

Natural Gas Price Risk – a Customer's Perspective

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SCA



- Leading global hygiene and forest products company
 - ◆ Headquarters in Sweden
 - ◆ \$14.2B sales in 100 countries
 - ◆ 44,000 employees
 - ◆ Europe's largest private forest owner
 - ◆ Sustainability effect

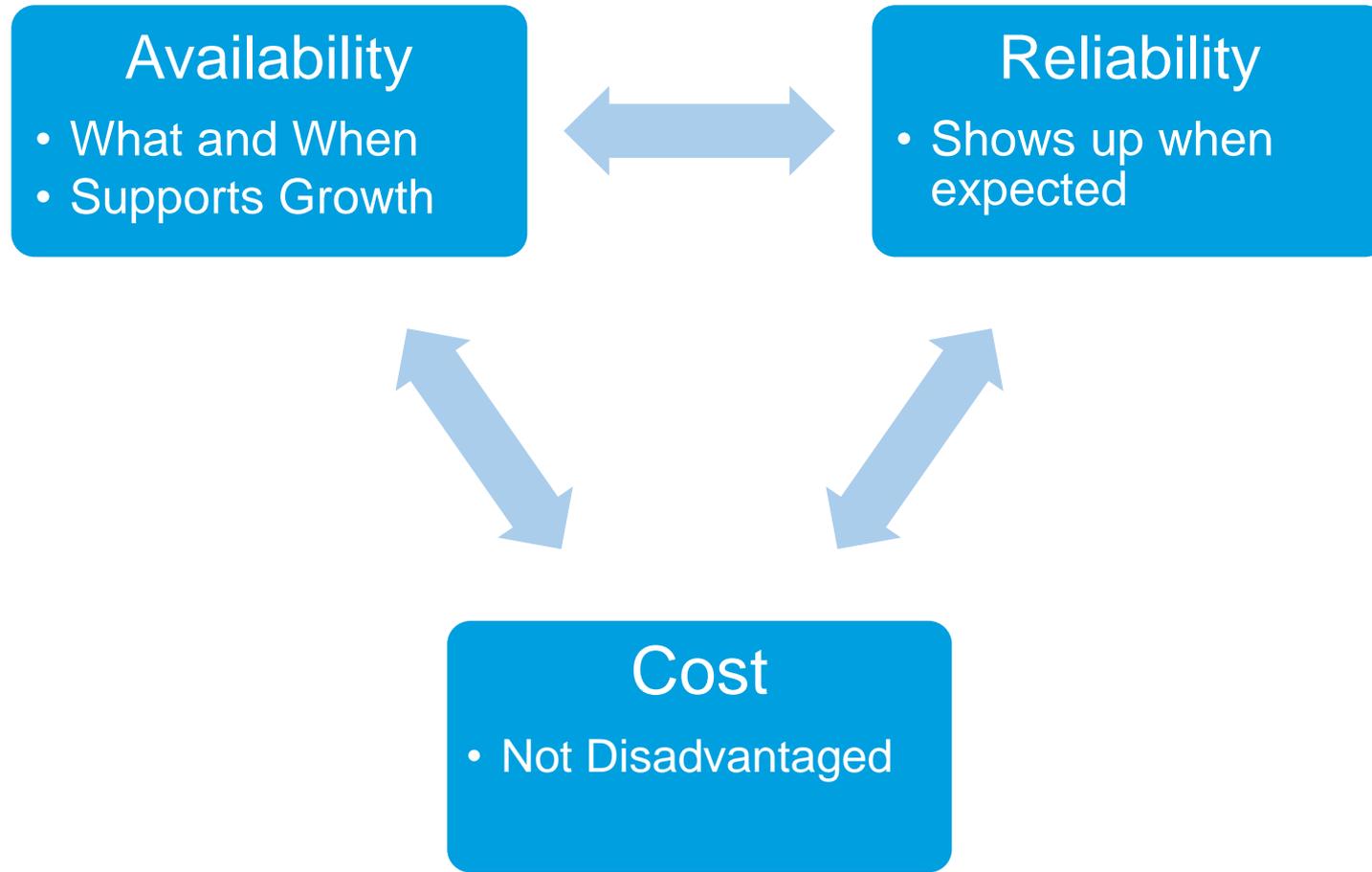


Americas

- ◆ \$3.0B Sales (2013)
- ◆ 1M Tons/yr of recycled fiber
- ◆ 8,300 employees; 1,000 in Wisconsin
- ◆ 23 manufacturing sites
- ◆ Strong global and regional brands



