



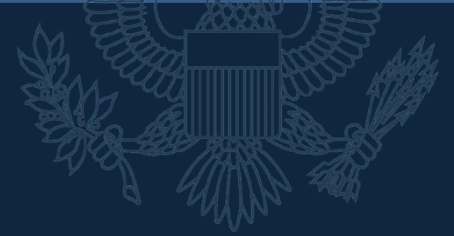
Bureau of Energy Resources (ENR)

April 17, 2019





Mission & Objectives



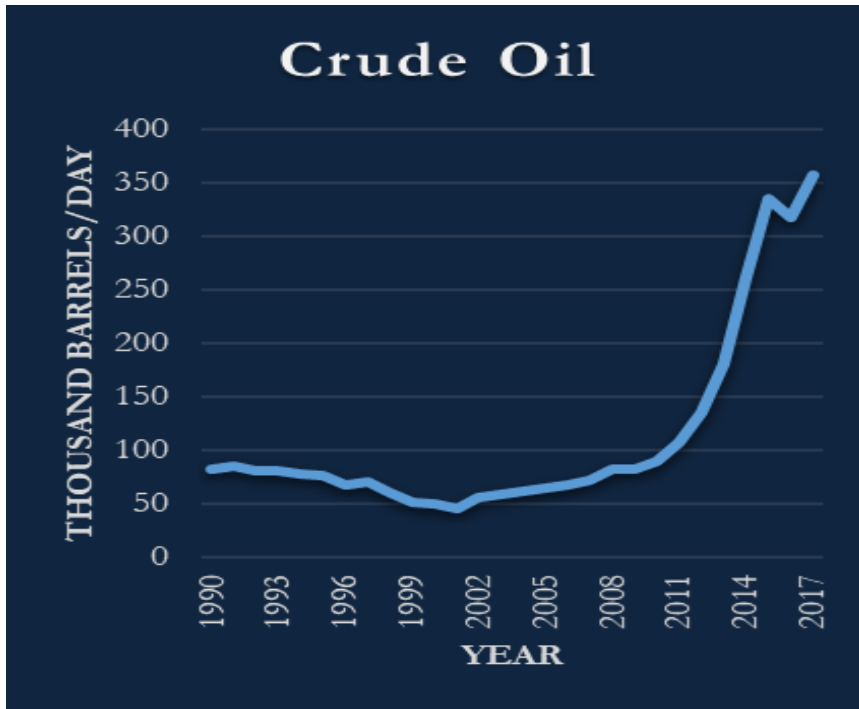
Mission:

- The Bureau of Energy Resources (ENR) leads the State Department's efforts to develop and execute international energy policy by directing diplomatic engagement to promote: 1) energy security for the United States and our partners and allies; 2) U.S. economic growth that benefits American business and people; and 3) global political stability and prosperity through energy development.

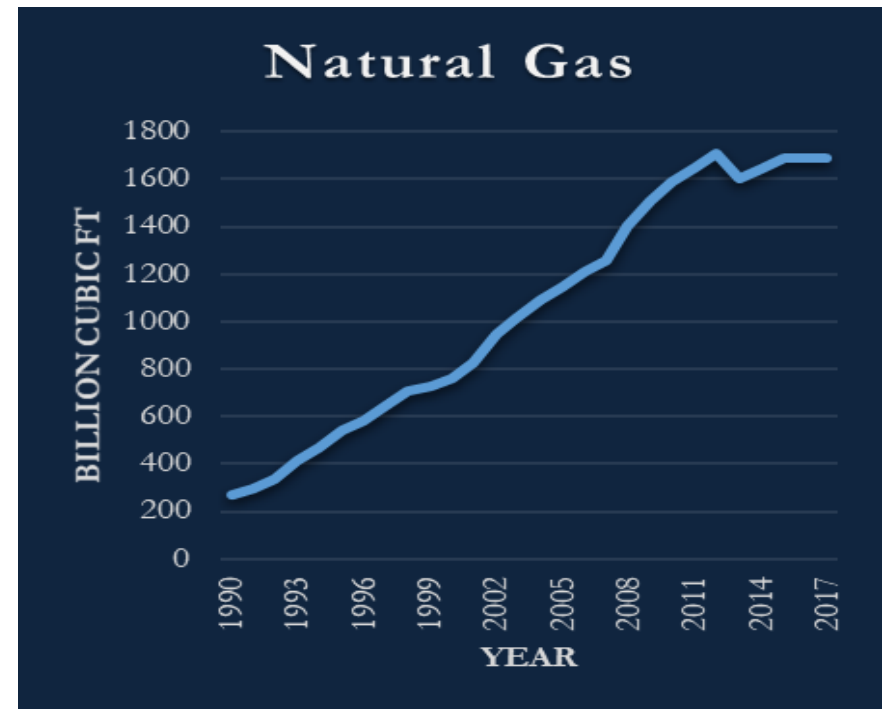
Strategic Objectives:

- Reduce barriers to energy trade and development;
- Promote U.S. energy exports, including all fossil fuels, renewable energy, energy efficiency, and smart grid technologies;
- Ensure energy security for the United States and its partners and allies;
- Ensure universal access to reliable, affordable energy.

