Attachment #8.3.3
Return to Agenda

New York ISO
Independent System Operator

Winter 2025-2026 Cold Weather Operations

Aaron Markham

VICE PRESIDENT OPERATIONS, New York ISO

NYSRC EC

April 10, 2026, WebEx

Key Observations from Winter 2025/2026

- Average temperatures were well below normal for much of the 2025/2026 Winter season, with a long duration cold stretch occurring from January 23rd to February 9th
- During the cold stretch, natural gas index prices for the pipelines serving NY generation were in the $50- $250/MMBtu range, with reports of spot quotes in excess of $300/MMBtu
- We estimate that liquid fuel provided about ~2 Million MWh while wind/solar provided ~500,000 MWh of energy during the late January through early February cold period
- Operational flow orders (OFOs) and natural gas supply limitations resulted in generation being forced out of service due to fuel restrictions
- Supplemental Resource Evaluation (SRE) commitments were required shortly after Day-Ahead Market (DAM) post during the cold stretch due to limited flexibility on the gas system
- Estimated supply mix for the peak hour (2/7/2026 hour beginning (HB) 18): 28% oil, 26% natural gas, 16% hydro, 14% nuclear, 10% imports, 6% wind, 1% other renewables

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Peak Loads

- NYCA all-time Winter electric peak load was 25,738 MW on January 7, 2014
- NYCA peak forecasts for Winter 2025/2026: 24,200 MW (baseline) and 25,239 MW (90th percentile)
- Winter 2025/2026 peak (to date) was 24,317 MW on Saturday, February 7, 2026 (HB 18) prior to any adjustments for demand response reductions
  - Estimated demand of 24,717 MW when accounting for Special Case Resource/Emergency Demand Response Program (SCR/EDRP) impact

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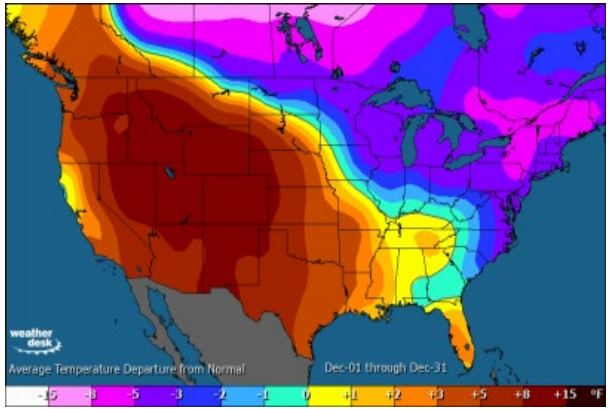
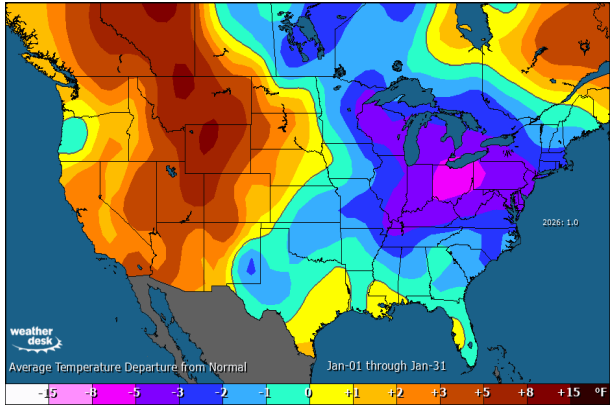
Average Monthly Temperature Departures From 30-Year* Normals

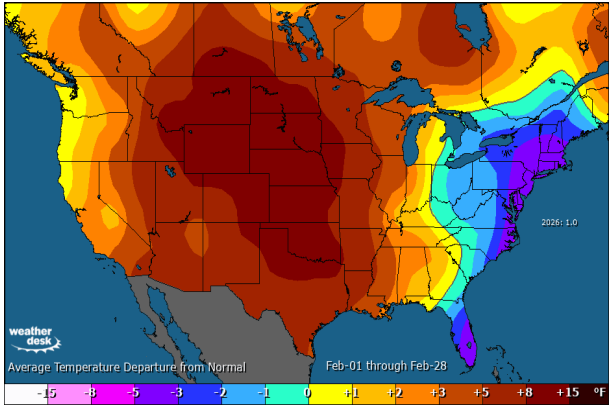
December



January



February



- **The below normal winter temperatures in New York were part of a larger regional trend of similar conditions**
  - December: Northeast, Mid-Atlantic, Great Lakes, and much of southern Canada
  - January: Eastern United States, with largest anomalies in the Mid-Atlantic, Ohio Valley, and Great Lakes
  - February: Northeast and eastern coastal areas

***The National Weather Service 30-year normals are calculated from 1991 to 2020.**

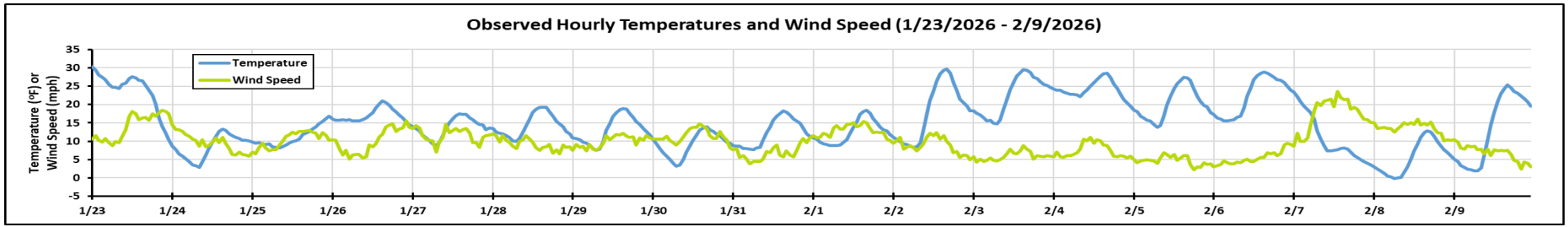
New York ISO

NYCA Temperature and Peak Load Statistics for January 23 – February 9

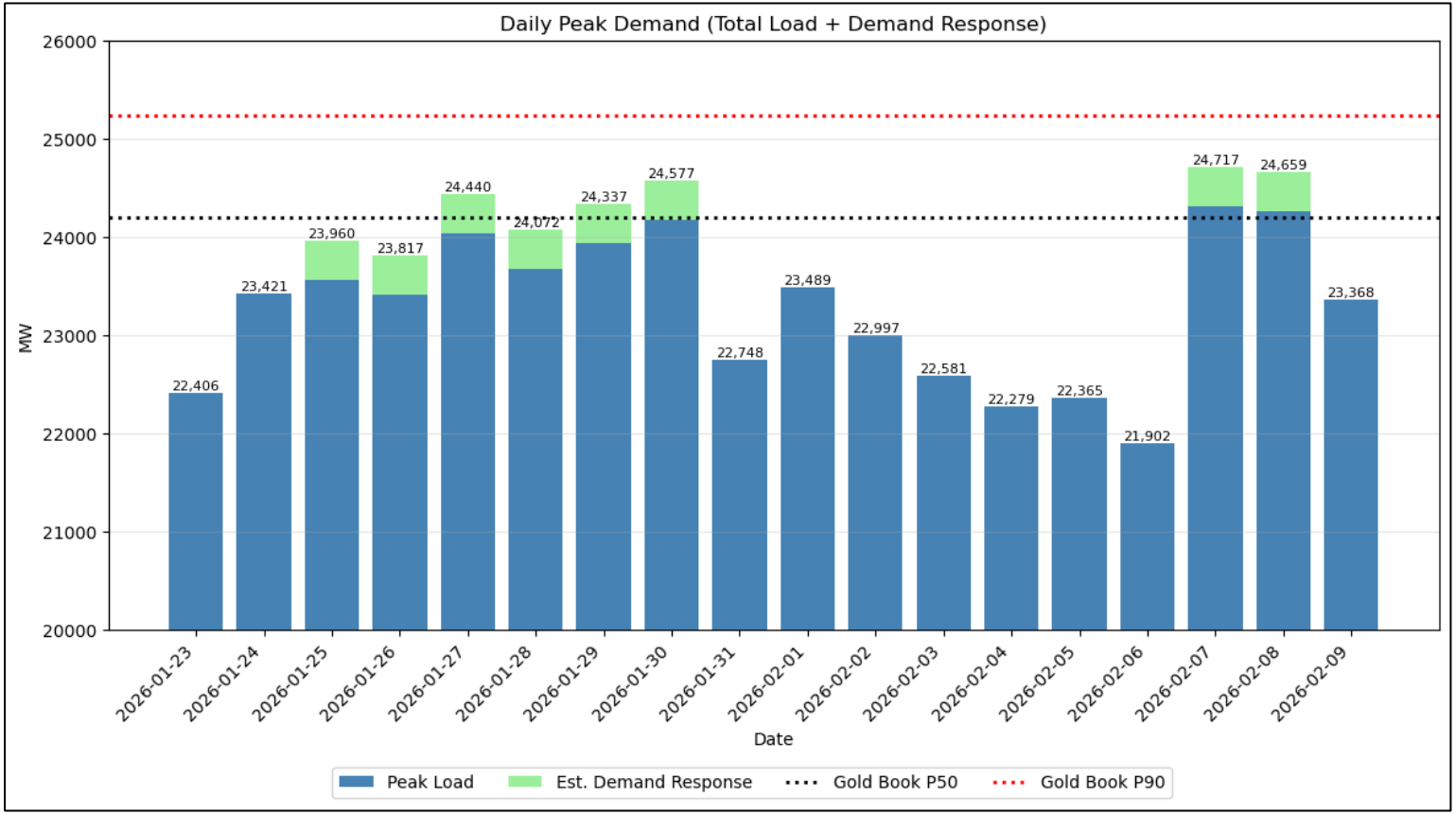
- **Coldest stretch of the 2025/2026 winter season with a daily average temperature of 15.2 ºF.**
  - Central Park was below freezing from 1/24 to 2/1 (9 days); longest consecutive day stretch since December 2017-January 2018 (14 days)
  - Albany was below freezing from 1/23 to 2/10 (19 days); longest consecutive day stretch since January 2011 (21 days)
- **Minimum temperature (-0.1 º F) occurred on Sunday, February 8th and was the lowest of the season**
  - Essentially equal to the Winter 90th percentile design condition (0 ºF)
  - Average season minimum: 3.8 º F (2004-2005 to 2024-2025)
- **Highest peak load (24,317 MW) occurred on Saturday, 2/7, aligning with the lowest HB18 temperature (6.1 ºF) and highest wind speed (19.3 mph) during the period**
  - SCR/EDRP was called, which reduced the measured peak load by an estimated 400 MW

Date	DOW	AM Low Temp	PM High Temp	HB18 Temp	Average Temp	HB18 Wind Speed	Peak Load (MW)
1/23/2026	Fri	24.4	27.6	22.4	23.8	17.5	22,406
1/24/2026	Sat	2.8	13.3	11.6	8.5	6.4	23,421
1/25/2026	Sun	8.2	16.8	13.4	11.1	12.6	23,560*
1/26/2026	Mon	15.5	21.0	18.8	17.0	14.7	23,417*
1/27/2026	Tue	8.9	17.5	15.9	13.7	9.6	24,040*
1/28/2026	Wed	10.0	19.3	16.8	14.3	6.7	23,672*
1/29/2026	Thu	7.5	18.9	16.5	13.1	11.2	23,937*
1/30/2026	**Fri**	**3.3**	**13.9**	**12.7**	**9.2**	**10.7**	**24,177***
1/31/2026	Sat	7.8	18.2	16.0	12.4	5.7	22,748
2/1/2026	Sun	8.7	18.5	16.2	12.5	12.4	23,489
2/2/2026	Mon	8.3	29.6	26.1	18.0	6.9	22,997
2/3/2026	Tue	14.8	29.4	27.5	22.4	5.1	22,581
2/4/2026	Wed	22.2	28.6	25.6	24.2	5.9	22,279
2/5/2026	Thu	13.8	27.4	24.2	20.2	2.3	22,365
2/6/2026	Fri	15.6	28.9	27.5	22.4	6.9	21,902
2/7/2026	**Sat**	**7.3**	**8.2**	**6.1**	**10.8**	**19.3**	**24,317***
2/8/2026	**Sun**	**-0.1**	**12.8**	**11.2**	**5.6**	**13.4**	**24,259***
2/9/2026	Mon	1.9	25.3	23.6	13.6	4.8	23,633

*Denotes measured peak loads that were reduced by SCR/EDRP.



