

Second Annual North America Energy Forum



For

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By

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U.S. Energy Information Administration



Independent Statistics & Analysis

U.S. Energy Information
Administration

Mandate: EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment

Independence: EIA, an element of the Department of Energy, is one of 14 federal statistical agencies; by law, its data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government

Mission: EIA provides data and analysis to help stakeholders understand the rapidly changing energy landscape across all fuels and all sectors

Lower Price Environment 2014 versus 2015

EIA Short Term Energy Outlook (STEO)

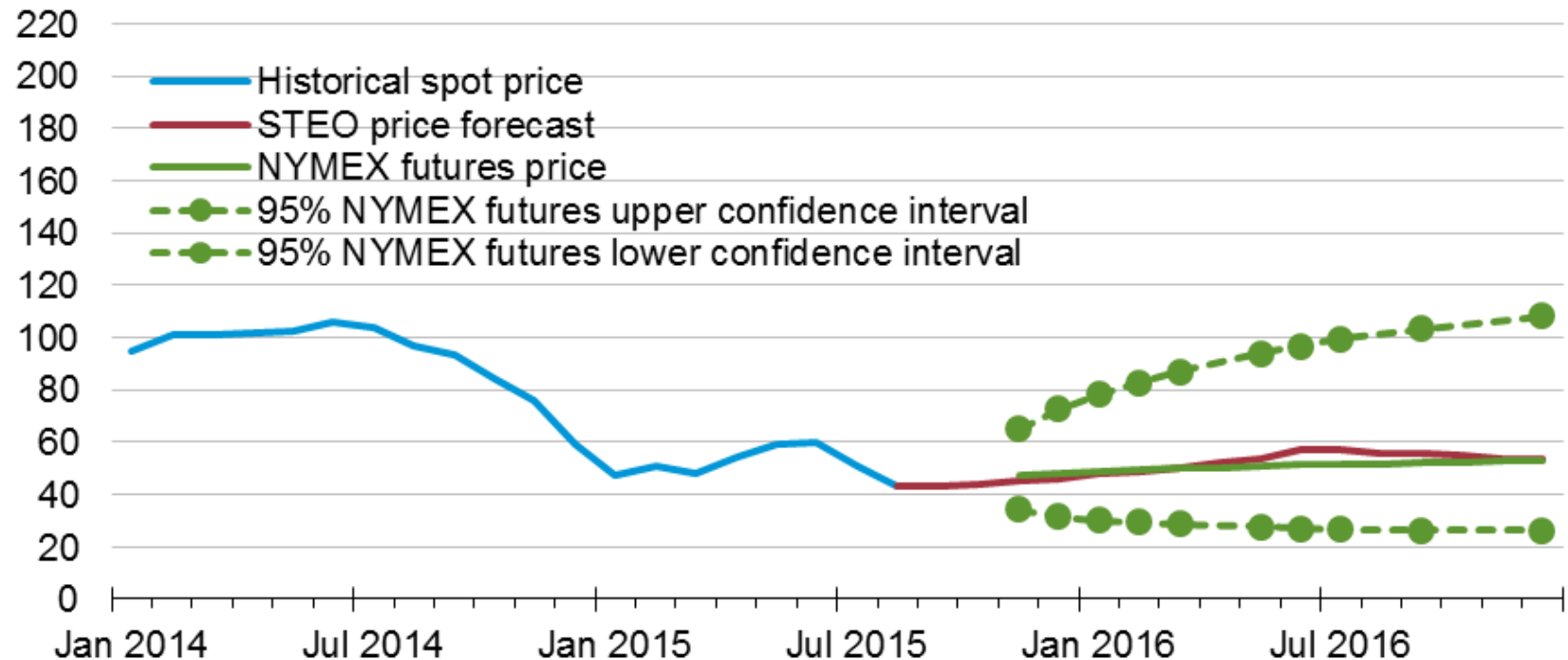
- North Sea Brent crude oil prices averaged \$47/barrel (b) in August, a \$10/b decrease from July. Crude oil price volatility increased significantly. (Brent spot price \$77.21 on 11/19/2014)
- EIA forecasts that Brent crude oil prices will average \$54/b in 2015 and \$59/b in 2016, unchanged from last month's STEO. Forecast West Texas Intermediate (WTI) crude oil prices in 2015 and 2016 average \$5/b lower than the Brent price. (WTI spot price \$75.44 on 11/19/2014)
- Prices likely reflect concerns about lower economic growth in emerging markets, expectations of higher oil exports from Iran, and continuing growth in global inventories.
- Spot Natural gas at Henry Hub average \$2.77/MMBtu in August, below \$3/MMBtu through November. (HH spot \$4.41 on 11/19/2014)

The market expects WTI prices to range from \$32/b to \$73/b (at the 95% confidence interval) in December 2015

