



# Winter 2013-2014 Operations and Market Performance in RTOs and ISOs

**AD14-8-000**

**April 1, 2014**

# 2014 Severe Weather Events

Jan 6-7  
"Early Jan"



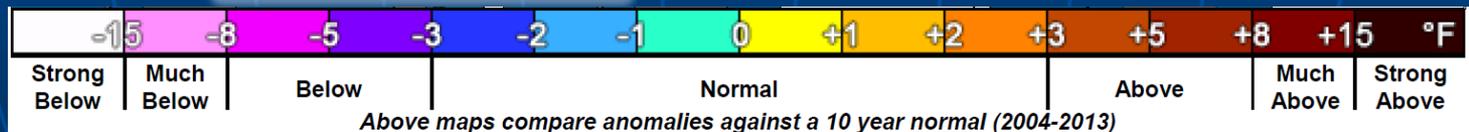
Jan 27  
"Persistent Cold"



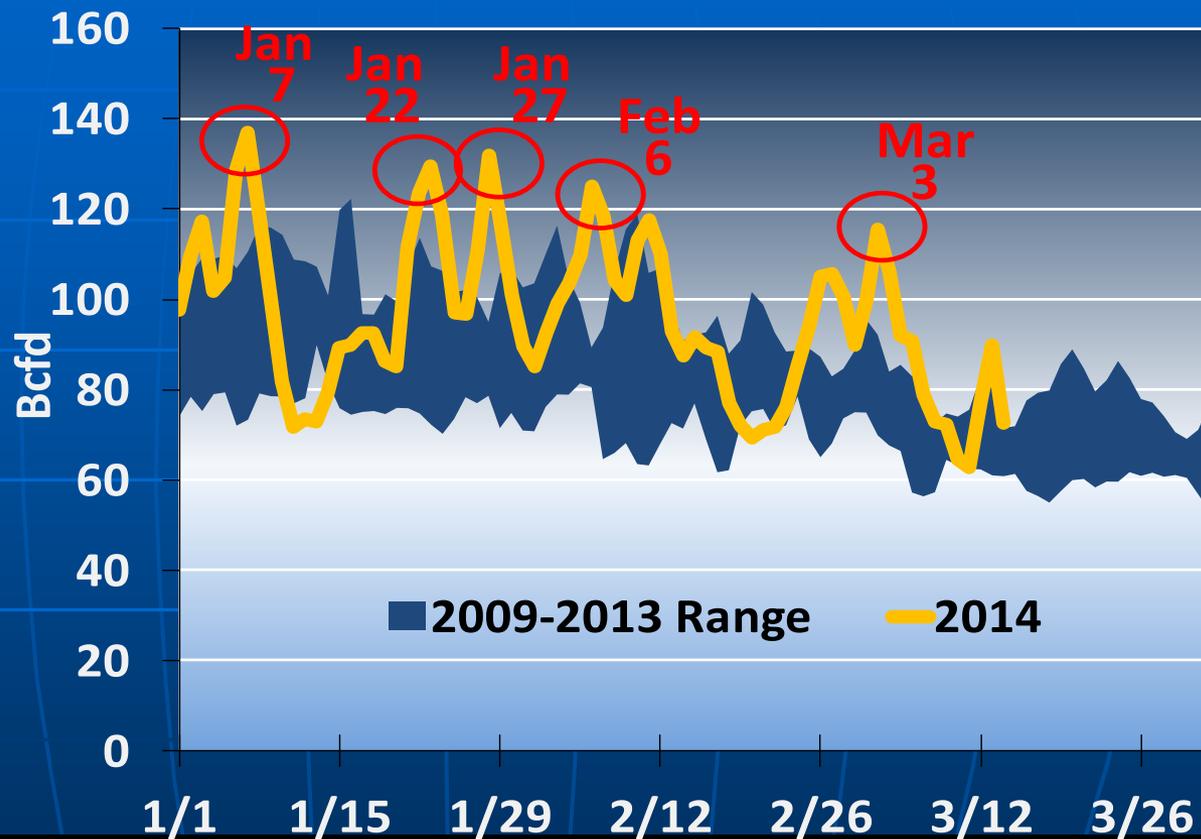
Jan 22  
"The \$100 Gas Price"



Feb 6  
"West Cold"



