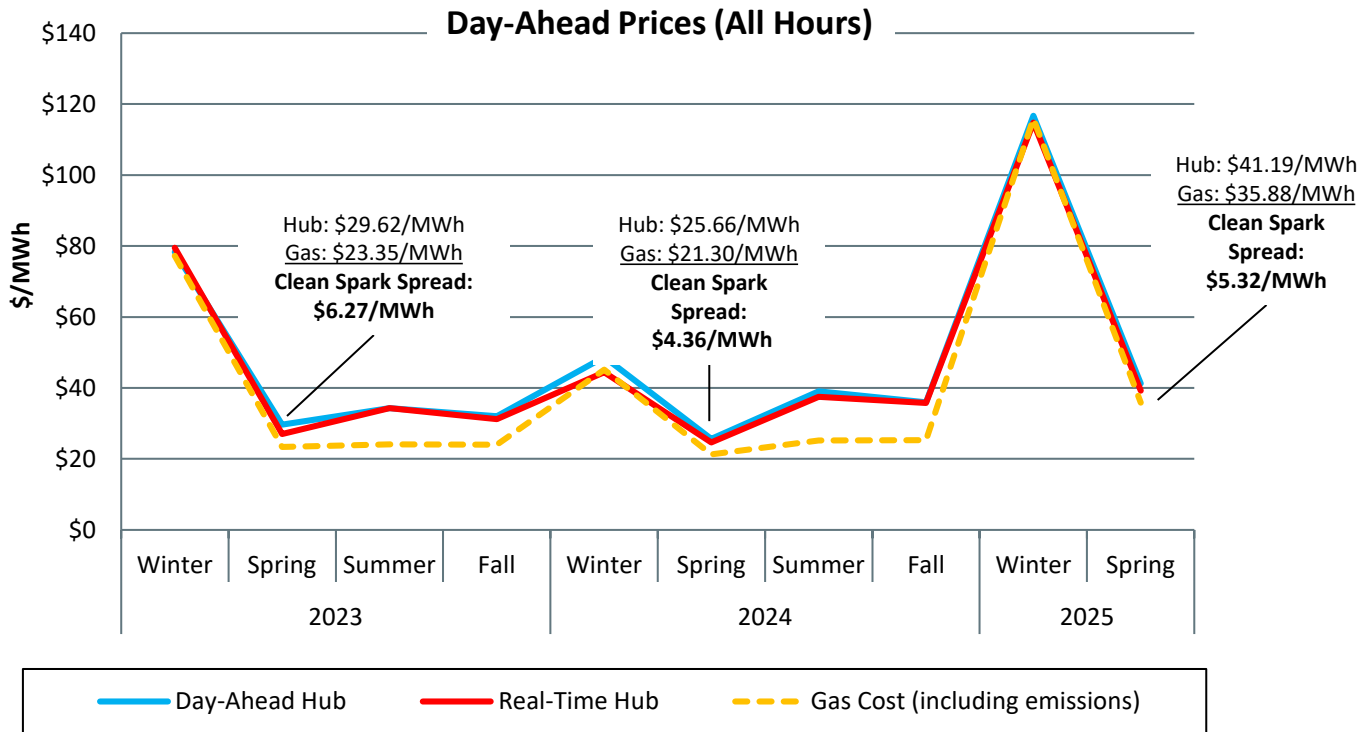


Load Duration Curves



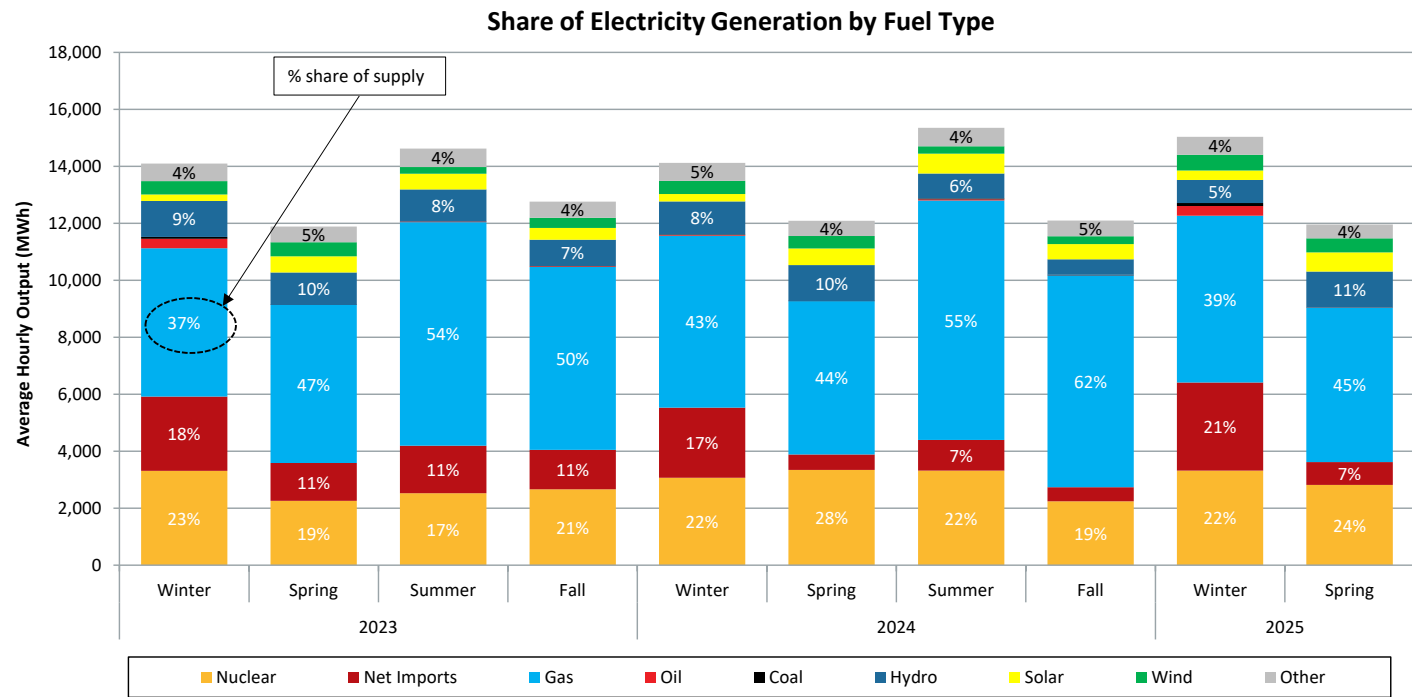
Seasons: Winter: Dec-Feb **Spring: Mar-May** Summer: Jun-Aug Fall: Sep-Nov

Higher gas prices drove higher energy prices; more net imports and lower loads put some downward pressure on LMPs



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Decrease in nuclear generation from Spring 2024 due to generator outages; increase in net imports