West Texas Intermediate (WTI) Crude Oil Price



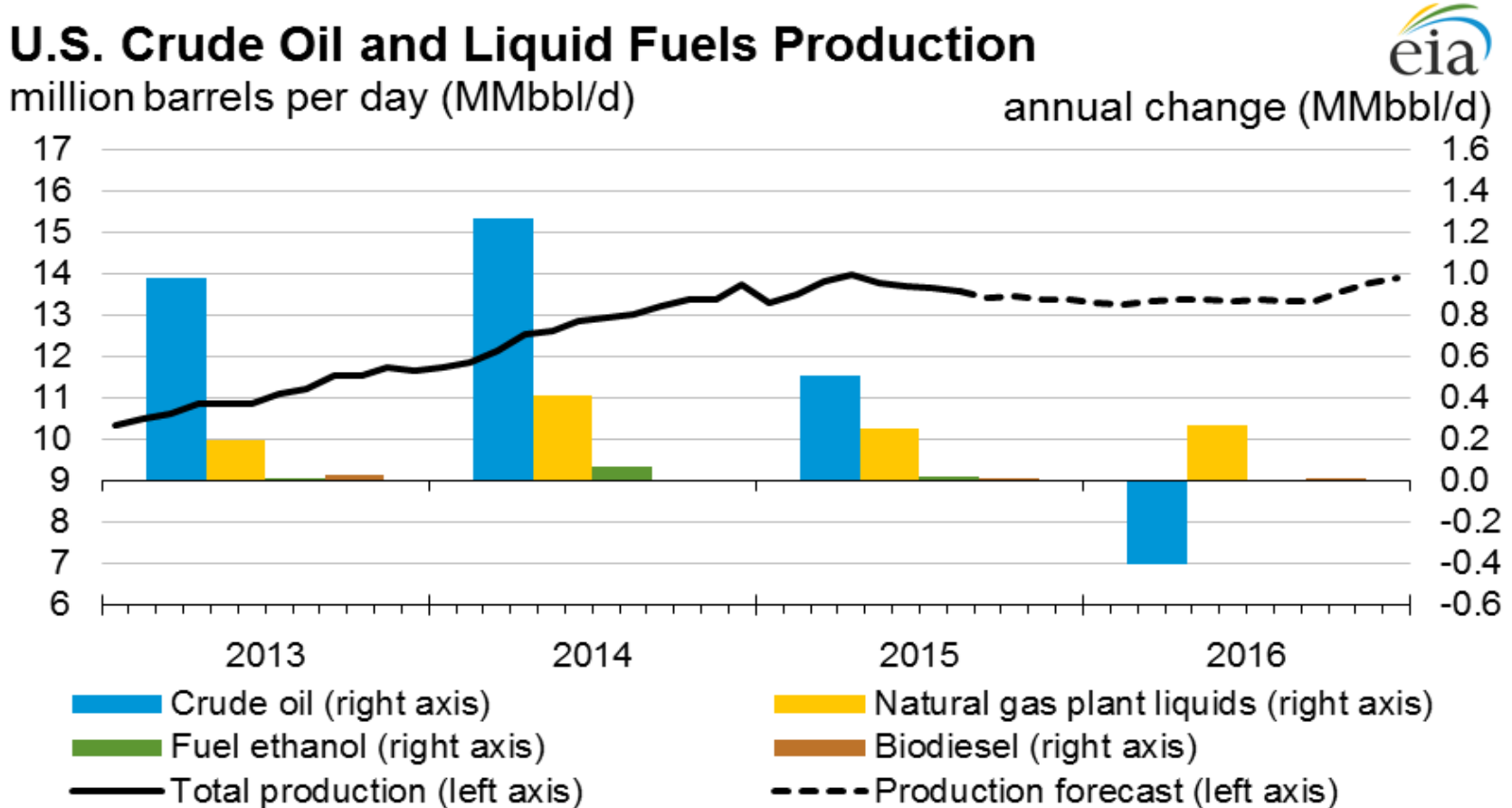
dollars per barrel



Note: Confidence interval derived from options market information for the 5 trading days ending Sep. 3, 2015. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, September 2015.

Crude oil production is forecast to continue decreasing through mid-2016 before growth resumes late in 2016

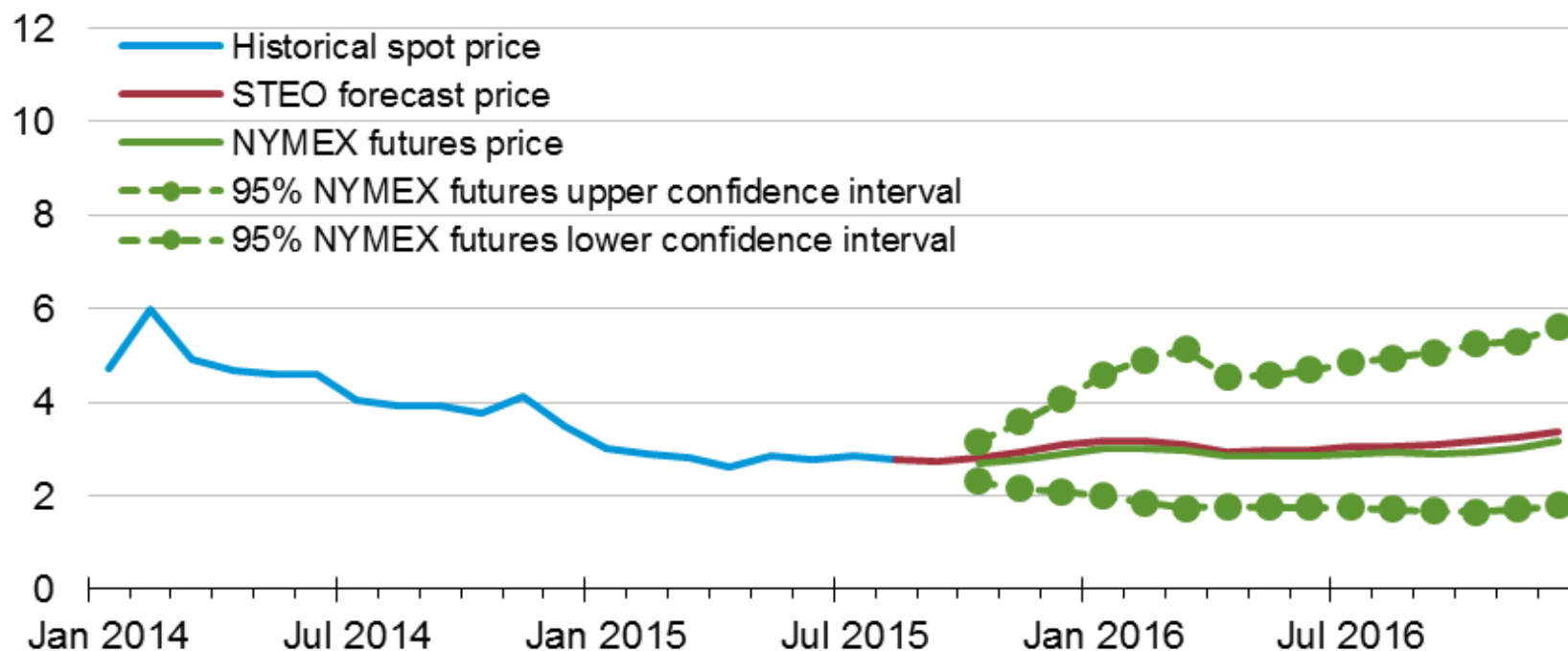


Source: Short-Term Energy Outlook, September 2015.