Colorado Energy Production

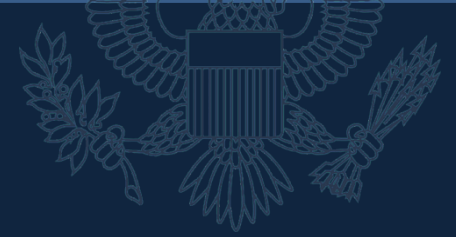


Source: EIA

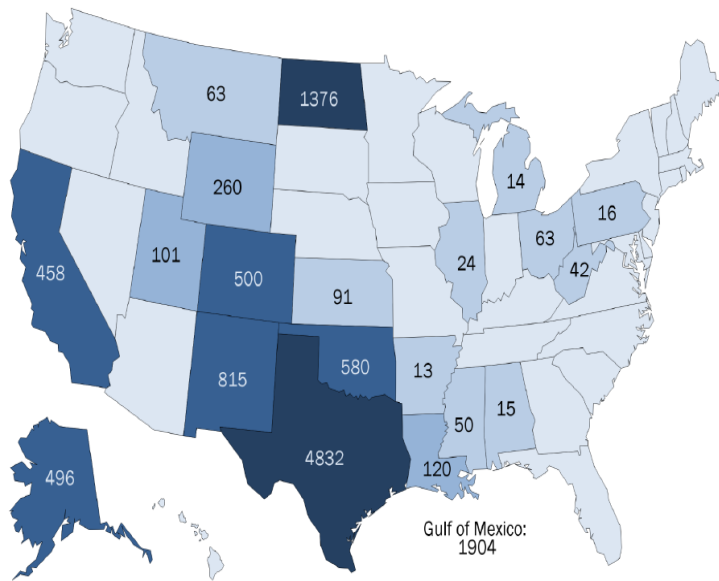


Source: EIA

U.S. Energy Production



Crude Oil Production by State

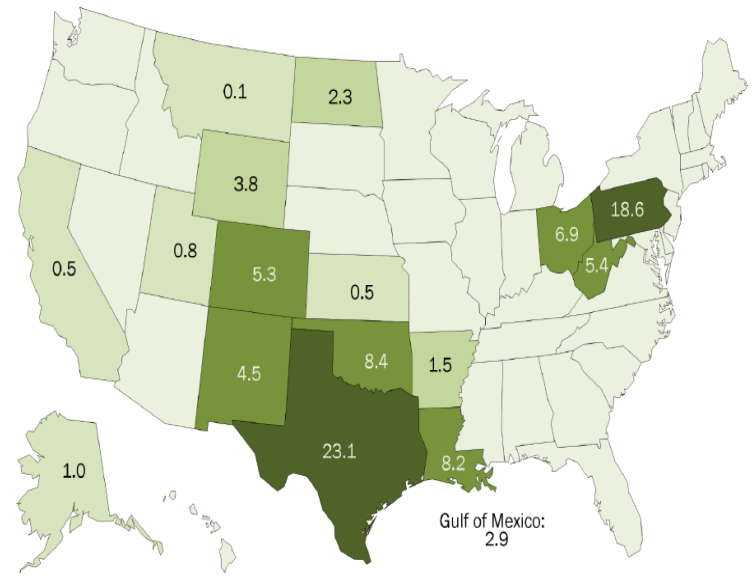


Thousand barrels per day

- <10
- 10 to <100
- 100 to <400
- 400 to <1000
- 1000+

NOTE: Data shown are monthly, for January 2019.
SOURCE: Energy Information Administration.

Natural Gas Production by State



Billion cubic feet per day

- <0.1
- 0.1 to <1
- 1 to <4
- 4 to <10
- 10+

NOTES: Data shown are monthly, for January 2019.
Series depicted is marketed natural gas production.
SOURCE: Energy Information Administration.



