

July 3, 2018

# U.S. Energy and Climate Policy

*The status, opportunities and challenges in the second year of the Trump Administration*

**Jane Nakano**

Senior Fellow

Energy and National Security Program

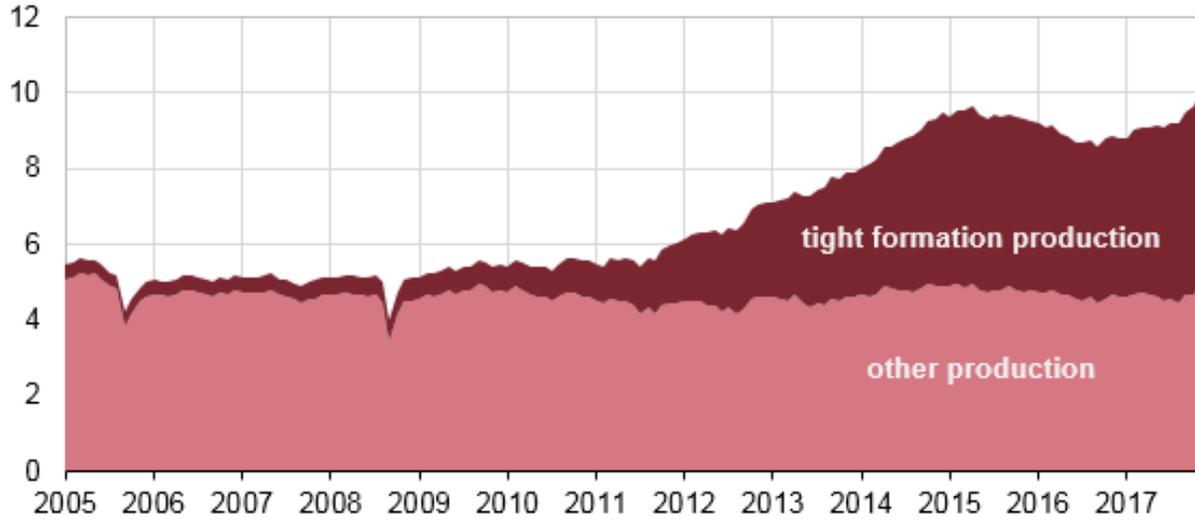
CSIS

CENTER FOR STRATEGIC &  
INTERNATIONAL STUDIES

# **U.S. Oil Production and Exports**

### U.S. crude oil production (Jan 2005-Nov 2017)

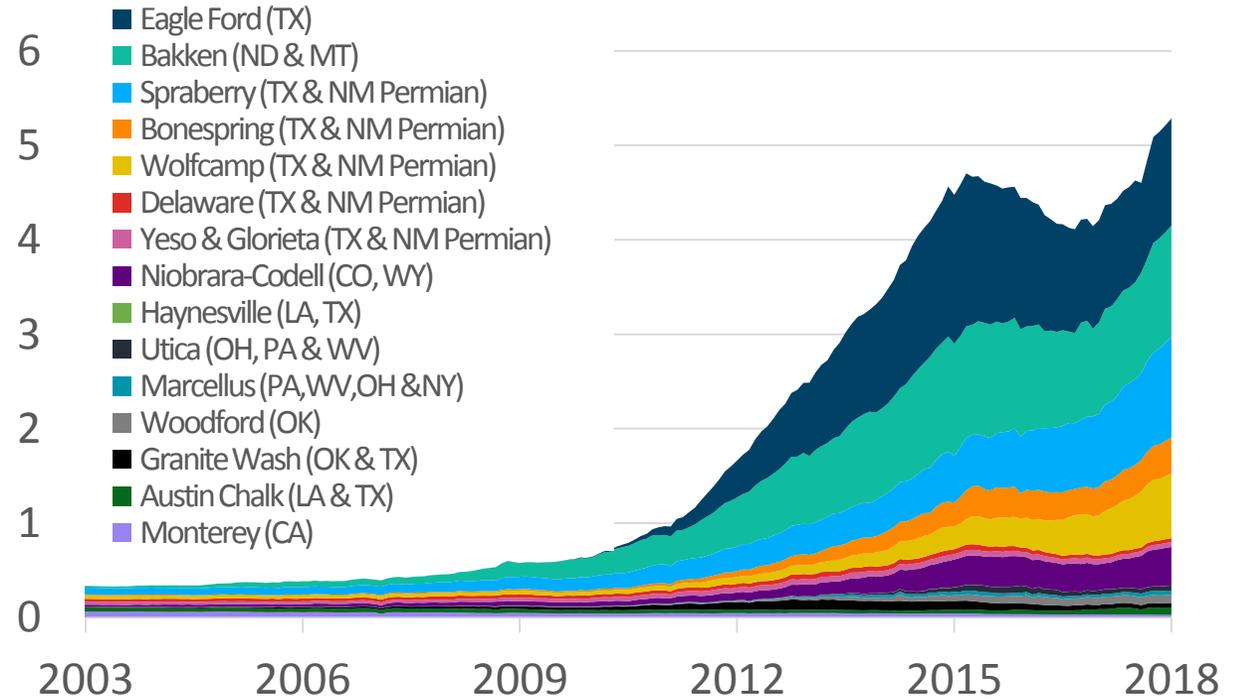
million barrels per day



(Data source: U.S. EIA)