Daily Peak Load and Estimated SCR/EDRP Impact



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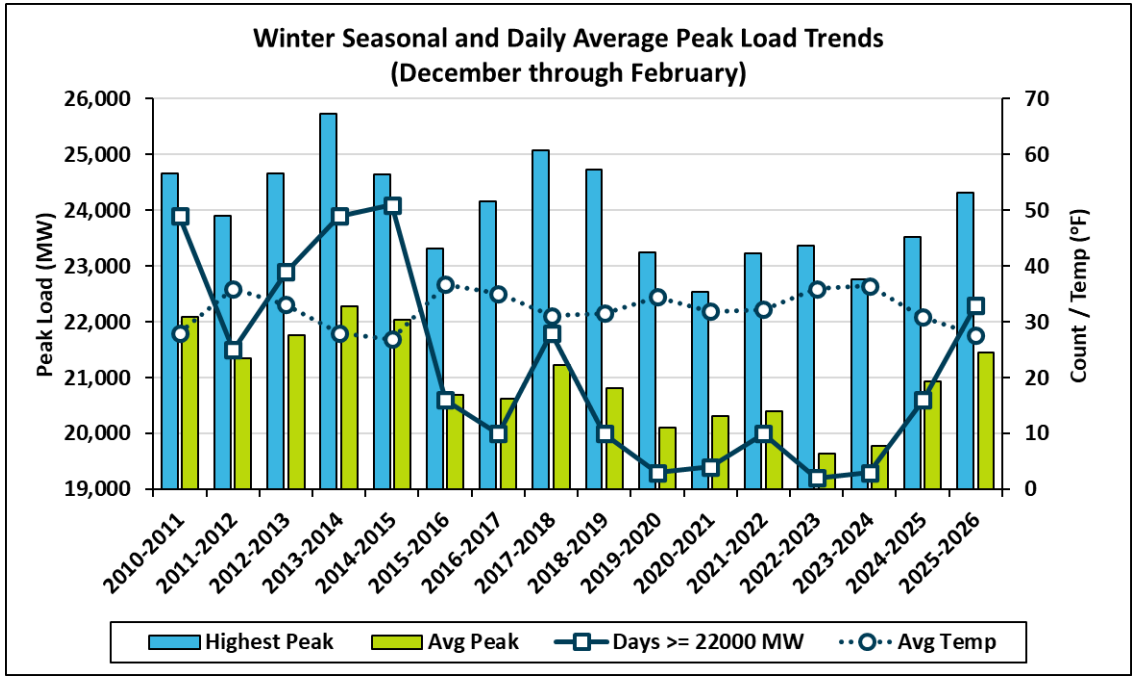
Winter 2025–2026 Daily Peak Loads In Perspective



- **Second lowest Winter average hourly temperature (27.7°F) since 2010-2011**
  - Winter 2014–2015: 26.8°F
- **Winter 2025–2026 peak load (24,317 MW) occurred on February 7th**
  - Highest winter peak since 2018-2019
  - SCR/EDRP reduced the peak by an estimated 400 MW
- **33 daily peak loads in excess of 22,000 MW**
  - Most since Winter 2014–2015
  - SCR/EDRP was activated 8 days
- **Average peak load of 21,449**
  - Highest average peak load since Winter 2014–2015

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Supply Data

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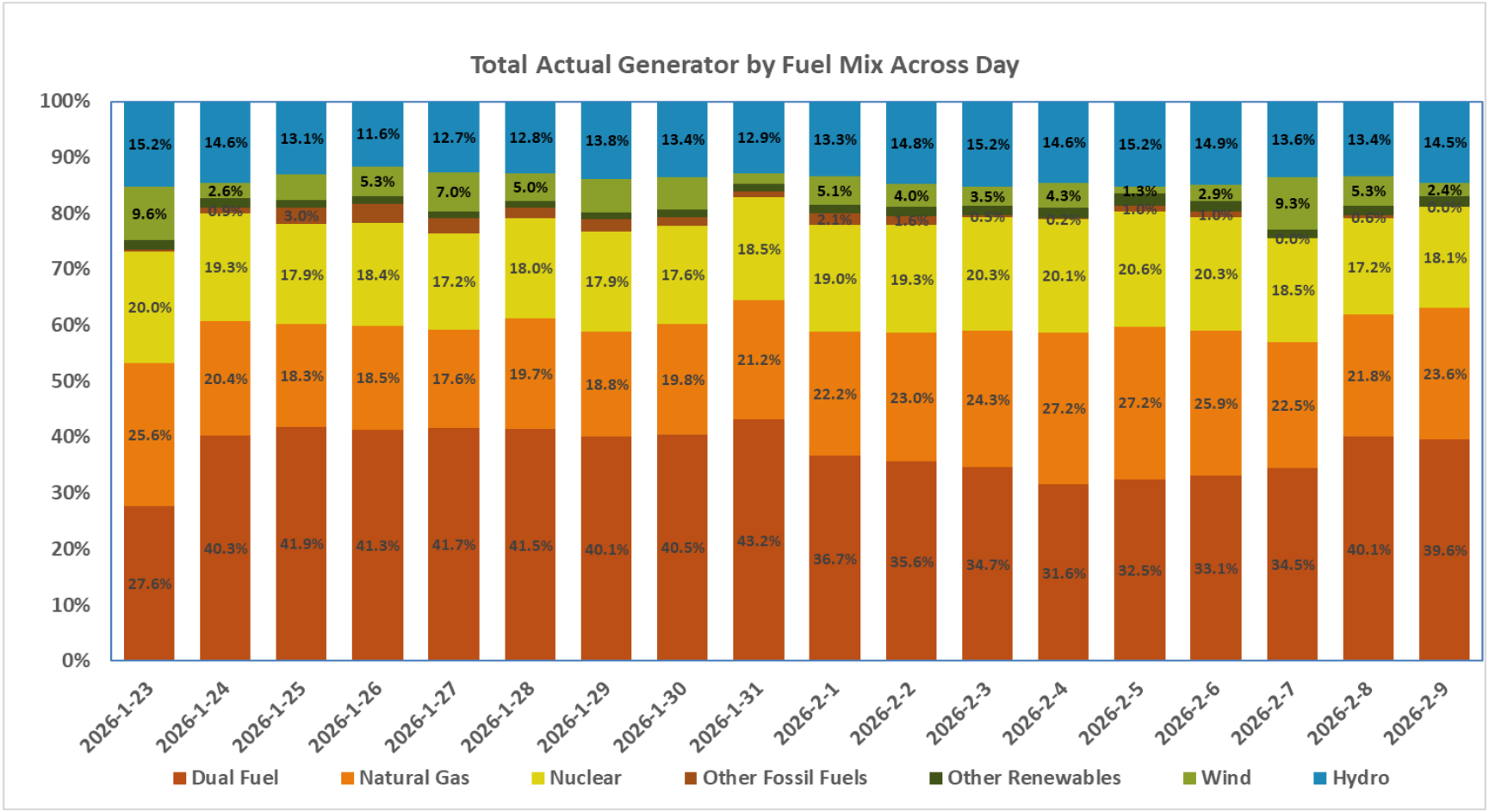

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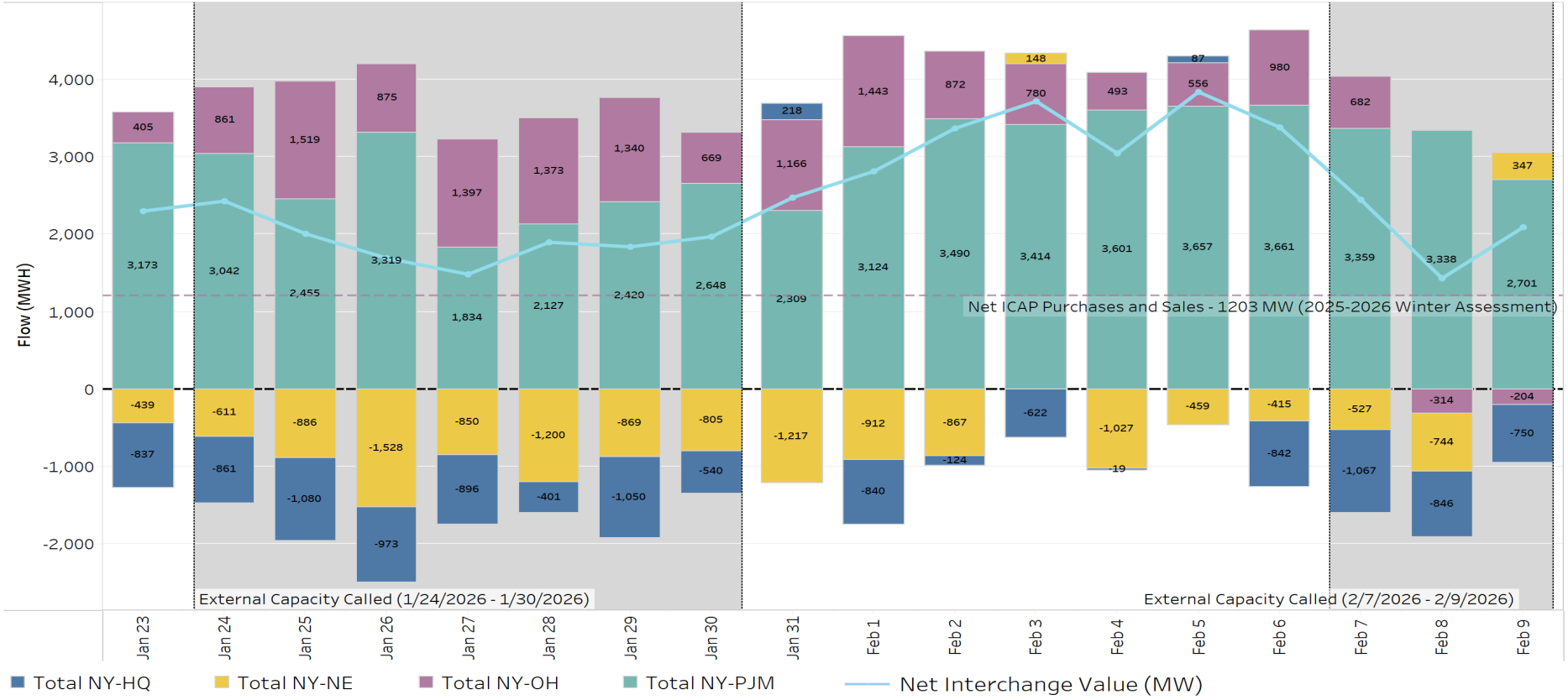
External Proxy Schedules During Peak Load Hour



* NYISO is assessing external capacity performance and potential for penalties (see MST Section 5.12.1.10)