Federal Reserve Bank of Dallas



Federal Reserve Bank of Dallas



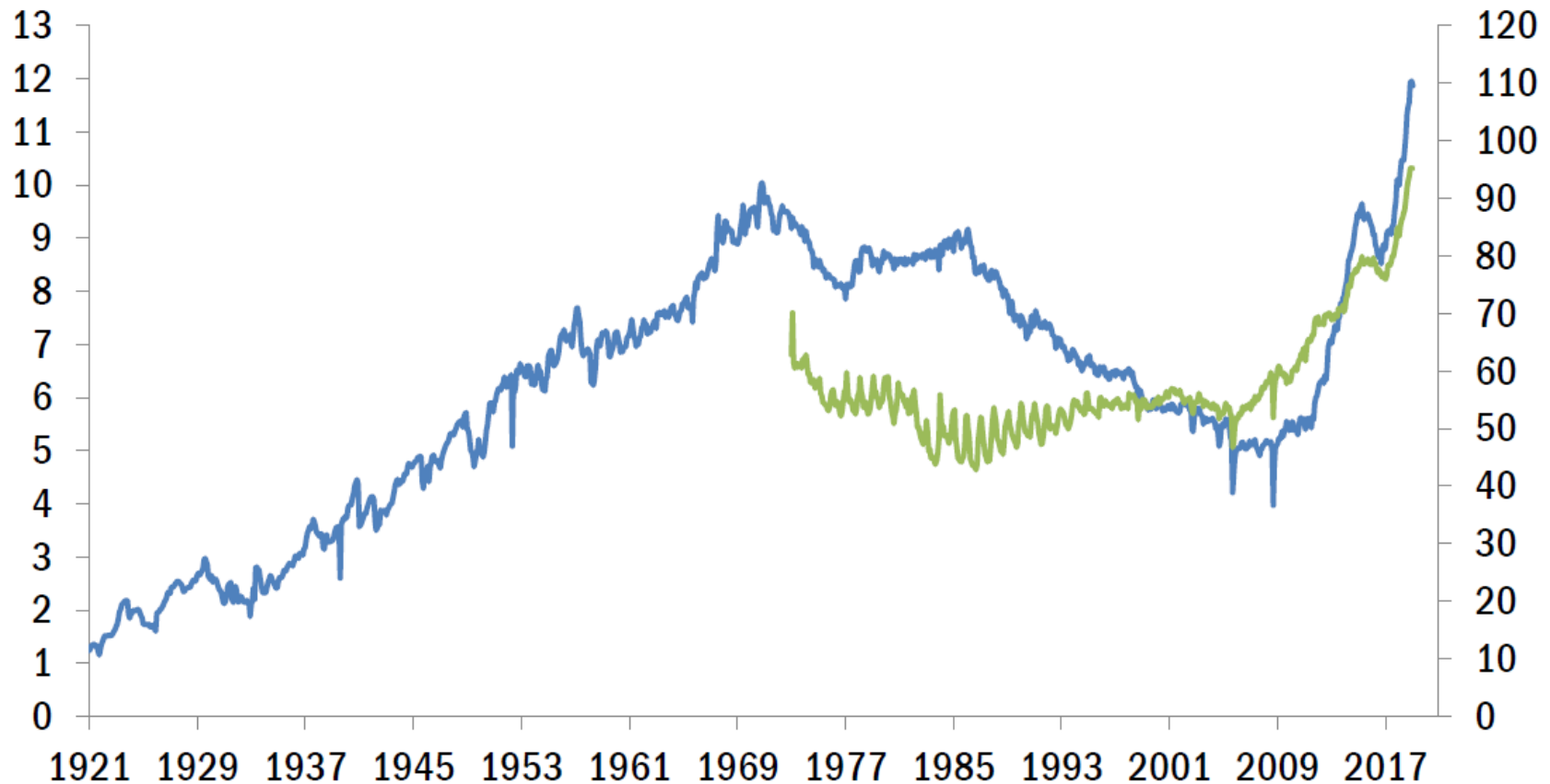
Growth in U.S. Oil and Gas Production

U.S. crude oil production

Million barrels per day

U.S. natural gas production

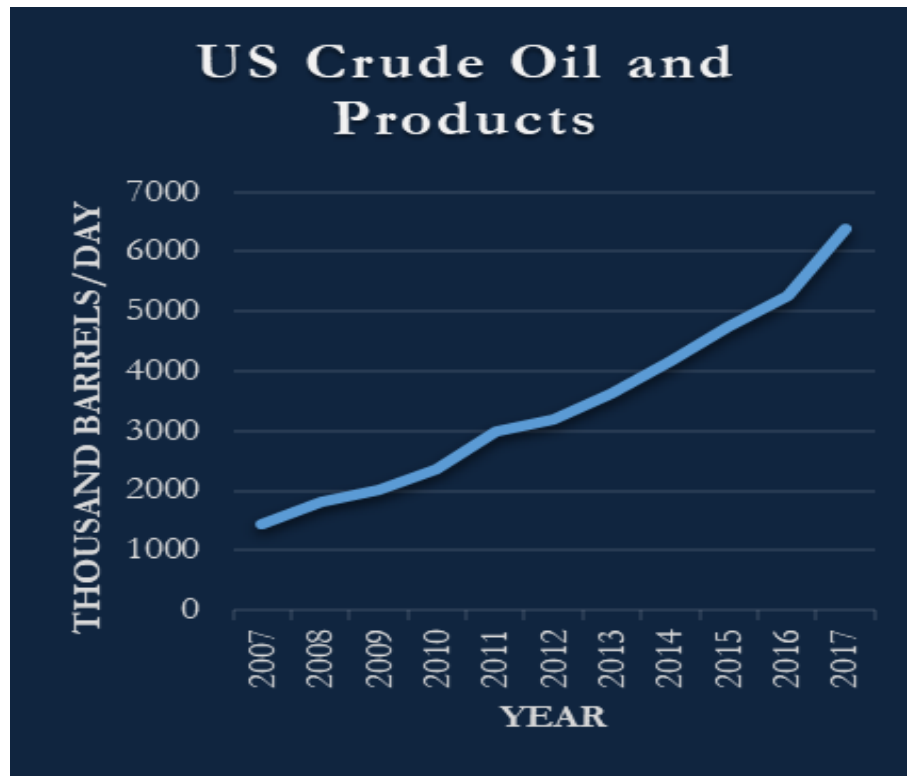
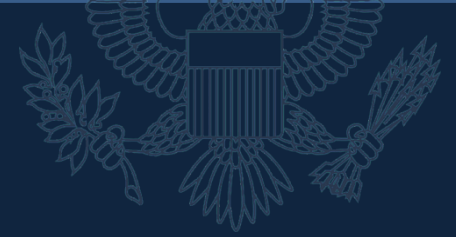
Billion cubic feet per day



Federal Reserve Bank of Dallas

NOTE: Natural gas series is marketed production.
SOURCE: Energy Information Administration

*** Growth in U.S. Oil Exports



Source: EIA

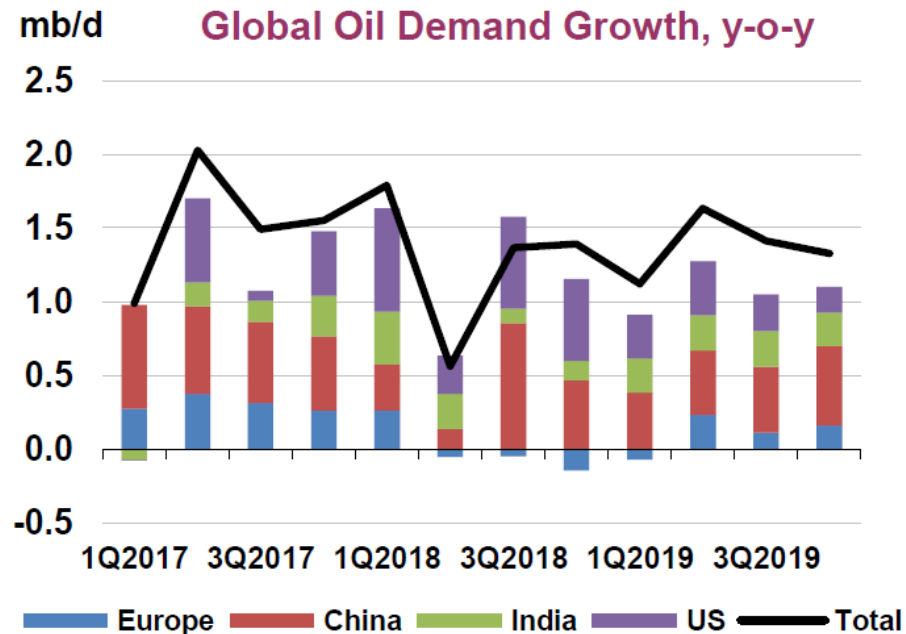
Top ten destinations:

1. Mexico
2. Canada
3. China
4. Brazil
5. Japan
6. Netherlands
7. Singapore
8. India
9. United Kingdom
10. Korea

Source: EIA

Global Demand Growth for Oil

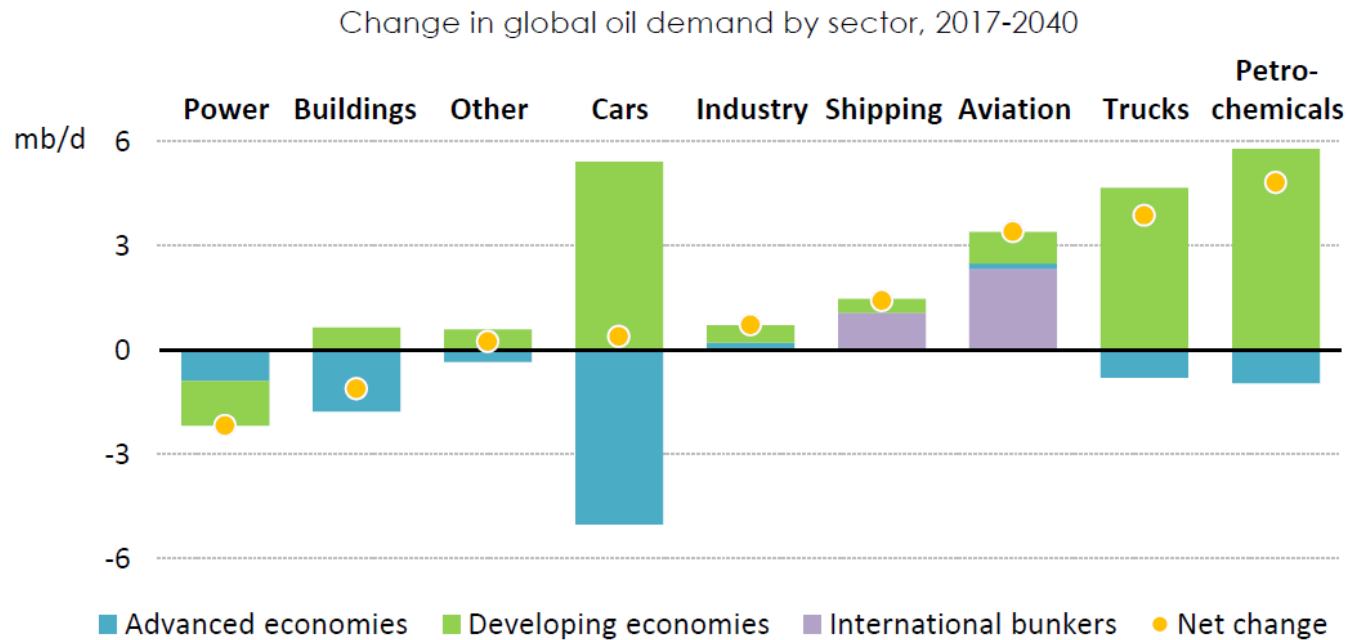
Short Term: Global demand growth remains solid for now