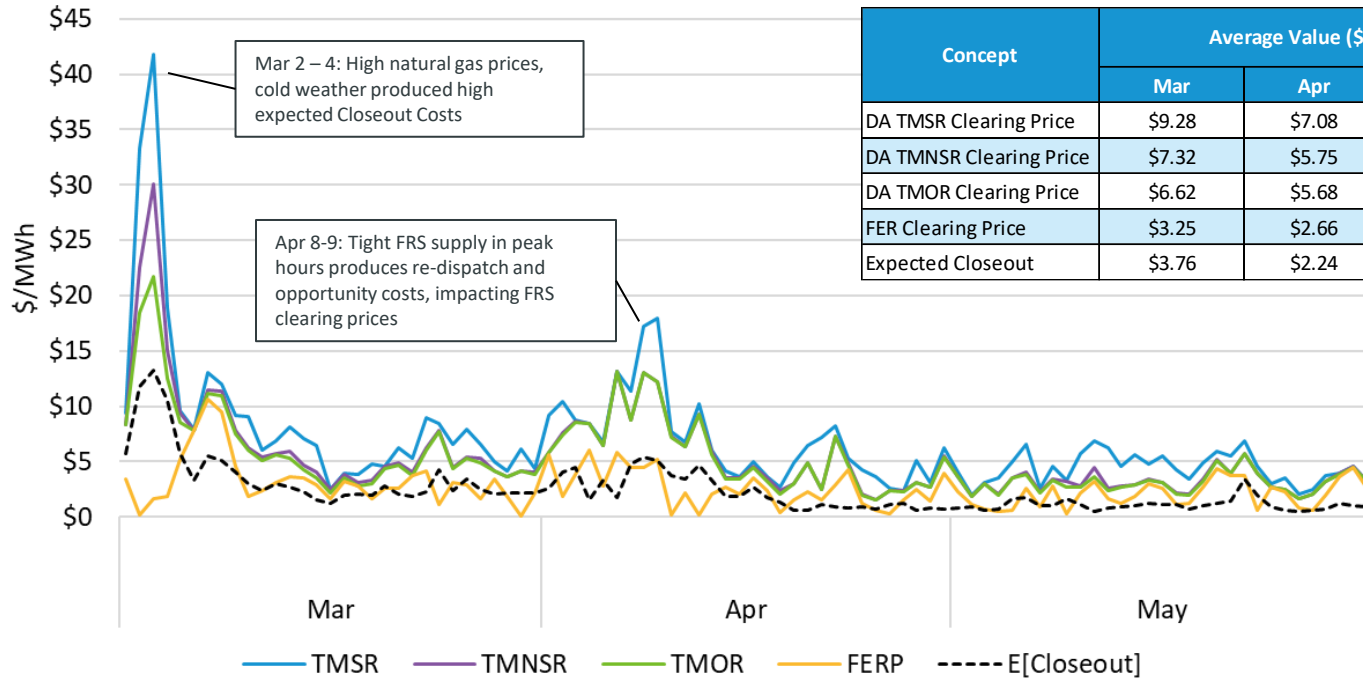


Note: the “Other” category includes energy storage, landfill gas, methane, refuse, steam, and wood

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DA A/S Clearing Prices

Daily Average FRS and Forecast Energy Requirement Prices



Concept	Average Value (\$/MWh)		
	Mar	Apr	May
DA TMSR Clearing Price	\$9.28	\$7.08	\$4.38
DA TMNSR Clearing Price	\$7.32	\$5.75	\$3.20
DA TMOR Clearing Price	\$6.62	\$5.68	\$3.10
FER Clearing Price	\$3.25	\$2.66	\$2.06
Expected Closeout	\$3.76	\$2.24	\$1.10

Explanation:

- TMSR: 10-min spin
- TMNSR: 10-min non-spin
- TMOR: 30-min non-spin
- FER: Forecasted Energy Requirement (Load Forecast)

DA A/S Settlement Outcome Summary

Concept	Mar	Apr	May	Total	% of Total
TMSR (net)	\$1.8	\$1.3	\$0.6	\$3.7	4%
TMNSR (net)	\$3.0	\$2.6	\$0.6	\$6.3	7%
TMOR (net)	\$1.5	\$1.1	\$0.3	\$2.9	3%
EIR (net)	-\$0.1	\$0.2	\$0.1	\$0.2	0%
FER	\$33	\$24	\$18	\$74	85%
Total	\$39	\$29	\$19	\$88	100%
Total E&AS Costs*	\$534	\$409	\$328	\$1,272	
% Total E&AS Cost	7%	7%	6%	7%	

Explanation:

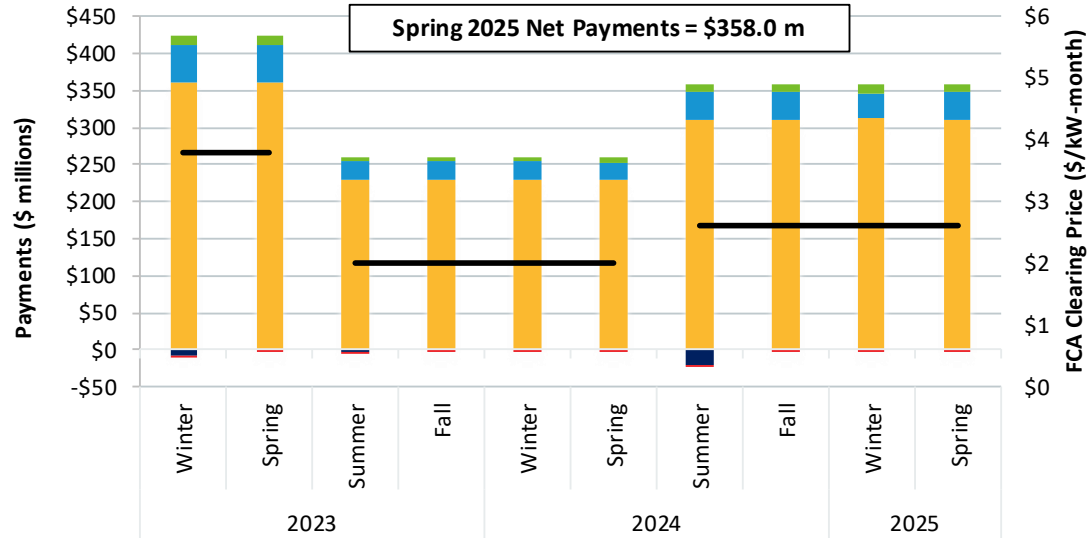
Net Cost/Settlement = Credits based on the clearing prices and volumes for each product *minus* Closeout Costs

