Carbon Regulation
Federal and State Updates

2014 Wyoming CO2 Conference:
U.W. Enhanced Oil Recovery Institute

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Overview:

- **FEDERAL (USA)**
  - Legislative Impasse
  - Far Reaching Environmental Regulation

- **Emphasis on Administrative Policy Development and Direction: Environmental Regulation to Achieve Climate Change Objectives**

- **STATE (Wyoming)**
  - Pioneering CCUS Legislation and Regulation
  - Guarded Approach to Carbon Regulation

- **Emphasis on Legislative Policy Development and Direction: Property Rights, Economic Opportunity, Risk Management**

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<table>
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<tr>
<th>Increase carbon control, incentives and federal administration</th>
<th>Prohibit carbon regulation and remove incentives</th>
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<tr>
<td>S. 332: Climate Protection Act of 2013 (Sen. Sanders, (VT))</td>
<td>H.R. 367 – Regulations from the Executive in Need of Scrutiny (passed House August 2013) (Young (AK))</td>
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<td>H.R. 2641 – Responsibly And Professionally Invigorating Development (RAPID) Act of 2014 (passed House March 2014) (Marino (PA))</td>
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Federal Environmental Regulation

• 2007
  – U.S. Supreme Court concluded EPA is authorized to regulate carbon dioxide emissions under the Clean Air Act if endangerment determination made.


• 2009
  – EPA determined that carbon dioxide emissions “may reasonably be anticipated to endanger public health or welfare.” 74 Fed. Reg. 66496 (Dec. 15, 2009).
Federal Environmental Regulation

• 2010
  – EPA adopted a threshold of 75,000 tons per year for stationary sources subject to regulation. 75 Fed. Reg. 31514 (June 3, 2010) (the “Tailoring Rule”)
  – EPA recognized CCUS as a pollution control technology which emitters should evaluate and may select for emissions reduction. http://www.epa.gov/nsr/ghgpermitting.html
Federal Environmental Regulation

• 2010 cont.
Federal Environmental Regulation

• 2010 cont.

  – EPA adopted regulations requiring mandatory reporting of carbon dioxide emissions. 40 C.F.R. Part 98
    • Large emission sources
    • Carbon dioxide injection for geologic sequestration (subpart RR)
    • All other facilities that inject carbon dioxide, including EOR (subpart UU)
    • Carbon dioxide supplied to the economy (subpart PP)
      www.epa.gov/climatechange/emissions/ghgrulemaking.html
Federal Environmental Regulation

- **2011**
  - EPA proposed a rule to conditionally exclude carbon dioxide from the definition of hazardous waste under RCRA. 76 Fed. Reg. 48073 (Aug. 8, 2011)

- **2012**
  - EPA proposed new source performance standards for carbon dioxide emissions from new fossil fuel-fired electric utility generating units (power plants). 77 Fed. Reg. 22392 (April 13, 2012); received over 2 million public comments and therefore EPA responded with a new proposal on September 20, 2013
  
  - EPA’s “Endangerment Finding” was upheld and challenges to its “Timing Rule” and “Tailoring Rule” were dismissed by the U.S. Court of Appeals, D.C. Circuit, on June 26, 2012; however, decision was reversed in part by June 23, 2014 U.S. Supreme Court decision.
Federal Environmental Regulation

• 2013
  – EPA *Completed* Guidance Documents
    • UIC Program Class VI Well Site Characterization Guidance – May 2013
    • UIC Program Class VI Well Area of Review and Corrective Action Guidance – May 2013
    • UIC Program Class VI Well Testing and Monitoring Guidance – March 2013
    • UIC Program Class VI Well Project Plan Development Guidance – August 2012
Federal Environmental Regulation

• 2013 cont.
  – EPA Draft Guidance Documents Closed for Comment
    • Draft UIC Program Class VI Well Plugging, Post-Injection Site Care, and Site Closure Guidance – June 2013
    • Draft UIC Program Class VI Well Recordkeeping, Reporting and Data Management Guidance for Owners and Operators – March 2013
    • Draft UIC Program Class VI Well Recordkeeping, Reporting and Data Management Guidance for Permitting Authorities – March 2013
Federal Environmental Regulation

• 2013 cont.
    • New proposed regulations for newly-constructed stationary sources issued September 20, 2013
    • Revised standards for existing stationary sources came in June 2014
Federal Environmental Regulation

• 2013 cont.
  – EPA’s new proposed regulation for *new* stationary sources. Issued September 20, 2013. 79 Fed. Reg. 1429 (Comment period ended March 2014; final rule to be released January 2015)
  
  • EPA proposes to treat coal-fired units and natural gas-fired stationary combustion turbines as separate source categories.
  • The most controversial aspect centers on EPA’s determination that CCS is an “adequately demonstrated” technology.
  • For new coal-fired units, EPA identified partial implementation of CCS as the best system of emission reduction (BSER) and set a performance standard of 1,100 CO2/MWh.
Federal Environmental Regulation

