

Reducing Carbon Pollution from New Power Plants

Clean Air Act
Section 111(b)

NESCAUM Stationary Source & Permitting
Committee Meeting

April 2, 2014





Reducing Carbon Pollution From Power Plants

President's Directive to EPA:

Develop carbon pollution standards, regulations or guidelines, as appropriate, for:

1. **New power plants—111(b)**
 - Proposed on September 20, 2013
 - Published on January 8, 2014

2. **Modified and reconstructed power plants—111(b)**
 - Proposal: June 2014
 - Final: June 2015

3. **Existing power plants—111(d)**
 - Proposed Guidelines: June 2014
 - Final Guidelines: June 2015
 - State Plans due: June 2016



Clean Air Act Section 111

- Lays out different approaches for new and existing sources
 - **New sources under section 111(b)**
 - Federal standards for new, modified and reconstructed sources
 - **Existing sources under section 111(d)**
 - State programs for existing sources that are equivalent to federal guidelines



Clean Air Act Section 111(b)

Statutory Authority

- Clean Air Act (CAA) section 111(b) requires EPA to regulate new sources.
 - **Section 111(b) – Federal Program for New Sources**
 - The Administrator shall “establish **Federal standards of performance**” for “new sources within [the] source category.”
 - **“Standard of Performance”**
 - “A standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the **best system of emission reduction**, which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.”



BSER: Best System of Emission Reduction

Key Factors in BSER Determination For New Power Plants

- **Feasibility**
System of emission reductions must be technically feasible
- **Costs**
Costs of the system are reasonable
- **Size of reductions**
EPA may consider the amount of emission reductions the system would generate
- **Technology**
Designed to promote the implementation and further development of technology



Proposed Carbon Pollution Standards for New Sources

- **Natural gas-fired stationary combustion turbines:**
 - Standard based on performance of modern natural gas combined cycle (NGCC) units
- **Fossil fuel-fired boilers and IGCC Units:**
 - Standard based on new efficient coal units implementing partial CCS (roughly 30-50%)



Summary of Proposed Standards

		Proposed Limits (lb/MWh-gross)	<i>Taking comment on range of...</i>
Natural gas combined cycle	Large (> 850 mmBtu/hr)	1,000	950 – 1,100
	Small (≤ 850 mmBtu/hr)	1,100	1,000 – 1,200
Fossil Fuel-fired Boilers and IGCC (coal-fired)	12 operating month (1 year)	1,100	1,000 – 1,200
	84 operating month (7 years)	1,000-1,050 (in this range)	1,000-1,050 (same as proposal)



Proposed Applicability Criteria: Steam Generating Units and IGCC

- **1/3 Sales Criterion** on an annual basis
- Greater than **219,000 MWh net sales** to the grid, on an annual basis (equivalent to 25MW, annual basis)

EXEMPTIONS

- **10% Exemption**: 10% or less of heat input over 3 years is derived from a fossil fuel



Proposed Applicability Criteria: Combustion Turbines

- **1/3 Sales Criterion** on a 3-year rolling average
- Greater than **219,000 MWh net sales** to the grid, based on a **3-year rolling average** (equivalent to 25MW, annual basis)

EXEMPTIONS

- **10% Exemption**: 10% or more heat input over 3 years from fuels other than natural gas



Compliance & Reporting

- Compliance Period:
 - **12-operating month** rolling average basis; **or**
 - **84-operating month option** for IGCC and fossil fuel-fired boilers
- Reporting Requirements
 - **Quarterly electronic reports** through Emissions Collection and Monitoring Plan System (ECMPS) Client Tool, used for Part 75 reporting



Title V and PSD Impacts

- Title V fee requirements
 - **EPA requests comment** on proposals to address Title V fee issues (see p. 1493)
- No impact on PSD Tailoring Rule thresholds for Title V sources
 - **EPA requests comment** on whether your SIPs can be interpreted already to apply the Tailoring Rule thresholds to the NSPS prong or **whether you would need to revise your SIPs** (see p. 1488)



Public Process

- EPA held a **public hearing** on February 6, 2014.
- Comments on the proposed standard should be identified by **Docket ID No. EPA-HQ-OAR-2013-0495**.
- Comment period closes: **May 9, 2014**