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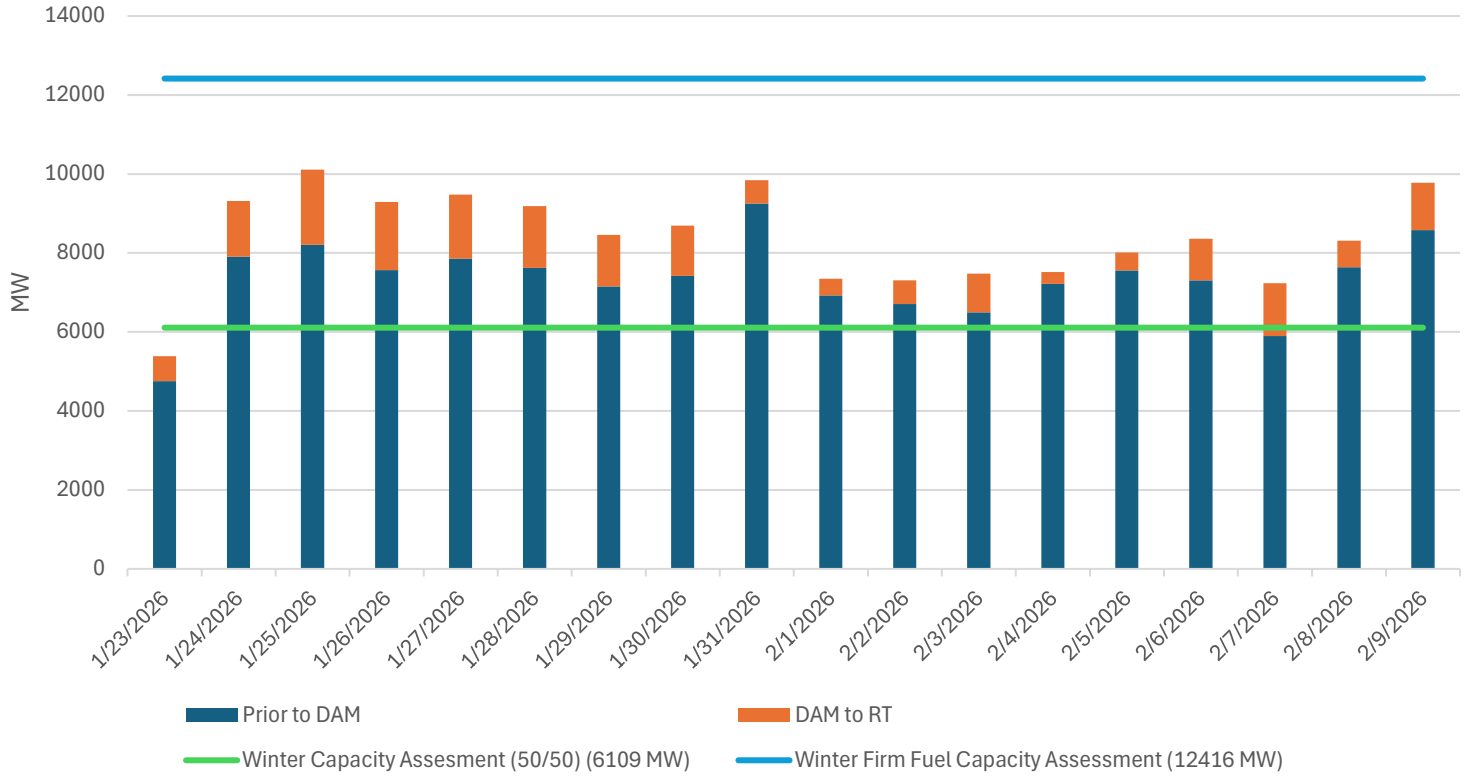
Unavailable Capacity for Peak Load Hour (Jan. 23 - Feb. 9 2026)



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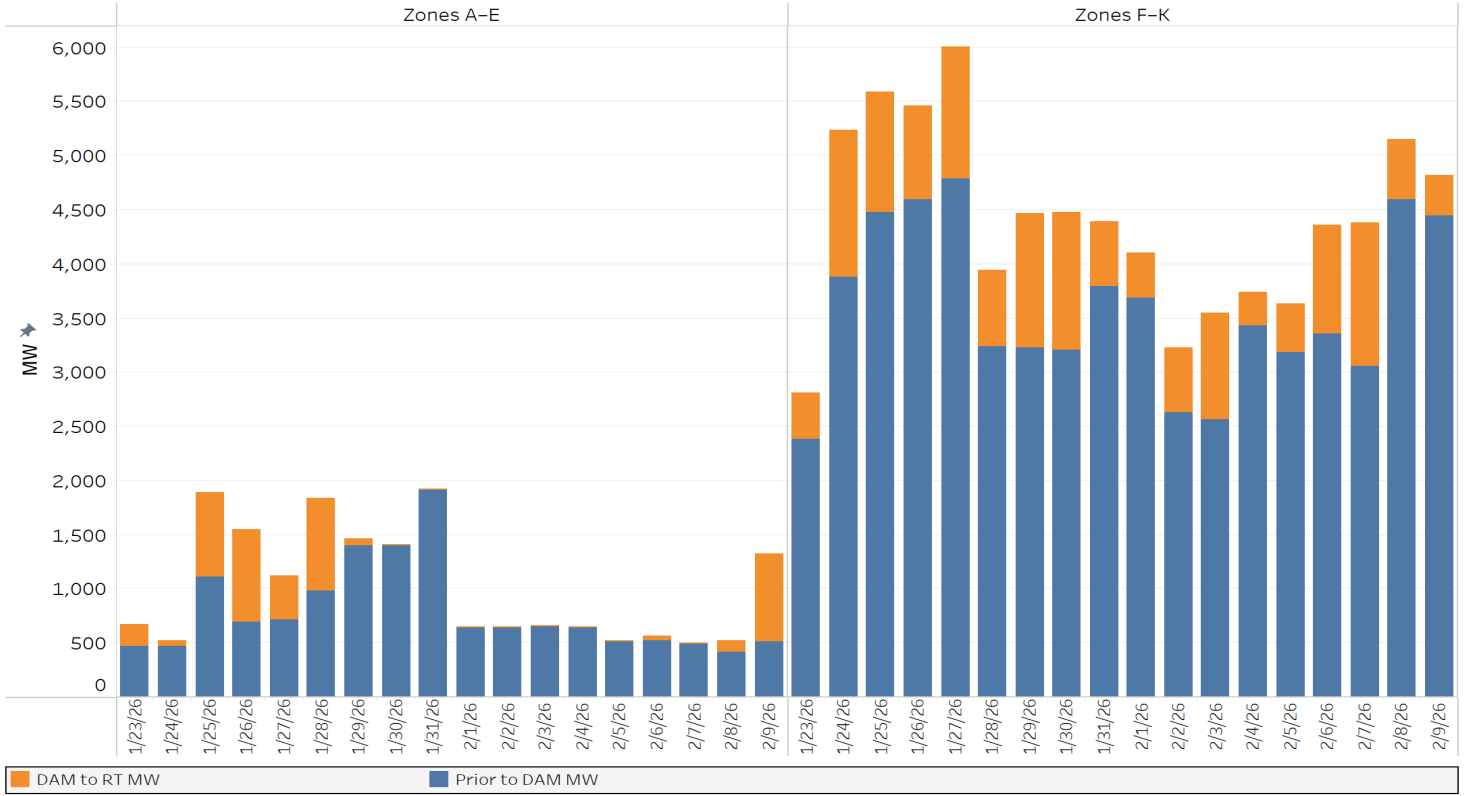
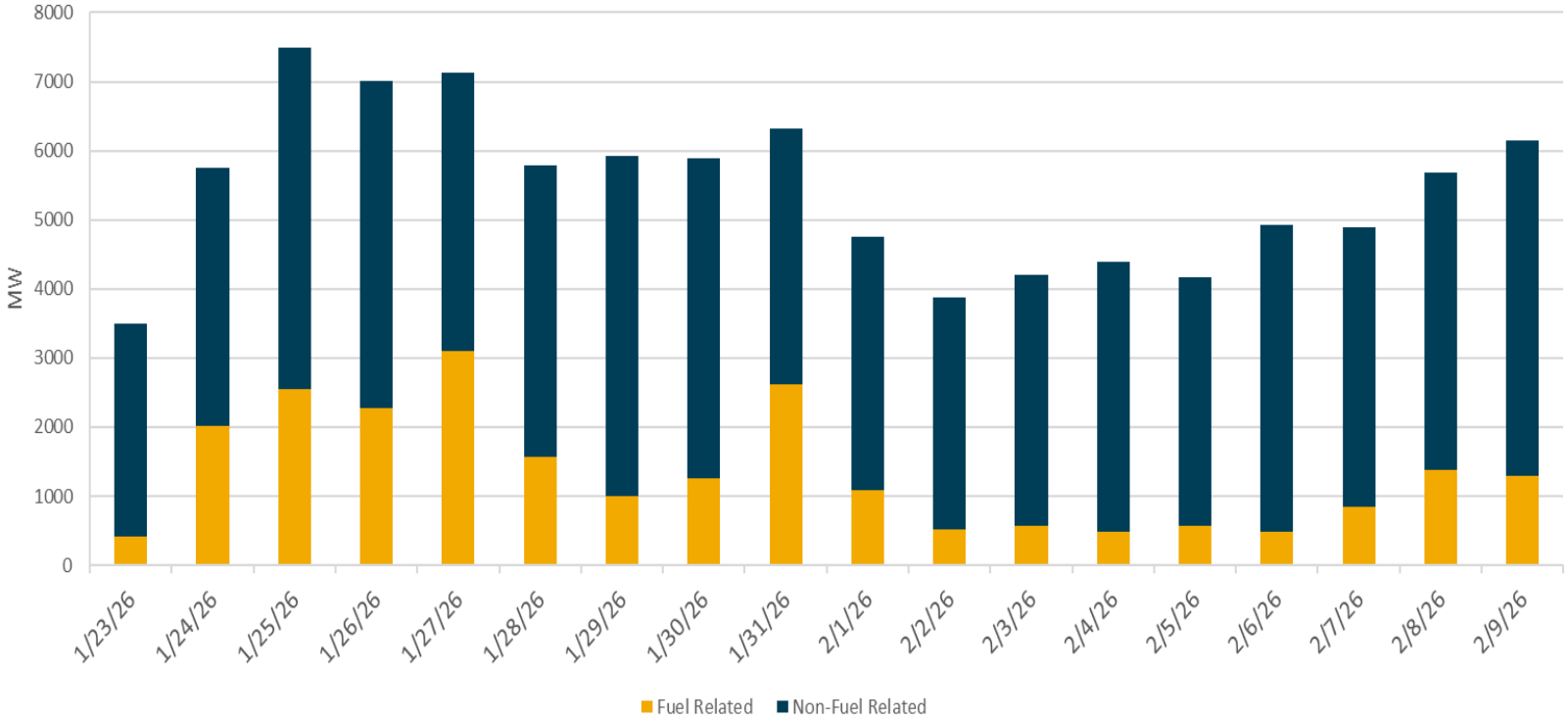
Unavailable Capacity For Peak Load Hour by Aggregated Zones (Excluding SCR/EDRP and Intermittent Resources)



Fuel and Non-Fuel Related Outages during Daily Peak Hour (Excludes SCR/EDRP and Intermittent Resources)



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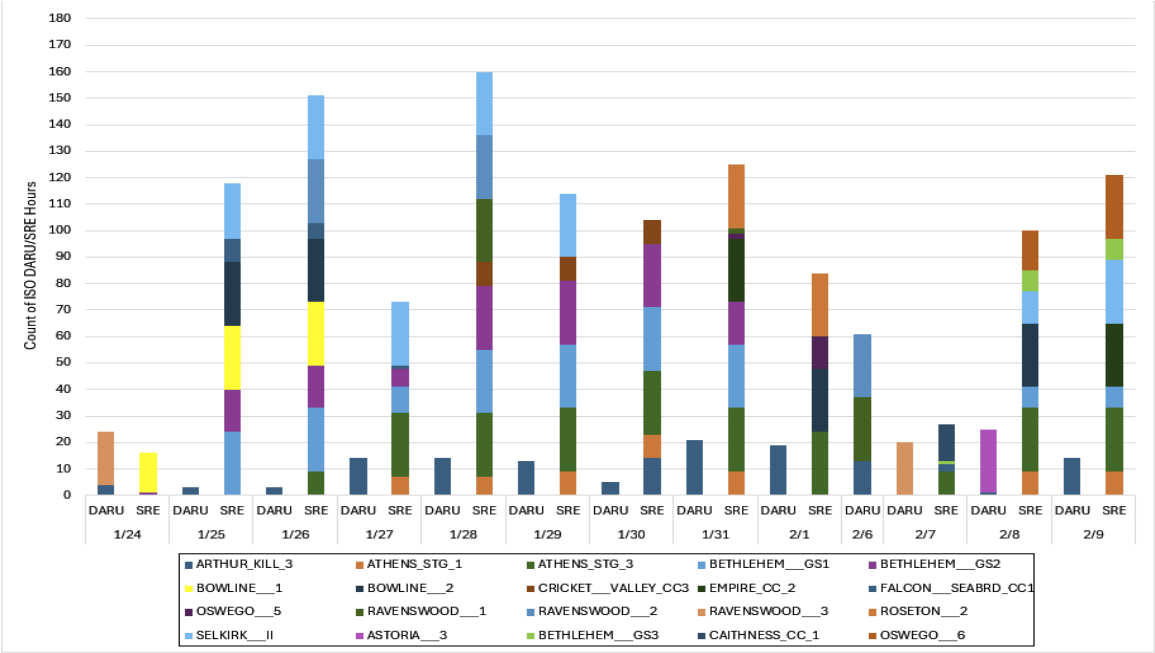
NYISO DARU and SRE