Buyers Expect Choices and Understand the Trade-Offs

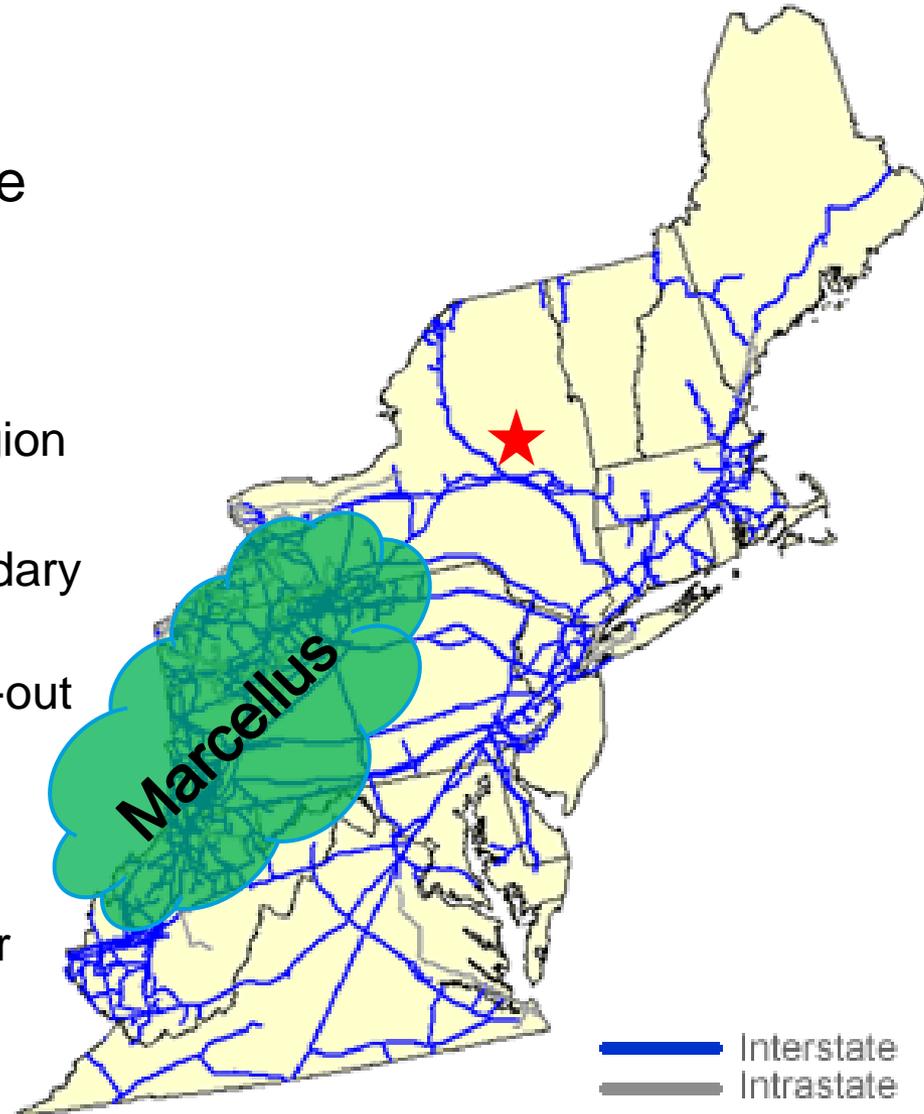


Up-State New York

- Reliability – Adequate

- Availability – Poor
 - ◆ Flows past/through region
 - ◆ Firm not available
 - ◆ +60 days when Secondary Firm did not flow
 - ◆ Lagging capacity build-out