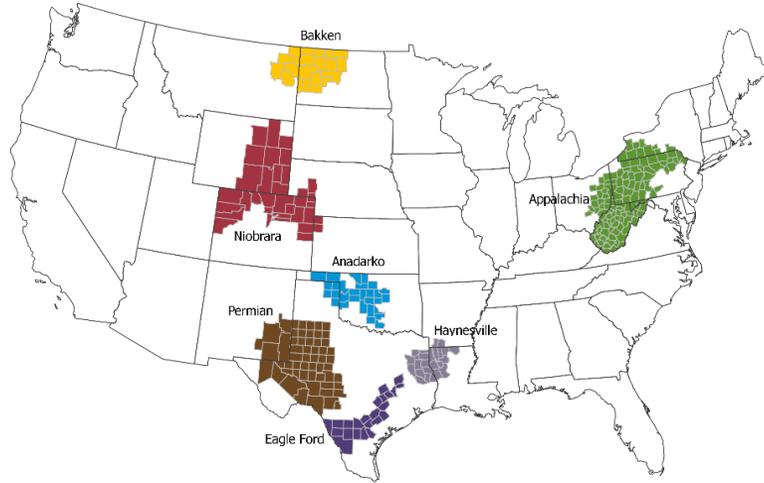
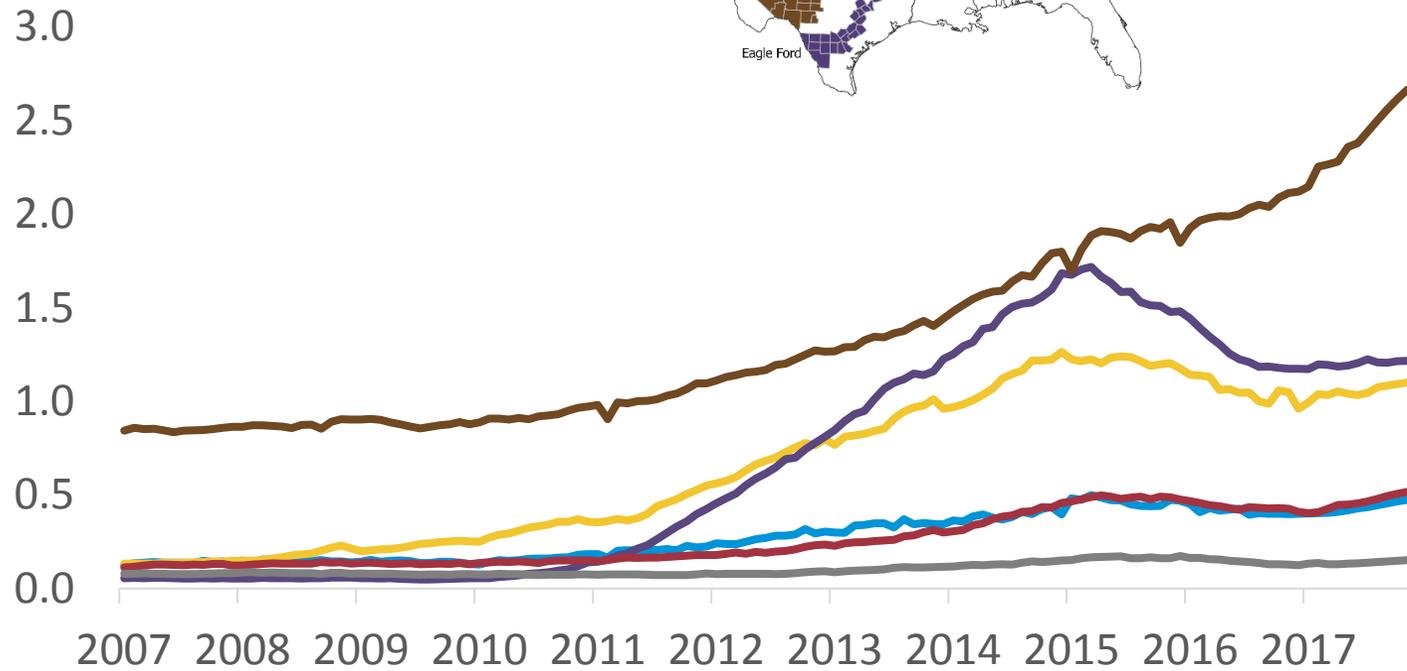
### U.S. Tight Oil Production by Play

Million barrels per day



(Source: Pioneer)

