

The Implications of the Bakken Shale Output: *A Pipeline's Perspective*



**New York Energy Forum
May 19, 2011**

**Brad Shamla
Vice President, Market Development
Enbridge Pipelines Inc**



Certain information provided in this presentation constitutes forward-looking statements. The words "anticipate", "expect", "project" and similar expressions are intended to identify such forward looking statements. Although Enbridge believes that these statements are based on information and assumptions which are current, reasonable and complete, these statements are necessarily subject to a variety of risks and uncertainties pertaining to operating performance, regulatory parameters, economic conditions and commodity prices. You can find a discussion of those risks and uncertainties in our SEC filings. While Enbridge makes these forward-looking statements in good faith, should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary significantly from those expected. Enbridge assumes no obligation to publicly update or revise any forward looking statements made herein or otherwise, whether as a result of new information, future events or otherwise.

- **About Enbridge**
- **Growing Bakken Production**
- **Enbridge in the Bakken – Crude Oil Activities**
- **Superior Market Access**
- **Contract Storage**
- **Rail alternatives**
- **Enbridge and Alliance in the Bakken – Natural Gas Activities**
- **Conclusion**

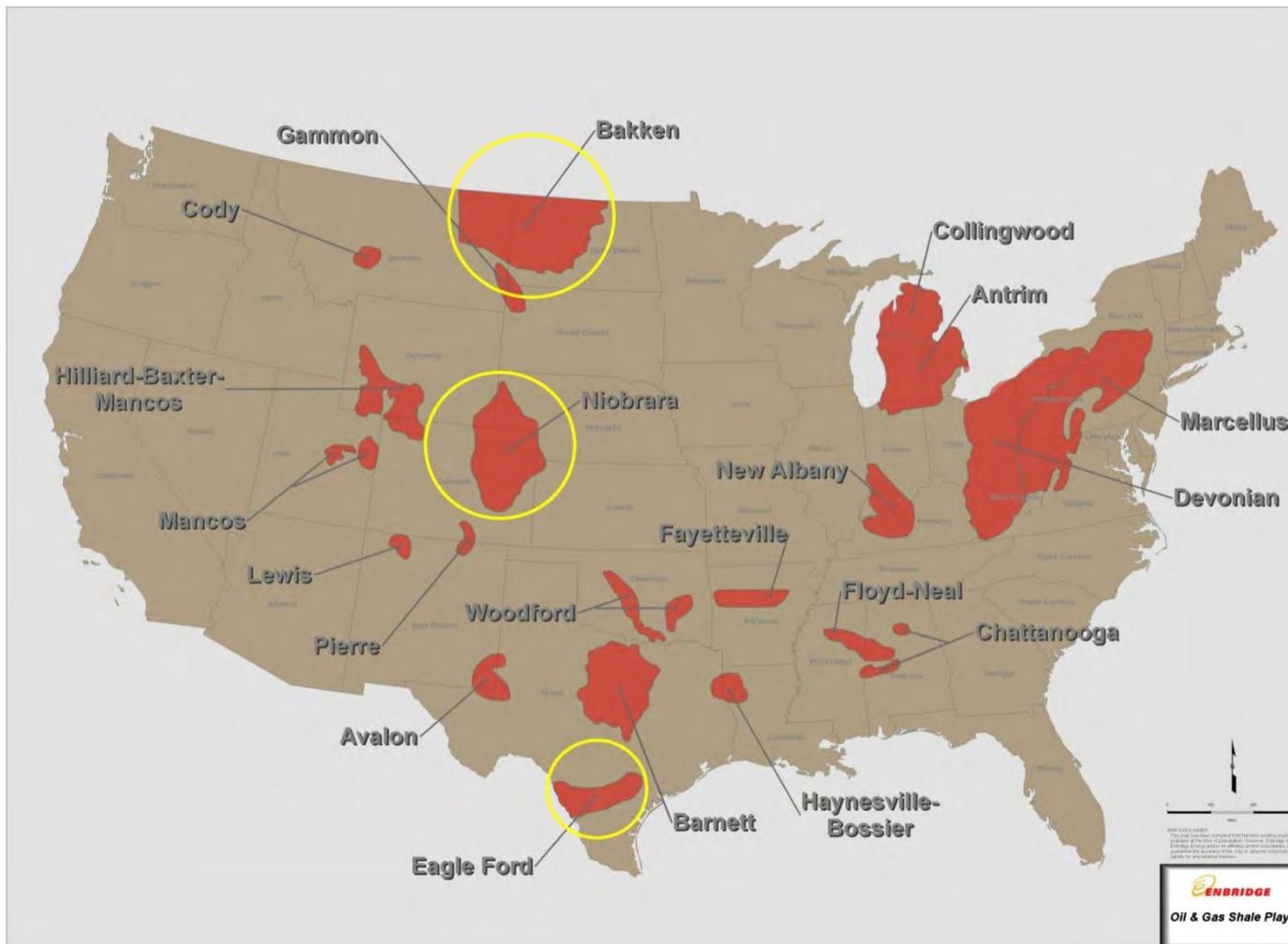
Enbridge Overview

North American Leader in Energy Transportation



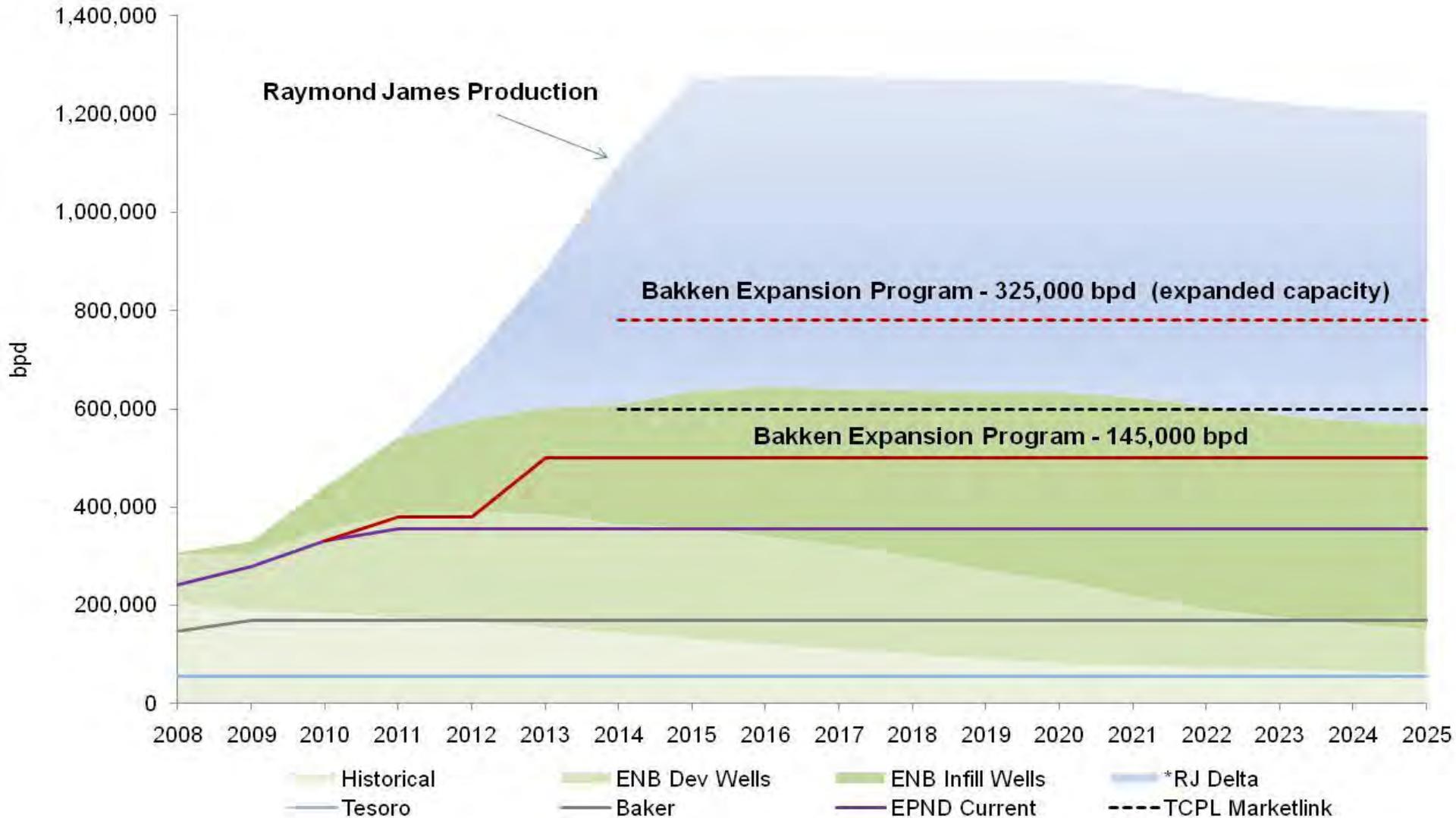
- Liquids Pipelines
- Gas Pipelines
- Gas Distribution
- ⚙ Wind Farms
- ☀ Sarnia Solar

Opportunities: Shale Oil Plays Yielding Sustainable Economic Recovery of Reserves



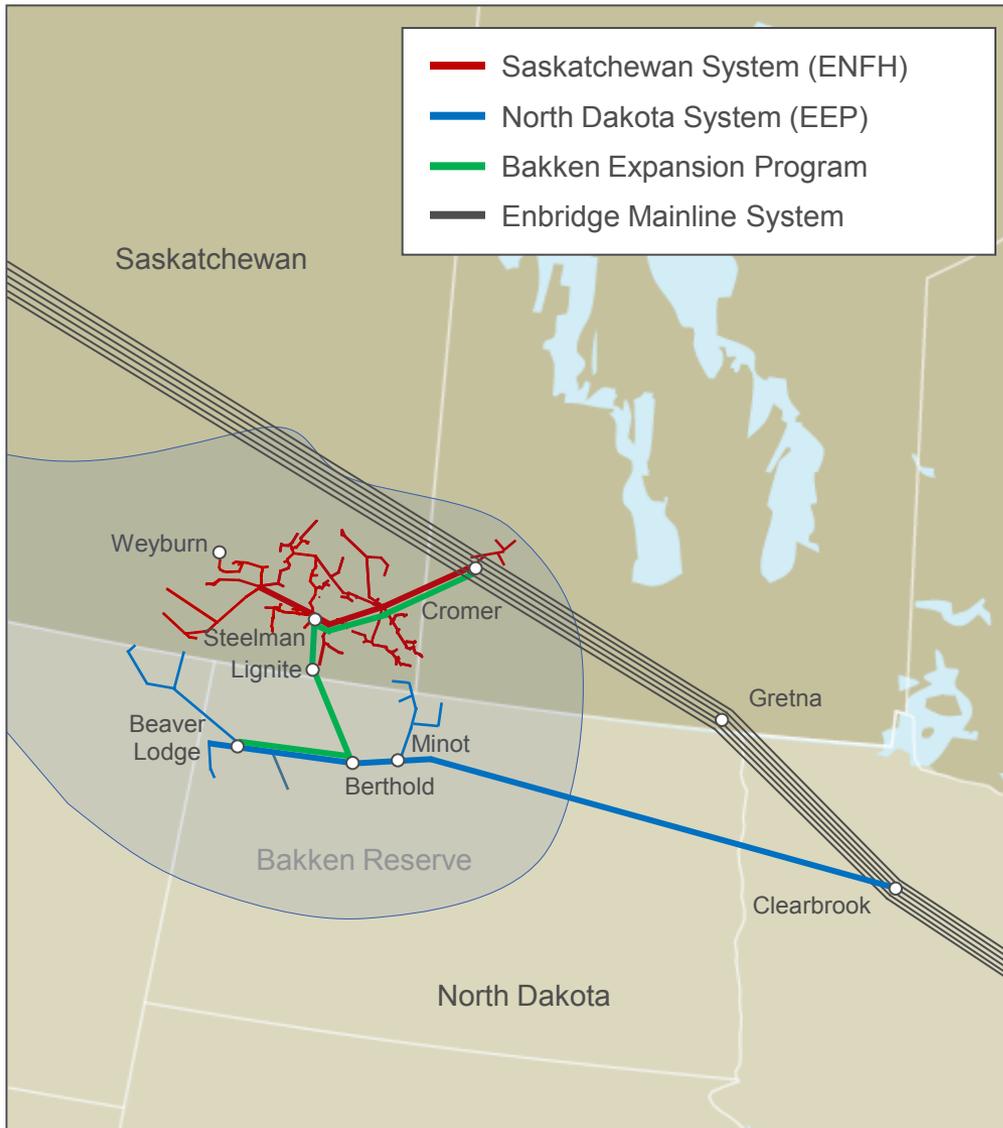
Goldman Sachs estimates North American shale oil potential at over 1.8 million barrels per day