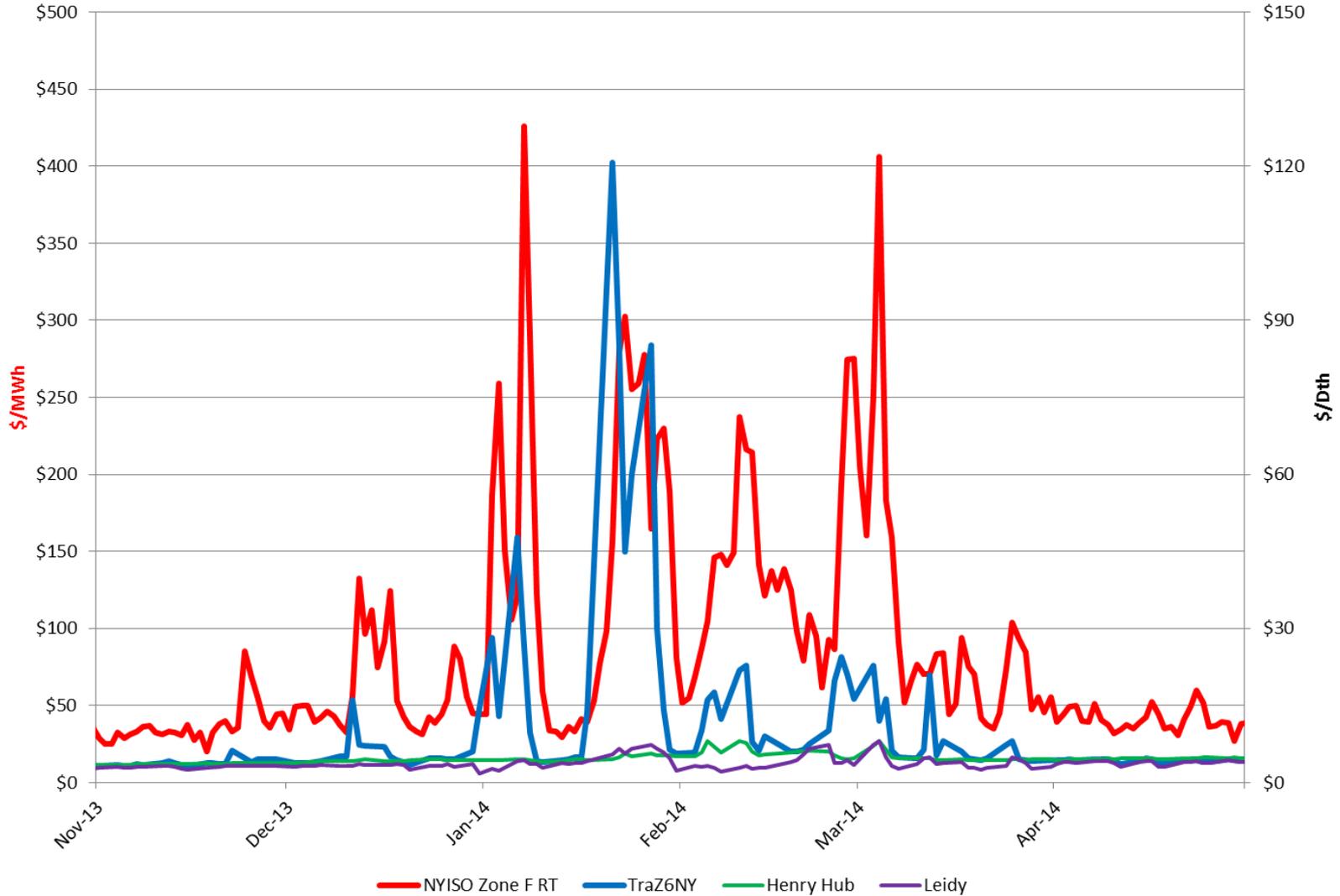
- Cost – Poor
 - ◆ Disadvantaged to other regions
 - ◆ Volatile; higher risk premiums



It's Not Just Natural Gas...



