



# FEDERAL AND STATE GREENHOUSE GAS REGULATION – IMPLICATIONS FOR THE WESTERN OIL AND GAS INDUSTRY

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- Brief update and discussion of EPA's Clean Power Plan
- EPA Methane White Papers
- Colorado Upstream Oil and Gas Methane Regulation and Implementation
- BLM Venting and Flaring
- Miscellaneous GHG Issues

- **President's Climate Action Plan (2013)**
  - Cut carbon pollution (17% below 2005 levels by 2020)
  
  - GHG standards for new and existing power plants
  
  - Reduce methane emissions; interagency methane strategy

- **President’s Methane Strategy (2014)**

- *Landfills* – EPA to update NSPS for new landfills; ANPRM for public comment on whether to update standards for existing landfills
- *Coal Mines* – BLM released ANPRM to gather public input on program under Mineral Leasing Act to capture, sell, or dispose of waste mine methane on federal lands
- *Agriculture* – “Biogas Roadmap” (voluntary strategies to accelerate adoption of methane digesters and other technologies to reduce dairy sector GHG emissions by 25 percent by 2020)
- *Oil and Gas* – Methane White Papers; BLM venting and flaring

- Issue: whether EPA permissibly determined that regulation of GHGs from mobile sources triggered a duty to regulate GHGs from stationary sources?
- The Court addressed two central questions:
  1. Can a PSD/Title V source be subject to permitting based solely on GHG emissions (“non-anyway” sources)?
  2. Can a source already subject to PSD/Title V be required to limit GHG emissions by employing BACT (“anyway” sources)?

1. “Non-anyway” sources: EPA overstepped its CAA authority in tailoring the emissions thresholds for GHGs

*“[It is a] core-administrative law principle that an agency may not rewrite clear statutory terms to suit its own sense of how the statute should operate”*

2. “Anyway” sources: EPA reasonably interpreted the CAA to require sources already subject to PSD/Title V to comply with BACT requirements for GHGs

- EPA's next steps memorandum (July 24, 2014)
  - EPA will no longer enforce SIP provisions for PSD/Title V for “non-anyway” sources
  - “Anyway” sources remain subject to BACT (75,000 tpy)
  - EPA will not preclude states from retaining PSD/Title V requirements based only on GHG (*i.e.* “non-anyways”)



- Why does *UARG* matter for the O&G industry?
  - Significant part of EPA’s GHG program upheld emboldening the Agency to move forward, but
  - The Court took EPA to task for significantly overstepping its CAA statutory authority
  - EPA is grappling with how to use its CAA statutory authority to regulate GHGs from O&G
  - Some options: § 111(b) (NSPS); § 111(d) (ESPS); § 182 (Ozone SIPs); or § 112(n)(4) (HAPs for O&G)

- Reduce states' carbon intensity from power fleet 30% by 2030 (30/30)
- Proposed rules for both new and existing plants under CAA § 111
  - § 111(b): new plant standards (Sep. 20, 2013)
  - § 111(d): existing plant standards (June 2, 2014)
- EPA will combine § 111(b) & (d) final rules to be issued mid-summer 2015
- “Model” Federal Plan also to be proposed mid-summer 2015, with final plan summer 2016

- Four “building blocks” to meet reduction targets (§ 111(d))
  1. Heat-rate efficiency on-site at the plant
  2. Fuel-switching (combined-cycle natural gas)
  3. Renewable energy and nuclear
  4. Demand side efficiency/consumption

- Almost certain to be legal challenges to CPP, which may impact EPA's authority to promulgate GHG rules for O&G
  - Do existing § 112 MATS standards at EGUs prohibit § 111(d) regulation?
  - Do the emission guidelines, and now the “federal model”, overstep EPA's § 111(d) authority by effectively setting the standard not the procedure?
  - Did EPA exceed its authority in going “beyond-the-fence line” to meet the goals?
  - Can states comply by using “beyond-the-fence” standards and/or a cap and trade program?

- 5 EPA methane white papers
  - Hydraulically fractured oil wells
  - Compressors
  - Liquids unloading
  - Leaks
  - Pneumatics
- EPA announced yesterday a commitment to curbing methane emissions from the O&G sector 45% from 2012 levels by 2025

- Hybrid approach between command and control regulation and voluntary measures
- Proposed rule will issue in 2015, final rule by 2016
- Rule will build on Quad O and methane white papers and will likely be an NSPS (new and modified sources)
- Rule will focus on VOCs & Methane
- Likely sources include fugitive control through LDAR; oil well completions; pneumatic pumps; gathering and boosting stations; compressor stations

- Commitment to engage the states
- EPA will continue voluntary methane reductions strategies (*e.g.*, Natural Gas Star)
- Enhanced Subpart W reporting obligations using LDAR
- DOT/PHMSA safety standards in 2015
- \$15 MM for DOE LDAR technology (focused on compressors)
- \$10 MM for DOE to enhance emission quantification in infrastructure

