EPA's 111(d) Clean Power Plan Rule: A DEQ Perspective

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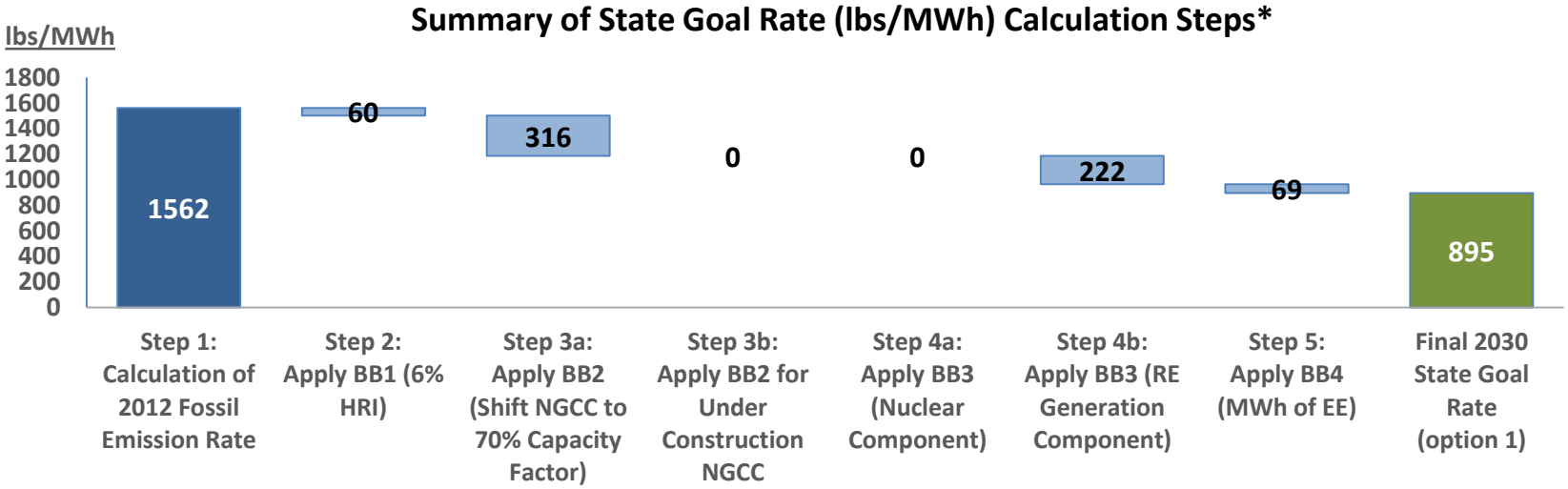
4 General Criteria for EGU 111(d) Plans

- **Enforceable measures** that reduce CO2 emissions from affected EGUs
- Measures must be projected to achieve emission performance **equivalent to or better than** state specific CO2 goal on a timeline equivalent to that in the emission guidelines.
- **Quantifiable and verifiable** EGU CO2 emission performance.
- Process for state reporting of plan implementation, CO2 emission performance, and, if necessary, implementation of **corrective measures**

Getting from 2012 Fossil Emission Rate to Final 2030 State Goal Rate (option 1)

Building Block 1 (step 2)	Improve the heat rate at existing coal units 6% to reduce the emission rate from **2,305** lbs/MWh to **2,166** lbs/MWh
Building Block 2 (steps 3a and 3b)	Shift generation from fossil-fired boilers to NGCC units up to a 70% capacity factor, increasing NGCC generation from **29,943** GWh to **49,406** GWh
Building Block 3 (steps 4a and 4b)	Increase generation from renewable sources from **8,521** GWh in 2012 to **15,579** GWh in 2030. State has no nuclear capacity.
Building Block 4 (step 5)	Improve end-use energy efficiency to decrease electricity demand **6,362** GWh, equivalent to avoiding **10.0%** of projected electricity sales in 2030



*This graph and the associated calculations are for illustrative purposes only to demonstrate how state goals are calculated to take into account all of the building blocks identified in Option 1 of the proposed Clean Power Plan. While this demonstration yields apparent "incremental" changes to state emission rates from quantifying the effect of each building block in a given state, the state goal is a product of all of the building blocks considered simultaneously in the computation process. While the "incremental" effect calculated for each building block depends on the sequence in which the building blocks are quantified (with only one particular sequence demonstrated here), the computed state goal is the same regardless of the sequence selected to calculate each building block's effects within the overall state goal computation process.