- SREs – NYISO committed additional generation throughout the period via the SRE process for statewide capacity needs and to help manage liquid fuel inventories for the duration of the cold period.
- DARU = Day-Ahead Reliability Unit

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SCR/EDRP Events January 23, 2026 – February 9, 2026

Program	Start Date & Time	End Date & Time	Zone(s)
SCR/EDRP	1/25/2026 15:00	1/25/2026 22:00	A, B, C, D, E, F, G, H, I, J, K
SCR/EDRP	1/26/2026 16:00	1/26/2026 22:00	A, B, C, D, E, F, G, H, I, J, K
SCR/EDRP	1/27/2026 15:00	1/27/2026 22:00	A, B, C, D, E, F, G, H, I, J, K
SCR/EDRP	1/28/2026 15:00	1/28/2026 22:00	A, B, C, D, E, F, G, H, I, J, K
SCR/EDRP	1/29/2026 15:00	1/29/2026 22:00	A, B, C, D, E, F, G, H, I, J, K
SCR/EDRP	1/30/2026 15:00	1/30/2026 22:00	A, B, C, D, E, F, G, H, I, J, K
SCR/EDRP	2/7/2026 15:00	2/7/2026 22:00	A, B, C, D, E, F, G, H, I, J, K
SCR/EDRP	2/8/2026 15:00	2/8/2026 22:00	A, B, C, D, E, F, G, H, I, J, K

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Fuel Inventory/Burn

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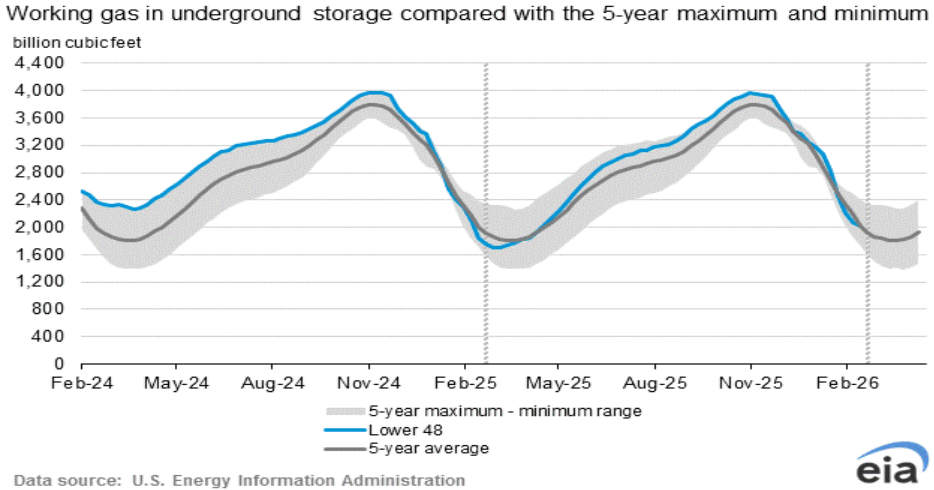
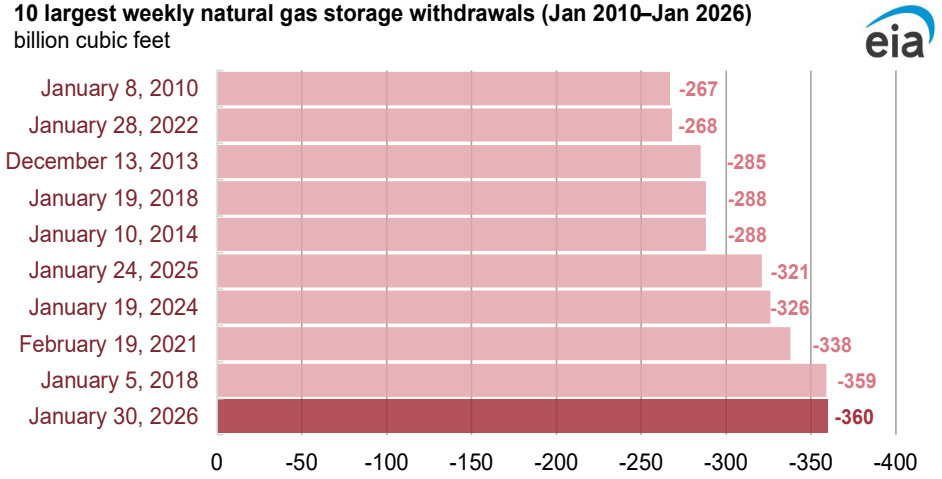
Regional Gas System Conditions

- Strong liquefied natural gas (LNG) injections east of NY likely eased pipeline constraints across the New York System
- National and Regional stocks of working gas in underground storage were heavily drawn upon at times throughout the season including Record natural gas stock withdrawals during week ending January 30, 2026





https://www.iso-ne.com/static-assets/documents/100032/system-and-market-ops-report-feb-2026.pdf

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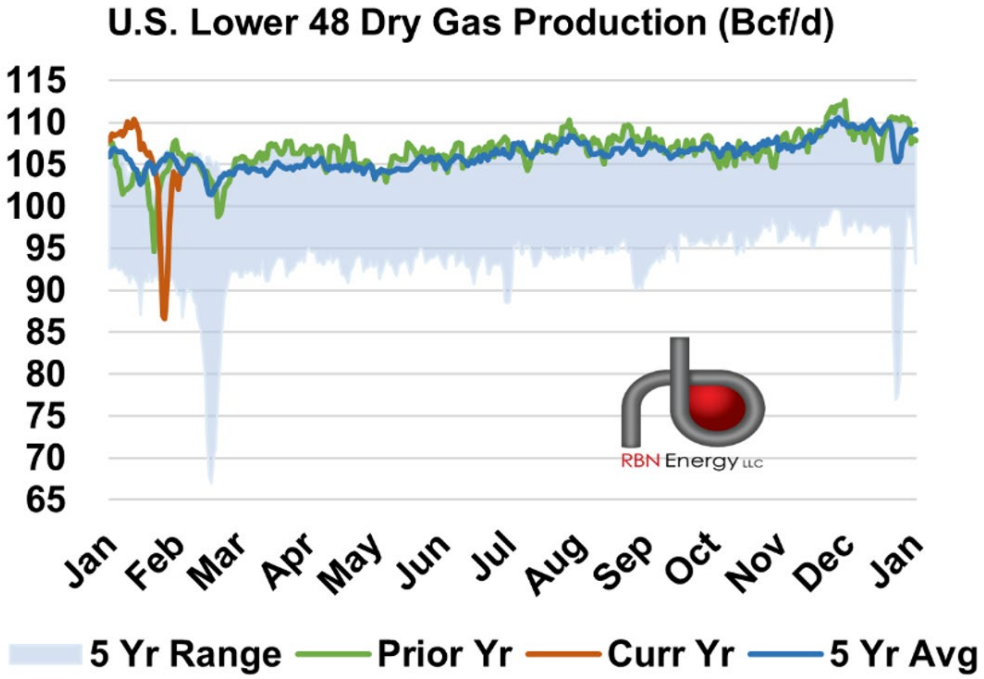
Regional Gas System Conditions (cont.)



- Production declines were significant but less than what was observed during Winter Storms Uri and Elliott.
- Daily gas deliverability—not total storage or annual production—is the binding constraint during cold snaps.

https://rbnenergy.com/daily-posts/blog/lng-exports-data-centers-have-north-american-natural-gas-poised-rapid-growth

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New York Gas System

- Gas pipelines and Gas Local Distribution Companies (LDCs) issued many of the following:
  - Gas Alerts
  - Daily OFOs
  - Hourly OFOs
  - Interruption of transportation services (Interruptible gas customers will not be able to get gas)
- In many cases these notices were issued with enough lead time (before the DAM closes at 5 am the prior day) to properly account for the impacts in the DAM solution
- NY experienced a high number of OFO conditions, including many days not identified as cold weather timeframes in this presentation
- Gas scheduling challenges existed during all 5 of the long holiday weekends during the season and throughout the long duration cold snap
- OFOs and natural gas supply limitations resulted in generation being forced out of service due to fuel restrictions

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Cold Period Conditions (1/23 – 2/9) Fuel

- **Most severe OFOs during the period:**
  - Con Edison Hourly OFOs: 1/24/26, 1/25/26, 1/27/26 through 2/3/26, 2/5/26, 2/6/26, 2/8/26 through 2/10/26
  - Con Edison Interruption of service: 1/27/26 through 1/31/26, 2/8/26 and 2/9/26 from 04:00 – 10:00 daily
  - National Grid Downstate Tier 1 and 2 Interruptions: 1/23/26 - 2/2/26 and 2/7/26 - 2/10/26
  - National Grid Upstate East Gate Interruptions: 1/23/26 10:00 – 1/26/26 10:00, 1/27/26 10:00 – 2/1/26 10:00, and 2/7/26 10:00 – 2/10/26 10:00
- **From 1/20/2026 – 2/9/2026 and estimated 2 million MWh were produced from liquid fuel equaling around 135 million gallons of liquid fuel**
  - Approximately 600,000 MWh were burned from initial inventories with the remainder from resupply
  - Dating back to the winter of 2013/2014 only three winters (2013/2014, 2014/2015, and 2017/2018) had liquid fuel burns near 2 million MWh with the rest only having burns of around 50% of this value
- **The NYISO took actions, working in coordination with generators, to manage liquid fuel inventory based on energy assessments to meet load and reserve requirements for the duration of the event.**

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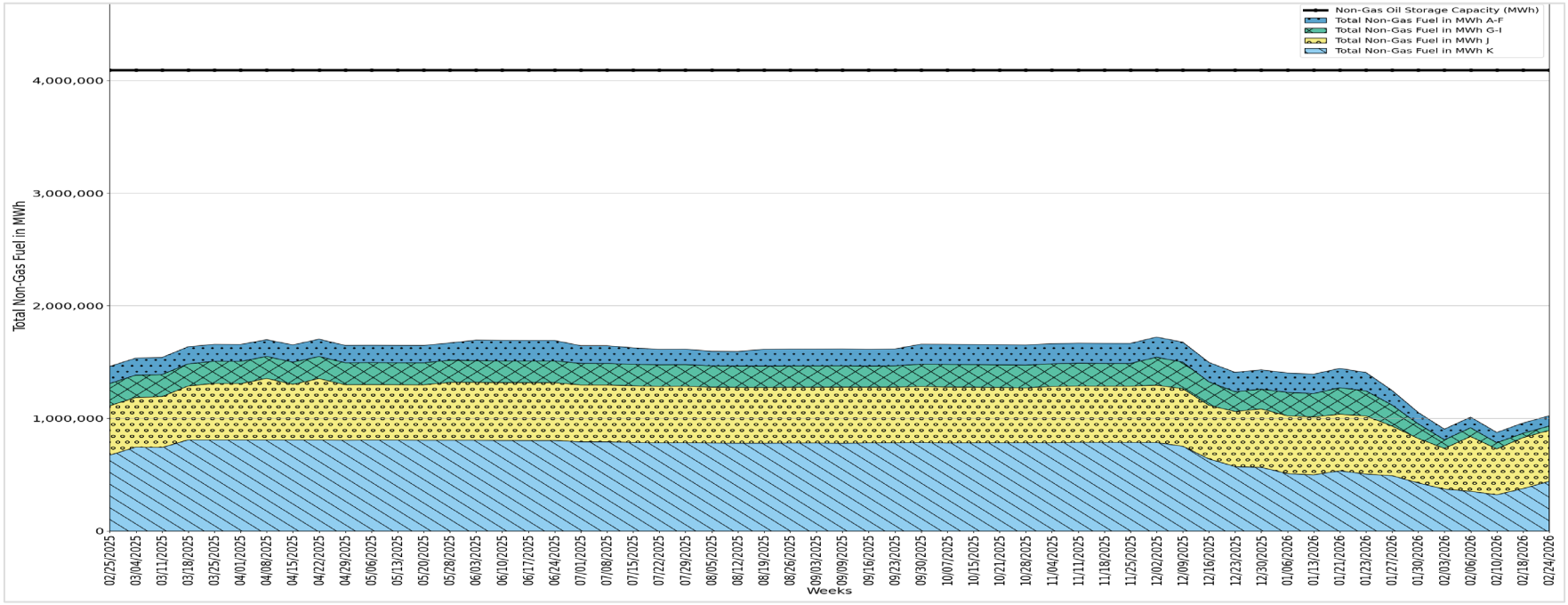
Total Weekly Oil Inventory in MWH from 2/25/2025 to 2/24/2026



- February 9 fuel survey results indicate liquid fuel inventory levels were ~875,000 MWh. This is the lowest since NYISO started formal tracking of fuel inventories in 2016 and a ~45% reduction from start of the cold period.

