



Natural Gas in the Northeast Winter 2013-2014

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Michelle Bloodworth
Senior Director, Power Generation
America's Natural Gas Alliance



ANGA Members



The American Shale Revolution



PGC: 2012

1,073 TCF shale

2,688 TCF total

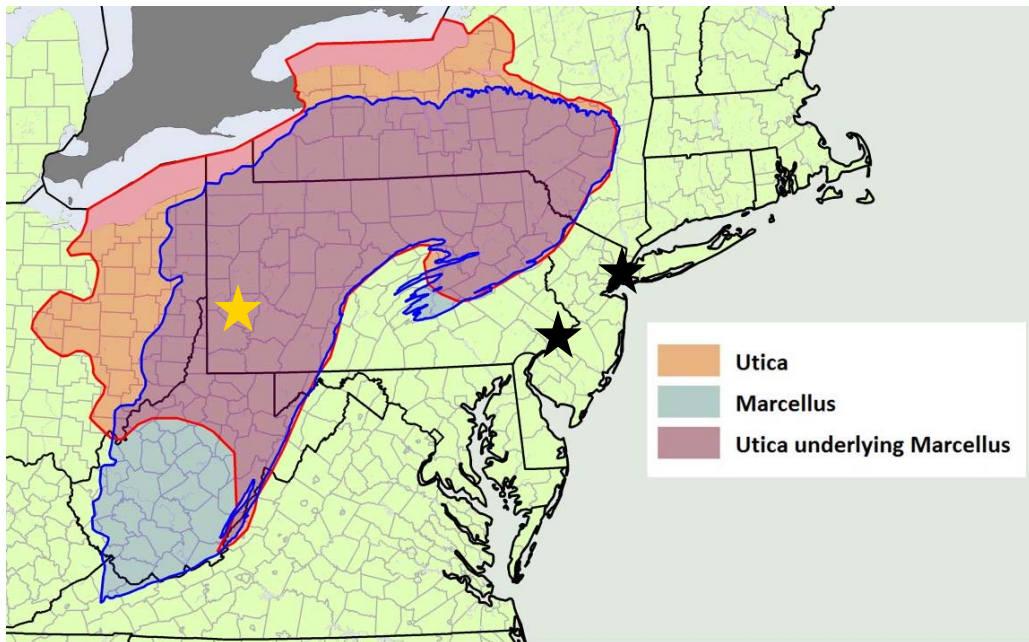
24% INCREASE
in just two years

Source: Potential Gas Committee
(Includes Proved Reserves)

No nation produces more natural gas than the United States, and we are forecast to become the world's top oil producer by 2015.

