

Proposed Revisions to Air Quality Requirements for Oil and Gas Facilities in Colorado

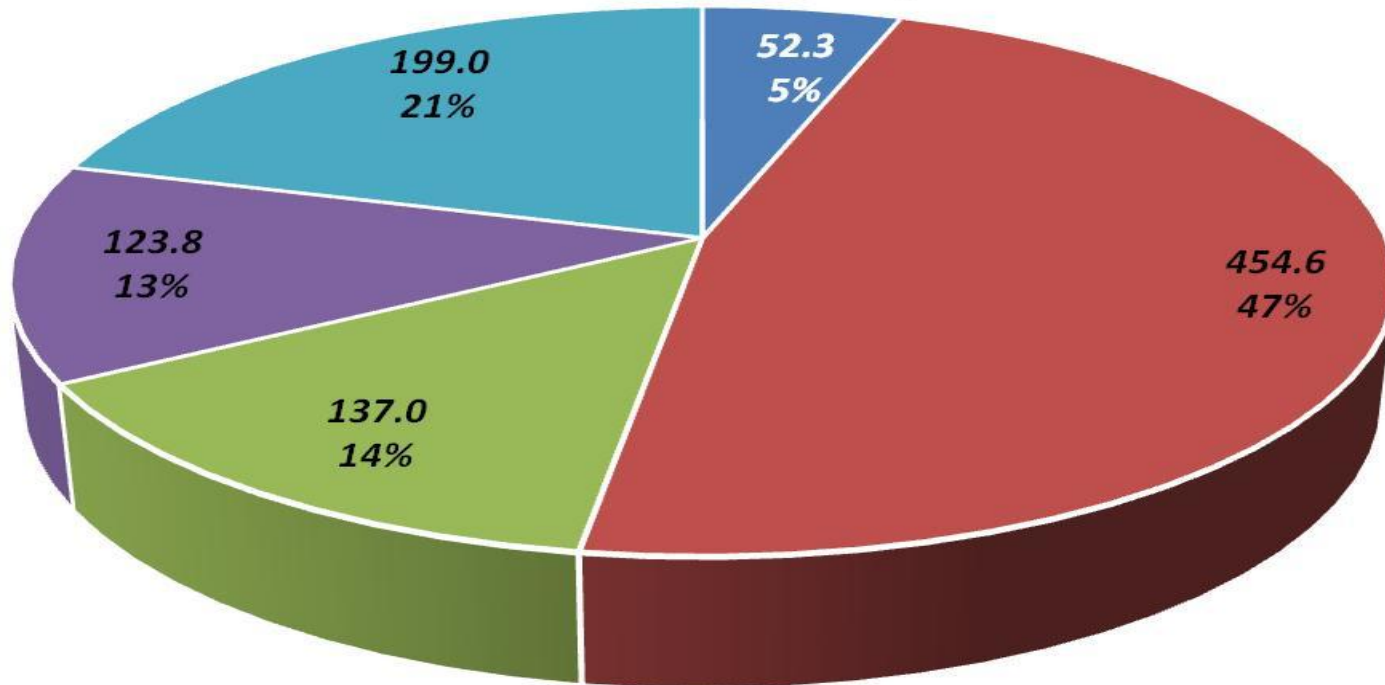
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Background

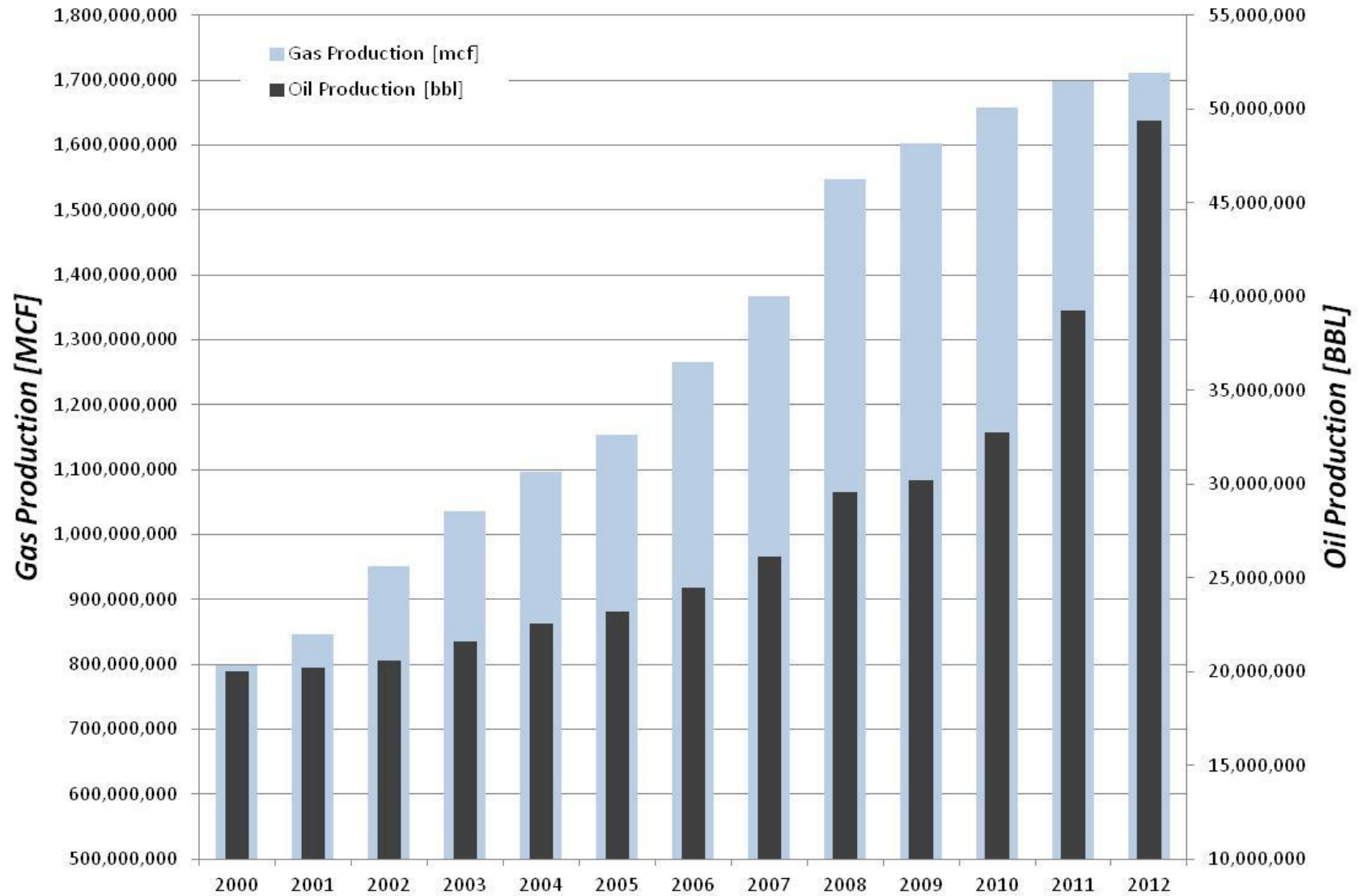
- ▶ Colorado has been a national leader in regulating air emissions from oil and gas production sector
- ▶ 2004 Rulemaking to reduce VOC emissions from Oil and Gas Sector in the Denver Metro/North Front Range as part of Early Action Compact
- ▶ 2006 update to 2004 rules and adoption of new rules with statewide applicability
- ▶ 2008 Ozone Action Plan to address non-compliance with Ozone NAAQS
- ▶ 2012 partial adoption of NSPS OOOO (1st in the nation)

