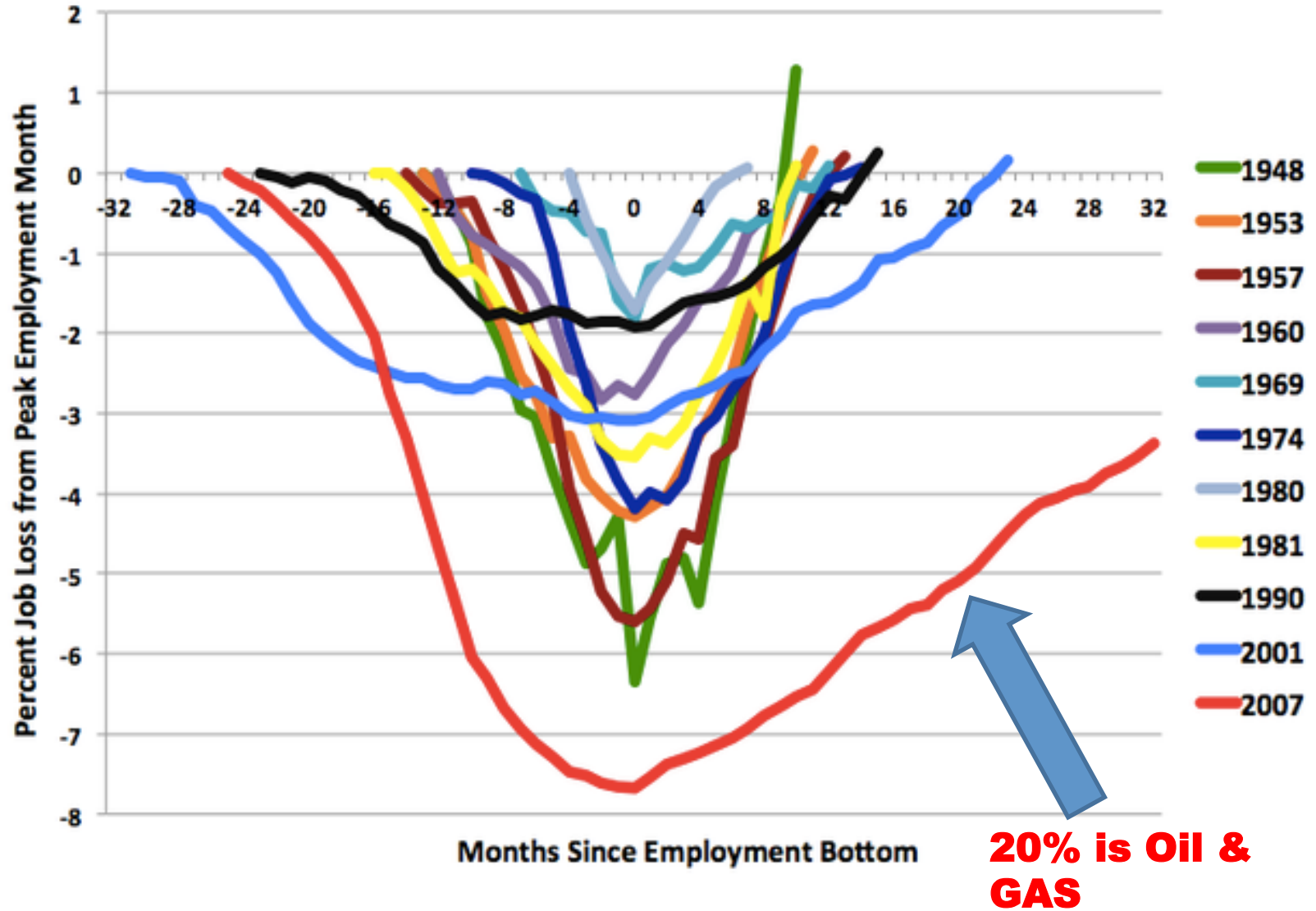


The U.S. Petroleum Renaissance: What Does it All Mean?

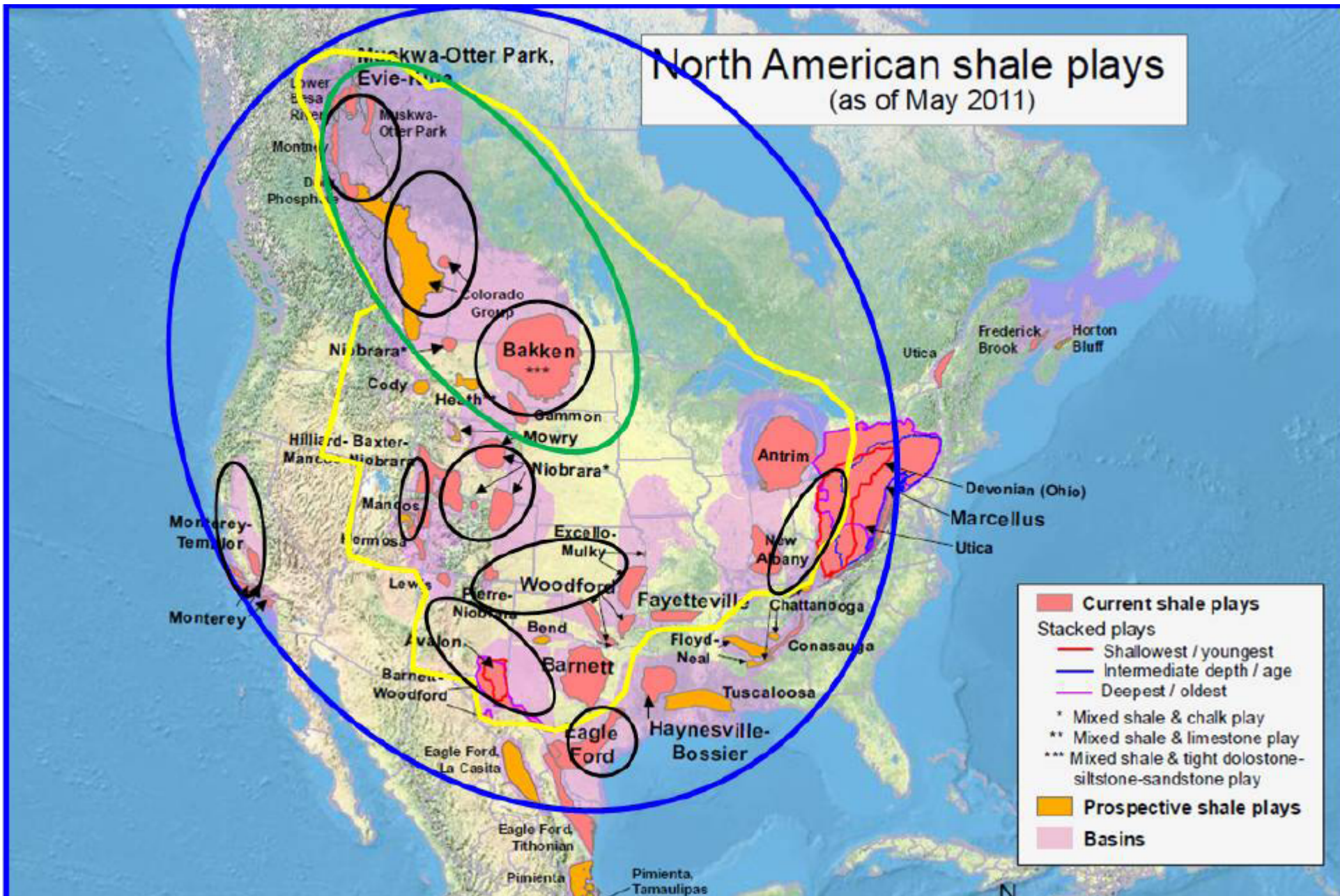
Lucian Pugliaresi, President
Energy Policy Research Foundation, Inc. (EPRINC)
33RD Alaska Resources Development Conference
Anchorage, Alaska
November 14, 2012

