



Natural Gas Outlook and Drivers



The
Fertilizer Institute

Nourish, Replenish, Grow

November 2012

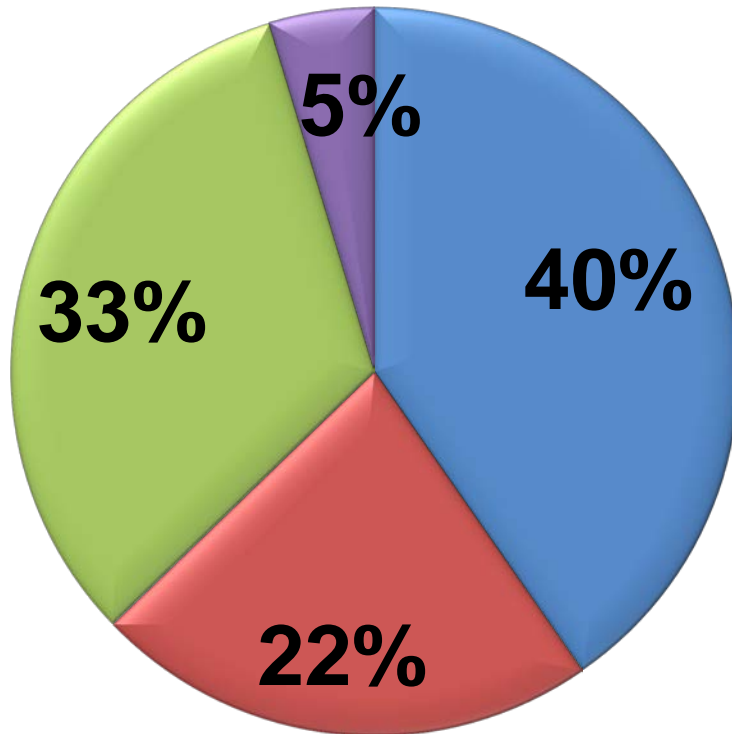
BENTEK Energy

Who We Are

- Based in Evergreen, CO
- 120 People
- 400+ Customers
- Subsidiary of McGraw-Hill/Platts

What We Do

- Collect, Analyze and Distribute Information and Knowledge to the Energy Industry
- Reports, Data, Consulting, and Tools

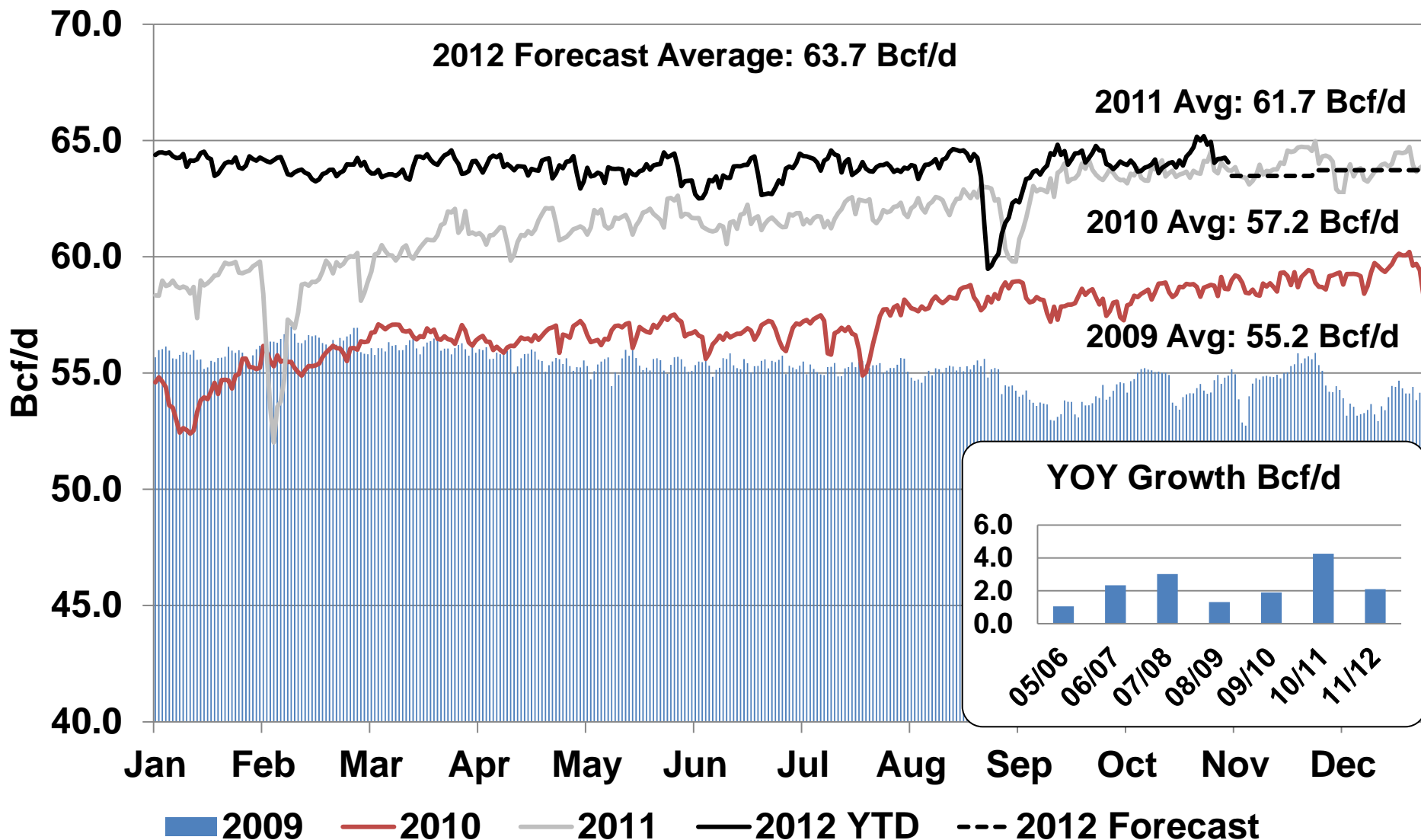


- Majors, Producers, Mktrs, Industrials
- Pipelines, Utilities, Midstream
- Financial and Hedge
- Government, Associations, Consultants

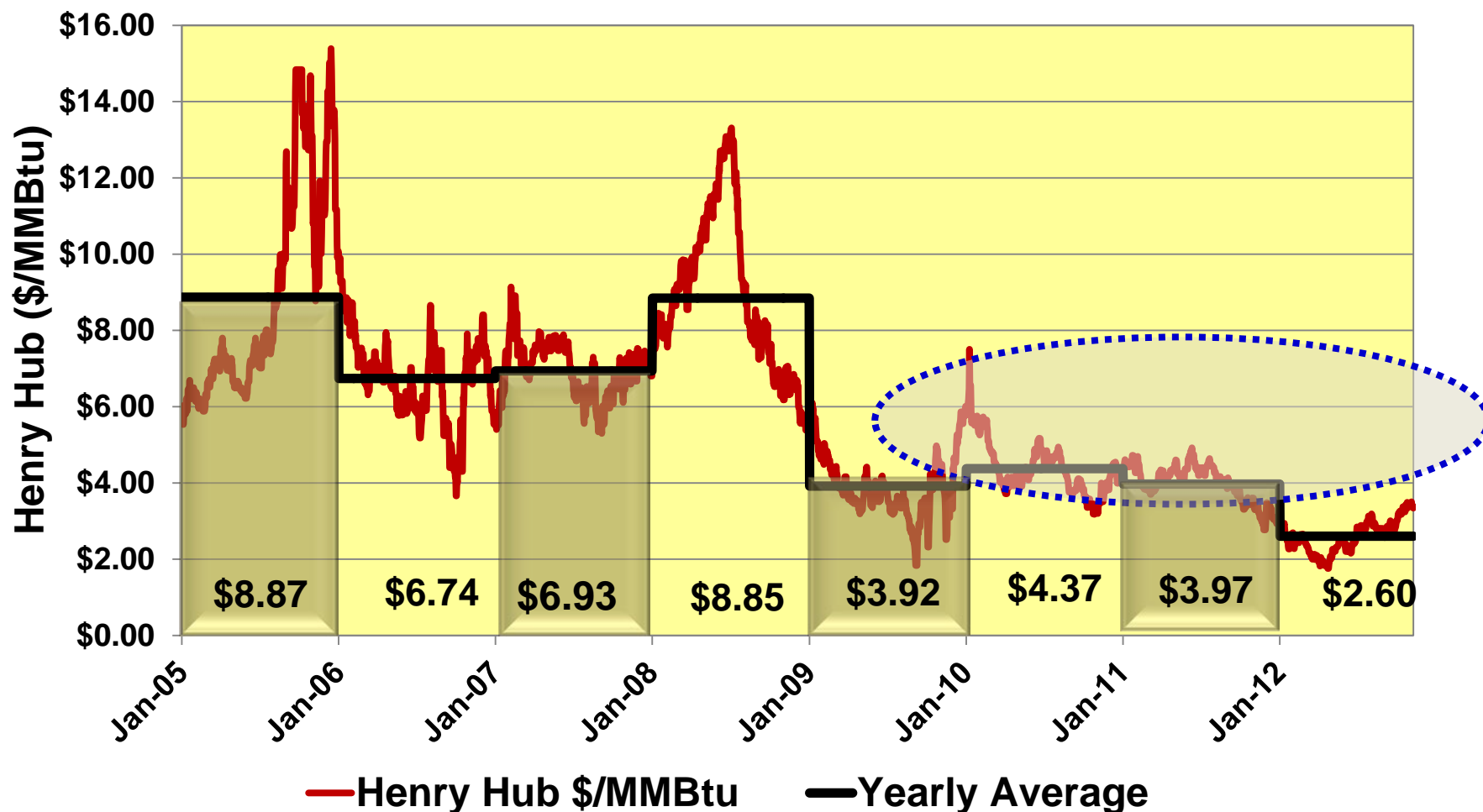
Presentation Outline

- ❖ **Natural Gas**
 - **Driven by the quest for NGLs and Oil**
 - **Not enough demand**
 - **Expect low prices**
- ❖ **NGLs**
 - **Production rising**
 - **An infrastructure play**
 - **Product must be exported to balance the market**
- ❖ **Oil**
 - **N. America reaching new production heights**
 - **An infrastructure play**
 - **Will dramatically change US dependence on foreign oil**
- ❖ **Conclusions & Implications**

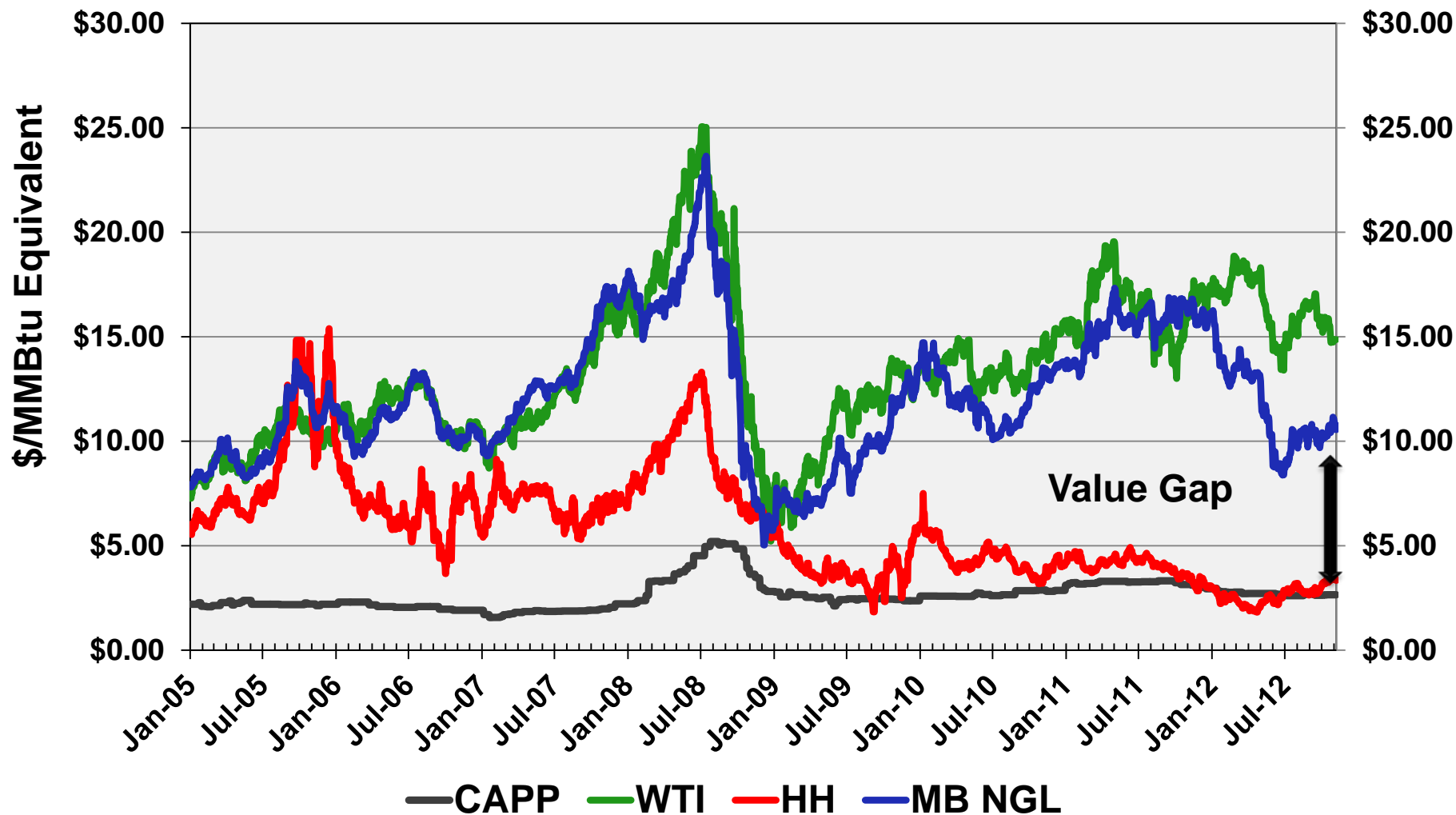
U.S. Natural Gas Production Up Year over Year But, Growth Has Slowed Due to Transition to Liquids



