Federal Climate Action Plan for Existing Power Plants: CAA §111(d)

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Overview

• Review Clean Air Act §111
• The Building Blocks
• MD’s Goal
On Sept. 20, 2013, the U.S. Environmental Protection Agency (EPA) announced its first steps under President Obama’s Climate Action Plan to reduce carbon pollution from power plants.

Power plants generate about one third of all greenhouse gas pollution in the U.S.

Clean Air Act recognizes the opportunity to build emissions controls into a source’s design is greater for new sources than for existing sources, so §111 has different approaches to standards for new and existing sources.
The Clean Air Act lays out distinct approaches for addressing new and existing sources under Section 111: a federal program for new sources and state programs for existing sources.

Section 111 (b) is the federal program to address new, modified and reconstructed sources by establishing standards of performance.

Section 111 (d) is a state-based program for existing sources. EPA establishes guidelines. States then design programs to fit their particular mix of sources and policies and get the needed reductions.
Clean Air Act §111(d)

- Allows EPA to establish guidelines for states to submit plans that set standards of performance for existing sources from a specific sector within the state.

- President’s Directive (6/25/13) requested EPA propose guidelines for existing power plants by June 1, 2014.

- EPA released a draft of the 111(d) rule in June.
EPA Proposal

• EPA proposed four building blocks for each state to establish the best system of emission reductions

• Rates are based on 2012 generation

• Building blocks create a framework of declining rates to be met from 2020 through 2030

• Individual building blocks do not have to be met as long as the end rate is met

• Final rate for 2030 will be carried forward indefinitely
Building Block 1 proposes to increase efficiency at coal plants by 6% based on work done by Sargent and Lundy. The EPA requests comment on 4% as the required efficiency improvement or other rates. Working with Maryland coal sources, have these improvements been made previously? Are these improvements possible? States that have no coal–fired sources have no reductions from this building block.
Building Block 2

- Building Block 2 redistributes generation from coal and oil so that 65-70% of fossil generation is now from combined cycle natural gas units to the extent possible.

- Building Block 2 is limited by the amount of combined cycle natural gas units in a state and how much redistribution is possible.
• Building Block 3 calculates a renewable energy goal for the state

• The methodology separates the nation into regions and averages the Renewable Portfolio Standard (RPS) for each region of states

• The average becomes the renewable energy target for the states in that region
Building Block 4

- Building Block 4 calculates an energy efficiency target for states
- States are separated into three groups based on their current level of energy efficiency implementation
- Then required to ramp up their EE programs based on their group
Rate to Mass Conversion

• EPA provided states with the opportunity to convert the rate based targets into mass based targets
  – Asked for comment on the methodology
  – Provided a fairly complex sample methodology

• Many states are considering whether to request EPA calculate the mass based targets for all states to ensure the conversion is equally stringent for all
Proposed Standards for MD

• MD’s 2012 rate is 2158

• The final rate for MD is 1187
Average change from 2012 baseline rate to 2030 goal is 33% (including renewables and at-risk nuclear in baseline).

- 45% or more decrease
- 44% to 39%
- 38% to 33%
- 32% to 27%
- 26% to 21%
- 20% or less decrease

% Change in Rate Based Goals