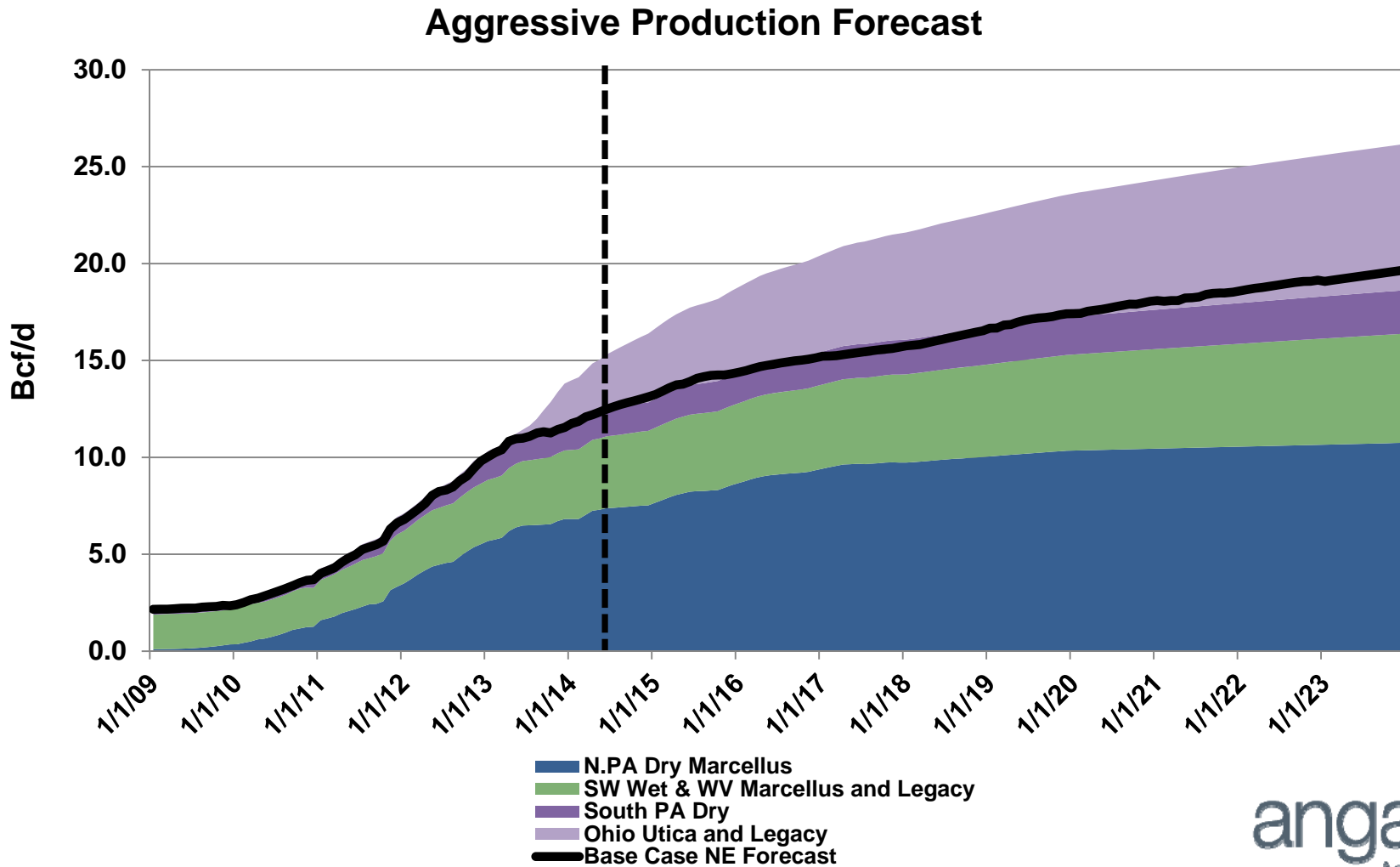


Game Changer



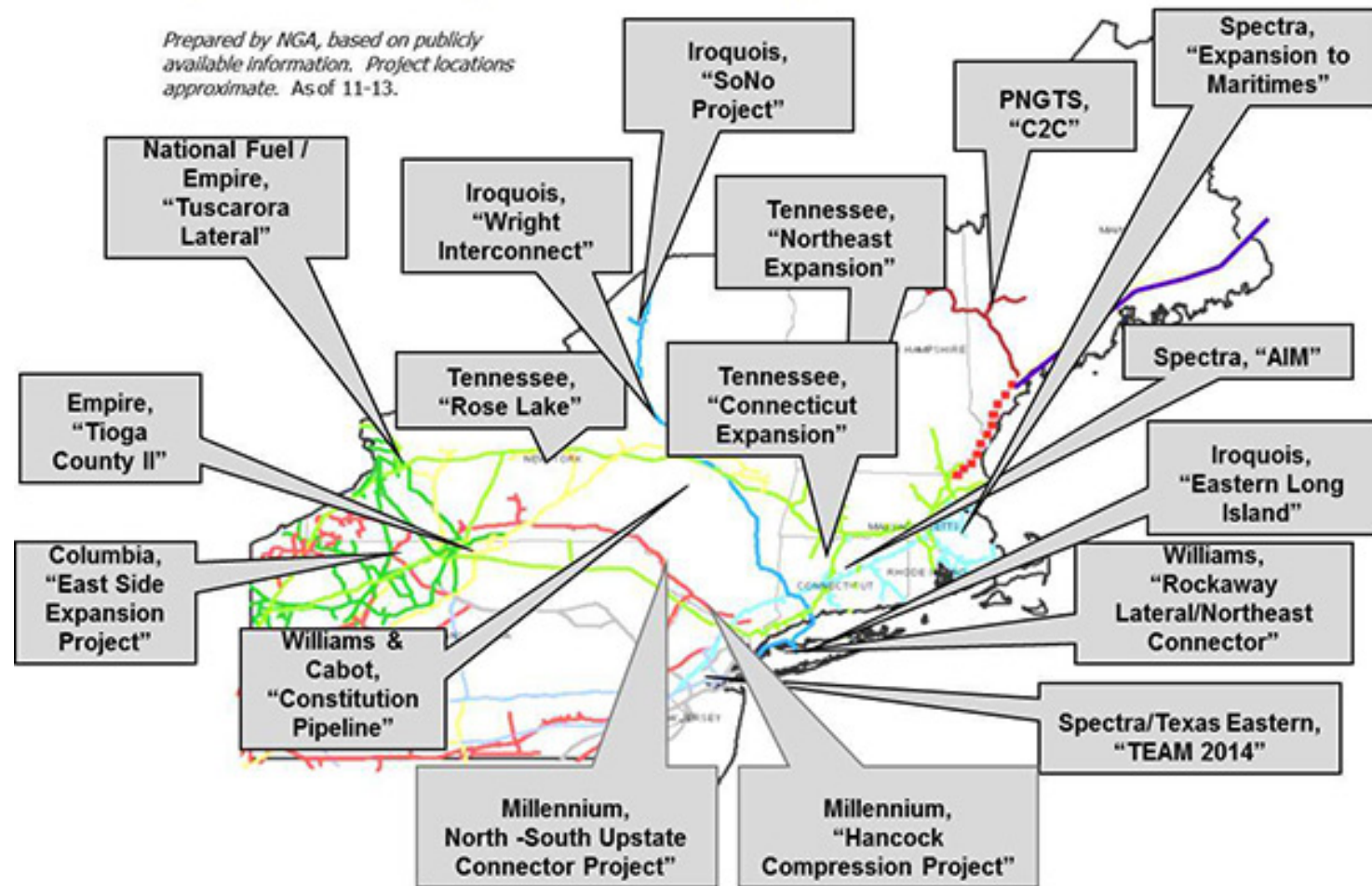
- About half of U.S. natural gas production growth to come from this region by 2020.
- If the Marcellus Shale were a country, its gas output would rank seventh in the world, surpassing Saudi Arabia, China and Norway.
- Marcellus production could surpass Canada before the end of this year, leaving only Iran, Qatar, and Russia as larger producers.