Growth is 1.3 mb/d in 2018 and 1.4 mb/d in 2019. China/India take 50% of growth this year.

Global Sector Demand Growth for Oil

Long Term: Diverging trends for global oil demand



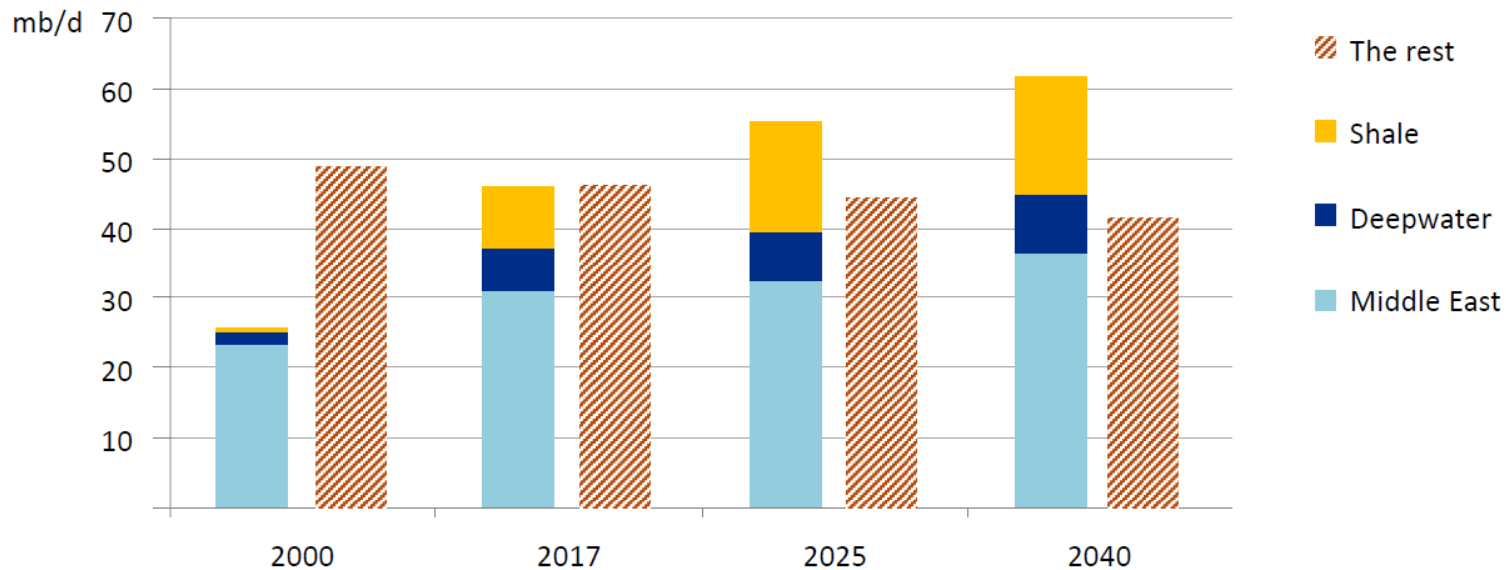
Headline growth in oil demand to 2040 masks a wide variety of different sectoral & regional trends, with petrochemicals underpinning a shift in consumption towards lighter products

Global Oil Demand Continues to Grow

Long Term: Supply relies on shale, deepwater & the Middle East

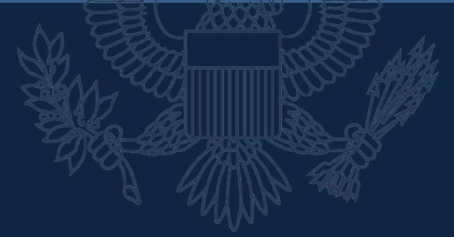


Composition of global oil production



Investment & growth on the supply side is also concentrated in a handful of areas: US shale dominates the near term, but the Middle East & deepwater production play vital roles

Global Growth in Gas



Natural gas demand is in the fast lane



- Natural gas is a versatile fuel whose demand is growing in part because of its air quality and greenhouse gas emissions benefits relative to other fossil fuels
 - *A strong contributor to "Blue Skies" policy in China*
 - *Abundant & cost competitive gas led to 5% coal-fired US power generation decline in 2018*
 - *Reducing oil burn for power generation in North Africa and the Middle East*
- Natural gas will remain the fastest growing fossil fuel in the future, overtaking coal by 2030 to become the second-largest source of energy
- Liquefied natural gas (LNG) is the driving force behind natural gas trade growth