Employment Recovery Remains Slow

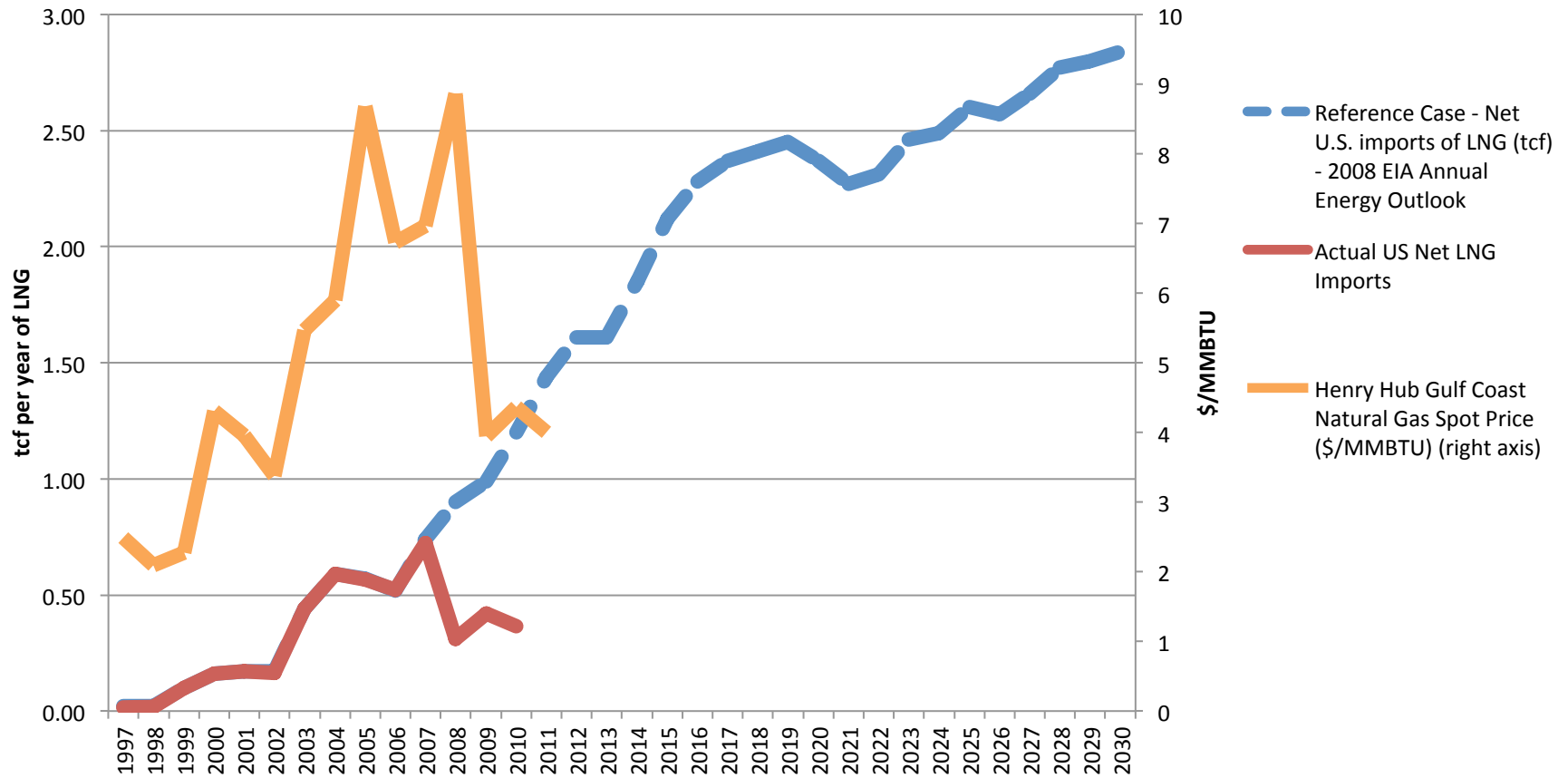


Source: U.S. Bureau of Labor Statistics

North American shale plays (as of May 2011)



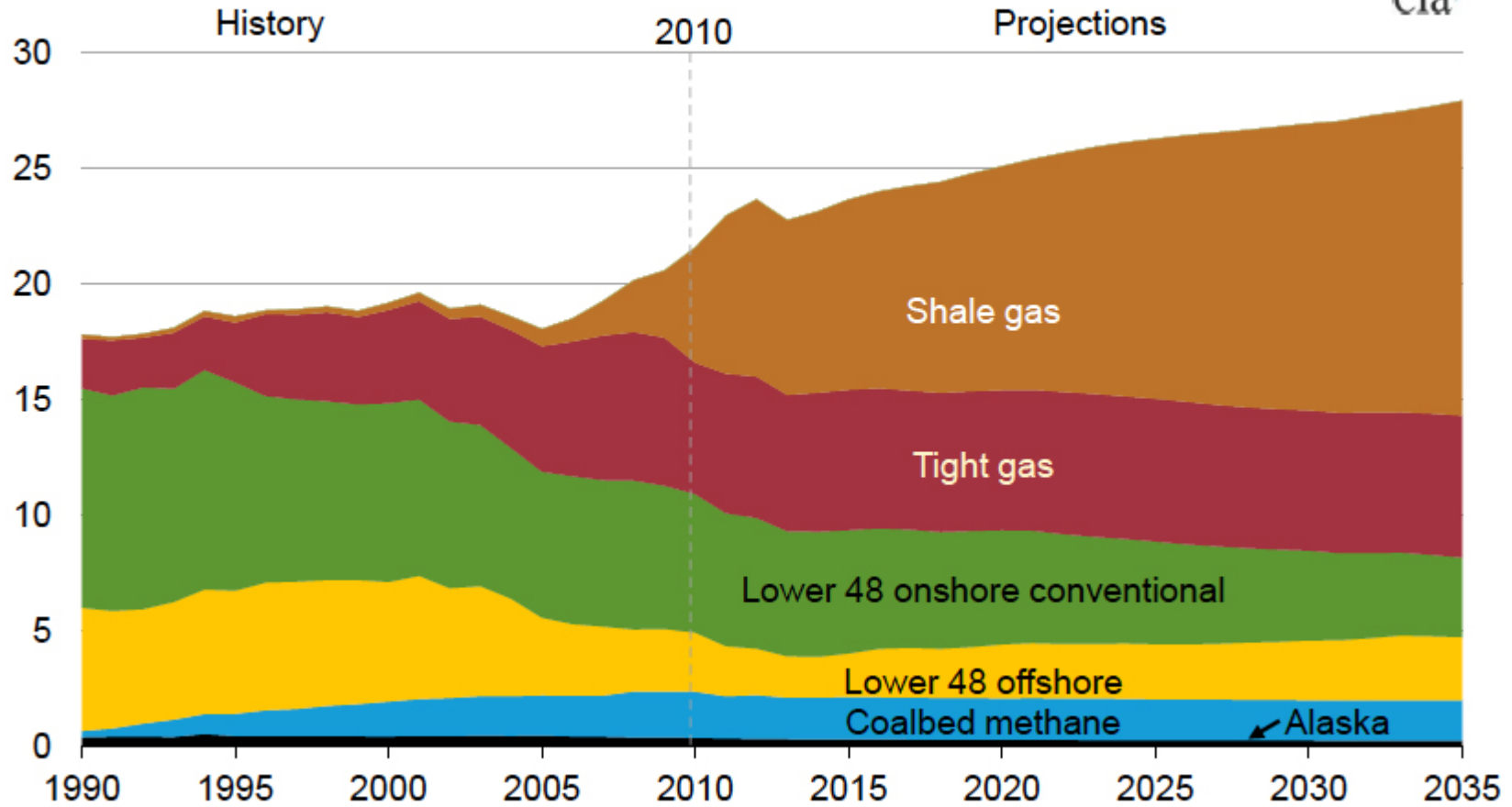
Remember to be humble...Projected Imports of LNG vs. Actual



