U.S. Energy and Climate Policy

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

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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. natural gas exports growing rapidly (Source: Pioneer)

Million barrels per day

Eagle Ford
Bakken
Niobrara
Anadarko
Other plays

Forecasted change Jun 2017 - Dec 2018 thousand barrels per day

Permian: +515
Federal Gulf of Mexico: +344
Eagle Ford: +31
Bakken: +0
Other: +17
U.S. crude oil export destinations (2017)

<table>
<thead>
<tr>
<th>Country</th>
<th>Thousand Barrels per Day</th>
<th>Percent of U.S. Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>300</td>
<td>29%</td>
</tr>
<tr>
<td>China</td>
<td>200</td>
<td>20%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>90</td>
<td>9%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>80</td>
<td>8%</td>
</tr>
<tr>
<td>South Korea</td>
<td>40</td>
<td>4%</td>
</tr>
<tr>
<td>Italy</td>
<td>27</td>
<td>2.7%</td>
</tr>
<tr>
<td>France</td>
<td>26</td>
<td>2.6%</td>
</tr>
<tr>
<td>Singapore</td>
<td>25</td>
<td>2.5%</td>
</tr>
<tr>
<td>Japan</td>
<td>20</td>
<td>2.0%</td>
</tr>
<tr>
<td>India</td>
<td>19</td>
<td>1.9%</td>
</tr>
<tr>
<td>Spain</td>
<td>20</td>
<td>2.0%</td>
</tr>
<tr>
<td>Colombia</td>
<td>19</td>
<td>1.9%</td>
</tr>
<tr>
<td>Bahama Islands</td>
<td>15</td>
<td>1.5%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>14</td>
<td>1.4%</td>
</tr>
<tr>
<td>Curacao</td>
<td>14</td>
<td>1.4%</td>
</tr>
<tr>
<td>rest of world</td>
<td>8</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: EIA
US Natural Gas Production and Exports
Today, new shale plays support 50%+ of US gas production
(Data Source: U.S. EIA)
Changes in the Volume and Composition of US Gas Exports

- Pipeline exports to Canada and Mexico
- Liquefied natural gas exports
- Pipeline imports from Canada
- LNG imports

U.S. exports of liquefied natural gas (billion cubic feet per day)

- Asia
- Americas
- Europe
- Other

- Japan
- China
- South Korea
- Mexico
- Turkey
- Spain
- Other (UAE, Kuwait, Jordan)

2016-2017 projections
U.S. Power Sector
U.S. Climate Policy
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

- Coal
- Other Hydrocarbons
- Petroleum Products
- Crude Oil
- Natural Gas Liquids
- Liquefied Natural Gas

Volumes of U.S. Energy Exports to China

- Liquefied Natural Gas Exports to China
- Natural Gas Liquid Exports to China
- Crude Oil Exports to China
- Petroleum Product Exports to China
- Coal Exports to China

U.S. Crude Oil Exports by Destination

- Other
- Middle East
- Africa
- Other Europe
- Other Asia
- Other Latin America
- Bahamas
- Taiwan
- India
- Colombia
- Japan
- Switzerland
- France
- Spain
- Singapore
- Curacao
- Korea
- Italy
- United Kingdom
- Netherlands
- China
- Canada

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