Monthly average gas spot prices remain lower than \$3/MMBtu through November, and lower than \$4/MMBtu through 2016

Henry Hub Natural Gas Price

dollars per million Btu



Note: Confidence interval derived from options market information for the 5 trading days ending Sep. 3, 2015. Intervals not calculated for months with sparse trading in near-the-money options

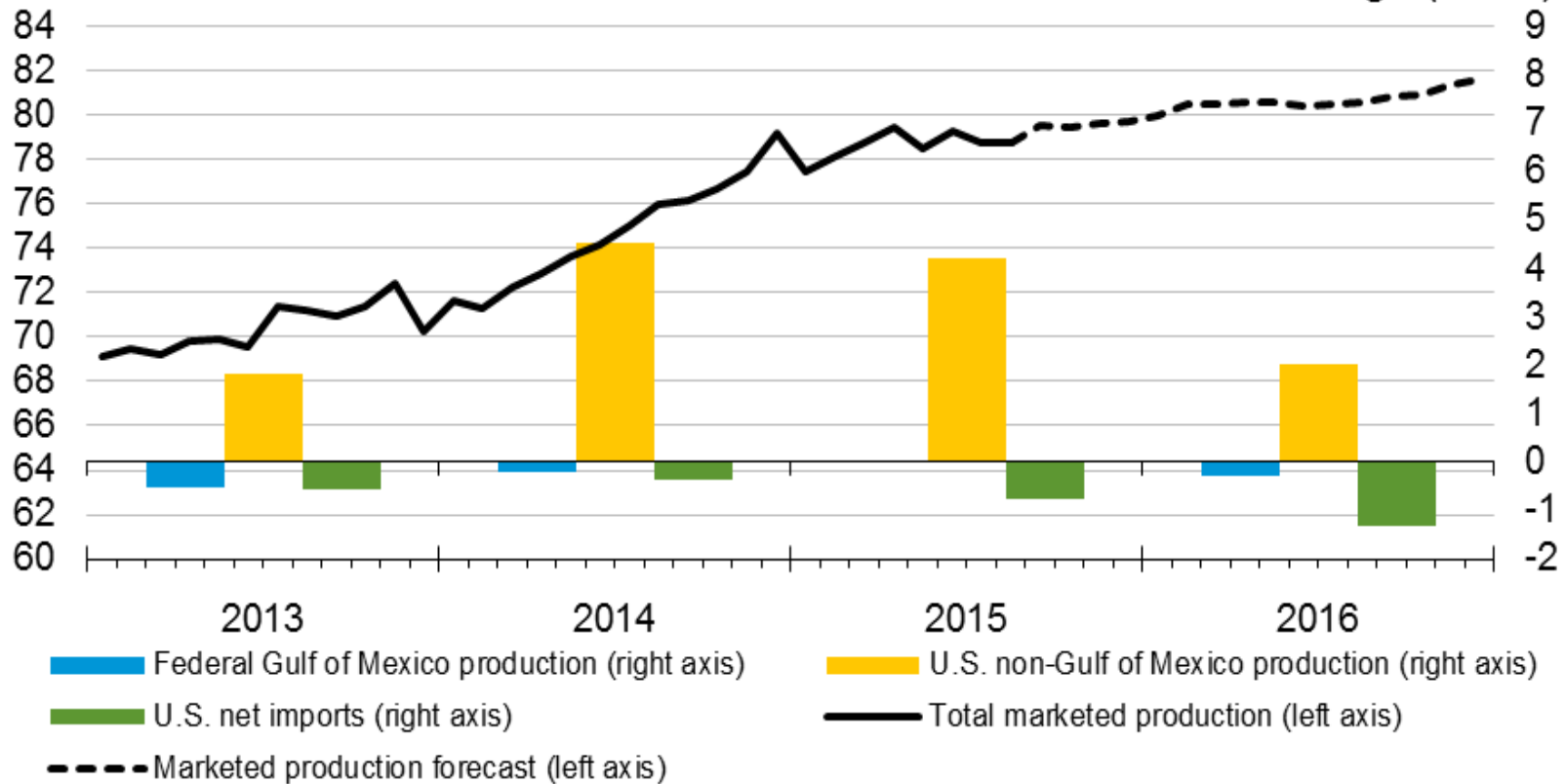
Source: Short-Term Energy Outlook, September 2015.

Increases in drilling efficiency support growing production despite relatively low natural gas prices

U.S. Natural Gas Production and Imports

billion cubic feet per day (Bcf/d)

eia
annual change (Bcf/d)



Source: Short-Term Energy Outlook, September 2015.