Strong and Sustained NE Production Growth



More Expansion on the Way

Proposed Pipeline Projects



Source: Northeast Gas Association

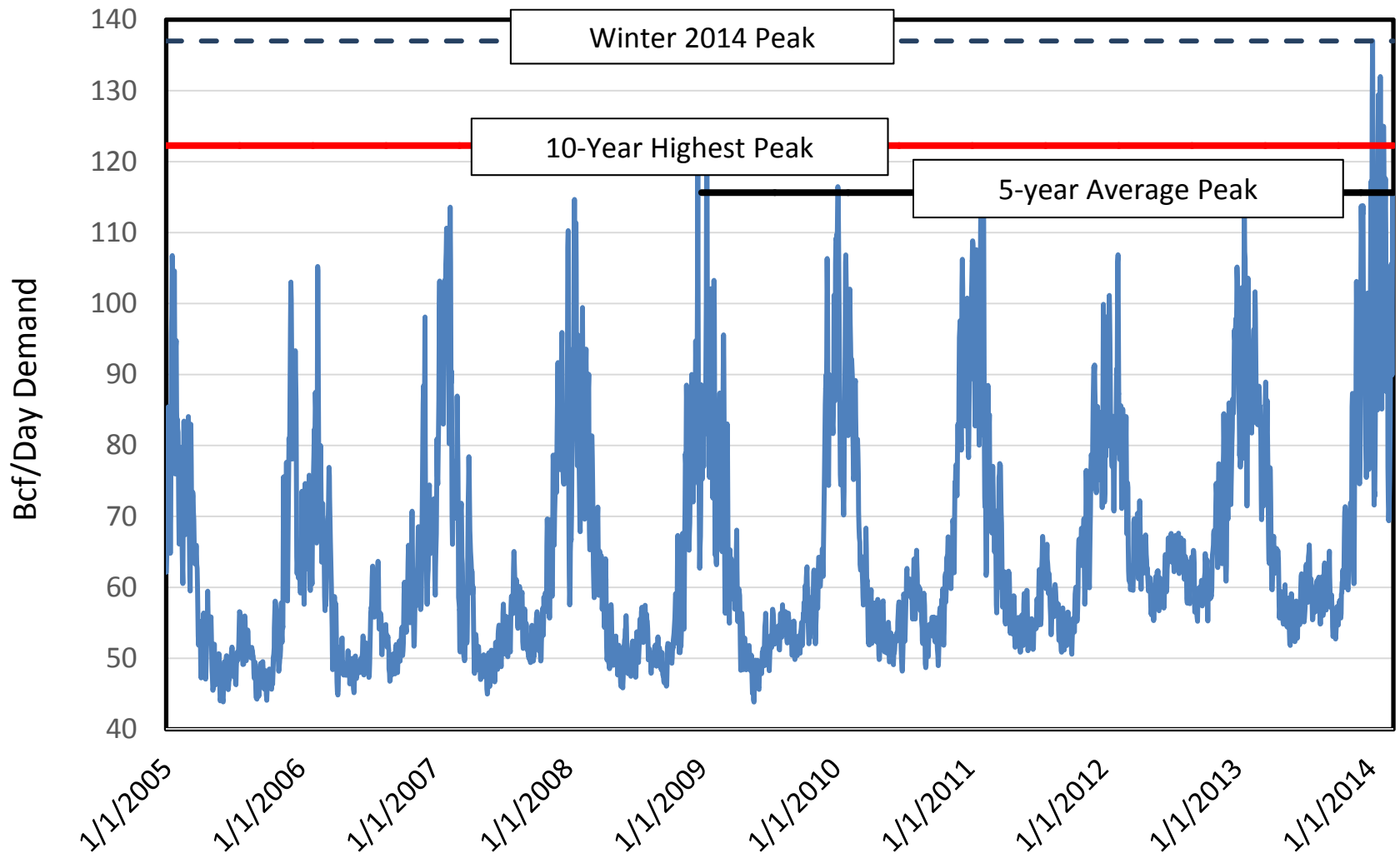
This Was Simply a Colder Winter

- January 2-3: 24 Inches of snow in Northeast
- January 7: 35 Northeastern cities set cold records
- January 8-9: Blizzard in Northeast
- January 28-30: Snow and Ice cover South
- February 21: Extreme cold in East
- Overall: Across Eastern half of US, 9 states set top-10 cold records; Northeastern temperatures went below zero over 10 times.

Source: NOAA National Climatic Data Center State of the Climate Report, March 2014, courtesy of the Natural Gas Supply Association



US Gas Demand--2014 Peak vs. 10-year History



Source: Bentek, a unit of Platts

Supply and Weather

- Supply is adequate. Everyone with firm contracts received the gas they nominated. No one with firm contracts was curtailed because of capacity constraints.
 - Voluntary requests for load reduction by LDCs, RTOs/ISOs or utilities are common in both the electric and gas industries and a way to balance out usage prior to engaging mandatory tools.
- Perfect storm:
 - Sustained record setting temperatures strained the system but in reality did not highlight any weaknesses or needs for increased infrastructure that were not previously identified.
 - Significant generation offline

Region	30 yr Rank	Total HDDs
Northeast	2 nd	4495
Southeast	5 th	2088
Midcon Market	1 st	5958
Midcon Producing	2 nd	4446
Texas	3 rd	2255
Southwest	30 th	1071
Northwest	17 th	3429
Rockies	18 th	4522
US	4 th	3430

