

# *Natural Gas, Liquids and Crude Oil Market Outlook North America – 2012 and Beyond*

*August 14th, 2012*

On behalf of:



for:

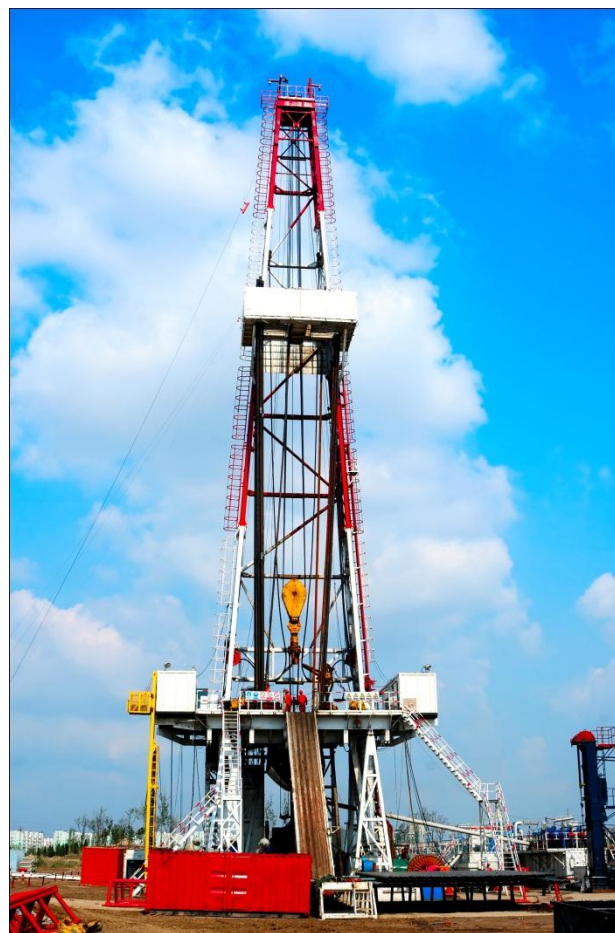


# ***BENTEK Energy Market Information***

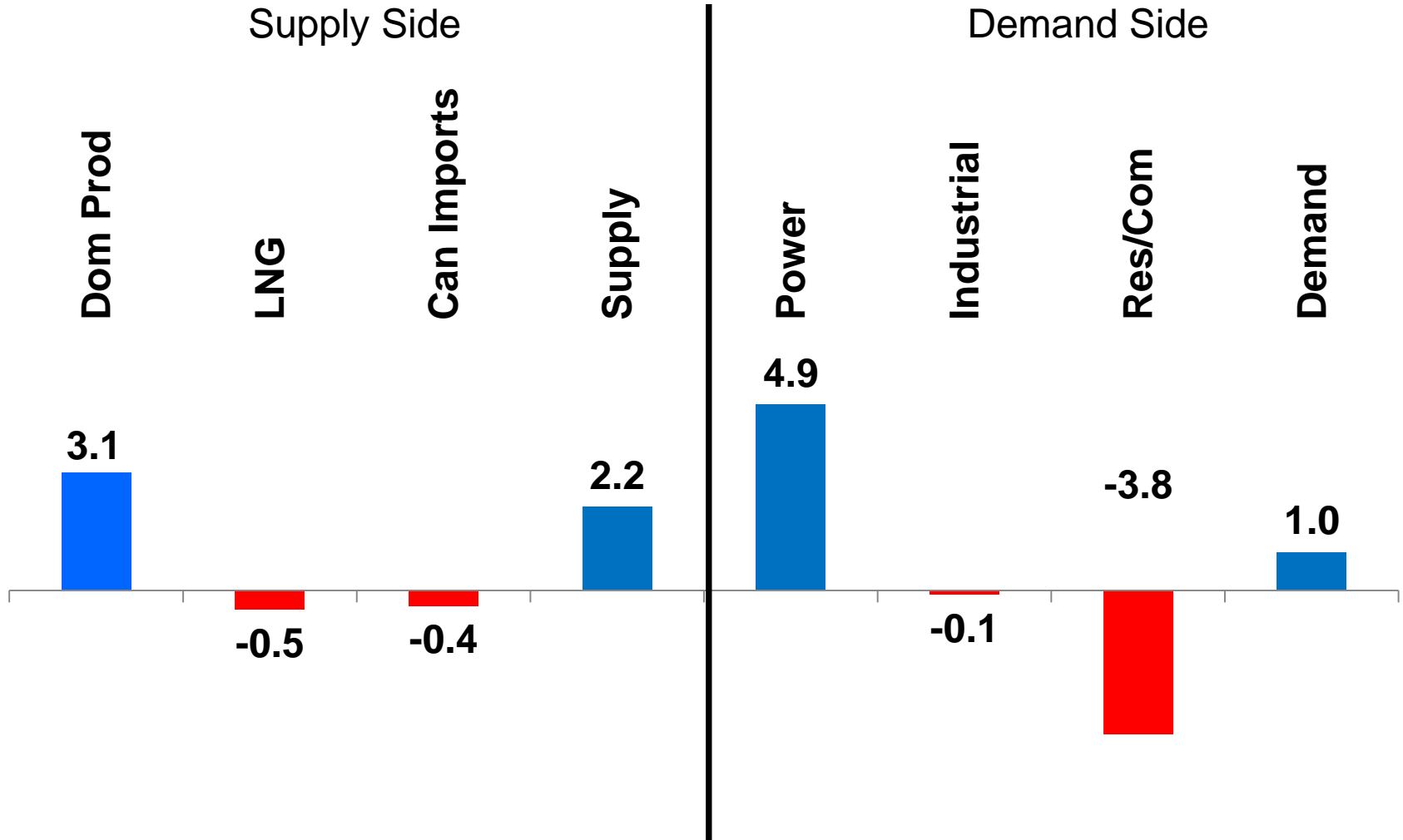
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## **Agenda:**

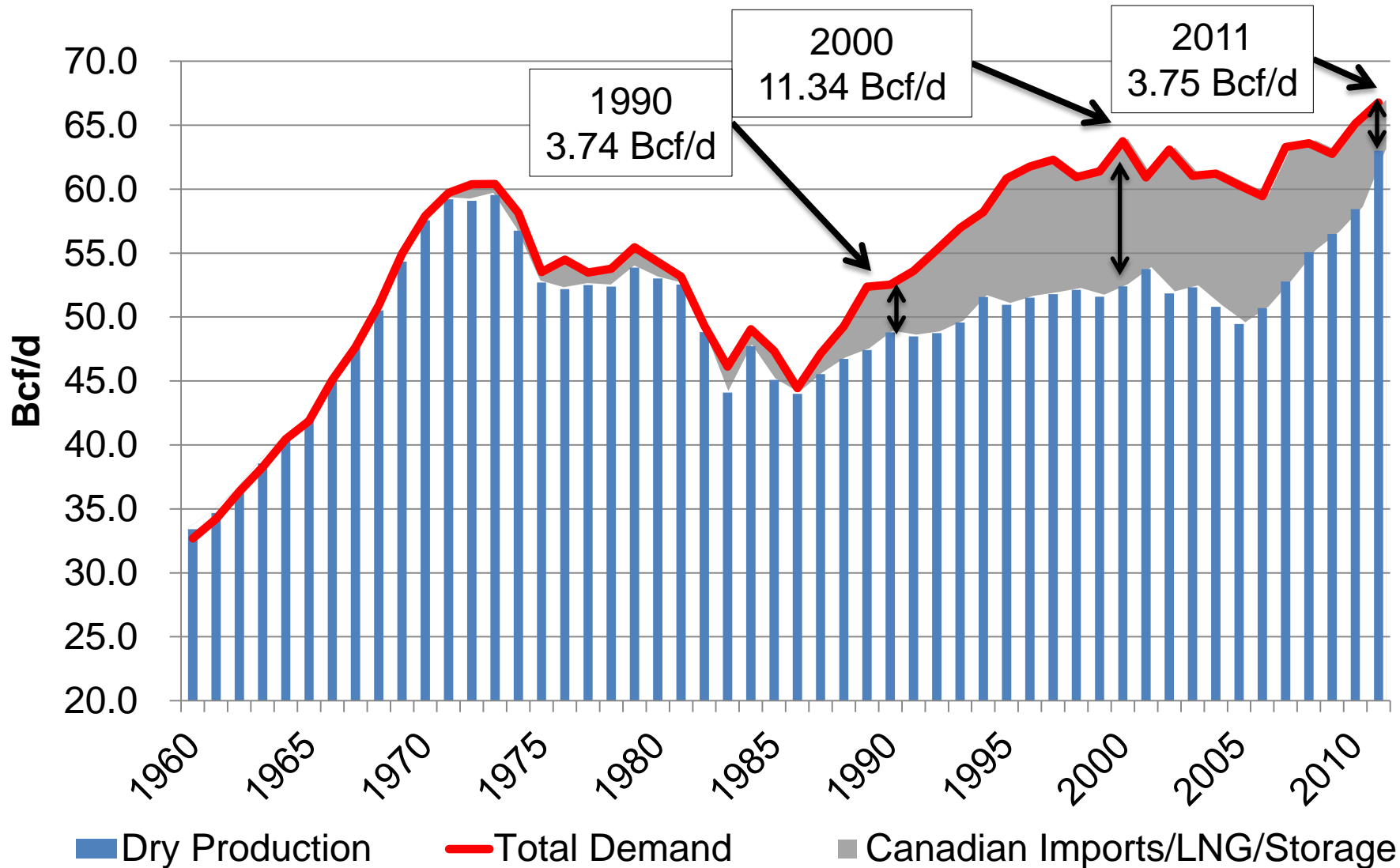
- ❖ U.S. Supply, Demand and Storage Outlook
- ❖ Macro Supply Implications on North American Market
- ❖ Liquids and Crude Oil Forecast
- ❖ Demand Response for Nat Gas and Impact on Henry Hub