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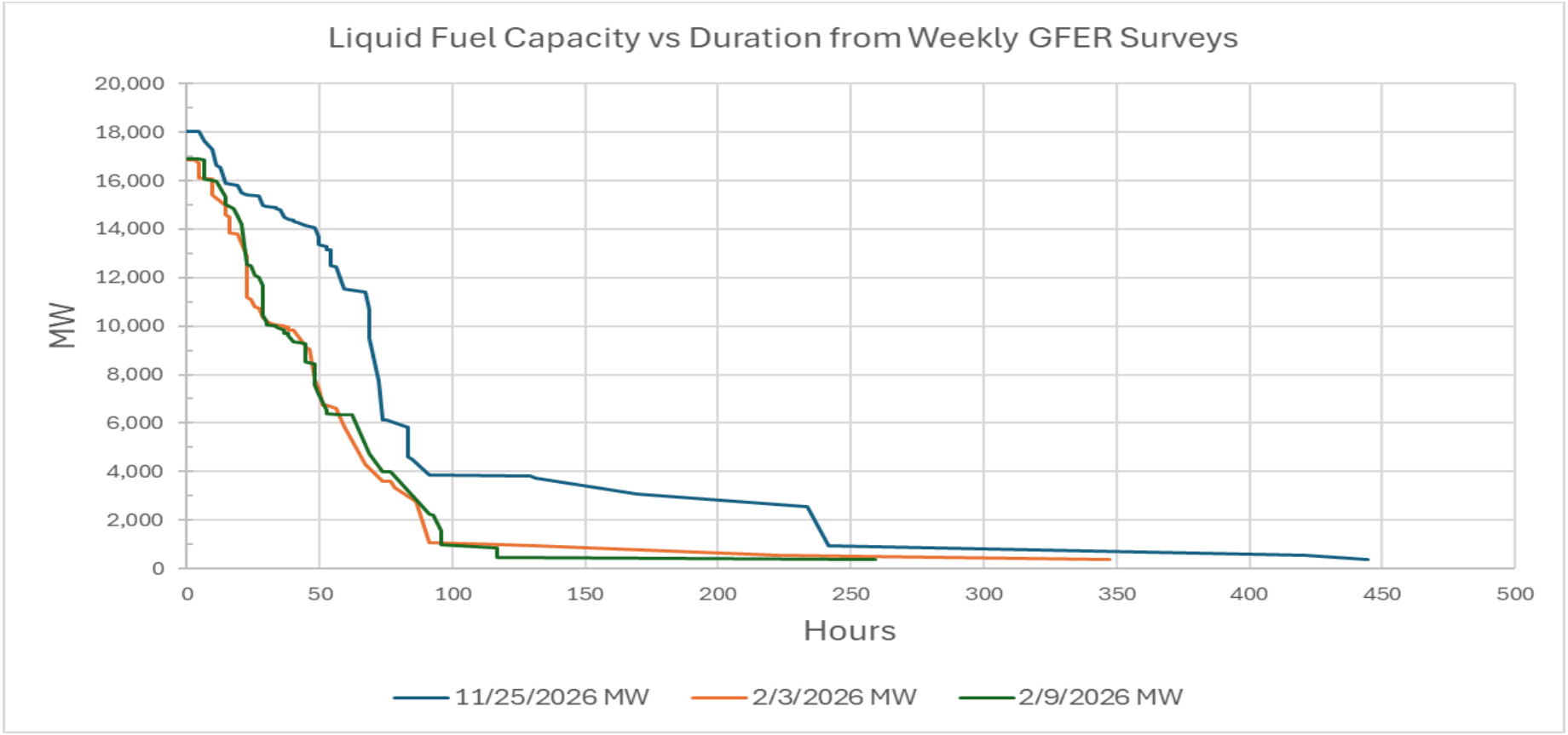

Source: Generator Fuel and Emissions Reporting (GFER) - Link to User's Guide: https://www.nyiso.com/documents/20142/3625950/UG-17-GFER-UG.pdf

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Intermittent Resources Production

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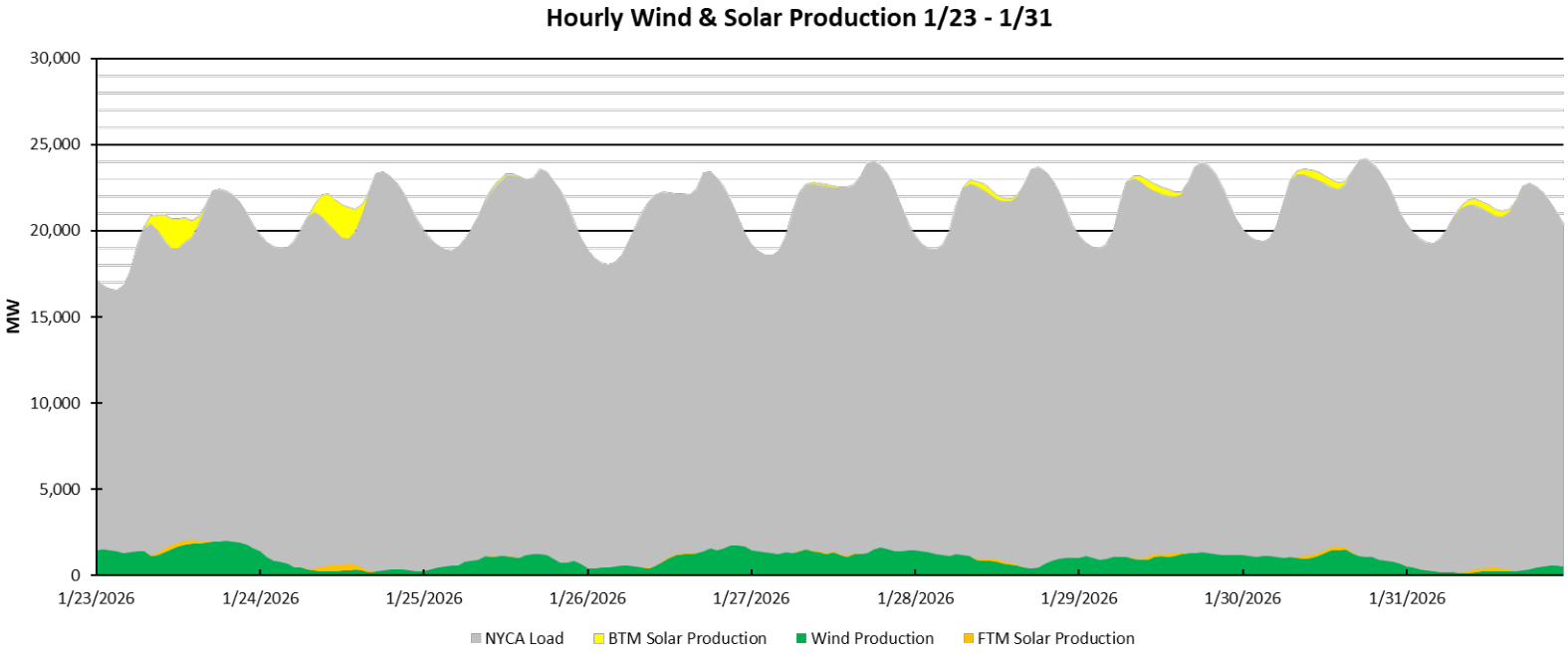
1/23 – 1/31 Renewables vs Load



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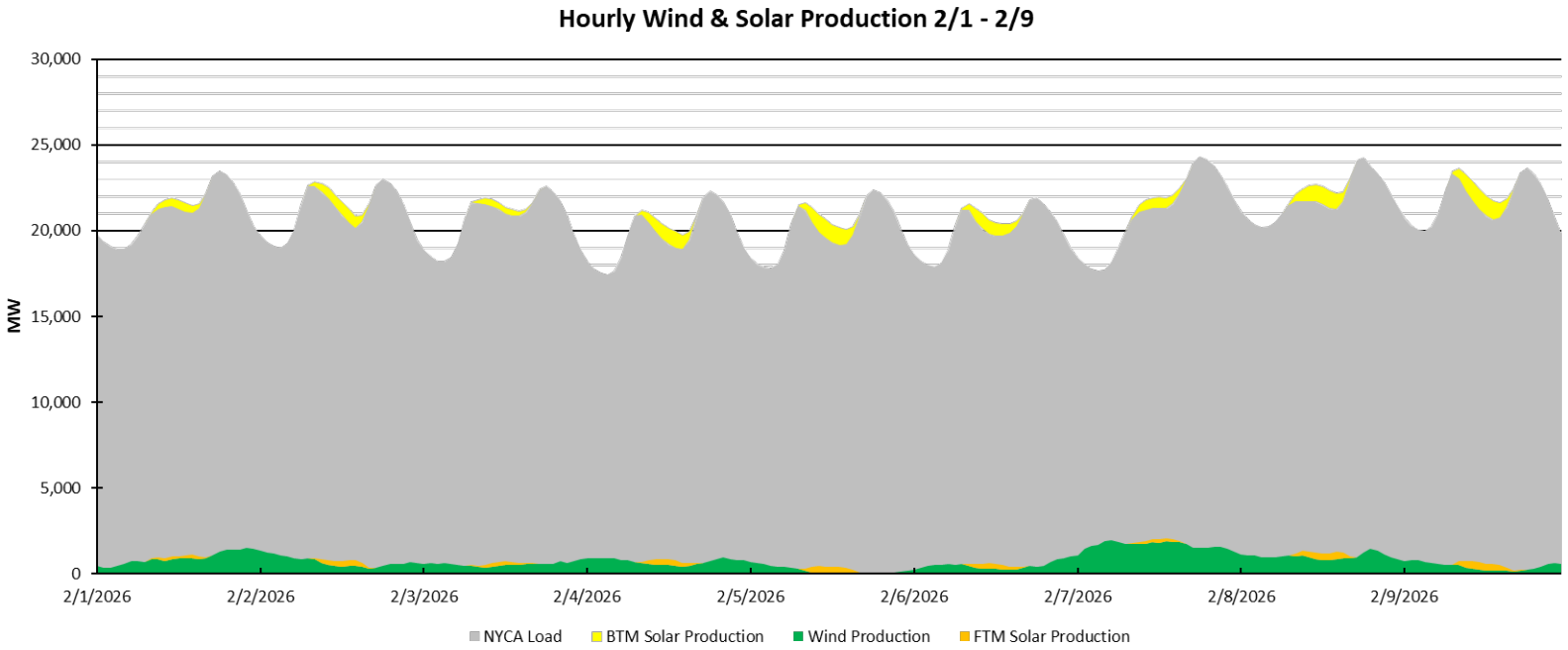
2/1 – 2/9 Renewables vs Load



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Agency Coordination

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Gas-Electric Coordination

- **As referenced on slide 11 of the NYISO Winter 2025-2026 Assessment & Winter Preparedness presentation, a communications protocol is in place with NY state agencies to improve the speed and efficiency of generator requests to state agencies if needed for reliability**
  - Protocol was leveraged multiple times in January and February 2026 and proved effective in facilitating communications between parties
- **Winter Coordination Protocol (NYSDPS, NYSDEC, NYSERDA, NYSDOT, and NYISO)**
  - May be initiated if: a) a generator is low on fuel and demonstrates an inability to procure more, b) generators are experiencing fuel supply or transportation issues and state agency action would assist, or c) weather conditions or forecasts pose risks to fuel availability.
  - The NYISO distributes a fuel availability dashboard if conditions are not normal and initiates a conference call on the business day following distribution of the dashboard. Any party may initiate a conference call at any other time as needed.