Bakken Production & Capacity Forecast



*Source: Raymond James January 24, 2011

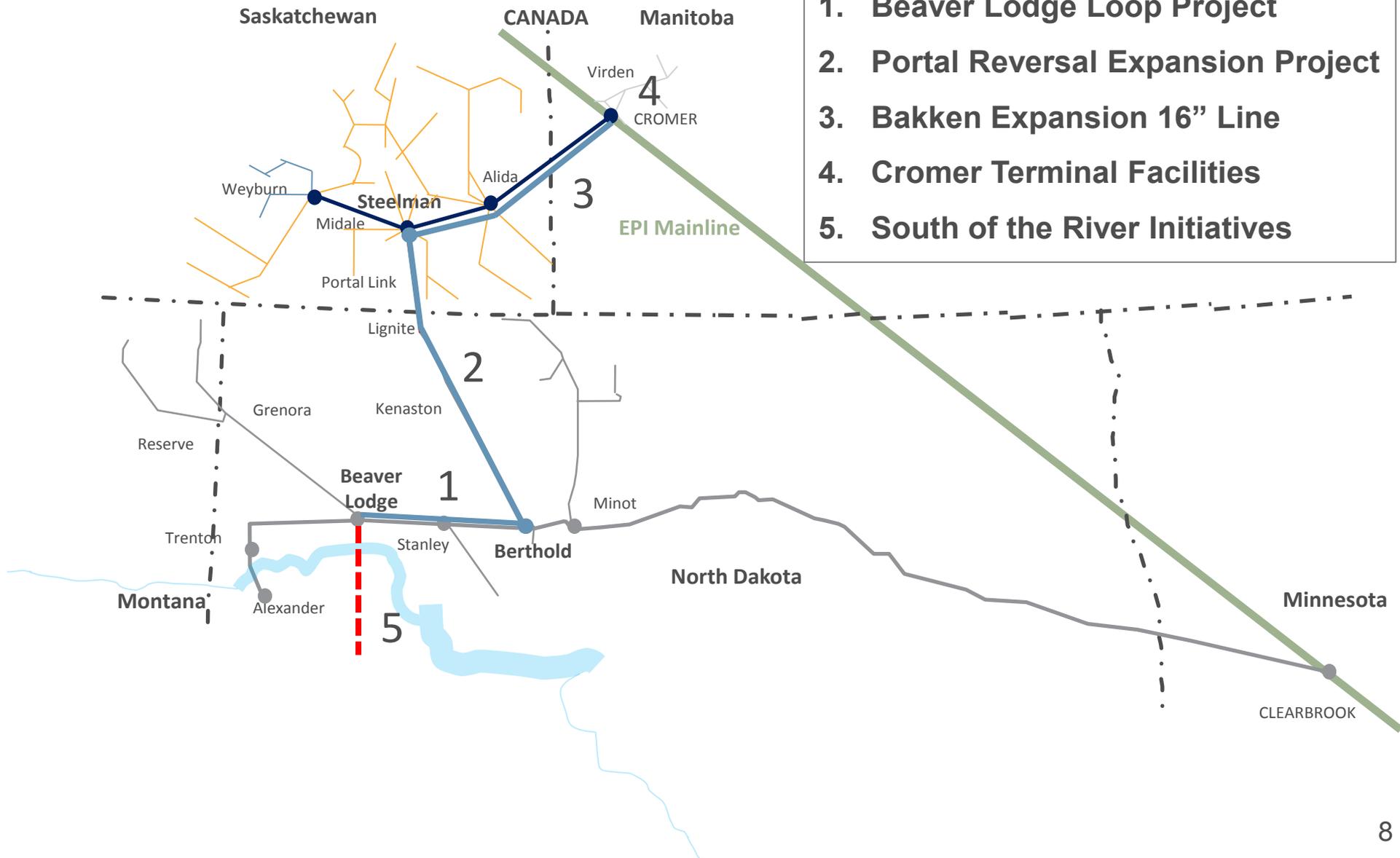
Bakken Regional Infrastructure Expansions Status Update



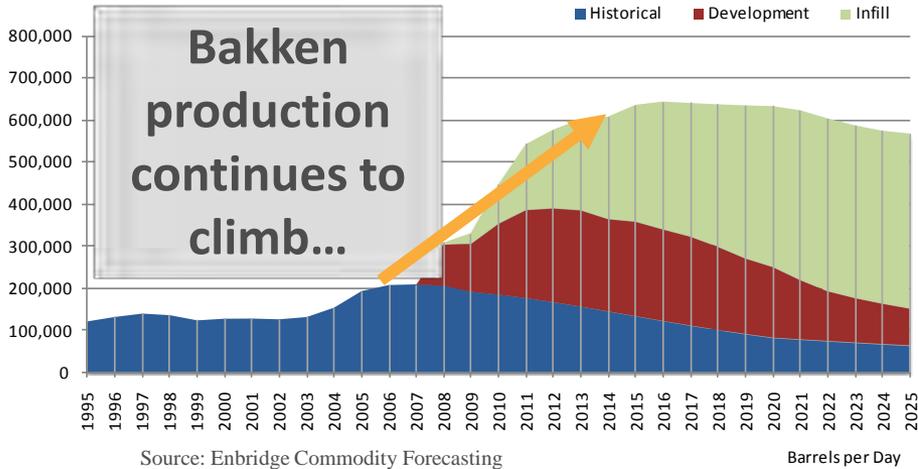
- **North Dakota Pipeline Capacity (185,000 bpd growing to 210,000 bpd)**
 - Phase 6 (51 kbpd of additional capacity)
 - Portal Reversal (25 kbpd of additional capacity)
 - Alexander to Beaver Lodge
 - System Optimization
 - Berthold Truck Station
- **Bakken Expansion Program**
 - Capacity: 145,000 bpd
 - In-service Jan 1, 2013
 - Expandable to 325,000 bpd

Bakken Expansion Program Configuration

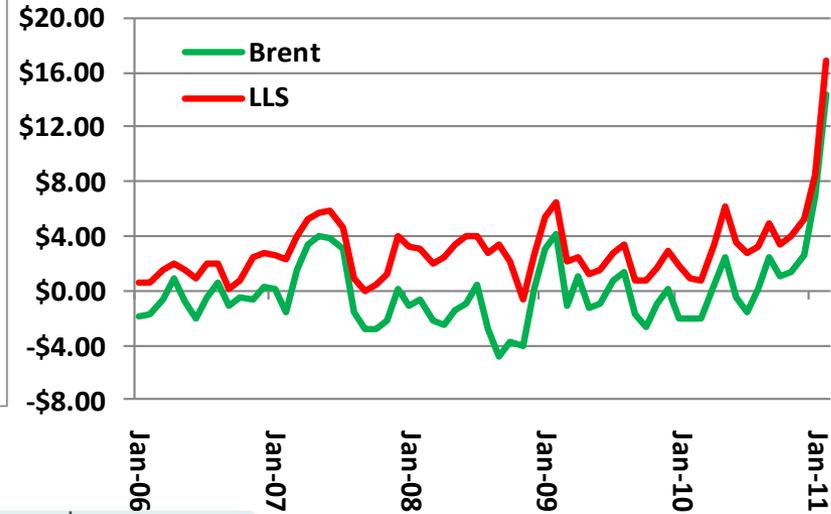
1. Beaver Lodge Loop Project
2. Portal Reversal Expansion Project
3. Bakken Expansion 16" Line
4. Cromer Terminal Facilities
5. South of the River Initiatives



