

NYISO Winter 2017-2018 Operations

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Joint Stakeholder Meeting
April 2, 2018

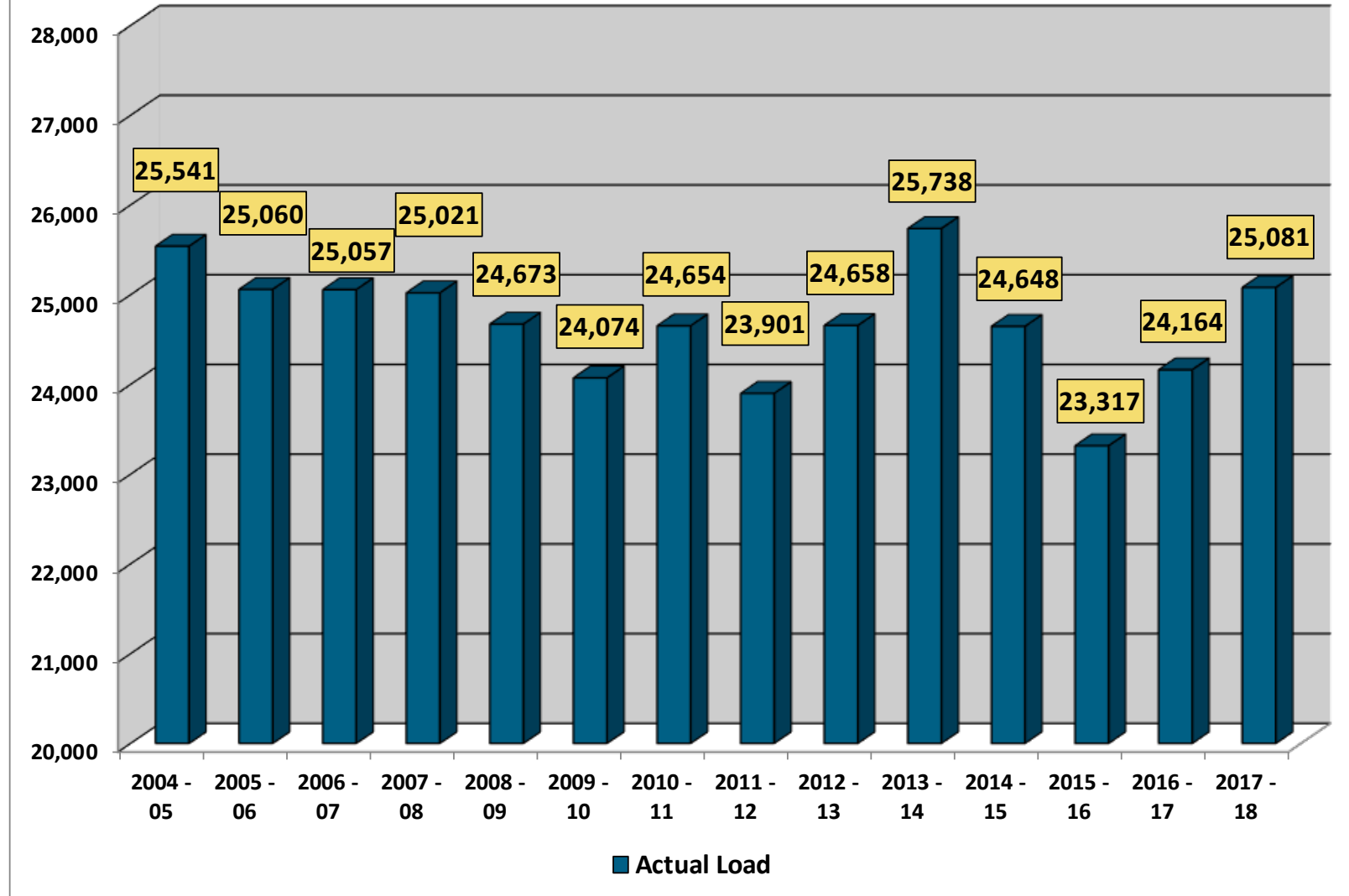
Cold Weather Conditions

- **Northeast Cold Snap:** December 26 through until January 7 (13 days)
- **Albany, NY:** Average temperature was 4.5 F between December 27 through January 2 with 7 consecutive days with minimums below 0 F
- **Syracuse, NY:** Coldest start of January in over 100 years with January 1-7 average of 7.3 F
- **New York City:** Temperatures below 32 F for 14 days
- **New England:** Temperatures below 20 degrees for 8 consecutive days
- **Coastal Blizzard:** Entire east coast experienced a Coastal Blizzard which impacted NYC, Long Island, and New England on January 4-6
 - NY: Mostly a snow, wind, and cold event