# US Net Long 1.2 Bcf/d Year to Date

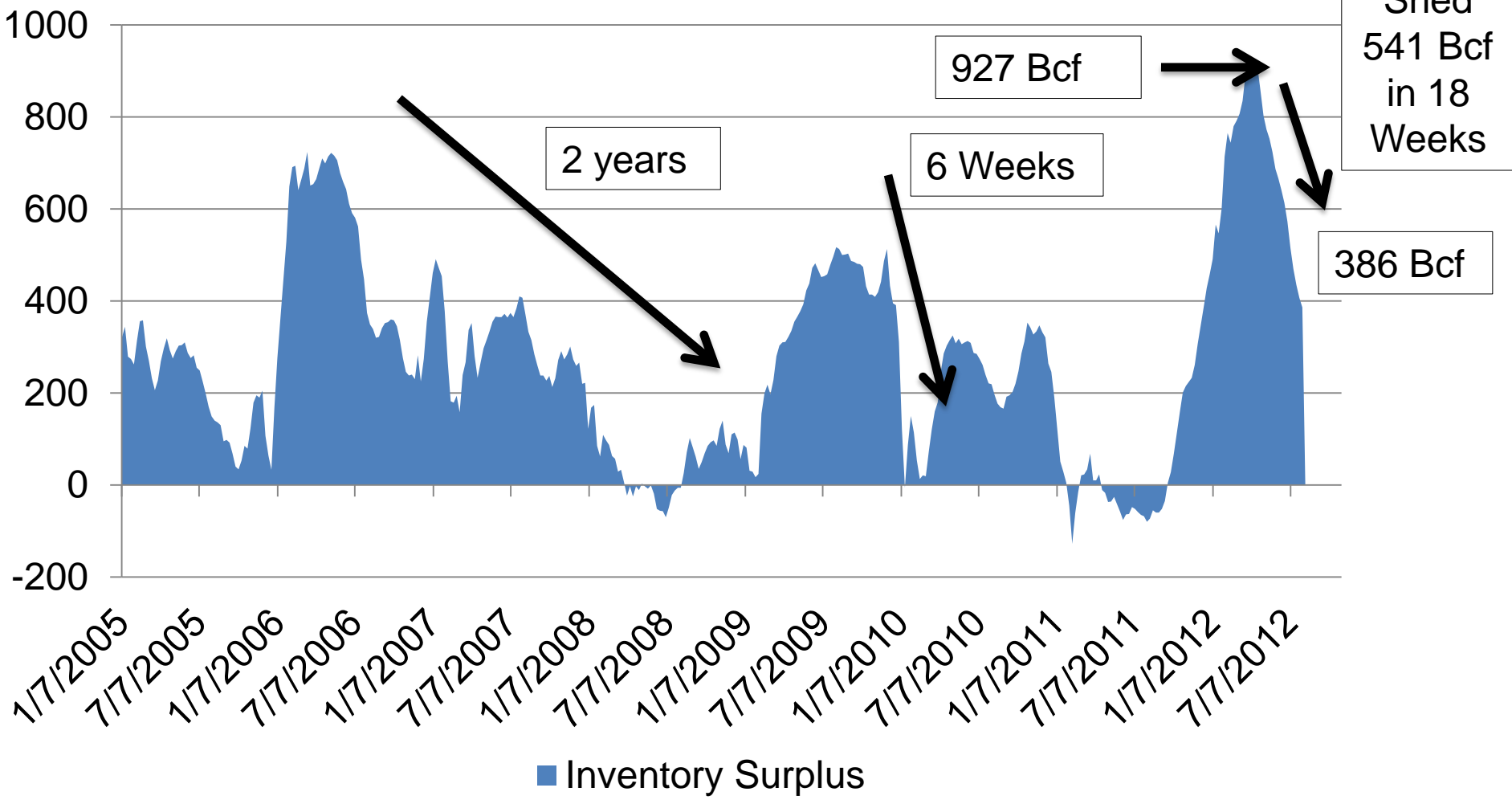


# Production Catching Up To Demand Pushing Out LNG and Canadian Imports



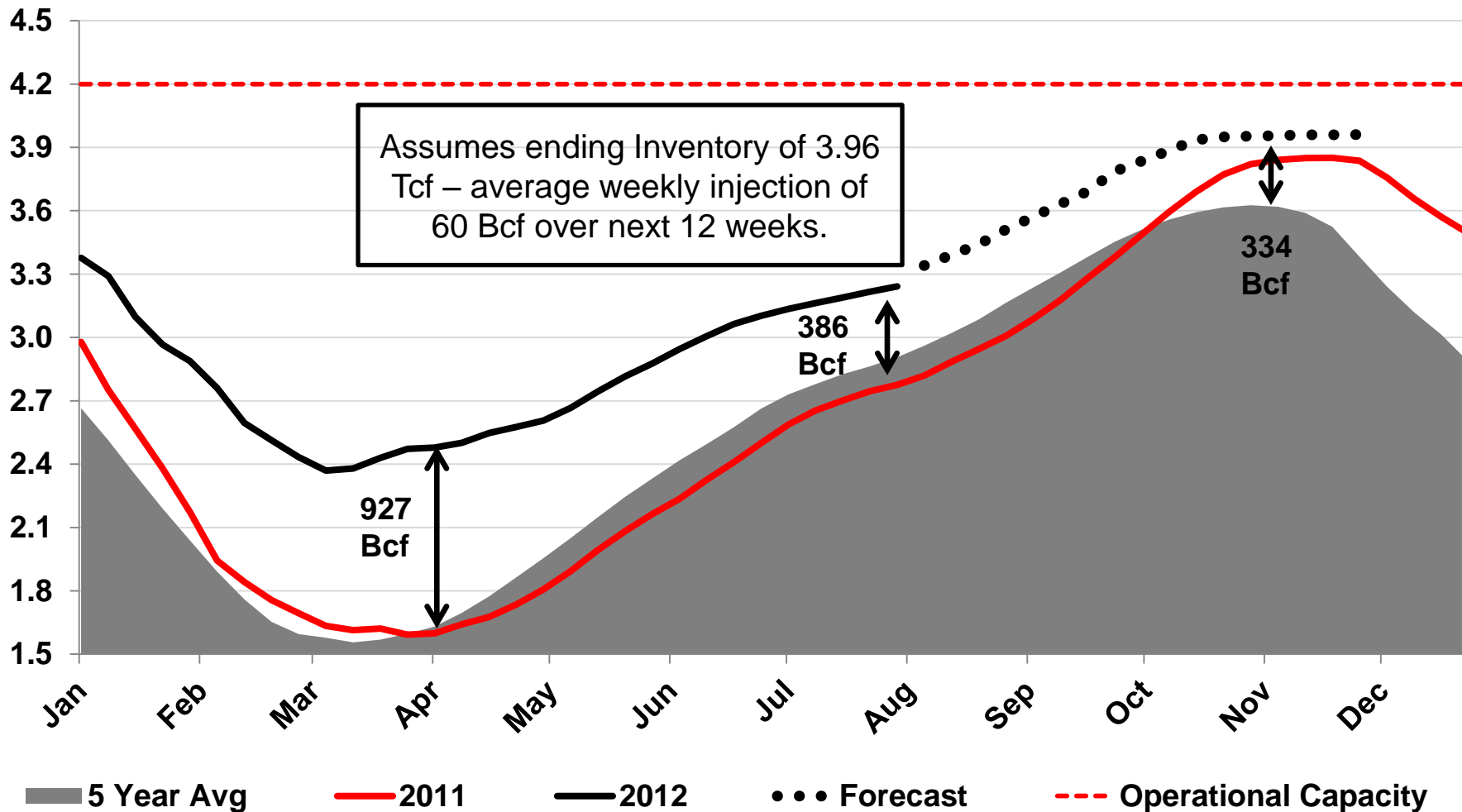
# Storage Surplus Starts Injection Season at Over 900 Bcf

