Lower oil prices and the energy outlook















For

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By

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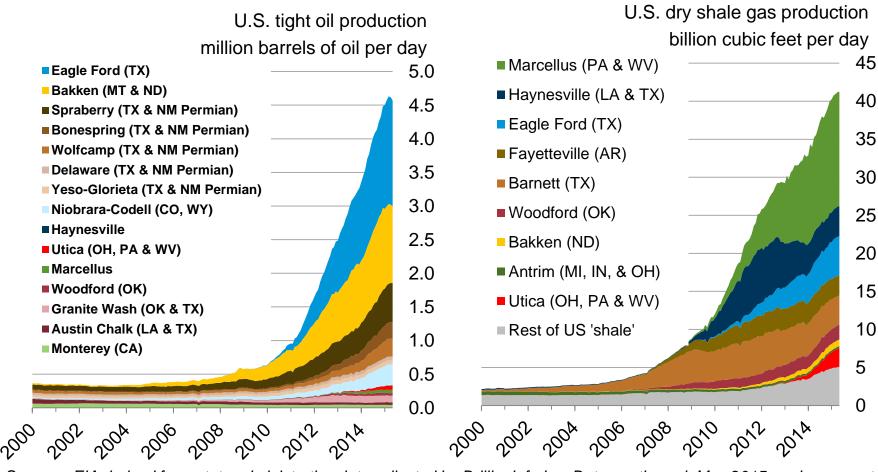
U.S. is the largest producer of petroleum and natural gas in the world

estimated U.S., Russia, and Saudi Arabia petroleum and natural gas production quadrillion Btu

million barrels per day of oil equivalent 30 60 **United States** Russia 25 50 Saudi Arabia 20 40 30 15 natural gas 20 10 10 5 petroleum 0 0 2010 2011 2013 2008 2009 2012 2014e

Note: Petroleum production includes crude oil, natural gas liquids, condensates, refinery processing gain, and other liquids, including biofuels; barrels per day oil equivalent were calculated using a conversion factor of 1 barrel oil equivalent=5.55 million British thermal units (Btu) Source: International Energy Statistics (EIA), July 2015 STEO (EIA), The 2014 Natural Gas Year in Review: First Estimates (CEDIGAZ)

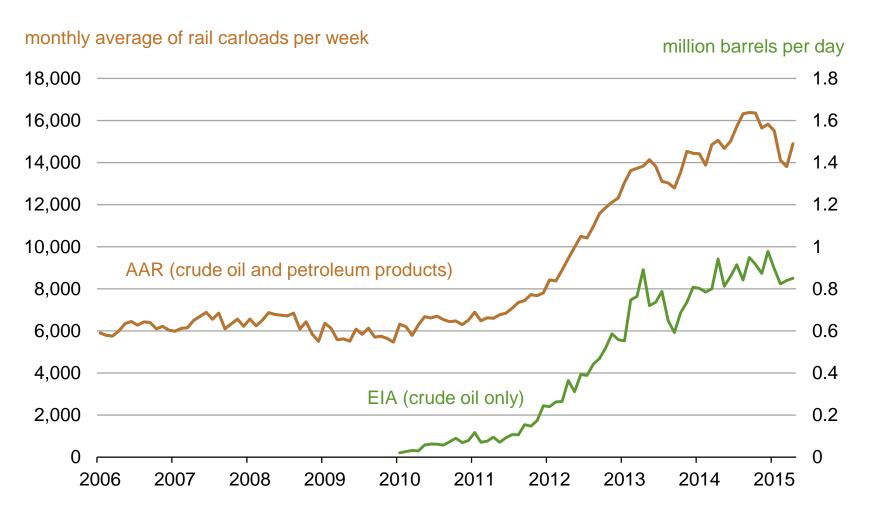
The U.S. has experienced a rapid increase in natural gas and oil production from shale and other tight resources



Sources: EIA derived from state administrative data collected by DrillingInfo Inc. Data are through May 2015 and represent EIA's official tight oil & shale gas estimates, but are not survey data. State abbreviations indicate primary state(s).