- Modernize transmission and distribution infrastructure (FERC/NARUC)
- Key Issue: Quad O version 1.0 determined data was insufficient to directly regulate methane

*While we expect that these avoided emissions will result in improvements in air quality and reductions in health effects associated with HAP, ozone and particulate matter (PM), as well as climate effects associated with methane, we have determined that quantification of those benefits and co-benefits cannot be accomplished for this rule in a defensible way. 77 Fed. Reg. 49,400, 49,493 n.2 (Aug. 16, 2012)*



- Game-changing methane regulation adopted in 2014 – coming to other states (if not already there)
- Includes:
  - Leak Detection and Repair (well production facilities and compressors)
  - More stringent tank controls
  - Storage Tank Emissions Management program
  - Well liquids unloading requirements
  - Significant recordkeeping and reporting
- Dropped “flaring” from the rulemaking (OGCC jurisdiction, but can be expected)

- Statewide, new and existing well production facilities and compressor stations
- Complex phase-in dates but at least one initial IR LDAR inspection at every well production facility
- Multiple possible IR frequencies depending on tank emissions (monthly, quarterly, or annually)
- Monthly AVO at every facility
- Detailed repair and re-monitoring requirements
- Detailed recordkeeping and reporting requirements

- More stringent than Quad O
- Lowers VOC threshold from 20 tpy to 6 tpy on a manifolded tank-battery basis (as opposed to single storage tank like Quad O\*)
- Requires controls during first 90 days of production
- “Without venting” emission standard
- Storage Tank Emission Management (STEM) Plan applicable to condensate, produced water, and crude oil tanks (except for stabilized liquids)

- Quasi-stakeholder process with the Division through FAQs and periodic meetings
- Expansion of the scope in significant ways not intended or supported by the record:
  - Tanks in the NAA between 2 tpy – 6 tpy with controls will be subject to STEM (“no venting std”)
  - LDAR expanded to all well heads, not just those facilities with tanks or centralized gathering (*i.e.*, the Christmas tree in a field). Significant “aggregation” concerns

# COLORADO OIL AND GAS REGULATIONS MORE RULEMAKING?

- Where else may this go?
  - Annual report on state of the new Regulation 7 programs required this March
  - Report on whether reciprocating compressors at WPFs are a significant emissions source and how to reduce fugitives
  - Report on increased transparency (*e.g.*, online posting of LDAR and other data from individual facilities)
  - Intermittent pneumatics (potential equipment replacement)
  - AQCC interest in GHG regulation of the downstream transmission segments (see new Subpart W proposal)
  - Temporary flowback tanks?
  - Setback-type requirements for air quality regulations (*i.e.*, more stringent obligations in certain places - CAA § 112(n)(4))?

# COLORADO OIL AND GAS REGULATIONS – LESSONS LEARNED

- On-going industry-wide data collection is important, both emissions and cost data (step-down)
- The devil is in the details: pay close attention to definitions, particularly for things like “components,” “affected facilities,” “well production facilities” etc.
- Pay close attention to applicability triggers (LDAR, tank requirements)
- For GHGs/methane, continue to gather data and modeling to make the “causal” case against selective sector regulation

- BLM initiated public outreach in 2014 to consider efforts to minimize “waste” and promote conservation of produced gas through better management of venting and flaring
- BLM jurisdiction through NTL-4A, regarding when gas is “unavoidably” or “avoidably lost”
- Focus
  - Well completions; production tests; liquids unloading; tank emission; pneumatics; leak detection and repair; gas conservation plans; casing head and associated gases
- ANPRM is expected April 2015

- Wyoming LDAR rulemaking
  - Will apply to well production facilities and compressor stations in the UGRB in existence on January 1, 2014;
  - Addresses ozone but methane co-benefits through LDAR
  - LDAR Protocol for fugitives:
    - Facilities > 4 tpy of VOCs shall develop LDAR Protocol by January 1, 2017
    - At least quarterly inspections
    - IR (at least once) + AVO or method 21
    - Substantial recordkeeping and reporting requirements



- EDF/UT 2.0 study on methane emissions from pneumatics
  - Average emissions per controller are 17% higher than EPA 2012 GHG NEI but
  - 19% of pneumatics account for 95% of emissions
  - Regional differences, lowest in Rocky Mountains
  
- EDF/UT 2.0 study on methane emissions from liquids unloads
  - Emissions similar to EPA 2012 GHG NEI
  - Emissions dominated by unloads using plunger lifts (because of frequency)

- GHG regulation is in full swing both federally and in the states
- Significant uncertainty about the reach of federal authority and litigation seems inevitable
- EPA and BLM are focusing on methane in particular, and the battleground from a rulemaking perspective will be cost/benefit analyses
- Pay attention – these efforts will impose costs and changes to your operations and flexibility is crucial (stay away from rigid technology forcing approaches)



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