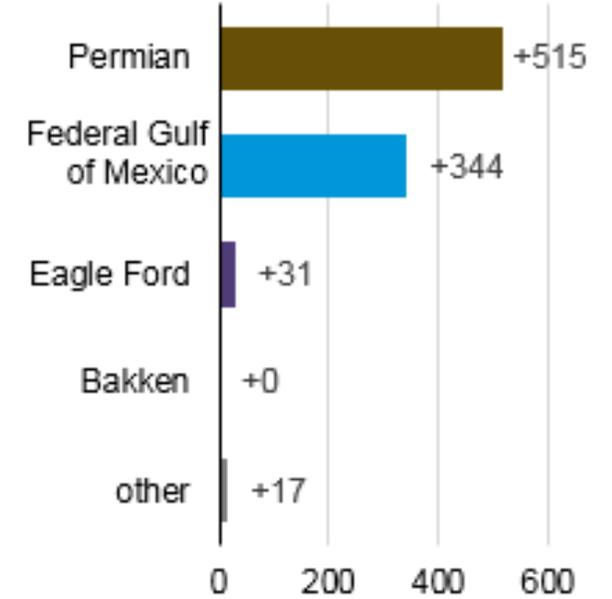
Million barrels per day



Forecasted change  
Jun 2017 - Dec 2018  
thousand barrels per day



Permian Basin



Eagle Ford

Bakken

Niobrara

Anadarko

Other plays

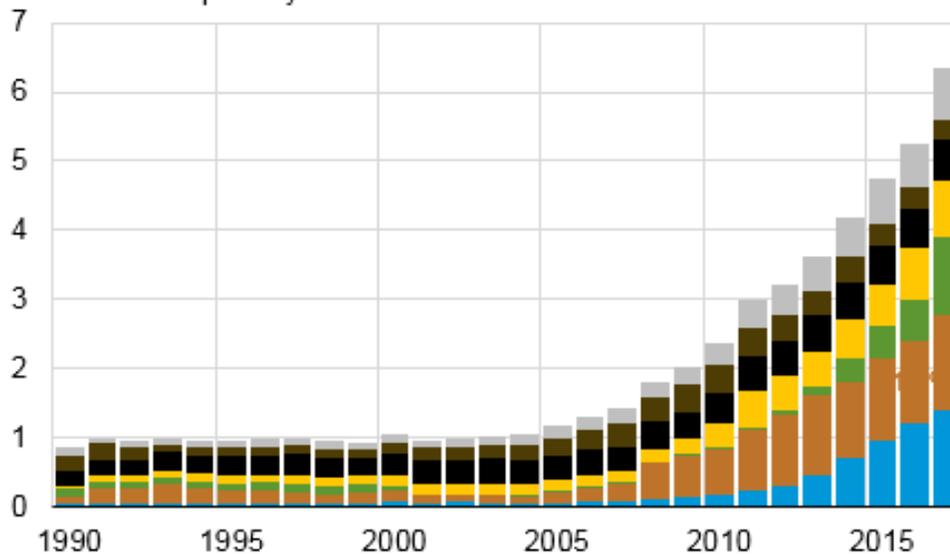
### U.S. crude oil exports (1920-2017)

thousand barrels per day



### Total U.S. crude oil and petroleum product exports

million barrels per day



2017 share of total petroleum exports

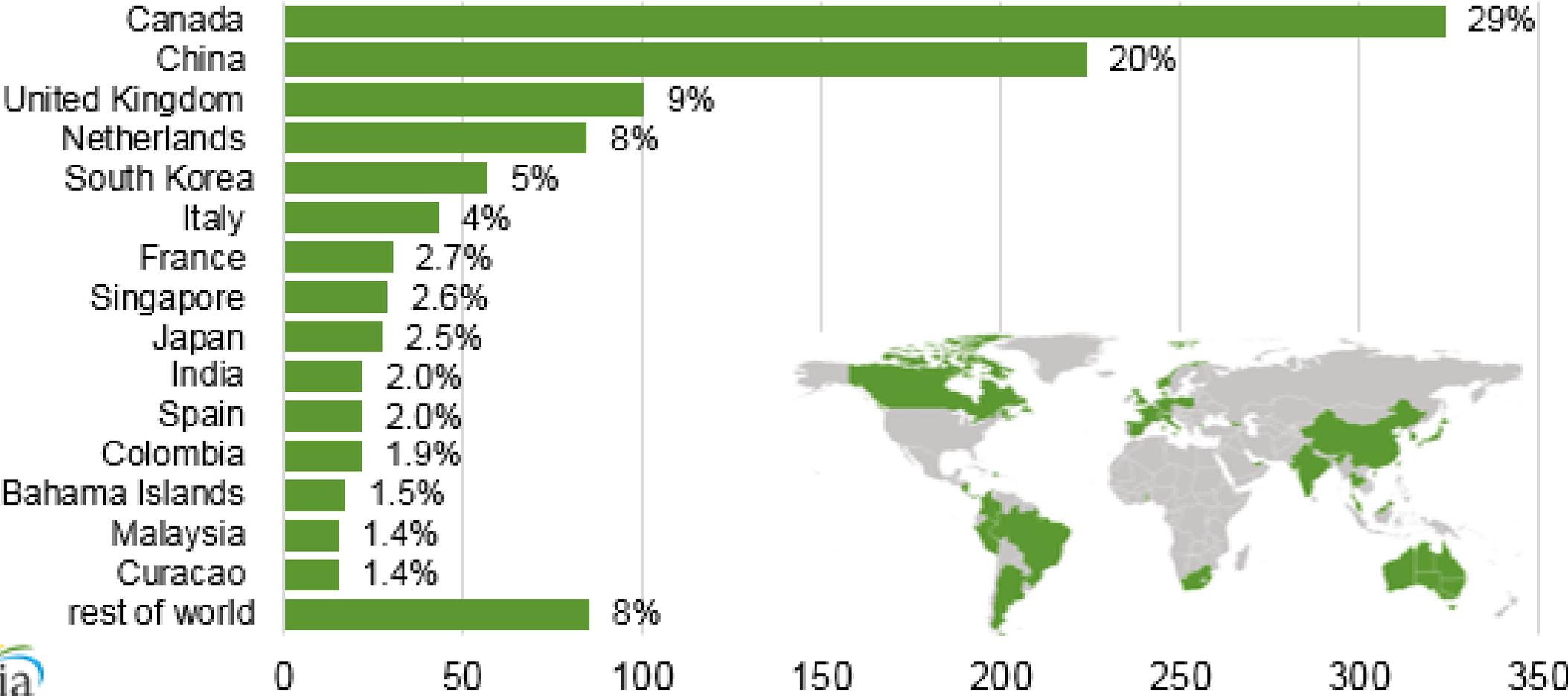
- 12% other liquids
- 5% residual fuel
- 9% petroleum coke
- 13% motor gasoline
- 18% crude oil
- 22% distillate
- 22% hydrocarbon gas liquids