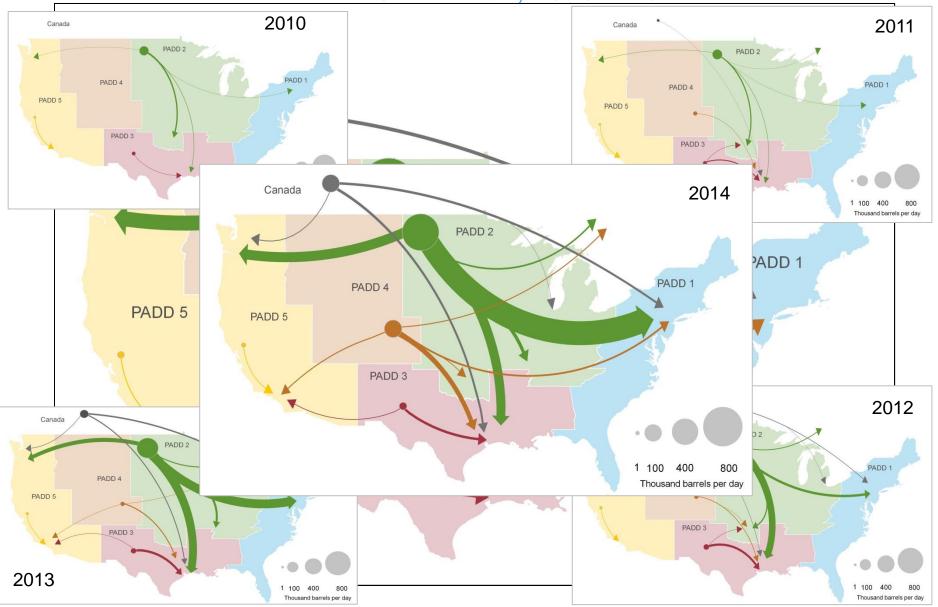
EIA's new data series on crude-by-rail (CBR) provides direct estimates for crude oil movements



Source: Association of American Railroads (AAR) RailTime Indicators and U.S. Energy Information Administration, based on Surface Transportation Board and other information

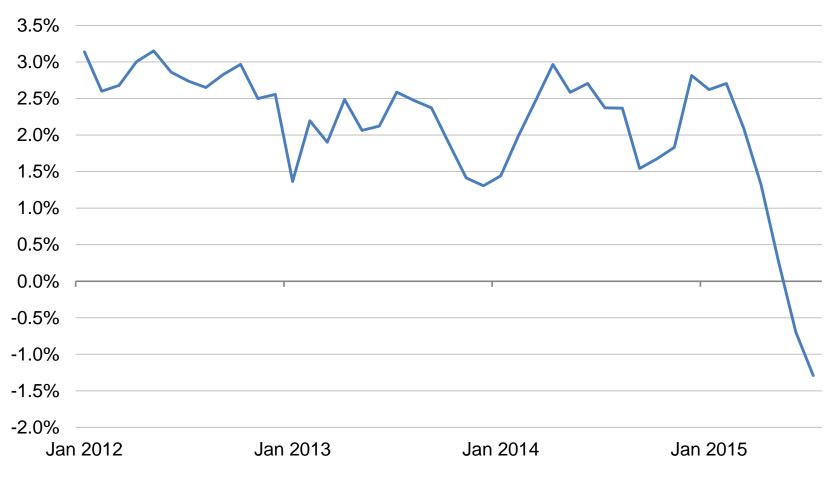


Annual CBR flows, 2010 – 2014



Production growth in top crude producing regions (Permian, Bakken, Niobrara, and Eagle Ford) reverses in early 2015

