

# State Planning for EPA's Carbon Pollution Standards

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# Proposals



- **3 Separate proposals**
  - New EGUs
  - Modified/Reconstructed EGUs
  - Existing EGUs
- **Reduce CO<sub>2</sub> and other emissions from Electric Generating Units (EGUs)**
  - Large boilers
  - Large turbines
  - Steam generating units, and
  - Integrated gasification combined cycle (IGCC) units



# 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 (a.k.a. ESPS)
- 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
- Applies Directly to Agency via:
  - State Plan, or
  - Federal Plan



# 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:  $\leq 70\%$  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: 11%

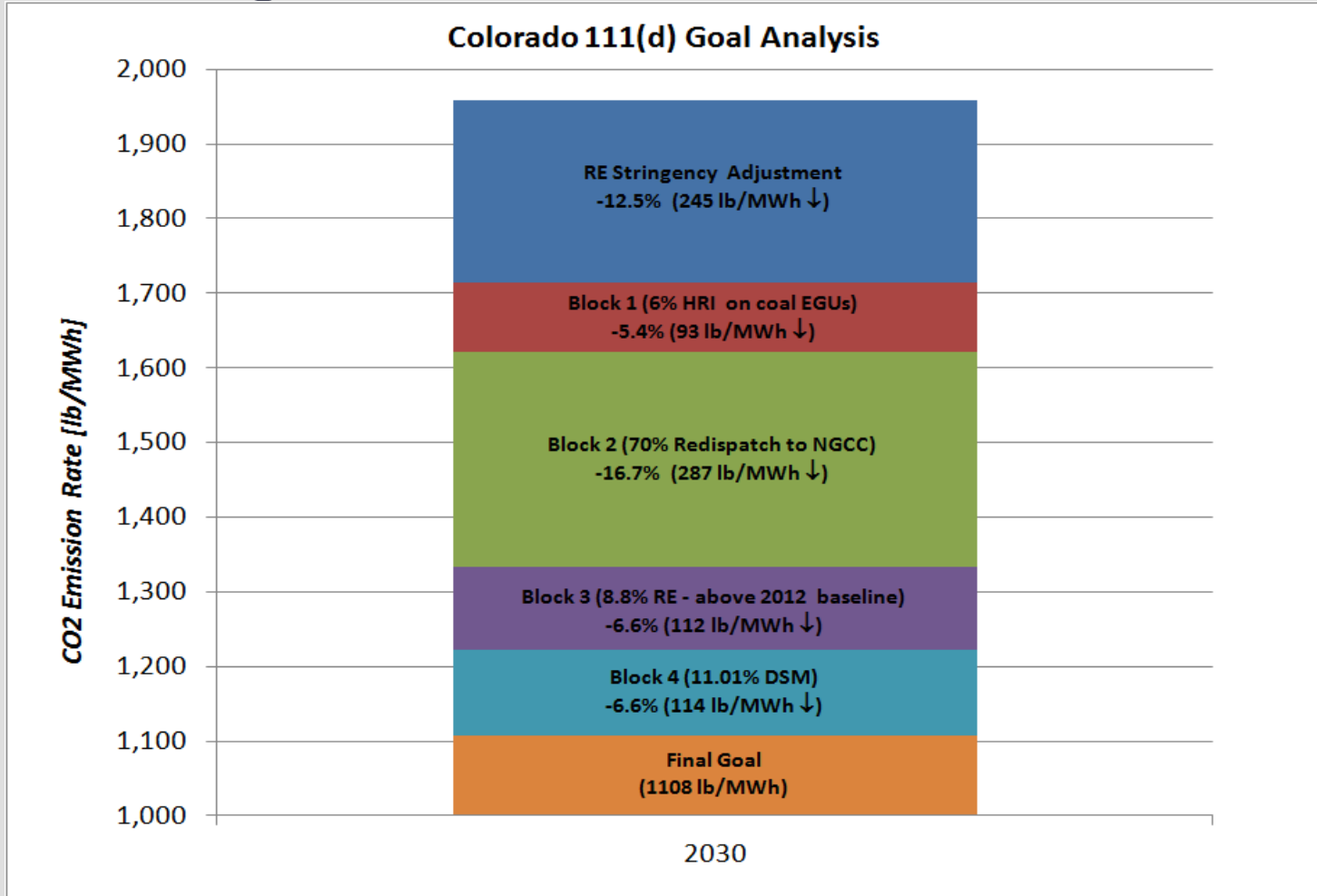


# EPA's State Goal Calculations

- Identify 2012 Baseline Emissions (lbs CO<sub>2</sub>/MWh net generation) for all EGUs
- Adjust for
  - 6% HRI projects at coal-fired EGUs
  - Redispatch of generation
    - 70% of natural gas-fired EGU capacity (from coal-fired generation)
  - 13% RE (from fossil fuel-fired generation)
  - 11% DSM/EE projects



# Deriving Colorado's State Goal



# Existing Units: Colorado Affected Facilities

- **EGUs**
  - **Total facilities: 23**
  - **Total units: 78**
    - Coal-fired: 23
    - Natural gas combined cycle turbines: 37
    - Oil-fired: 1
    - Other: 1
    - Additional turbines following RE: 16
- **Other Affected Entities**
  - **Other agencies**
  - **Other third parties**



# Schedule and Timing Considerations

- **Schedule:**
  - 12/1/14 Comments on Existing EGU Proposal Submitted
  - Summer 2015 Final Rule
  - 6/16/16 State Plan Due
    - 1 yr extension
    - 2 yr extension
  - 1/1/20 Compliance Date (interim goal)
  - 1/1/30 Compliance Date (final goal)
- **Timing Considerations:**
  - **State Plan Development**
    - Internal state agency coordination
    - Multi-state agency coordination
    - Other external entity coordination (i.e. trading)
  - **Rulemaking**
  - **Legislative Process/Plan Submittal**
  - **EPA Plan Approval**
  - **EGU Planning**
  - **Realized Measures**





# Some Other Issues for Consideration

- Credit for early efforts (RE, DSM, CACJA, etc.)
- Timeline
- Mass vs. rate-based standard
- Multi-state plan
- Out-of-state generation apportionment
- Trading Program participation
- Differences between utilities
- Changes in fleet
- Jurisdictional authority/multiple agency involvement
- Calculation assumptions/methodologies (renewables projections, demand projections, model limitations, etc.)
- Other reduction options beyond building blocks
- Other limitations (transmission, Endangered Species Act requirements, regional boundaries, population demographics, etc.)
- Litigation



# Colorado's Position on § 111(d)

- Colorado generally 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
- Additional state flexibility is needed
- Complicated planning process
- Concerns with building block assumptions
- Timing concerns
- 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
- Comment letter requested more time to submit plans

# Current Status and Next Steps

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



# Questions?



**COLORADO**

**Air Pollution Control Division**

Department of Public Health & Environment