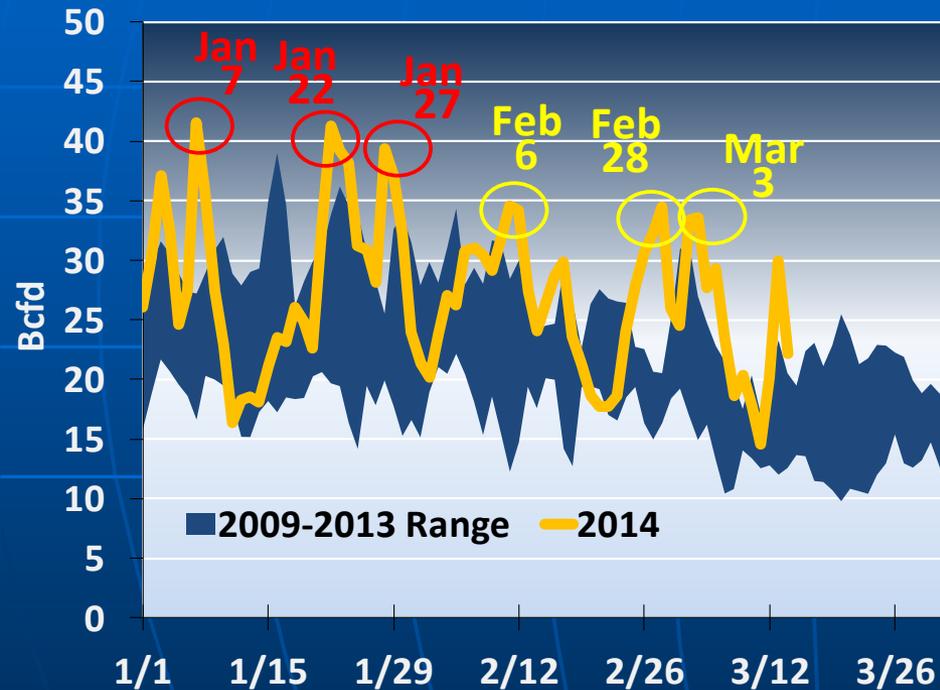
# National NG Demand Soars Beyond 5-yr Averages



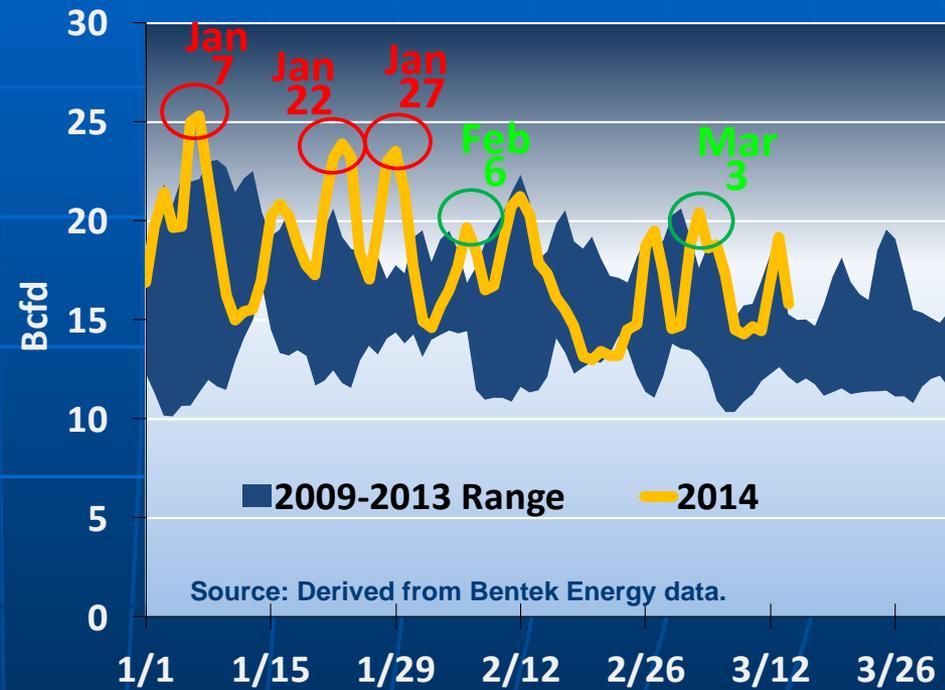
Source: Derived from Bentek Energy data.