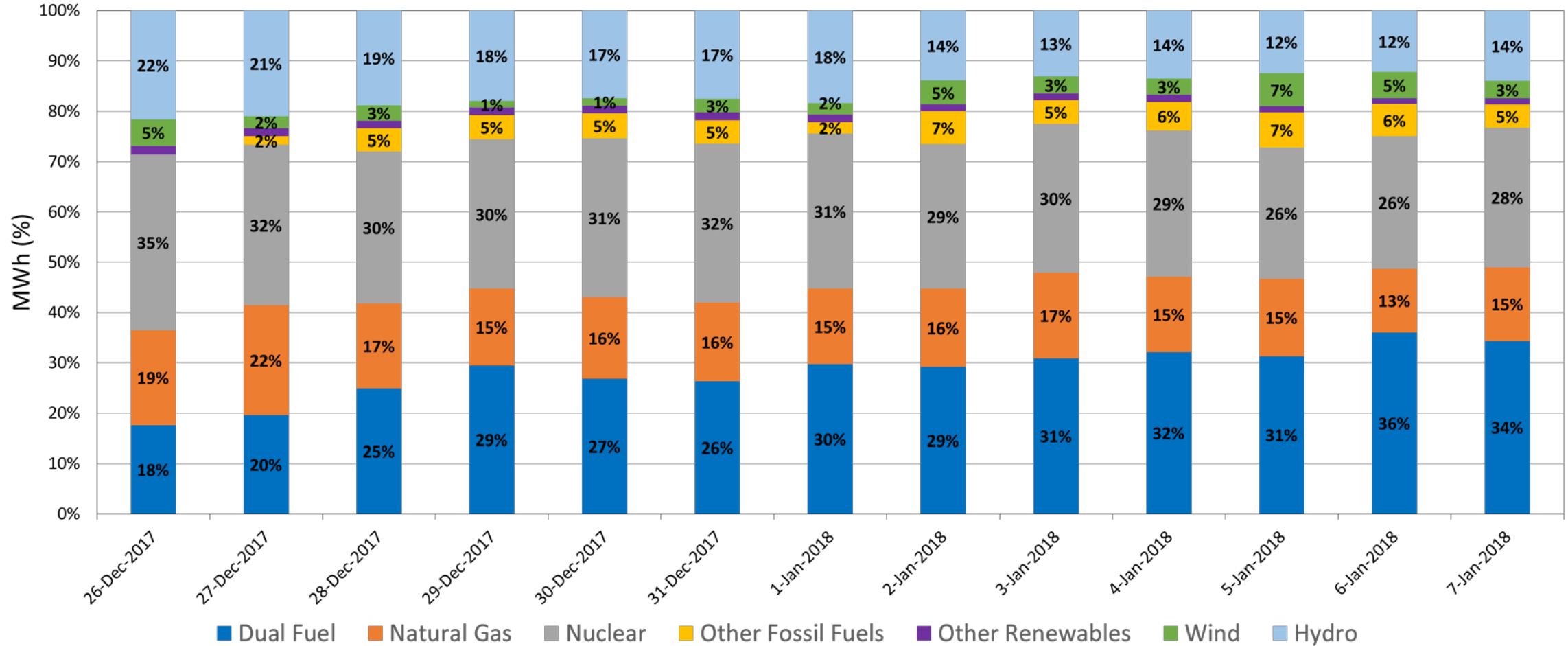
Peak Loads

- **NY all-time Winter Electric Peak Load was 25,738 MW on January 7, 2014**
- **NYISO Seasonal 50-50 Forecast was 24,365 MW**
- **This Winter's Actual Peak (so far) is 25,081 MW on Friday, January 5**
 - It was colder on January 1 than January 5 but January 1 was a holiday

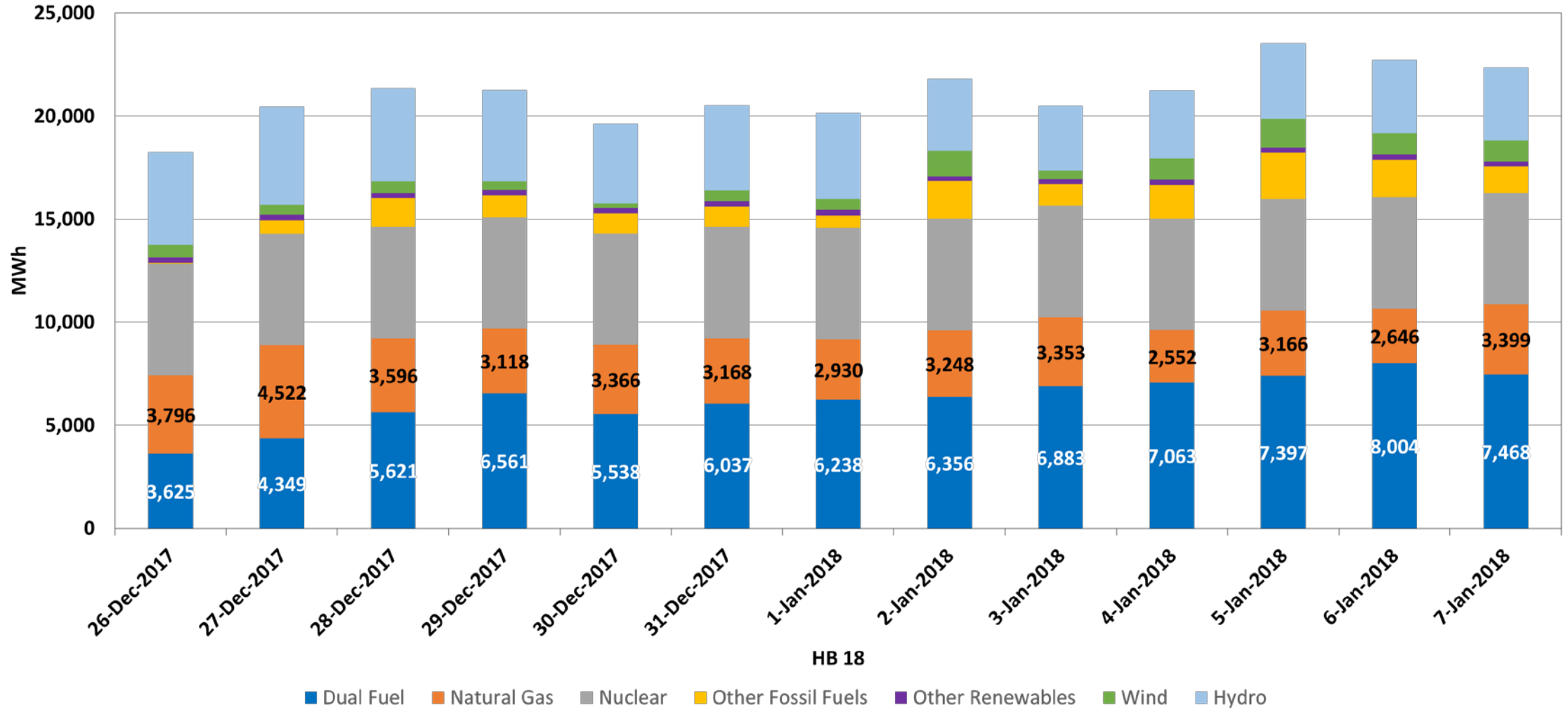
Winter Peak Loads (MWs) - 2004-05 to 2017-18