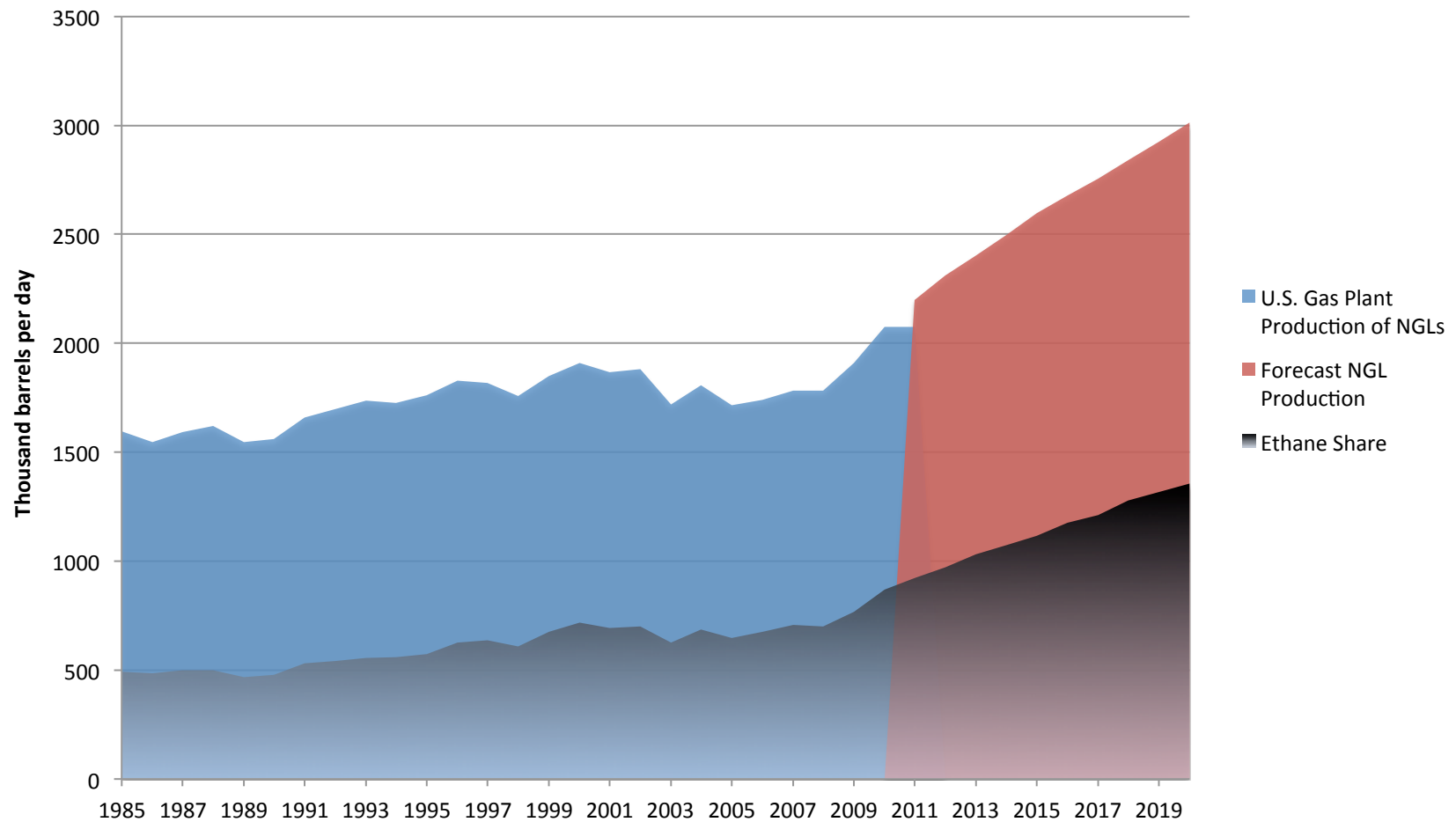
Source : EIA data and forecasts

EIA Forecast of Natural Gas Production

U.S. dry natural gas production
trillion cubic feet

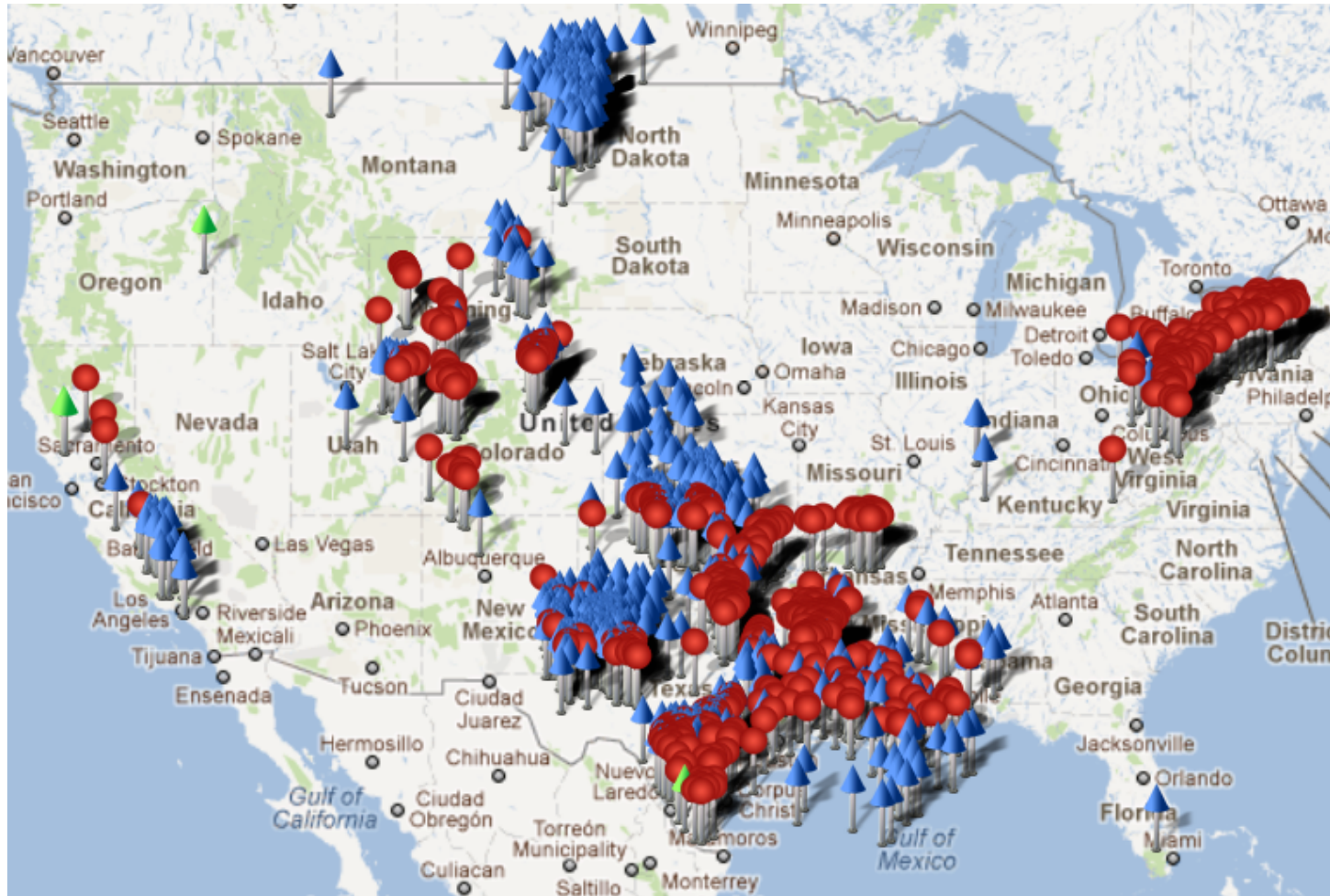


NGL Production Outlook to 2020



