

Update on Greenhouse Gas Measures

Air Quality Control Commission

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Colorado's Accomplishments

- 2004 Renewable Energy Standard (as amended)
 - IOUs: 30% by 2020
 - Cooperatives \geq 100,000 meters: 20% by 2020
 - Cooperatives $<$ 100,000 meters: 10% by 2020
 - Municipals $>$ 40,000 meters: 10% by 2020
- 2007 Demand Side Management
 - IOUs must reduce retail/peak demand 5% by 2018
 - Saving 1.7 MWh/year as of 2012

Accomplishments (cont.)

- 2010 Clean Air Clean Jobs Act
 - 3.6 million tpy CO₂ reduction from Xcel Energy
- 2014 Revisions to Regulation 7
 - Oil & gas air quality rules
 - Projected 65,000 tpy methane and ethane reductions

Upcoming CDPHE Actions

- Clean Air Act § 111(d) state plan
 - Existing Source Performance Standard (ESPS) for electric generating units (EGUs)
 - ~35% proposed CO₂ reduction from largest GHG sector
- Regulation 7 implementation and follow-up
- Implementation of 2008 ozone standard
- Governor's oil & gas task force recommendations?

Upcoming Federal Actions

- Finalize § 111(d) Clean Power Plan “mid-summer”
- Expand EPA’s oil & gas rules (proposal summer 2015)
- Revise landfill New Source Performance Standard (NSPS) and ESPS (final rule March 30, 2015)
- Revise medium/heavy-duty vehicle standards (proposal March 2015)
- Considering venting, coal mines, agriculture, and other issues

EGU Carbon Emissions EPA Proposals



- 3 separate proposals
 - New, modified/reconstructed, and existing Electric Generating Units (EGUs)
- Address electric generation's carbon intensity
- Reduce CO2 and other emissions

CAA § 111 Comparison

111(b)

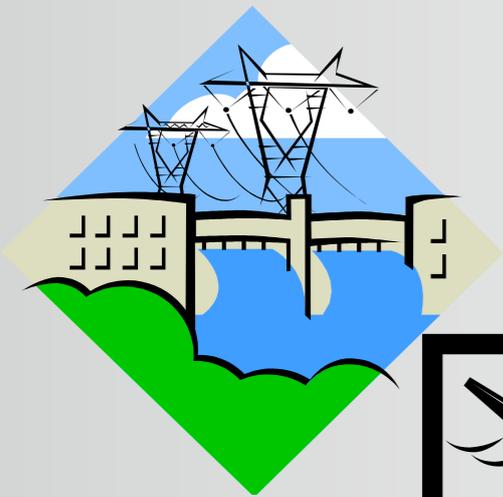
- New, modified, reconstructed stationary sources from listed categories
- Establishes emission standards
- Addresses any air pollutant
- Best System of Emission Reduction (BSER)
- Applies directly to sources

111(d)

- Existing stationary sources from listed categories
- Establishes emission standards
- Addresses any air pollutant:
 - No National Ambient Air Quality Standard /air quality criteria
 - Not emitted from source regulated under CAA §112 (air toxics)
 - NSPS promulgated for that pollutant for that source category
- BSER
- Implemented through state or federal plans

2014 Proposal: Existing Units

- Applies to:
 - States
 - Affected units
 - Other affected entities
 - State CO2 Emission Goals
 - Mass vs. Rate Based
 - 4 Building Blocks
 - Interim vs. Final
 - Alternative
 - State Plan Requirements
 - Meet state CO2 goals
 - Interim
 - Final
 - Annual Reporting



EPA's Building Blocks

- BB1: Heat Rate Improvement (HRI)
 - Coal-fired EGUs only
 - On-site project improvements
 - Goal: 6%
- BB2: Redispatch to Natural Gas Generation
 - Coal & oil to natural gas-fired generation
 - Goal: 70% of capacity
- BB3: Redispatch to Renewable Energy (RE)
 - Coal, oil and/or natural gas-fired generation to RE generation
 - Goal: 13% (by 2030)
- BB4: Demand Side Management/Energy Efficiency (DSM/EE)
 - Off-site reductions that translate to demand reductions at EGU
 - Goal: 1.5% annually

Colorado's Position on § 111(d)

- Colorado supports EPA's proposal
- APCD's top priority for GHG reductions
- Joint CDPHE, PUC and CEO letter of support
- Requested some changes to EPA's proposal

Comment Letter

- GHG goal must reflect our accomplishments through early action credit
- Option 1: Remove the RE penalty
- Option 2: Alternative BSER based solely on RE capacity
 - Simpler
 - Promotes redispatch to NGCC

Comment Letter (cont.)

- Additional state flexibility is needed
- Complicated planning process
- BB1: 6% HRI not always attainable
 - Units already efficient
- BB2: 70% NGCC utilization is problematic
 - NGCC capacity may be overstated
 - NGCC needed to backstop RE generation
 - Ozone limits

Comment Letter (cont.)

- BB3: Planned 2020 actions counted in baseline
- BB4:
 - Timing concerns
 - Diminishing returns over time
- Requested revisions to interim goal
 - States should have flexibility to set glidepath

Comment Letter (cont.)

- State plans due 2016
 - Extensions available to 2017 or 2018
- Tight schedule
- Multiple agencies + stakeholders = more time
- Legislative review likely
 - SB 15-092
- Comment letter requested more time to submit plans

ESPS Current Status

- APCD is internally evaluating options
- Consulting with National Association of Clean Air Agencies and Center for New Energy Economy
- Limited stakeholder outreach
 - Have met individual stakeholders
 - Formal outreach after publication of final rule
- EPA is considering 3.9 million comments and may revise proposal

Regulation 7

- Implementing new requirements
 - Phased compliance deadlines
- AQCC assigned follow-up tasks
 - Reciprocating compressors at production facilities
 - Briefing AQCC in March 2015
 - Downstream compressors
 - Intermittent pneumatic controllers
 - LDAR reporting

GHG Update

Questions?