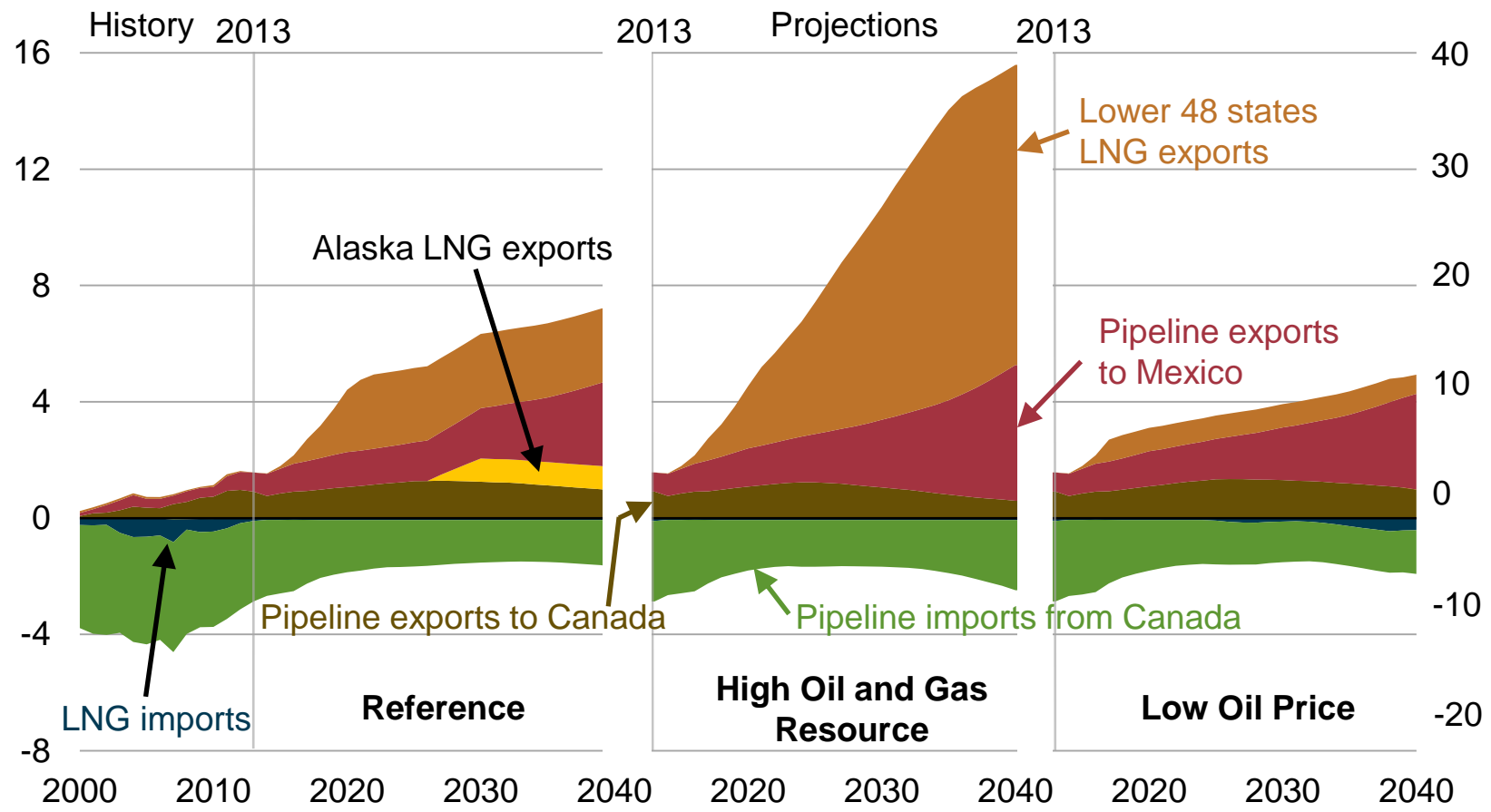
Regional energy trade

Natural Gas

Projected U.S. natural gas trade reflects the spread between domestic natural gas prices and world energy prices, along with resource outcomes

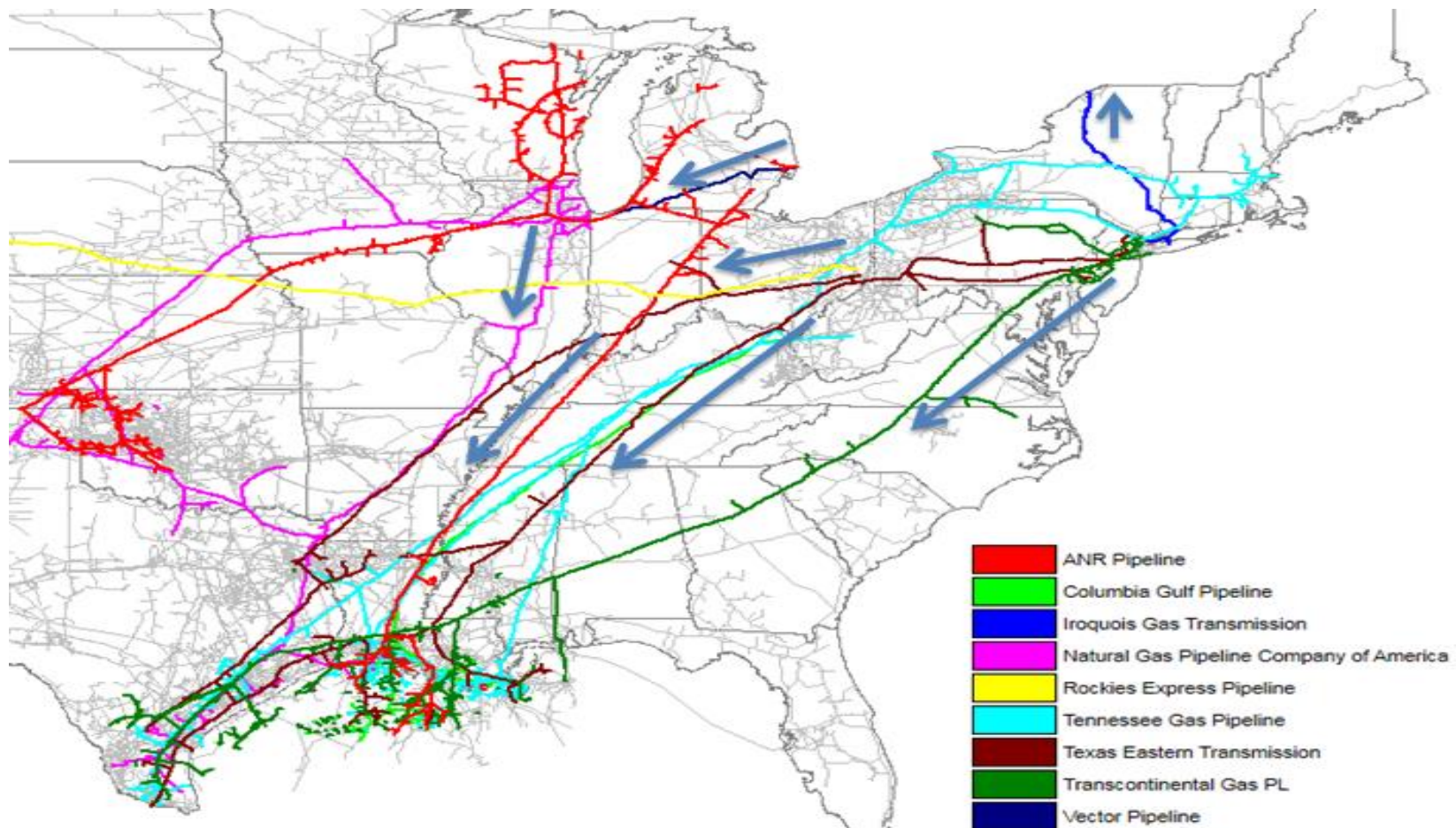
U.S. natural gas imports and exports
trillion cubic feet