*Total E&AS Cost includes DA & RT energy, reserves, regulation, and uplift; All values in \$millions

- DA A/S costs have come down month-over-month, following downward trend in clearing prices (which in turn are driven by declining gas prices and load levels)
- FER costs are the largest share of DA A/S-related costs
 - FER Credits are paid to all DA cleared energy awards to physical supply resources, as they contribute to satisfying the load forecast

Fourth quarter of FCA15; higher clearing prices

FCA 15 prices: \$2.61/kW-month in rest of pool; was 30% higher than the previous year



Generation (LA)

Imports (LA)

Failure-to-Cover Charges (LA)

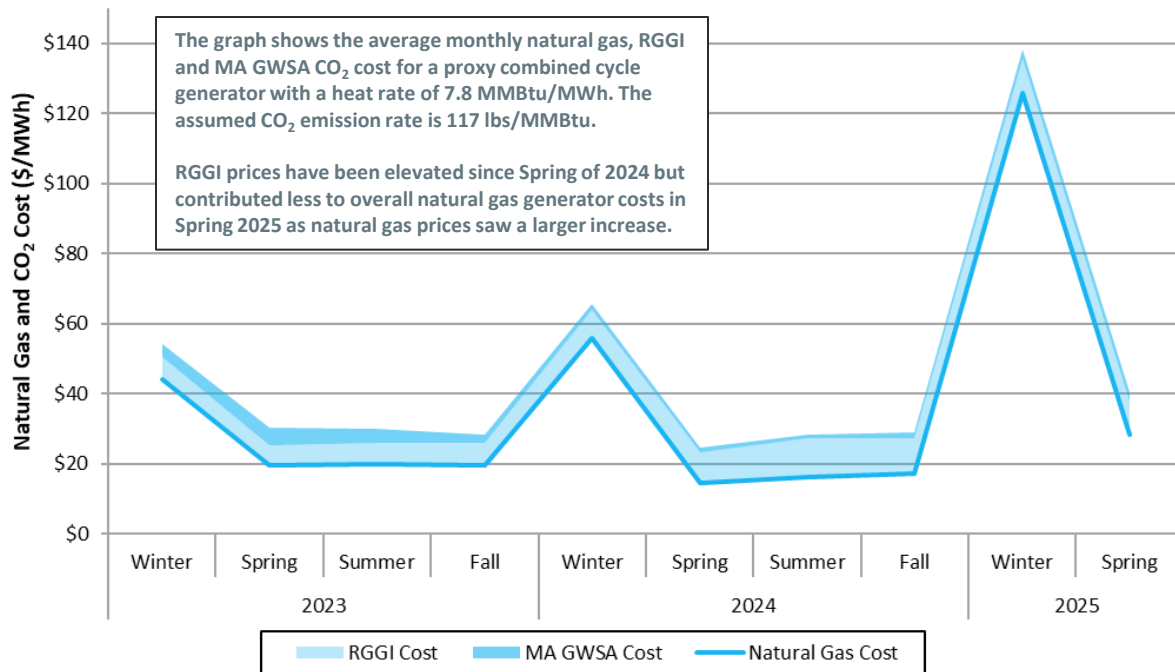
Demand Response (LA)

PfP Adjustments (LA)

FCA Rest-of-Pool Clearing Price (RA)

Seasons: Winter: Dec-Feb Spring: Mar-May Summer: Jun-Aug Fall: Sep-Nov

RGGI and MA GWSA price increases drive higher CO₂ adders but a reduced overall cost share



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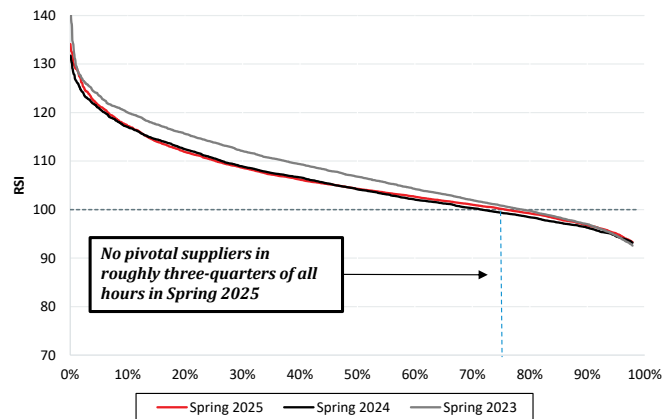
Energy Market Competitiveness