Source: EIA Data, EPRINC forecast. Assumes ethane continues to incrementally increase its share of the NGL pool.

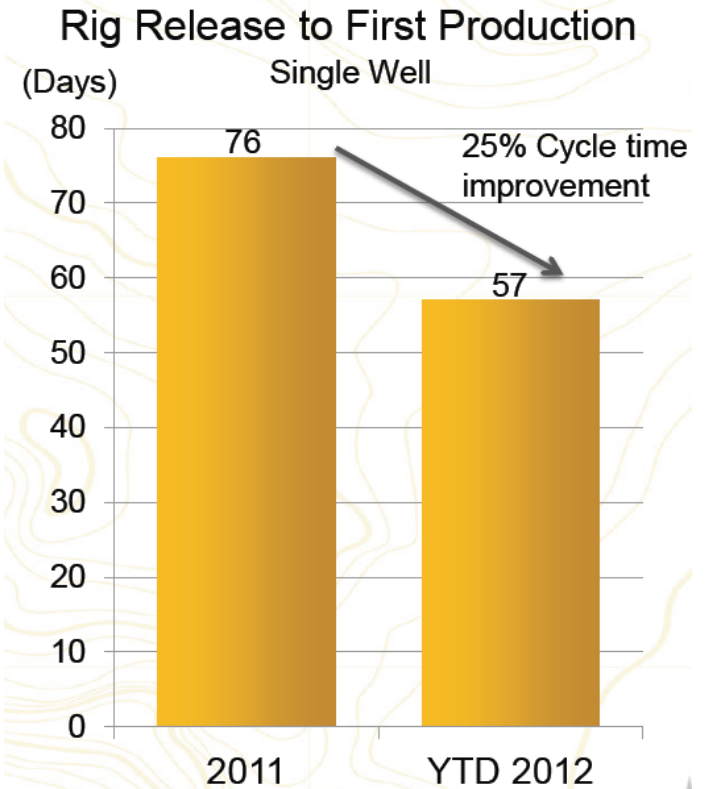
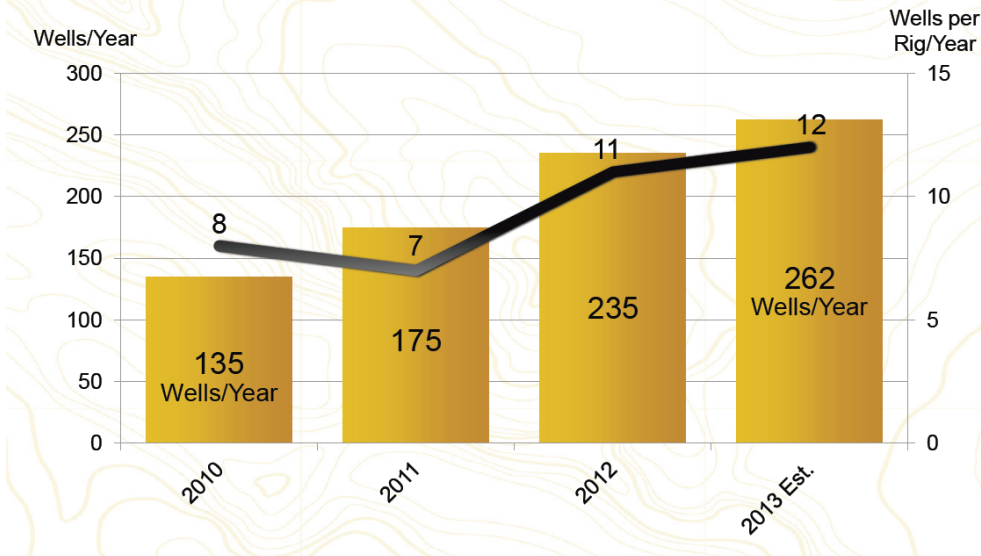
Rig Count and Permits