billion cubic feet per day



Source: EIA, Annual Energy Outlook 2015

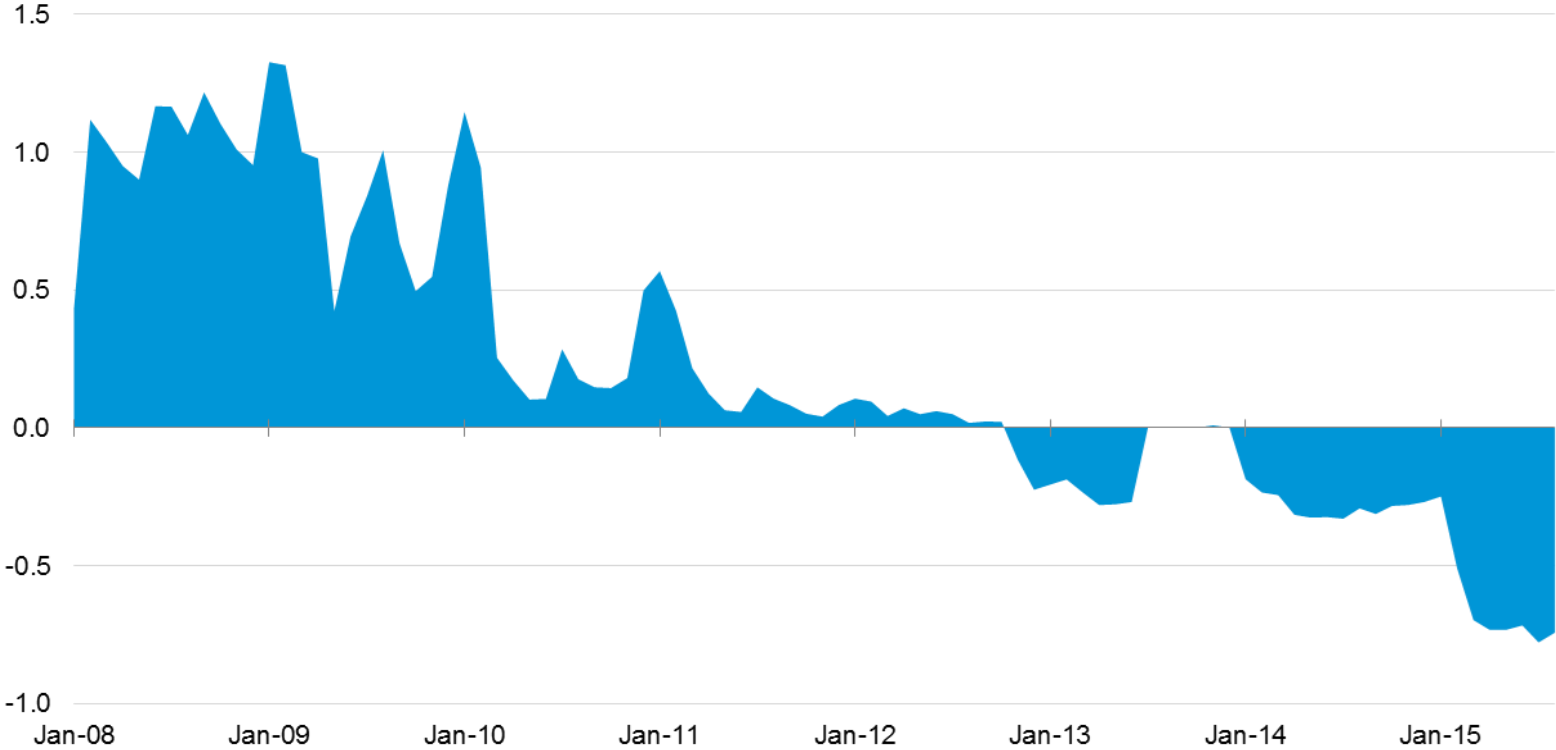
Recent and planned pipeline reversals reflect high levels of natural gas production in the Northeast



Sources: Federal Energy Regulatory Commission (FERC), trade press, company websites, SNL Financial, and BENTEK Energy LLC (Bentek)