North Dakota and Eastern Montana - Production Forecast



Spot Spreads to WTI



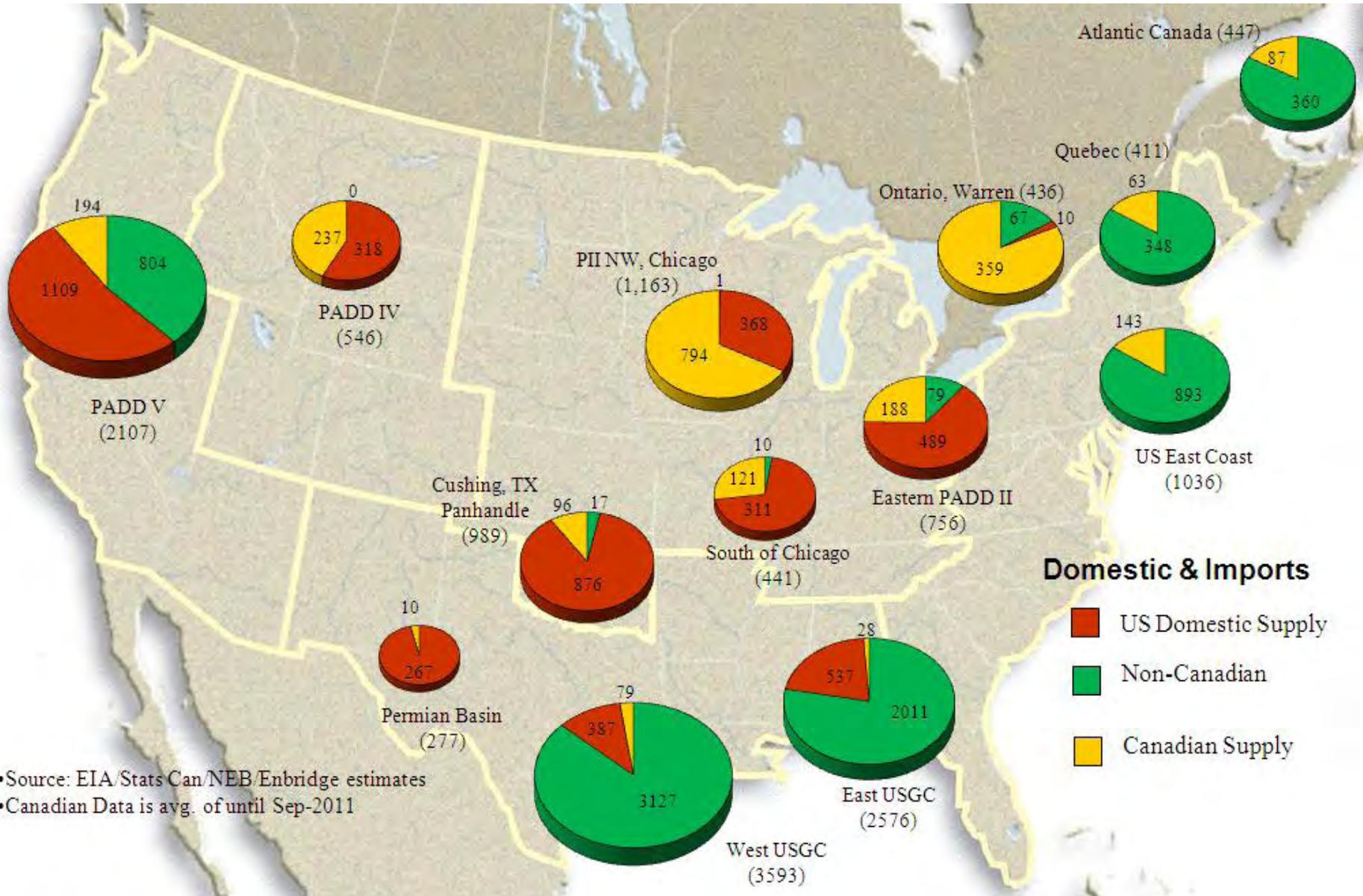
...while refinery conversions in Midwest will further reduce regional demand for light crude

Refinery Conversions	Year	Change in Light
WRB Wood River	2012	-130,000
BP Whiting	2013	-230,000
MAP Detroit	2013	-70,000
Total		-430,000

Growth in light production coupled with refinery conversions in Upper Midwest will continue to cause market disparity for WTI