## Inventories Vs. Rolling Five Year Average (Bcf)

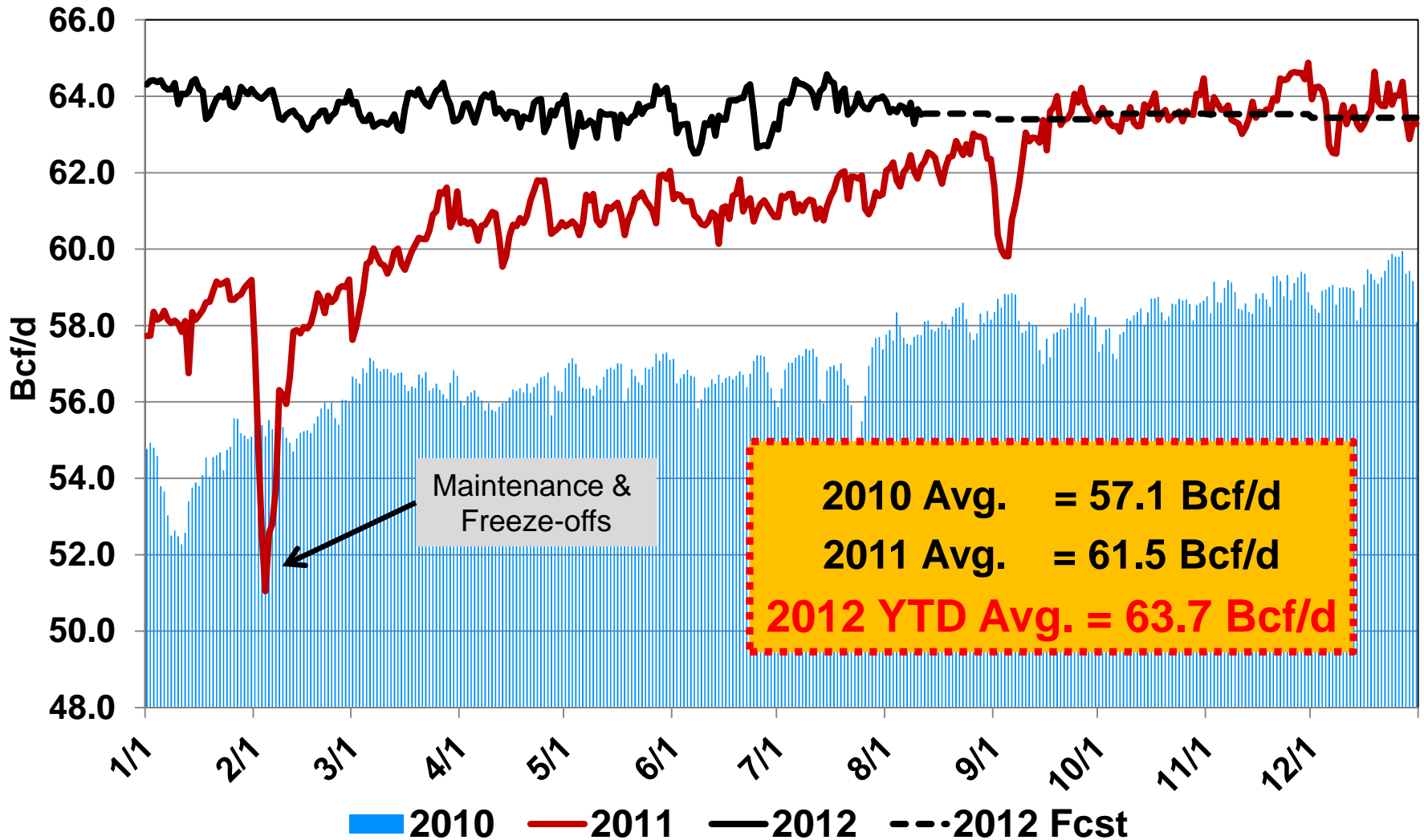


# Storage Headed for Record Highs

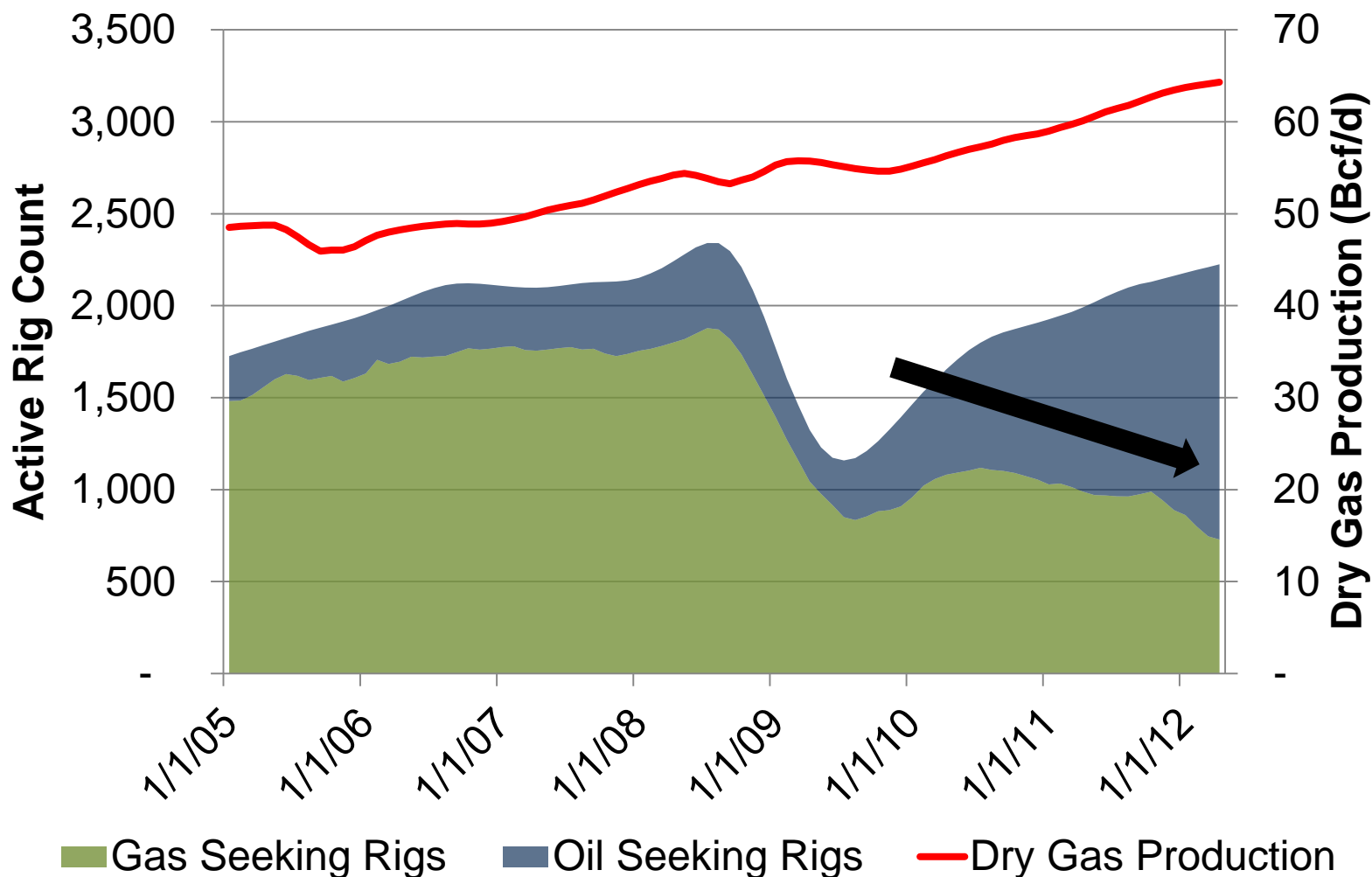
## U.S. Storage Inventories (Tcf)



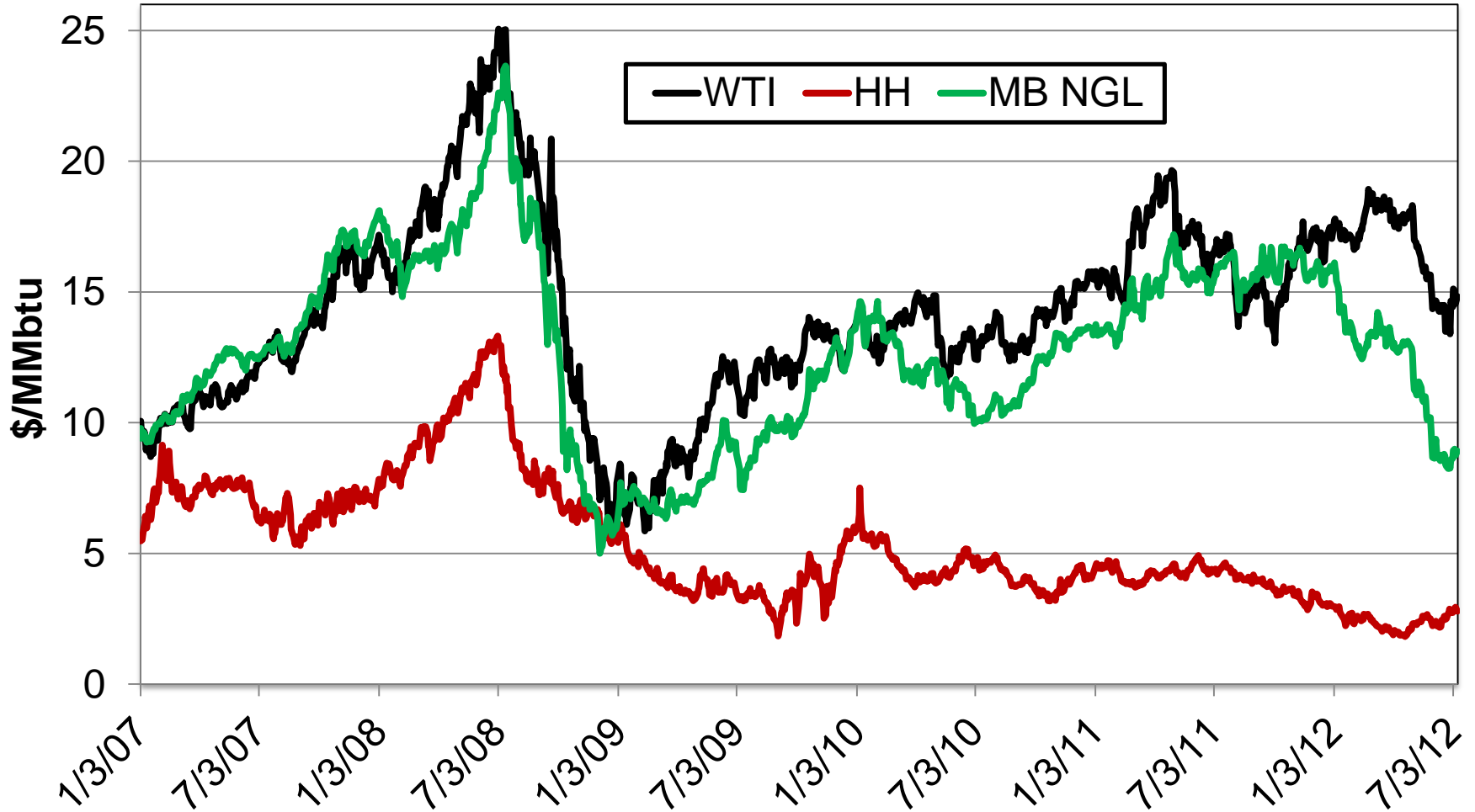
# U.S. Production Reaches New Highs



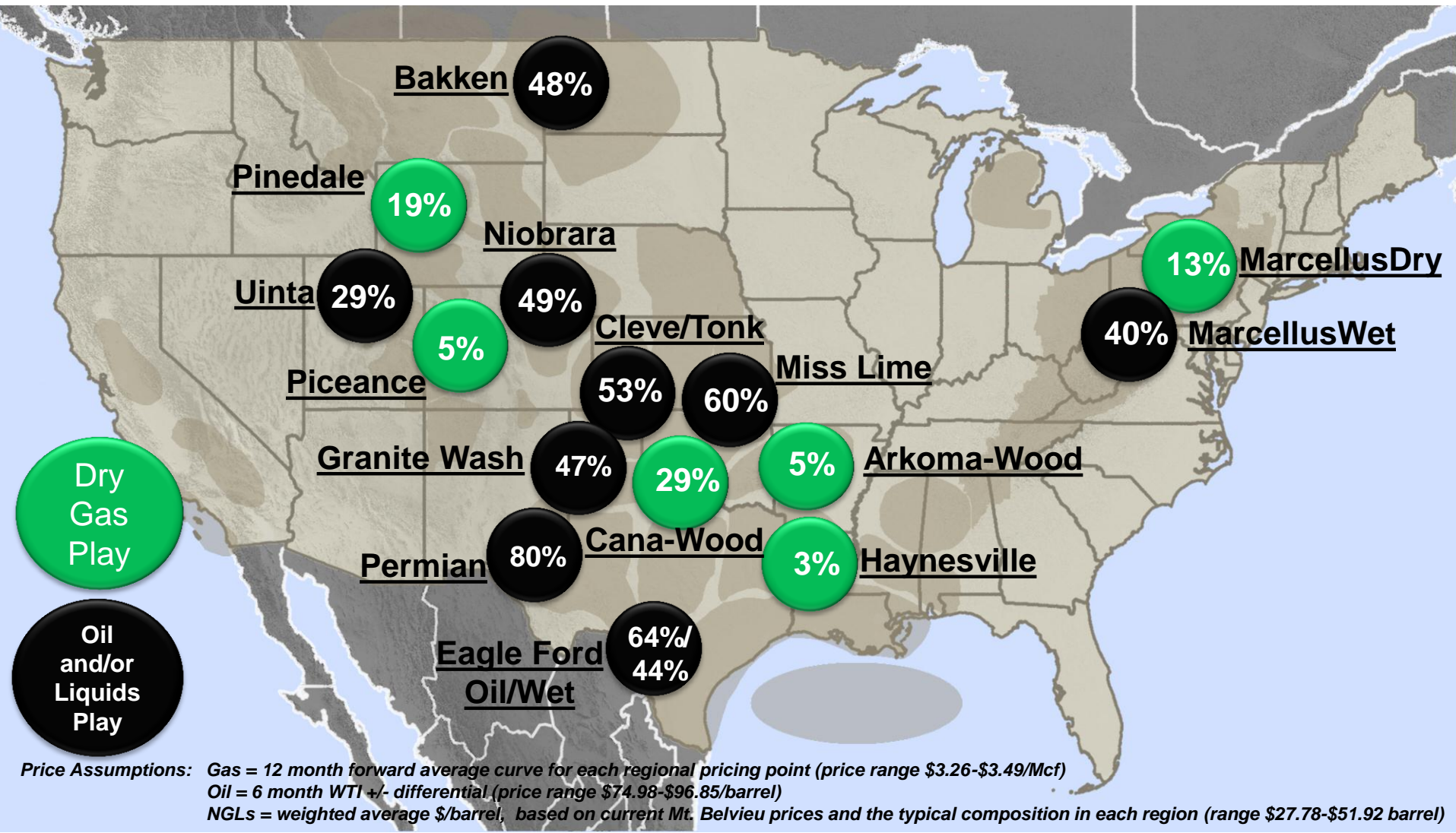
# Gas Rigs Plummet as Producers Turn to Oil and Liquids