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DOE Section 202(c) Waiver

- **Overview**
  - NYISO requested and received a U.S. Department of Energy (DOE) Section 202(c) waiver for the period January 26 - February 2, providing emergency authority, if needed, for designated generators to exceed environmental permit limits to support electric demand under NYISO-declared emergency conditions.
- **Operational Impact**
  - The system was operated reliably throughout the waiver period without exercising the waiver authority.
- **Governance and Coordination**
  - A coordinated process was established to manage the DOE request, notify state agencies, communicate with impacted generators, and provide broader stakeholder notification.
- **Related links**
  - Federal Power Act Section 202(c): NYISO Order No. 202-26-08 | Department of Energy
  - Attachment A - https://www.nyiso.com/documents/20142/1408854/NYISO-Application-Exhibit-A-Order-No-202-26-08-01-27-2026.pdf

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Questions?

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Appendix

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Well Below Normal Winter Temperatures Prevailed

Average Temperatures and Departures from 1991 – 2020 Normals					
Station	December	January	February	Season	Coldest
Islip	34.3°F (-2.8 °F)	29.6°F (-2.3 °F)	27.9 °F (-5.4 °F)	30.7°F (-3.4 °F)	0 °F (1/31)
Central Park	33.8 °F (-5.3 °F)	30.4 °F (-3.3 °F)	31.5 °F (-4.4 °F)	31.9 °F (-4.3 °F)	3 °F (2/8)
Albany	25.7 °F (-4.7 °F)	21.9 °F (-2.5 °F)	22.8 °F (-4.0 °F)	23.5 °F (-3.7 °F)	-9 °F (2/9)
Syracuse	26.2 °F (-4.2 °F)	22.5°F (-1.6 °F)	23.6 °F (-1.9 °F)	24.1 °F (-2.6 °F)	-9 °F (1/24, 2/8, 2/9)
Buffalo	27.4 °F (-4.0 °F)	22.4 °F (-3.1 °F)	23.8 °F (-2.6 °F)	24.6 °F (-3.3 °F)	-9 °F (2/9)
Plattsburgh	20.9 °F (-5.5 °F)	17.5 °F (-1.6 °F)	17.0 °F (-4.0 °F)	18.5 °F (-3.7 °F)	-12 °F (12/9, 2/2)

Data Source: NWS Local Offices (www.weather.gov)

Legend: Below Normal | Above Normal

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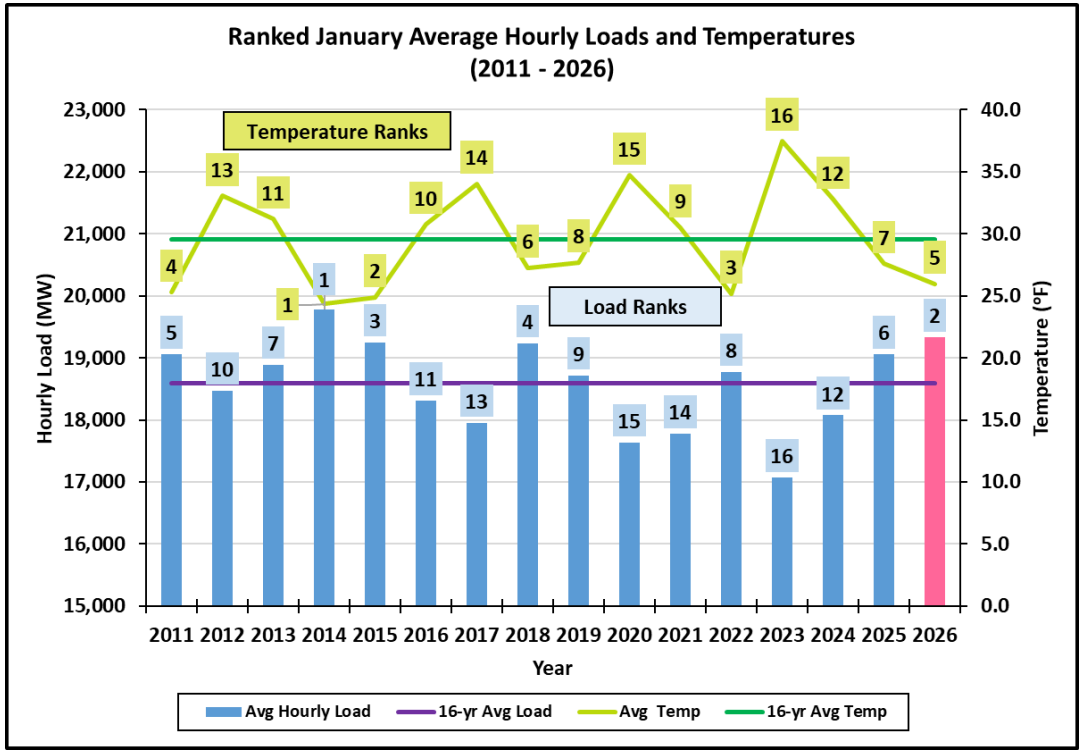
January 2026 Daily Peak Loads In Perspective



- **Average hourly temperature: 26.0 °F**
  - Fifth lowest average temperature since 2011
  - Below 16-year average by 3.5 °F
- **Average hourly load: 19,335 MW**
  - Second highest since 2011 (highest since 2014)
  - Nearly 750 MW higher than 16-year average
- **Peak hourly load: 24,177 MW (Fri. 1/30)**
  - Highest Winter 2025–2026 weekday peak
  - Third highest Winter 2025–2026 peak (2/7, 2/8)
  - SCR/EDRP reduced load by an estimated 400 MW
- **14 days above 22,000 MW in January 2026**
  - 2011–2026 Average: 10.3 January days above 22,000 MW
- **1/27 and 1/30 were the first winter peak days above 24,000 MW since 2019**

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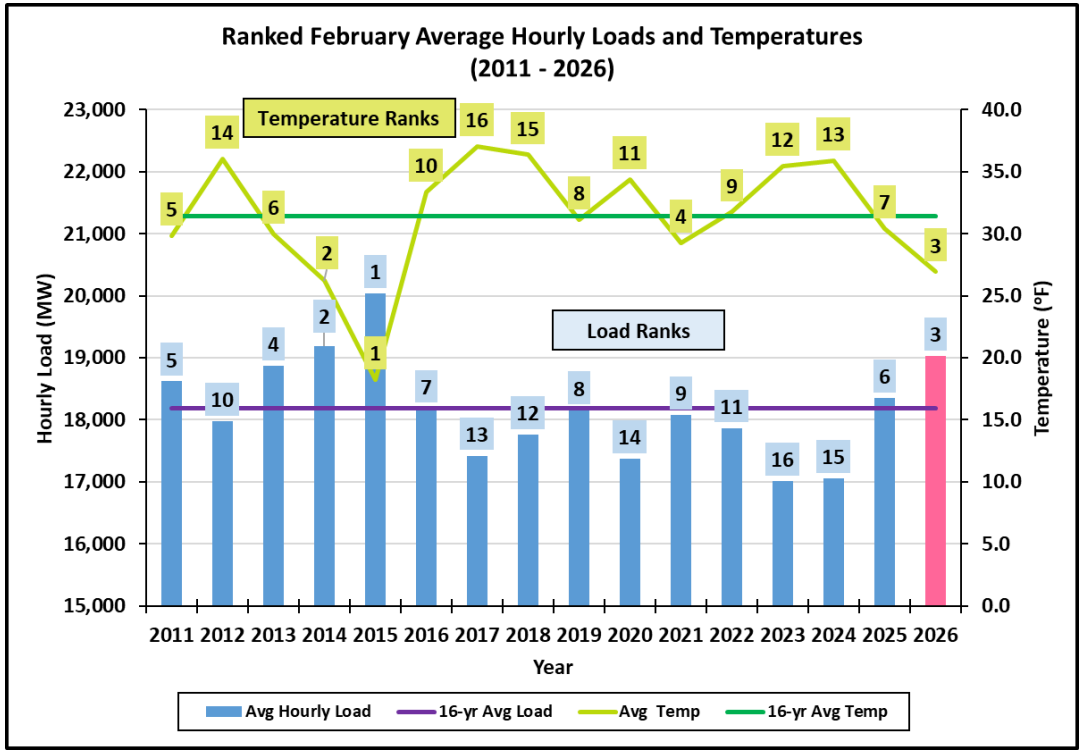
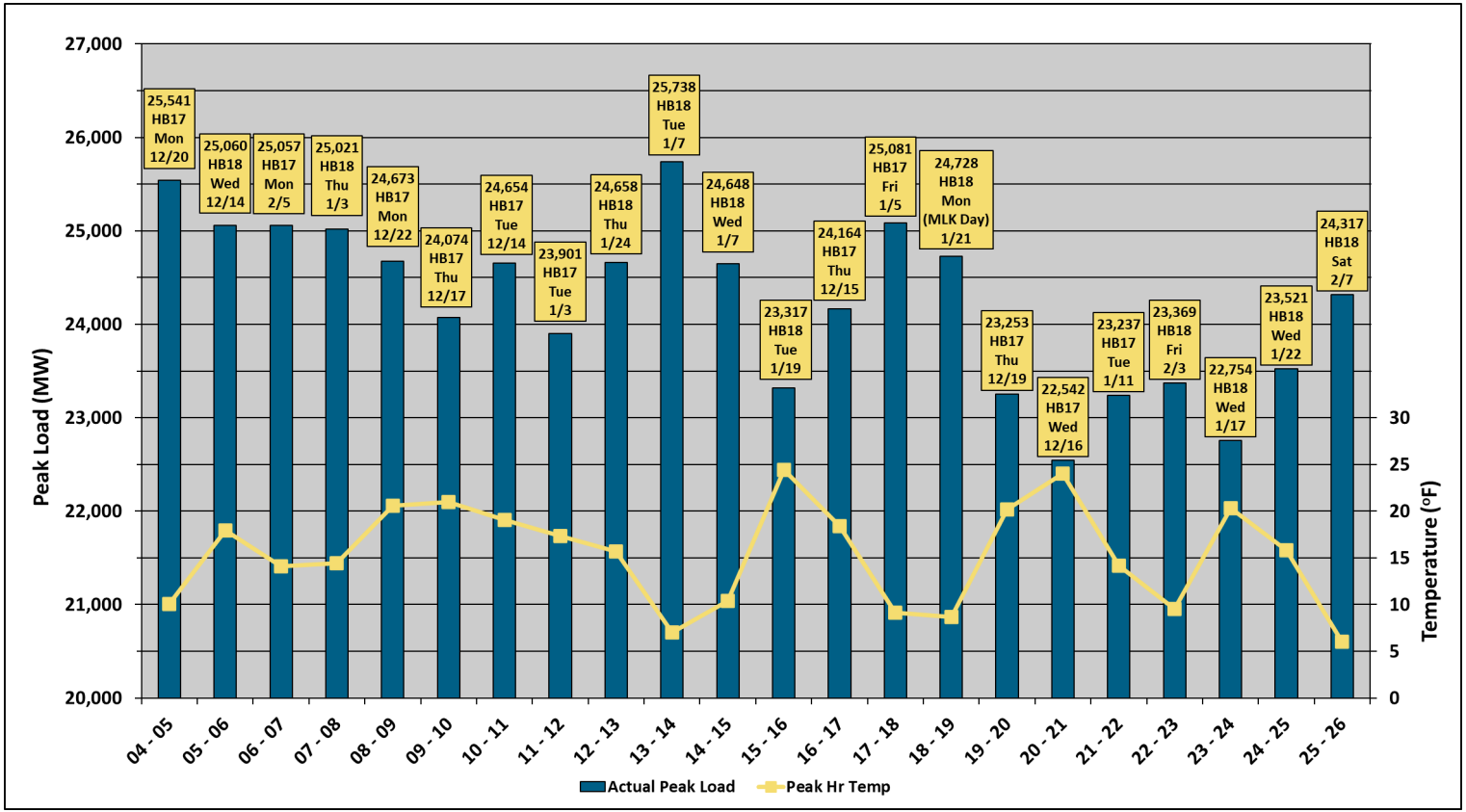
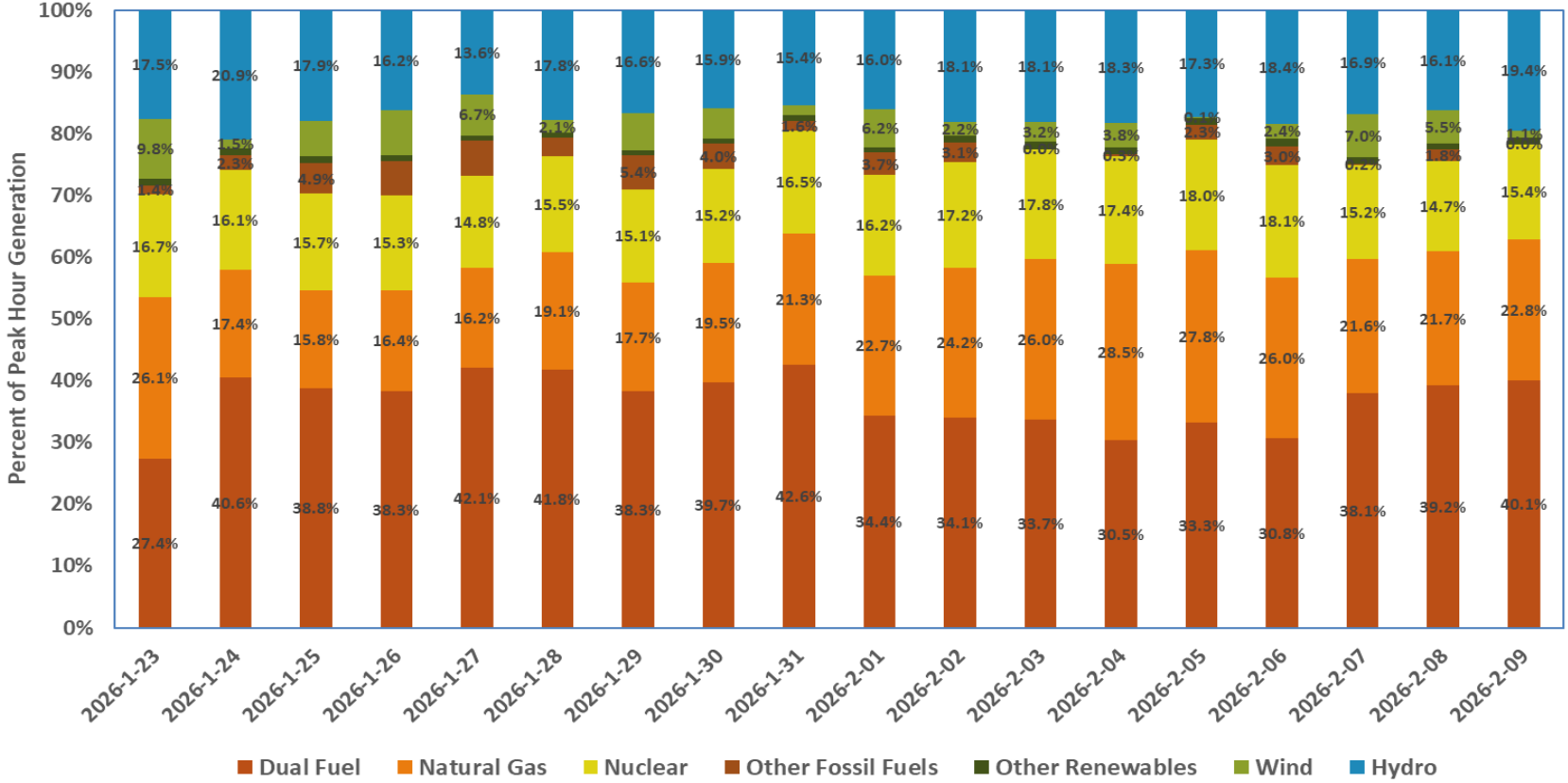
February 2026 Daily Peak Loads In Perspective