# Northeast & Southeast Peak Demand Coincides

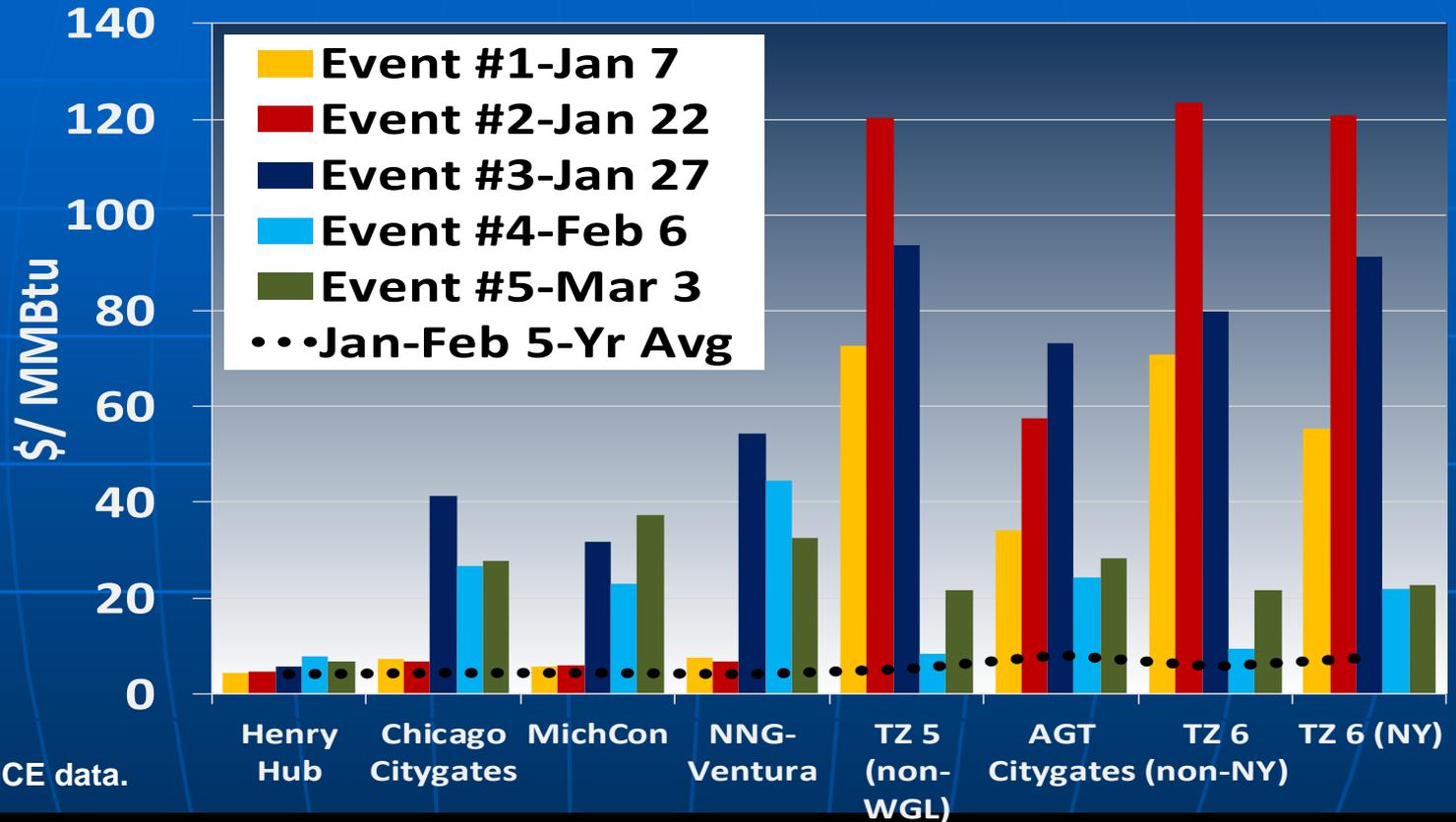
## Northeast NG Demand



## Southeast NG Demand

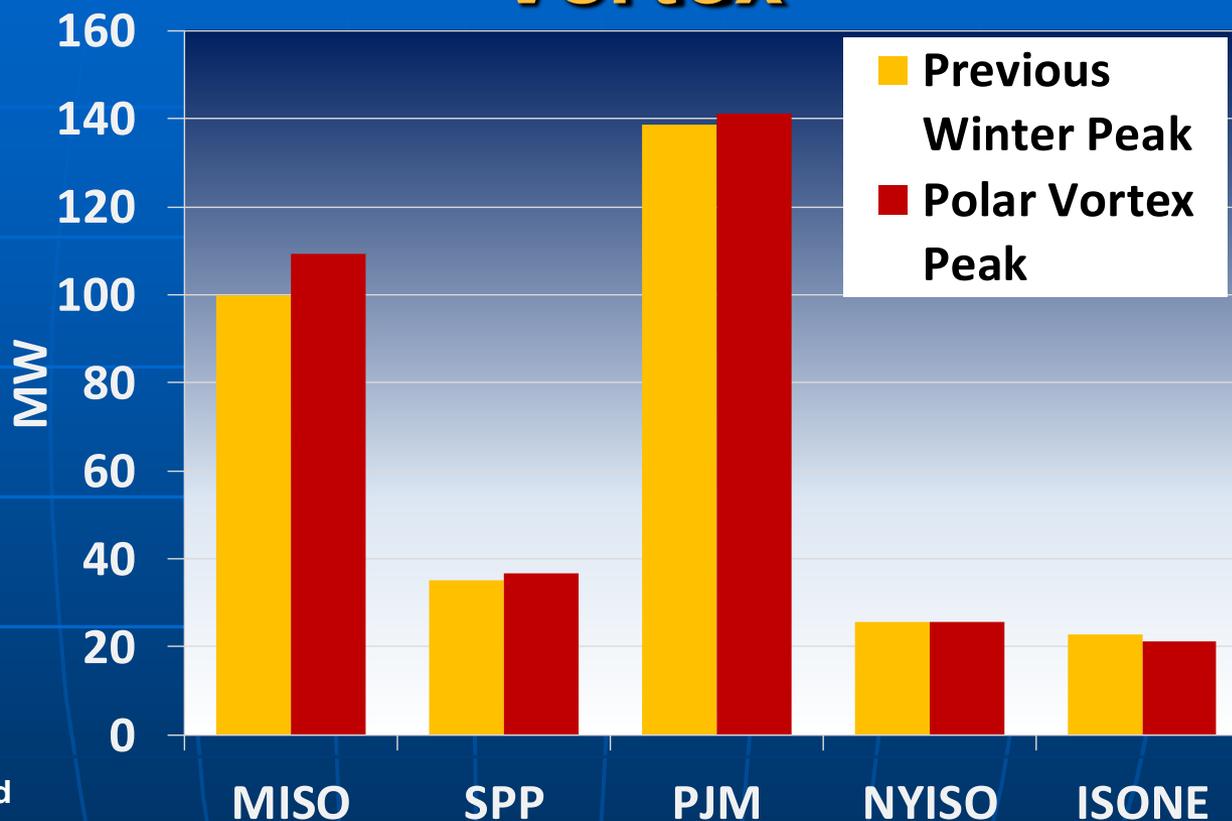


# NG Prices Soar in the Eastern U.S.



Source: Derived from ICE data.

# New Electric Winter Peak Demands Set During Polar Vortex



Source: Derived from ISO and RTO data.