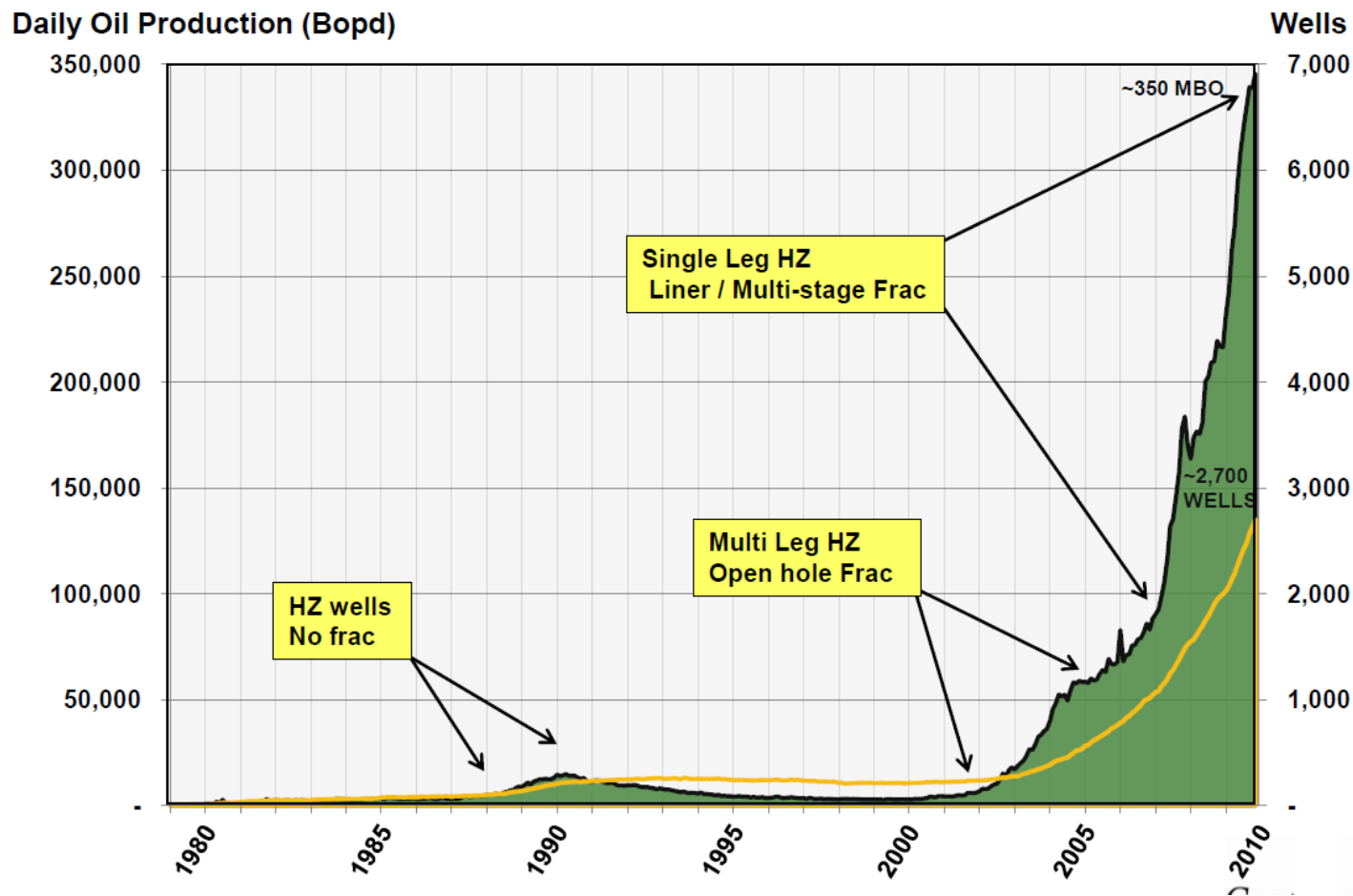
Source: Photo Baker Hughes Interactive Rig Count Jan 25, 2012

Drilling Efficiencies – Doing more with less...