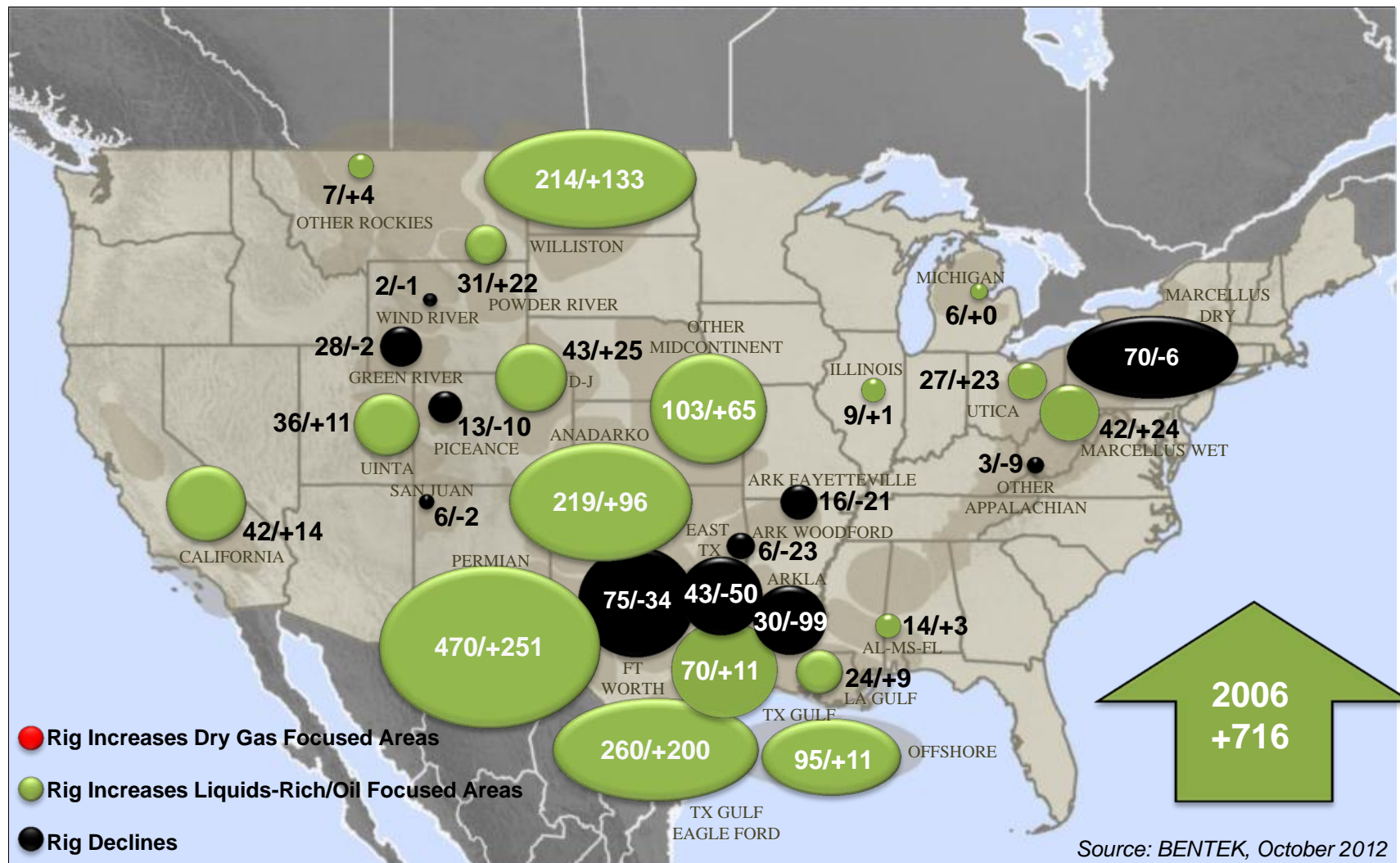
The Shale Revolution Drives Down Prices



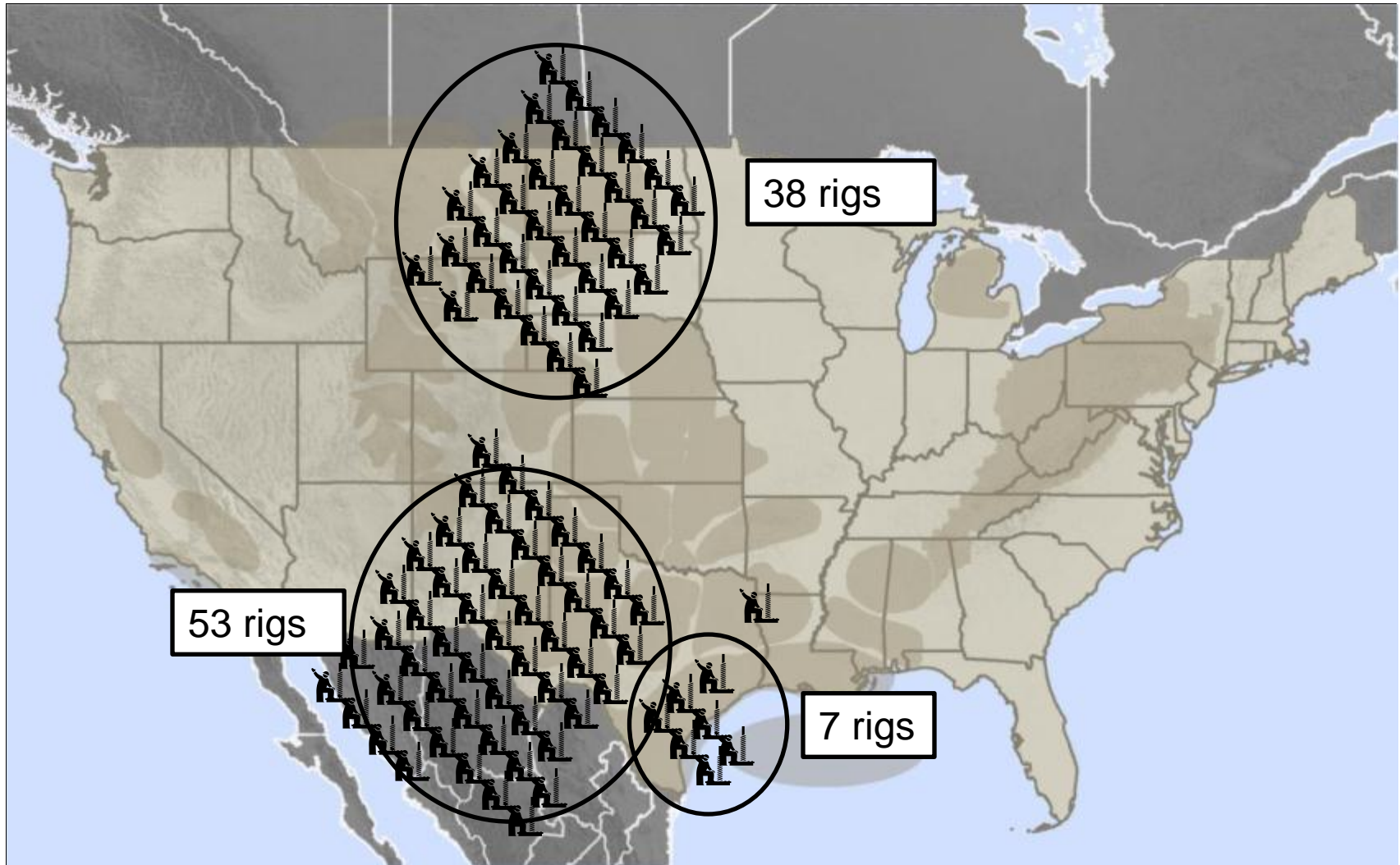
Gas, Oil and NGL Price Comparison: MMBTU Equivalent



Plays With High Returns Attract Drilling Rigs

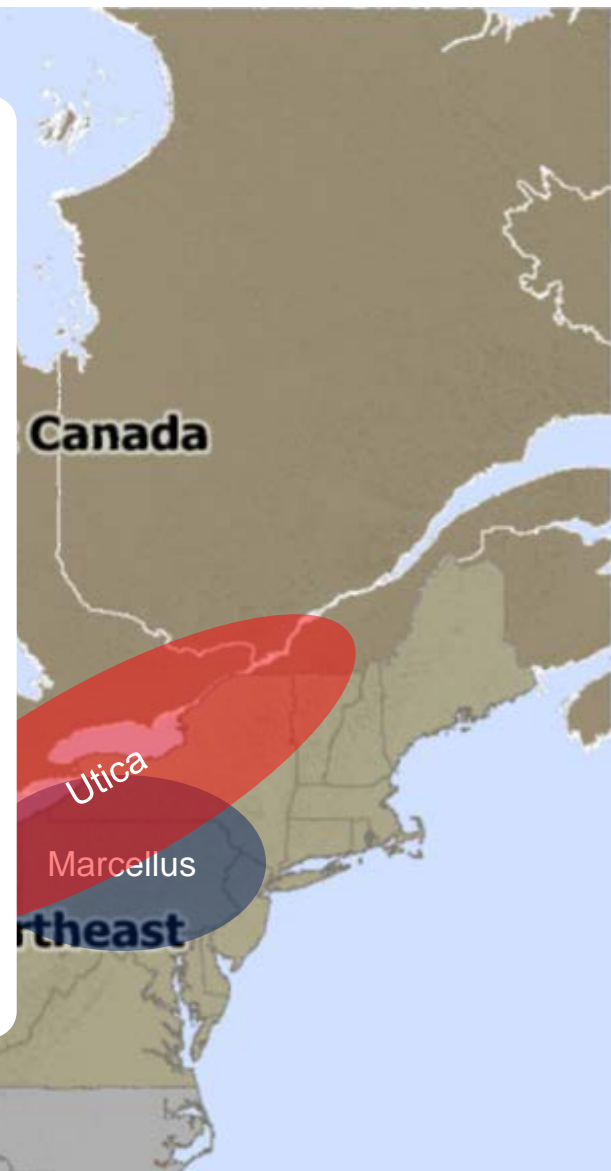
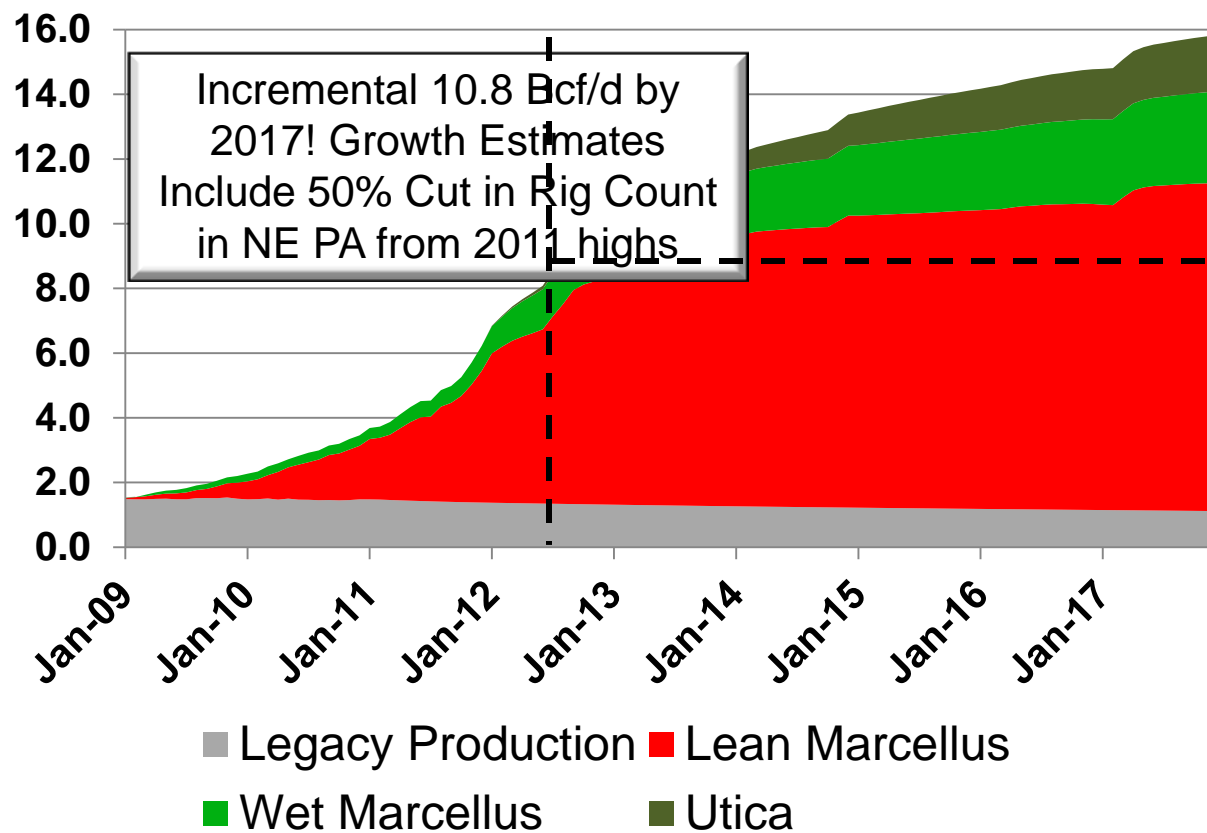


Associated Gas – Is it enough?