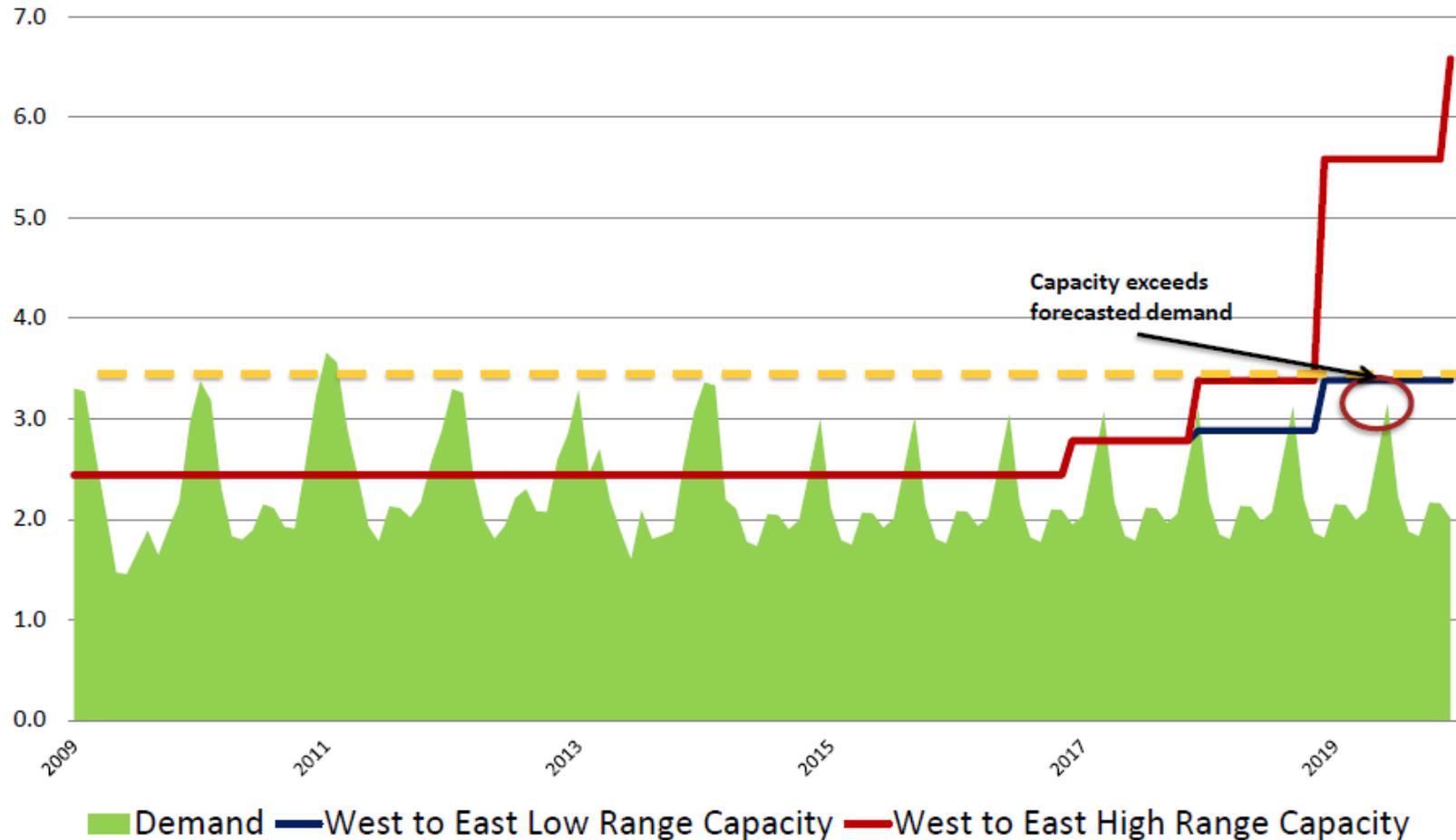
NYISO Zone F RT (Daily Avg) vs. Natural Gas Spot



When Does It Get Better?