monthly percent change three month rolling average



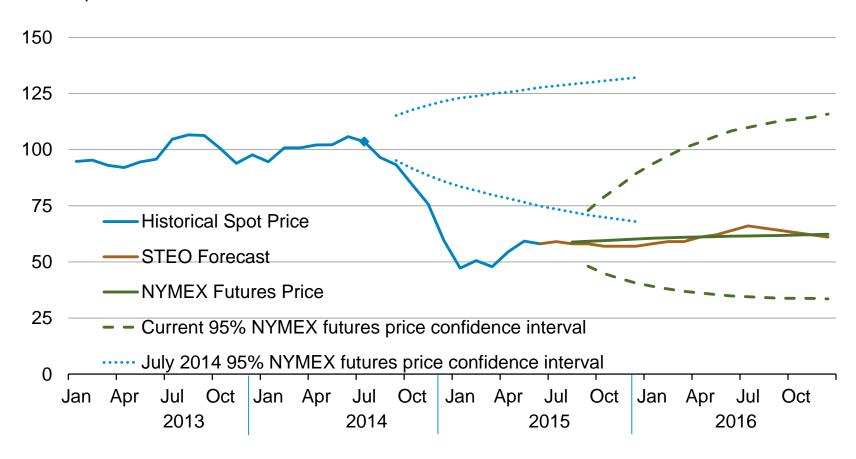
Source: EIA, DPR, June 2015



Short-term considerations

For oil prices, the market-implied confidence band is very wide

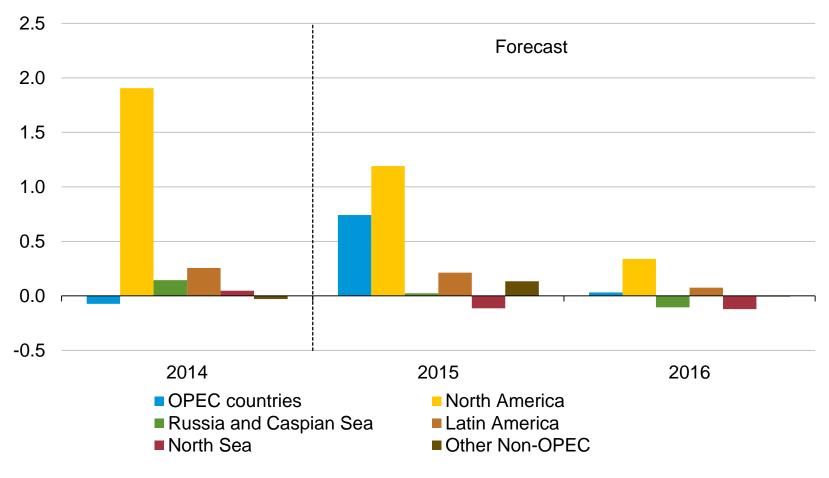
WTI price dollars per barrel





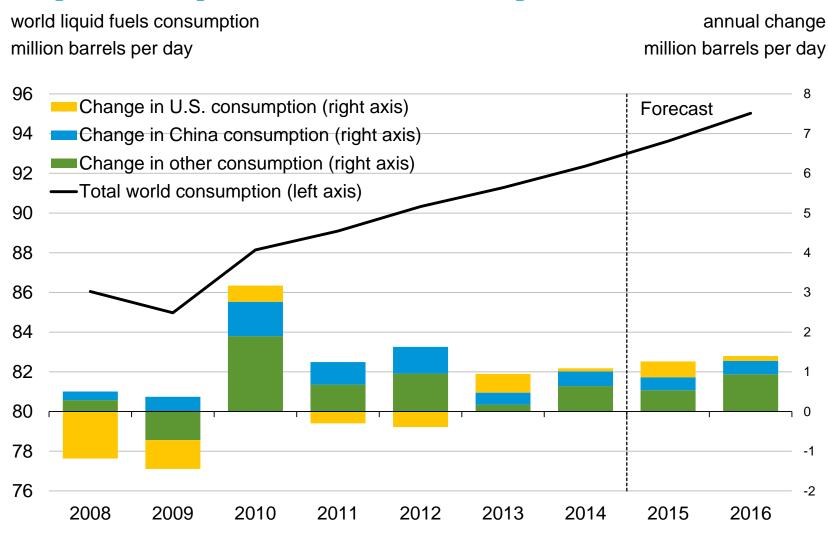
North American oil production growth slows with lower oil prices but remains the main driver of global production growth