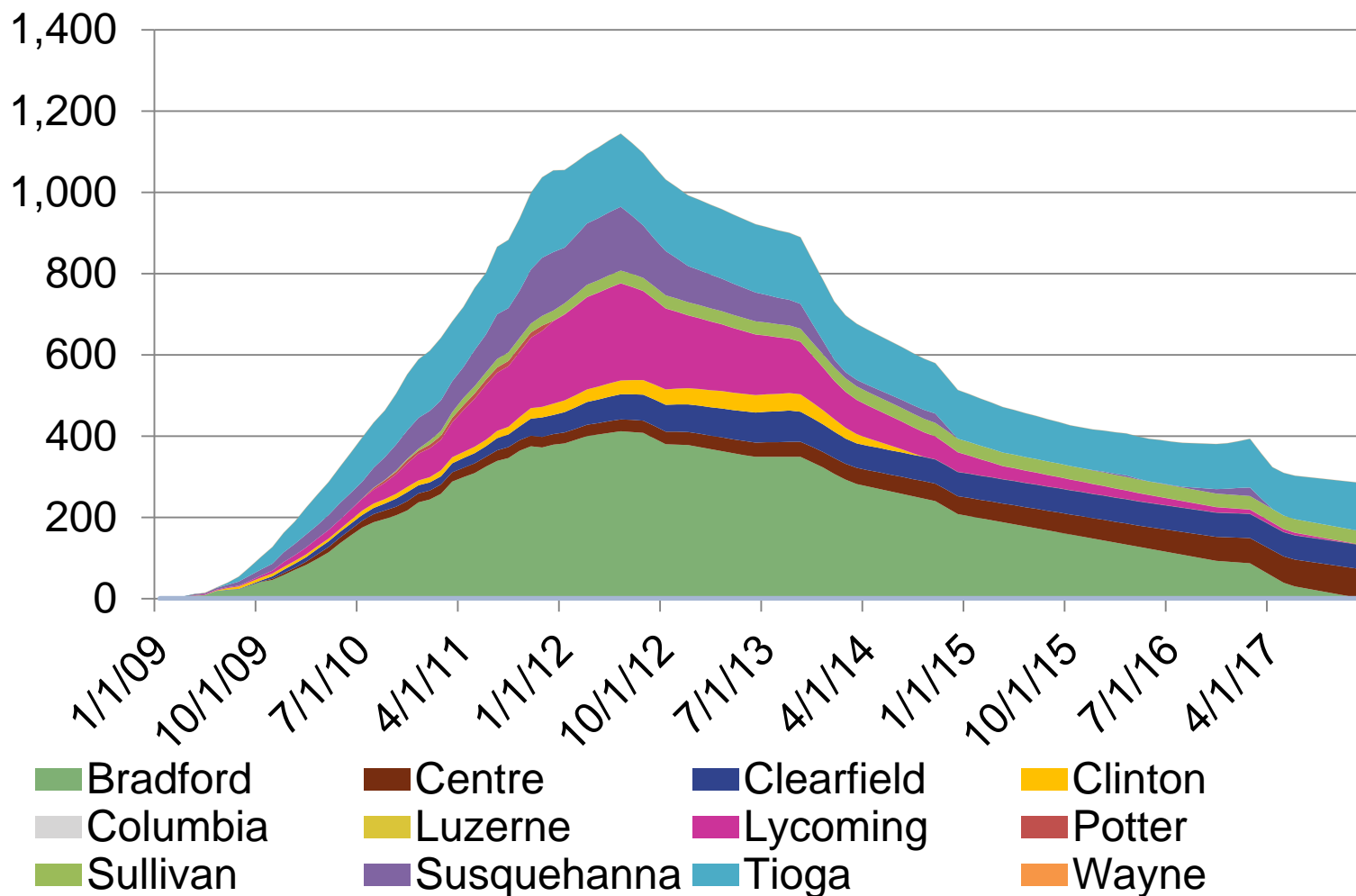


Northeast Production Potential 15.5 Bcf/d by 2017

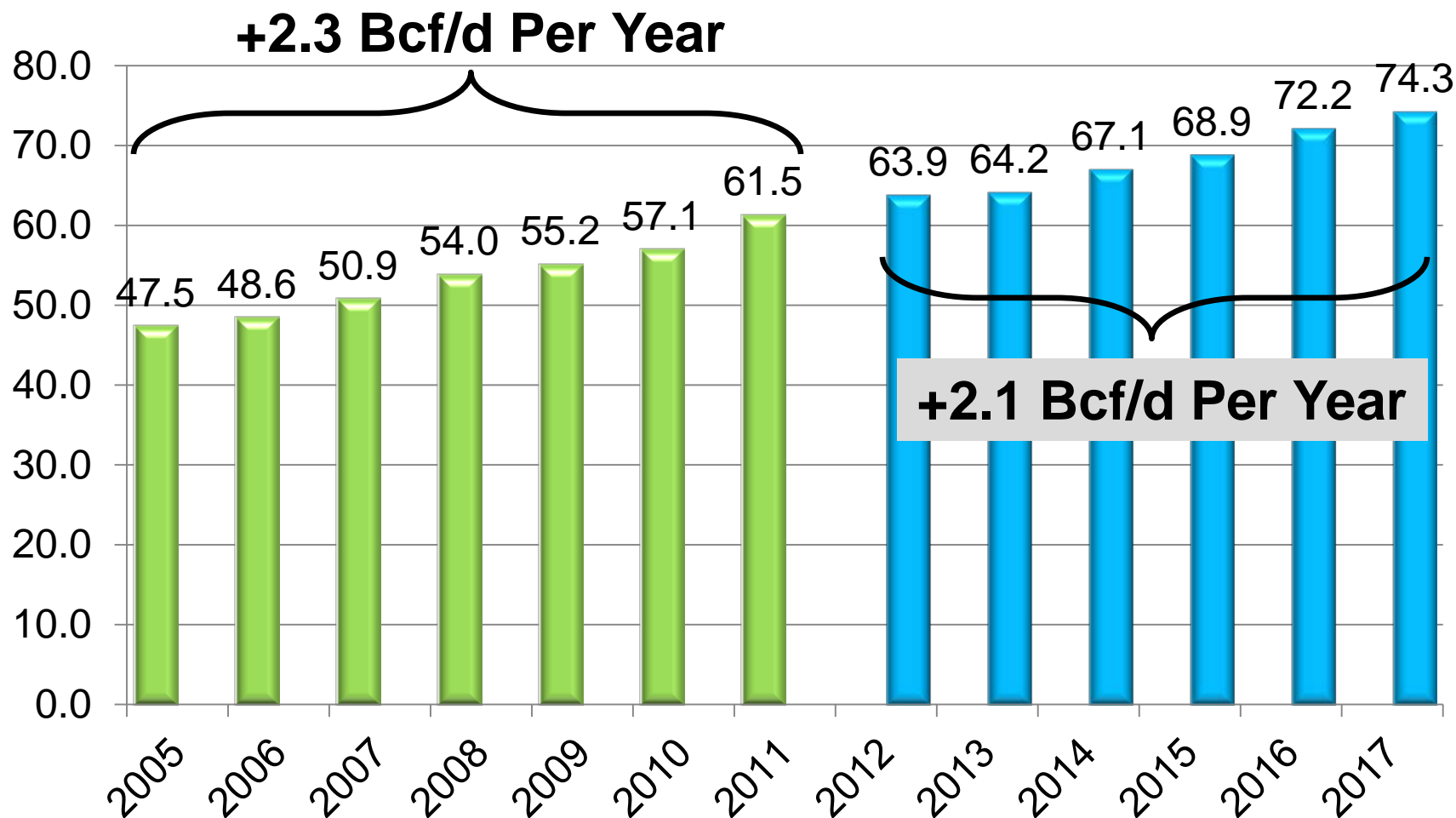
Northeast Production Profile (Bcf/d)



Lycoming, Bradford, Susquehanna Backlog Gets Worked Off with 50% Slow Down in Drilling

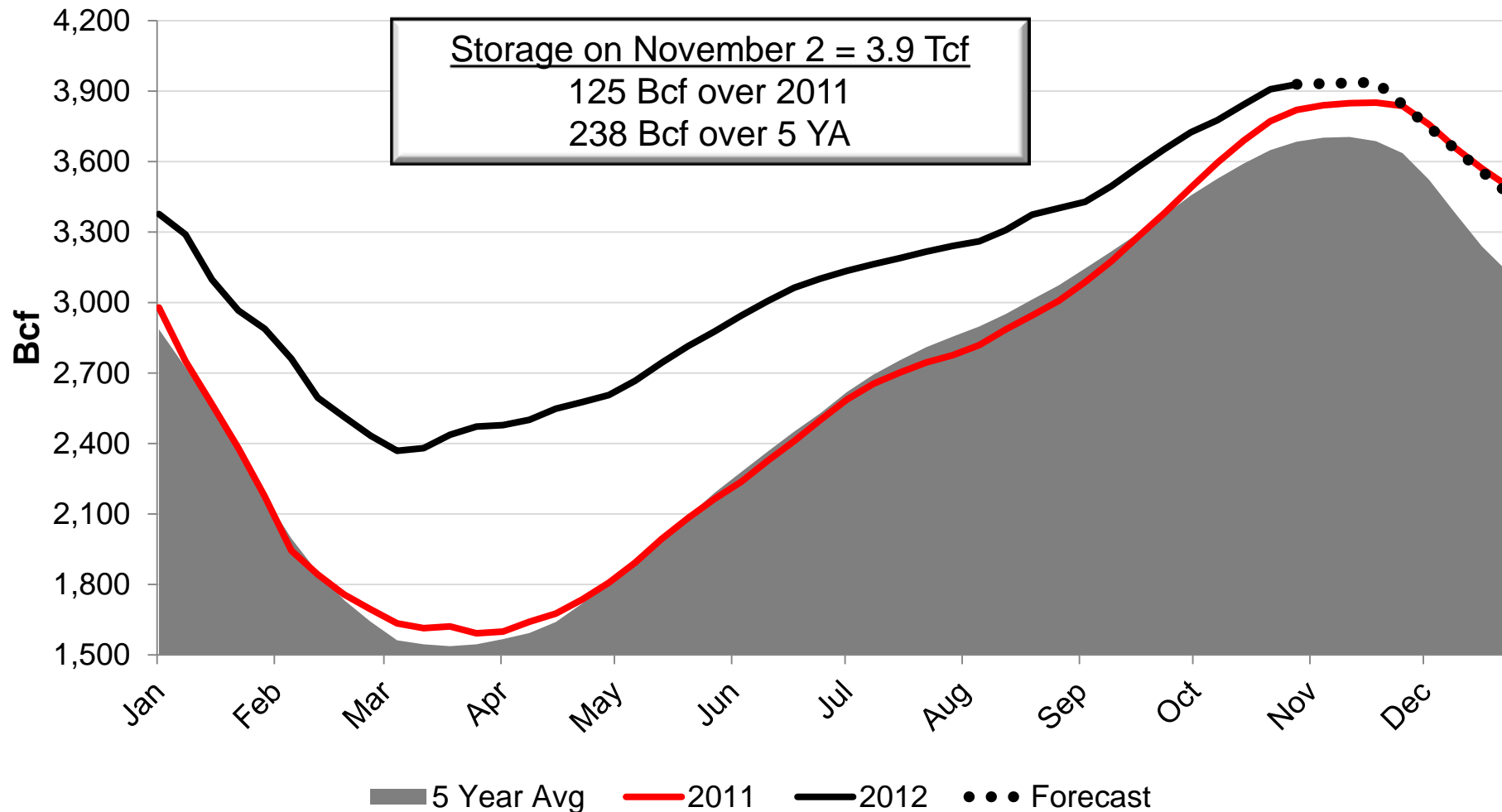


U.S. Dry Gas Production Forecast to Grow 12.8 Bcf/d from 2011 to 2017



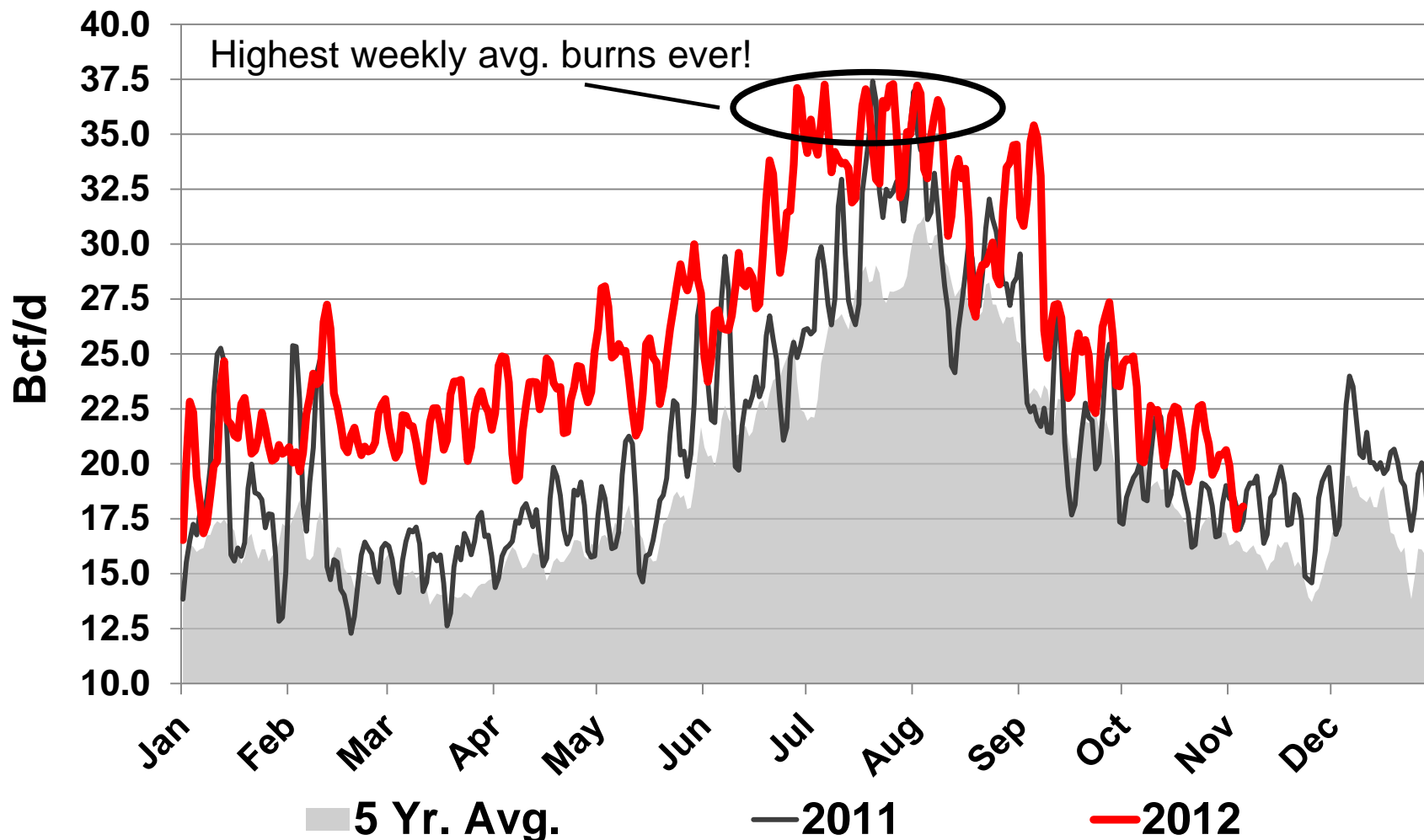
Starting Winter at Record High Inventories

U.S. Storage Inventories



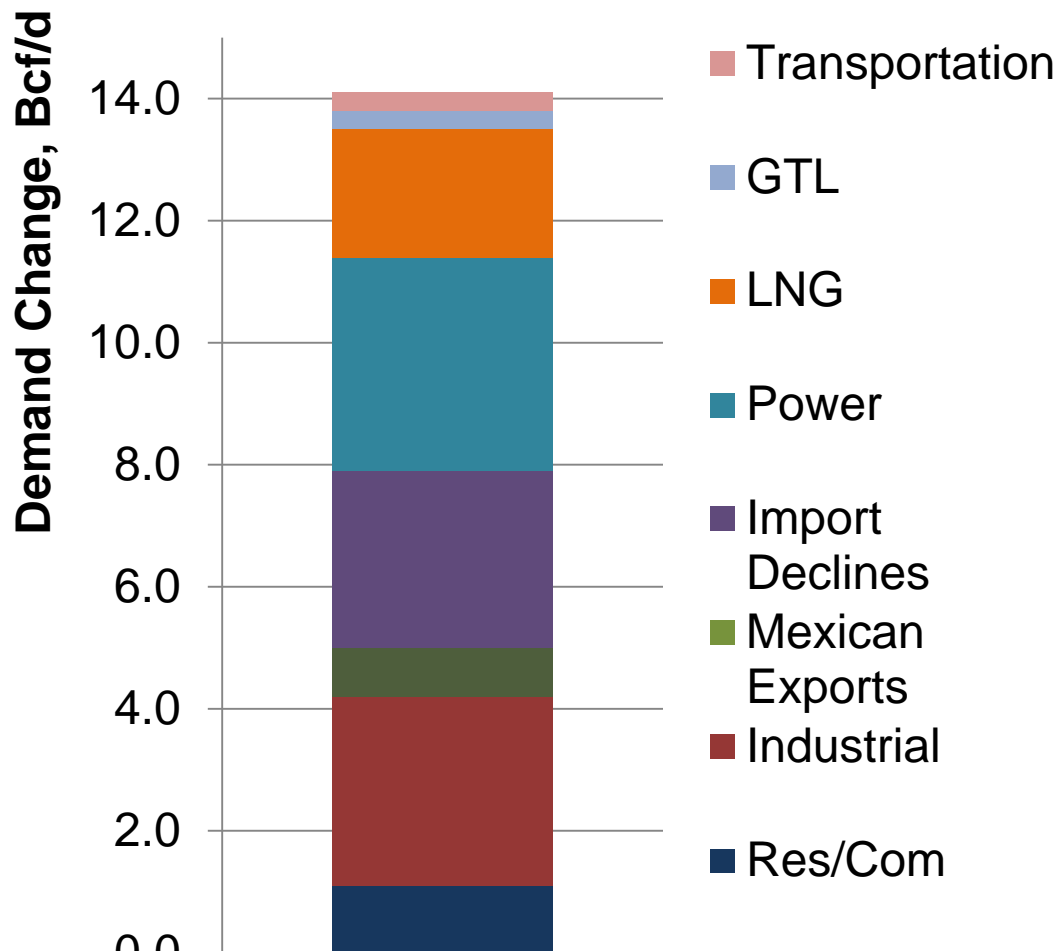
Source: BENTEK Storage Analytic Report and Data Warehouse, Market Call
 Note: Storage Forecast as of September 2012