Flows of natural gas at Niagara, 2008 - 2015

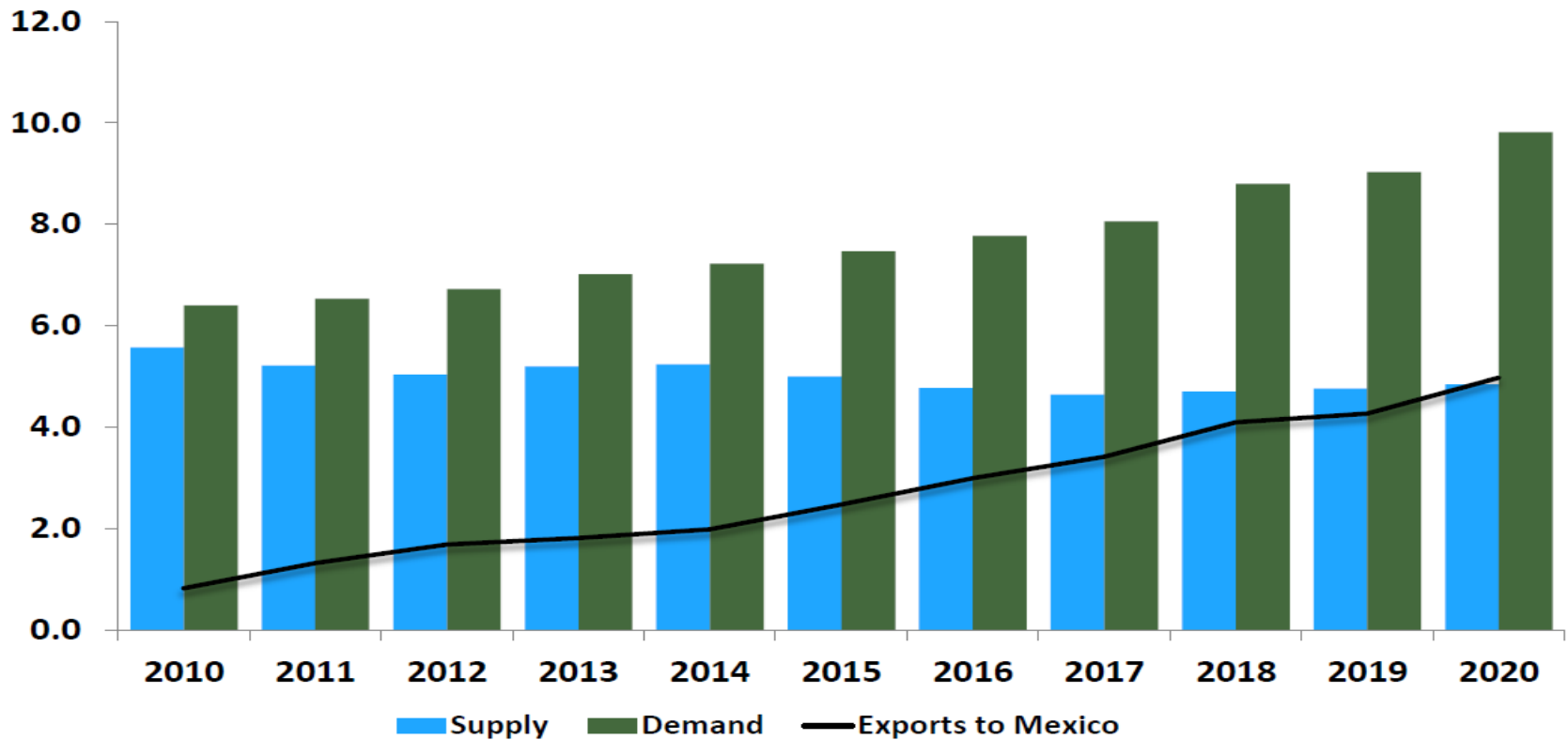
Flows from Canada to the United States at Niagara, New York
Bcf/d



Source: LCIEI; daily throughputs at Niagara

U.S. natural gas exports to Mexico double by 2020

Billions of cubic feet per day (Bcf/d)