# Generator Outages Add to Market Stress

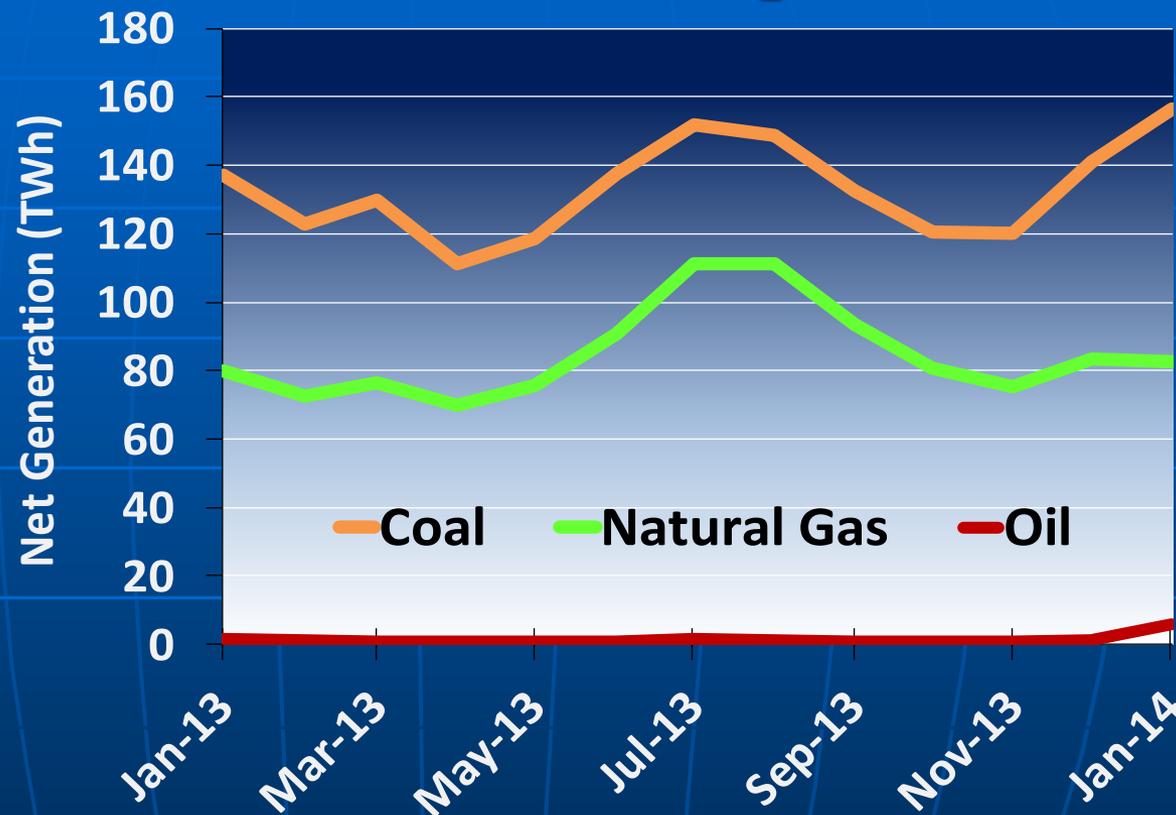
## Early January Peak Day Generation Outages (January 6 and 7)

ISO	Peak load MW	Lost Generation* MW	% of Peak	Fuel Supply Issues MW	% of Lost Generation
PJM	141,312	41,336	29%	9,718	24%
ISONE	21,320	1,473	7%	1,473	100%
NYISO	25,738	4,135	16%	2,235	54%
MISO	107,770	32,813	30%	6,666	20%
SPP	36,602	3,185	9%	2,412	76%

\*Forced outages and derates.