Drilling Efficiencies Result in 40% More Wells Per Rig

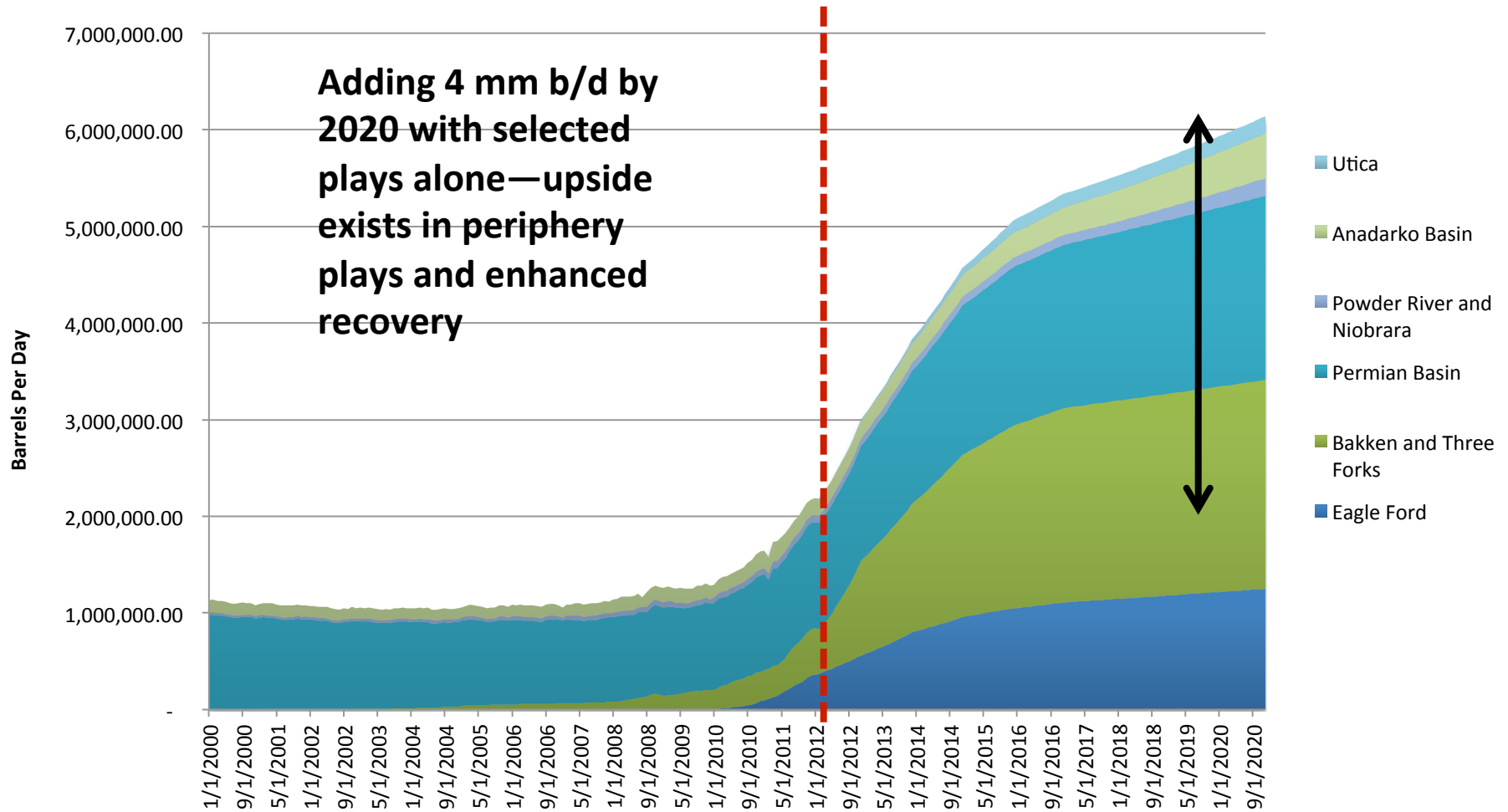


Williston Basin Production Forecasts



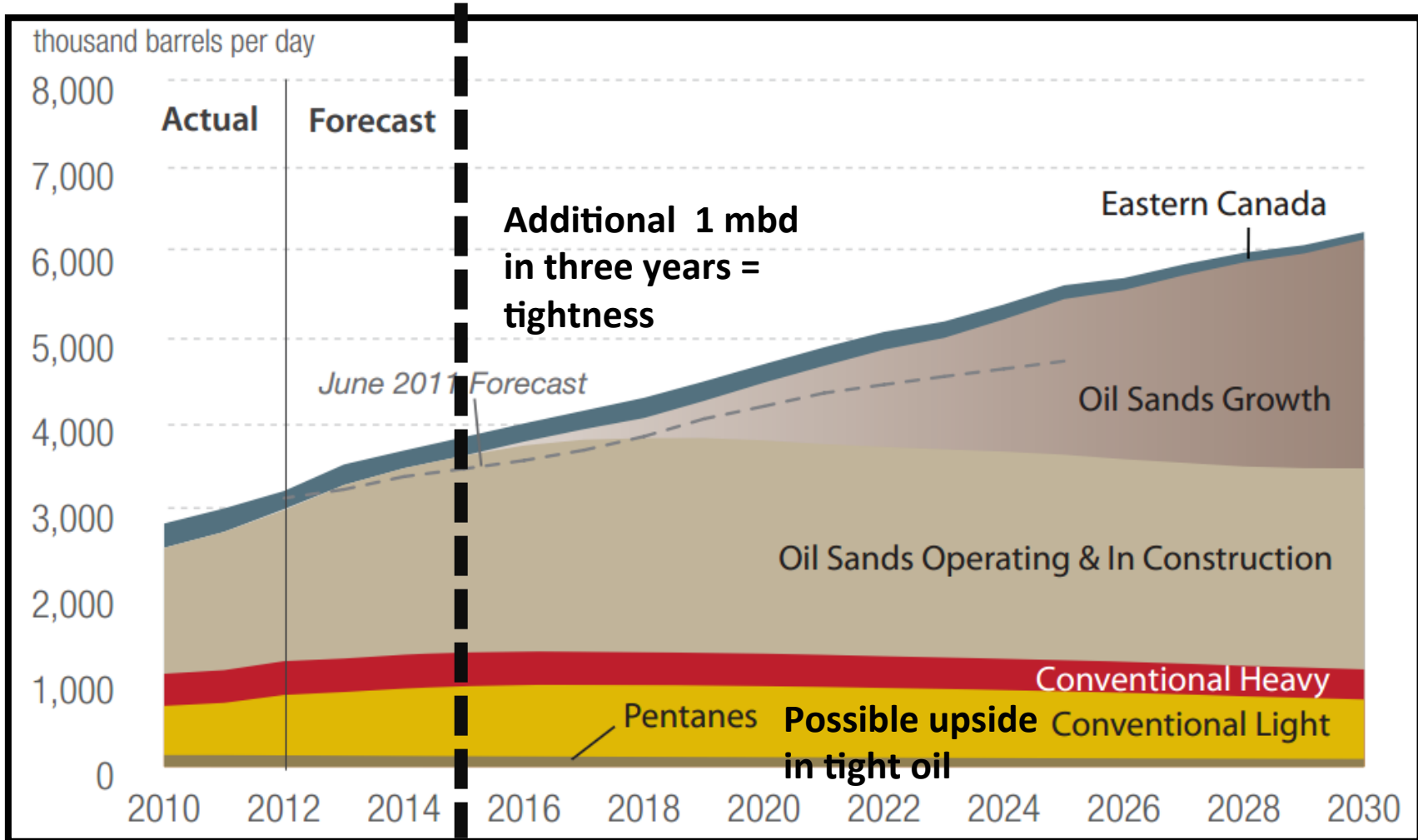
Source: Continental Resources , from Platts Midstream Development & Management Conference, May 12, 2011 NDPA