# U.S. crude oil export destinations (2017)

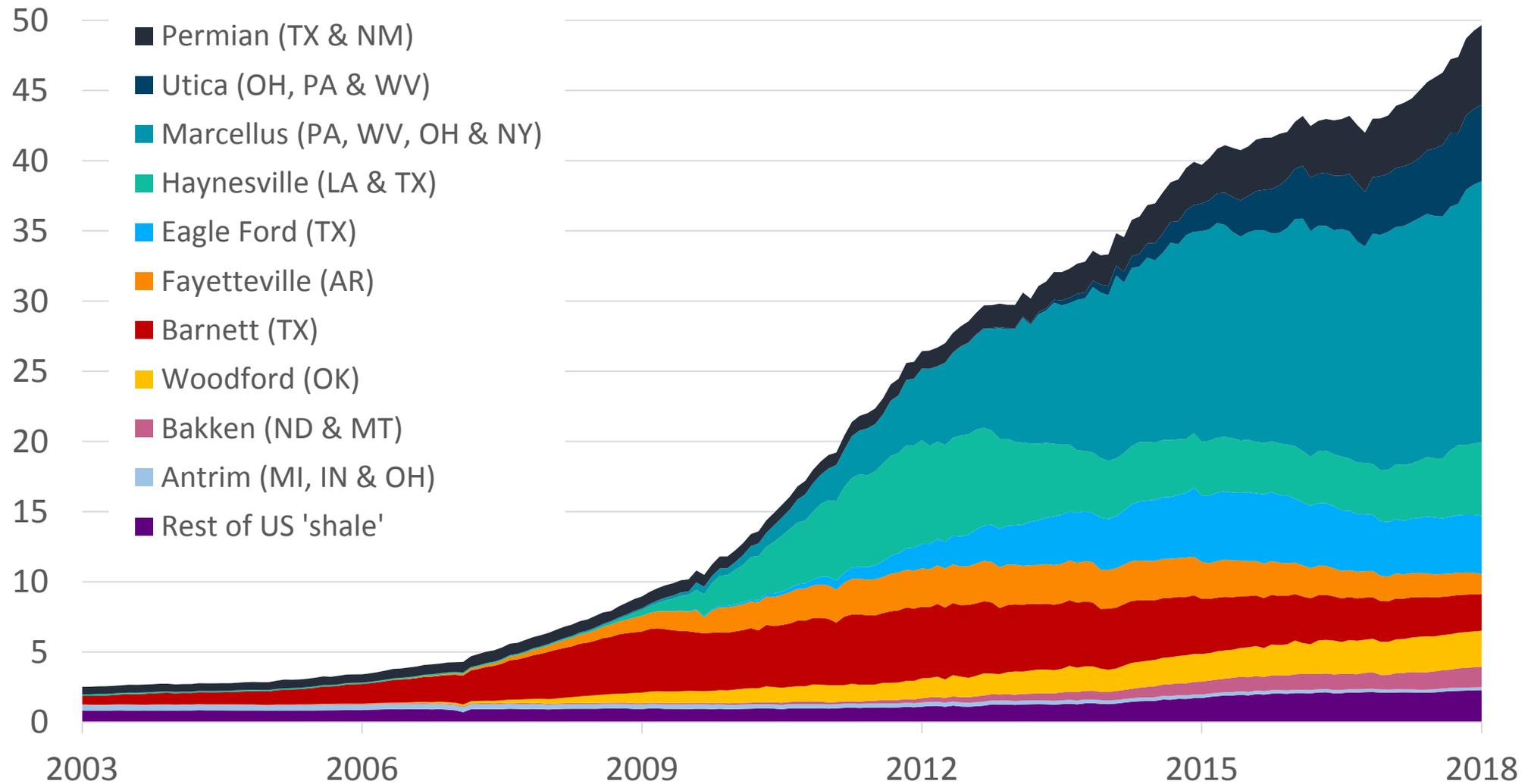
thousand barrels per day

percent of U.S. total