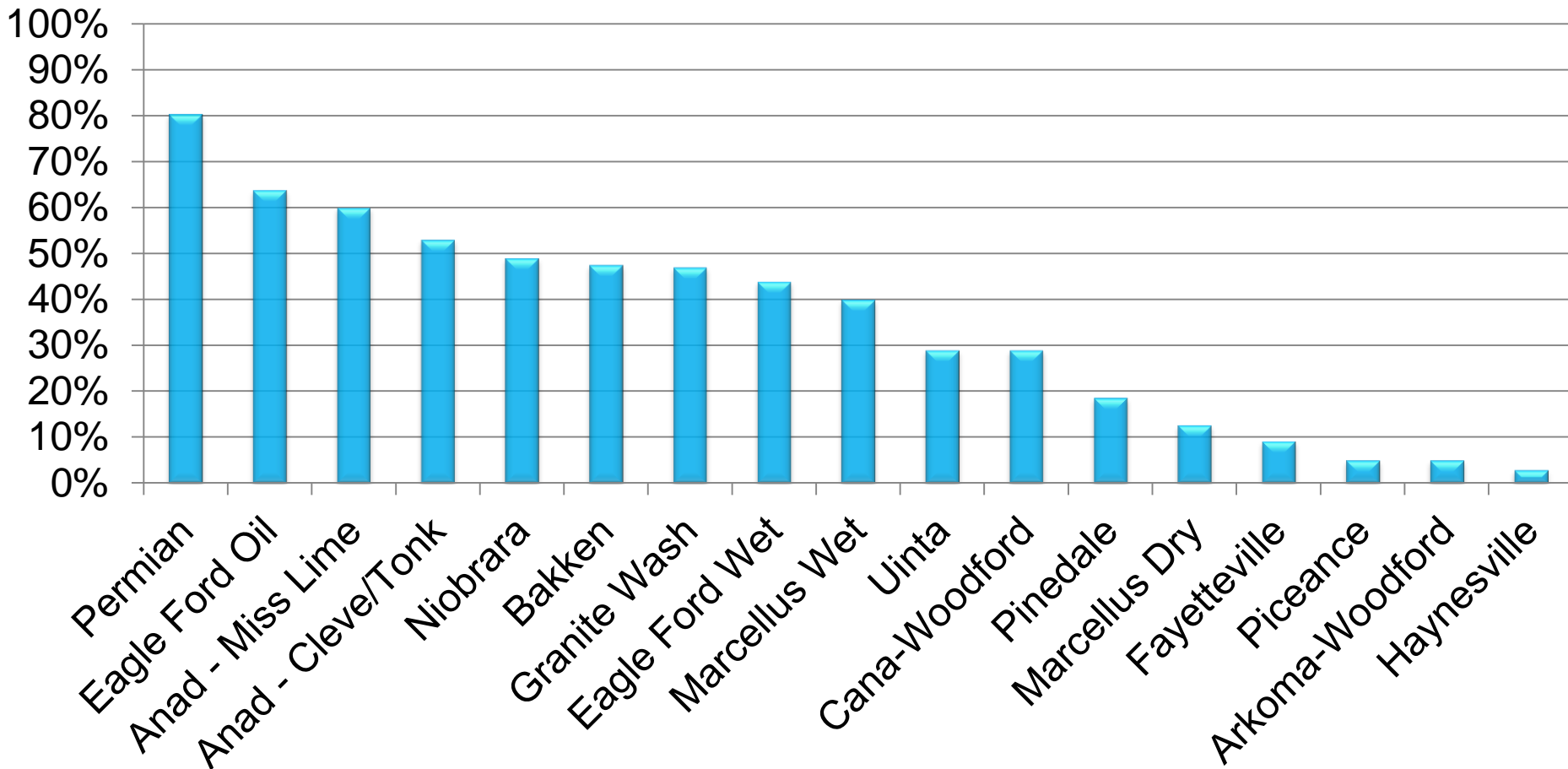
# Liquids Providing Uplift, Under Pressure Lately