- **Average hourly temperature: 26.9 °F**
  - Third lowest average temperature since 2011
  - Below 16-year average by 4.5 °F
- **Average hourly load: 19,027 MW**
  - Third highest since 2011 (highest since 2015)
  - Roughly 840 MW higher than 16-year average
- **Peak hourly load: 24,317 MW (Sat. 2/7)**
  - Highest Winter 2025-2026 peak
  - Highest Winter peak since 2018-2019
  - Sunday 2/8 peak: 24,259 MW
  - SCR/EDRP reduced load by an estimated 400 MW on 2/7 and 2/8
  - If similar weather conditions occurred on a weekday, peak load would likely have exceeded 25,000 MW
- **10 days above 22,000 MW in February 2026**
  - 2011–2026 Average: 5.5 February days above 22,000 MW
  - 6 days exceeded 22,000 MW between 2020 and 2025

Winter Peak Loads in MW: Winters 2004-2005 to 2025-2026





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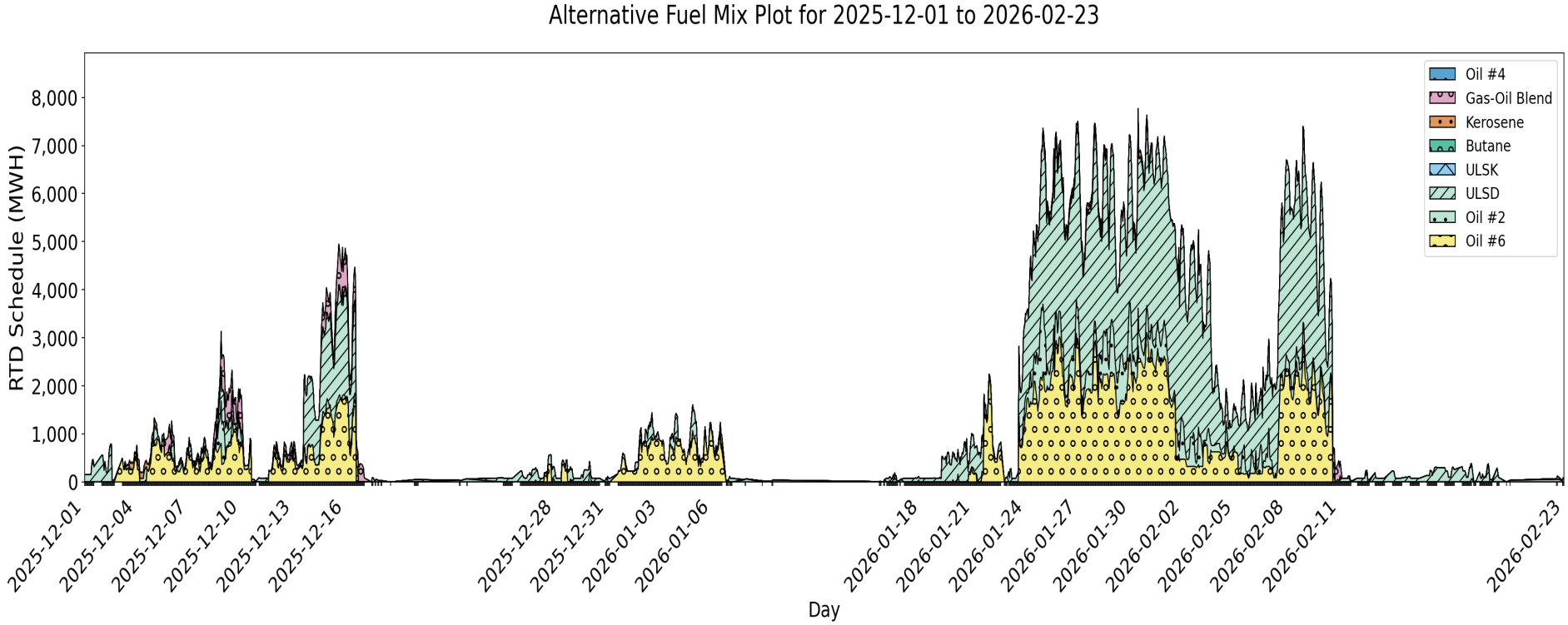
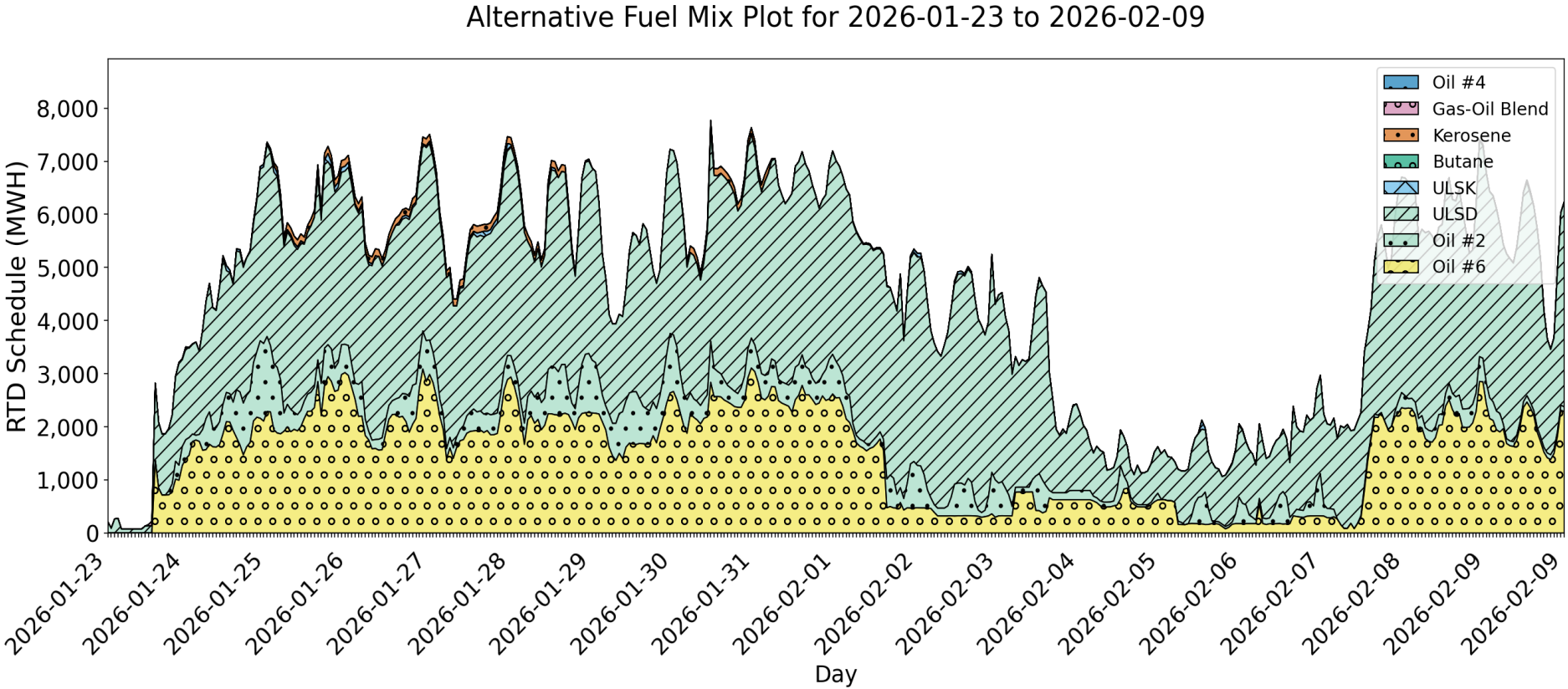


