

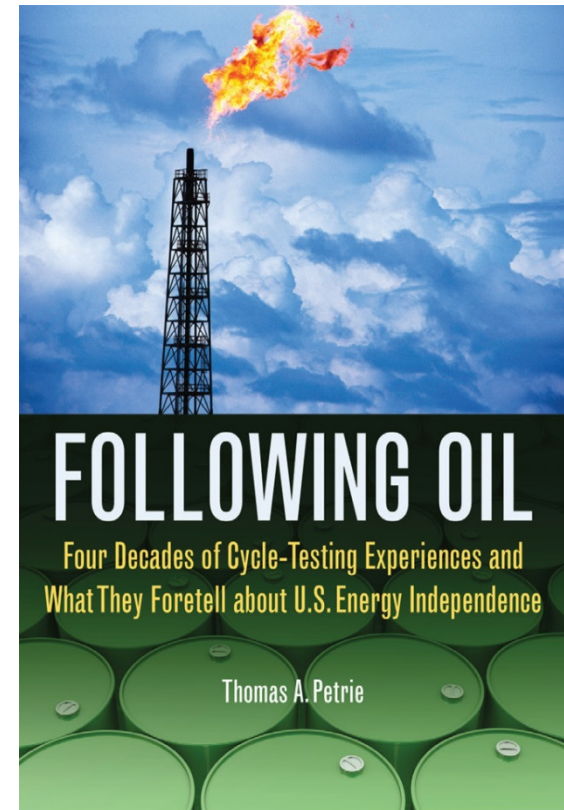


Energy Policy Options - 2015

Houston, Texas

November 19, 2014

THOMAS A. PETRIE, CFA
CHAIRMAN, PETRIE PARTNERS

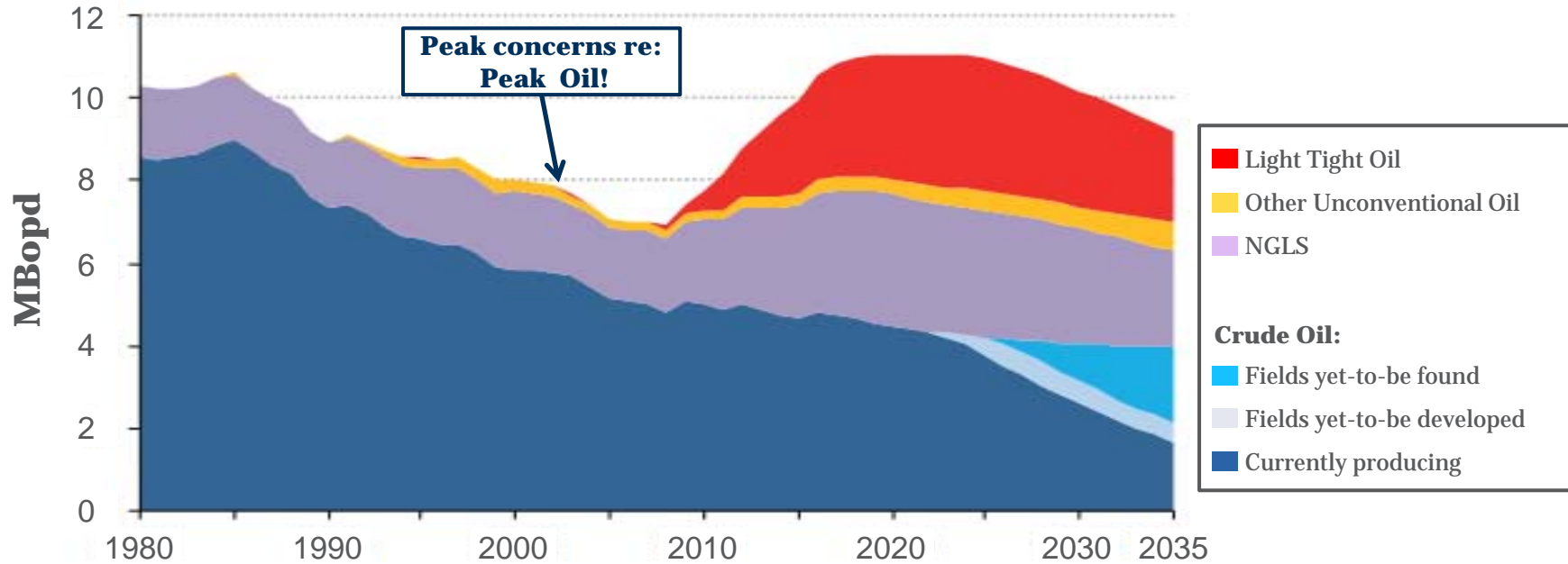


Topics

- ❖ America's Transformed Outlook
- ❖ A Path To Petroleum Flexibility
- ❖ The Oil Price Supercycle
- ❖ Oil Export Issues
- ❖ Keystone XL Pipeline
- ❖ Acceleration of LNG Exports
- ❖ Concluding Observations