Gas Demand from Power Up 4.7 Bcf/d (24%) in 2012



Natural Gas Demand Driven by Capturing Market Share

Natural Gas Demand Growth Scenarios Through 2017

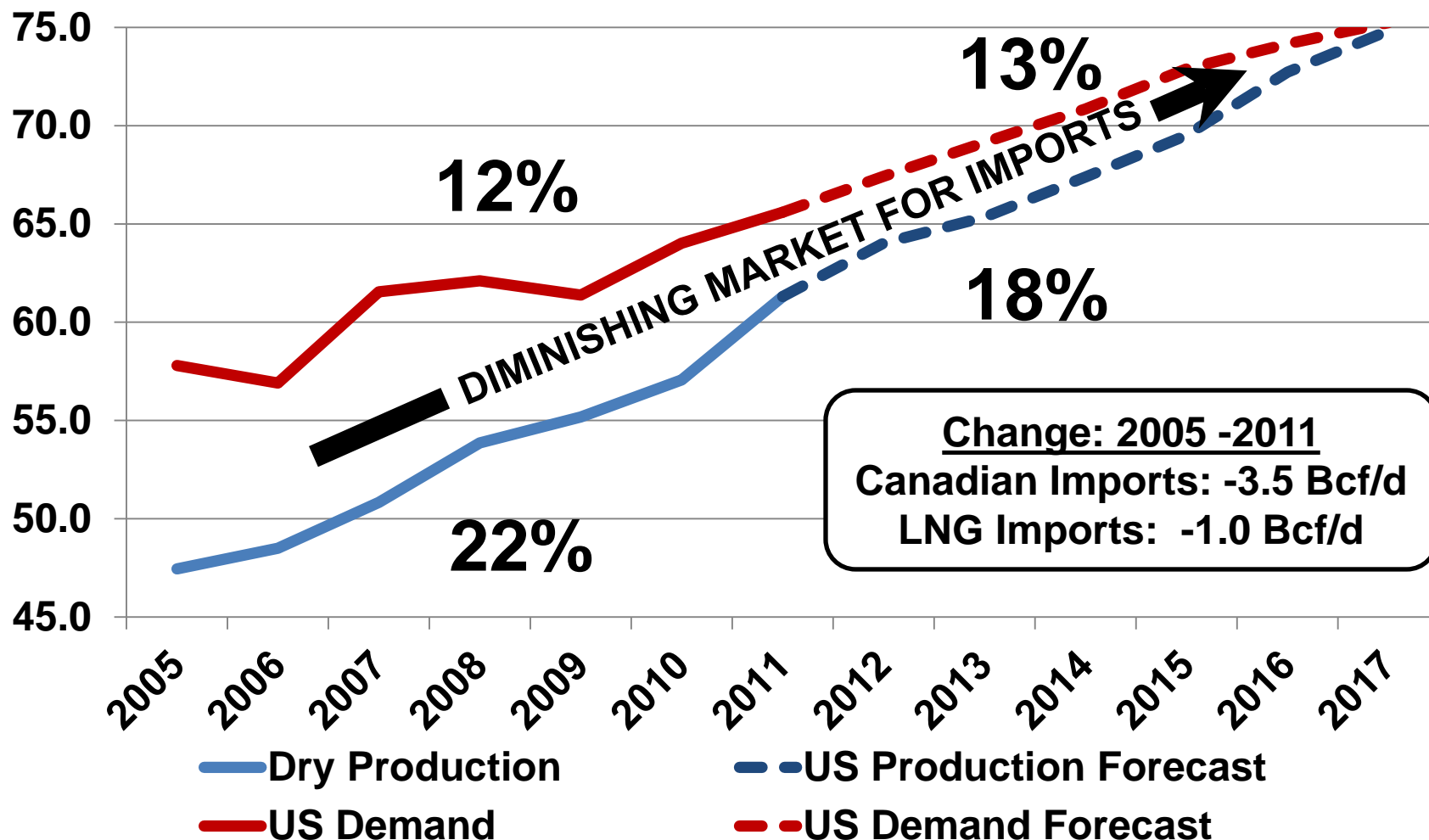


Scenario Risks:

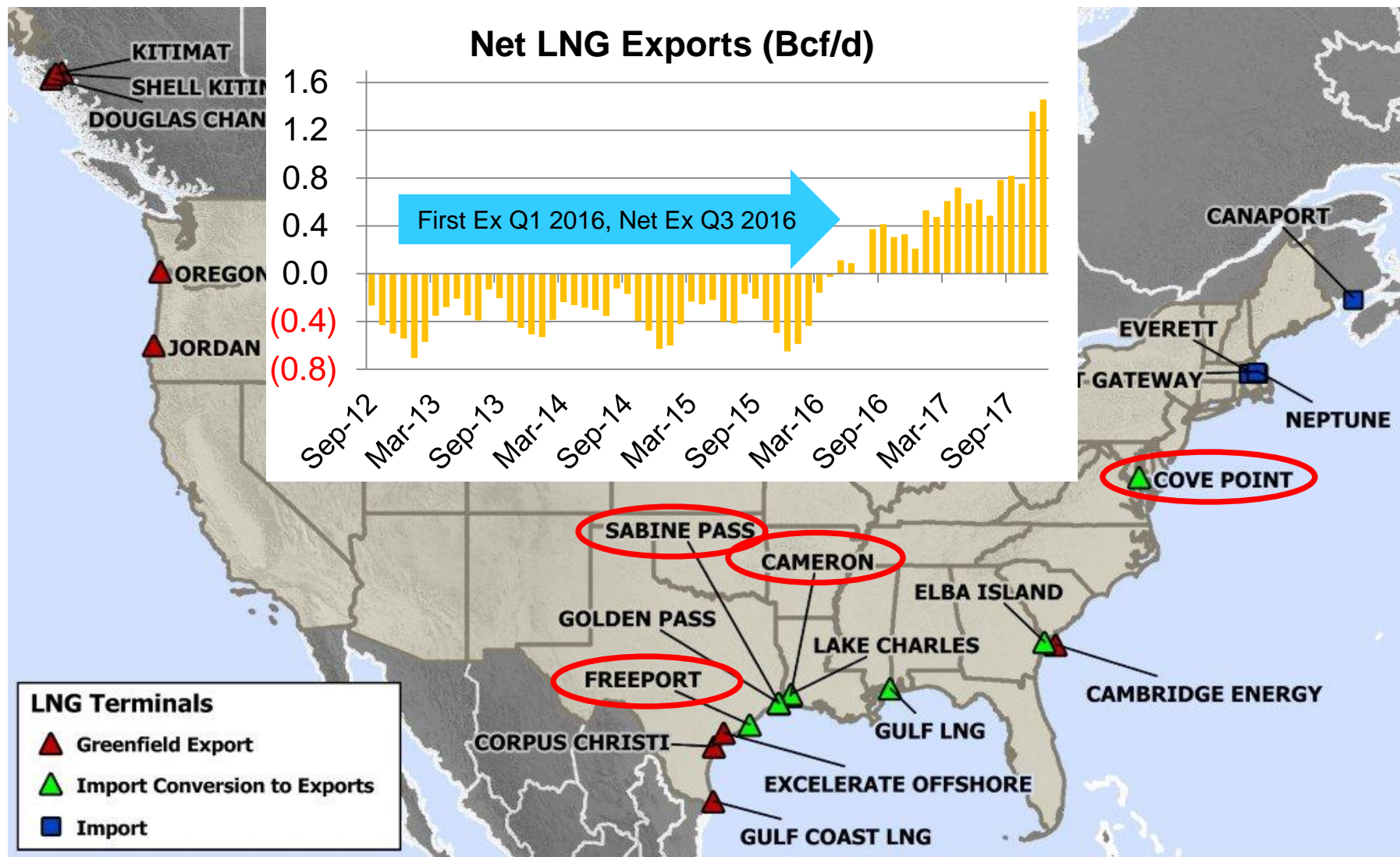
1. Risk of changes in Energy Policy
2. Power Infrastructure Slow to Build Out
3. World Markets Shift Lowering Incentive for LNG
4. Price levels shift to discourage Industrial Demand

