EIA’s Short-Term Energy Outlook

For
Rocky Mountain Association of Geologists
January 13, 2021 | Washington, DC

Stephen Nalley, Deputy Administrator
U.S. Energy Information Administration
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EIA has evolved its program in recent years to provide an expanding customer base with coverage of increasingly complex and interrelated energy markets.
Key takeaways from our current forecast

• West Texas Intermediate crude oil spot prices will rise to an average $49.70 per barrel in 2021 and increase slightly to $49.81 per barrel in 2022.

• Expected U.S. crude oil production will fall to 11.1 million b/d in 2021, before recovering to 11.5 million b/d in 2022.

• Natural gas spot price at the Henry Hub will average $3.01 per MMBtu in 2021 and will increase to $3.27 per MMBtu in 2022.

• Production of natural gas in the United States will increase next year and will average 97.6 Bcf/d in 2022 from the forecast average of 95.9 Bcf/d in 2021. Growth in associated gas production will drive the increase in natural gas production in 2022.

• Natural gas consumption will fall in 2021 and in 2022. The decrease in consumption is driven by lower gas use for electric power generation, and to a lesser extent, lower use among residential and commercial consumers.

• Higher natural gas prices will result in less gas use for electric power generation in 2021 and 2022 relative to 2020. Natural gas will partly be replaced by coal generation.
Following a precipitous decline in the second quarter of 2020, crude oil prices recovered and will continue to rise slightly through our forecast period.
Crude oil prices are driven by global petroleum supply and demand. Over the next 24 months, consumption will generally exceed production, limiting crude price increases.

**World liquid fuels production and consumption balance**
million barrels per day

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**Sources:** U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021
U.S. crude oil production will decline in 2021 but recover somewhat in 2022. The year-over-year increases in 2022 will be driven by an increase in tight oil production.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021
In the Rocky Mountain region, production has followed similar trends as the rest of the United States.

Rocky Mountain crude oil production

Thousand barrels per day

Source: U.S. Energy Information Administration, Petroleum Supply Monthly
Driven by an increase in natural gas liquids production, total liquids production in the United States will stay relatively flat in 2021 and increase in 2022.

**U.S. crude oil and liquid fuels production**

- **million barrels per day**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Monthly Production</th>
<th>Forecast</th>
<th>Annual Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>20.00</td>
<td>20.00</td>
<td>18.00</td>
</tr>
<tr>
<td>2020</td>
<td>18.00</td>
<td>18.00</td>
<td>17.50</td>
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<td>2021</td>
<td>17.50</td>
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<tr>
<td>2022</td>
<td>17.00</td>
<td>18.00</td>
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</tr>
</tbody>
</table>

**Components of annual change**

- **million barrels per day**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ethanol and Biodiesel</th>
<th>Natural Gas</th>
<th>Plant Liquids</th>
<th>Crude Oil</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0.00</td>
<td>1.71</td>
<td>-0.76</td>
<td>0.03</td>
<td>0.78</td>
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<tr>
<td>2020</td>
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<tr>
<td>2021</td>
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<td>2022</td>
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</tbody>
</table>

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021
As the U.S. economy continues to recover, consumption of liquid fuels will continue to grow from the 2020 lows.

U.S. liquid fuels product supplied (consumption) million barrels per day

<table>
<thead>
<tr>
<th>Year</th>
<th>Motor Gasoline</th>
<th>Distillate Fuel</th>
<th>Jet Fuel</th>
<th>Hydrocarbon Gas Liquids</th>
<th>Other Fuels</th>
<th>Annual Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
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<td>2020</td>
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<td>2022</td>
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</tbody>
</table>

Components of annual change

- Motor gasoline: 1.44 million barrels per day
- Distillate fuel: -2.48 million barrels per day
- Jet fuel: 0.99 million barrels per day
- Hydrocarbon gas liquids: 0.03 million barrels per day
- Other fuels: forecast

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021
Natural gas prices reached multi-year lows last year, but we expect them to rise to about $3 per MMBtu as a result of lower production and increased economic activity.

**Henry Hub natural gas price and NYMEX confidence intervals**

Dollars per million Btu

Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021, and CME Group
U.S. natural gas production will fall as a result of continued declining shale gas production in 2021, but we see an increase in 2022

**Components of annual change**

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. non-Gulf of Mexico</th>
<th>U.S. Gulf of Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>9.6</td>
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<tr>
<td>2020</td>
<td>-1.8</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>-2.3</td>
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<tr>
<td>2022</td>
<td>1.7</td>
<td></td>
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**U.S. marketed natural gas production**

- **billion cubic feet per day**

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021
Natural gas exports will continue to grow both by pipeline and as LNG in 2021 and 2022.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021
Rocky Mountain region accounts for about 10% of total U.S. production

Rocky Mountain region marketed natural gas production
billion cubic feet

Source: U.S. Energy Information Administration, Natural Gas Monthly
Natural gas will continue to account for the largest share of electric power generation, but its use in this sector will fall in 2021 and 2022 as a result of higher prices.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021
Coal production in the Mountain region accounts for half of the U.S. production and has been steadily declining since 2008.

**Mountain region coal production**

million short tons

Source: U.S. Energy Information Administration, Annual Coal Report
For more information


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

Annual Energy Outlook | www.eia.gov/aeo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

Today in Energy | www.eia.gov/todayinenergy