• 2014
  – EPA Completed Guidance Documents
    • Underground Injection Control (UIC) Program Class VI Primacy Manual for State Directors
  – EPA Draft Guidance Documents Closed for Comment
    • EPA Drafts Guidance Document on Transitioning a Class II well to a Class VI well - closed March 1, 2014.
Federal Environmental Regulation

• 2014 cont.
  – EPA Finalizes RCRA CO2 Exemption
    • Establishes a conditional exclusion from the definition of hazardous waste under Subtitle C for carbon dioxide streams that are injected in geologic sequestration activities.
    • The rule exempts carbon dioxide that has been captured from an emission source (e.g. power plant) under four conditions.
2014 cont.

- EPA Proposes Rule on CO2 standards for existing sources
  - Comment period ending October 14, 2014 and final rule to be released in June 30, 2015. States to file compliance plan before June 30, 2016.
  - Specifically, the proposal has two main elements: (1) State-specific emission rate-based CO2 goals and (2) guidelines for the development, submission and implementation of state plans.
  - Differs from past regulation in that regulation will be based on state-wide targets rather than emissions at the individual unit.
  - Rate-based regulatory target will look at tons of CO2 per megawatt of electricity produced; Mass-based target will establish an overall CO2 tonnage cap for a states fleet; also will allow state to participate in a multi-state trading program.
  - http://cleanpowerplanmaps.epa.gov/CleanPowerPlan/
Federal Environmental Regulation

- 2014 cont.
  - US Supreme Court case, *Utility Air Regulatory Group v. EPA*, upheld and restricted EPA authority under the Tailoring Rule
    - Rejected EPA authority to apply PSD regulations to sources that would not be subject to PSD but for their GHG emissions.
    - But agreed that EPA may require sources that trigger PSD permitting based on emissions of "conventional" pollutants to comply with the "best available control technology" (BACT) requirements for GHGs
    - Practically, the decision was a win for the EPA and environmentalists because the tailoring rule still applies to 83% of GHG emissions from stationary sources.
    - Also, the decision suggests that the Court’s decision in *Massachusetts v. EPA* will be upheld in future cases, with 7 Justices showing support for the case and only Justices Thomas and Alito voicing concern over the prior opinion.
What to Watch: Federal

- Litigation Challenging The President’s Climate Action Plan
  - For New Sources:
    - Challenges to EPA’s conclusion that CCS technology is “adequately demonstrated” technology.
  - For Existing Sources:
    - Challenges to EPA’s ability to regulate “beyond the fence” -- areas and activities outside of individual units.
- Final Rule for New Sources  - January 30, 2015
- Final Rule for Existing Sources  - June 30, 2015
- Energy Cost Increase/Demand-Side impacts?
  - Renewable development
  - Efficiency and conservation
Wyoming: Geologic Storage

• 2001
  – Established a carbon sequestration advisory committee to assess sequestration potential, identify research needs and recommend policies or programs. House Enrolled Act No. 107

• 2008
  – Determined that pore space underlying surface is owned by the surface estate owner, but that the mineral estate is dominant and its development will take priority over geologic storage activity. W.S. 34-1-152
Wyoming: Geologic Storage

• 2008 cont.
  – Preserved the right of the surface or mineral owner to drill or bore through a geologic sequestration site if done in accordance with WOGCC rules for protecting the storage site from carbon dioxide escape. W.S. 30-5-501
  – Directed the WDEQ to develop standards for regulating long-term geologic storage of carbon dioxide in Wyoming under the existing UIC program. W.S. 35-11-313
    • Preserved WOGCC authority over EOR operations
    • Formed a working group to develop bonding and financial assurance protocols
Wyoming: Geologic Storage

- 2009
  - Affirmed dominance of severed mineral estate over pore space. W.S. 34-1-152(e)
  - Established that the carbon dioxide injector is presumed to own and bear all rights, benefits, burdens and liabilities for the injected carbon dioxide. W.S. 34-1-153
  - Established a procedure for unitizing geologic sequestration sites by order of the WOGCC. Pore space owned by multiple parties can be aggregated for the efficient development of a geologic sequestration site so long as 80% of the parties approve the unitization plan. W.S. 35-11-314 through 317; W.S. 30-5-104
Wyoming: Geologic Storage

- 2010
  - Established the Wyoming geologic sequestration special revenue account. W.S. 35-11-318
  - Imposed specific carbon dioxide injection well permit application requirements related to bonding and financial assurance. W.S. 35-11-313
  - WDEQ Published Class VI UIC Injection Well Permit Rules.
    - WQD Rules and Regulations, Chapter 24 filed November 5, 2010, prior to EPA Class VI Rules
What to Watch: Geologic Storage