U.S. NG Balance Continues to Tighten

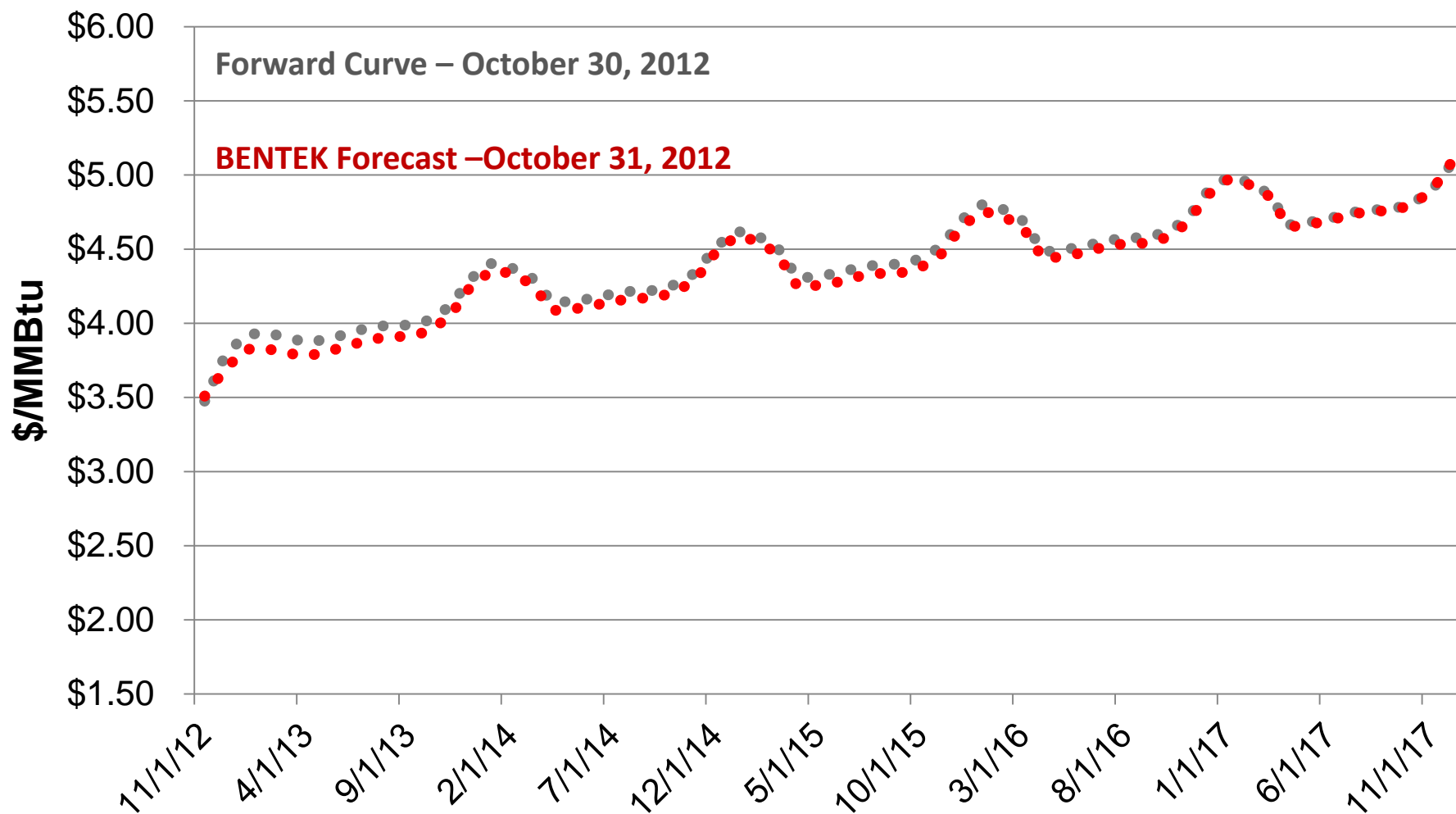
U.S. Supply/Demand Balance



Proposed U.S. Export Projects Total 18.8 Bcf/d of Capacity



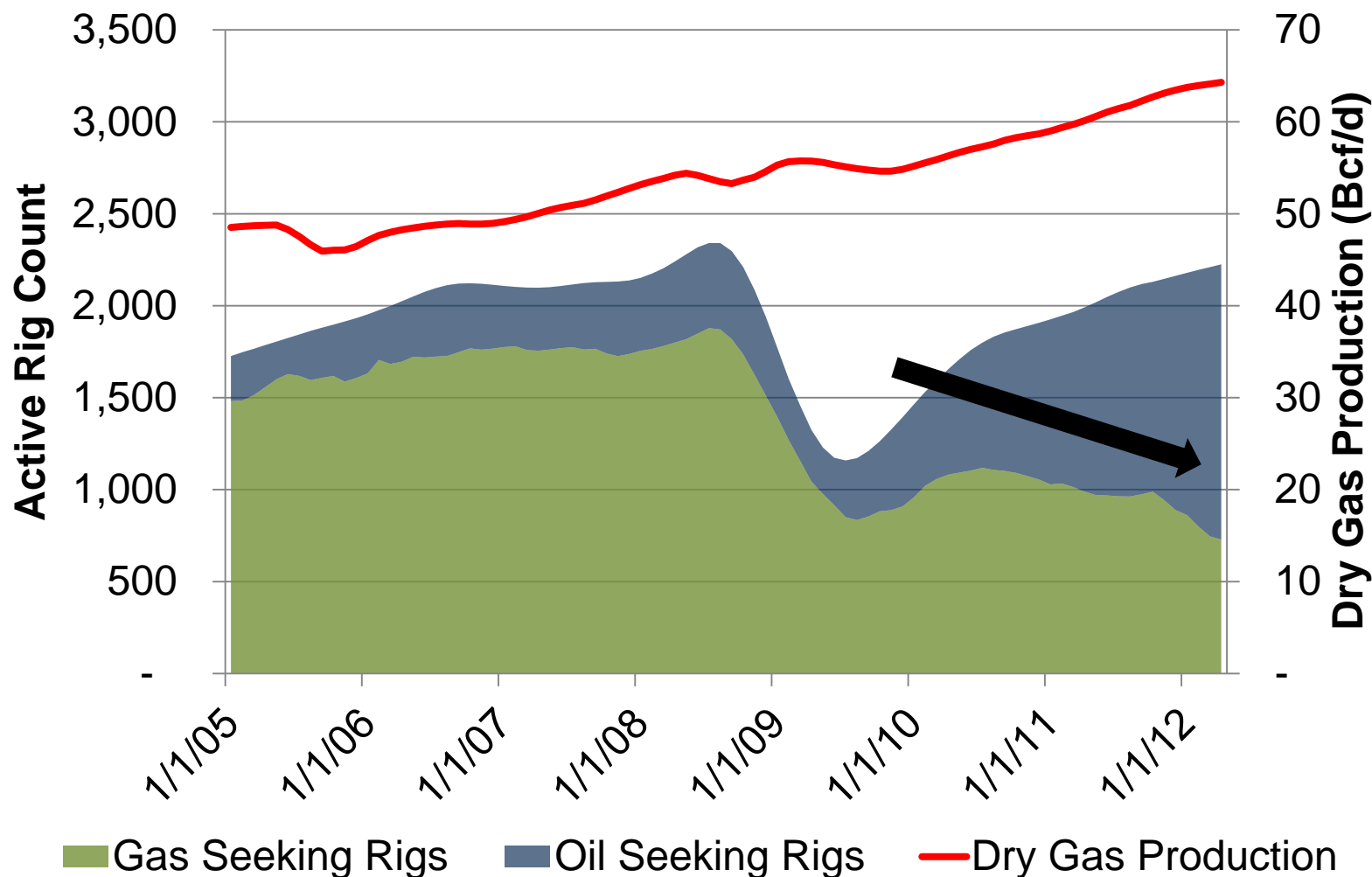
NYMEX Forward Curve Expectations



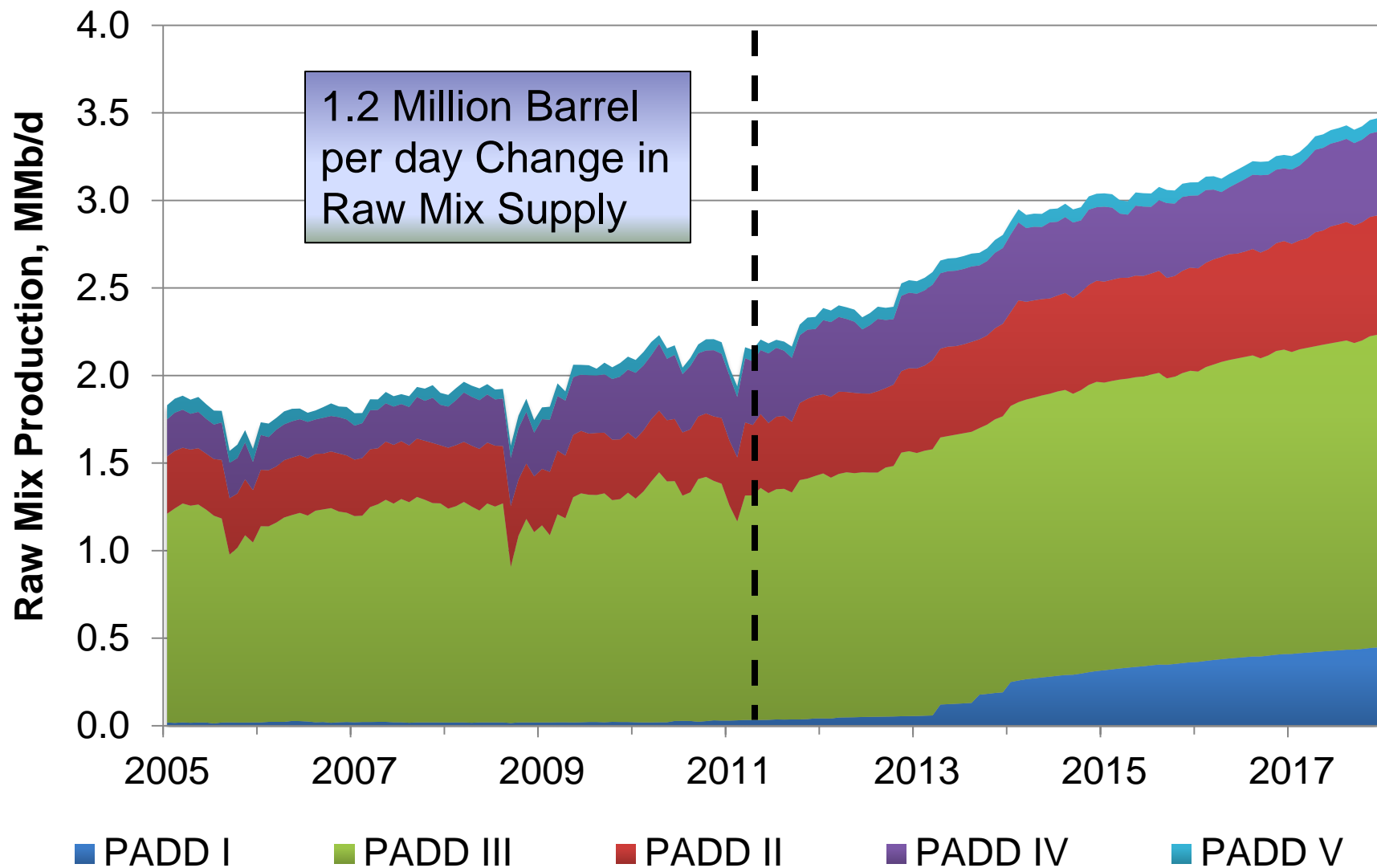
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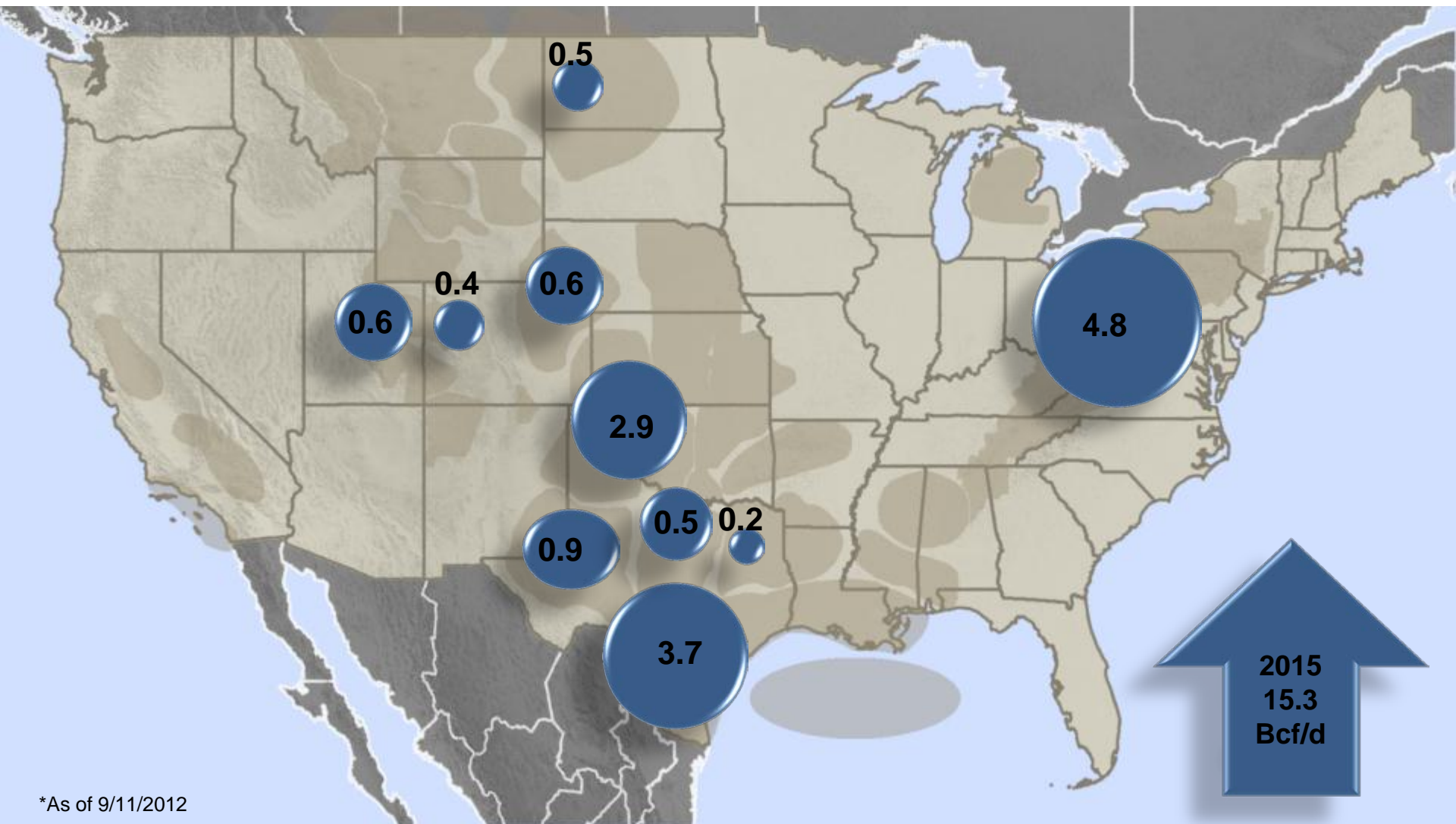
Gas Rigs Plummet as Producers Turn to Oil and Liquids