State-Specific Goals

- EPA has proposed specific CO_2 emission reduction **rate** goals for each state
- EPA based these goals by projecting what they think are achievable emission rate reductions for each state by using four building blocks.
  1. Improving the heat rate of existing coal units in Oklahoma for a reduction of 60 lbs/MWH
  2. Shifting generation from fossil fired boilers in Oklahoma to NGCC units for a reduction of 316 lbs/MWH
  3. Increasing generation from renewable sources in Oklahoma for a reduction of 222 lbs/MWH
  4. Improving end-use energy efficiency in Oklahoma for a reduction of 69 lbs/MWH

State-Specific Goals (cont.)

- Oklahoma's goal is to reduce EPA's estimated 2012 emission rate of 1562 lbs/MWH of CO_2 to 895 lbs/MWH in 2030 for a reduction of 43%
- Based on EPA estimates, other state goals will require from 0 to 72% rate reductions.

Questions??????

What approach is best for Oklahoma?

Are statute changes needed?

Will DEQ or OCC need to adopt new rules?

Is it realistic?

Oklahoma's EGU 111(d) Plan
- The long road ahead

DEQ Permanent Rulemaking Process

Typically, it takes at least 18 months to promulgate a permanent air quality rule.

- Rule development with stakeholder input
- Oklahoma APA filings and publication requirements
- Public comments
- Air Quality Advisory Council Hearing
- DEQ Environmental Quality Board Hearing
- Legislative Approval
- Gubernatorial Approval
- Publication of Final Rule

If new DEQ rules needed ?

Fast Track to DEQ Rule Effective 2016

- June 30, 2015 – EPA projects to promulgate final rule
- October 2015 – Presentation on Key Concepts of DEQ Rule Proposal during Council meeting
- December 15, 2015 – Proposed rule available for public comment; 30-day public comment period begins

DEQ Rule Effective 2016 (cont.)

- January 2016 – Air Quality Advisory Council Hearing
- March 2016 – Environmental Quality Board Hearing
- July 2016 – Permanent rule effective

Oklahoma 111(d) Plan

- June 30, 2016 – Deadline for submitting State 111(d) Plan or request for extension to EPA
  - Extension state plan – June 30, 2017 deadline
  - Extension regional plan – June 30, 2018 deadline
- Publish proposed 111(d) Plan & 30-day public comment period prior to hearing
- Response to Comments part of Final 111(d) Plan – Allow at least 45 days to prepare and finalize.

To Think About

- No complex rule ever passed with one council meeting
- Regional Haze technical workgroups started in 1998
- If EPA final rule delayed, may be impossible to promulgate rule in 2016.
- Additional time may be needed if EPA final rule is substantially different than as proposed.
- Plan to request extension?

Extension Request

If a state seeks an extension, must submit an initial plan with the following content by June 30, 2016:

- Description of plan approach and progress made in developing a complete plan
- Initial quantification of the level of emission performance that will be achieved through the plan
- Commitment to maintain existing measures that limit or avoid CO2 emission (e.g., RPS, unit-specific limits on operation or fuel utilization), at least until the complete plan is approved.

Extension Request (cont.)

- Comprehensive roadmap for complete the plan, including process, analytical methods, and schedule (including milestones) specifying when all necessary plan components will be complete (e.g., projection of emission performance; implementing legislation, regulations and agreements; necessary approvals)
- Identification of existing programs state intends to rely on to meet its goal
- Executed agreements (s) with other states (e.g., MOU), if regional approach is being pursued

Extension Request (cont.)