• State Primacy for UIC Class VI Wells
  – FA Rule and crosswalk changes previewed at Water Advisory Board during April 18, 2014 meeting
    • Waiver availability
    • Financial Assurance
    • Plume stabilization
  – ND is the only state in EPA Region 8 to submit primacy application
    • Submitted and comments closed Sept. 2013, decision expected in the next few weeks.
What to Watch: Geologic Storage

• Transition of UIC Class II Wells to Class VI Wells - Based on EPA Guidance:
  – Based on risk to USDWs, see 40 C.F.R. 144.19(b)
  – EPA looking to operators to self-report
  – Formal risk assessment not required, but operators may use:
    • Evaluation of Features, Events and Processes (FEPs), see for example http://www.quintessa.org./co2fepdb/
    • Probabilistic Risk Assessment (PRA), for example CQUESTRA-2 (Walton et al.), Certification Framework (Oldenburg et al.), CO2-PEN model (Stauffer et al.)
  – Must demonstrate that well construction meets standards and protects USDW.
  – More comprehensive requirements for Class VI well operation, monitoring, and reporting.

• Possible need to amend W.S. 35-11-313(b) and (c) to clarify oversight jurisdiction (WOGCC v. DEQ WQD) during transition
Wyoming: Emissions Regulation

• 1999
  – Legislature prohibited WDEQ from proposing or promulgating any new rule or regulation intended to reduce greenhouse gas emissions from the residential, commercial, industrial, electric utility, transportation, agricultural, energy or mining sectors. W.S. 35-11-213

• 2011
  – Legislature adopts a resolution to request that Congress limit air quality regulation by EPA. Senate Joint Resolution No. 6
Wyoming: Emissions Regulation

- 2012
  - Provided WDEQ limited authority to promulgate greenhouse gas regulations to extent necessary to submit a SIP and obtain primacy over the PSD permitting program. 2012 Wyoming Session Laws, Chapter 11
  - State thresholds cannot be more stringent than federal requirements
  - WDEQ may only submit SIP after Legislature authorizes or Federal Court issues final ruling
Wyoming: Emissions Regulation

- 2013
  - 2013 Session Laws Chapter 39; W.S. 35-11-213
    - Authorized DEQ to submit an amended greenhouse gas SIP to EPA
    - Authorized DEQ to promulgate new source performance standards for greenhouse gases
Wyoming: Emissions Regulation

- 2013 cont.
  - Amended GHG SIP submitted to EPA March 8, 2013, approval effective December 23, 2013
    - Similar to EPA rules
    - GHG permits only required under the PSD permitting process
    - Minor sources are exempt
    - Deferral for biogenic sources (set aside based on *Center for Bio. Diversity v. E.P.A.*, 722 F.3d 401 (D.C. Cir. 2013), vacating similar EPA rule)
What to Watch: Emissions Regulation

• Senate Joint Resolution No. 001 – 2014
  – Requests that Congress require the EPA to respect Wyoming primacy in developing guidelines for regulating CO2 emissions.
  – The Resolution requests that the EPA:
    • Respect Wyoming primacy by taking into account the unique policies, energy needs, resource mix and economic priorities of Wyoming and other states;
    • Issues guidelines and approves state standards that are practical and achievable by measures taken by fossil-fueled power plants;
    • Give maximum flexibility to the states to implement CO2 performance standards within their respective jurisdictions.
What to Watch: Emissions Regulation

• Senate File No. 0075 – 2014
  – Authorizes the Attorney General to take action before the EPA or in court to stop the enforcement or implementation of rulemaking if the action exceeds the authority granted by the US Congress or rests on questionable authority.
  – Sets aside funds for legal action taken by the Attorney General that are necessary to protect the state’s economic interests from action taken by the EPA.
  – Pending approval by the Governor.
Wyoming - Action Plan

  – Theme 1: Economic Competitiveness, Expansion and Diversification
    • Objective 2: Infrastructure – CO2 Pipeline Network Corridors
      – Wyoming Pipeline Corridor Initiative submitted to BLM June 2014
  – Theme 2: Efficient, Effective Regulation
    • Objective 4: Primacy – Review State Oil and Gas Environmental Regulations
      – Rule packages previewed by WWAB
Wyoming - Education

• Wyoming Energy and Natural Resource Education Initiative
  – Report completed December 2013, recommends:
    • Establishing a Statewide Governance Board
    • Developing a Framework for Understanding Energy and Natural Resources
    • Creating an Educational Resource Database and Provide Professional Development for Educators

• Integrated Test Center
Wyoming - Legislature

• Interim Committees
  http://legisweb.state.wy.us/LegislatorSummary/IntCommList.aspx

  – Joint Revenue Interim Committee
    • Reviewing existing mineral tax code – Sept. 22-23

  – Joint Ag., State and Public Lands, Water Resources
    • Landowner indemnification, pipeline liability – Sept. 25-26

    • Orphaned, abandoned wells; flaring; bonding; conversion of CBM wells

  – Select Fed. Nat. Resources Management Committee
Thank You