



Department of the Environment

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**



Clean Air Act §111

- 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





Clean Air Act §111 (b + d)

- 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



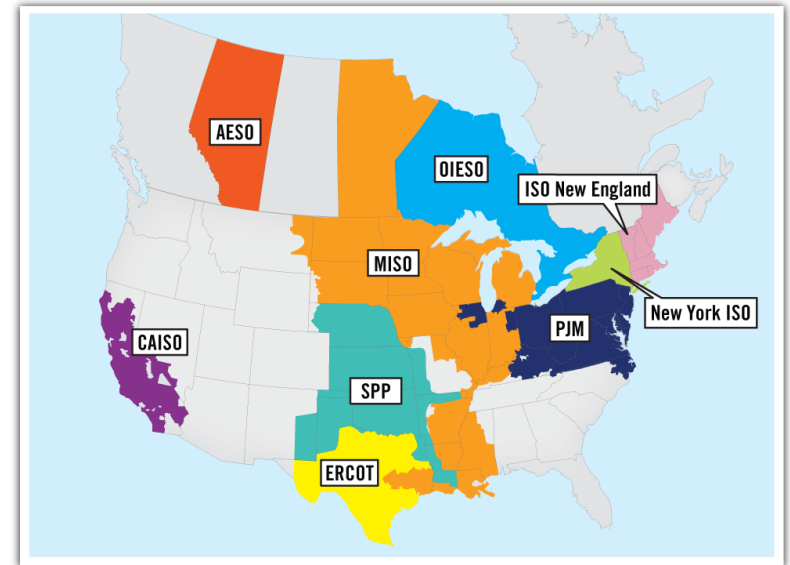
Clean Air Act §111(d)

- **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



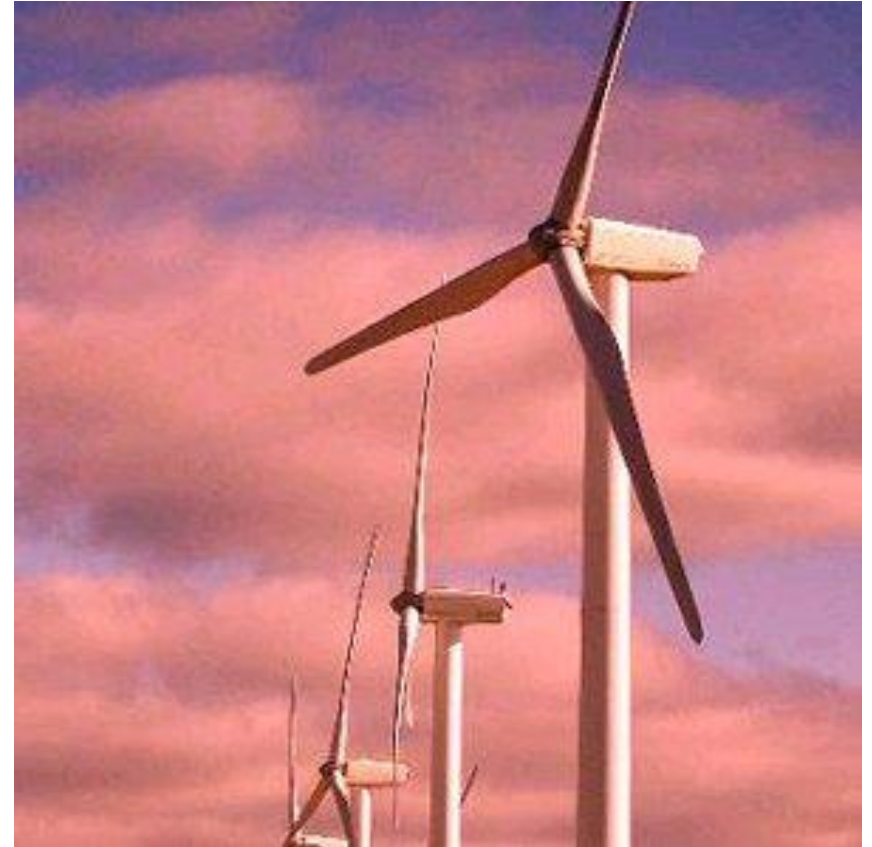
- Building Block 1 proposes to increase efficiency at coal plants by 6%
- Based on work done by Sargent and Lundy
- EPA requests comment on 4% as the required efficiency improvement or other rates
- Working with Maryland coal sources
 - **Have these improvements been made previously**
 - **Are these improvements possible**
- States that have no coal –fired sources have no reductions from this building blocks

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**



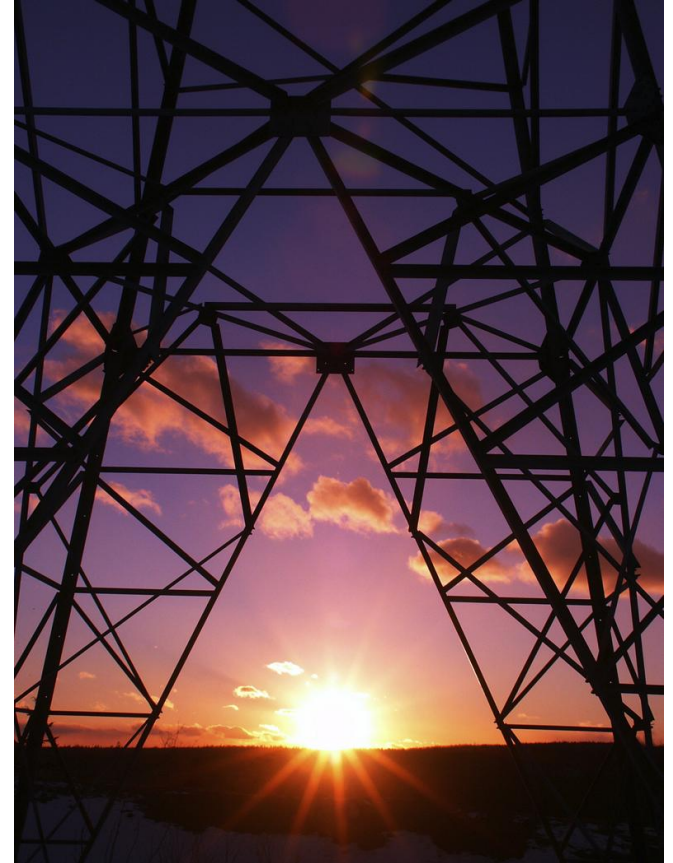
Rate to Mass Conversion

- **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**



Questions/Comments