**Colorado (Statewide)
2008 Base - Anthropogenic VOC Emissions
967 tons/day**



- Point
- Area
- On-Road Mobile
- O&G (permitted & unpermitted)
- Non-Road Mobile

Colorado Annual Oil and Gas Production



Proposed Emission Reduction Strategies

- ▶ Expand control requirements for storage tanks
 - Lower control threshold from 20 tons per year to 6 tons per year
 - Include crude oil and produced water storage tanks
 - Require controls during the first 90 days of production statewide

- ▶ Improve capture of emissions at controlled tanks
 - Clarify that controlled tanks must be operated without venting to the atmosphere
 - Establish requirements for Storage Tank Emission Management systems (STEM)
 - Capture performance evaluation
 - Certified design to minimize emissions
 - Extensive instrument based monitoring
 - Continual improvement

Proposed Emission Reduction Strategies

- ▶ Establish LDAR requirements for compressor stations and well production facilities
 - Frequent monitoring using Method 21 or infra-red (IR) cameras
 - Tiered monitoring schedule to focus on the highest emitting facilities and reduce the burdens on smaller facilities
 - Would establish the most comprehensive leak detection program for oil and gas facilities in the nation
 - Repair schedule for identified leaks
 - Recordkeeping and reporting requirements

Proposed Emission Reduction Strategies

- ▶ Expand control requirements for glycol dehydrators
 - Lower control threshold from 15 tons per year to 6 tons per year
 - More stringent threshold for facilities near populated areas
- ▶ Require capture or control of the gas stream at well production facilities
- ▶ Establish requirements to minimize emissions during well maintenance
- ▶ Expand pneumatic controller requirements statewide
- ▶ Require auto-igniters on all combustion devices
- ▶ Full adoption of NSPS OOOO

Proposal Highlights

- ▶ Wide range of regulatory requirements aimed at reducing volatile organic compound (VOC) and methane emissions from the oil and gas production sector
 - Ongoing effort to reduce ozone precursors
 - Direct regulation of methane from oil and gas sector
- ▶ Collaborative effort involving the Division, industry and environmental group stakeholders

Proposal Highlights

- ▶ Significant emission reductions from the oil and gas sector
 - Approximately 92,000 tons per year of VOC
 - Tens of thousands of tons of methane
- ▶ Cost-effective requirements
 - Calculated cost per ton of VOC reduced ranges from \$176 to \$818 per ton
 - Overall cost effectiveness for the entire package is approximately \$300 per ton of VOC reduced

Proposal Highlights

- ▶ Expands Colorado's existing program and establishes innovative new strategies that address each of the most significant sources of hydrocarbon emissions from the oil and gas production sector
- ▶ Maintains Colorado's leadership role in regulating air emissions from oil and gas production
- ▶ Establishes a rigorous set of requirements to ensure responsible development of Colorado's oil and gas resources

Regulatory Process

- ▶ Hearing Scheduled for February 19–21, 2014
- ▶ Interested persons can participate in two ways
 - Participate as a party
 - Provide public comment
- ▶ Participation as a party requires involvement throughout the pre–hearing process
 - Submit request for party status: December 13, 2013
 - Status Conference: December 19, 2013
 - Pre–Hearing Statements: January 6, 2014
 - Pre–Hearing Conference: January 17, 2014

Regulatory Process

- ▶ Individuals or groups can provide written comments prior to the hearing
- ▶ Alternatively oral or written comments can be provided at the hearing on February 19, 2014
 - Time limitation on oral comments
 - Unlike parties, individuals or groups providing public comments cannot offer alternative proposals
- ▶ Hearing will take place at the Aurora Municipal Center, 15151 East Alameda Parkway

Questions?