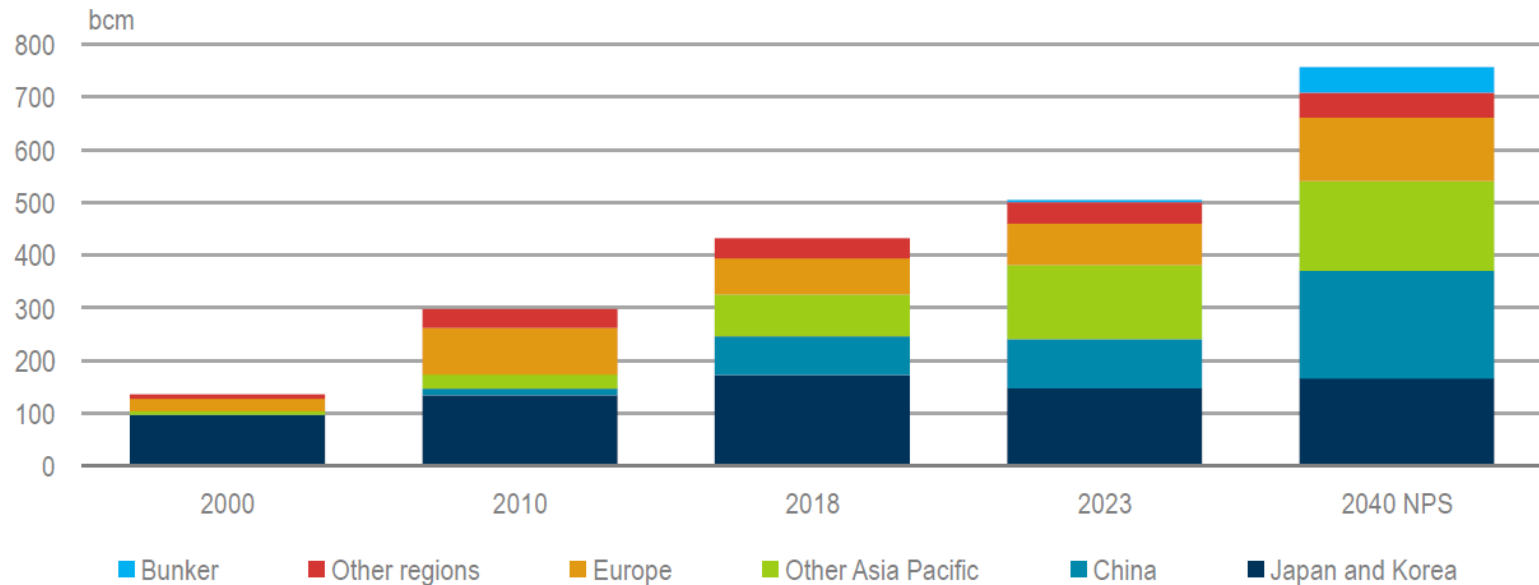
Source: IEA. All rights reserved.

Global Liquefied Natural Gas (LNG)

LNG is the driving force behind global natural gas trade growth



World LNG imports for main destinations, 2000-40

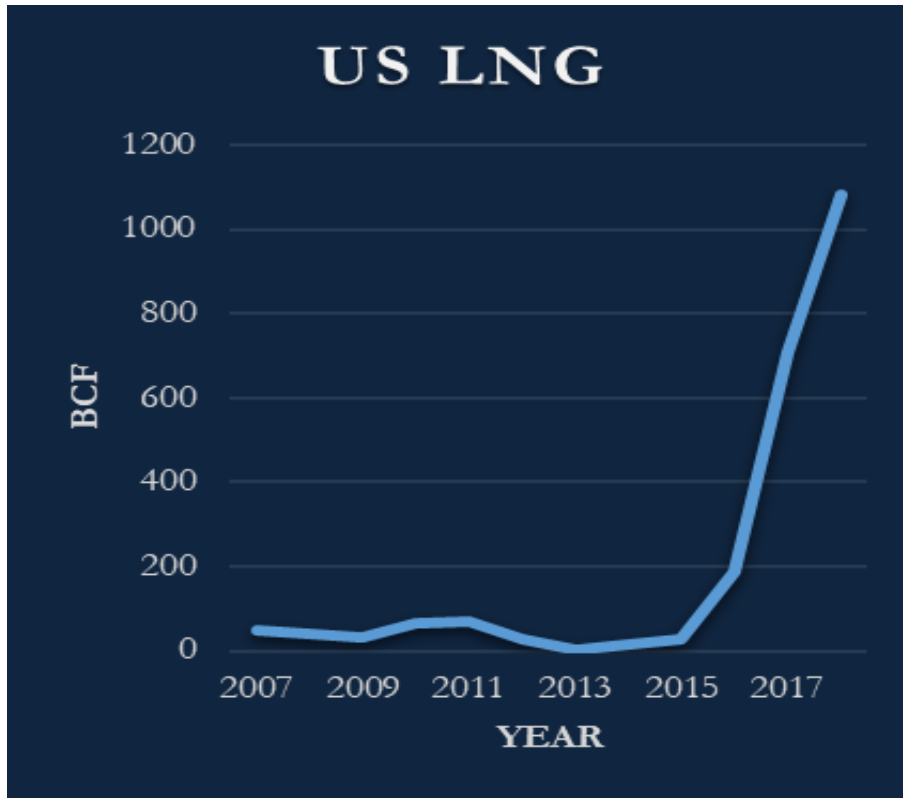


Global LNG trade more almost doubles by 2040, accounts for 60% of total natural gas trade

Source: IEA. All rights reserved.

Source: IEA

*** Growth in U.S. LNG Exports



Source: EIA

Top ten destinations:

1. Korea
2. Mexico
3. Japan
4. China
5. India
6. United Kingdom
7. Chile
8. Jordan
9. Brazil
10. Argentina

Source: EIA

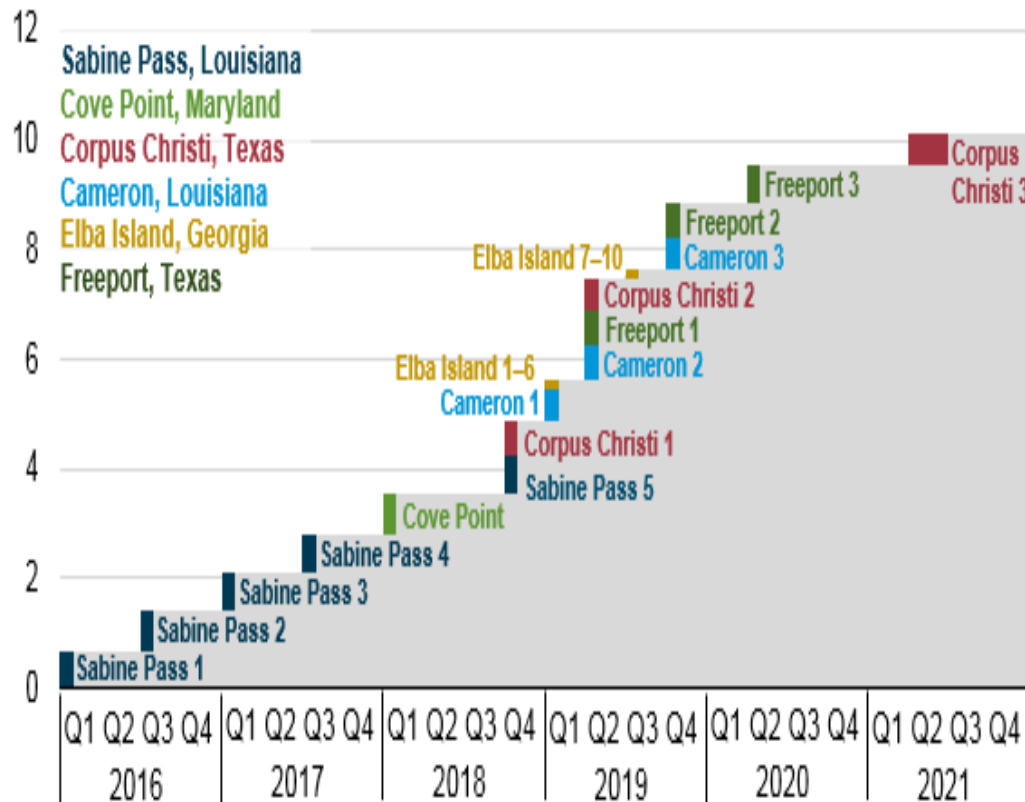


U.S. LNG Strengthens National Security



U.S. liquefied natural gas export capacity, 2016–2021

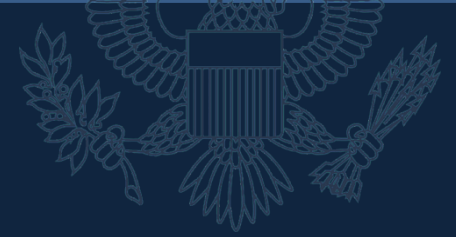
billion cubic feet per day



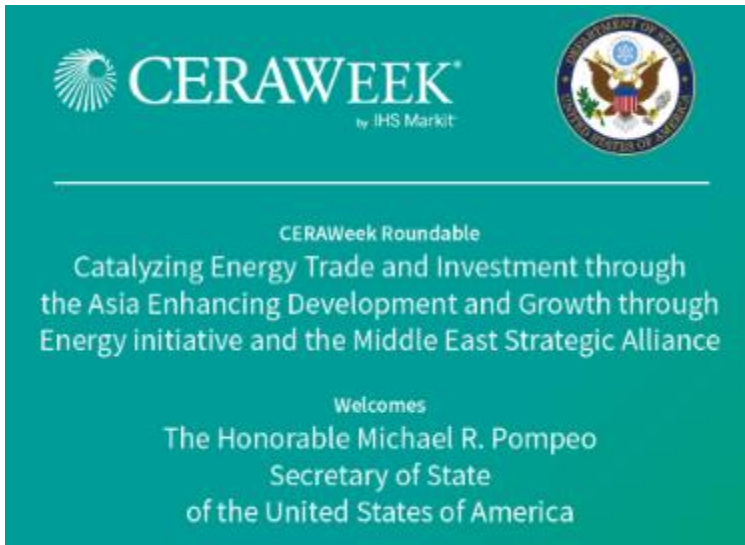
Source: EIA

- U.S. LNG export capacity nearly doubling in 2019;
- The United States is forecasted to be the 3rd largest LNG exporter behind Qatar and Australia in 2019;
- This is only three years after LNG production in the lower 48 states began in earnest;
- U.S. LNG is exported globally to over 25 countries;
- By 2024, U.S. LNG exports based on completed LNG export facilities and those under construction will be over 300 million cubic meters per day or 114 billion cubic meters per annum (bcma).

★★★ Energy Prosperity



CERAWeek Houston, TX – March 2019



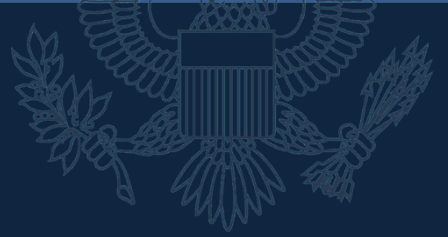
World Gas Conference, DC – June 2018



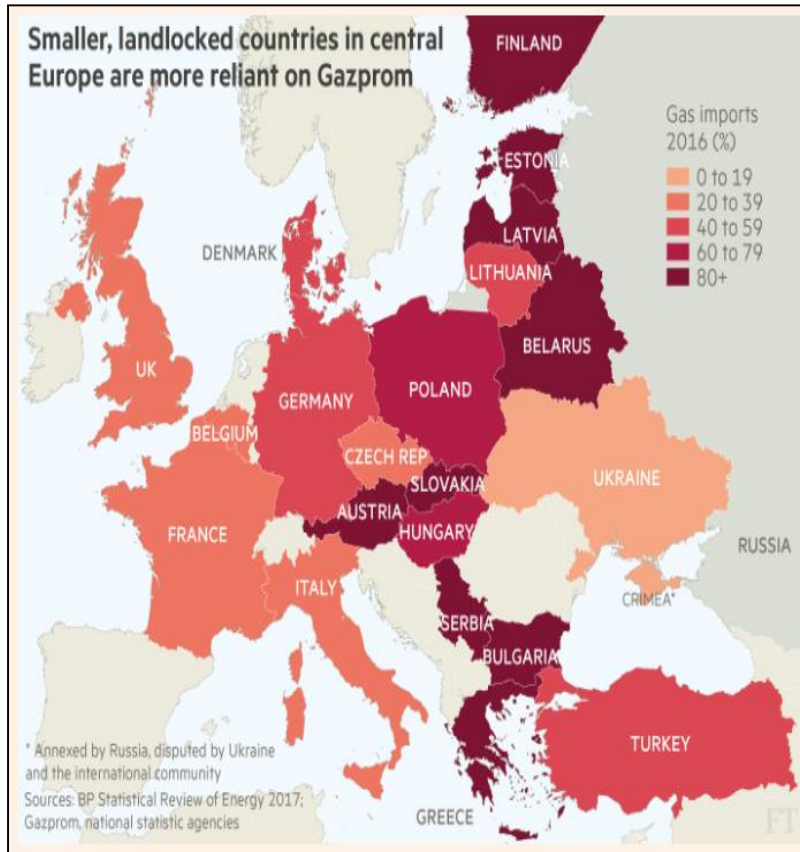
Promoting U.S. Energy Exports

- Engagement at major energy conferences to promote U.S. exports and reciprocal investments
- \$5.2 billion in U.S. energy sector exports in FY2018
 - LNG to Europe, exports to projects in the eastern Mediterranean, wood pellets to Japan, and a major power sector deal in North Africa
- Fostered investment climates abroad that allowed governments to attract \$3.7 billion in financial resources for international strategic energy infrastructure projects in FY2018
 - Cross-border power line in South Asia, investments in gas transmission in the Eastern Mediterranean, and funding committed to the Southern Gas Corridor to bring gas from Azerbaijan to Europe

Energy Security



Transatlantic Energy Security



Source: Financial Times

Energy Sanctions



Russian oil industry soon to feel the squeeze of U.S. sanctions



U.S. pushes more U.N. sanctions targeting North Korea oil, coal smuggling

Bloomberg

Politics

In Big Win for Trump, U.S. Sanctions Cripple Iranian Oil Exports

By [Javier Blas](#)