# US Natural Gas Production and Exports

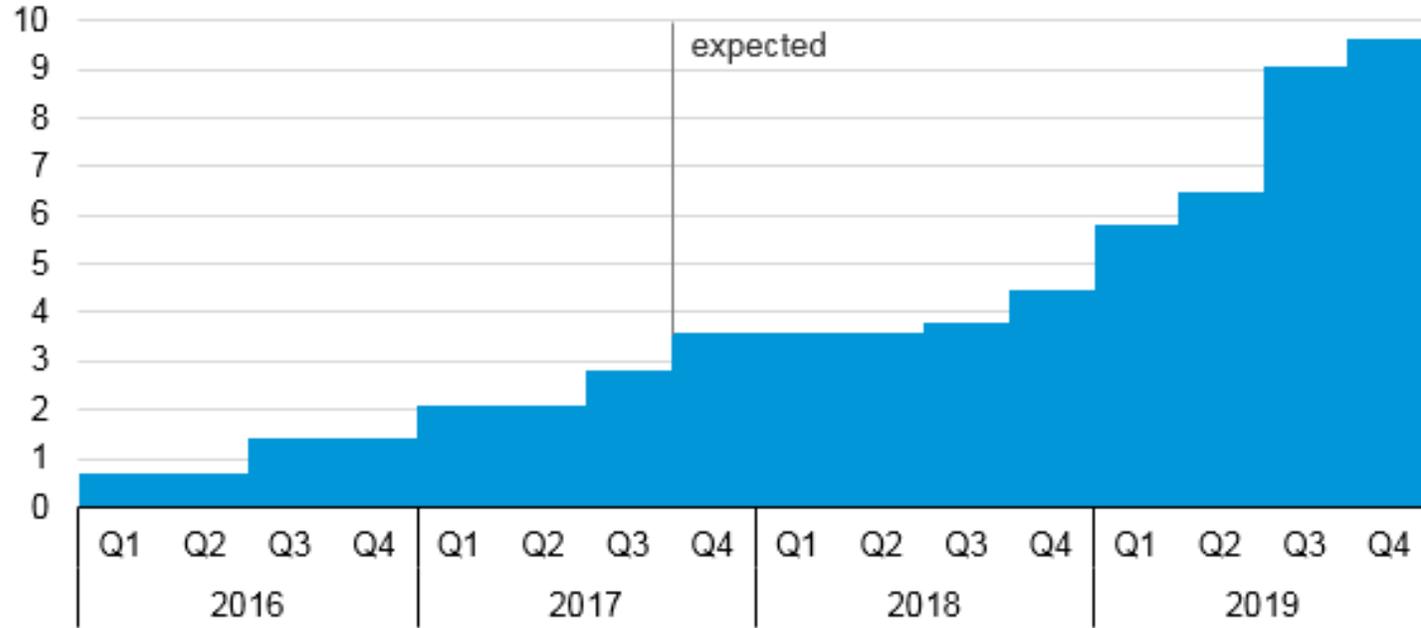
## Billion Cubic Feet per Day



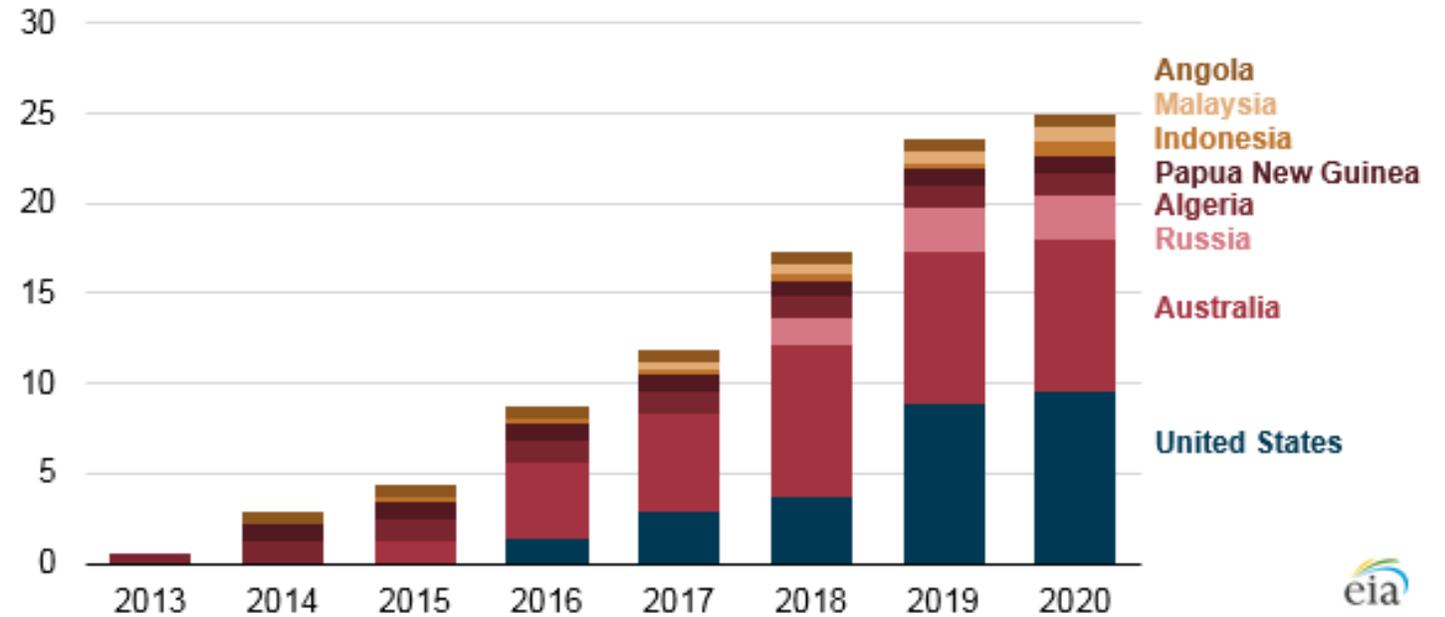
(Data Source: U.S. EIA)