# Rates of Return Falling , Even in Wet Plays

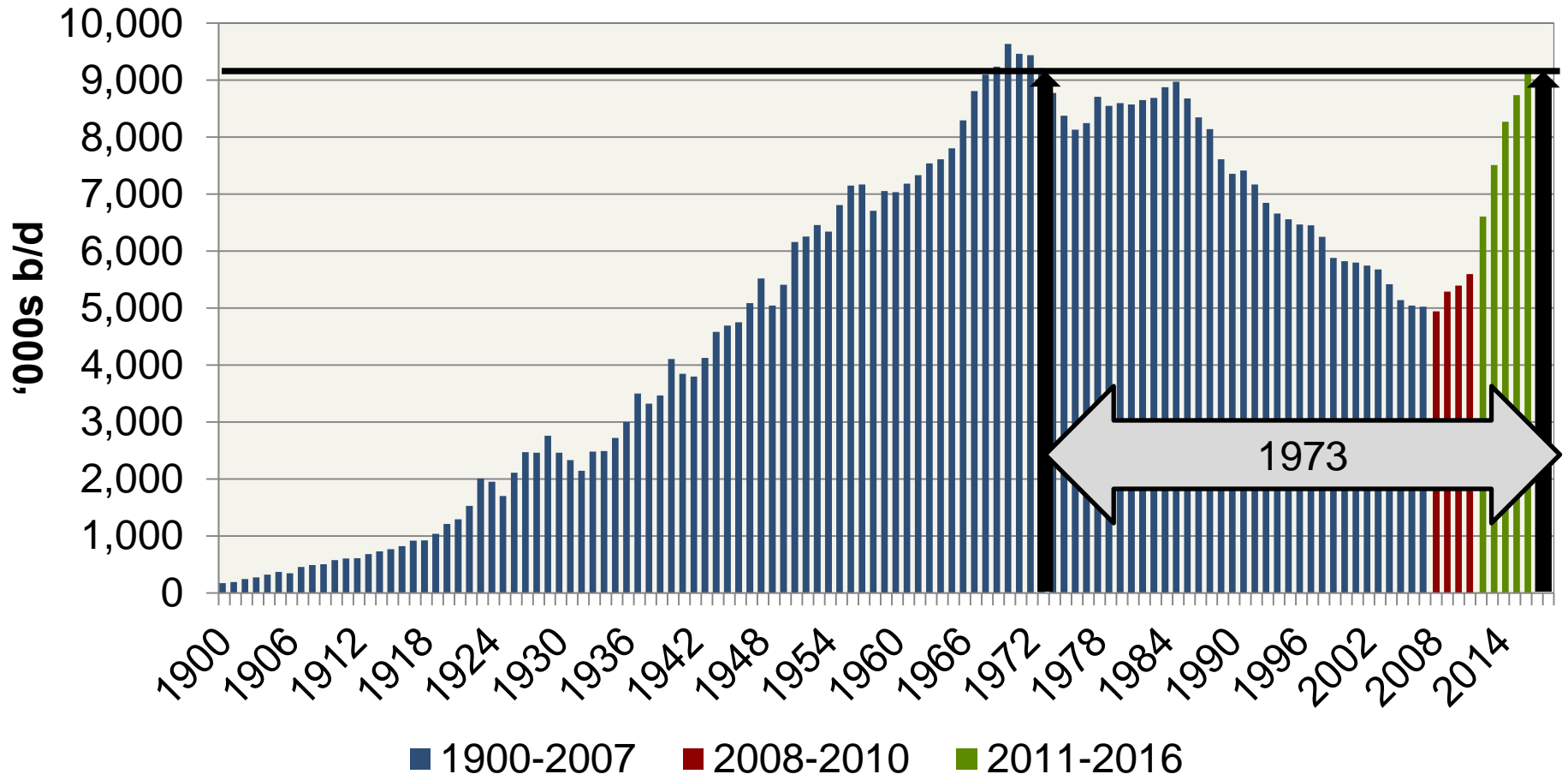


# Oil Plays Remain at the Top of the IRR Stack

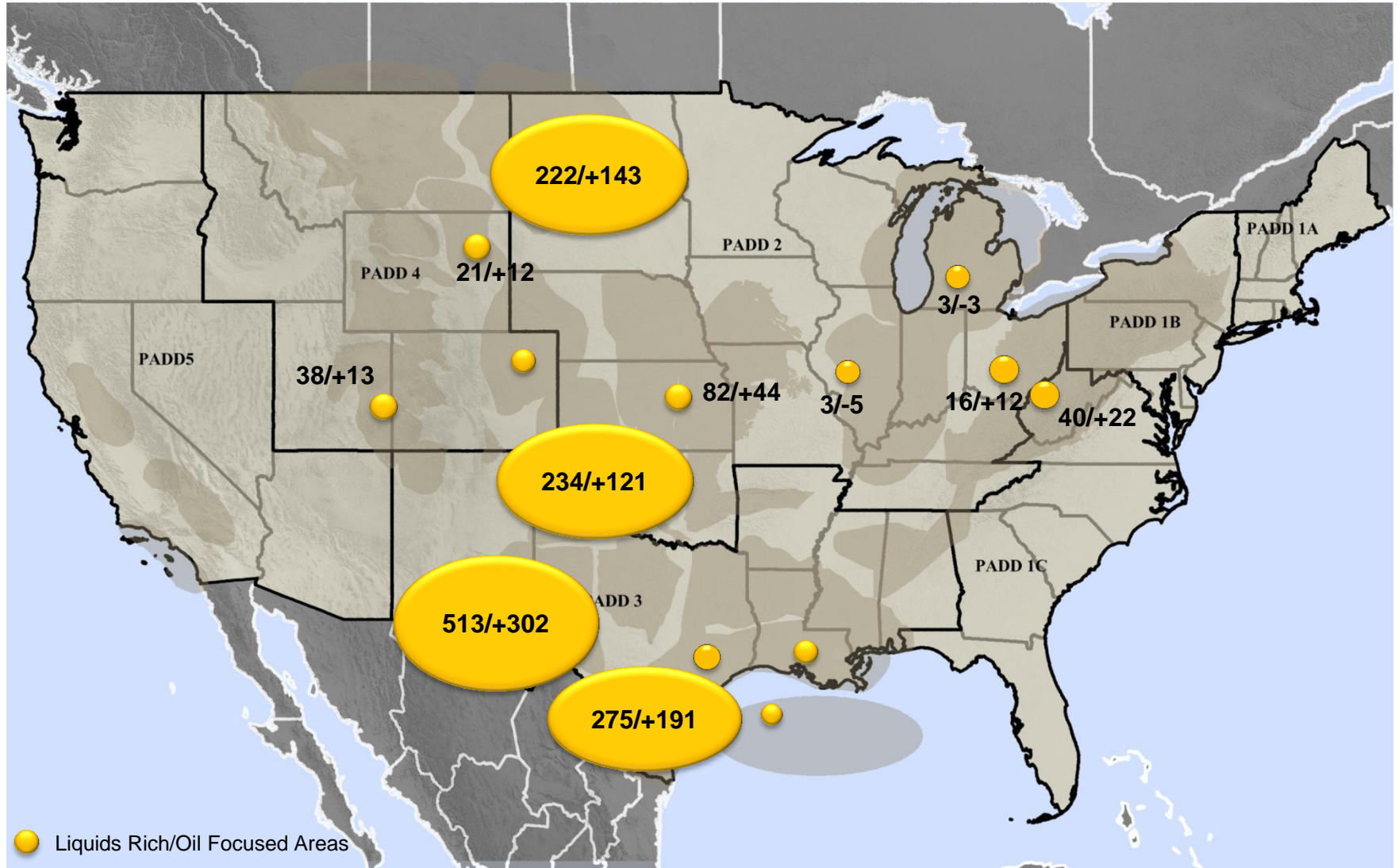


Price Assumptions: Gas = 12 month forward average curve for each regional pricing point as of June, 2012 (price range \$3.26-\$3.49/Mcf)  
 Oil = 6 month average WTI +/- differential as of June, 2012 (price range \$74.98-\$96.85/barrel)  
 NGLs = weighted average \$/barrel based on current Mt. Belvieu prices and the typical composition in each region (range \$27.78-\$51.92/barrel)

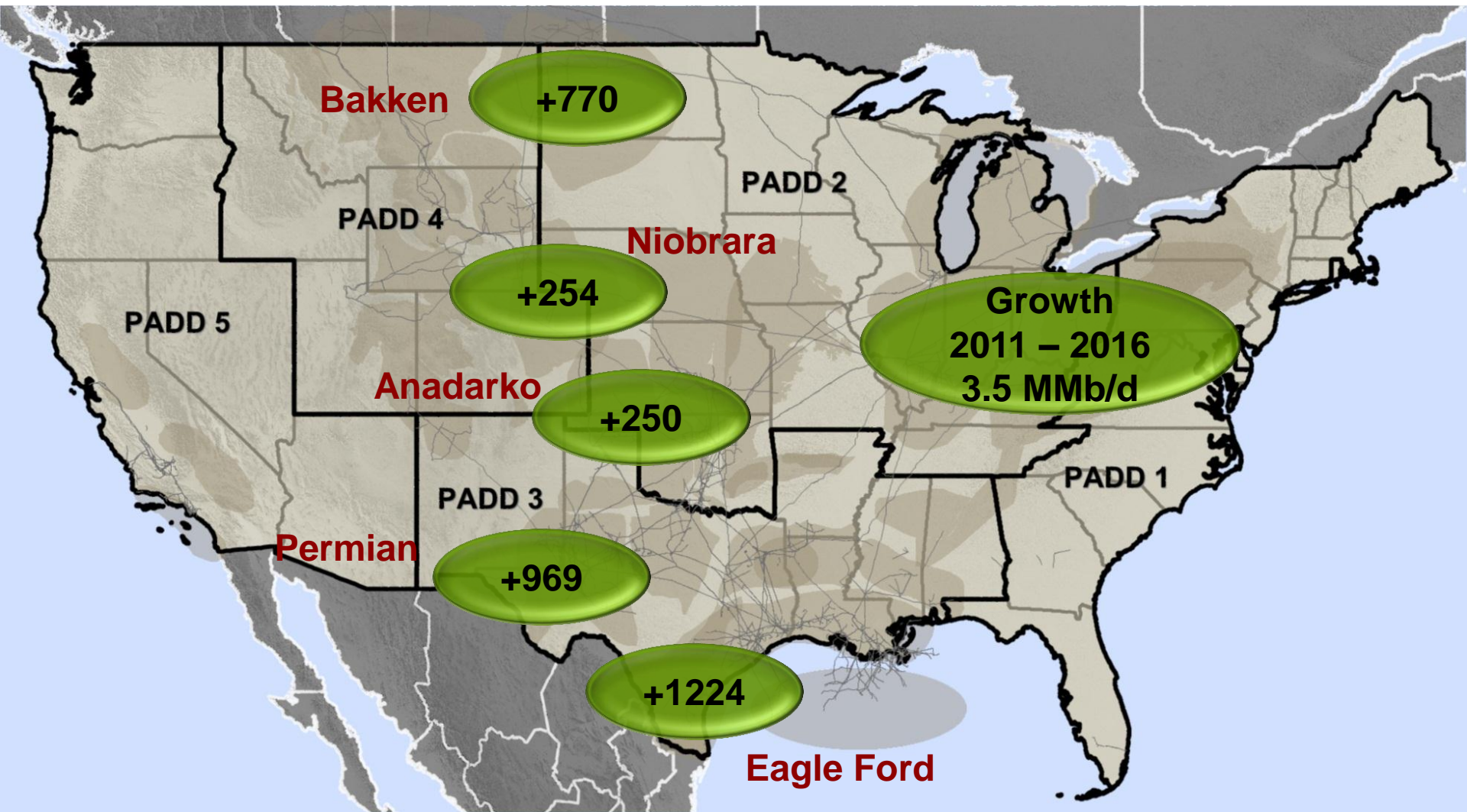
# Crude Oil Production Forecast Through 2016