America's Transformed Outlook

U.S. OIL PRODUCTION BY TYPE IN NEW POLICIES SCENARIO

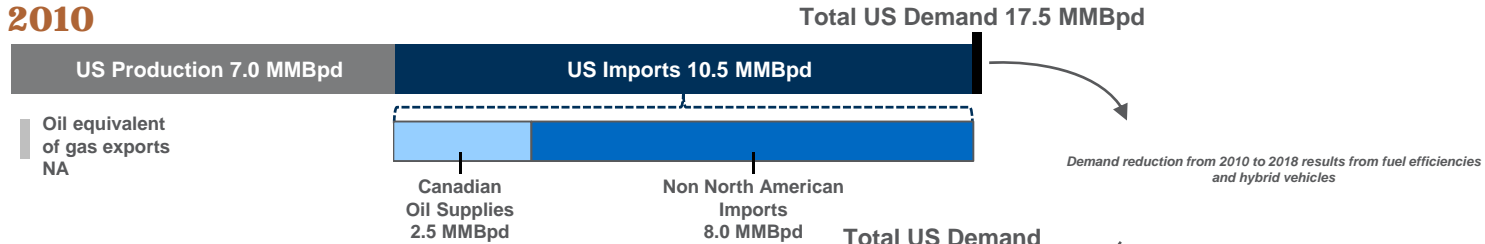


Note: The World Energy Model supply model starts producing yet-to-find oil after it has put all yet-to-develop fields into production. In reality, some yet-to-find fields would start production earlier than shown in the figure.

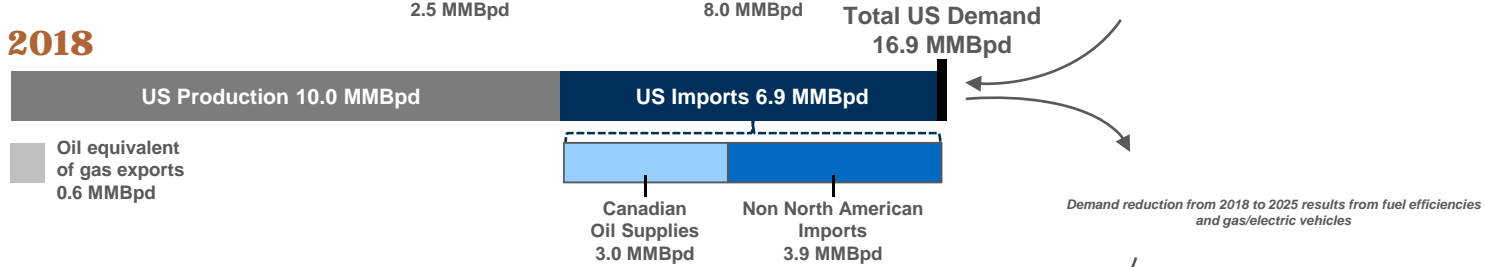
Source: IEA, World Energy Outlook 2012.