U.S. NGL Production to Increase 49% over the next Five Years

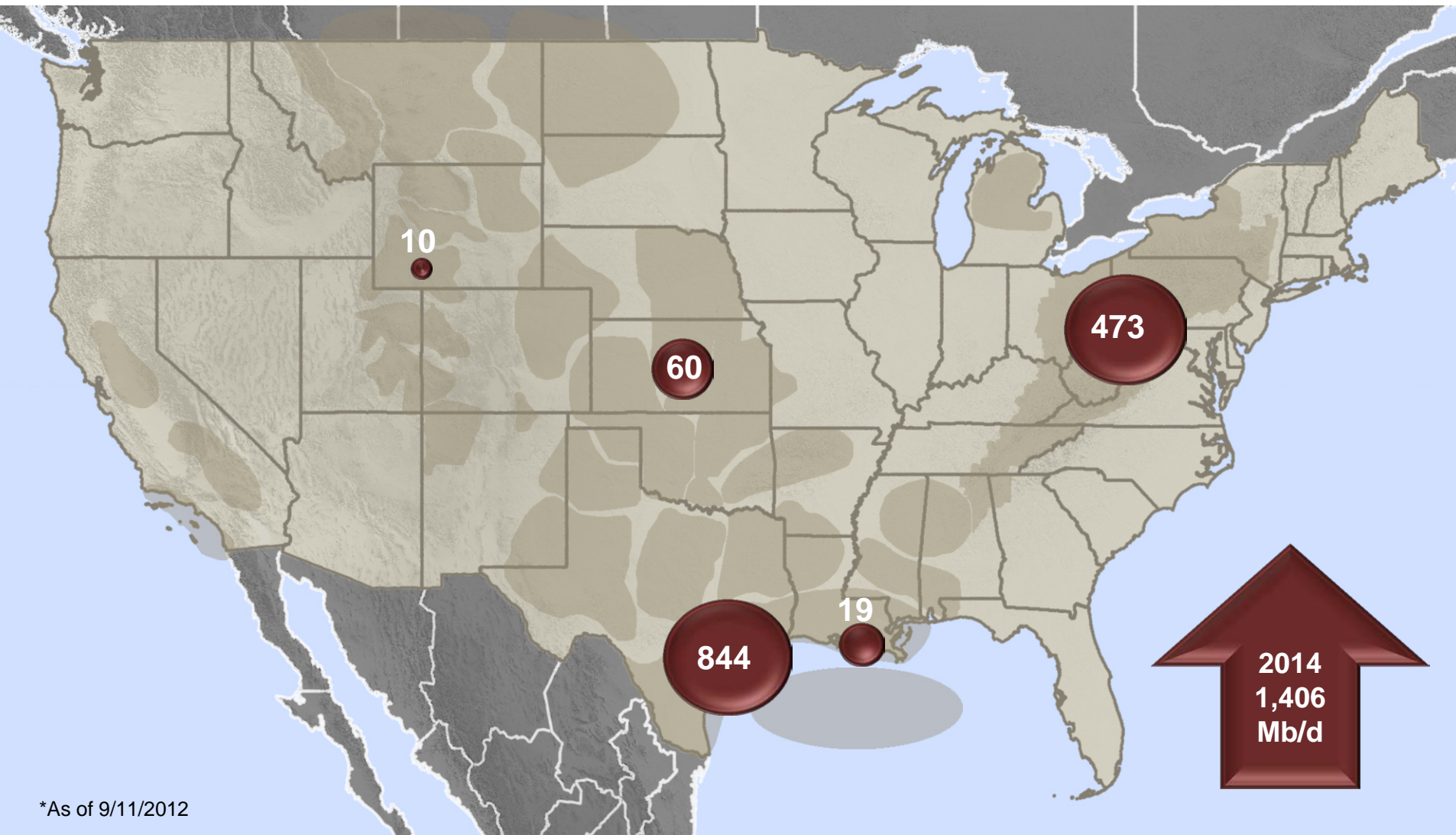


U.S. Gas Processing Capacity Set to Increase by 21% Thru 2015



*As of 9/11/2012

U.S. Fractionation Capacity Set to Increase by 44% Thru 2014

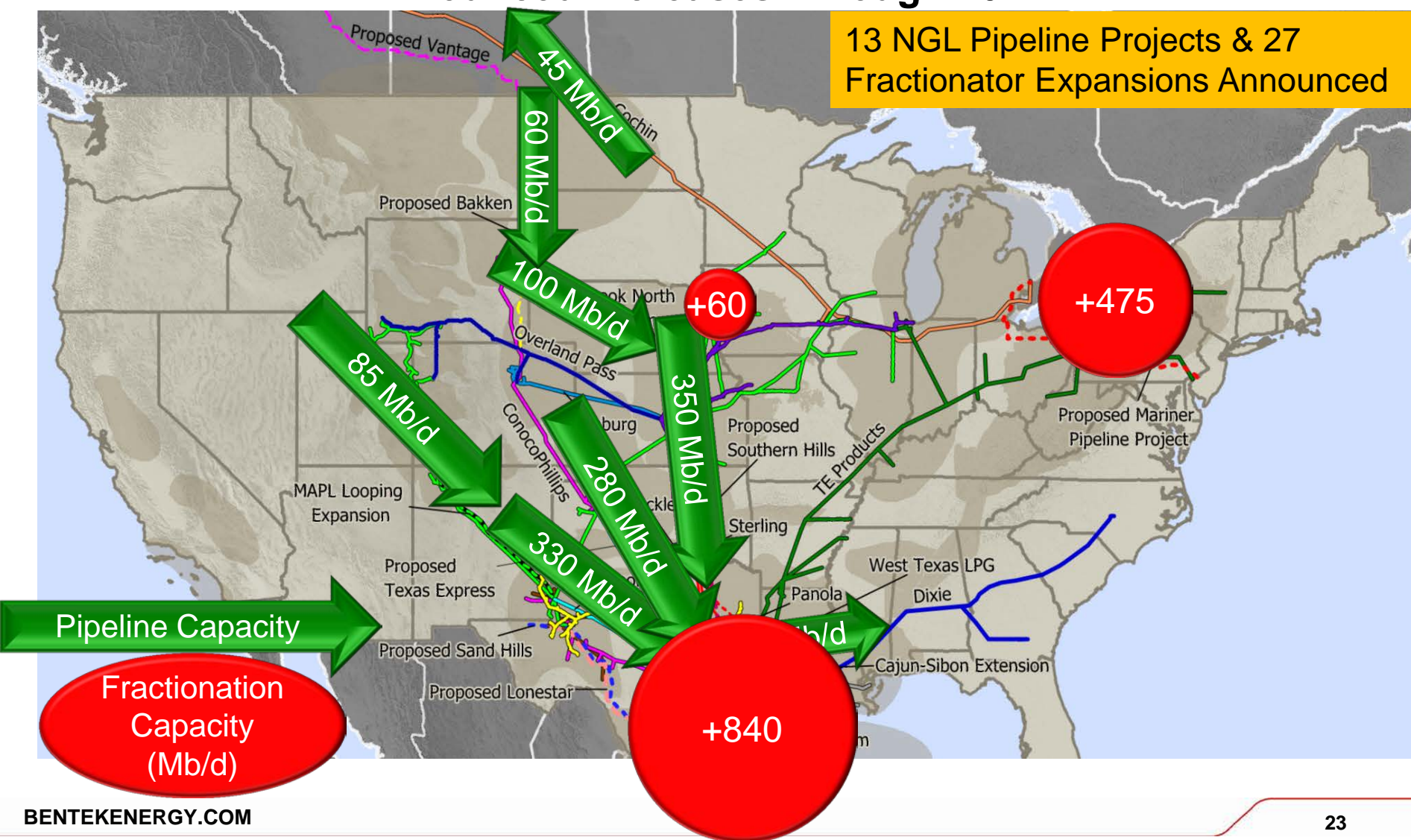


*As of 9/11/2012

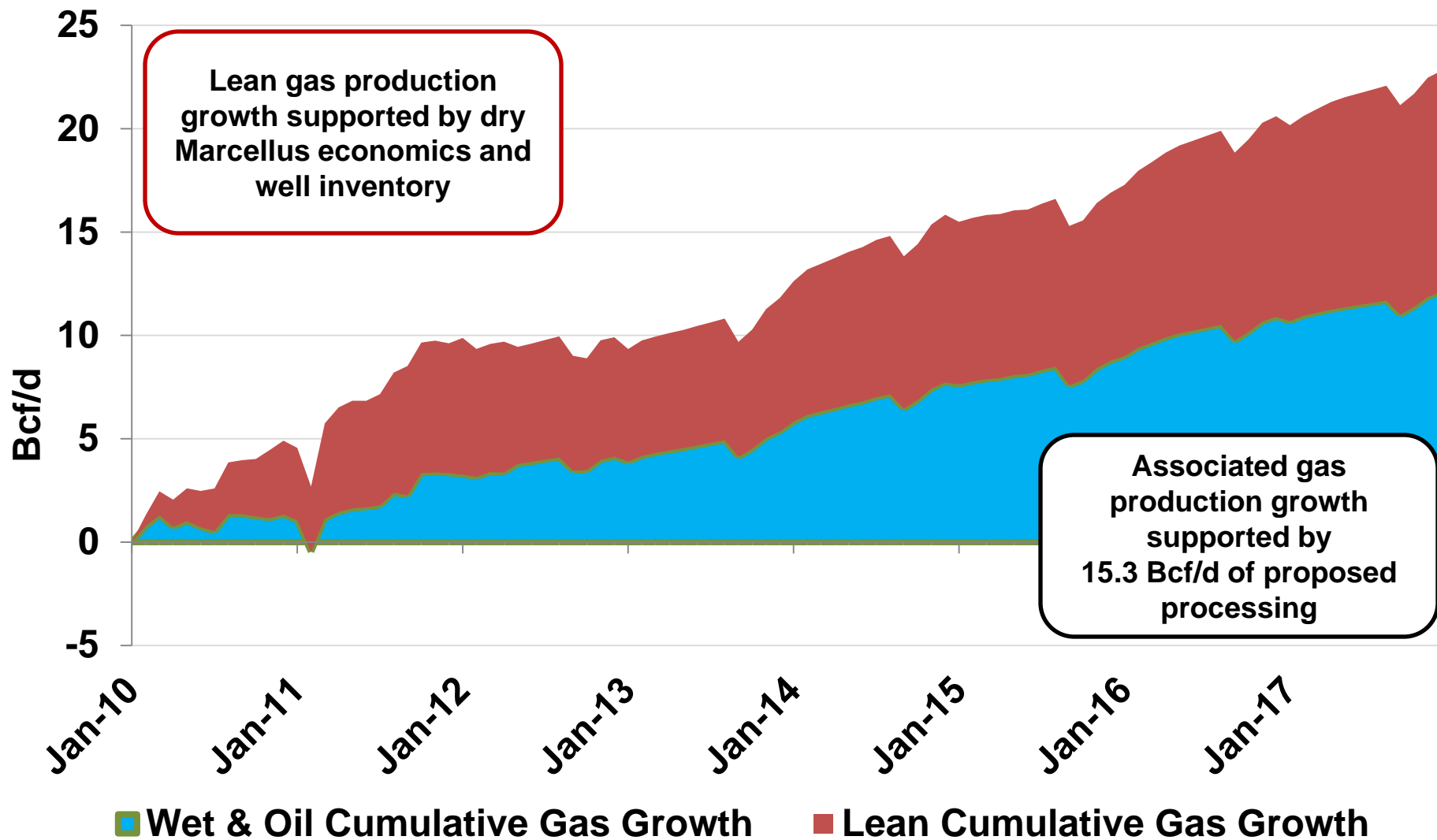
Infrastructure Is Required To Maintain NGL Growth

Announced Increases Through 2014

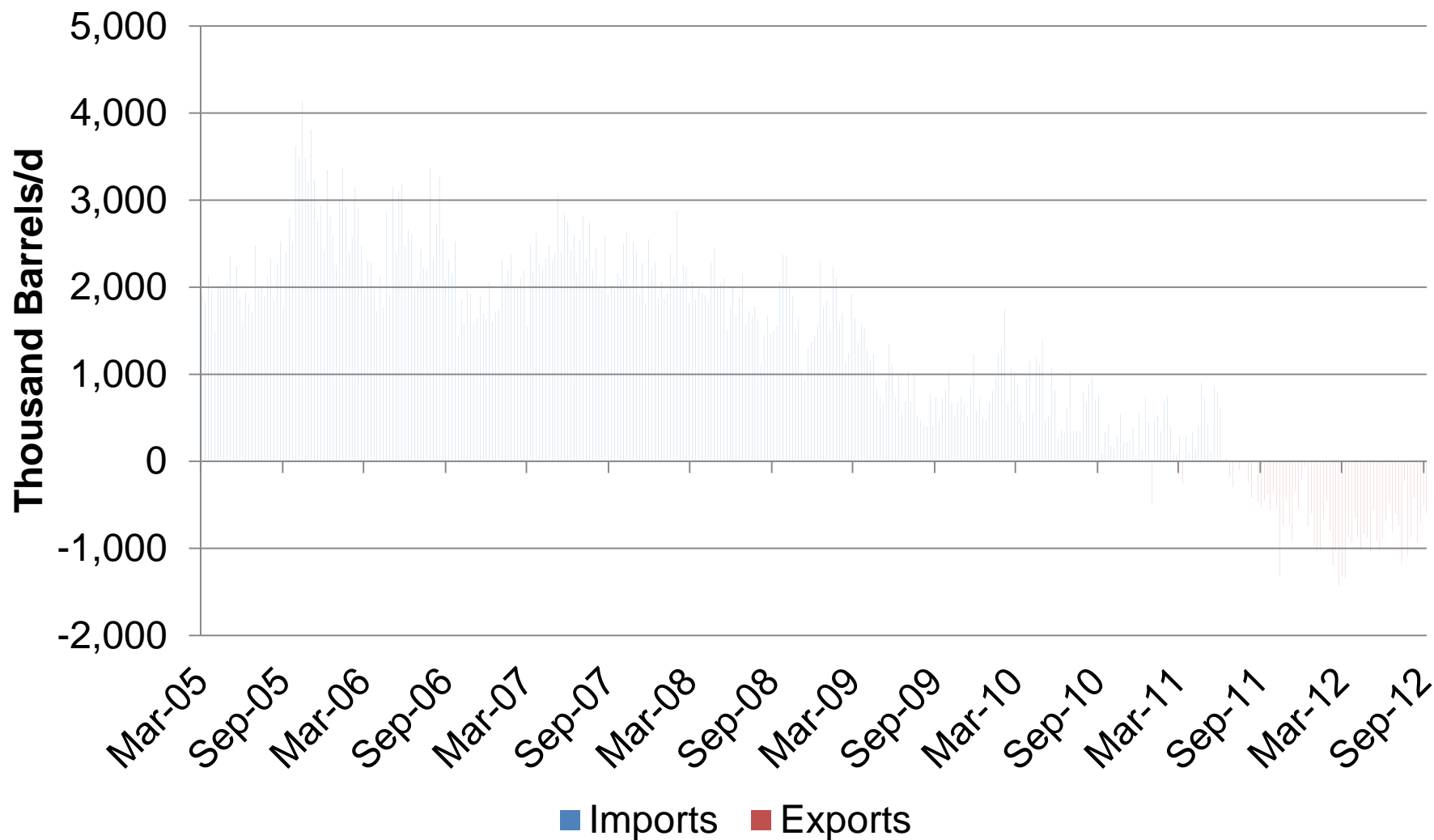
13 NGL Pipeline Projects & 27 Fractionator Expansions Announced



Residue Gas from Liquids Plays Expected to Account for 50% of NG Growth Through 2017



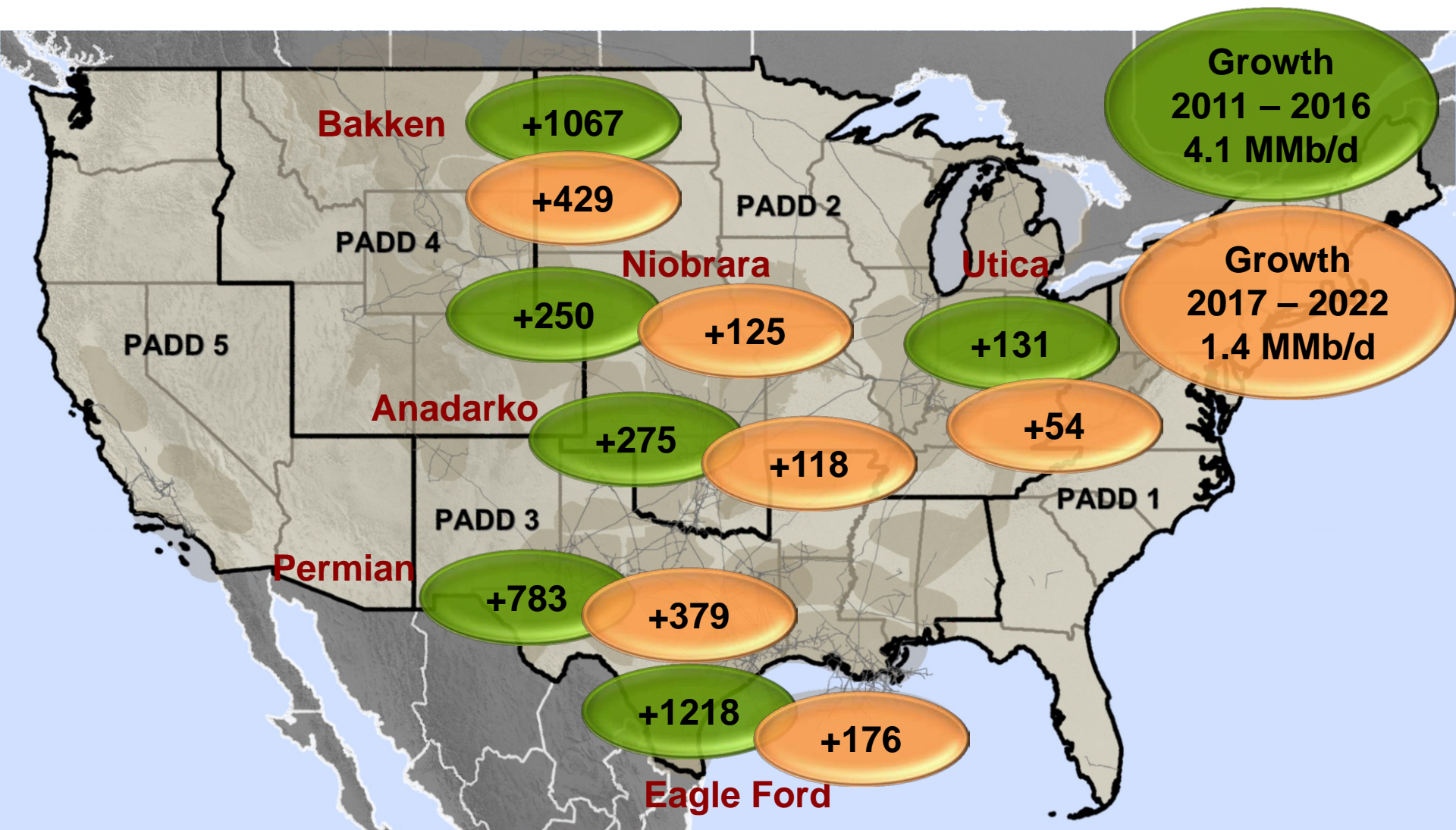
US Now a Net Exporter of Refined Products