Total Actual Generation by Fuel Mix Across Day

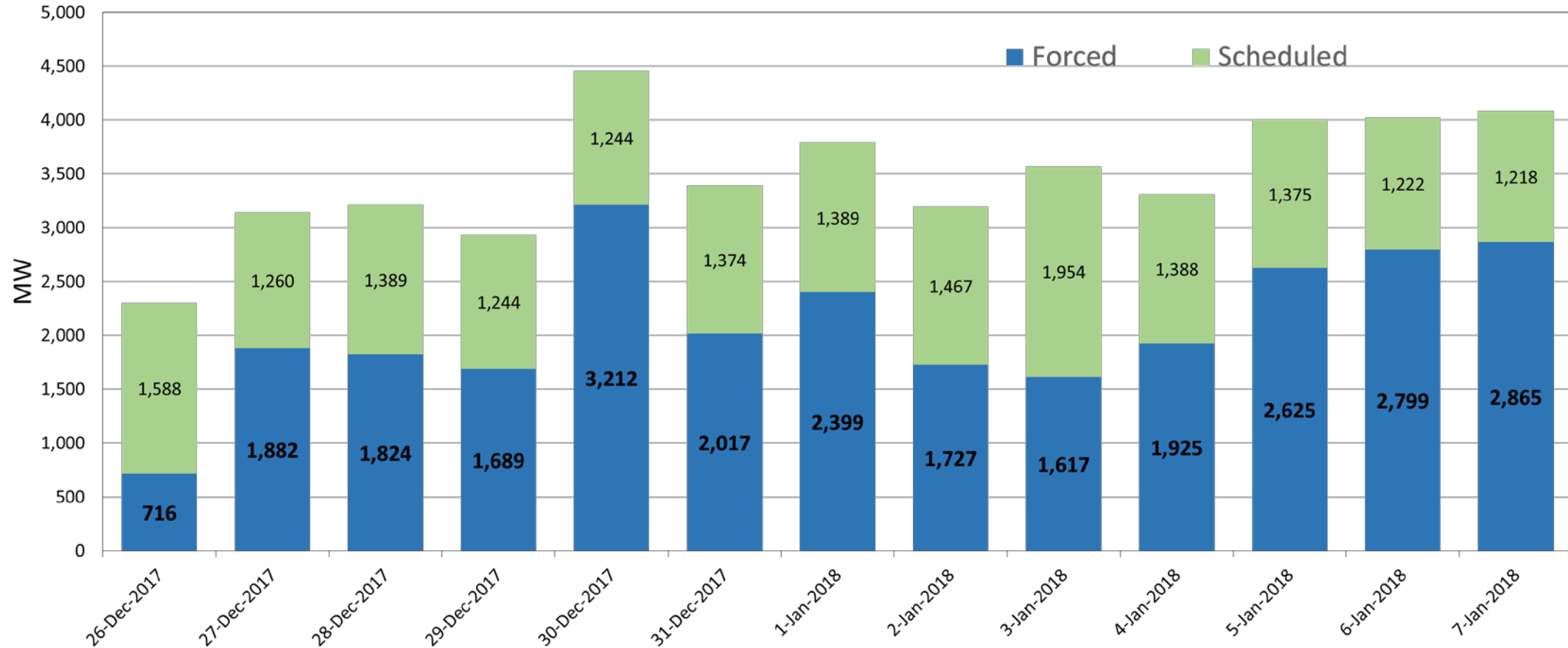


Total Actual Generation by Fuel Mix- During Peak Hours

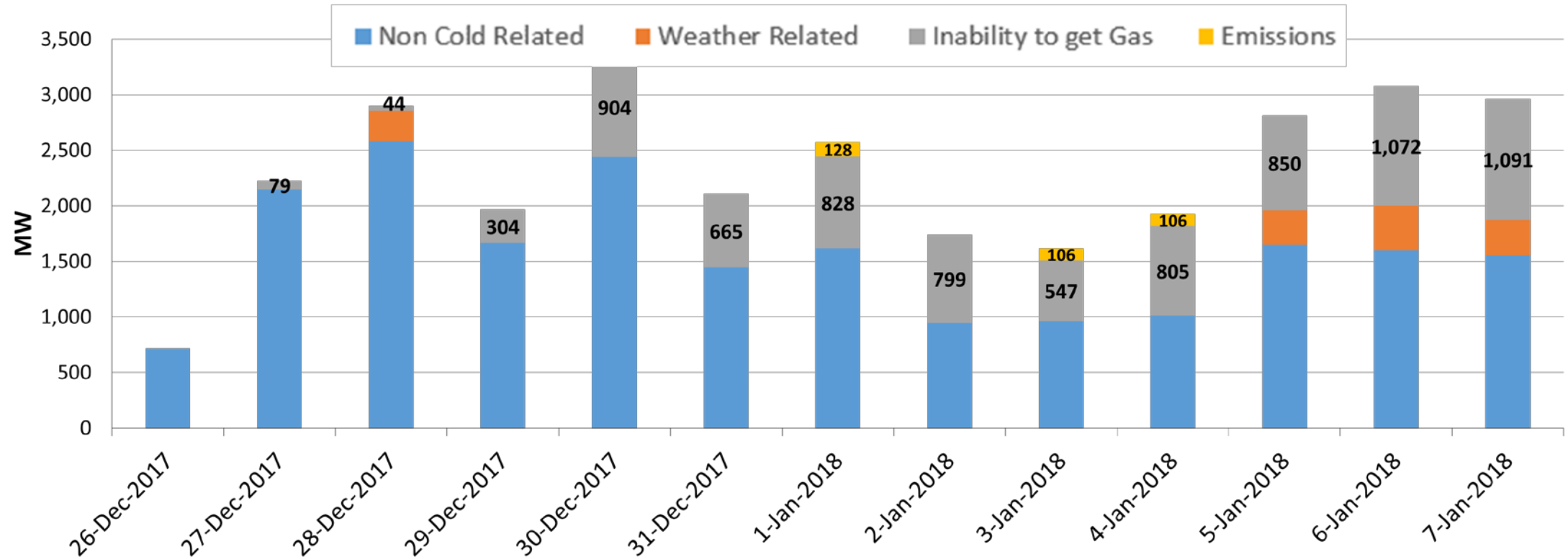


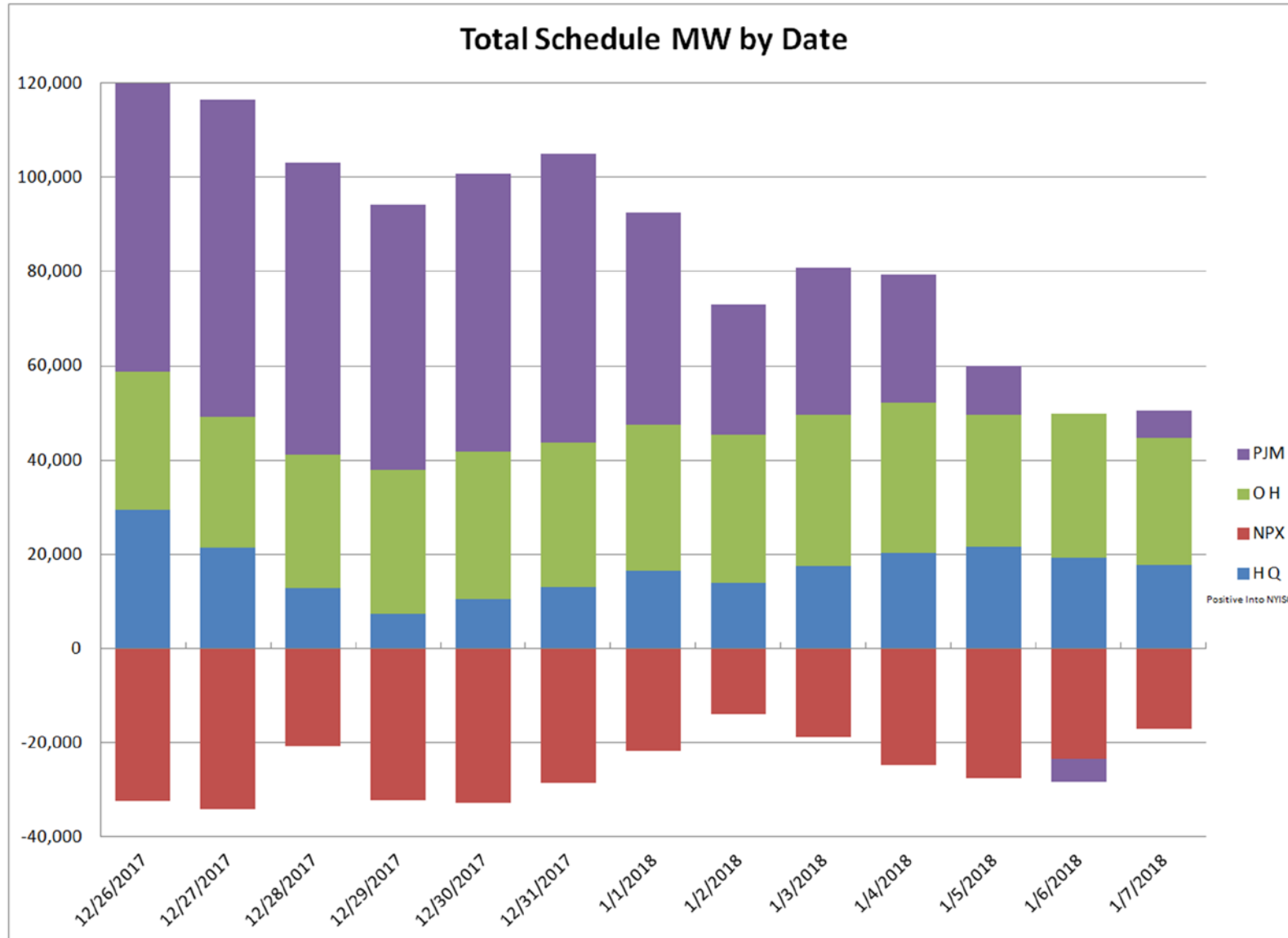
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Outages by Type - Over Peak Hours



Thermal and Hydro Forced Outages and Forced Derates by Categories





Transmission

- **Transmission Infrastructure Performance - Excellent**
- **Transmission Owners rescheduled transmission maintenance outages to time periods after the cold snap**
- **The two Ramapo PARs had positive impacts – full utilization of 500 kV #5018**
- **Central East was the primary binding constraints**
- **NYISO initiated a few NERC TLR-3 alerts**

Waiver Request for Cost Recovery

- **On January 4, 2018, the NYISO filed for a waiver with FERC to allow compensation for generator incremental energy costs and minimum generation costs in excess of \$1000/MWh**
 - The requested waiver period was January 6 to February 28
- **FERC granted the waiver request on January 12, 2018**
- **The NYISO did not commit any resources with incremental costs in excess of \$1,000/MWh during the waiver period**