EPRINC's Forecast for Major U.S. Shale Plays

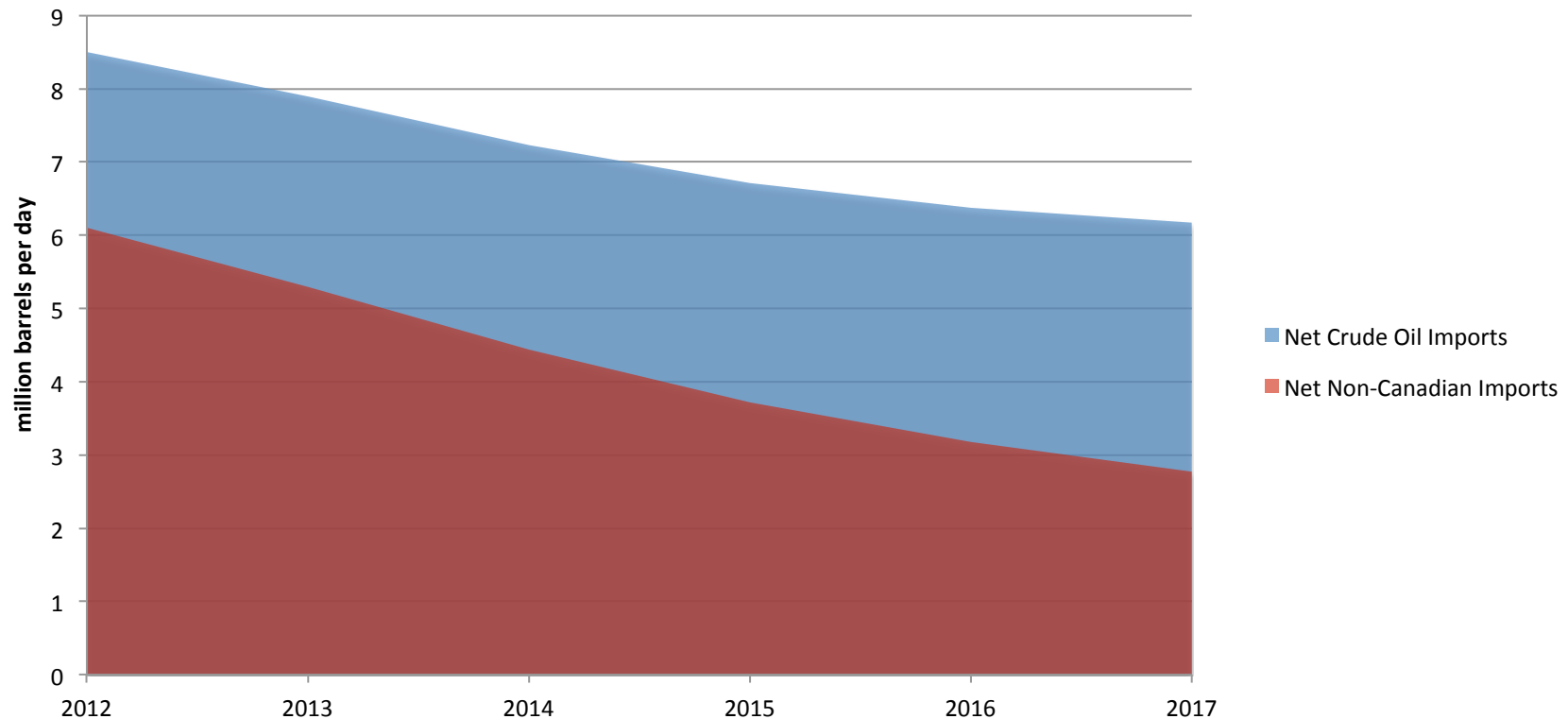


Source: HPDI data with EPRINC forecast estimates

Canadian Production

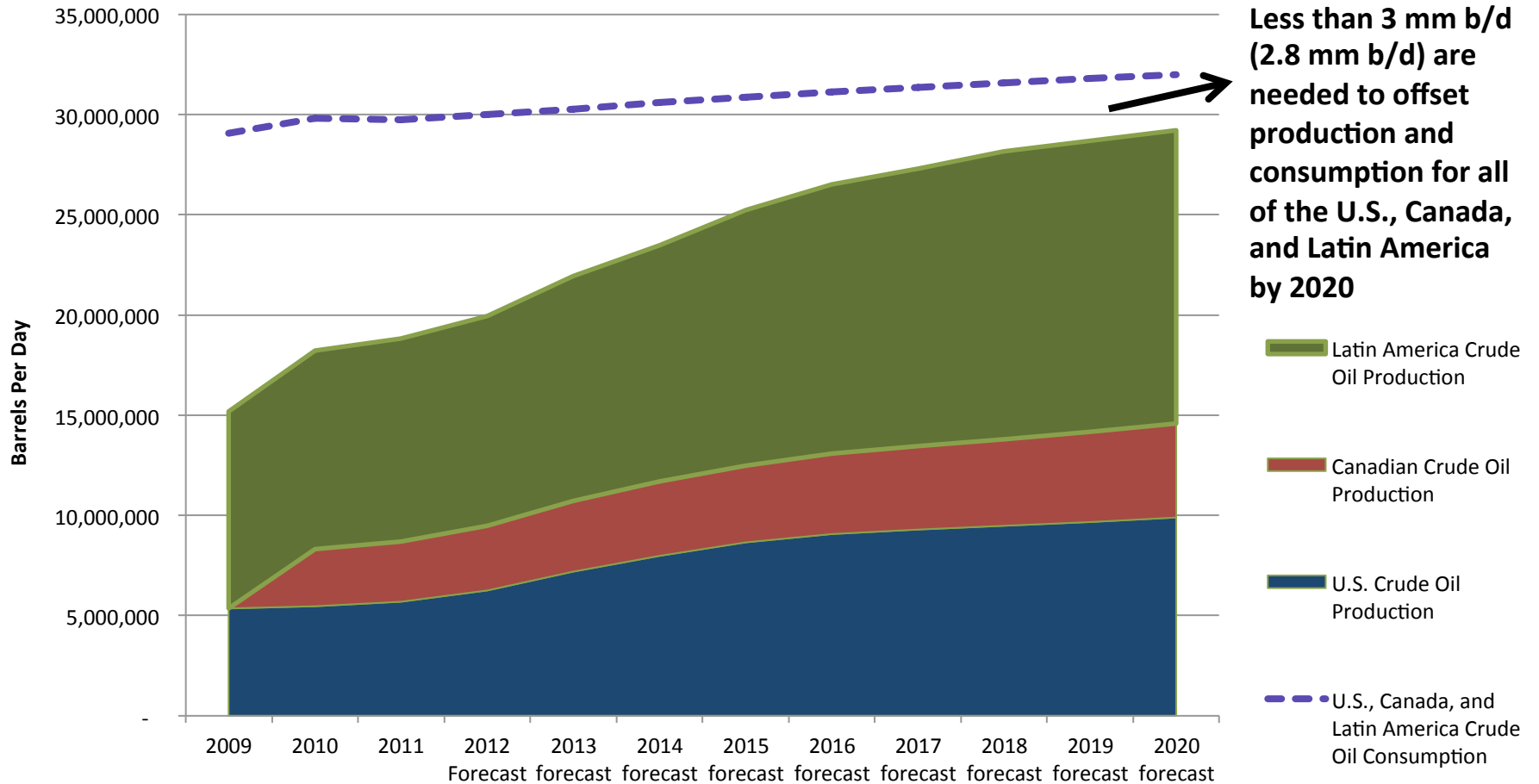


Resulting Decline in US Net Imports*



*Holds all US crude oil and biofuel production constant except for the plays listed in the previous slides. Assumes 1 mm bd of Canadian production growth dispersed evenly over 5 years, and that all incremental Canadian production enters the US. Also assumes US demand remains unchanged from current levels.