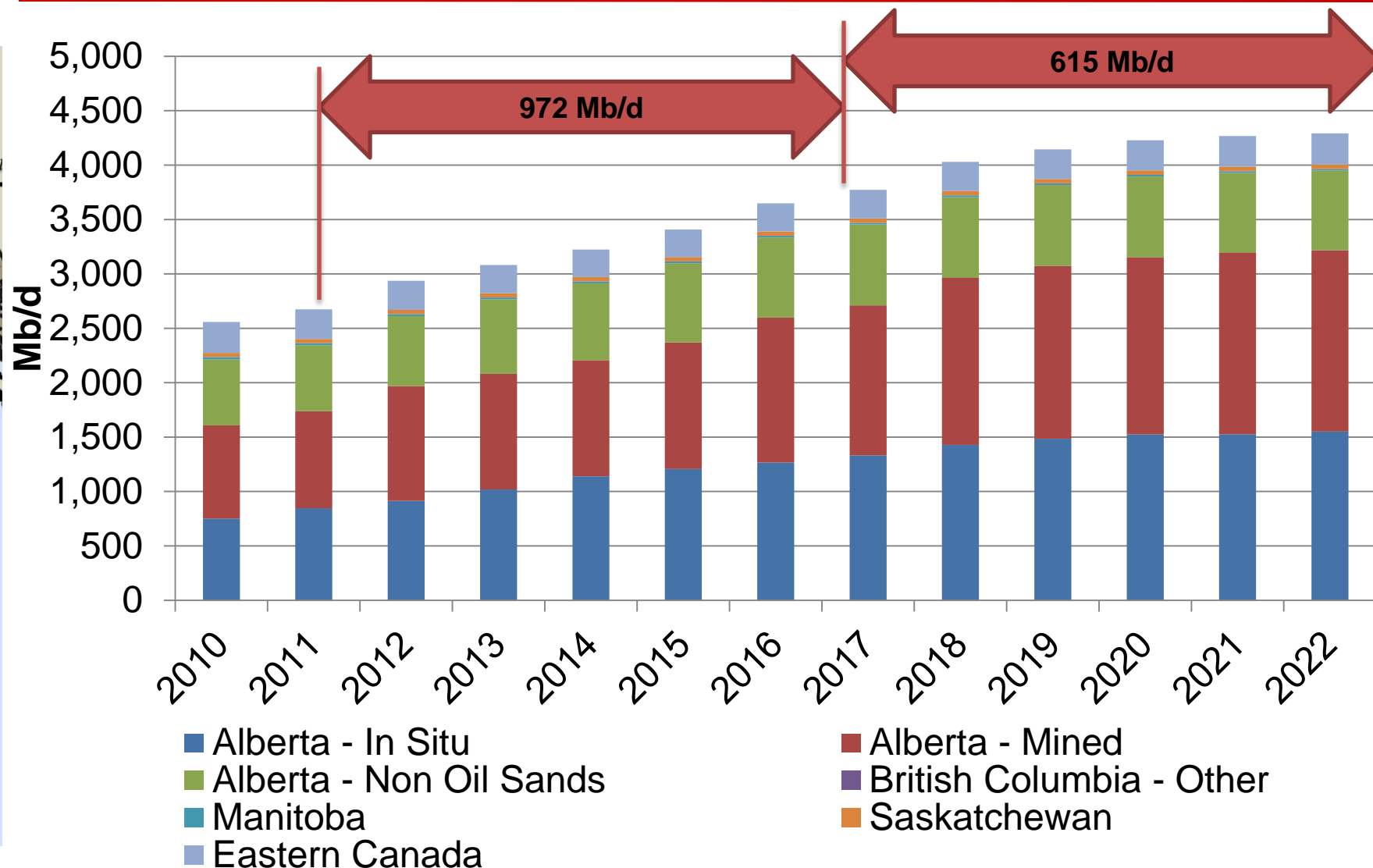
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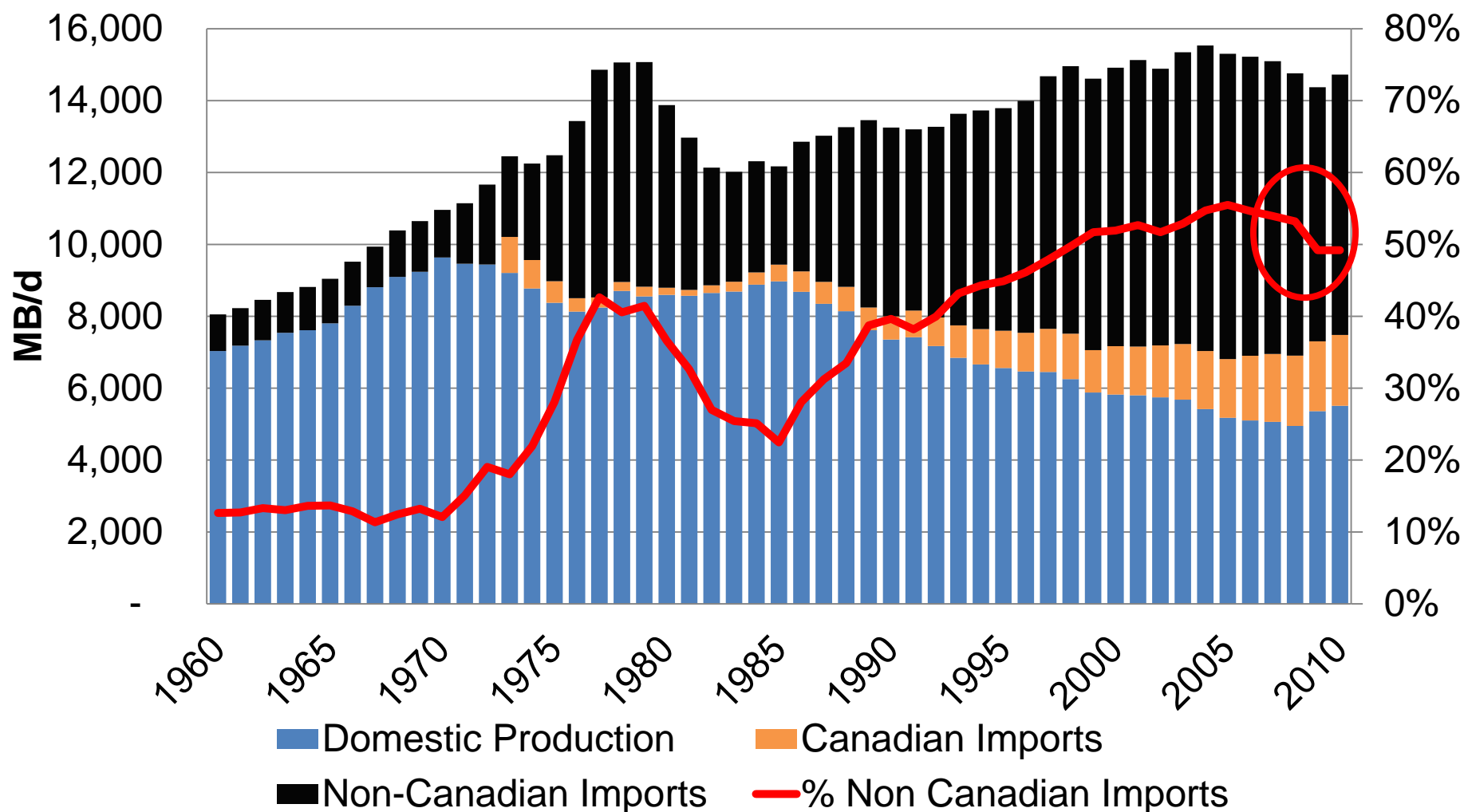
Unconventional Oil Plays – Turning The Corner



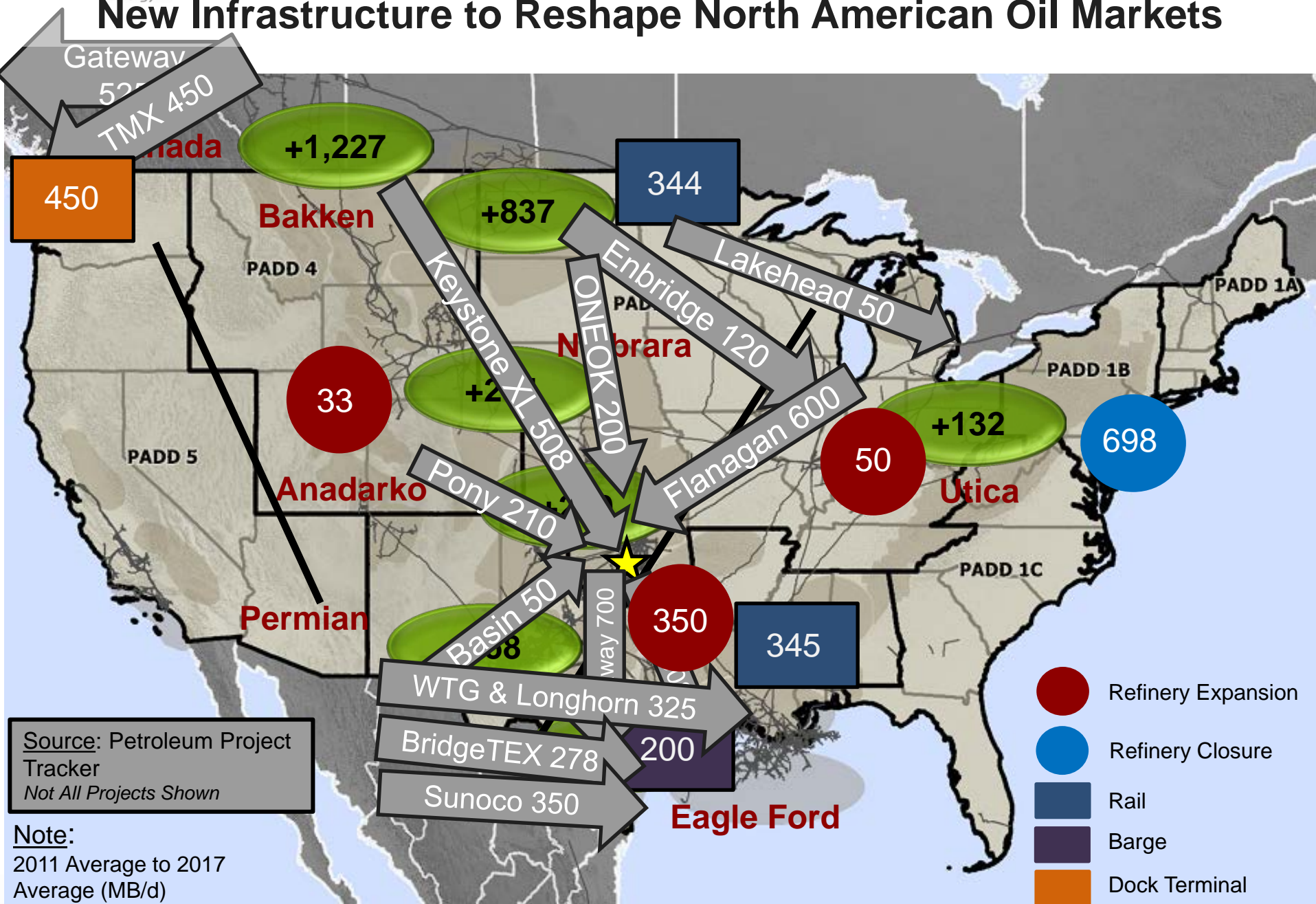
Canadian Production Expected to Grow 1.6 MMb/d



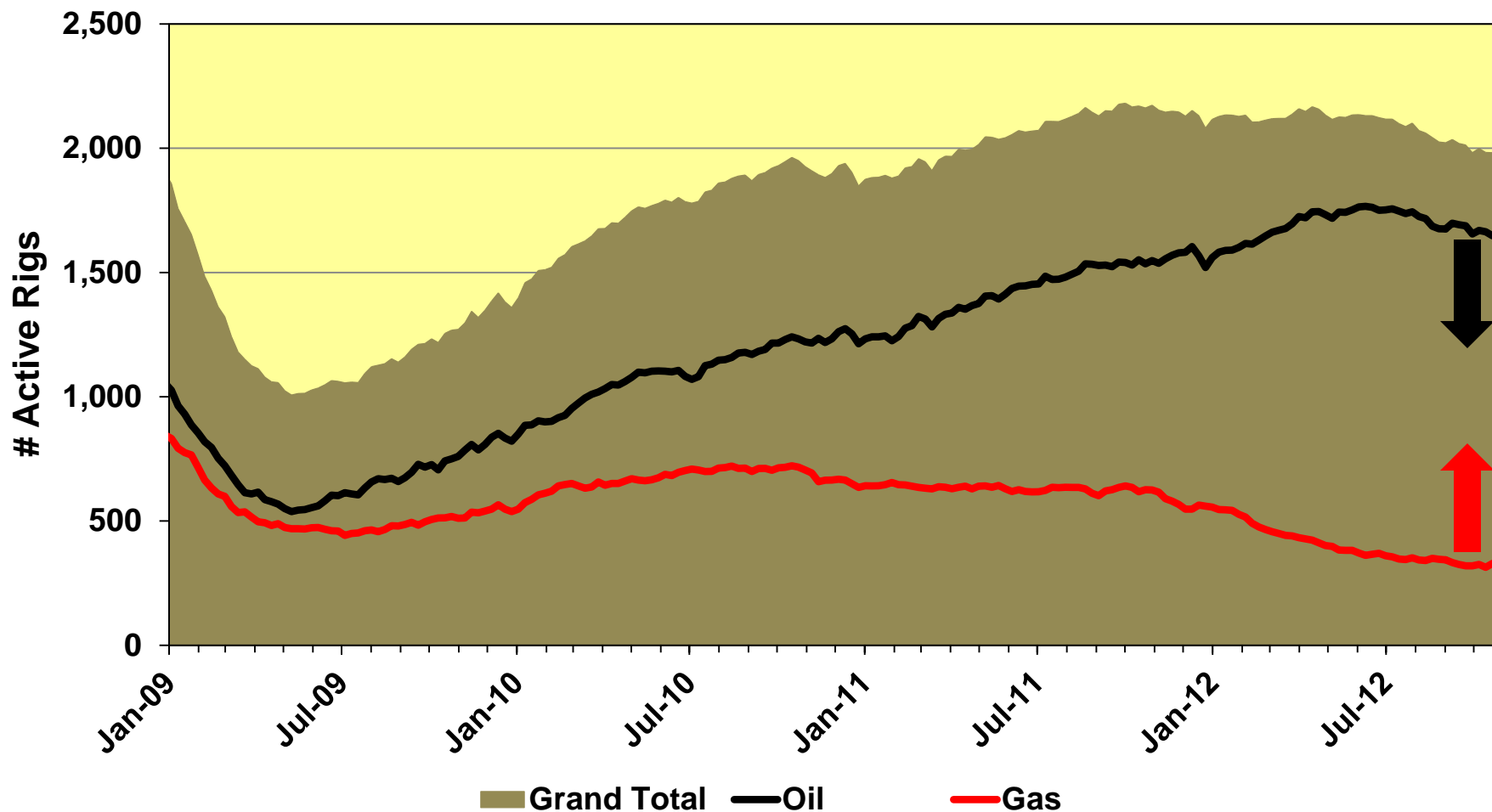
6% Decline in Waterborne Imports Since 2005



