Background

@ColoradoOilGas | #COGA2020
History of Colorado’s Oil & Gas Industry

• First US well drilled in 1859
• First CO well drilled 1860
• Boulder Oilfield developed, 1901
• Major Basins
  • Denver Julesberg
  • Piceance
  • Raton
  • San Juan
Colorado’s Oil & Gas Industry Today

- Rig Count: 16
  - 30 in April 2018
  - 77 in June 2014
- 5th largest oil producer in U.S.
- 6th largest natural gas producer
- Well-regulated
- High tech, innovative, evolving
- Responsible, safe
- Stuck in political crosshairs and targeted by aggressive activist community
Economic Impact in Colorado

• 89,000 direct and indirect jobs in Colorado’s upstream &midstream sectors
  • More than 200,000 direct, indirect, induced jobs in Colorado industry-wide
• $31 billion annual economic impact
• $10.8 billion in employee income to CO households
• $1 billion in public revenue each year
  • $600 million in taxes for public education
Keeping Energy Prices Low for Consumers

• Thanks to lower natural gas prices, U.S. households save over $1,200 in disposable income and an estimated household savings of $1,551 per year.

• Colorado has the lowest energy bills in the nation, the average energy costs are 23% less than the national average, primarily due to historically lower natural gas prices in the state.
Commodity Price Drop

- Russia, Saudi production war
- Coronavirus decreases demand
- WTI: $20.37 as of 4/15/20
  - $58 on 1/13/2020
  - $65 on 4/14/2019
- Slow recovery predicted
  - $32 by 2021; $45 by 2022
- Job losses, furloughs, pay cuts, bankruptcies, cuts to short and medium-term investment plans
Market Conditions (4/15/20)
WTI = $20.37   Natural Gas = $1.59
U.S. Fundamentals

• Abundant U.S. Resources
  • Over 100 years of domestic gas supply and growing
  • U.S. and Canada net oil independence within a decade

• Economic Strength
  • Low energy costs for manufacturing, businesses, and households
  • Energy security and U.S. trade balance
    • Exporting oil and liquefied natural gas (LNG)
  • Improving our environment
    • Reduced surface impacts
    • Lower emissions
    • Strengthened groundwater protections
U.S. Energy Mix

The share of electricity generation from renewables doubles

U.S. Energy Information Administration

**crude oil...**
U.S. crude oil production
million barrels per day

- 19% renewables
- 38% natural gas
- 37% nuclear
- 24% coal
- 12%

tight oil reaches 73% of U.S. crude oil production in 2050

U.S. Energy Information Administration

**and natural gas.**
Dry natural gas production by type
trillion cubic feet

- tight/shale gas reaches 91% of domestic natural gas production in 2050

COLOrado OIL & GAS Association
SB 181

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SB 181: “Most Meaningful Changes in 60 Years”

- Local control expanded
- Health, safety, environment prioritized above all else
- Re-writing of the Oil & Gas Conservation Act
- Oversight agency (COGCC) restructured
  - Removed engineering & geology expertise
  - 1 oil & gas seat on 9-member commission
- Requires over a dozen rulemakings

- Full impact not yet known
- State permits cut in half
- Fewer rigs
- Layoffs
- Uncertainty is high
Tough Regulations

- 2010 - Clean Air Clean Jobs
- 2011 - Hydraulic Fracturing Fluid Disclosure
- 2012 - Groundwater Monitoring and Baseline Sampling
- 2013 - Setbacks
- 2013 - Spill Reporting
- 2013 - Wildlife Mapping
- 2014 - Leak Detection and Repair
- 2014 - Enforcement and Penalties
- 2018 - Setbacks from Schools
- 2019-20 - SB-181
  - Flowlines
  - Wellbore Integrity
  - Financial Assurance
  - Location Assessment
  - Cumulative Impacts
  - Air Monitoring
  - Mission Change and more…
Ozone Trends

- 2020 VOC = 292.8 tpd
- 2020 NOx = 166.1 tpd

*Current as of 12/31/19.*
# RAQC Inventory - 2017

Table 14—2011 and 2017 Nonattainment Area Emissions Inventory (tons per day)

<table>
<thead>
<tr>
<th>Description</th>
<th>2017</th>
<th>2011</th>
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<tbody>
<tr>
<td></td>
<td>VOC</td>
<td>NOx</td>
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<tr>
<td>Oil and Gas Sources</td>
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<tr>
<td>Point Sources Subtotal</td>
<td>16.3</td>
<td>20.6</td>
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<tr>
<td>Condensate Tanks Subtotal</td>
<td>78.7</td>
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<tr>
<td>Area Sources Subtotal</td>
<td>59.0</td>
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<td><strong>TOTAL</strong></td>
<td><strong>154.0</strong></td>
<td><strong>65.8</strong></td>
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<tr>
<td>Point Sources (Non-Oil and Gas)</td>
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<tr>
<td>Electric Generating Units</td>
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<td>19.2</td>
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<tr>
<td>Point (Non-Oil and Gas)</td>
<td>28.0</td>
<td>20.9</td>
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<td><strong>TOTAL</strong></td>
<td><strong>28.4</strong></td>
<td><strong>40.1</strong></td>
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<tr>
<td>Area Sources (Non-Oil and Gas)</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>67.5</strong></td>
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<tr>
<td>Non-Road Mobile Sources</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>44.3</strong></td>
<td><strong>54.9</strong></td>
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<tr>
<td>On-Road Mobile Sources</td>
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<tr>
<td>Light-Duty Vehicles</td>
<td>53.8</td>
<td>51.8</td>
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<tr>
<td>Medium/Heavy-Duty Vehicles</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>56.5</strong></td>
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<tr>
<td>Total Anthropogenic Emissions</td>
<td><strong>350.7</strong></td>
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<td><strong>↓32%</strong></td>
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<td><strong>↓17%</strong></td>
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<tr>
<td>Total Biogenic Sources</td>
<td>170.5</td>
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Why This Matters