



HARVARD LAW SCHOOL

Environmental Law Program
POLICY INITIATIVE

EPA's 111(d) Proposed Rule for Existing Power Plants

Harvard Electricity Policy Group

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Deference to EPA's Reasonable Interpretation of the Clean Air Act

The seminal case on judicial deference to an expert agency's reasonable interpretation of a statute was a Clean Air Act case. At issue in *Chevron v. NRDC* (US 1984) was EPA's interpretation of the term "stationary source."

"If the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute. . . . The question ... is whether the agency's answer is based on a permissible construction of the statute."

Limits on EPA's Interpretation

“If the agency cannot reasonably trace its action to a statute, it has no business acting. ... [W]hen reading a set of briefs or listening to oral argument, I sometimes wonder whether the agency consulted its lawyers only after it found itself in court.” – D.C. Circuit Court Judge David Tatel, speaking at a 2009 Environmental Law Institute gathering.

“When an agency claims to discover in a long-extant statute an unheralded power to regulate ‘a significant portion of the American economy,’ ... we typically greet its announcement with a measure of skepticism.” – Justice Scalia, writing for the majority in *UARG v. EPA* (US 2014).

Disputes over CAA Text: “Any Air Pollutant”

- *Massachusetts v. EPA* (US 2007) – “any air pollutant” in the Act means *any* air pollutant.
- *UARG v. EPA* (US 2014) - “any air pollutant” in different parts of the Clean Air Act can mean different things.

“[A] statutory term – even one defined in the statute – ‘may take on distinct characters from association with distinct statutory objects calling for different implementation strategies.’”

Disputes over CAA Text: “Any Air Pollutant”

The dissent in *UARG v. EPA* (US 2014) characterized the majority opinion as rewriting the statute to read:

—“any air pollutant *except for those air pollutants, such as carbon dioxide, with respect to which regulation at that threshold would be impractical or absurd or would sweep in smaller sources that Congress did not mean to cover.*”

Disputes over CAA Text: “Amounts” of Pollution

CAA “Good Neighbor Provision” – State air quality plans must– *“prohibit [] . . . any source or other type of emissions activity within the State from emitting any air pollutant in amounts that will (1) contribute significantly to nonattainment in, or interference with maintenance by, any other State... .”*

EPA v. EME Homer Generation (US 2014) – EPA can apportion responsibility to upwind States based on the cost of reductions each State can make, rather than on “amounts” that contribute significantly to air quality problems in other States.

New Source Performance Standards

- Section 111 of the Clean Air Act
- Purpose: to set standards “at the greatest degree of control attainable through the application of the Best System of Emission Reduction (BSER) which has been adequately demonstrated.” (1970 CAA Conference Report)
- Section 111(b): EPA determines BSER and sets performance standards for a source category.

Existing Source Performance Standards

- Section 111(d) is triggered when a “standard of performance ... would apply if such existing source were a new source.”
- EPA must establish a SIP-like procedure for States (referring to state air quality plans).
- Section 111(d): EPA determines BSER; States submit plans which “establish[] standards of performance for any existing source”

“Standard of Performance”

The heart of Section 111 is the “standard of performance” for a category of sources, defined as:

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 nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

Policy Overlay: Presidential Charge to EPA for 111(d) Rule

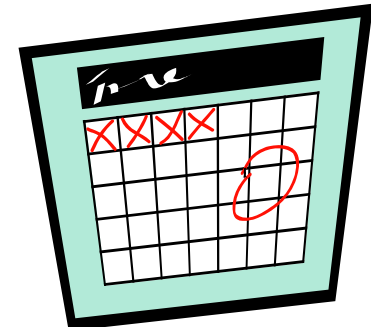
- Consult with states and stakeholders;
- Tailor regulations to reduce costs;
- Allow States to use market-based instruments and other flexibilities;
- Enable State reliance on multiple energy sources and technologies; and
- Maintain reliability and affordability.

Statutory Factors

- Factors for determining BSER (from “standard of performance” definition)
 - ✓ Results in an Achievable Emission Limitation; and is
 - ✓ Adequately Demonstrated, considering Cost,
 - ✓ Nonair quality health and environmental impacts, and
 - ✓ Energy requirements.
- In addition, Section 111(d) allows consideration of
 - ✓ “remaining useful life” and
 - ✓ “other factors”when setting standards for existing sources.