2010 Crude Disposition by Region (MB/D)

Canada Is Main Supplier for PADD II Markets

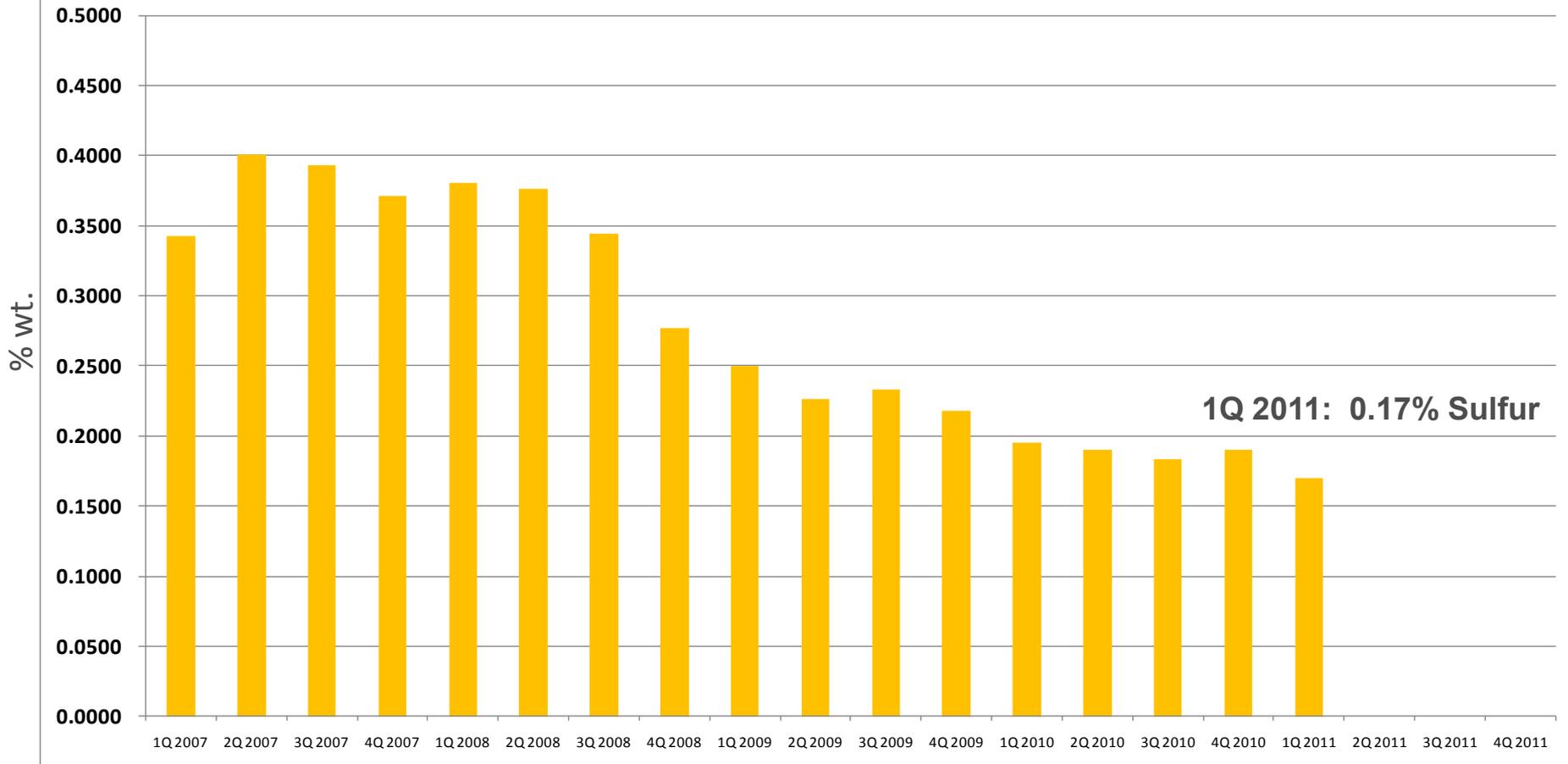


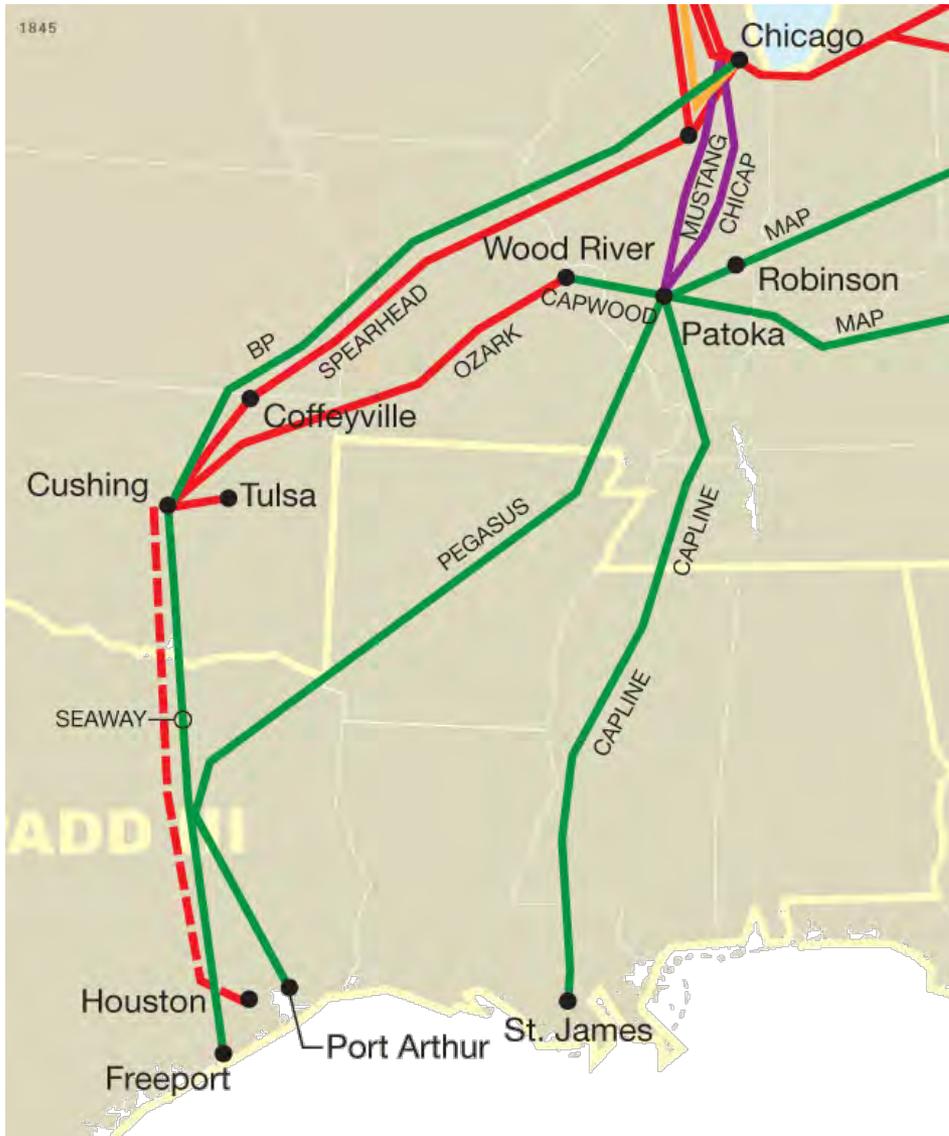
Domestic & Imports

- US Domestic Supply
- Non-Canadian
- Canadian Supply

•Source: EIA/Stats Can/NEB/Enbridge estimates
 •Canadian Data is avg. of until Sep-2011

EPND Common Stream Quality at Clearbrook 1Q 2006 - 1Q 2011 (Sulfur Content -- Percent)





Greenfield

- A 475 mile pipeline from Cushing to the interconnect north of Houston to serve US Gulf Coast refinery hub
- Utilize existing terminal at Cushing and deliver into existing terminal and pipeline infrastructure in Houston area
- Designed based on 350 kbpd of WTI
- Expandable to meet market needs to connect supplies to vast Gulf Coast hubs
- Targeting a Q4 2013 in-service date

-  Existing Terminal that includes contract storage
-  Existing Terminal with new contract storage capability



- **Contract Storage**

- \$77 million Cushing expansion
- Additional 3 million barrels of capacity
- In-service late 2011
- Total system capacity after expansion: 19 million barrels

- **Operational Flexibility**

- Growing Lakehead volumes will spur additional investment

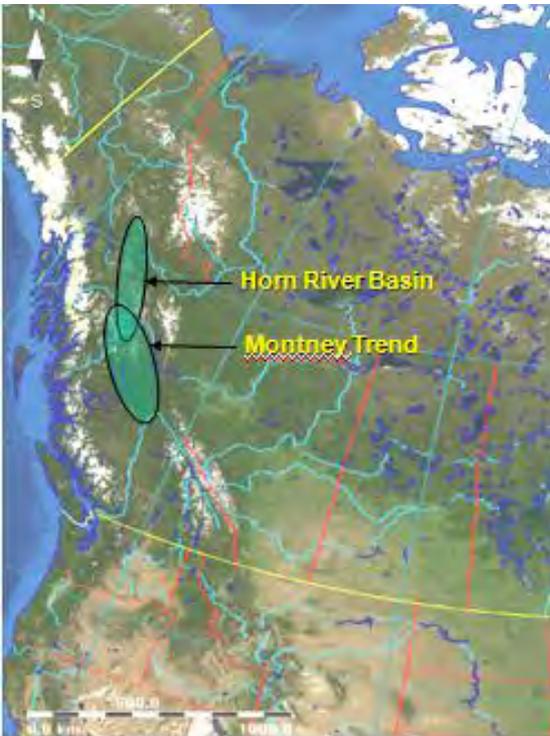
Rail Service As Interim Transport Solution in the Bakken

With crude oil at current market prices rail is viewed by producers as a viable transportation alternative in the interim as pipeline capacity is being built to service producer transport needs due to production outpacing pipeline infrastructure expansion. Enbridge is considering rail alternatives as part of its overall Bakken transportation portfolio.