- Commitment to submit a complete plan by the applicable required date and actions the state will take to show progress in addressing incomplete plan components
- Description of steps already taken toward developing complete plan
- Evidence of opportunity for public comment on the initial plan
- Not much difference between info necessary for extension and actual plan

Oklahoma 111(d) Plan Preparation

- Unlike other 111(d) plans and routine implementation plans done in past
- Not a traditional State Implementation Plan
- Jurisdiction of Corporation Commission

  Energy Efficiency, Demand Side Management, Renewable Energy and Renewable Energy Credits, Southwest Power Pool
- Role of Department of Environmental Quality

Oklahoma Workgroup Structure

- Technical Workgroup led by Air Quality Division of DEQ
  - Those companies with units affected by the rule
- Broader stakeholder process led by the Secretary of Energy and Environment
  - Includes all other interested parties
- Suggestions for better structure?

Suggested Oklahoma Pathway

- Currently working on comments to proposal for submittal by December 1st.
- Continue working with Corporation Commission and affected/interested parties
- Meet with smaller technical workgroup between now and time rule becomes final as necessary
- Participate in broader stakeholder meetings in conjunction with SOEE as necessary
- Develop realistic timeline after rule goes final and legal challenges appear to be resolved

Issues Yet to be Addressed

- Opposition to plan
  - Cap and Trade Possibility
  - Plan will have to span presidential administrations and possible Congressional changes
- MISO and SPP reliability concerns
- Legal uncertainty
- Enforceability across jurisdiction boundaries
- Consequences unclear

Cases Challenging GHG Regulation Under 111(d)

- *State of West Virginia, et al. v. EPA*, No. 14-1146 (D.C. Cir., Aug. 1, 2014)
- *Murray Energy Corp. v. EPA*, No. 14-1112 (D.C. Cir., June 18, 2014)
- *Murray Energy Corp. v. EPA*, No. 14-1151 (D.C. Cir., Aug. 15, 2014)
- *Murray Energy Corp. v. EPA*, No. 5:14-cv-00039 (N.D.W.V., May 23, 2014)

Sample List of Technical Issues for Comment

- As proposed, the rule is unworkable.
- The timeline for implementation is unrealistic. Recommend delayed implementation to allow sufficient time for resolution of court challenges.
- While proposed rule is flexible, it is overly complicated and does not ensure CO2 emissions will be reduced.
- Obvious inequities in state goals. States with diversified generation have much more stringent goals than those with only coal. This could result in higher implementation costs in those states.
- EPA should calculate, publish and provide opportunity to comment on mass-based targets for all states.
- Interim goal is problematic, and EPA should provide milestones instead with only a final goal.

Sample List of Technical Issues for Comment (cont.)

- State goal inequities could contribute to interstate leakage.
- Satisfying enforceability requirements for plan is problematic.
- States should get credit for RE generation exported to another state. As proposed, states are responsible for CO2 emissions from fossil-fuel generation that is exported to another state, but do not automatically get credit for exported RE generation.
- EPA should minimize the amount of additional reporting that states and affected sources must do.
- Not all NGCC turbines should be considered available for re-dispatch. Older, less efficient units should be excluded.
- As proposed by FERC, the rule needs to include a "relief valve" when reliability issues arise.

Clean Power 111(d) Plan

Federal Clean Power Plan & Oklahoma's §111(d) Plan

The Air Quality Division, in cooperation with the Oklahoma Secretary of Energy & Environment and the Oklahoma Corporation Commission, is working to involve the public, state electrical utilities, and other stakeholders during the development process under EPA's Clean Power Plan.

What Greenhouse Gas Standards has EPA Proposed?

For New Power Plants: On January 8, 2014, the U.S. EPA published proposed New Source Peformance Standards (NSPS) under §111(b) of the Clean Air Act (CAA) for new fossil-fuel fired power plants (i.e., units constructed after the proposal date), which would set carbon pollution limits for individual units in terms of pounds of Carbon Dioxide (CO_2) per megawatt-hour. (79 FR 1429) The comment period for this proposal is closed. [Note that EPA also withdrew their previous (March 2012) NSPS proposal]. EPA is evaluating the comments received, and has indicated that the NSPS will be finalized in early 2015.