New England Demand Vs. Capacity (Bcf/d)



Source: Bentek

What is the Impact?

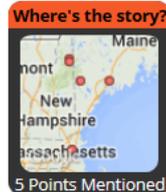
SOARING NATURAL GAS PRICES CAUSE THREE DAY SHUTDOWN AT GPT

Published Date Thursday, 19 December 2013 23:45
Written by Barbara Tetreault

GORHAM – Gorham Paper and Tissue shut down production for three days over the weekend as the extreme cold temperatures spiked natural gas prices. GPT CEO Mike Cummings said about 100 employees were temporarily laid off Saturday, Sunday, and Monday as both production and shipping operations were shut down. He said some maintenance workers remained on duty.

The subzero temperatures caused the price of natural gas supplied by the Portland Natural Gas Transmission System to skyrocket. Cummings said the price of natural gas reached the point where it was "uneconomical to operate the mill".

Last Friday, Cummings said the price per dekatherm was \$33 compared to \$6.50 per dekatherm last December. The price of natural gas dropped Tuesday and again yesterday. Operations resumed Tuesday. "We're running two machines and trying to start a third," said Cummings.



NEWS Posted December 19, 2013

INCREASE FONT SIZE **A+**

Some Maine mills forced to idle lines as price of power soars

The temporary measures during an early cold snap show how the state's natural gas shortage is a threat to businesses and workers.

BY **TUX TURKEL** STAFF WRITER
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Some Maine paper companies limited production or shut down parts of their operations last weekend after extreme cold prompted a spike in wholesale prices for natural gas and electricity.

Huhtamaki Inc.'s molded-fiber mill in Waterville said it will likely idle machines and send workers home again this winter if power prices continue to make production unprofitable. Another workplace, the UPM paper mill in Madison, said it took unspecified steps to adjust its output. Such measures are harbingers of what Maine's manufacturing sector may face in the next few months, highlighting just how vulnerable the state has become to New England's shortage of natural gas, the source of about half the region's electricity.

Example

(Jul13 – Jun14; 10.0MW; 1,000Dth/day)