world crude oil and liquid fuels production growth million barrels per day



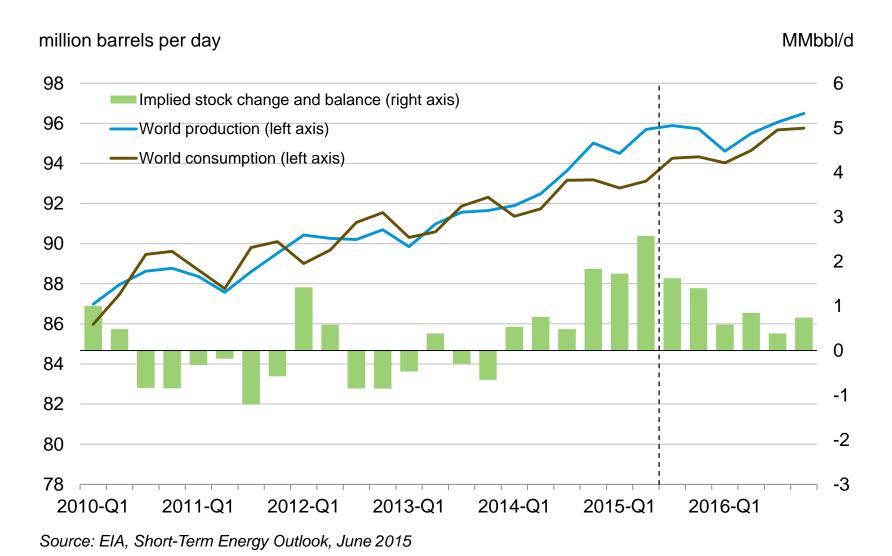


Surprises in liquid fuel demand to the upside are rare





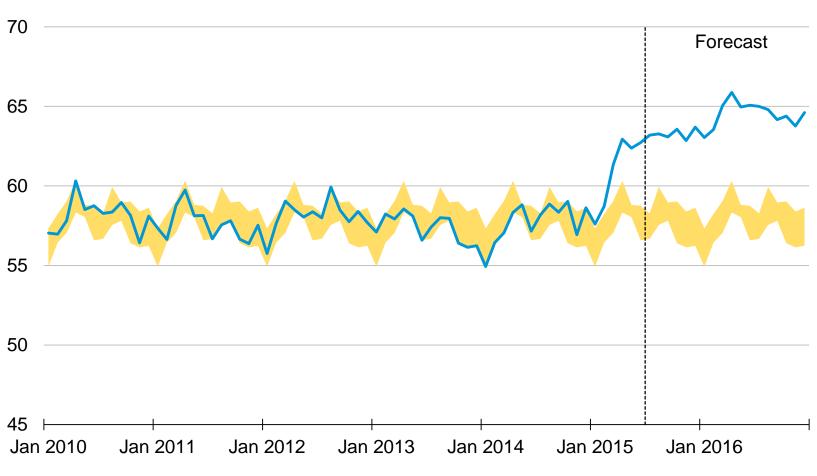
Oil supply and demand begin to rebalance in 2016





