The Great Natural Gas Flow Reversal of 2015
What Goes East goes West. What Goes North......???

Annual Meeting and Think Day

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Price & Basis – 2007>2009

The Great Divide

Price Below Henry

Price Above Henry

2007

2009

$(2.90)  $(0.19)  $(0.19)

$6.94  $3.27  $0.27

$1.49  $0.33  $0.11

$0.27  $0.11  $0.33

$(0.19)  $0.27  $0.33

$6.94  $3.27  $0.27

$1.49  $0.33  $0.11

$(2.90)  $(0.19)  $(0.19)
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Massive Growth in U.S. Natural Gas Production

Current U.S. Gas Production Levels At All Time Highs

- 16.2 Bcf/d Incremental Growth

» 2009 production decline was due to lack of downstream infrastructure

Source: BENTEK
Northeast Production Growth
Supporting Total Production Numbers

High rates of return in the ‘Wet’ gas window from NGLs

Inventory backlog of wells in the ‘Dry’ gas window

Source: BENTEK
Marcellus Sees Aggressive Growth in PA; Dry Gas Production Still Increasing

Pennsylvania Production Receipts by Pipeline

Source: BENTEK
Pipeline and Frac Crew Constraints Build Large Backlog of Wells

Inventory of drilled but non-producing wells will take five years to clear.
High BTU Content = Rich in NGLs
Typical Rates or Return by Basin

Source: BENTEK
U.S. Dry Gas Production Forecast to Grow 11.5 Bcf/d from 2012 to 2017

Source: BENTEK
Regional Natural Gas Production Outlook

Source: BENTEK
Northeast Supply/demand

Source: BENTEK
Natgas for Power Generation

Source: BENTEK
LNG Exports

Source: BENTEK
The Great Flow Reversal of 2015
Flow Analysis – Intra-Regional
Flow Analysis – Intra-Regional

- Pipelines need to repurpose: Reverse or convert to another hydrocarbon such as NGLs or crude oil
- Significant re-plumbing of capacity will be needed for storage fields
Regional Prices/ Basis
The Great Natural Gas Flow Reversal of 2015
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» Northeast natural gas production will increase by 9.5 Bcf/d to 18 Bcf/d in 2017

» Supply will have increased enough to cover Northeast demand by 2017 – the region will be self sufficient

» The onslaught of production will curtail or reverse the flow of pipelines that have traditionally supplied the region

» Continental gas flows will transition to a east-to-west pattern

» Northeast prices will decline as supply exceeds demand, particularly in the summer; Southeast prices will increase
The Marcellus Changes Everything

Thursday, October 4, 2012

Yesterday the highest and lowest natural gas prices in the country were only 100 miles apart - on the same pipeline. Tennessee Zone 4 averaged $1.65/MMBtu while Zone 6 came in at $2.56/MMBtu. Weird stuff like this happens in the middle of winter, but not in late spring. In today’s world of tiny natural gas basis differentials, this is an incredible shoulder-season differential of more than $0.90/MMBtu. What could cause such a rupture in the space-time continuum? How long will the situation continue? Why does this development portend dramatic, long-term changes in natural gas flows across North America?