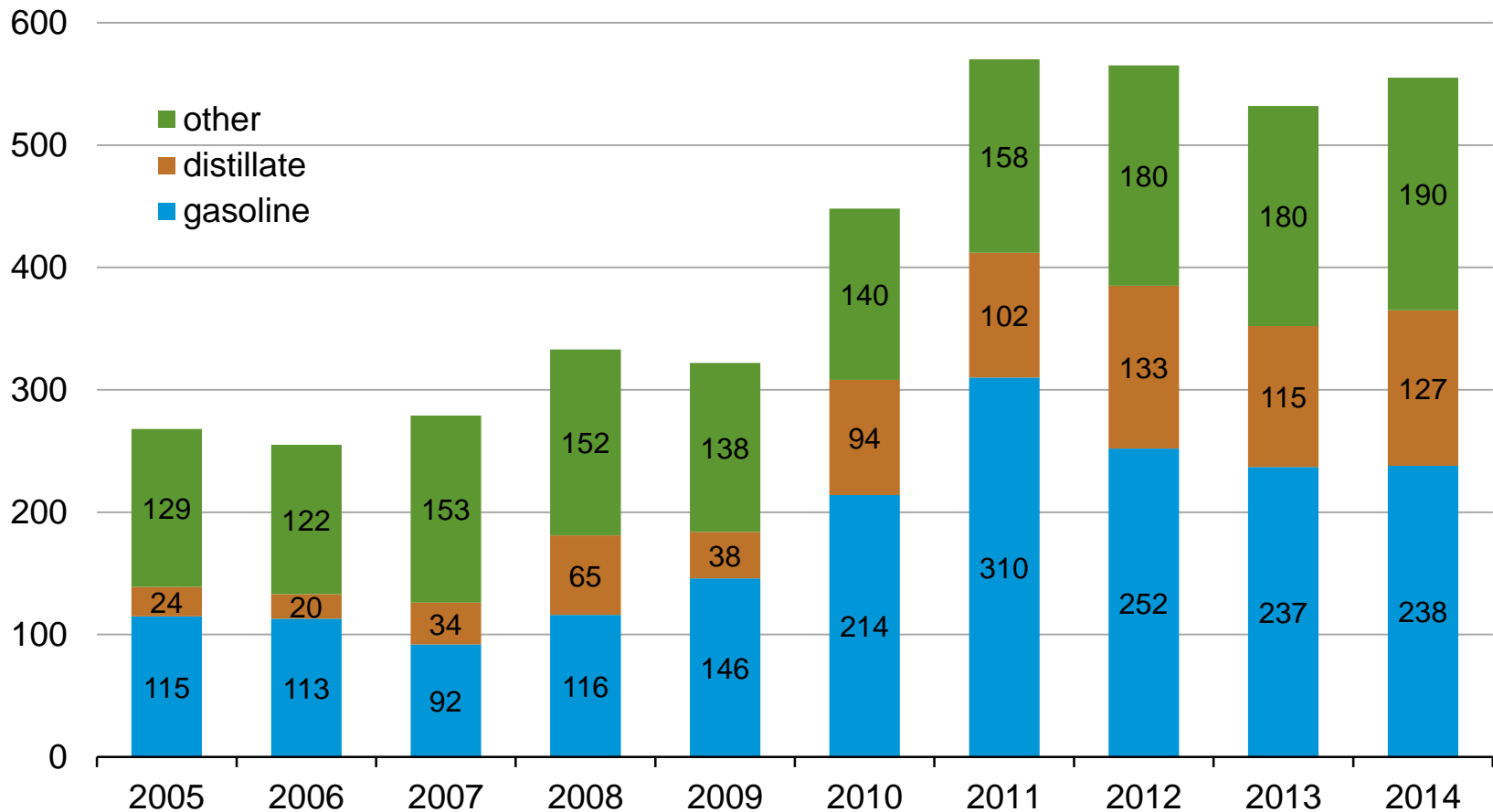


Source: Bentek

Crude Oil and Refined Products

The U.S. currently exports about 500,000 barrels/day of petroleum products to Mexico, half of which is gasoline

U.S. petroleum product exports to Mexico
thousand barrels per day



Source: U.S. Energy Information Administration, *Petroleum Supply Monthly*

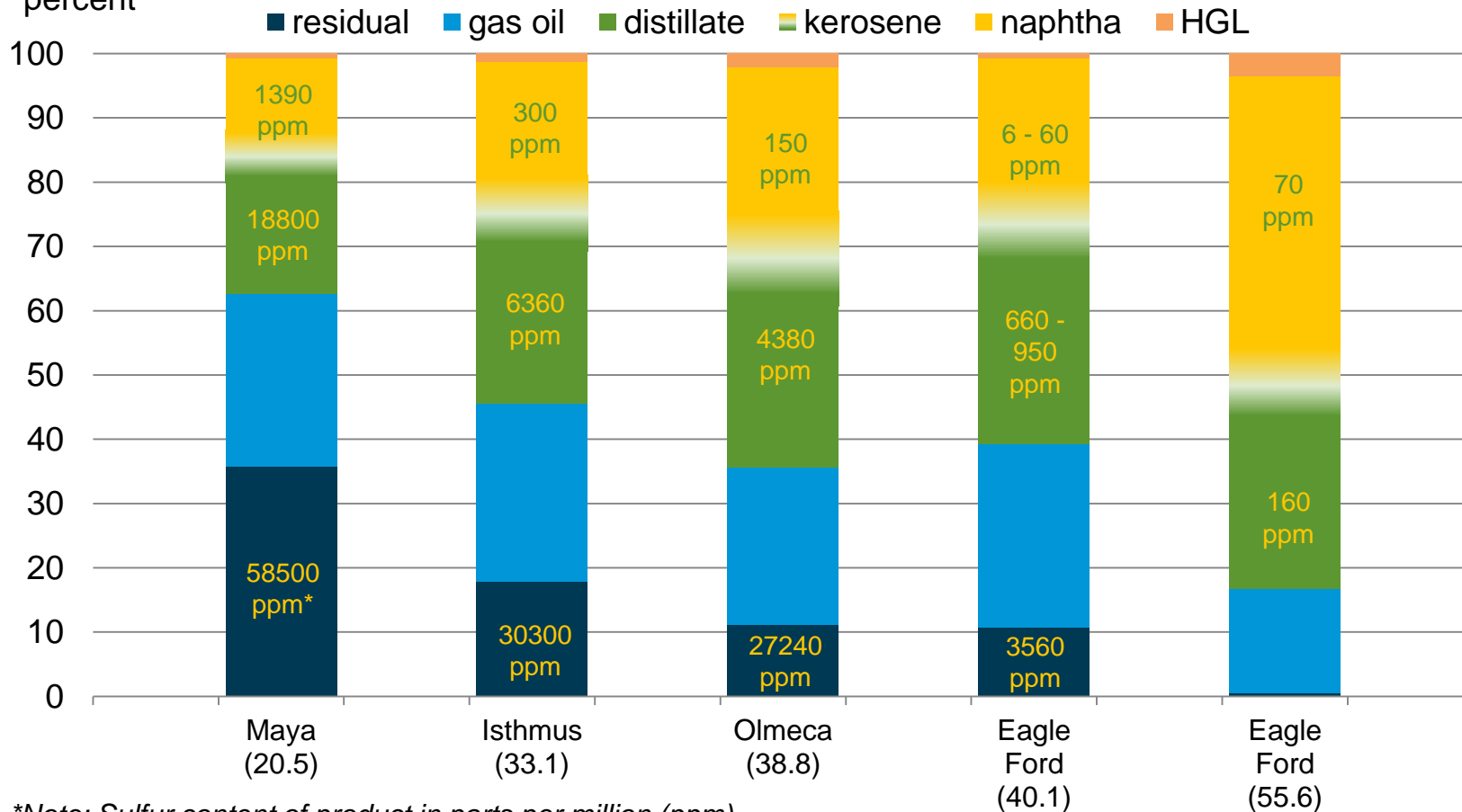
PEMEX Application for Crude Oil Swap with U.S.