OECD commercial crude oil stocks remain high

days of supply

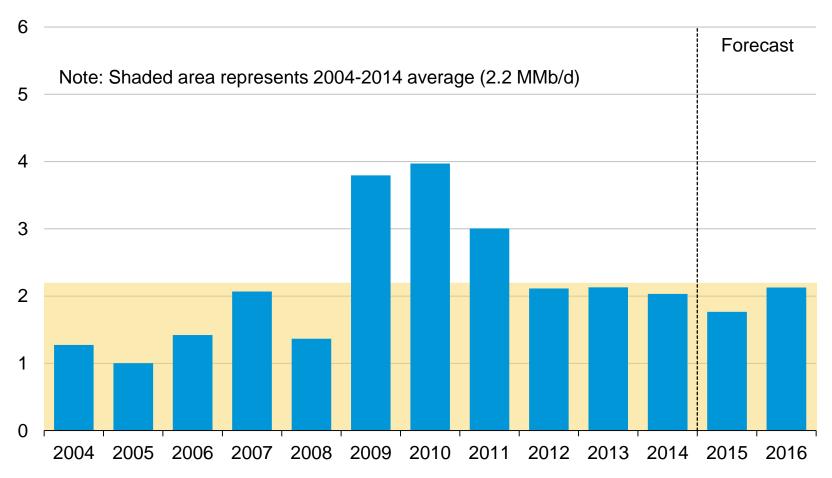






OPEC surplus crude oil production capacity remains moderate to low

million barrels per day

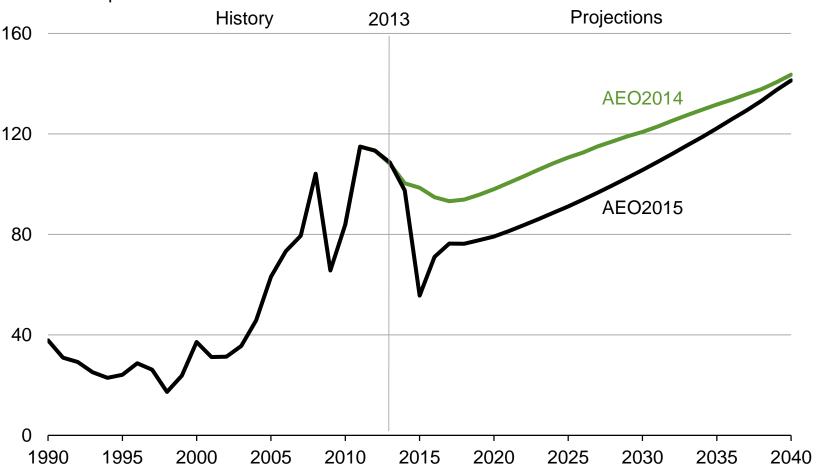




Long-term considerations

World crude oil price projection is lower in the AEO2015 Reference case than in AEO2014, particularly in the near term

Brent crude oil spot price 2013 dollars per barrel

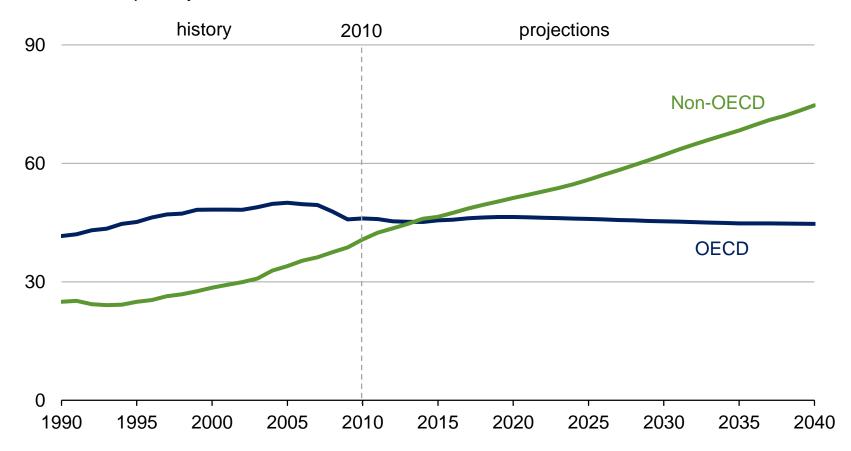


Source: EIA, Annual Energy Outlook 2015 Reference case and Annual Energy Outlook 2014 Reference case