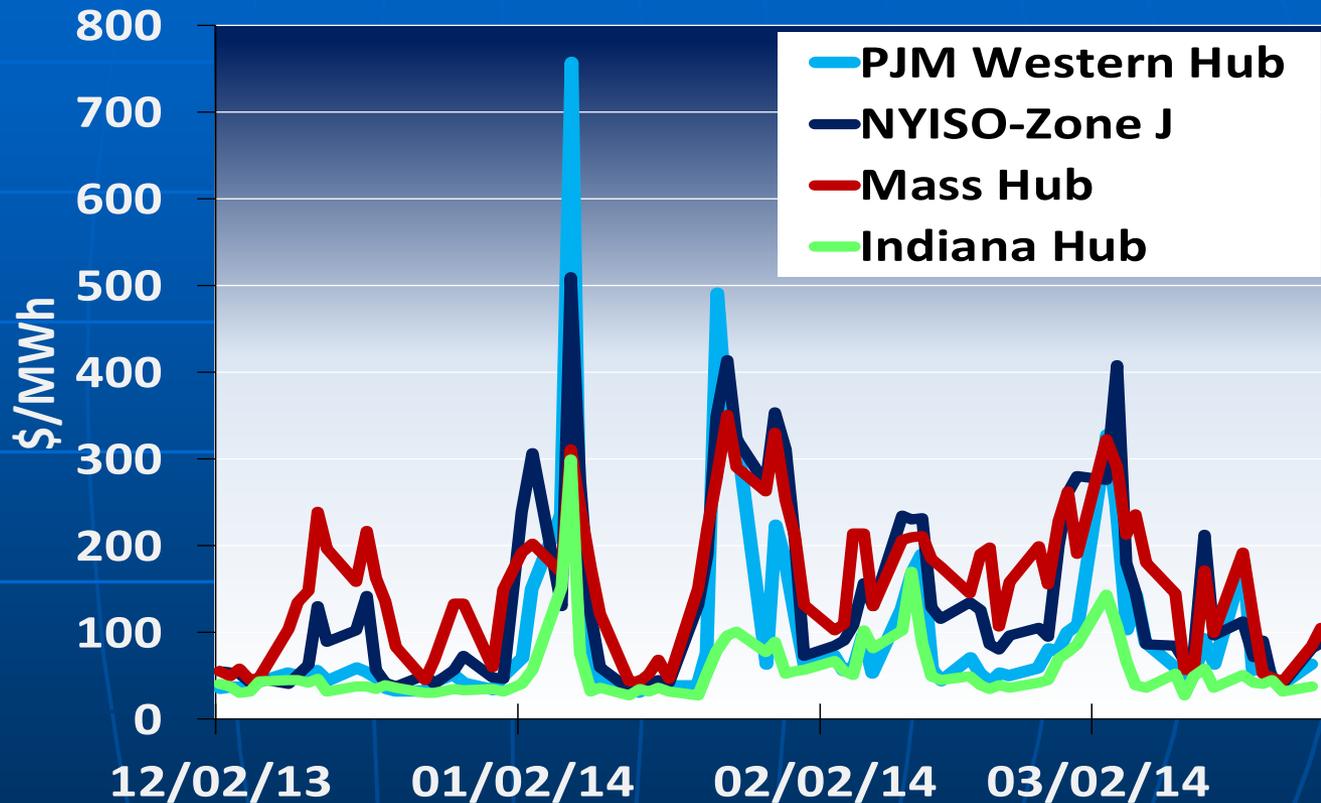
Source: RTOs and ISO.