# Oil Rigs Keep Gaining Ground

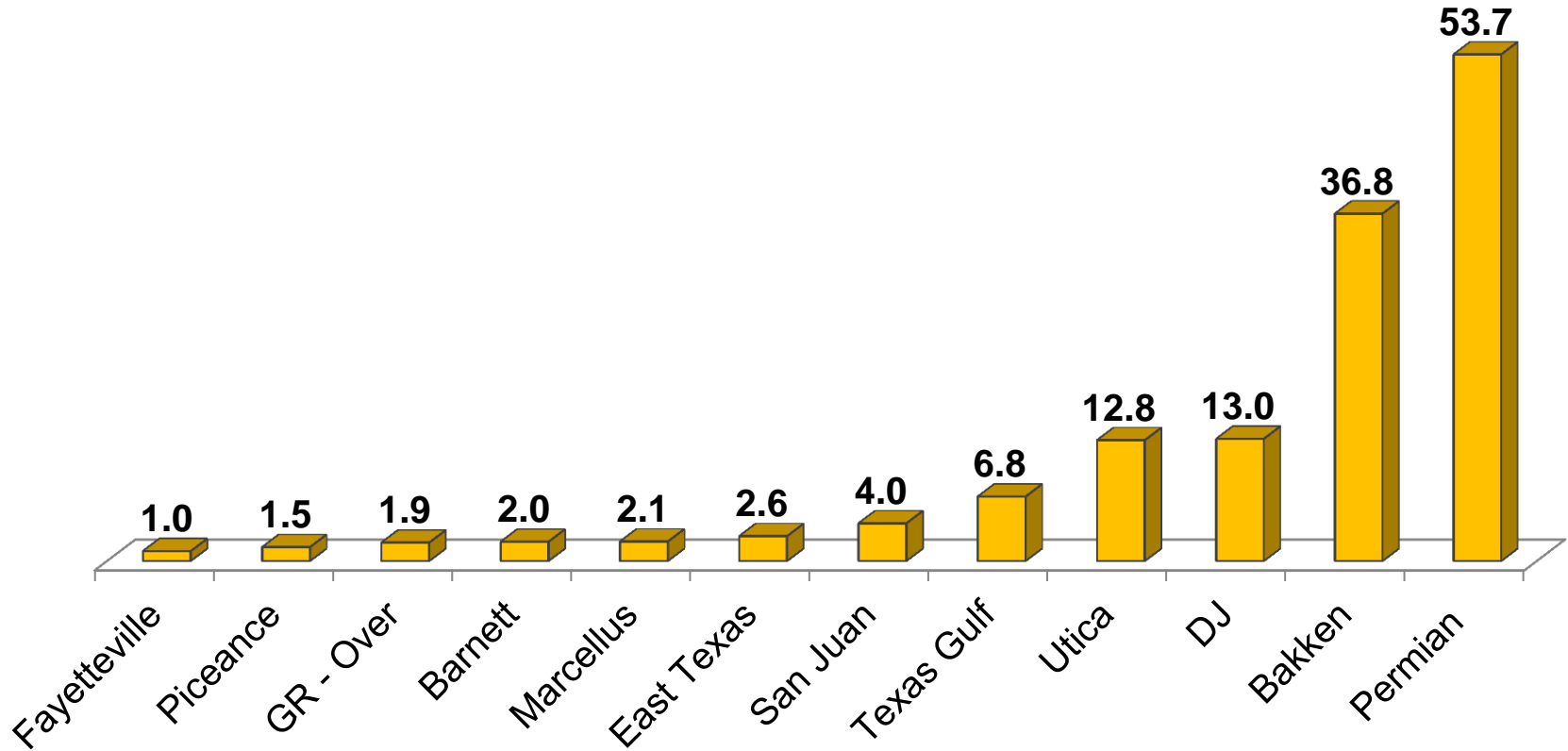


# Unconventional Oil Plays – Turning The Corner



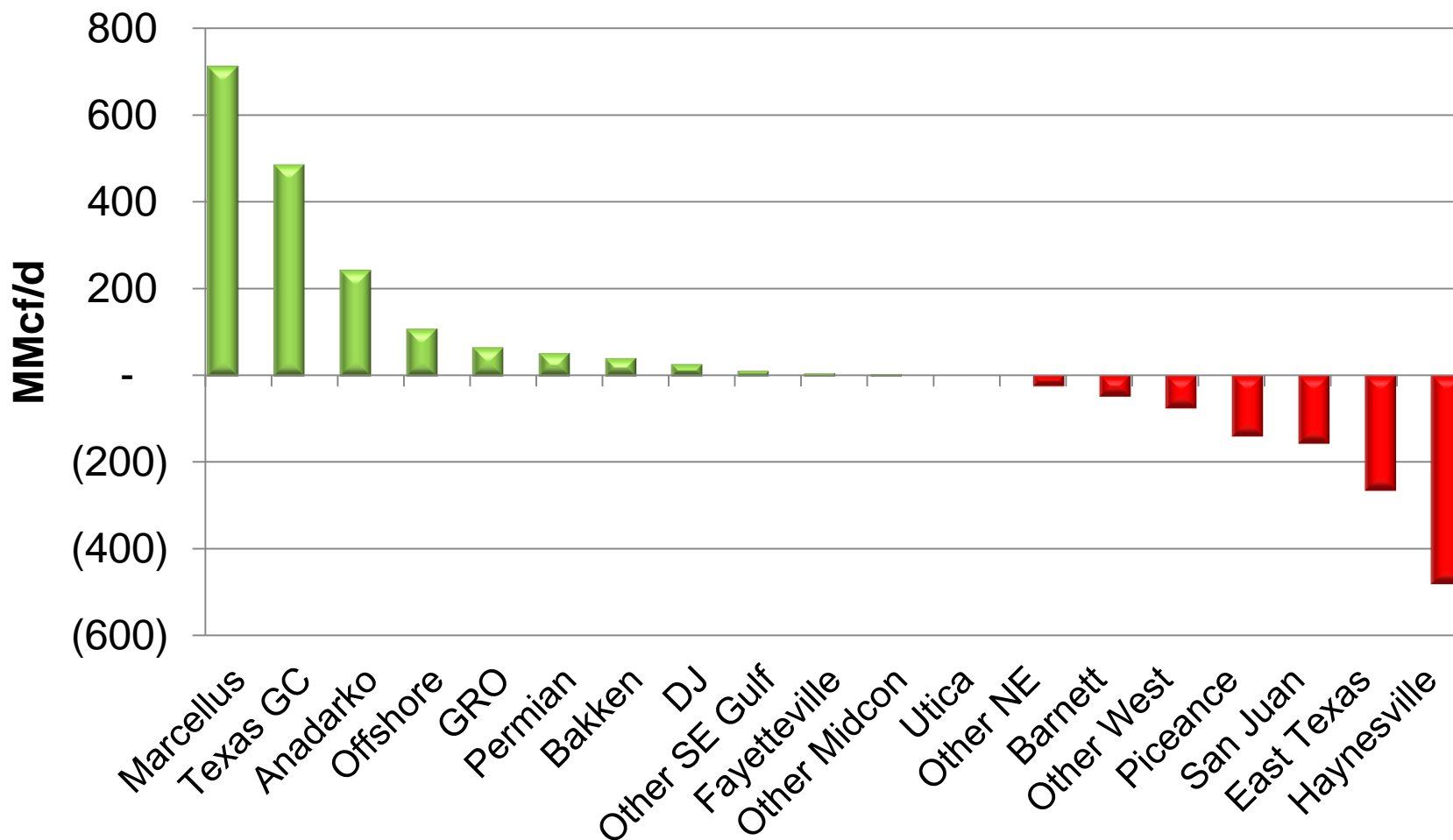
# Drilling Rig Equivalencies

## One Rig Haynesville – Gas Production Equivalent



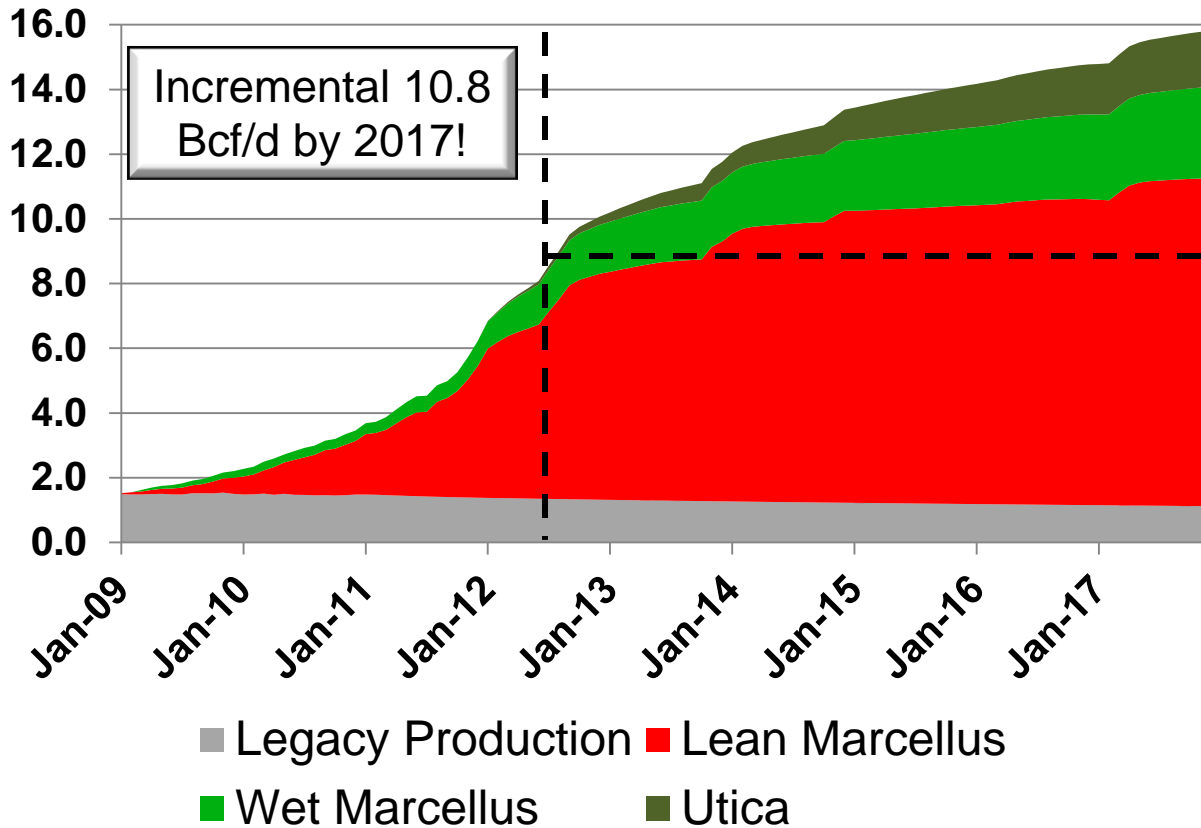
# What Gas Basins Win and What Basins Lose?