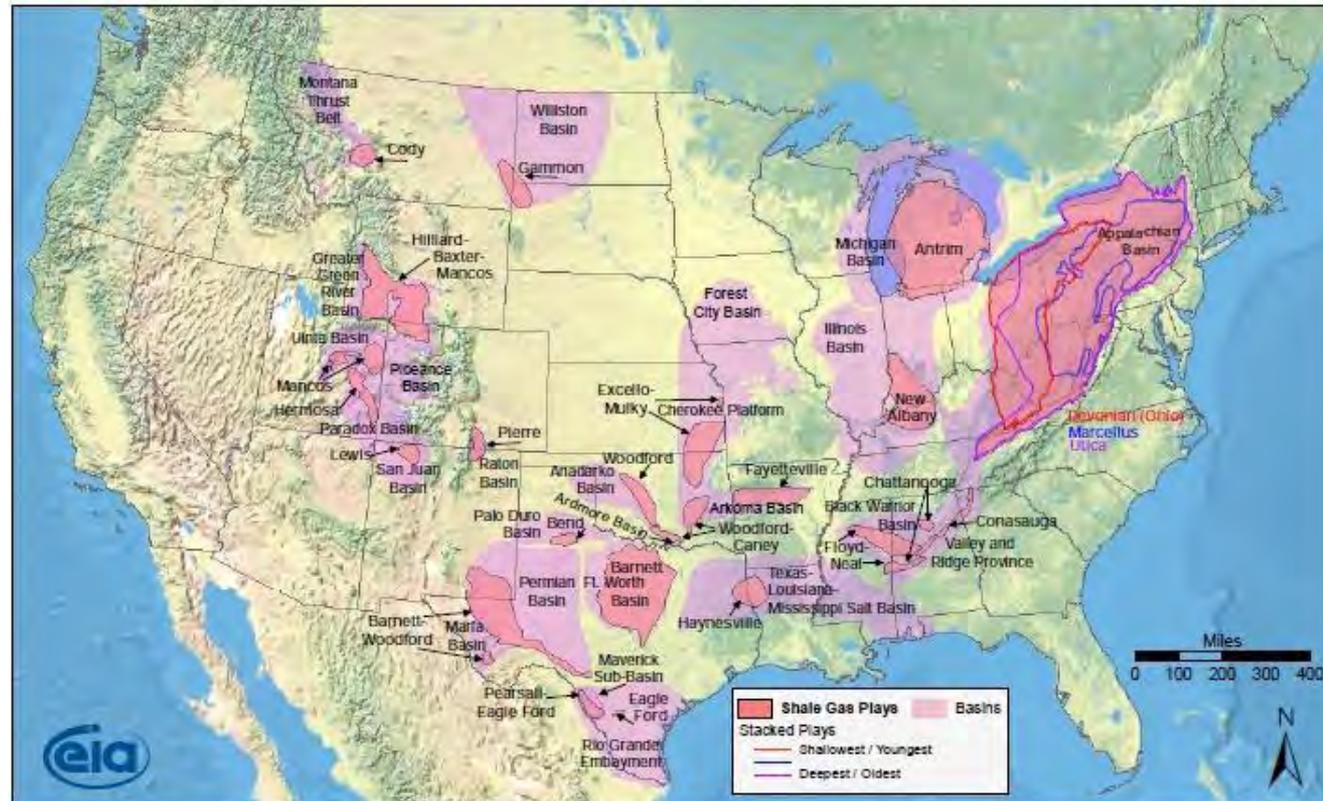
Widespread deposits of shale have become game-changers; North America now has abundant low-cost resources .