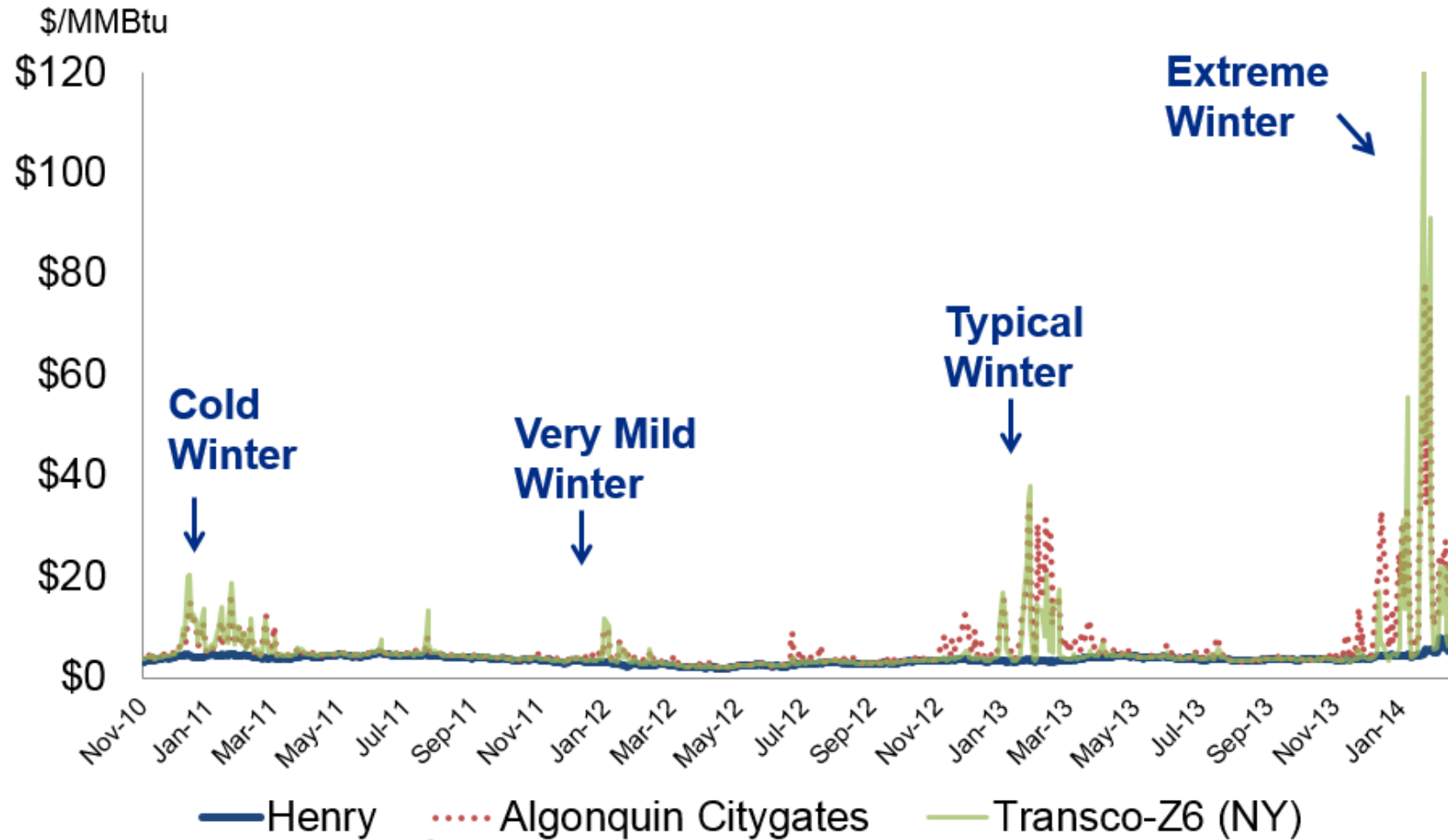
Slide 9

AF1

Additional potential source: slides from April 1 FERC technical meeting

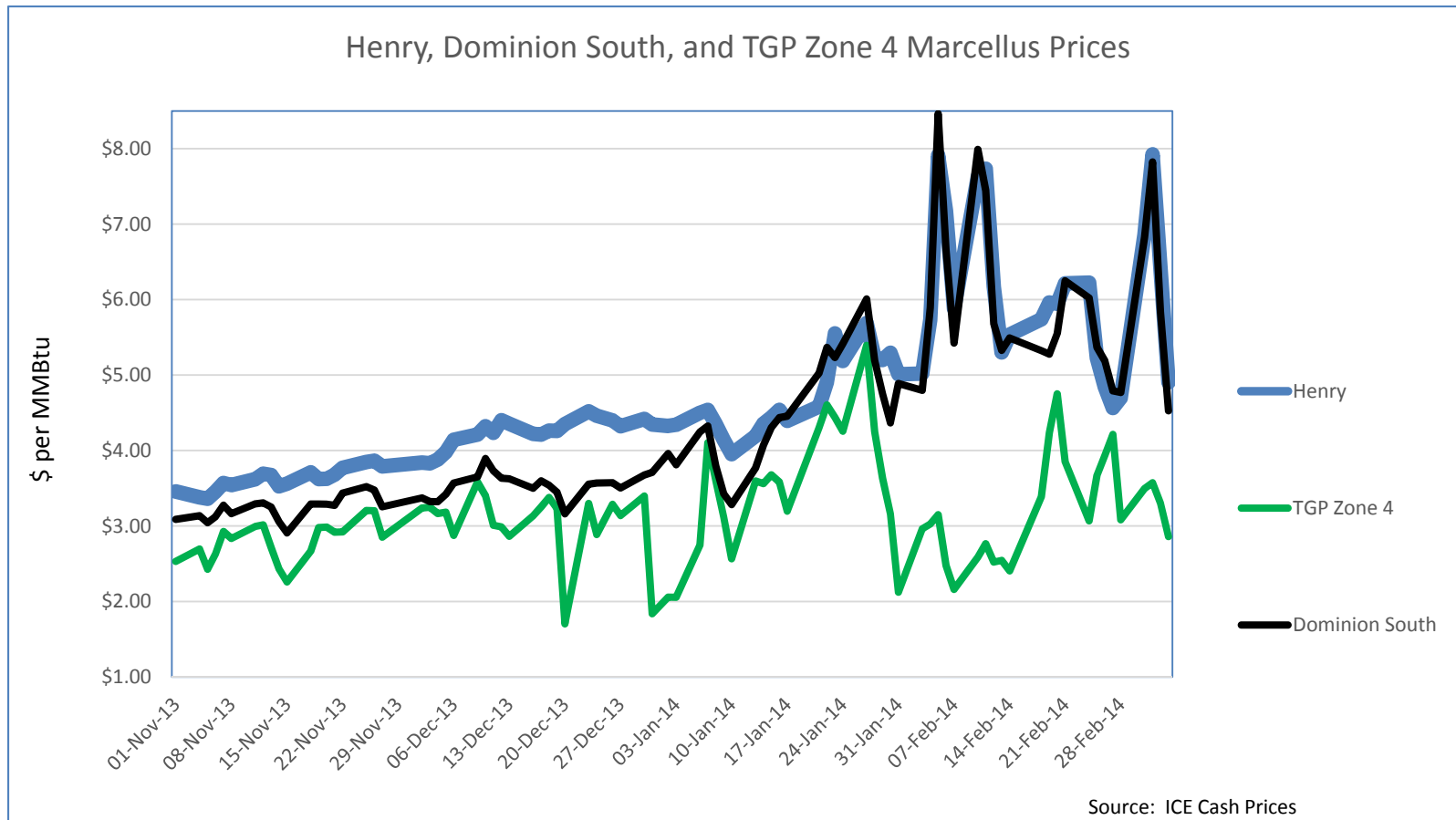
Amy Farrell, 4/22/2014

Henry Hub Prices Stable, but Regional Spikes Caused by Bottlenecks



Source: Intercontinental Exchange

The Basis Blowout Didn't Happen in Pennsylvania



Northeast Prices

- What about the big spikes in Northeast spot prices?
- Impact of infrastructure constraints.
- Producers are also hurt by pipeline constraints.
- Bottom line: More infrastructure is needed.

Regulatory Considerations

- Domestic demand is growing in key sectors such as power generation, manufacturing, and transportation, but steady production growth in the Northeast is outpacing demand growth.
- Suppliers met record demand in coldest winter in nearly 30 years
- Customers should have a varied supply portfolio and not rely on spot gas alone – decisions count
- Infrastructure solutions in New York and New England are critical to resolve supply bottlenecks and getting gas to where it is needed most
- State agencies should process infrastructure applications expeditiously and seek negotiated solutions where appropriate, in order to eliminate system constraints as soon as possible



www.anga.us
twitter @ANGAus

Michelle Bloodworth
Senior Director, Power Generation
America's Natural Gas Alliance
mbloodworth@anga.us