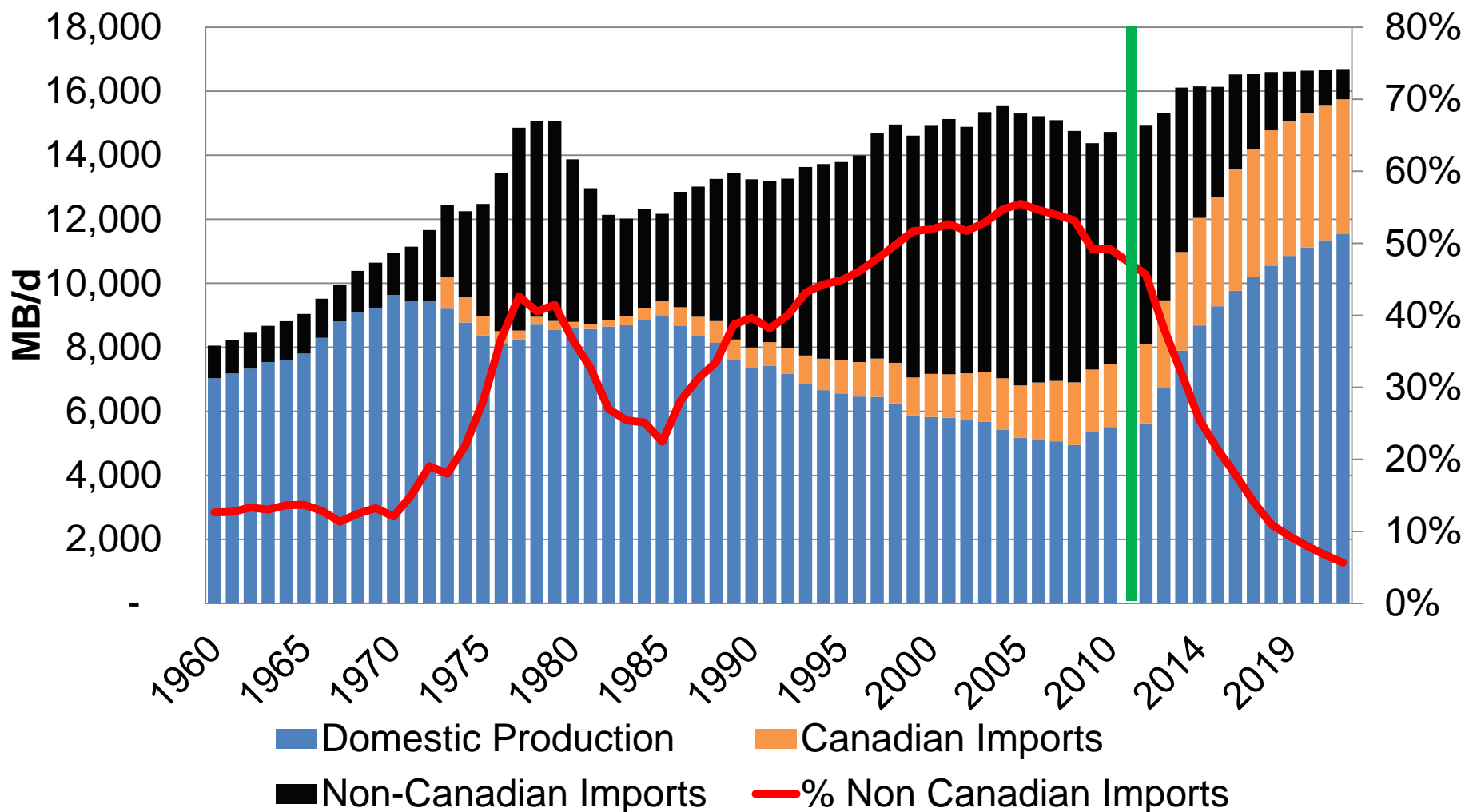
New Infrastructure to Reshape North American Oil Markets



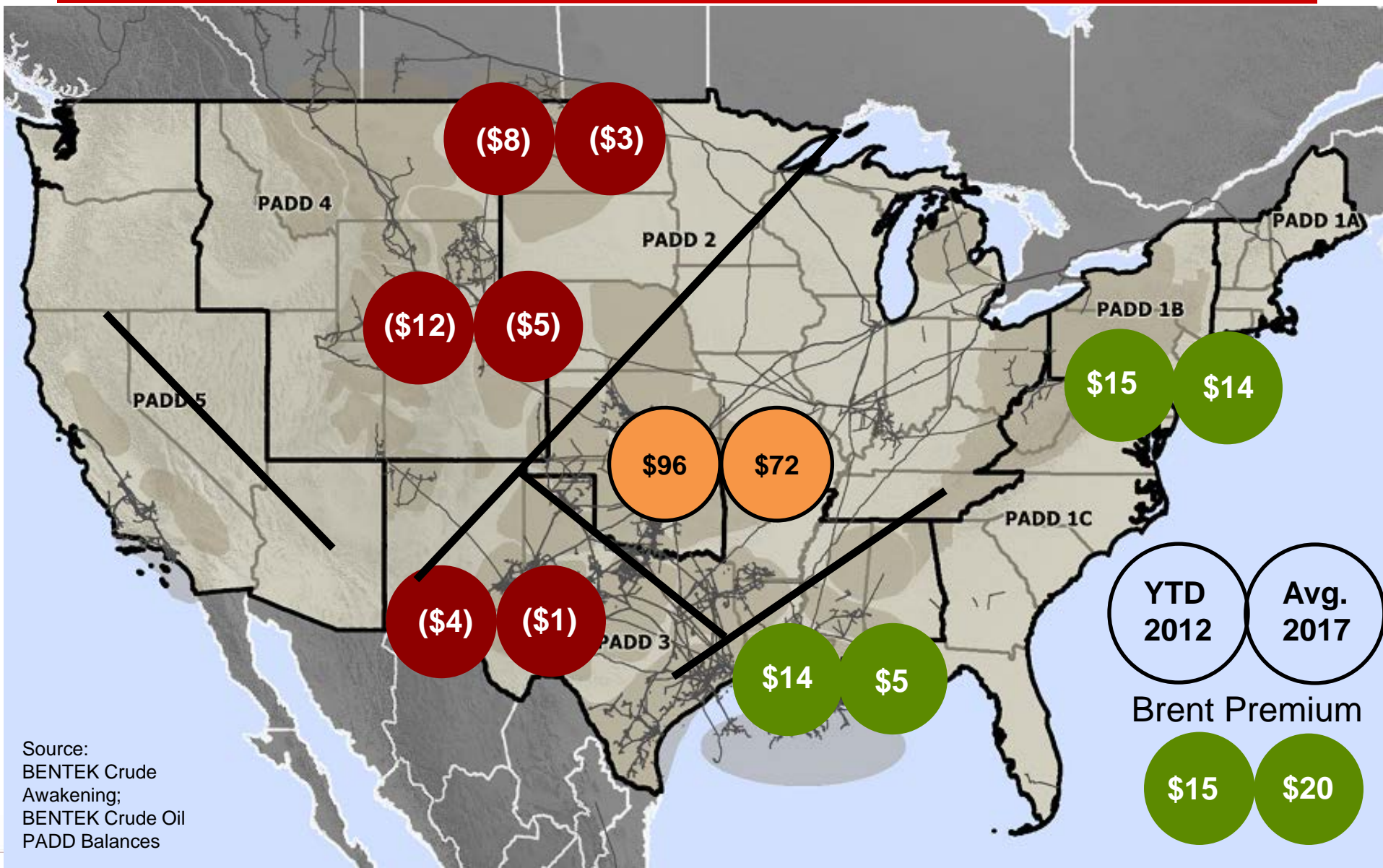
Gas Rig Count Bottomed in October Beginning to Creep Higher as Oil Rig Counts Fall on Constraints



Waterborne Imports Will Account For 6% of US Supply by 2020



Current Lack of Crude Export Market Will Continue to Leave WTI and Brent Separated



Conclusions and Takeaways

- ❖ **Natural Gas Production is pushing daily highs. We begin winter at record storage inventories, need winter to materialize to balance immediate market.**
- ❖ **Natural Gas production to slow then resume growth as higher oil prices, uncompleted wells, technological and efficiency gains allow E&Ps to respond to market conditions.**
- ❖ **Liquids production growth dependent on pipeline capacity expansions, demand growth and exports of purity products.**
- ❖ **While Power growth has been impressive, US MMBTUs need to find global outlets to balance.**
- ❖ **Henry Hub prices remain under downward pressure with market rallies stifled by supply response. Henry struggles to break \$5.00 through 2017.**

BENTEK Energy

BENTEK is an energy market analytics company focused on the natural gas, liquids, crude oil and power sectors.



Suzanne Minter

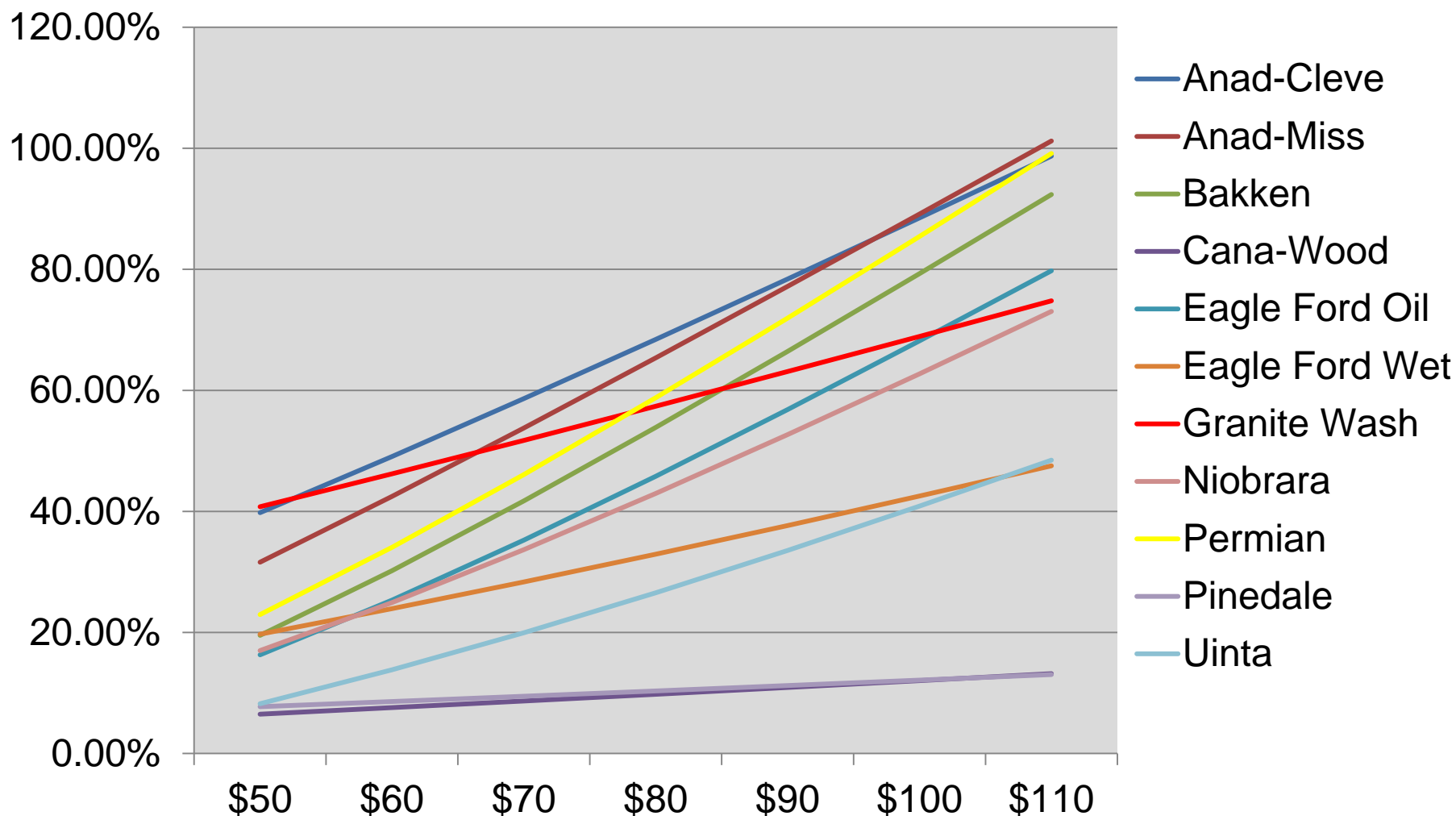
sminter@bentekenergy.com

Contact Any Analyst at 303.988.1320

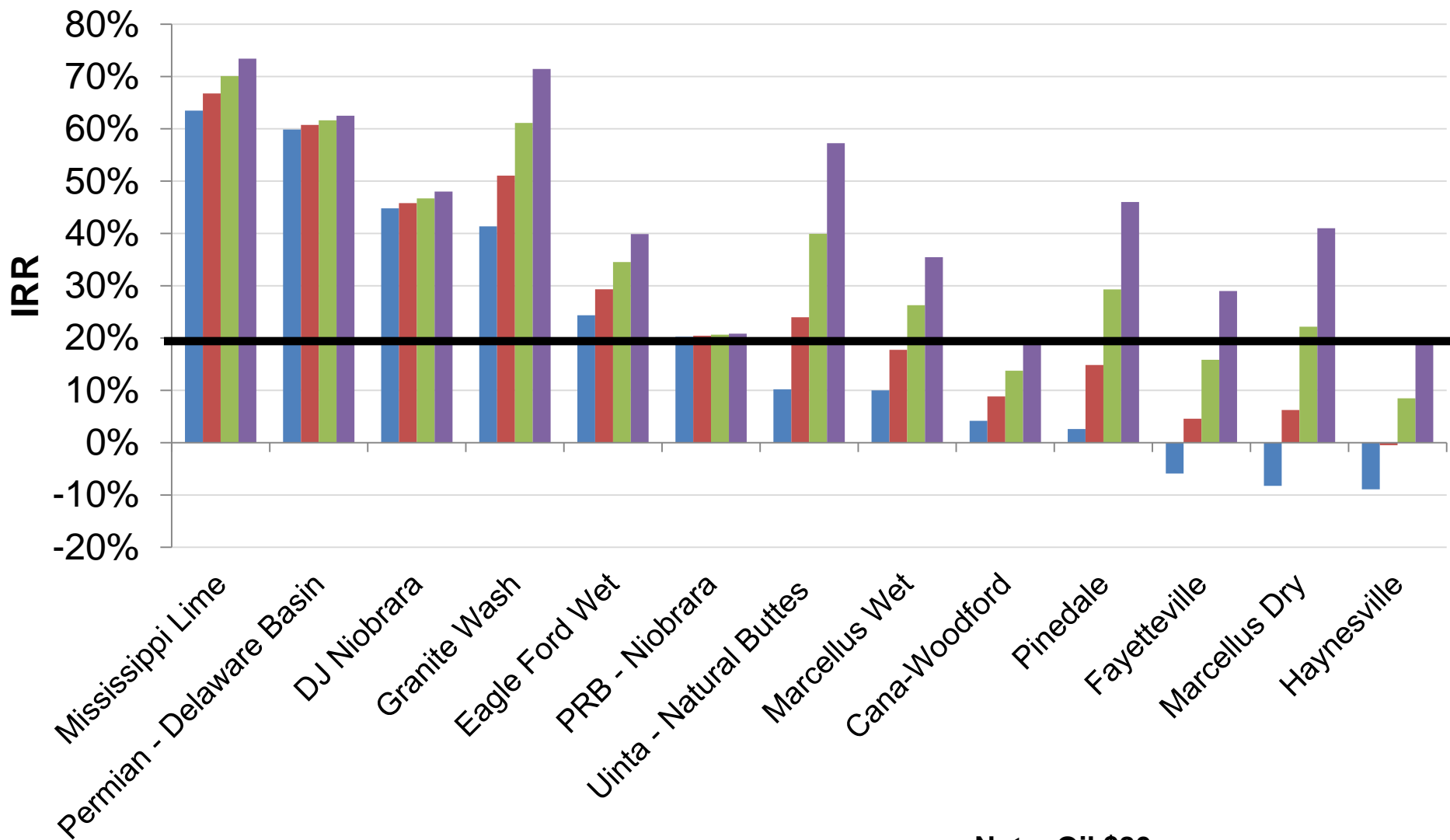
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IRR Sensitivities to Changes in Oil Prices (plays with oil production)



Major Basin Economics Shifts Positive as Gas Prices Rise Above \$3, Even with Weak NGL Prices



Note: Oil \$80
NGL 30% of Crude