- At least one pivotal supplier present in the real-time market for 25% of 5-minute intervals in Spring 2025 (vs 29% the previous spring)
- Presence of structural market power slightly lower than that of Spring 2024; lower avg. reserve requirement due to more net imports and lower loads
- The residual supply index for the real-time market in Spring 2024 was 105.7, indicating that on average, the ISO could meet load and the reserve requirement without energy and reserves from the largest supplier

Residual Supply Index and Intervals w/Pivotal Suppliers (RT)

Quarter	RSI	% of Intervals With At Least 1 Pivotal Supplier
Winter 2023	105.2	20%
Spring 2023	107.7	22%
Summer 2023	103.8	34%
Fall 2023	98.9	60%
Winter 2024	101.7	45%
Spring 2024	105.5	29%
Summer 2024	104.0	34%
Fall 2024	104.7	31%
Winter 2025	101.3	47%
Spring 2025	105.7	25%

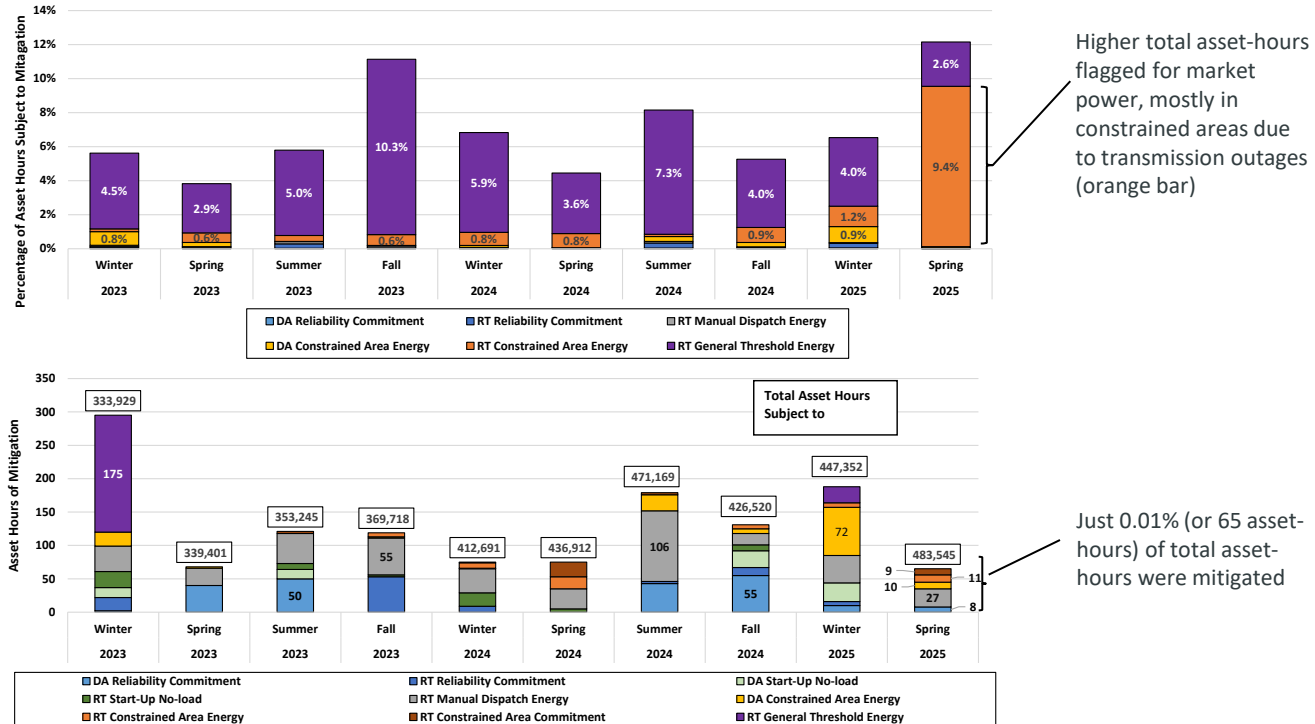
System-Wide Residual Supply Index Duration Curves



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Market Power Mitigation in the Energy Market

- In general, mitigation occurs very infrequently relative to the structural test failures



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Questions