All of the growth in liquid fuels consumption occurs in the emerging non-OECD (million barrels per day)

petroleum and other liquid fuels consumption, 1990-2040 million barrels per day

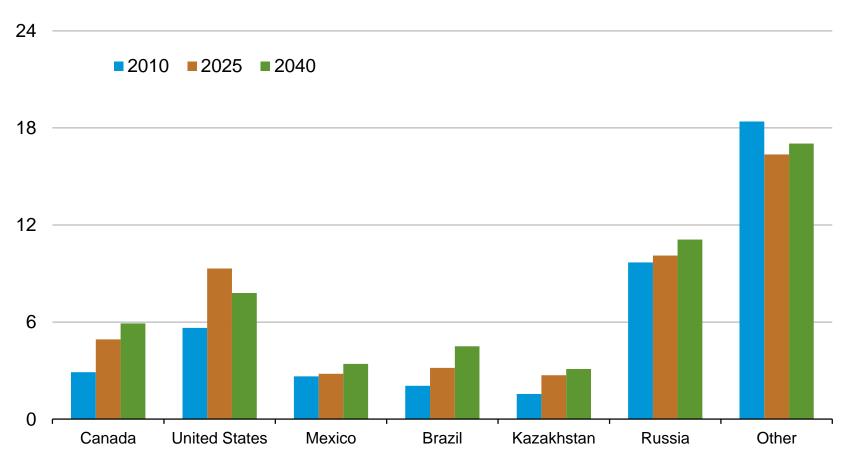


Source: EIA, International Energy Outlook 2014



Most significant contributors to non-OPEC crude and lease condensate production: Canada, Brazil, U.S., Kazakhstan, Russia

non-OPEC crude and lease condensate production, Reference case million barrels per day

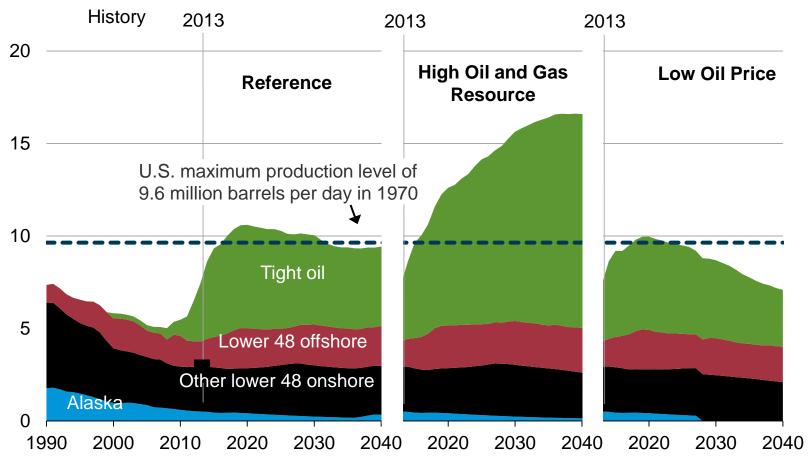


Source: EIA, International Energy Outlook 2014



U.S. crude oil production rises above previous historical highs before 2020 in all AEO2015 cases, with a range of longer-term outcomes