A Path to Petroleum Flexibility

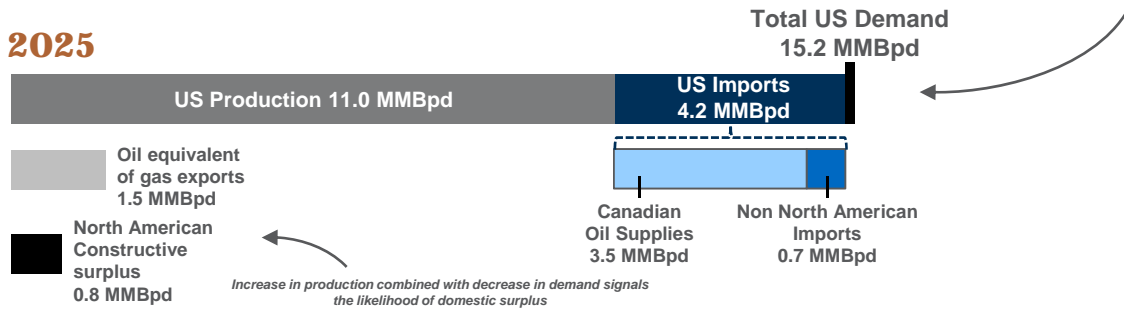
2010



2018



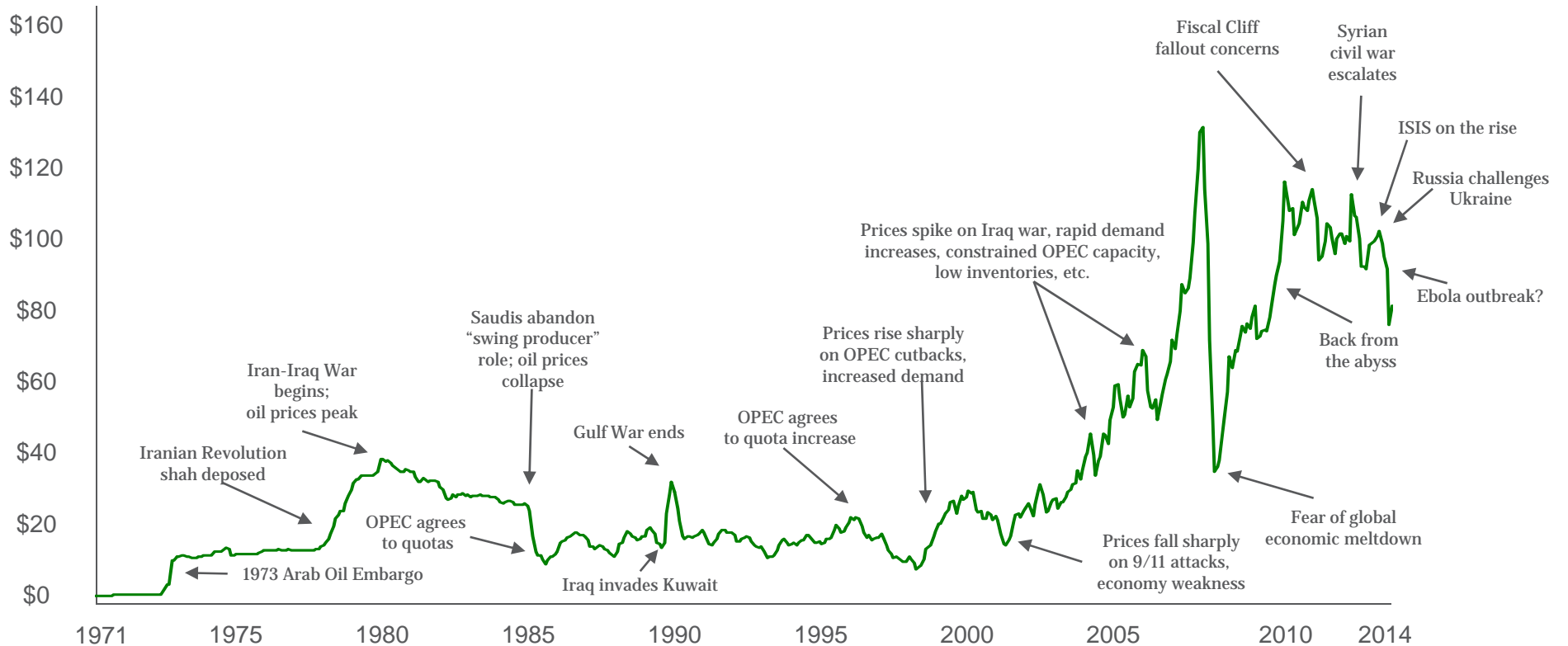
2025



Source: IEA, World Energy Outlook 2012 and Thomas A. Petrie's Following Oil.