Northeast B.C. Shale Plays



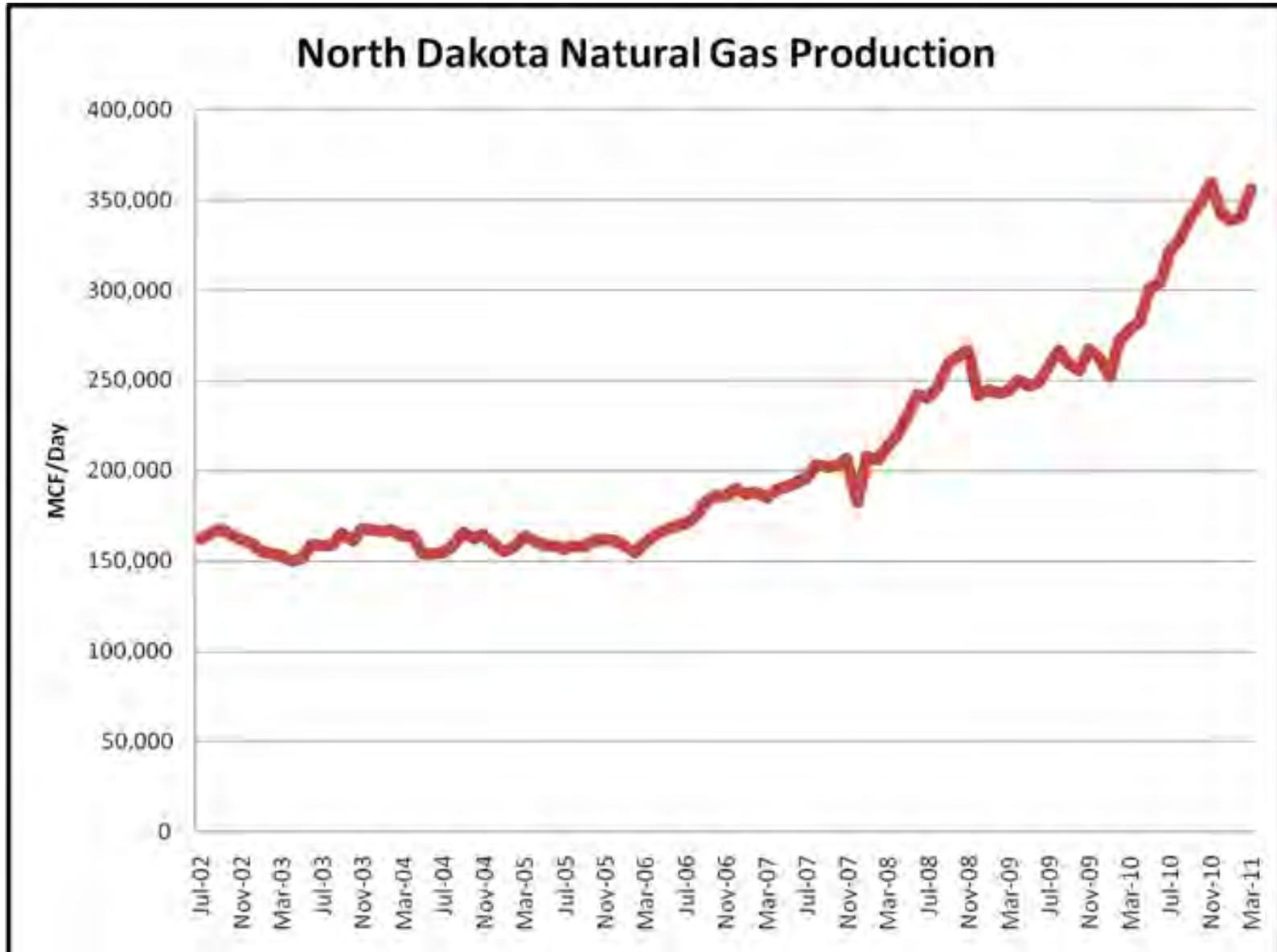
Source: CSUG

Shale Gas Plays, Lower 48 States



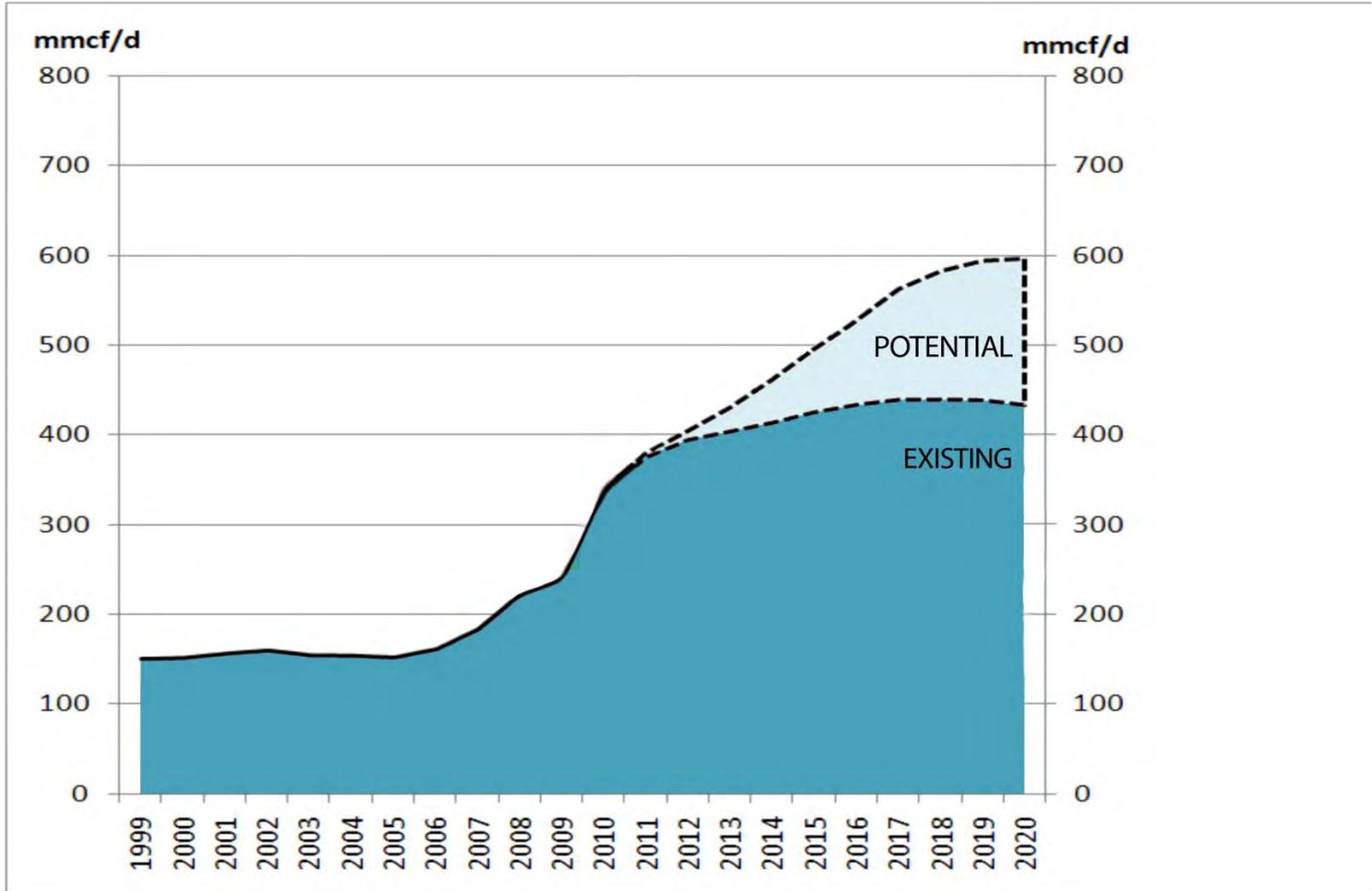
Source: Energy Information Administration based on data from various published studies
Updated: May 28, 2009