### U.S. liquefied natural gas export capacity (2016-2019)

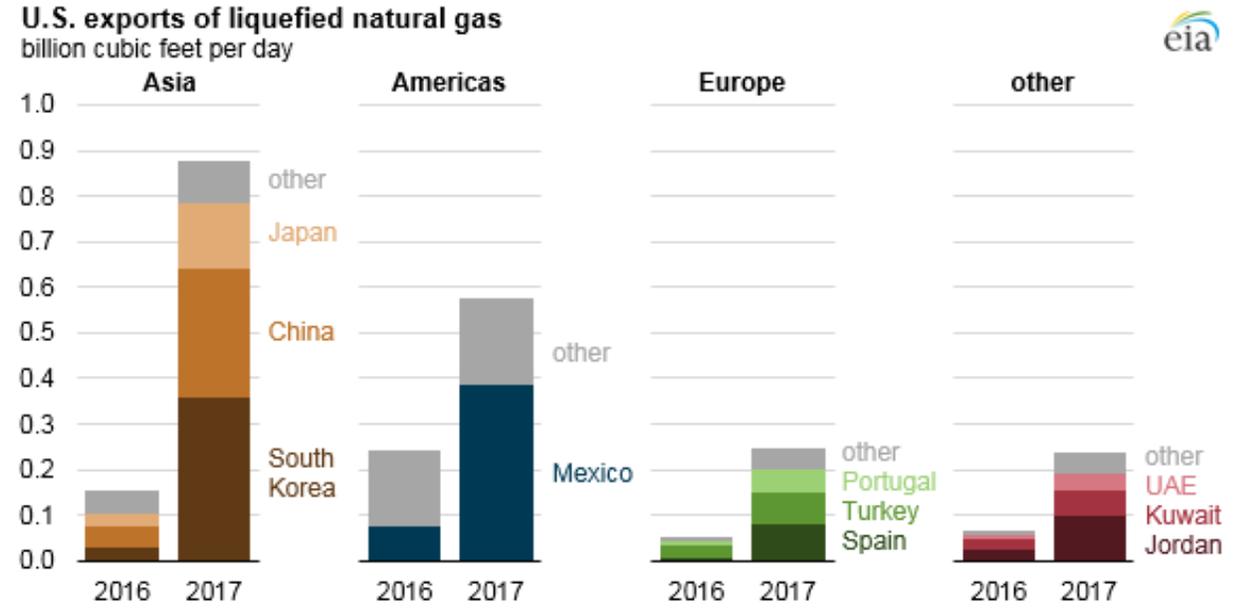
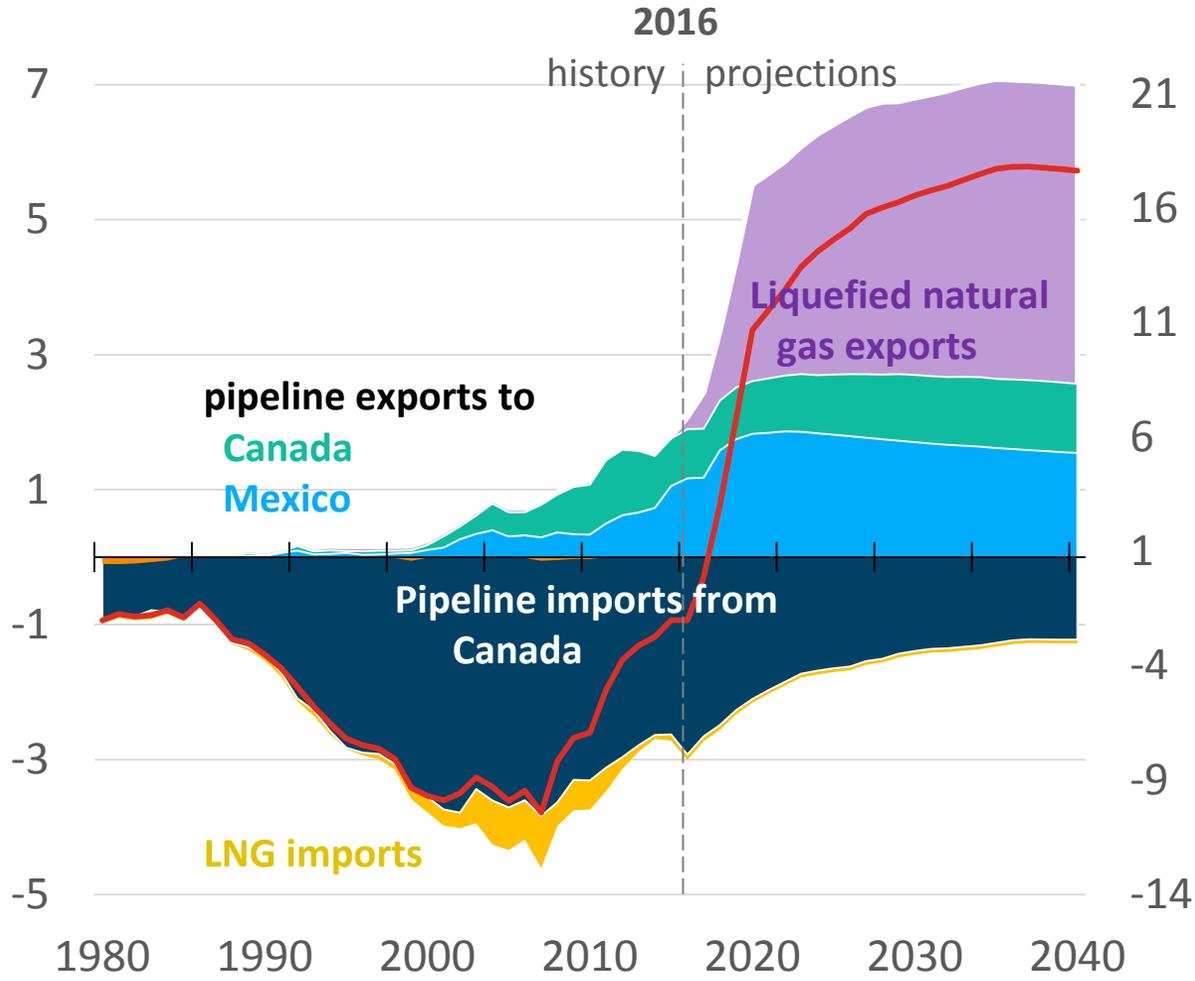
billion cubic feet per day



Natural gas liquefaction capacity additions, 2013-2020 (billion cubic feet per day)