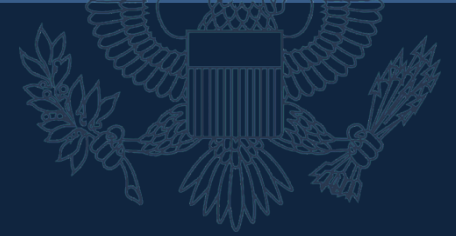
September 17, 2018, 11:00 PM EDT Updated on September 18, 2018, 6:24 AM EDT

- ▶ Iranian crude exports have dropped about 35% since April
- ▶ Bigger-than-expected plunge in sales is tightening oil markets

FINANCIAL TIMES

US imposes sanctions on Venezuela's state-owned oil group

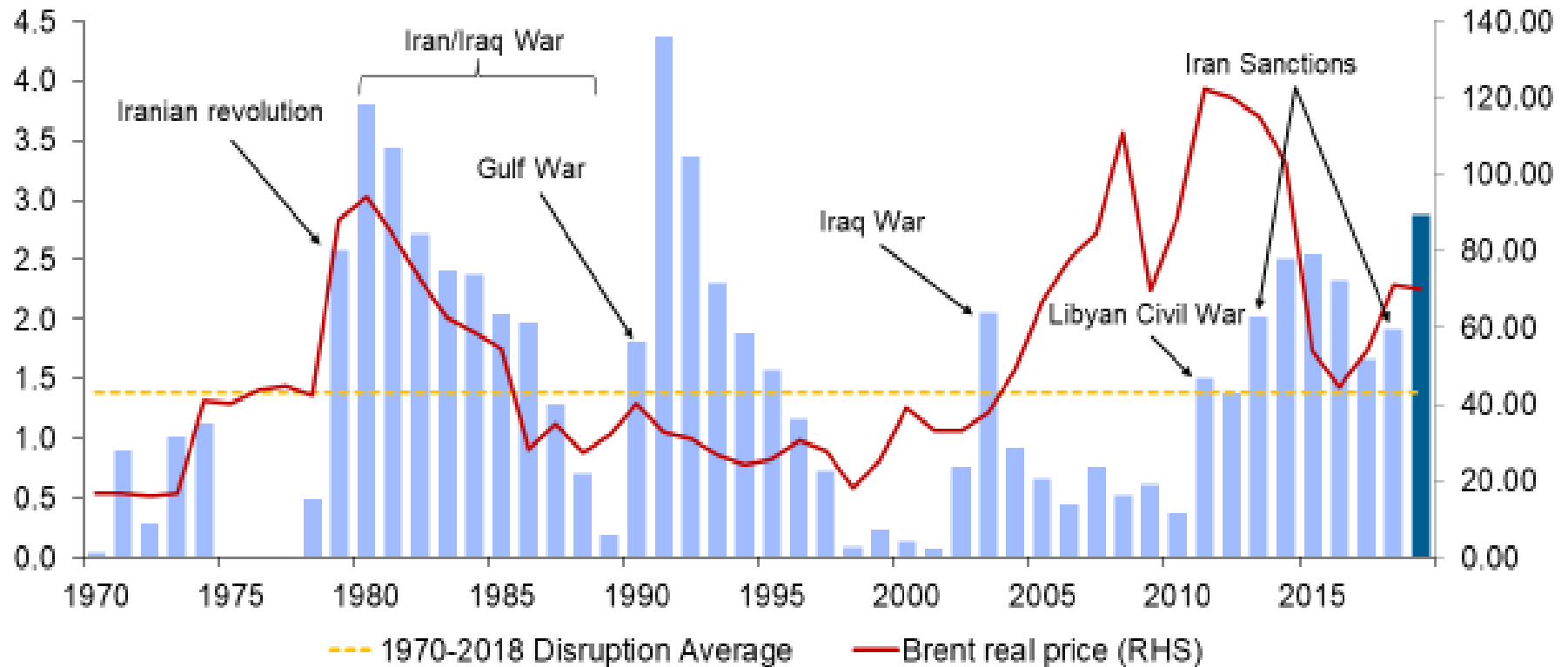
Energy Security



Disruptions cause higher prices, but unclear whether higher prices trigger disruptions

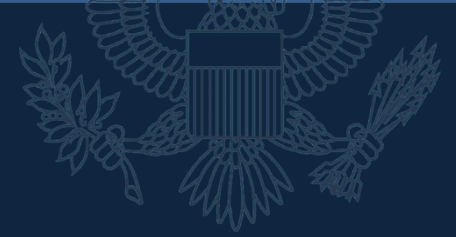
OPEC Crude Supply Disruptions* (MMB/D)

Brent Oil Price (2017\$/Bbl)



* Only includes disruptions from major geopolitical events (excludes Neutral Zone dispute, Venezuela)

Energy Cooperation



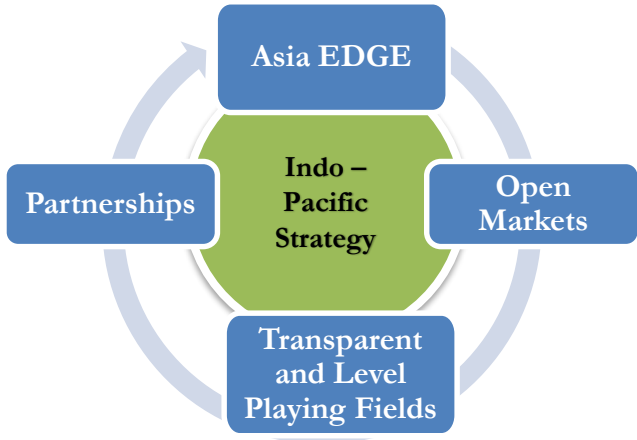
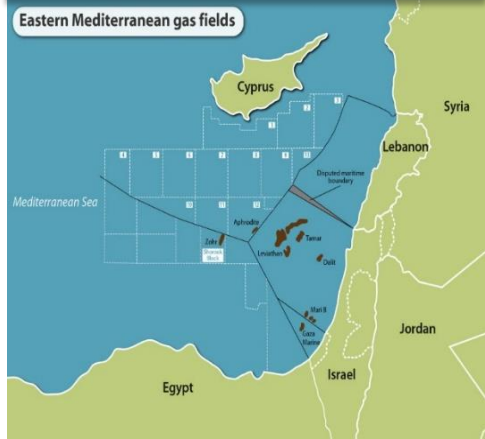
America Crece



America's Energy Abundance

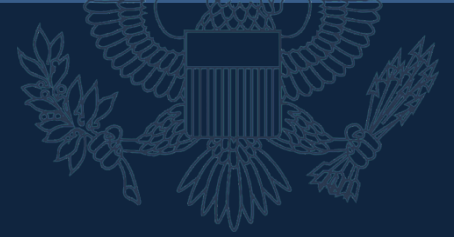


Eastern Med and the Middle East Strategic Alliance (MESA)





Multilateral Engagement






Multilateral fora can promote secure, stable, diversified, and modern energy systems.