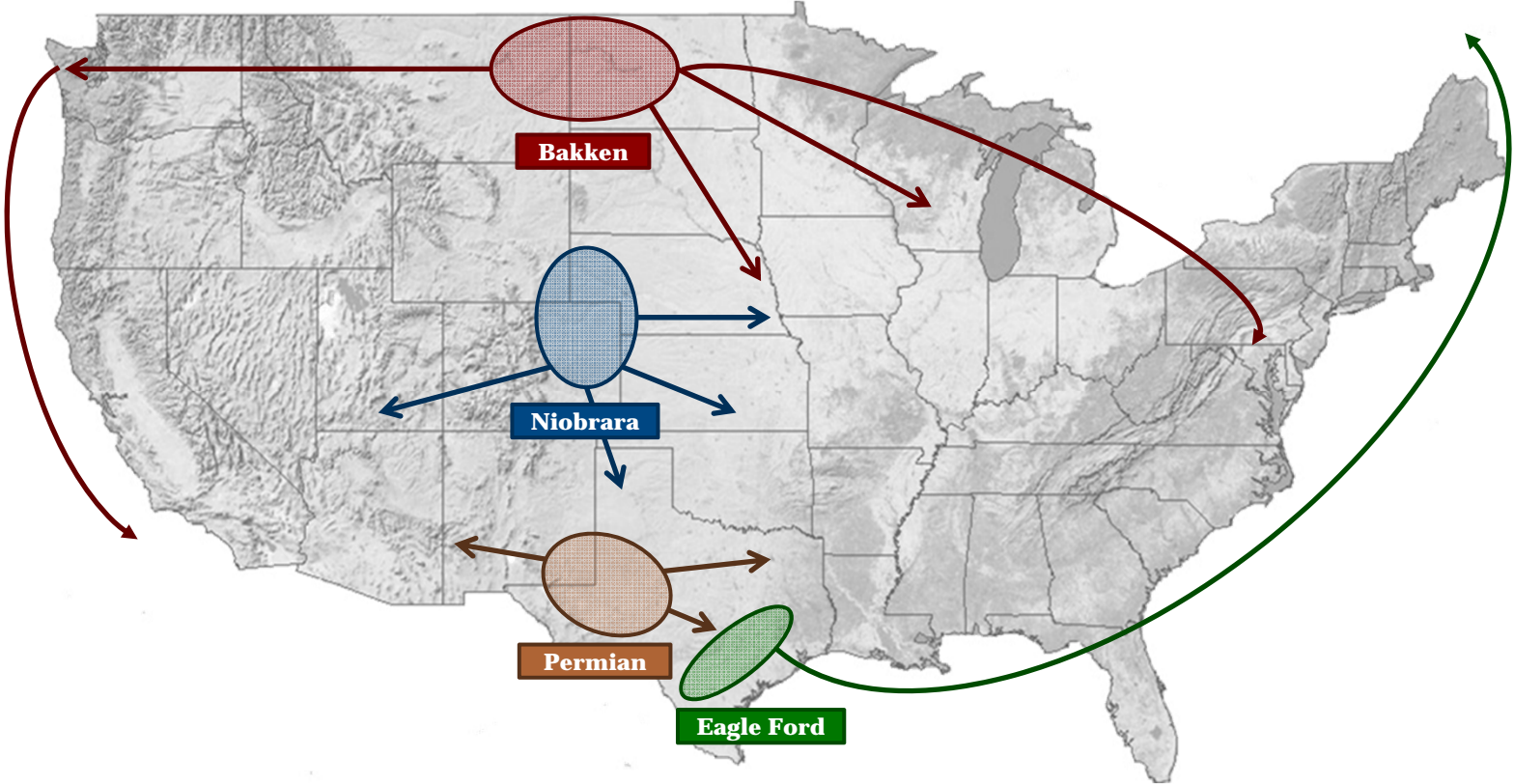
The Oil Price Supercycle

WORLD EVENTS AND OIL PRICES – NOMINAL PRICING (1971 – 2013)