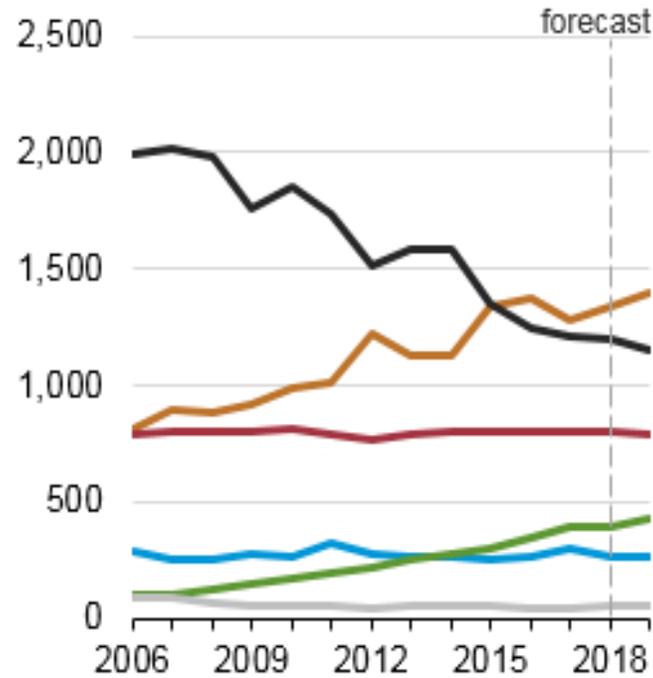


# Changes in the Volume and Composition of US Gas Exports

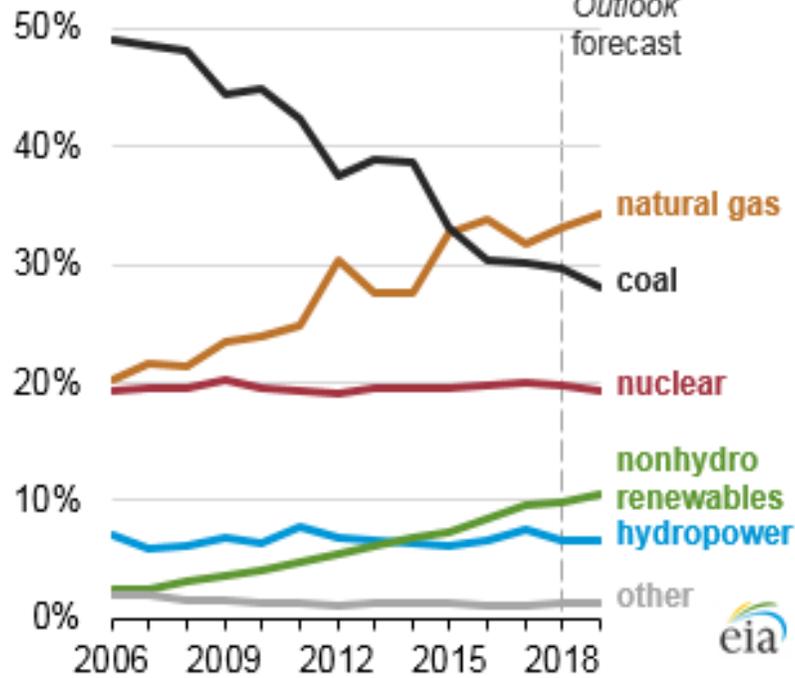


# **U.S. Power Sector**

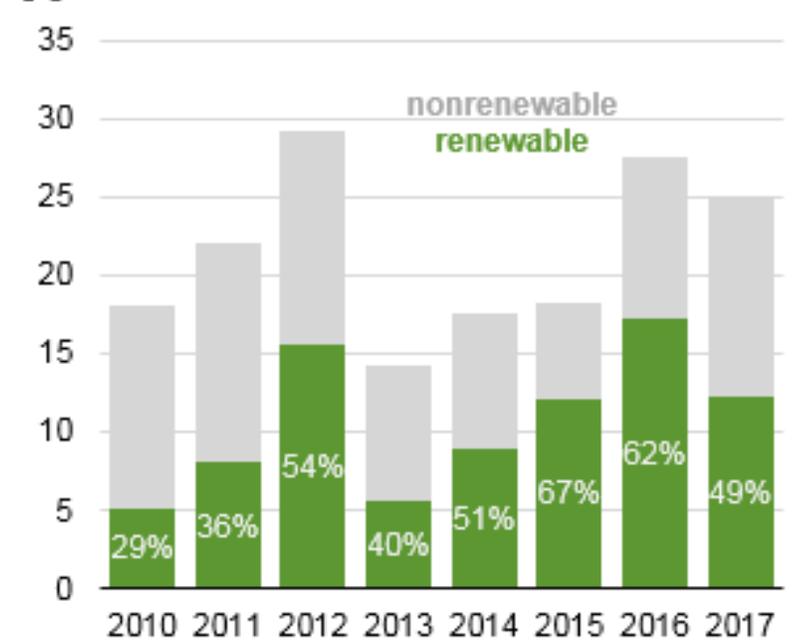
**U.S. electricity generation by energy source (2006-2019)**  
billion kilowatthours



share of total generation



**Utility-scale capacity additions, 2010-2017**  
gigawatts



# **U.S. Climate Policy**

# Actors, Approaches, and Aspirations

*Internationally, the U.S. announces in June '17 its decision to withdraw from the Paris Agreement. Domestically, major climate regulations are under rollback.*

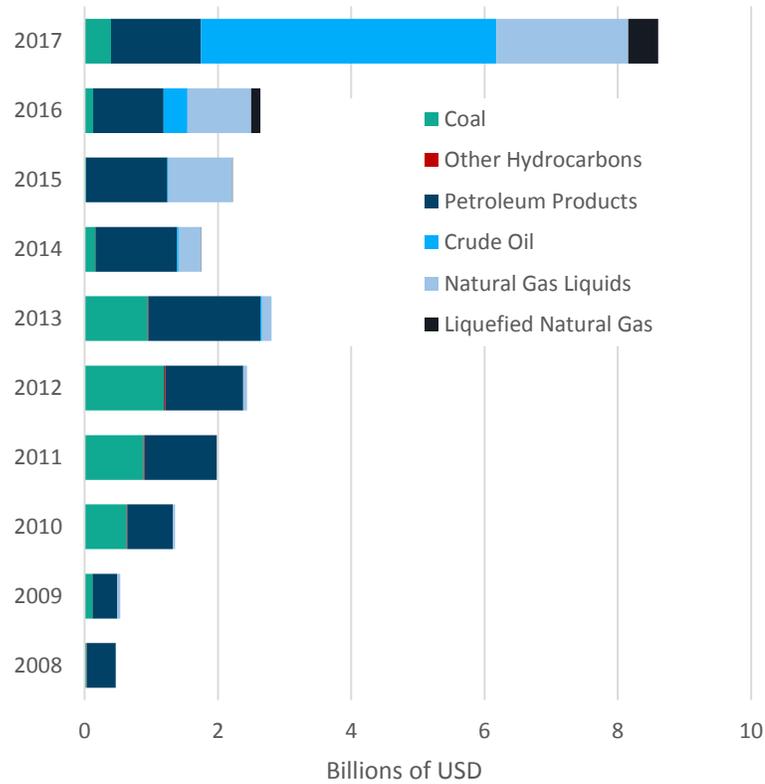
*Yet, lots of climate policy developments in the United States:*

- Federal vs. local governments
- Public vs. private sectors
- Republicans vs. Democrats?