111(d) Proposal: Timeline

- EPA issues Final Rule **June 2015**
- Individual State plans due **June 2016**;
States may request 1-year extensions
- Extension deadline **June 2017**
- Multi-State plans due in **2018**
- Interim compliance period, **2020-2029**



Proposal: Rationale for BSER

“[T]he agency recognizes that the most cost-effective system of emission reduction for GHG emissions from the power sector under CAA Section 111(d) entails not only improving the efficiency of fossil fuel-fired EGUs, but also addressing their utilization by taking advantage of opportunities for lower-emitting generation and reduced electricity demand across the electricity system’s interconnecting network or grid.”

- EPA Clean Power Plan, preamble to proposed rule

Proposal: Starting Point

EPA's power plant proposal aims to reduce the carbon intensity of each State's existing fossil-fuel fired generators

2012 Carbon Intensity Snapshot

$$\frac{\text{CO}_2}{\text{MWh}} = \frac{\text{Emission Rate} \times \text{MWh (Coal, NGCC, O/G Steam)} + \text{Other Emissions}}{\text{Total MWh (Coal + NGCC + O/G Steam + Other)}}$$

Proposal: Role of BSER

- EPA proposed a 2030 carbon intensity goal for each State based on application of BSER.
- EPA proposed an interim carbon intensity goal, to be met on average over 2020-2029 period, based on a ramp-up of BSER

Proposal: BSER Determination

Best System of Emission Reduction

Block 1	Reduce emission rate at coal-fired EGUs
Block 2	Increase utilization of existing NGCC plants
Block 3	Increase renewable generation
Block 4	Increase end-use energy efficiency

111(d) Proposal: BSER, Applied

Calculating the 2030 Carbon Intensity Goals

	<u>Emission Rate</u>	<u>MWh Generation</u>
Coal	Block 1	<i>Block 2</i>
NGCC	--	<i>Block 2</i>
O/G Steam	--	<i>Block 2</i>
Nuclear	--	Block 3
Renewables	--	<i>Block 3</i>
Efficiency	--	<i>Block 4</i>

Proposal: Carbon Intensity Goals

Calculating a 2030 State Goal

$$\frac{\text{CO}_2}{\text{MWh}} = \frac{\text{Emission Rate} \times \text{MWh (for Coal, NGCC, O/G Steam)} + \text{Other Emissions}}{\text{MWh Fossil} + \text{MWh RE} + \text{MW Nuclear} + \text{MWh Nuclear} + \text{MWh EE}}$$

- A State may convert its 2030 rate to a mass-based goal
- If a State chooses the rate-based goal, it may convert MWh EE to avoided emissions and credit EE in the numerator

Proposal: BSER Options

BSER Option #1:

- EPA bases stringency of state goals on four “strategies” being used by states and companies to reduce CO2 emissions from EGUs.
- These strategies are “building blocks” or components of BSER.

Alternative BSER Option #1:

- EPA bases stringency on what can be done to reduce EGU emissions: improve heat rate or reduce utilization.
- Measures in blocks 2-4 are not components of BSER but are used to quantify reductions achievable from shifting, reducing utilization.
- States can opt to employ strategies inside or outside an EGU’s fence line

Proposal: BSER Options (cont.)

EPA Stated Benefits of BSER Option #1/ Alternative :

- Reflects highly integrated nature of source category
- Tracks current trends in the electricity sector
- Keeps costs down

EPA Also Proposed BSER Option #2:

- EPA bases stringency of state goals on blocks 1 and 2.
- This results in smaller reductions, at higher cost.

Proposal: Compliance

- A State is not limited to the 4 building blocks but can implement any measure that reduces carbon pollution from existing EGUs
- States can negotiate different types of agreements –
 - credit trading agreements – each State meets its own standard but agrees to trade EE, RE credits with other States
 - allocation agreements – States agree on how to treat interstate effects of dispatch and energy efficiency
 - multi-state plans – States collectively meet a single compliance target

Questions?

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