North Dakota Natural Gas Production

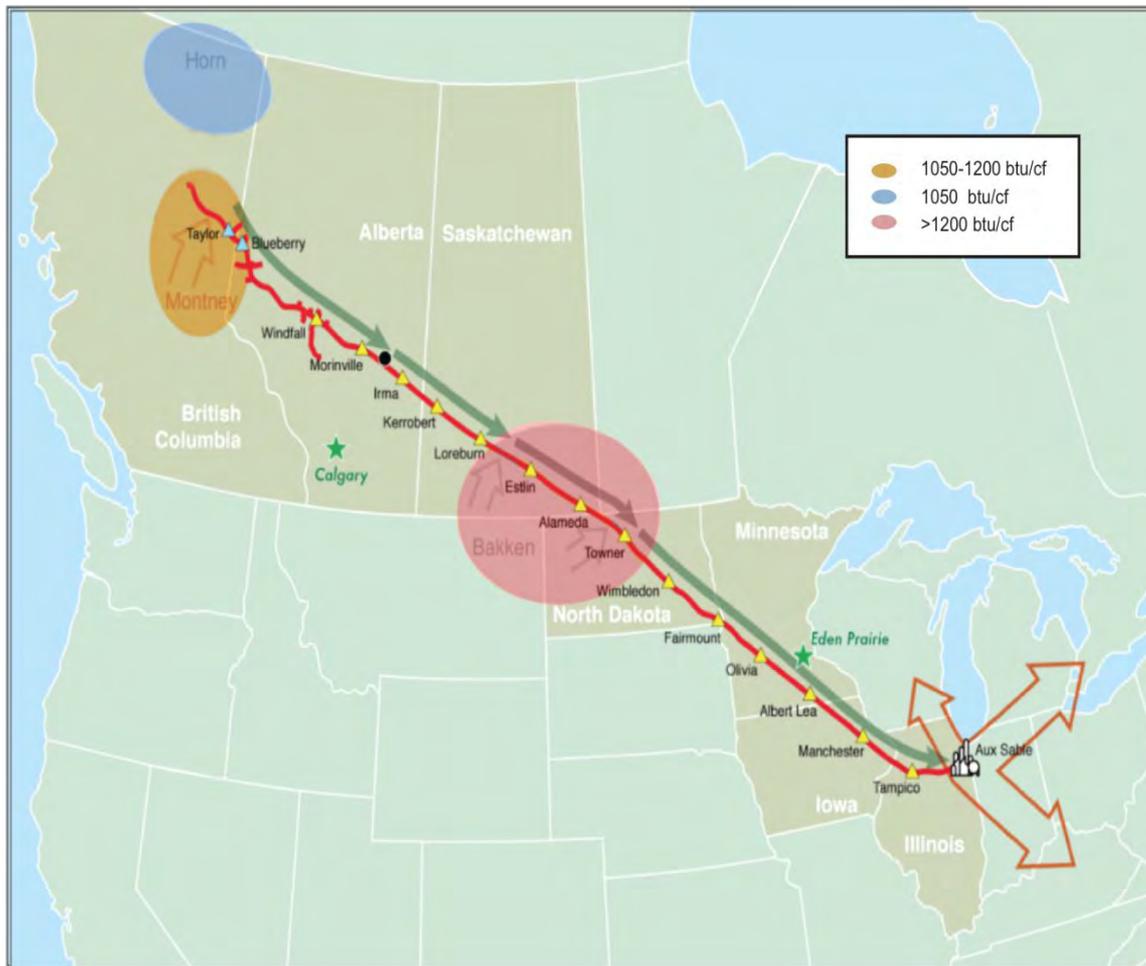


Source: North Dakota Industrial Commission, Dept. of Mineral Resources, Oil and Gas Division

Significant Natural Gas Potential in ND Bakken



Source: Alliance Pipeline



Alliance Pipeline

The Alliance Pipeline system transports high-energy, rich natural gas from northeastern British Columbia and northwestern Alberta through Saskatchewan, North Dakota, Minnesota, and Iowa to its terminus at the Aux Sable plant along Highway 6 between Morris and Channahon, Illinois



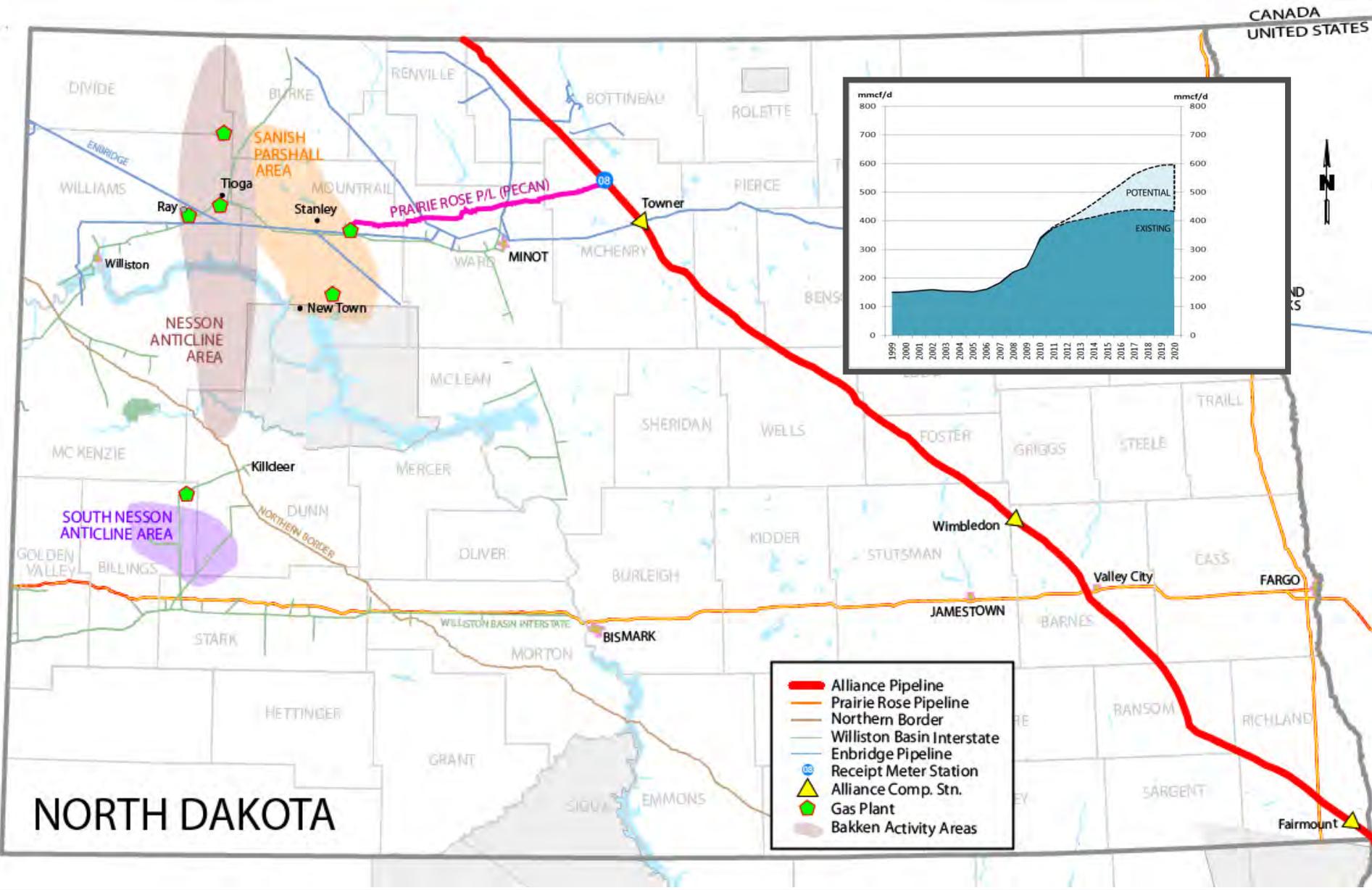
Aux Sable Liquids Products: Channahon NGL Facility

- Commenced operations in December 2000 and can process up to 2.1 billion cubic feet per day of natural gas.
- Capable of extracting and fractionating approximately 92,000 barrels per day of spec NGL products (ethane, propane, normal butane, iso-butane, and natural gasoline).
- ASLP installed a 7,000 barrel a day isomerization plant that commenced operations in 2nd quarter 2007.



Located on US Highway 6 approximately half way between Channahon and Morris, Illinois, about 50 miles southwest of Chicago

Alliance and Aux Sable are well positioned to provide optimum value for growing natural gas production



NORTH DAKOTA

- Alliance Pipeline
- Prairie Rose Pipeline
- Northern Border
- Williston Basin Interstate
- Enbridge Pipeline
- ⊙ Receipt Meter Station
- ▲ Alliance Comp. Stn.
- ⬠ Gas Plant
- Bakken Activity Areas

- ✓ Investing in infrastructure to get production to market
- ✓ Providing producers with access to the right markets
- ✓ Developing projects to access more markets and greater optionality



Questions?