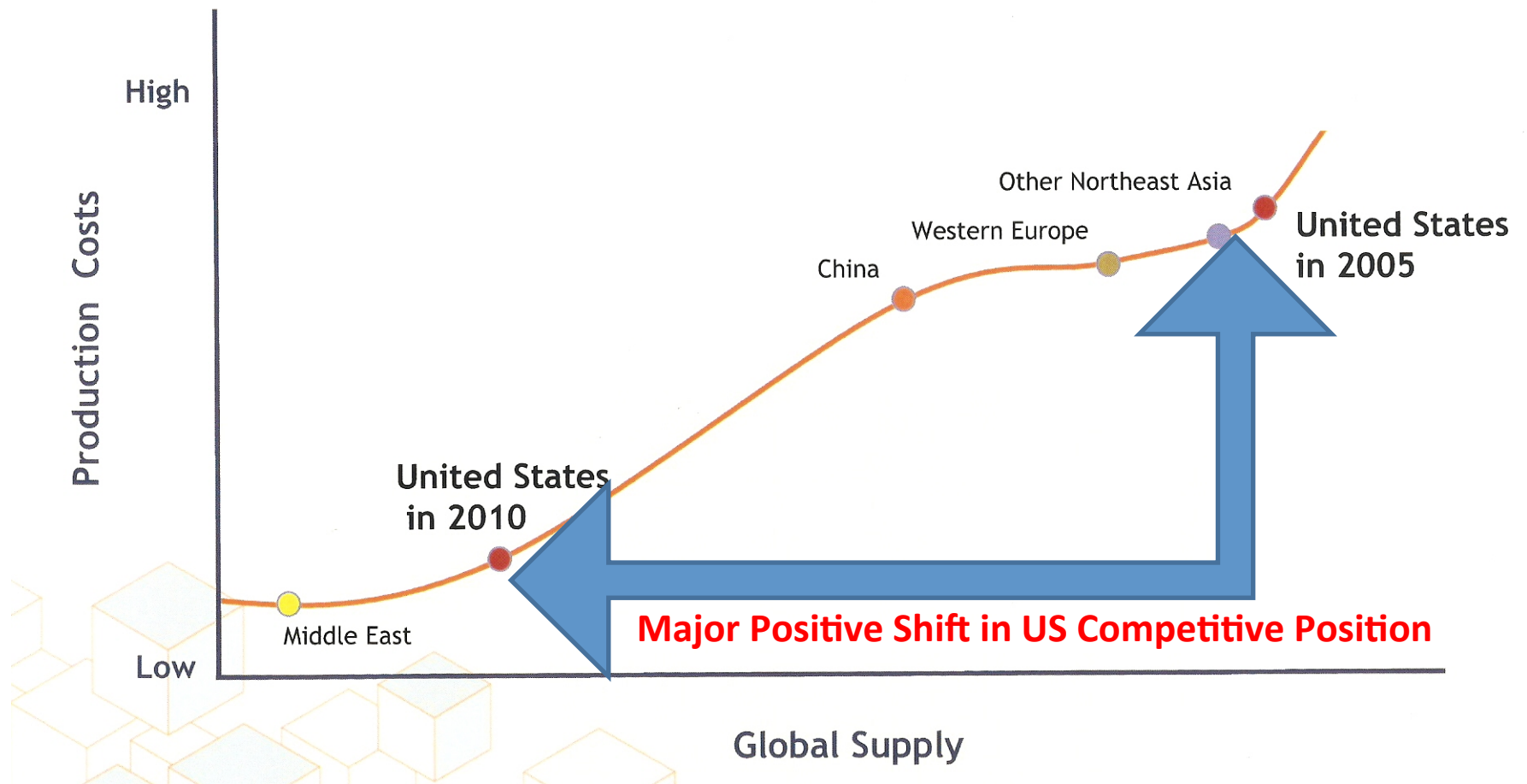
The Americas nearly self sufficient by 2020...



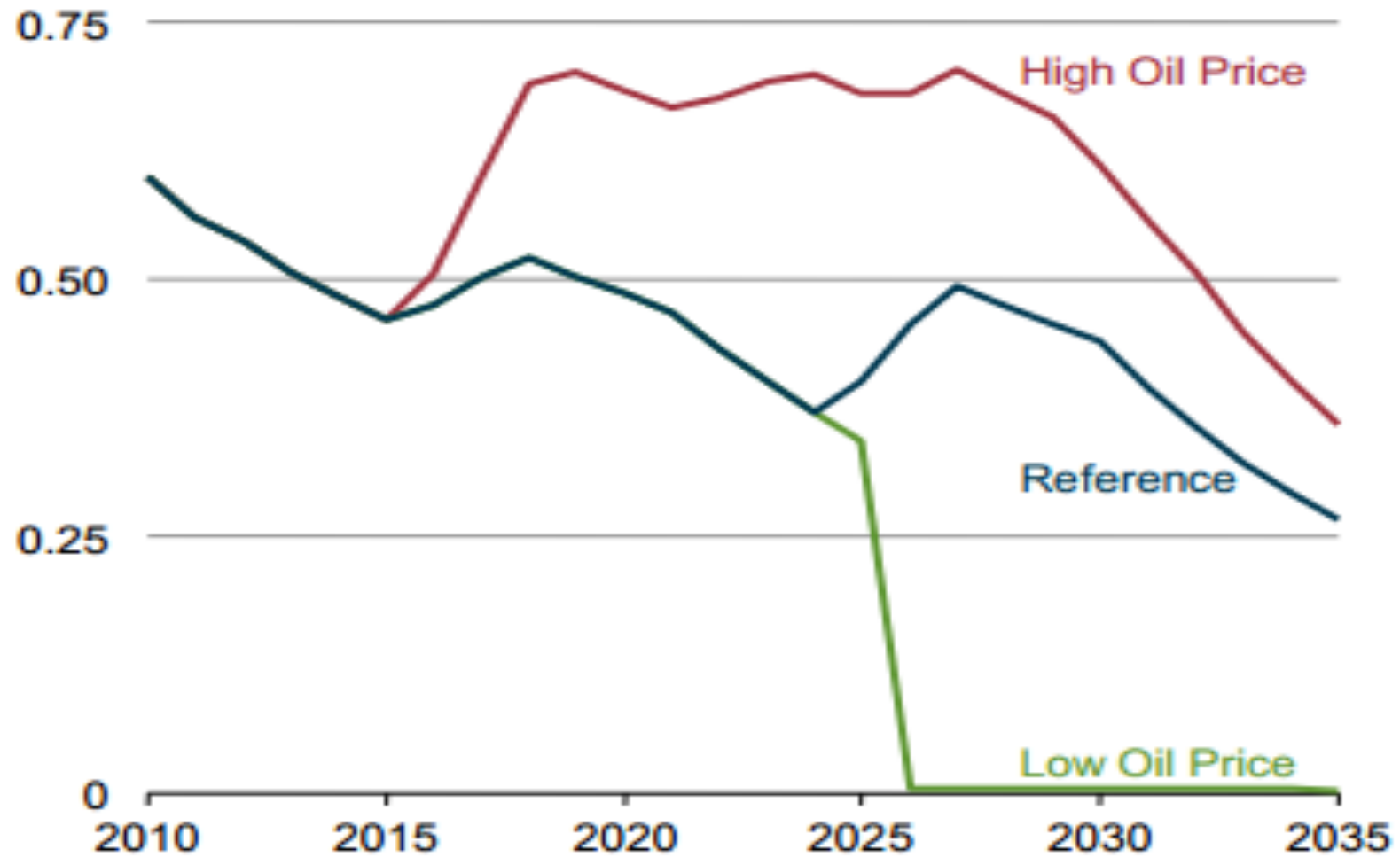
Source: US 2012 data from May EIA-forecasts using EPRINC shale additions, Canada forecast from CAPP, Latin America production from BMI with some small estimates for "other latin america countries" from 2017-2012Energy

Typical Global Ethylene Supply Curve

(Petrochemical Production Costs by Country/Region)



North Slope Production Scenarios



Source: EIA

Conclusions

- This is a petroleum renaissance. The U.S. is the largest producer of gas in the world and quickly moving into first place in oil production.
- Downstream is Connected to the Upstream – Need Both.
- Regulatory Fix is Critical –Permitting, Permitting, Permitting!!!!
- Federal Access and Alignment of Interests are Essential
- Positive Future is Not Guaranteed without Policy Accomodation to New Reality.