# Natural Gas Burn Dips in January



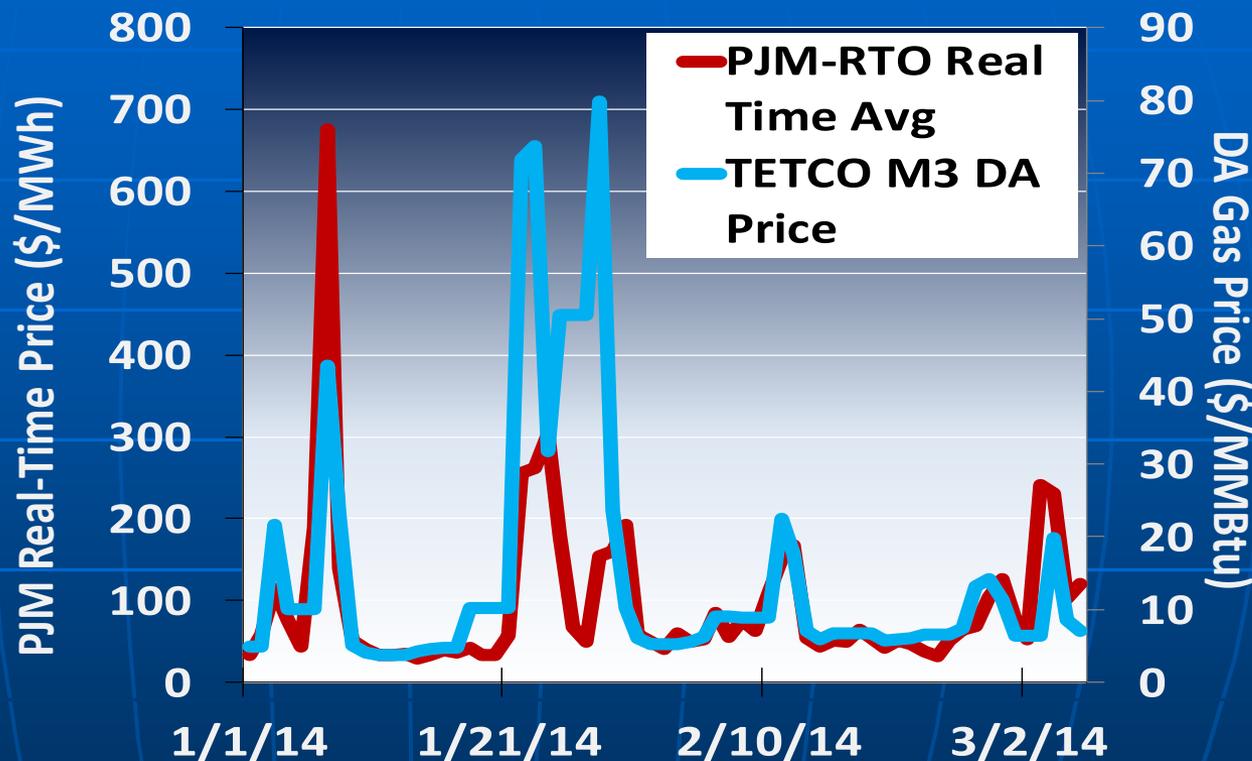
Source: Derived EIA data.

# RTO and ISO Prices Winter 2014



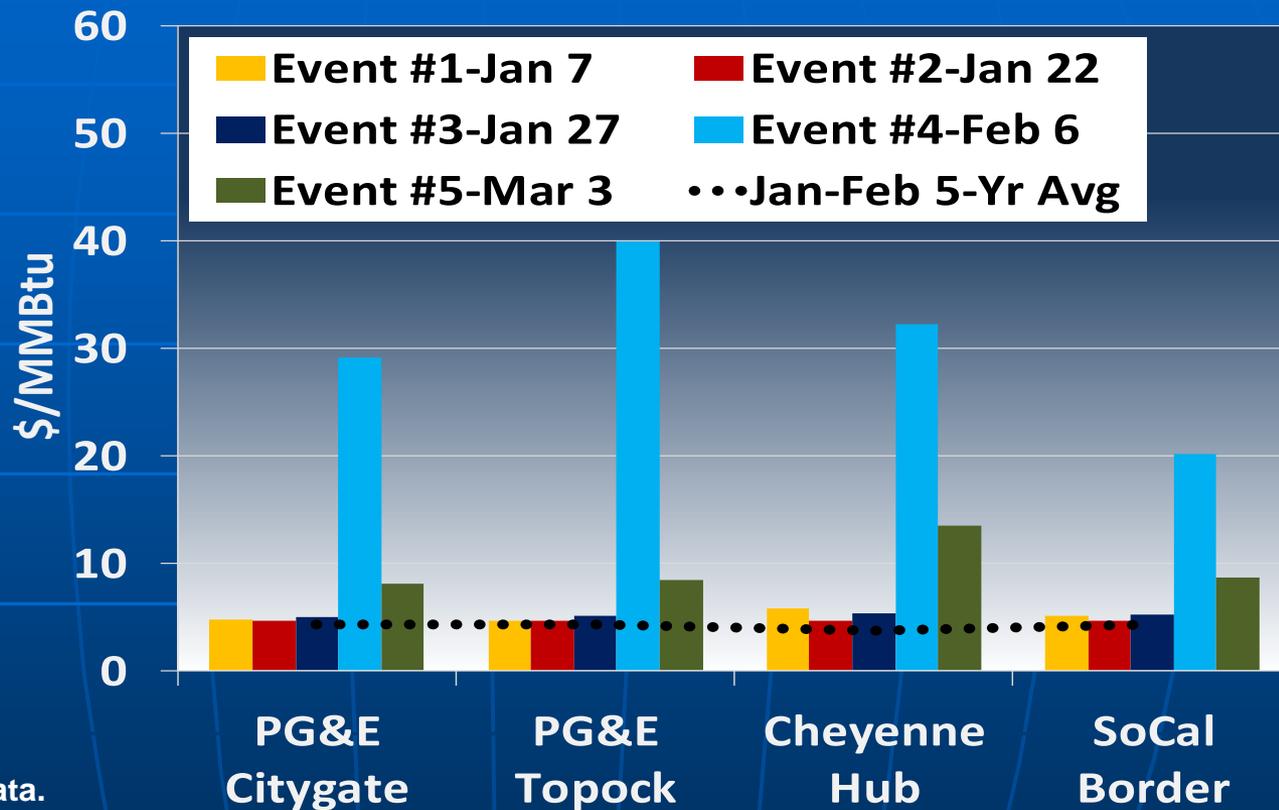
Source: Derived from Velocity Suite data.