Other Region's Reliability & Gas System

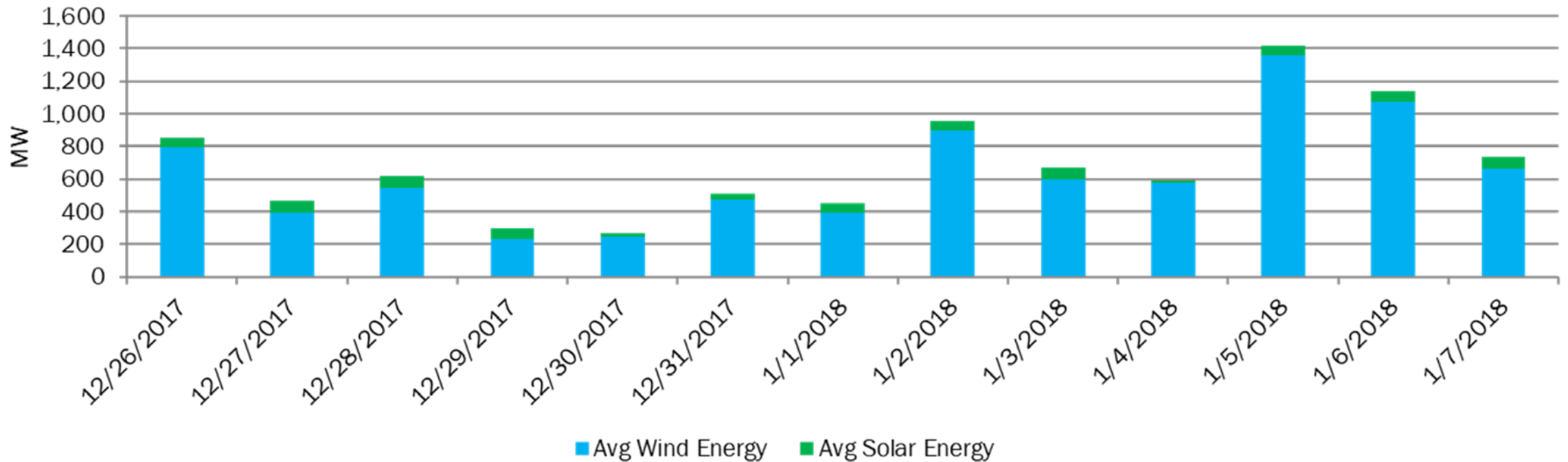
- **NYISO: Operations participated in conference calls with NPCC, PJM, MISO and gas pipelines**
- **The interstate and gas LDC pipelines all remained in-service**
- **Gas Pipelines and Gas LDCs issued many of the following:**
 - Gas Alerts
 - Daily OFOs (Operational Flow Orders)
 - Hourly OFOs
 - Interruption of Transportation Services (Interruptible Gas Customers will not be able to get Gas)

Operations

- **Ad Hoc Fuel Surveys**
- **No Need for Demand Response**
- **State Agencies Communications**
 - NY Governor press release on January 4, 2018 regarding coastal Blizzard
 - NYISO participation in a few NY State Agency conference calls per our State Agency Winter Communication Protocol
- **NYISO Press WebEx**
 - NYISO hosted a “Winter Operations Media Briefing” on January 4, 2018