- **International Energy Agency (IEA):** Advance energy security.
- **G-7/G-20:** Promote all of the above energy technologies, energy diversification, and European energy security.
- **Other Multilateral Engagements:** International Renewable Energy Agency (IRENA), Extractive Industries Transparency Initiative (EITI), International Energy Forum (IEF), Energy Charter, ASEAN, and APEC.



Case Study: Regional Energy Diplomacy



-  Regional Electricity Line (SIEPAC)
-  LNG Regasification Terminal / FSRU
-  Proposed LNG Regasification Terminal

-  LNG Liquefaction Terminal
-  Geothermal Plant



Case Study: Caribbean Energy Security Initiative

Caribbean

Providing grant funding for energy project preparation and due diligence efforts;

Engaging in an open dialogue with CARICOM to advance its regional energy coordination and planning body (C-SERMS);

Seeking to mobilize private investment through a loan guarantee with USAID's Development Credit Authority.

Fostering the investment climate for the development of wind, solar, biofuels, and natural gas infrastructure in **Jamaica** and the **Dominican Republic**

Providing technical assistance to foster transparent procurement and development of a geothermal power plant in **St. Kitts and Nevis**

Supporting post-hurricane efforts in **Dominica** and **Barbuda** to ensure that reconstruction results in secure, resilient, efficient, and cost-effective energy systems



WHERE WE ENGAGE

Working with **U.S.** companies to identify infrastructure and energy sector opportunities abroad that will yield more U.S. jobs

Streamlining the permitting process of cross-border infrastructure to strengthen **North American** energy security

Maximizing **North American** energy development by promoting access to trans-border energy resources and energy integration

Counteracting **Russia's** dominance of **European** fuel supplies through diversification of energy type, source, and supply routes

Using energy developments in the **Eastern Mediterranean** to promote regional economic stability and cooperation instead of conflict

Promoting U.S. finance and business models in **India** and **China** to improve the investment climate

Promoting U.S. energy exports, expertise and innovation, including liquefied natural gas (LNG), through diplomacy with potential buyers and facilitating LNG shipments

Promoting electricity integration in **Central America** and encouraging **Caribbean** and other **Latin American** countries to diversify their energy resources, including LNG

Pressing for the restoration of democracy in **Venezuela** and providing energy expertise in the formulation of sanctions against the Government of Venezuela

Promoting good governance and U.S. finance and business models globally in both hydrocarbons and alternative energy sectors

Ensuring resource-rich countries use hydrocarbon wealth to fuel economic growth rather than conflict

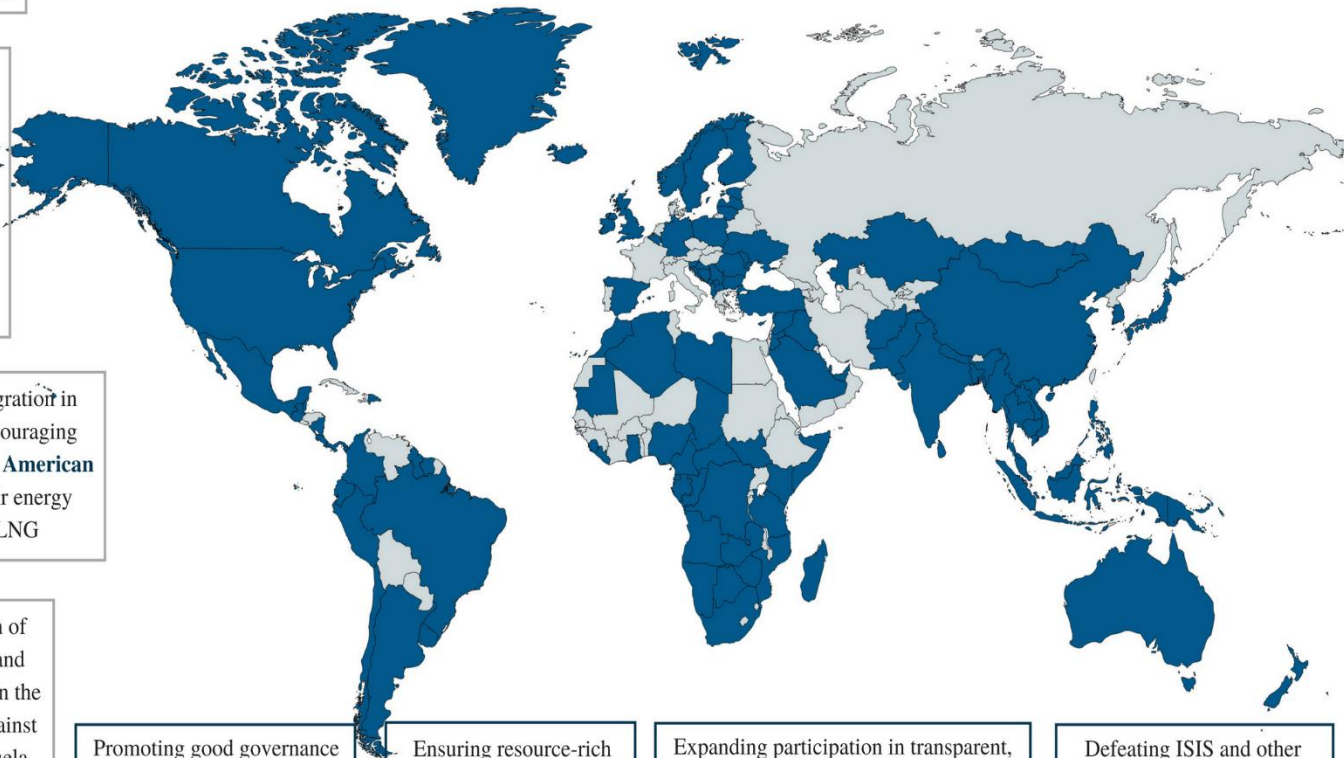
Expanding participation in transparent, rules-based global energy markets through strategic energy policy cooperation with emerging partners in the developing world

Defeating ISIS and other transnational terrorist organizations by preventing the groups from exploiting energy resources

Formulating multilateral energy sanctions, including on **Iran**, **Russia**, and **North Korea**, to improve regime behavior

Engaging governments and stakeholders in **Africa** to promote energy governance and access to commercially-viable energy sources, including LNG, to promote stability and economic prosperity

Supporting energy diversification and electricity market transformation in **Israel**



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Thank You!