For Existing Power Plants: On June 2, 2014, EPA proposed emissions guidelines under CAA §111(d) to reduce carbon pollution (in the form of CO_2) from existing power plants. (79 FR 34728) On the same day, EPA separately proposed a standard for modified or reconstructed power plants to follow up on the standards (NSPS) EPA proposed for new power plants. (79 FR 34959)

EPA's proposed emissions guidelines would require the states to develop and implement a "§111(d) plan" to reduce CO_2 emissions from existing power plants. The proposal would set interim and final goals for each state in terms of pounds of CO_2 per megawatt-hour of total power produced by all fossil-fueled power plants in the state. EPA set each state's goal based on the state's current mix of power production and CO_2 emissions, applying what EPA considers average achievable reductions in CO_2 emissions rates. In setting the goal, EPA considered increased in-plant efficiencies, greater reliance on existing or expanded natural gas and renewable energy sources, and expanded end-use energy efficiency measures.

What are the timelines?

- EPA is receiving comments on the proposals for existing sources and for modified or resconstructed sources until October 16, 2014.
    - EPA expects to finalize the proposal for existing sources by June 2015.
      As proposed:
        - State plan submitted by June 30, 2016
            - Submittal process includes opportunity for public hearing and comment

Oklahoma's Clean Power Page

www.deq.state.ok.us/aqdnew/RulesAndPlanning/cleanpower111d

Proposed Standards

Timelines

State & Industry Roles

Presentations to Date

EPA's Comment Procedure Page

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  - EPA expects to finalize the proposal for existing sources by June 2015.
    As proposed:
    - State plan submitted by June 30, 2016
      - Submittal process includes opportunity for public hearing and comment
      - One-year extension available for single-state plan
      - Two-year extension available for multi-state plan
    - Interim goal covers 2020 to 2029
    - Final Plan should be fully implemented by 2030 so emission goal is met for 2030-2032 averaging period
- The comment period for the NSPS (new sources) ended on May 9, 2014
  - EPA has indicated that they expect to finalize the proposal in early 2015
    - The NSPS must be finalized prior to or simultaneous with the §111(d) emissions guidelines for existing power plants
  - NSPS would affect sources constructed after January 8, 2014

What are the State and Industry roles?

If the proposal is finalized in substantially its present form, the State will be required to develop, submit, and implement a plan to reduce the CO2 emissions rate from fossil-fueled power plants. If the state does not fulfill this requirement, EPA would step in and directly implement a federal plan, as indicated in the proposed rules.

Although EPA's clean power initiatives are still in the proposal stage, the projected timelines for development and implementation are rather short, considering the complexity of the issues. The state will be relying on the power industry, various state agencies, and other state-wide stakeholders to develop a plan that takes advantage of the flexibility provided in the proposal. Secretary of Energy & Environment Michael Teague and AQD have begun working with a broad group of stakeholders to keep all parties informed and focused on the potential issues and solutions.

What's the latest?

In addition to the information provided on EPA's Clean Power Plan web site, which has links to the proposed rules, EPA has provided several presentations on various aspects of the proposal. AQD also recently gave a presentation on DEQ's rulemaking process in case agency rule changes are ultimately required to implement a state §111(d) plan.

- EPA Webinar - State Goals Overview, June 25, 2014
- EPA Webinar - Meeting State Goals, June 26, 2014
- EPA Webinar - GHG EGU 111(d) Emission Guidelines - State Plan Implementation, June 24, 2014 (presented 7/1/14)
- EPA Presentation for OK - Clean Power Plan -- Reducing Carbon Pollution From Existing Power Plants, July 9, 2014
- EPA Presentation for OK - Calculating Oklahoma's Proposed State Goal, July 9, 2014
- DEQ-AQD Presentation - Oklahoma EGU 111(d) Plan & Rulemaking Timelines, July 9, 2014

AQD believes it is critical that the affected parties review the proposals, including the data and technical