# Electricity Prices Follow Natural Gas Prices



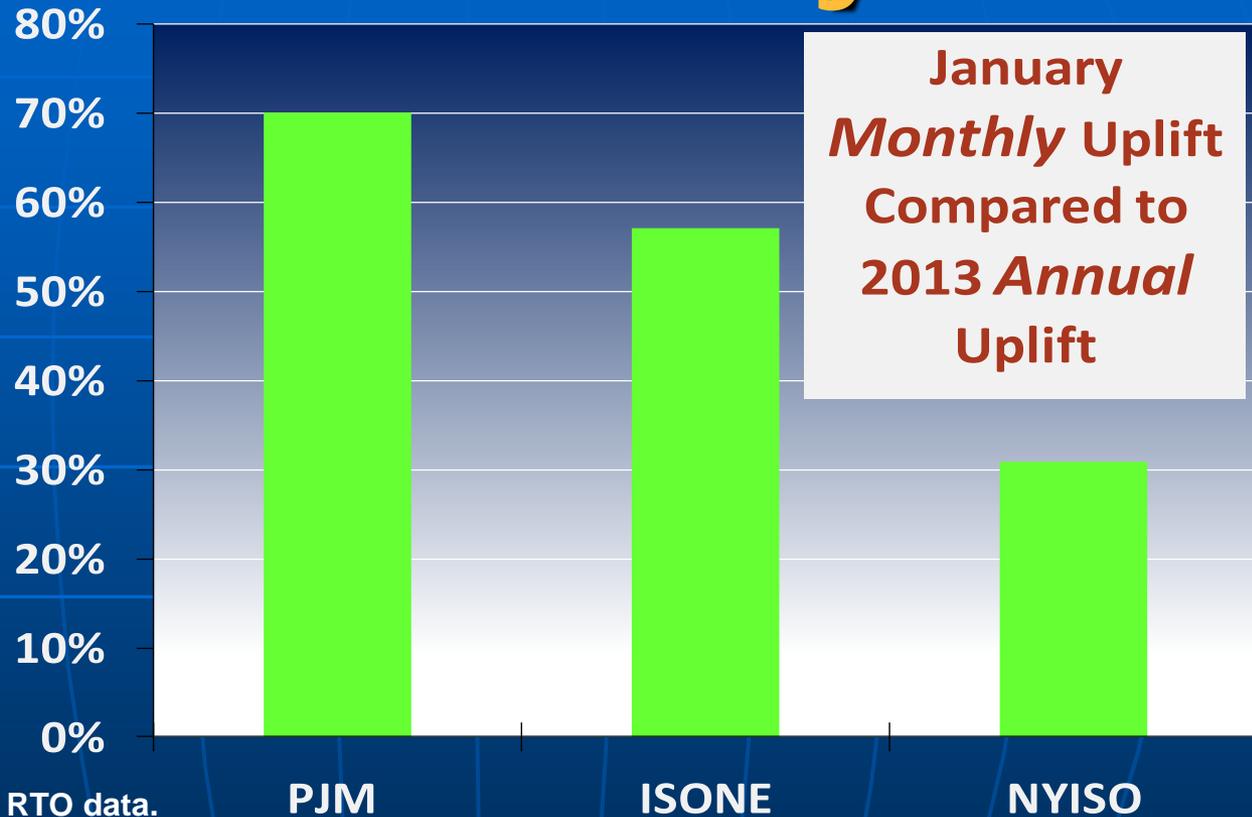
Source: Derived from Velocity Suite data.