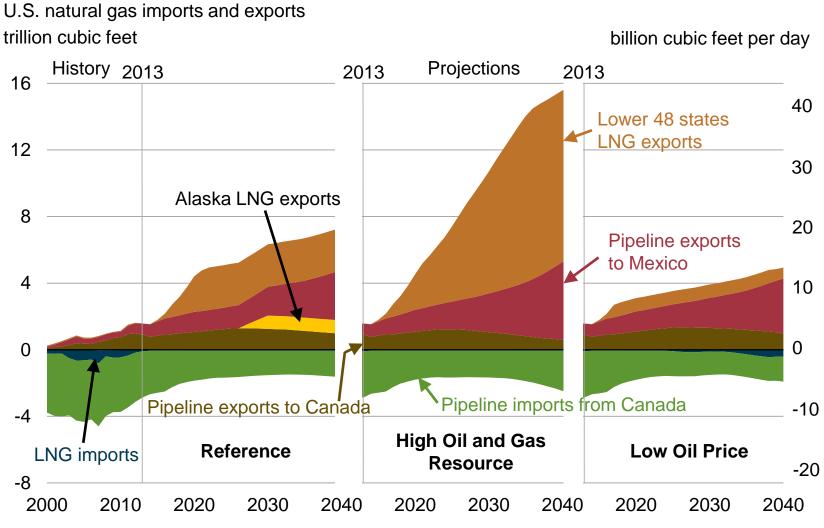
U.S. crude oil production million barrels per day

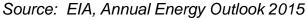


Source: EIA, Annual Energy Outlook 2015



Projected U.S. natural gas exports reflect the spread between domestic natural gas prices and world energy prices





EIA is publishing a series of reports on U.S. crude exports

Report	Publish date
U.S. crude oil production forecast—analysis of crude types www.eia.gov/analysis/petroleum/crudetypes/	May 2014
What drives U.S. gasoline prices www.eia.gov/analysis/studies/gasoline/	October 2014
U.S crude oil import tracking tool www.eia.gov/beta/petroleum/imports/browser/	November 2014
Technical options for processing additional light tight oil volumes within the United States www.eia.gov/analysis/studies/petroleum/lto/	April 2015
Implications of increasing light tight oil production for U.S. refining (Turner Mason) www.eia.gov/analysis/studies/petroleum/morelto/	April 2015
U.S. crude oil production to 2025: Updated projection of crude types http://www.eia.gov/analysis/petroleum/crudetypes/	May 2015
Effects of relaxing U.S. crude export restrictions	August 2015

TRILATERAL MOU CONCERNING COOPERATION ON ENERGY INFORMATION

SIGNED MOU

SUBGROUP A: Energy Trade Statistics – Inconsistent energy trade data reporting

SUBGROUP B: Geographical Energy Information – Fragmented mapping initiatives

180-DAY PROGRESS REPORT

SUBGROUP A: Comprehensive methodological guides; analysis of energy definitions; preliminary data comparison

SUBGROUP B: Interactive maps and seven static maps displaying various types of energy infrastructure

365-DAY PROGRESS REPORT

SUBGROUP A: Tools for data comparison; analysis of crude oil and equivalents and NGLs, commencement of feasibility studies where necessary

SUBGROUP B: Continued development of comprehensive static and interactive maps

ULTIMATE GOAL

SUBGROUP A: Consistent energy trade data across and within jurisdictions; harmonized methods and definitions; aligned international reporting practices

SUBGROUP B: Fully integrated maps of North American energy infrastructure

Dec. 2014

June 2015

Dec. 2015

2016 & Beyond

SUBGROUP C: Outlooks for Energy Supply and Demand

Differences between published outlooks

SUBGROUP D: Cross-Reference for Energy Terminology - Lack of unified definitions and conversion factors **SUBGROUP C:** Analytical modelling framework and existing outlook comparison; protocols for sharing information, including outlook development calendars

SUBGROUP D: Developed glossary of terms and definitions; developed table of common conversion factors

SUBGROUP C: Identification of top modelling assumptions; consolidation of revised outlooks; and development of a North American energy forecast

SUBGROUP D: Glossary expanded to include other commonly used energy terms and definitions

SUBGROUP C: Process for exchanging views and projections of cross-border energy flows

SUBGROUP D: Catalogue of concepts, terms and definitions consistent across North America and translated into each country's official language(s)

For more information

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

Annual Energy Outlook | www.eia.gov/aeo

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

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

Today in Energy | www.eia.gov/todayinenergy

State Energy Profiles | www.eia.gov/state

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

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