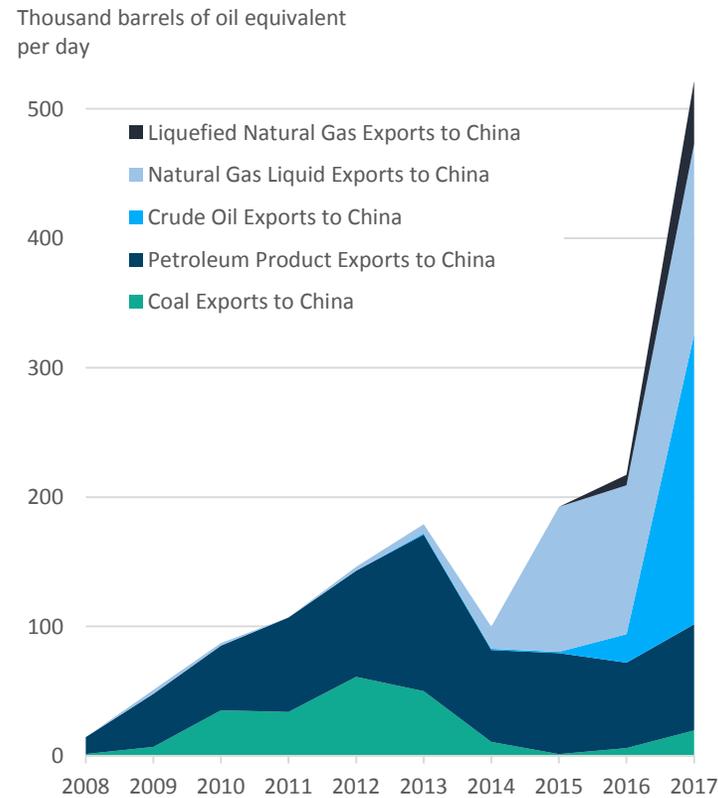
***Economic statecraft, including sanctions and trade, will continue to reshape domestic energy markets, patterns of investment, infrastructure build out, pace of energy development and energy trade flows.***

# US-China Trade Tension and Energy

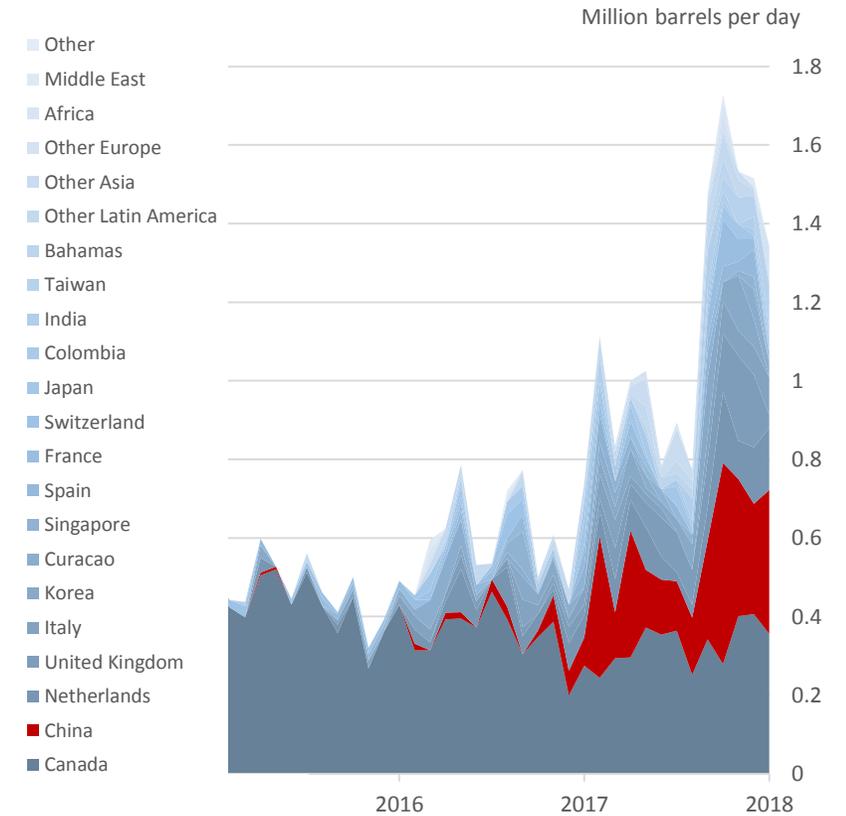
## Value of U.S. Energy Exports to China



## Volumes of U.S. Energy Exports to China



## U.S. Crude Oil Exports by Destination



Source: CSIS Energy and National Security Program with data from the U.S. EIA and U.S. Census Bureau

Source: CSIS Energy and National Security Program with data from the U.S. EIA

# About Us

The CSIS Energy & National Security Program is a leader in understanding and analyzing the shifting global and domestic energy landscape. Our approach seeks to analyze and explain the intersection of policy, markets, and technologies. The team is comprised of scholars with a wide range of professional experience in the private and public sectors as well as firsthand regional expertise, who work together to formulate innovative yet pragmatic policy recommendations.

Continuing its collaboration with leaders in industry, government, academia, and nonprofits, the CSIS Energy & National Security Program has events and projects designed to help decision-makers craft smart energy policies that balance economic, environmental, and security priorities.