# Record NG Prices in the West



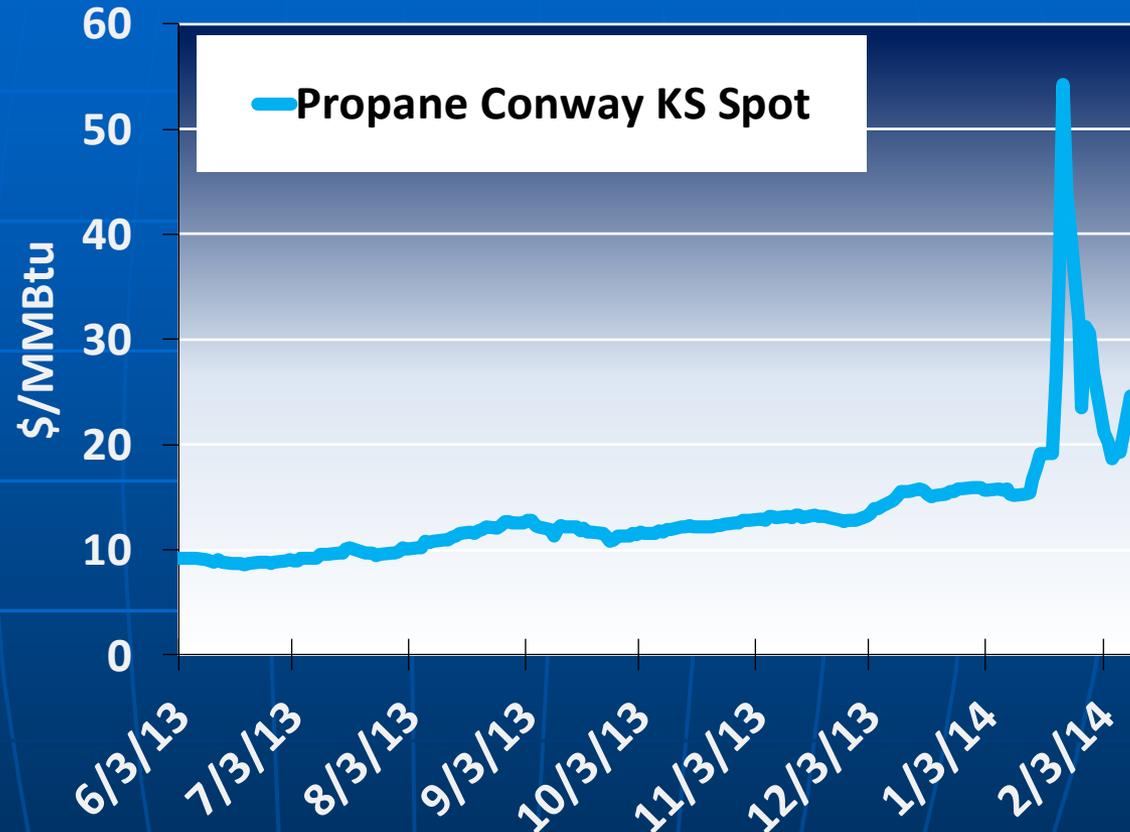
Source: Derived from ICE data.

# Uplift is High in January



Source: Derived from ISO and RTO data.

# Propane Price Spikes



Source: Derived from Bloomberg data.



# Analytics and Surveillance Response

- Automated computer routines (“screens”) that sift through both public and non-public data, such as EQR data, ISO/RTO market data, including offer, uplift, and outage data and FTR holdings, e-Tags, ICE transaction data, large trader reporting data, Form 552 data, Bentek, and Platts.
- Built by DAS staff based on:
  - ✓ Known manipulative schemes
  - ✓ Market rules
  - ✓ Behavior that could constitute manipulation if entered into
  - ✓ Statistical measures that help identify market anomalies
  - ✓ Persistence measures



# Analytics and Surveillance Response

- Analysts routinely run screens and analyze the output, sharing the results with all division staff, including management.
- While DAS surveillance screens are based on different parameters and theoretical approaches, many follow a common framework composed of three building blocks:
  - Tool → Target → Benefiting Position



# Analytics and Surveillance Response

- Algorithmic surveillance screens generated multiple alerts in January and February for New England, the Mid-Atlantic, the Midwest and California.
- Staff followed up on these alerts and other information it received to identify potential market misbehavior.
  - ✓ Coordinated with RTO/ISO and market monitoring staff to discuss market conditions and operations and any issues they identified related to their markets
  - ✓ Conducted dozens of interviews with generators, gas suppliers and traders to gather market insights and facts relating to operations and bidding
  - ✓ Used Order 760 datasets to gather generator uplift payments and offers
  - ✓ Used the recently received CFTC Large Trader Report data to identify financial incentives by company at volatile hubs
  - ✓ Data requests were issued to certain companies



# Analytics and Surveillance Observations

## ➤ Preliminary observations:

- ✓ Natural gas spot prices were at record levels, driven by high demand, pipeline flow restrictions, covering of physical short positions and concern for pipeline penalties .
- ✓ Pricing issues aggravated by power users not knowing gas needs within the gas trading window and pipelines restricting hourly usage flexibility. Users reflected expectation of low Northeast basis in their supply planning (e.g., due to increased Marcellus supply and new transport).



# Analytics and Surveillance Observations

- Preliminary observations:
  - ✓ Higher levels of uplift related to conservative operations and high natural gas prices
  - ✓ Unable to re-supply oil as quickly as needed due to significant oil for power generation (fewer problems in New England due to this winter's fuel program)
  - ✓ Spot market supply was reduced. Firm users were able to buy gas but certain interruptible customers (especially power peaking units) were unable to obtain gas for some periods.
- Our review is ongoing and we will report to the Commission upon completion.



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