## July 2012 vs. December 2012 Projection

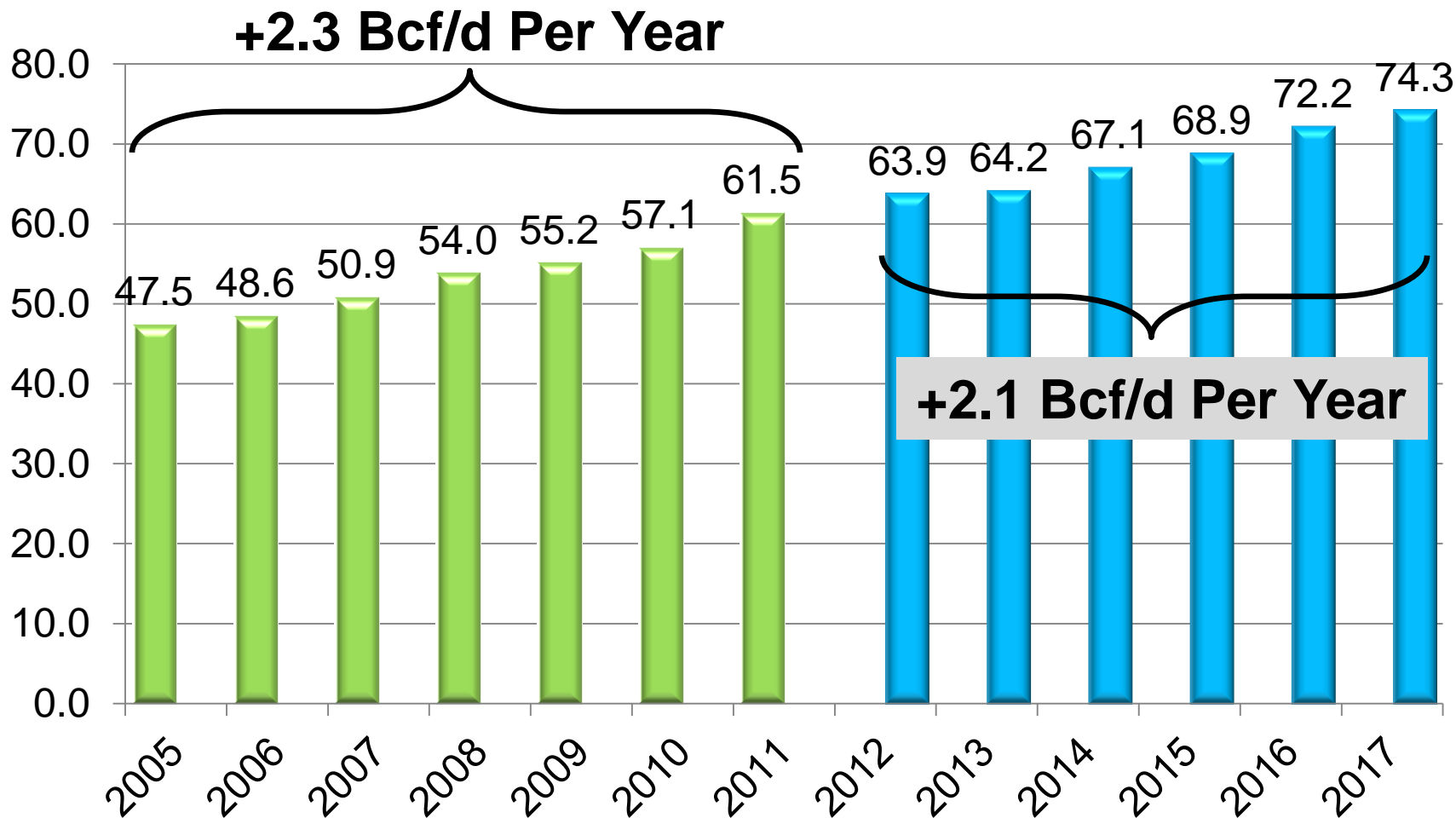


# Northeast Production Potential 15.5 Bcf/d by 2017

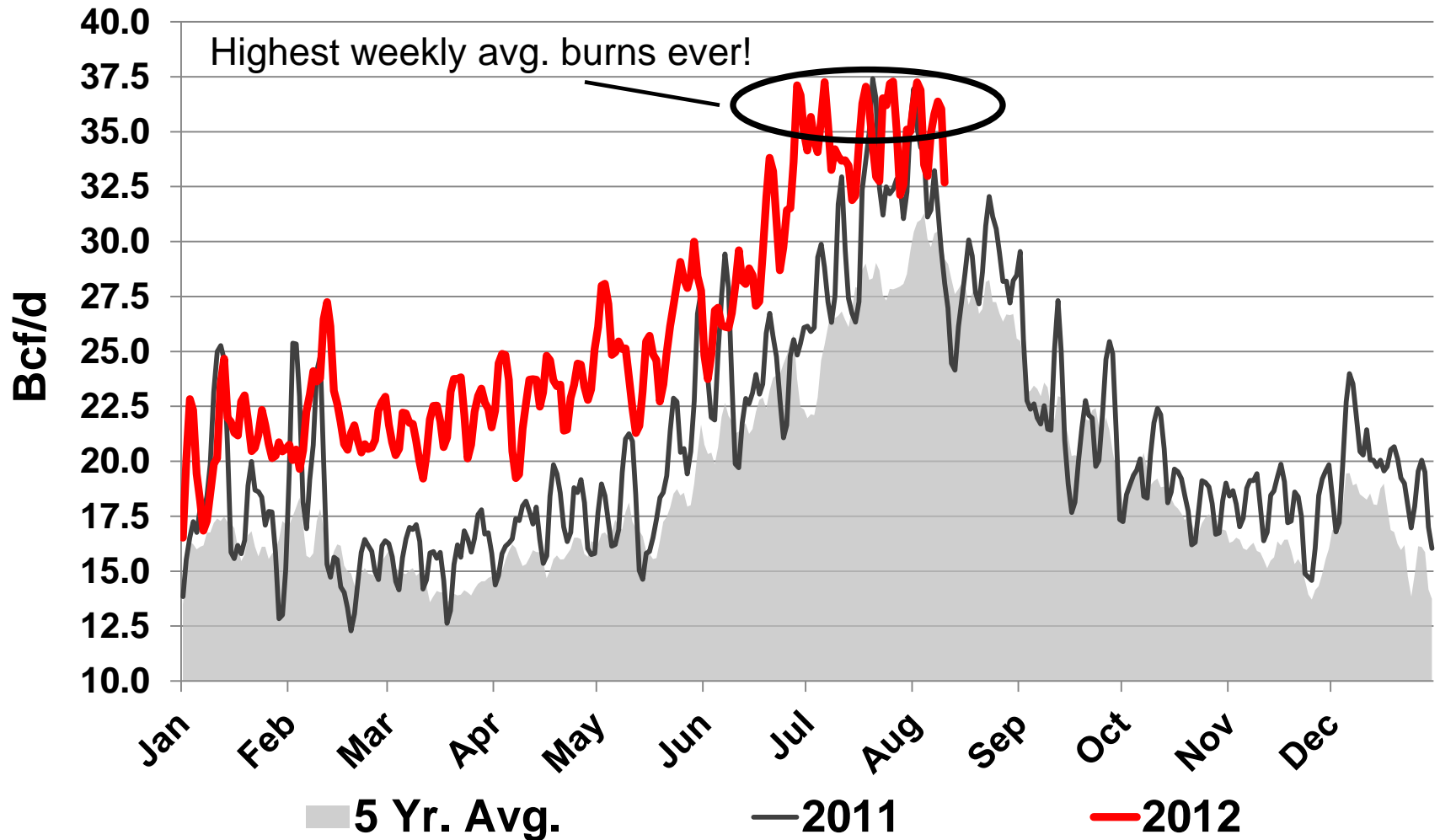
Northeast Production Profile (Bcf/d)



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

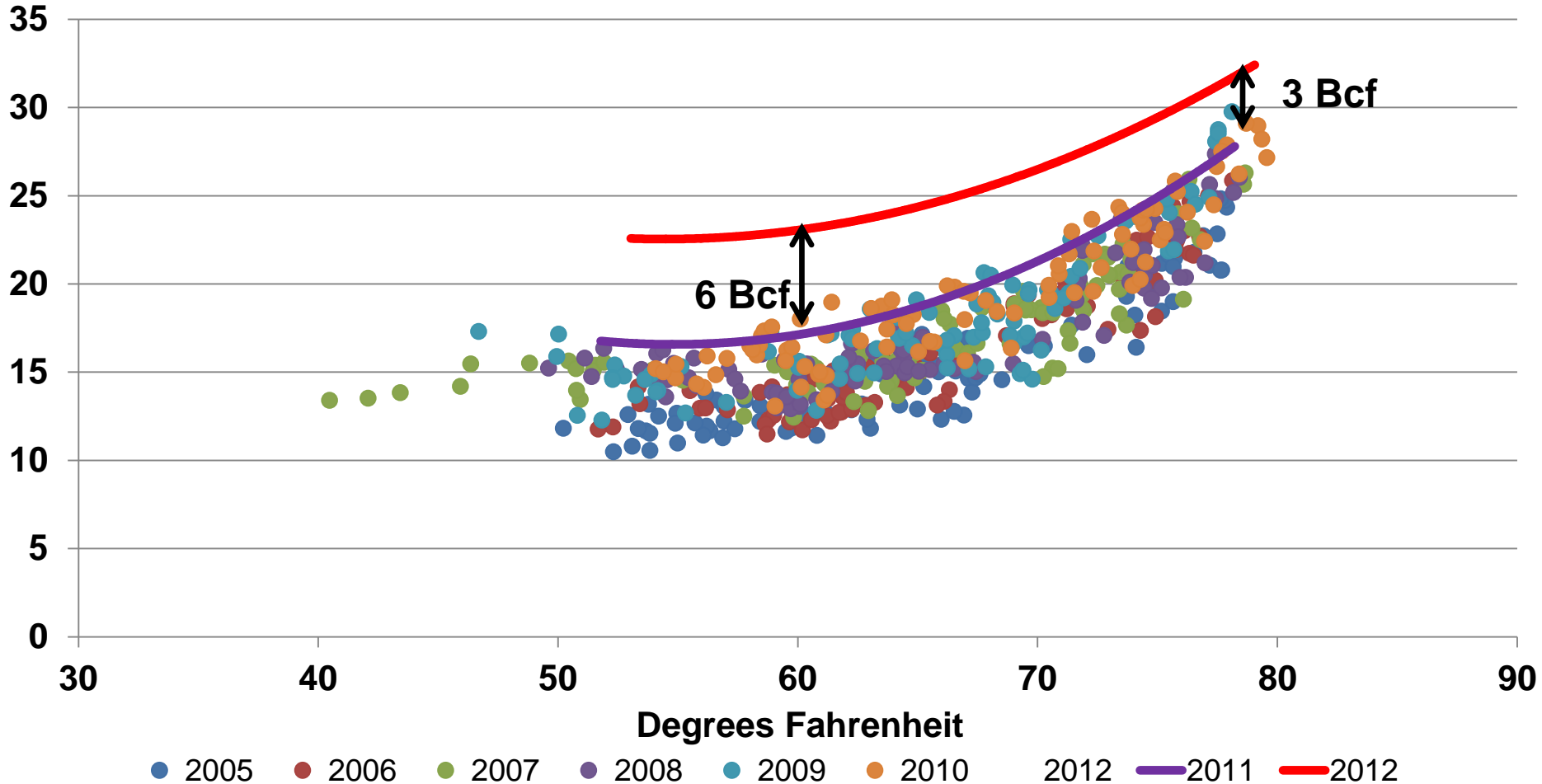


# Gas Demand from Power Up 4.9 Bcf/d (24%) in 2012



# Power Burn Up Significantly in 2012 but Hotter Temps May Suppress YOY Increase

## Power Burn Per Degree (Bcf/d)



# *Barrage of EPA Regs Hit Power Sector*

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Significant EPA regulations affecting the power industry include:

## **1. Mercury Air Toxics Standards (MATS)**

- a) Finalized in Dec. 2011.
- b) Affects about 396 GW of Coal and Oil Power Plants

## **2. Cross State Air Pollution Rule (CSAPR)**

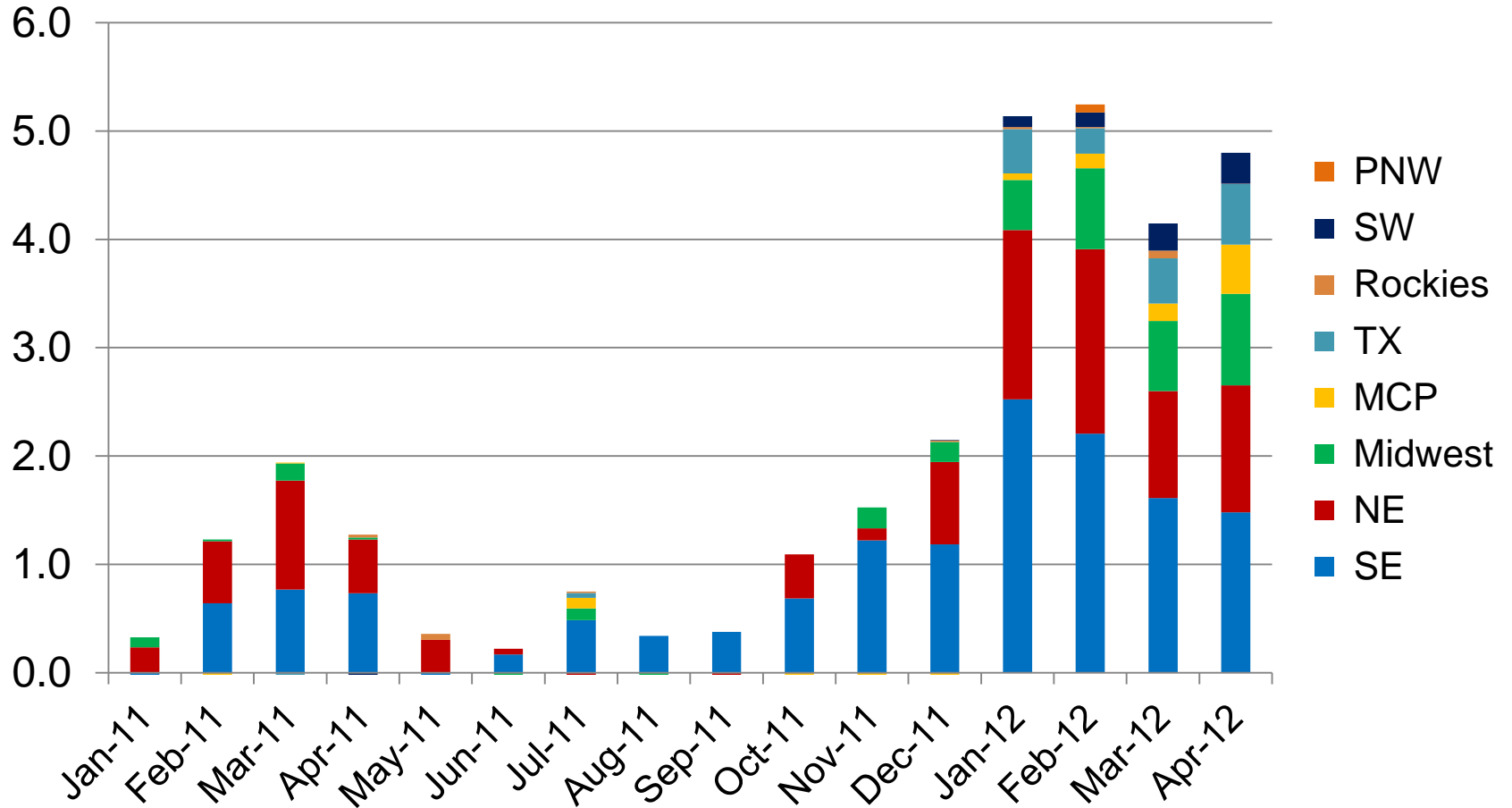
- a) stayed by the U.S. Court of Appeals on Dec. 30.
- b) imposes caps on SO<sub>2</sub> and NO<sub>x</sub> emissions in 27 states east of the Rockies.
- c) States nearly achieved required emissions reductions in 2011 because of Clean Air Interstate Rule requirements in 2005 and low gas prices.