New York ISO

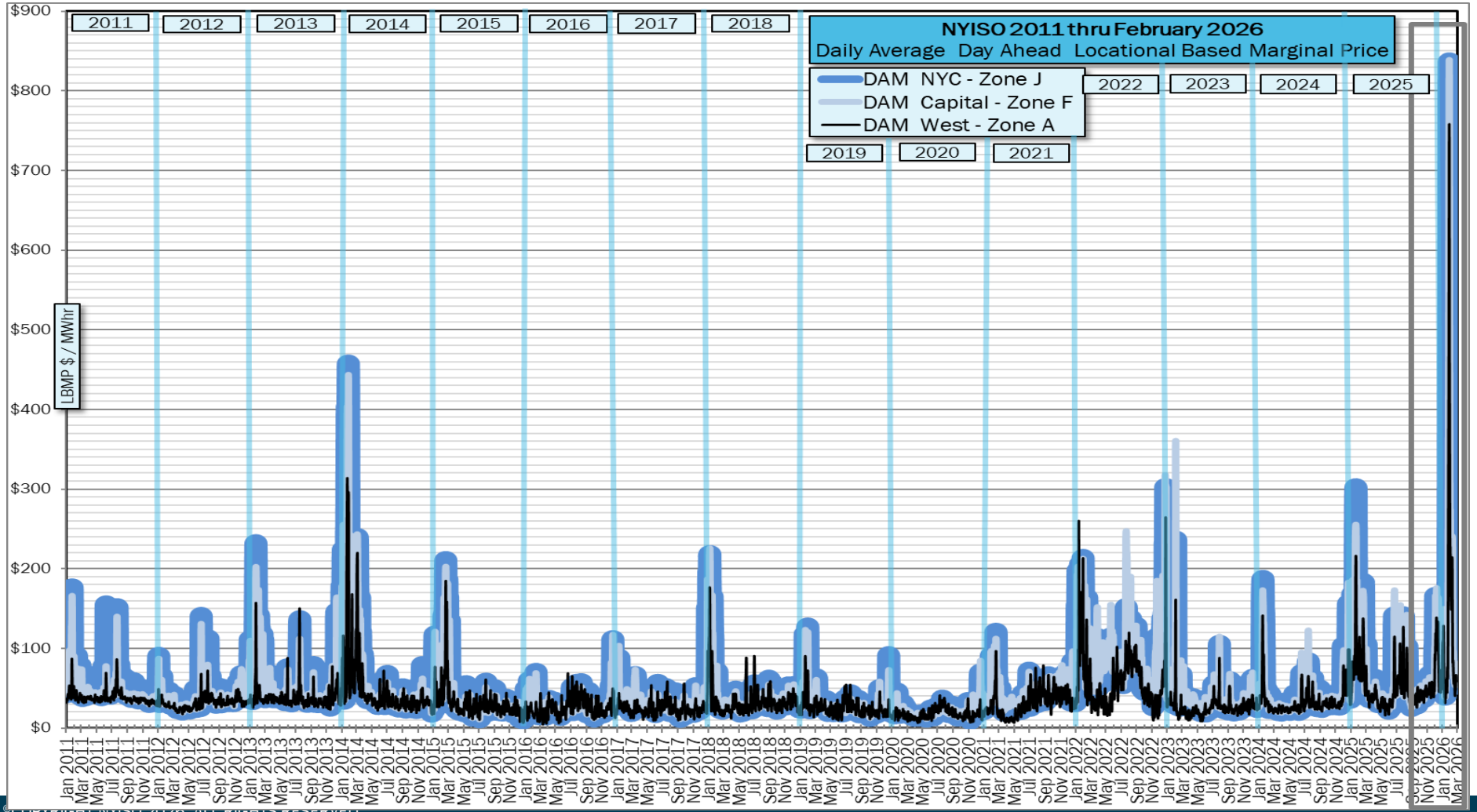


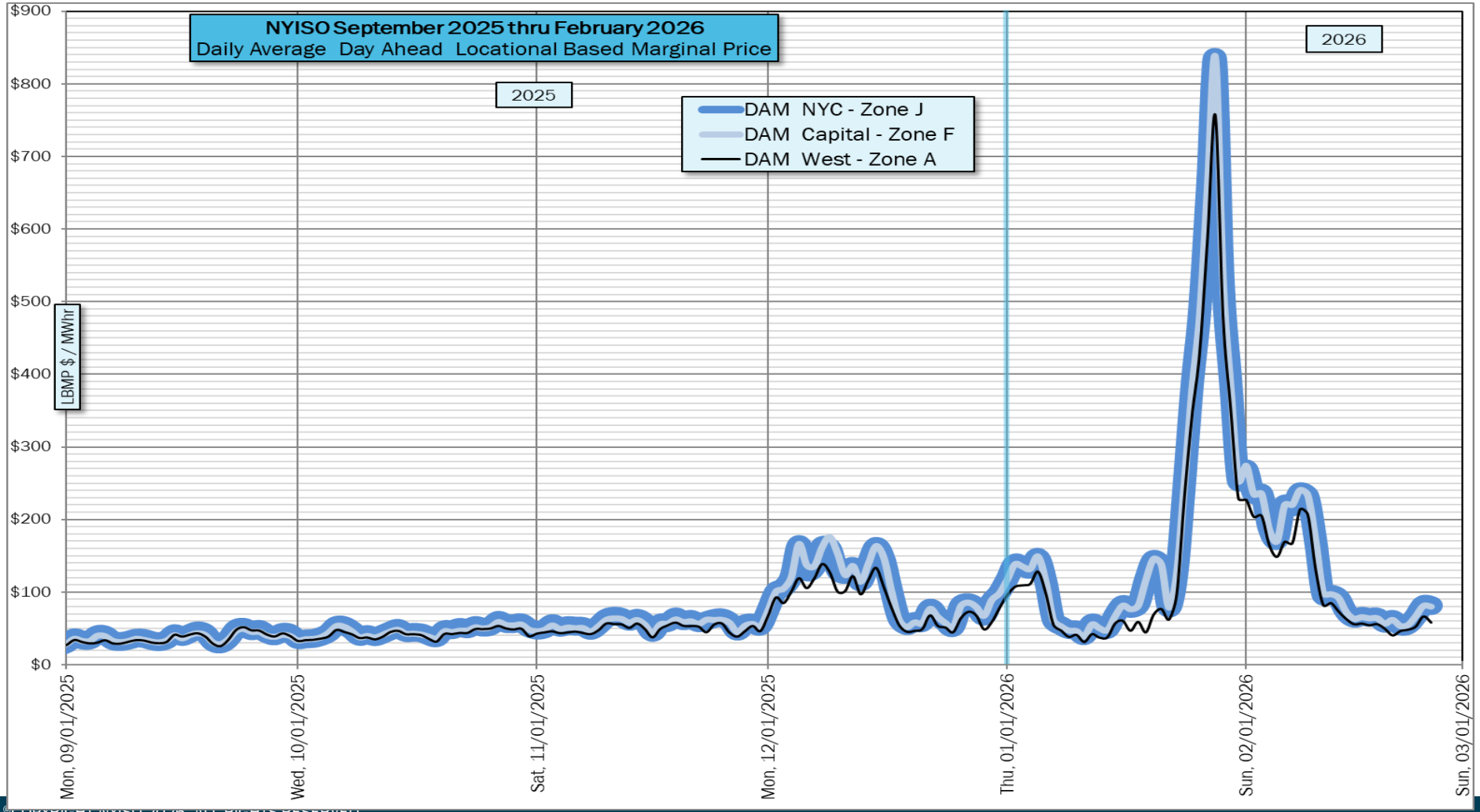
New York ISO

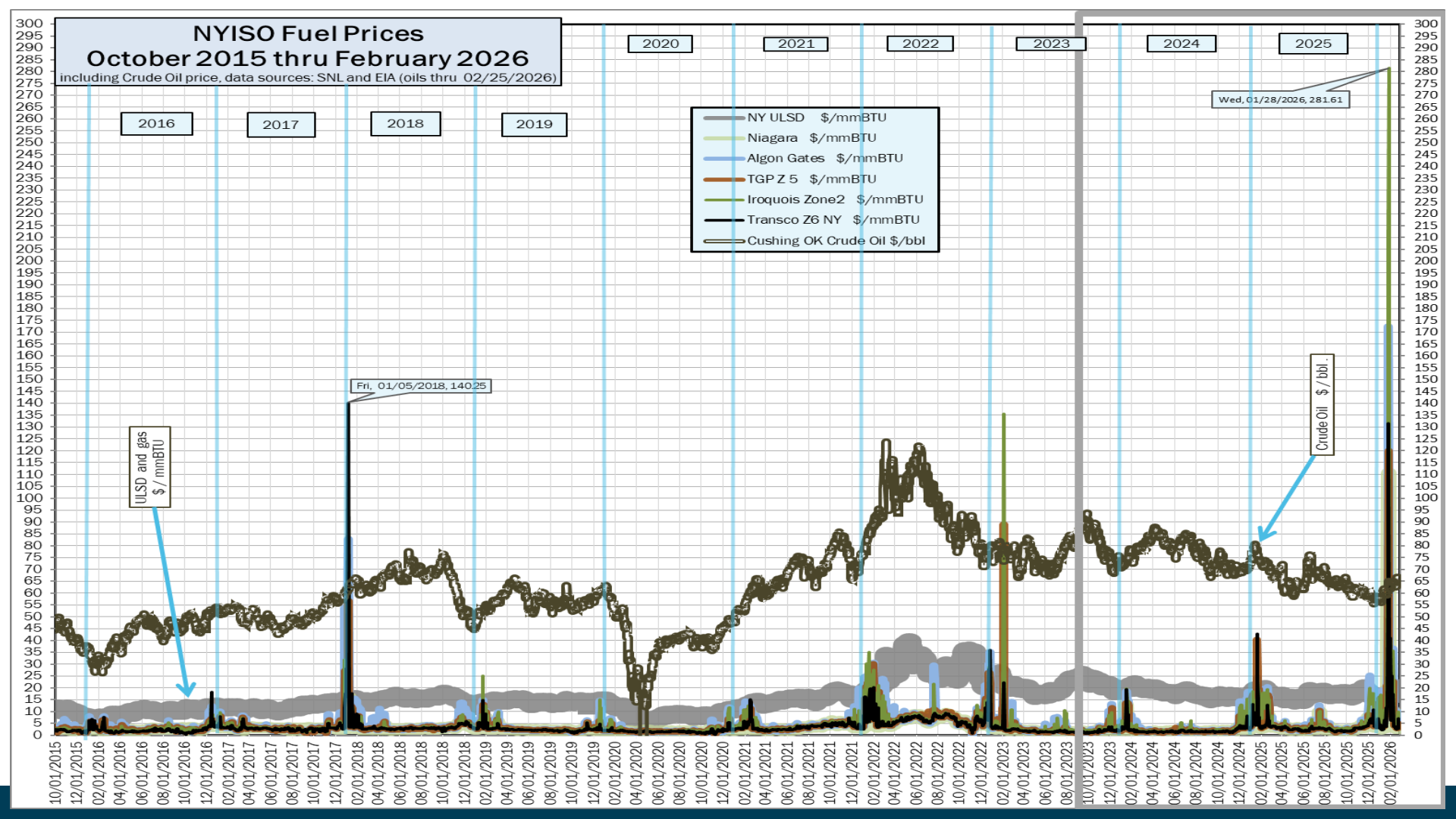
Transmission Infrastructure Performance

- **Continuing Forced Outages**
  - Hudson-Farragut 345 kV B3402
  - Marion-Farragut 345 kV C3403
- **Other impactful outages throughout the season (not all concurrent)**
  - Astoria Annex – E 13th St 345 kV Q35L
  - Valley Stream - Barrett 138 kV 292
  - Marcy 345kV CSC

New York ISO






NYISO Fuel Prices
October 2015 thru February 2026
including Crude Oil price, data sources: SNL and EIA (oils thru 02/25/2026)
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
NY ULSD $/mmBTU
Niagara $/mmBTU
Algon Gates $/mmBTU
TGP Z 5 $/mmBTU
Iroquois Zone2 $/mmBTU
Transco Z6 NY $/mmBTU
Cushing OK Crude Oil $/bbl
Fri, 01/05/2018, 140.25
Wed, 01/28/2026, 281.61
ULSD and gas $/mmBTU
Crude Oil $/bbl