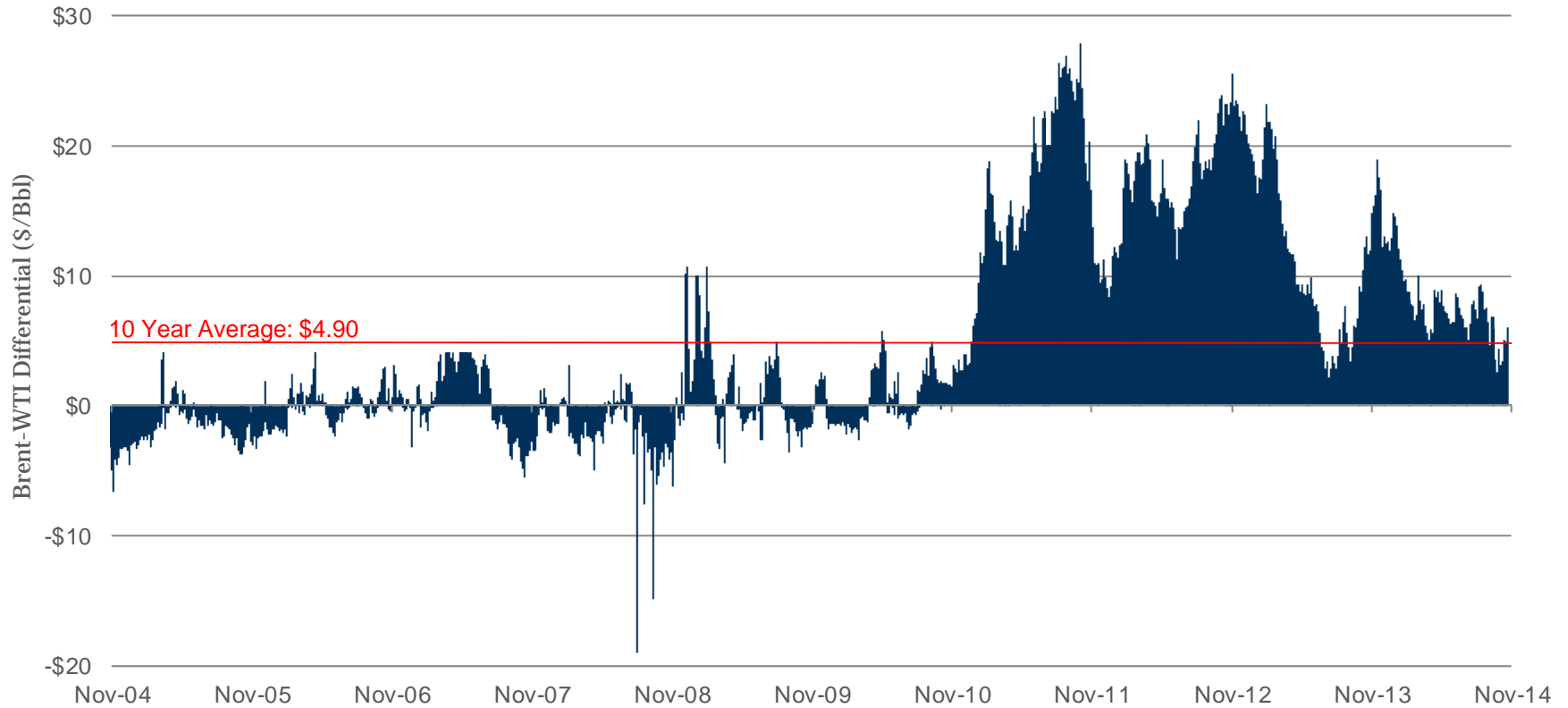


Source: EIA.

Oil Export Issues



Oil Export Issues



(1) Market data per FactSet as of November 14, 2014.

Oil Export Issues

“U.S. Set to Export First Oil Since ‘70s”

“Energy Industry Buzzes at Oil-Export Opening”

“America’s Oil Export Policy is Stuck in the ‘70s”

“Refining Impact of Oil Exports”

“Fracked Oil Proves a Volatile Variety”

“Oil Export Decisions Roil Industry”

“Pioneer’s Sheffield is ‘Cautiously Optimistic’ on Lifting of Export Ban”

“China Motorists Drive Oil Market”

“Oil Producers Plan Push to Loosen U.S. Ban on Oil Exports”

“Why Tension is Rising Between U.S. and Israel”

