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• US and CO energy markets
  • Prices
  • Production
  • Recovery
• Severance Taxes
• Severance Tax Working Group
Global Oil Supply & Demand: Pandemic Effects

Source: Energy Information Agency; shaded area denotes forecast period.

<table>
<thead>
<tr>
<th>Year</th>
<th>Global Production</th>
<th>Global Consumption</th>
<th>Production / Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>100.34 Bbl/day</td>
<td>100.67 Bbl/day</td>
<td>-0.33 0.2% -0.5%</td>
</tr>
<tr>
<td>2020</td>
<td>93.87 Bbl/day</td>
<td>91.98 Bbl/day</td>
<td>1.89 -6.4% -8.6%</td>
</tr>
<tr>
<td>2021</td>
<td>95.55 Bbl/day</td>
<td>97.48 Bbl/day</td>
<td>-1.93 1.8% 6.0%</td>
</tr>
</tbody>
</table>

Million bbl/day

Colorado Energy Economics & Revenue - Office of State Planning & Budgeting - meredith.moon@state.co.us
Ukraine War & Russian Energy Exports

Russian Energy Production & Exports: 2021

- Russia Oil Production Bbl/Day: 10.5M
- Russia Oil Exports Bbl/Day: 4.7M
  - Exports to EU: 2.4M
  - 10% of EU diesel demand from Russian exports

- Russia Gas Production: 762 bcm
- Russia Gas Exports: 210 bcm
  - 40% of EU gas demand

Source: Energy Information Agency

Source: International Energy Agency
Oil & Gas Prices Exceed Breakeven Prices

WTI Price per Barrel
Weekly

Henry Hub Natural Gas Prices
Weekly
Dollars per million BTU


Federal Reserve 10th District
Price to Significantly Increase Production

Breakeven Price

m Meredith Moon@State.co.us
## US Oil Production State Ranking

### U.S. Oil Production State Rankings as of Dec. 2021

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>12/2021 Avg. Barrels Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Texas</td>
<td>4,988,000</td>
</tr>
<tr>
<td>2</td>
<td>New Mexico</td>
<td>1,362,000</td>
</tr>
<tr>
<td>3</td>
<td>North Dakota</td>
<td>1,128,000</td>
</tr>
<tr>
<td>4</td>
<td>Alaska</td>
<td>451,000</td>
</tr>
<tr>
<td>5</td>
<td>Oklahoma</td>
<td>397,000</td>
</tr>
<tr>
<td>6</td>
<td><strong>Colorado</strong></td>
<td><strong>393,000</strong></td>
</tr>
<tr>
<td>7</td>
<td>California</td>
<td>343,000</td>
</tr>
<tr>
<td>8</td>
<td>Wyoming</td>
<td>236,000</td>
</tr>
<tr>
<td>9</td>
<td>Utah</td>
<td>116,000</td>
</tr>
<tr>
<td>10</td>
<td>Louisiana</td>
<td>88,000</td>
</tr>
</tbody>
</table>

December 2021 U.S. Oil Production By State

- **Texas**, 50.7%
- **New Mexico**, 13.8%
- **North Dakota**, 11.5%
- **AK**, 4.6%
- **OK**, 4.0%
- **CO**, 4.0%
- **CA**, 3.5%
- **Other States**, 8.0%
- **Other States**, 8.0%

Source: Energy Information Agency
# US Gas Production State Ranking

## U.S. Gas Production State Rankings as of Dec. 2021

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>12/2021 MCF Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Texas</td>
<td>843,633,000</td>
</tr>
<tr>
<td>2</td>
<td>Pennsylvania</td>
<td>680,706,000</td>
</tr>
<tr>
<td>3</td>
<td>Louisiana</td>
<td>312,720,000</td>
</tr>
<tr>
<td>4</td>
<td>West Virginia</td>
<td>242,327,000</td>
</tr>
<tr>
<td>5</td>
<td>Oklahoma</td>
<td>219,187,000</td>
</tr>
<tr>
<td>6</td>
<td>New Mexico</td>
<td>213,755,000</td>
</tr>
<tr>
<td>7</td>
<td>Ohio</td>
<td>200,174,000</td>
</tr>
<tr>
<td>8</td>
<td><strong>Colorado</strong></td>
<td><strong>156,530,000</strong></td>
</tr>
<tr>
<td>9</td>
<td>Wyoming</td>
<td>102,767,000</td>
</tr>
<tr>
<td>10</td>
<td>North Dakota</td>
<td>83,883,000</td>
</tr>
</tbody>
</table>

Source: Energy Information Agency
US & CO Oil & Gas Production Recovery

Index 100 = January 2019

U.S. Gas Production

CO Gas Production

U.S. Oil Production

CO Oil Production

Source: Energy Information Agency
Colorado Oil & Gas Production

Colorado Annual Oil Production, 2012-2021

- 2012: 49.8M
- 2013: 66.2M
- 2014: 95.7M
- 2015: 122.2M
- 2016: 129.9M
- 2017: 169.2M
- 2018: 171.6M
- 2019: 192.3M
- 2020: 171.6M
- 2021: 153.5M

Barrels

200 Million
175 Million
150 Million
125 Million
100 Million
75 Million
50 Million
25 Million
25 Million

Source: Colorado Oil and Gas Conservation Commission

Colorado Annual Natural Gas Production, 2012-2021

- 2012: 1.50 Billion
- 2013: 1.75 Billion
- 2014: 2.00 Billion
- 2015: 2.25 Billion
- 2016: 2.50 Billion
- 2017: 2.18B
- 2018: 2.13B
- 2019: 2.17B
- 2020: 2.26B
- 2021: 2.30B