- Mexico's crude production has become heavier and more sour and requires more blending with lighter crude for export and a suitable feedstock for domestic refineries.
- PEMEX produces 2.4 million b/d of mostly medium and heavy sour crude oil and owns and operates 6 refineries in Mexico with total crude processing capacity of 1.6 million b/d. ('14 refinery utilization ranged from 59%-91%.)
- In 2006, Mexico passed laws requiring the use of low sulfur diesel and gasoline by 2009; however, only 25% of the country currently requires the use of these clean fuels
- In August 2015, the U.S. Department of Commerce Bureau of Industry and Security (BIS) approved a request from PEMEX to establish a crude oil exchange through which PEMEX/PMI would import up to 100,000 b/d light crude oil and/or condensate produced in the United States in exchange for an equal amount of Maya crude oil.

Substituting a light sweet U.S. crude like Eagle Ford would increase clean fuels production without additional capital investment

product yields by crude type

percent



*Note: Sulfur content of product in parts per million (ppm)

Source: U.S. Energy Information Administration calculations with data from Chevron Assays.

For more information

U.S. Energy Information Administration home page | www.eia.gov

Short-Term Energy Outlook | www.eia.gov/steo

Today in Energy | www.eia.gov/todayinenergy

State Energy Profiles | www.eia.gov/state

Drilling Productivity Report | www.eia.gov/petroleum/drilling/

Annual Energy Outlook | www.eia.gov/aeo

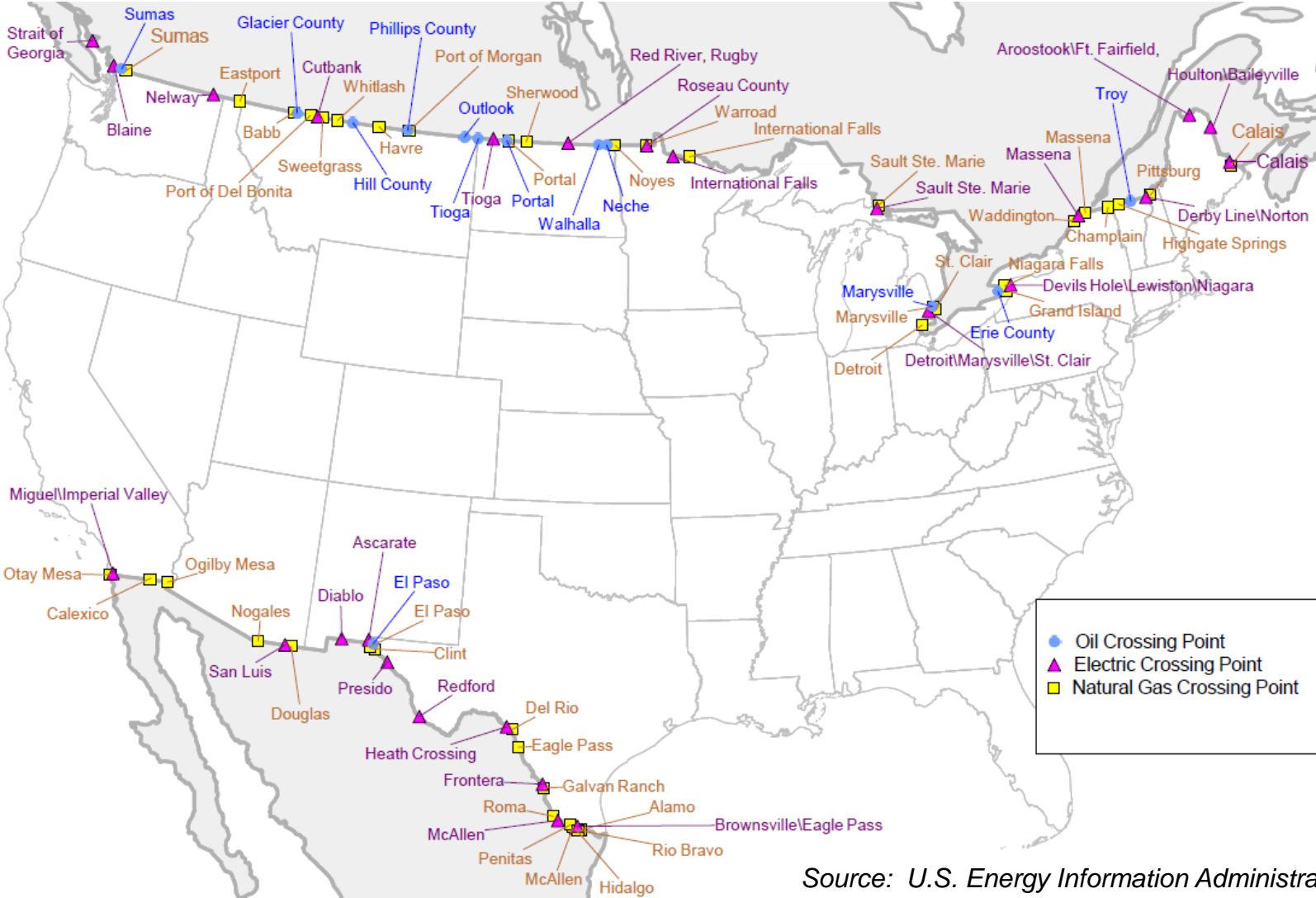
International Energy Portal | www.eia.gov/beta/international/?src=home-b1

Supplemental Slides



Source: U.S. Energy Information Administration, based on data from various published studies

North American border crossing points for oil, natural gas, and electricity



Source: U.S. Energy Information Administration