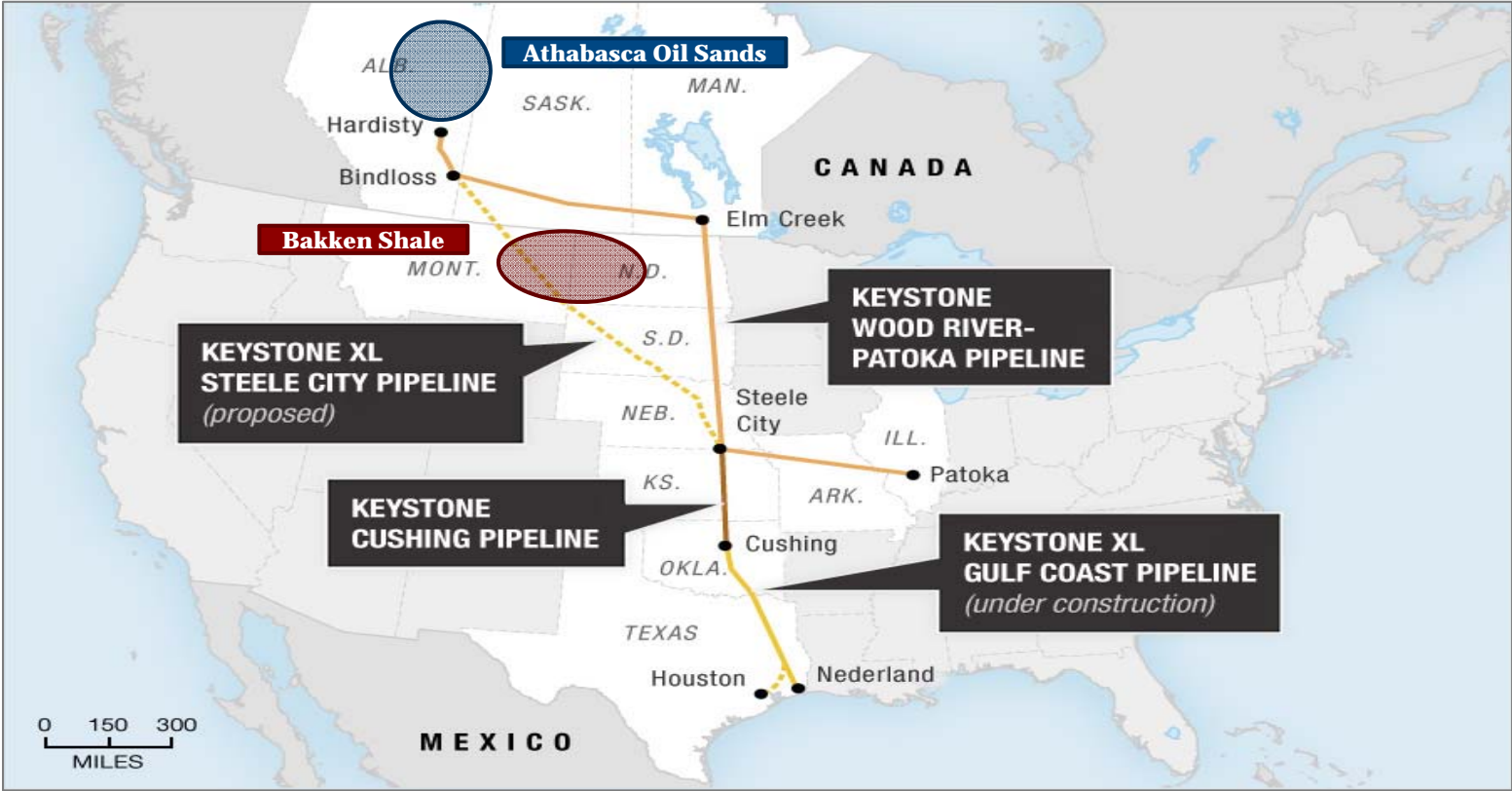
“Putting America’s Energy Leverage to Use”

Oil Export Issues



Keystone XL Pipeline

EXISTING INFRASTRUCTURE AND PROPOSED EXPANSION



Acceleration of LNG Exports

Proposed LNG Export Terminals

- | Proposed Export Terminals | |
|---------------------------|---------------------------------|
| 1. | Freeport LNG Expansion LP |
| 2. | Lake Charles Exports LLC |
| 3. | Cameron LNG liquefaction |
| 4. | Gulf LNG |
| 5. | Sabine Pass LNG terminal |
| 6. | Golden Pass Products LLC |
| 7. | Gulf Coast LNG Export LLC |
| 8. | Excelerate floating terminal |
| 9. | Corpus Christi Liquefaction LLC |
| 10. | Main Pass Energy Hub LLC |
| 11. | Jordan Cove Energy Product LP |
| 12. | Oregon LNG |
| 13. | Dominion Cove Point |
| 14. | Elba Island terminal |



Concluding Observations

- ❖ For somewhat different reasons than in prior cycles, Saudi Arabia's inclination to replay parts of the 1985 – 1986 market share competition is now apparent
- ❖ U.S. oil's fungibility, likely improving ease of transport, and absolute size all argue for its having a role in world petroleum trade
- ❖ The "distilled condensate" exemption has important but limited utility for absorbing new shale liquids
- ❖ U.S. oil refining configurations underscore the need for light oil exports balanced by imports of medium/heavier foreign crude oils
- ❖ U.S. oil export policy affords the potential on the margin to impact Russian/Middle East geopolitics
- ❖ Accelerated expansion of US LNG Exports is a US job creating, trade deficit reducing, compelling strategy