MCF

2.50 Billion
2.25 Billion
2.00 Billion
1.75 Billion
1.50 Billion
2.50 Billion

CO Rig Count Slow to Recover

Source: Energy Information Agency, Baker Hughes
## CO County Oil Production

### 2021 CO Oil Production County Rankings

<table>
<thead>
<tr>
<th>Rank</th>
<th>County</th>
<th>2021 Production (Barrels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Weld</td>
<td>131,178,453</td>
</tr>
<tr>
<td>2</td>
<td>Adams</td>
<td>8,074,216</td>
</tr>
<tr>
<td>3</td>
<td>Larimer</td>
<td>3,227,850</td>
</tr>
<tr>
<td>4</td>
<td>Rio Blanco</td>
<td>3,097,669</td>
</tr>
<tr>
<td>5</td>
<td>Arapahoe</td>
<td>2,017,412</td>
</tr>
<tr>
<td>6</td>
<td>Broomfield</td>
<td>1,869,127</td>
</tr>
<tr>
<td>7</td>
<td>Garfield</td>
<td>1,034,454</td>
</tr>
<tr>
<td>8</td>
<td>Cheyenne</td>
<td>727,450</td>
</tr>
<tr>
<td>9</td>
<td>Jackson</td>
<td>669,112</td>
</tr>
<tr>
<td>10</td>
<td>Lincoln</td>
<td>460,340</td>
</tr>
</tbody>
</table>

Source: Colorado Oil and Gas Conservation Commission

### 2021 Colorado Oil Production Share

- **Weld County, 85.5%**
- **Rest of CO, 14.5%**

Source: Colorado Oil and Gas Conservation Commission
CO Oil Production Recovery by County

Top 10 Colorado Oil Producing Counties
Index 100 = January 2019
*Excludes Broomfield County

Source: Colorado Oil and Gas Conservation Commission
### 2021 CO Natural Gas Production County Rankings

<table>
<thead>
<tr>
<th>Rank</th>
<th>County</th>
<th>2021 Production (MCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Weld</td>
<td>1,003,937,713</td>
</tr>
<tr>
<td>2</td>
<td>Garfield</td>
<td>410,499,021</td>
</tr>
<tr>
<td>3</td>
<td>Montezuma</td>
<td>258,974,146</td>
</tr>
<tr>
<td>4</td>
<td>La Plata</td>
<td>225,239,522</td>
</tr>
<tr>
<td>5</td>
<td>Rio Blanco</td>
<td>58,468,927</td>
</tr>
<tr>
<td>6</td>
<td>Las Animas</td>
<td>43,443,152</td>
</tr>
<tr>
<td>7</td>
<td>Mesa</td>
<td>36,585,212</td>
</tr>
<tr>
<td>8</td>
<td>Adams</td>
<td>35,237,405</td>
</tr>
<tr>
<td>9</td>
<td>Dolores</td>
<td>18,552,378</td>
</tr>
<tr>
<td>10</td>
<td>Archuleta</td>
<td>17,564,852</td>
</tr>
</tbody>
</table>

Source: Colorado Oil and Gas Conservation Commission

### 2021 Colorado Gas Production By County

- **Weld**: 46.1%
- **Garfield**: 18.9%
- **Montezuma**: 11.9%
- **La Plata**: 10.3%
- **Rest of CO**: 12.8%

Source: Colorado Oil and Gas Conservation Commission
CO Gas Production Recovery by County

Top 10 Colorado Gas Producing Counties
Index 100 = January 2019
*Excludes Adams County

Source: Colorado Oil and Gas Conservation Commission

Archuleta
Rio Blanco
Weld
Las Animas
La Plata
Garfield
Montezuma
Mesa
Dolores
CO Oil & Gas Employment

Colorado Oil and Gas Industry Employment

Select Oil & Gas Employment

- September 2019: 31,733
- September 2021: 19,817
- Total 2-Year Change: (11,916)
- Total 2-Year % Change: -37.6%

Source: Colorado Department of Labor and Employment
Severance Tax Collections & Forecast

Colorado Oil & Gas Severance Tax Collections

Price Forecasts

<table>
<thead>
<tr>
<th>Year</th>
<th>WTI</th>
<th>Henry Hub</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$105</td>
<td>$4.15</td>
</tr>
<tr>
<td>2023</td>
<td>$86</td>
<td>$3.75</td>
</tr>
</tbody>
</table>

Source: Colorado Oil and Gas Conservation Commission, Colorado Department of Revenue
Severance Tax Volatility & Ad Valorem Credits

O&G Severance Tax, AV Credit Used, and Gross Tax Liability

Dollars in millions

Source: Energy Information Agency, Colorado Department of Revenue
SB 21- 281 Severance Tax Working Group

**Goals**

- **Smooth Volatility**
  - Many factors drive volatility, creating challenges for state administrators and tax beneficiaries

- **Ease Administration**
  - Complex filing, multi-year processes, and lack of transparent data make filing and administration more challenging than other taxes

- **Revenue Neutral**
  - Solutions that raise or lower revenue over multiple fiscal years were considered out-of-scope

**Who:** OSPB, DNR, DOLA, DOR, CDE

Severance Tax Working Group Recommendations

1. Shift from taxing all interest owners to only operators
2. Base the ad valorem tax credit on severance tax year gross income and prior year mill levy rate
3. Implement and require an electronic filing system
4. Require additional reporting
5. Further evaluate SB 21-281 impacts on metropolitan districts and additional considerations for metropolitan district service plan approval
6. Potential shifts in distribution methodology
7. Creation of a constitutional severance tax perpetual trust
8. Evaluate stripper well exemption thresholds
Questions?

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