## **3. Greenhouse Gas Rule (GHG)**

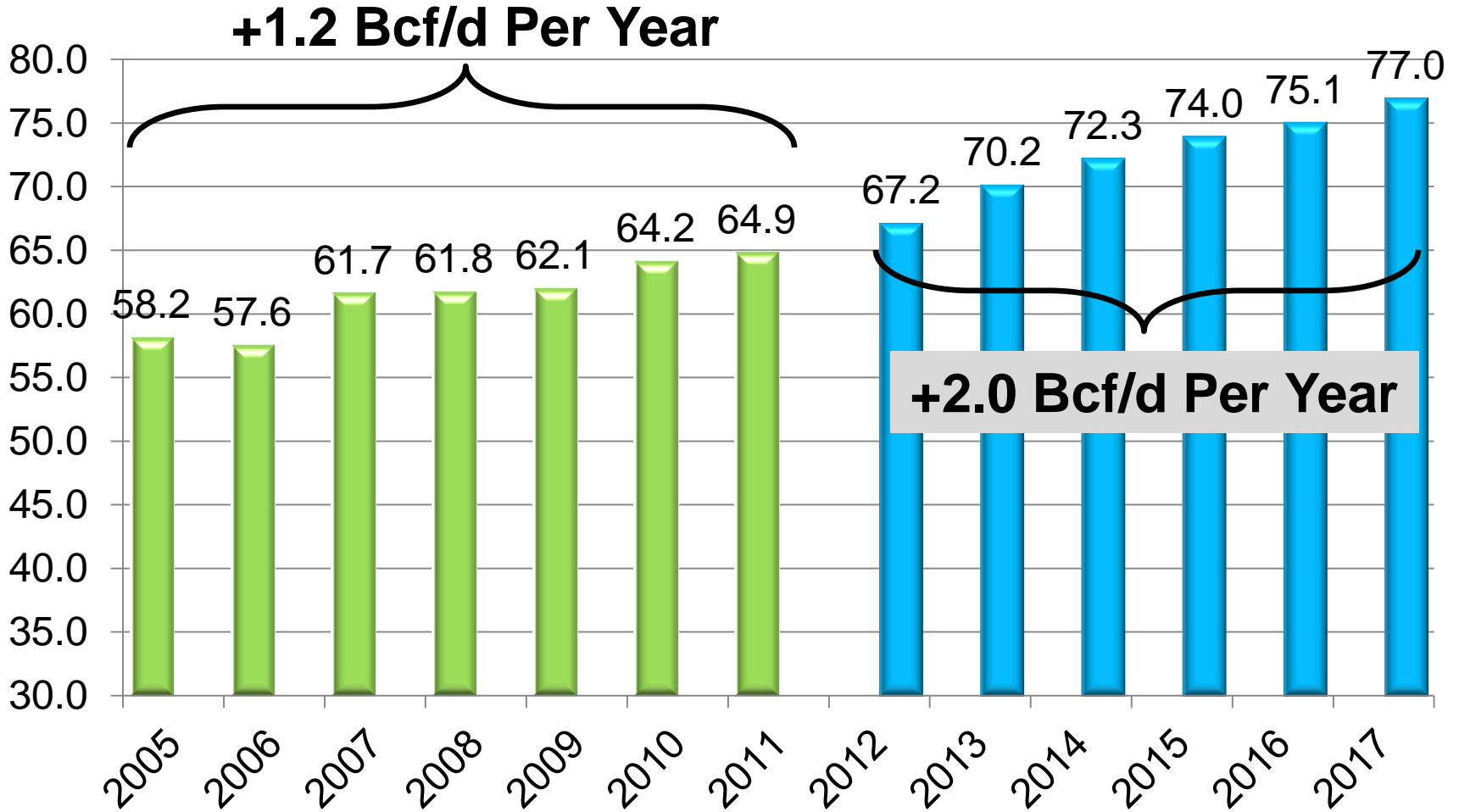
- a) Proposed this March
- b) Caps CO<sub>2</sub> at 1,000 lbs per MWh (typical coal plant emits 1,800 lbs)
- c) Doesn't Apply to Existing Plants
- d) Phases in over 30 Years

# Coal to Gas Switching Leading Demand Push

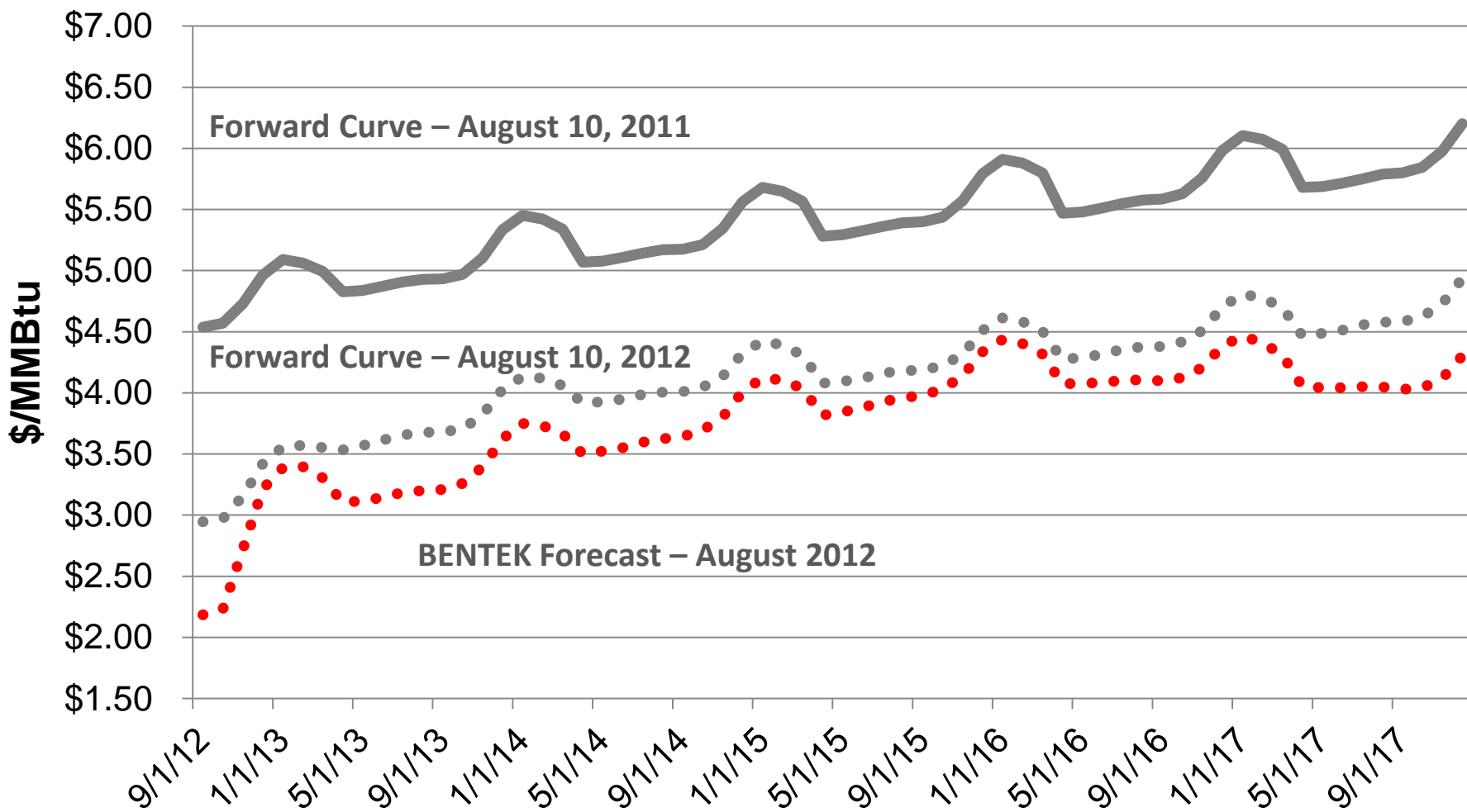
## Coal to Gas Switching by Region (Bcf/d)



# U.S. Demand Forecast to Grow 12.1 Bcf/d from 2011 to 2017



# NYMEX Forward Curve Expectations



# *Conclusions and Takeaways*

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- ❖ **Production to slow then resume growth as higher oil and liquid prices, uncompleted wells, technological and efficiency gains allow E&Ps to respond to market conditions.**
- ❖ **Demand push will temper storage overhang this summer, but need weather to show up in winter to balance market.**
- ❖ **Power demand growth is slowly becoming more systemic, and primary driver in year over year demand gains.**
- ❖ **Henry Hub prices remain under downward pressure with market rallies stifled by a supply response. Henry averages about \$3.50 through 2017.**

# BENTEK Energy

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



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