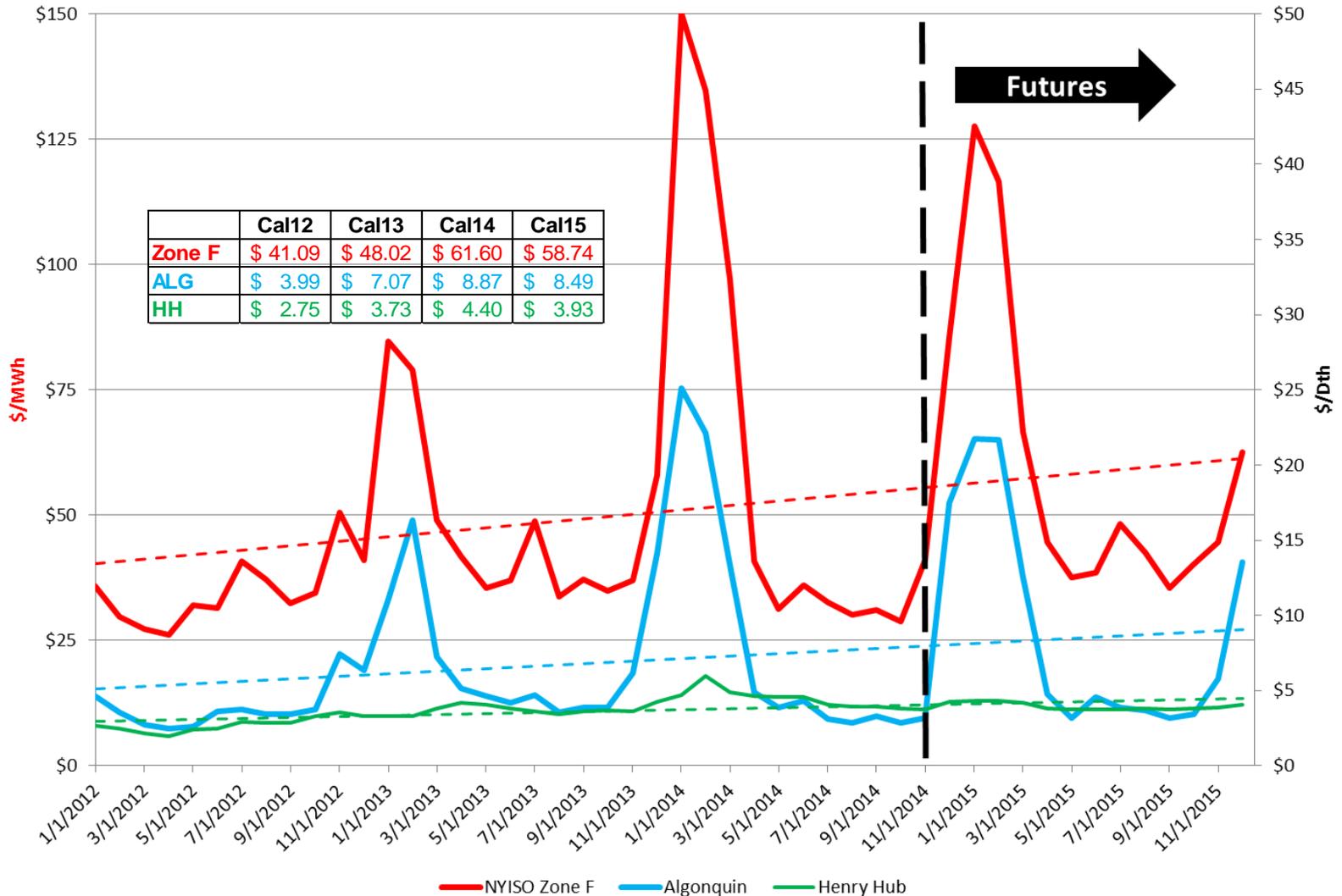
Natural Gas - Algonquin							
Avg Price (\$/Dth)	Total Spend	Cap	Cap Days	Avg > Cap (\$/Dth)	Avg < Cap (\$/Dth)	Spend @<Cap Avg	Peak Premium
\$ 8.90	\$ 3.25 M	2%	8	\$ 33.87	\$ 7.02	\$ 2.56 M	27%
\$ 8.90	\$ 3.25 M	5%	19	\$ 28.70	\$ 7.25	\$ 2.64 M	23%
\$ 8.90	\$ 3.25 M	15%	55	\$ 17.80	\$ 5.49	\$ 2.00 M	62%

Electricity - Zone F							
Avg Price (\$/MWh)	Total Spend	Cap	Cap Days	Avg Price > Cap (\$/MWh)	Avg Price < Cap (\$/MWh)	Spend @Cap Avg	Peak Premium
\$ 61.30	\$ 5.37 M	2%	8	\$ 270.20	\$ 48.46	\$ 4.24 M	26%
\$ 61.30	\$ 5.37 M	5%	19	\$ 192.49	\$ 50.00	\$ 4.38 M	23%
\$ 61.30	\$ 5.37 M	15%	55	\$ 92.83	\$ 40.31	\$ 3.53 M	52%

Forward Curves



NYISO Zone F Monthly vs. Natural Gas Spot



Conclusions



- Buyers understand the trade-offs
- It's not just natural gas
- Relief in the north-east is several years away, while the situation worsens.
- Impact can be severe
- If it can happen in NY, can it happen in WI?
 - ◆ Coordinated planning?
 - ◆ Market signals and incentives to build capacity?
 - ◆ Lagging capacity build-out?



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