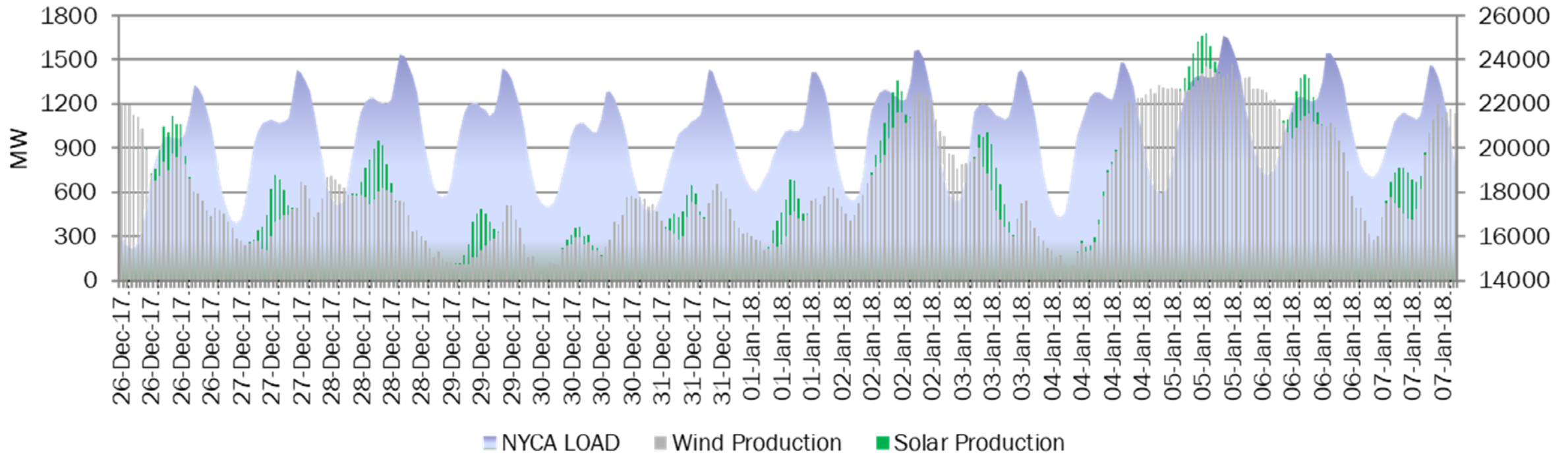
Renewable Generator Performance

Daily Wind & Solar Production during the Cold Snap



Renewable Generator Performance

Hourly Wind & Solar Production during the Cold Snap

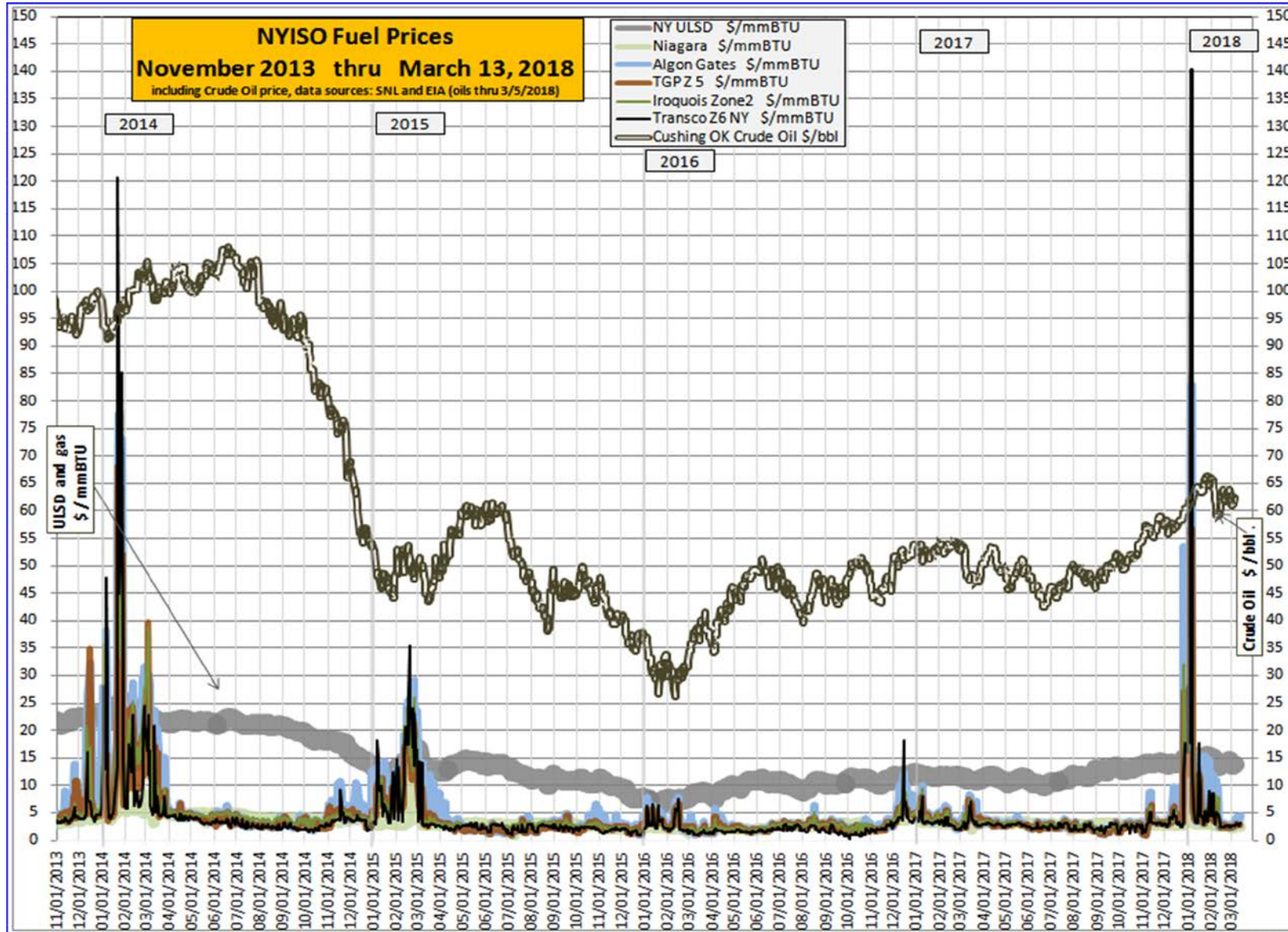


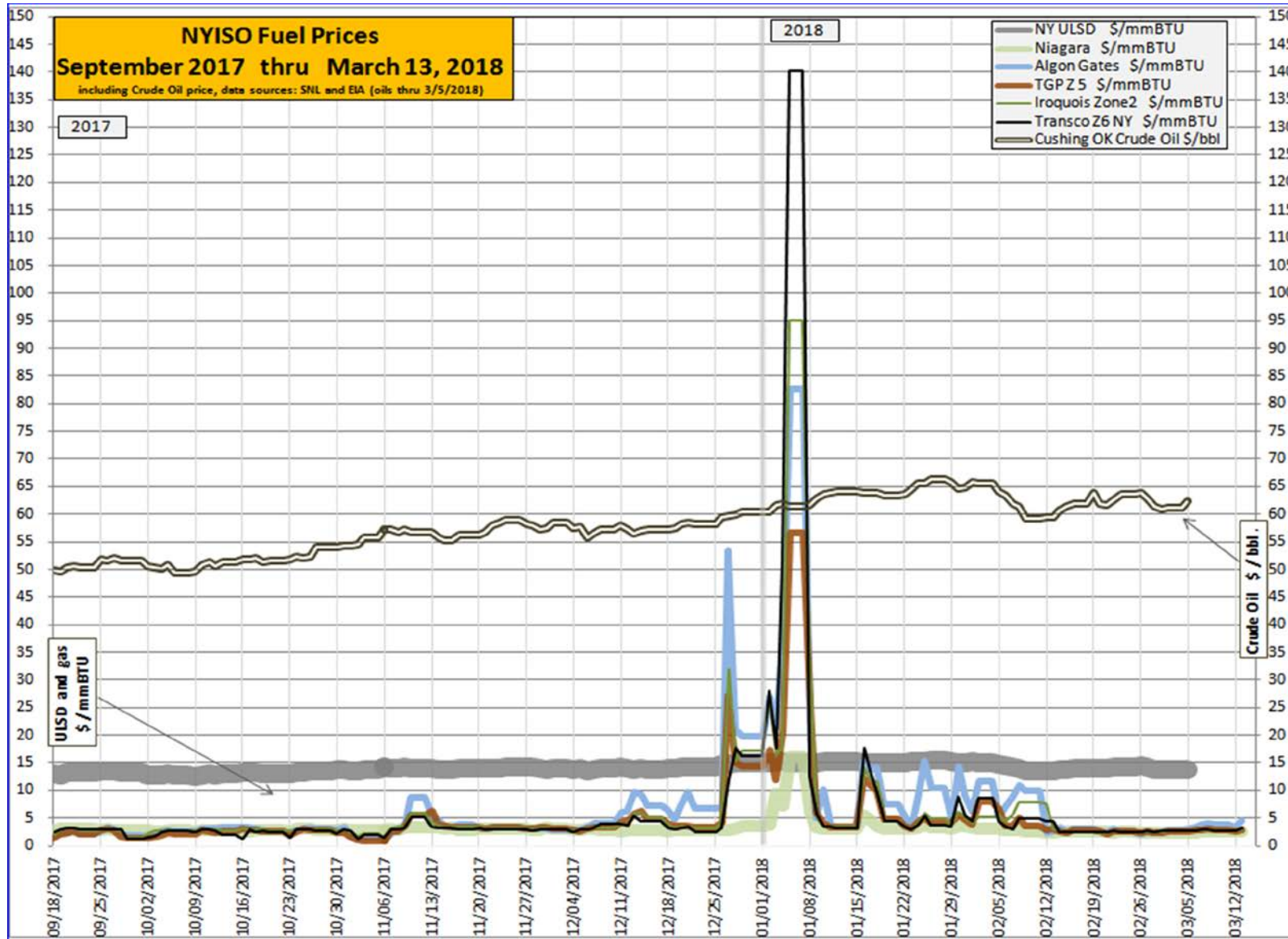
March Snow Storms

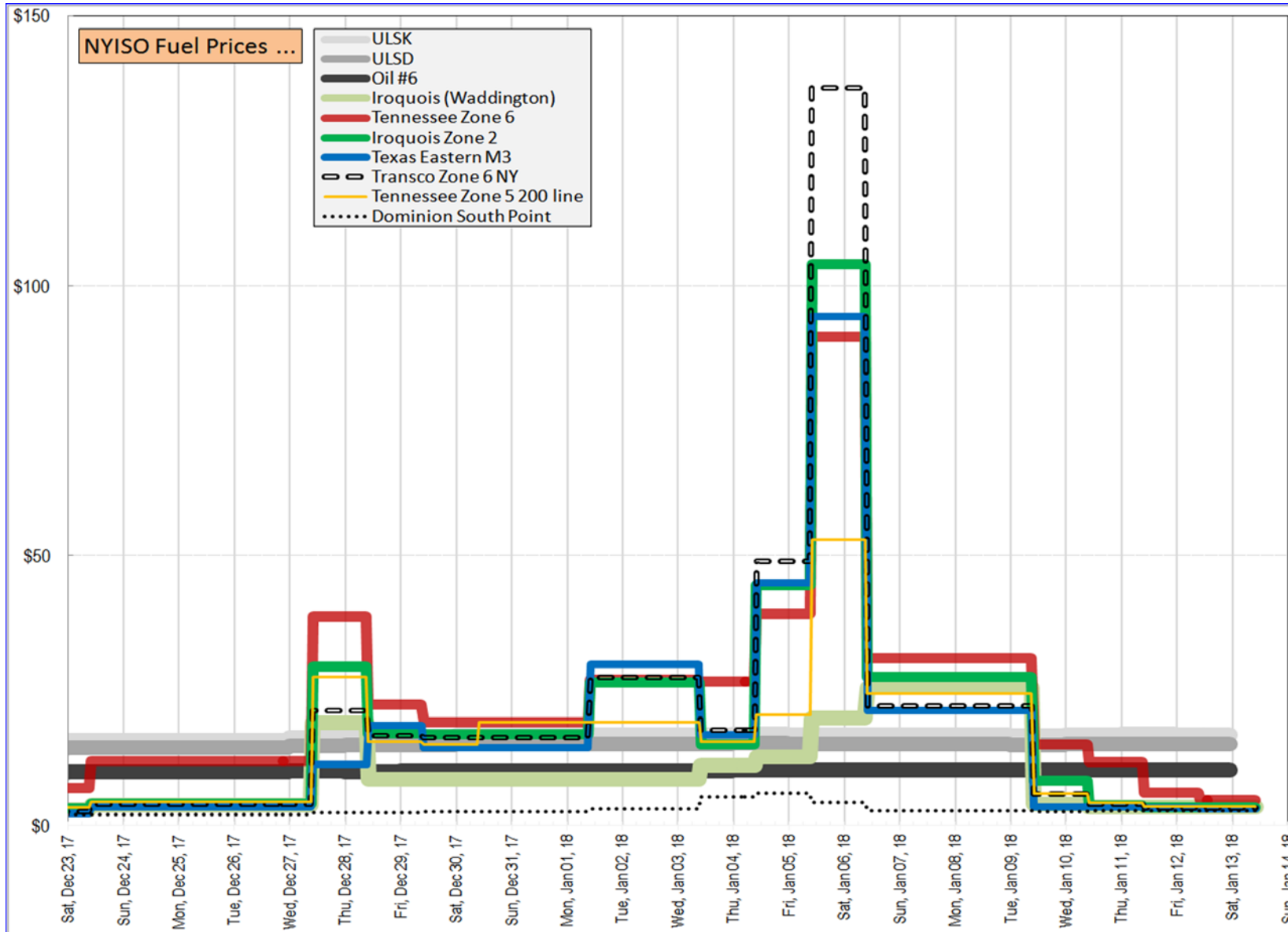
- **Eastern and Southeastern New York have experienced four Nor'easters between March 2 and March 22.**
 - All three storms produced varying amounts of snow and wind, depending on location
 - None of the storms resulted in high voltage transmission line issues or generation issues
 - The March 2 Nor'easter did result in several 115 kV line outages and one 138 kV line outage, but the outages did not create reliability problems
 - Distribution customer outages of varying severity occurred due to the four storms

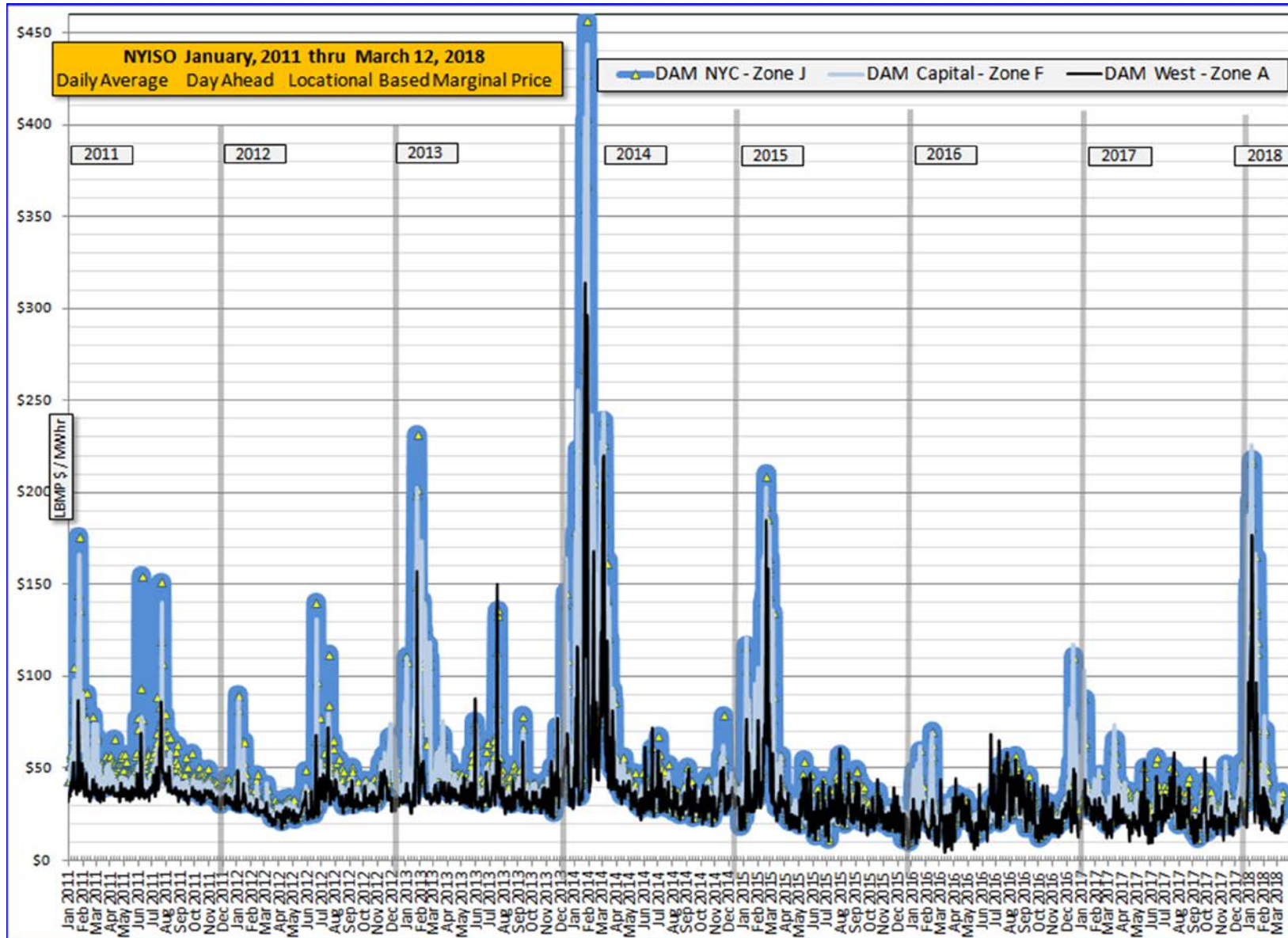
Appendix

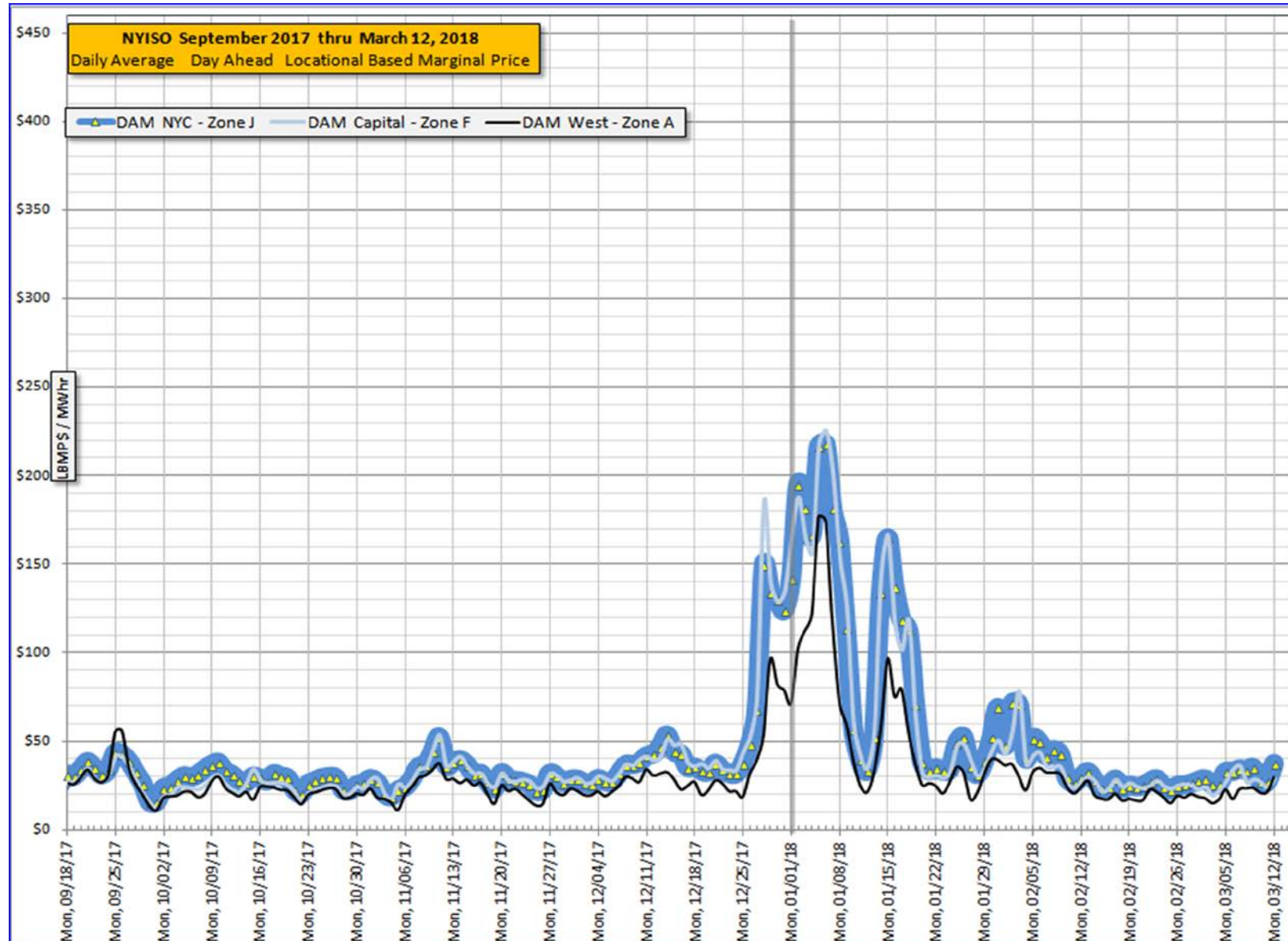
Fuel Prices & Marginal Energy Prices











Questions?