

EPA's Proposed Existing Source Performance Standards

Presentation to the
Surface Transportation Board
Rail Energy Transportation Advisory Committee

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Background

- 2007 - Supreme Court decision in *Massachusetts v. EPA*: GHGs are “air pollutants” that EPA can regulate under the Clean Air Act if it makes an “endangerment finding.”
- 2009 - endangerment finding.
- 2010 - first motor vehicle GHG regulation (others have followed).
- 2011 – GHG permitting program for industrial/large manufacturing/electric generators becomes effective. Reversed in part by Supreme Court.
- 2013 – EPA proposes CO₂ performance standards for new coal and gas generators.
- 2014 – EPA proposes CO₂ performance standards for existing coal and gas generators.

Other EPA Rules Affecting Power Sector

- Cross State Air Pollution Rule – compliance 2015/2017.
- Mercury and Air Toxics Standards (MATS) – compliance 2015/16.
- Cooling Water Intake Structures rule – compliance 2022.
- Coal ash rule – still proposed.
- Effluent Guidelines – still proposed.
- Ambient Air Quality Standards.

Major Elements of Rule

- Each state must meet an EPA-established power-sector CO₂ emissions rate.
- Different rates for different states. Each state's rate is determined by applying 4 “building blocks” to the state's 2012 electric generation resource mix.
- State plans meeting EPA emission rates due in June 2016, with possibility of one or two year extension. EPA approval one year thereafter.
- Compliance beginning 2020.

Building Blocks

For each State, take 2012 resource mix and make the following changes:

- Block 1: Assume all coal units improve generation efficiency – and thus lower CO₂ emissions per KWh – by 6%.
- Block 2: Increase natural gas generation (and reduce coal generation) by increasing capacity factors of existing combined cycle natural gas units to 70% and under-construction combined cycle units to 55% (unless coal zeroes out first).

Building Blocks

- Block 3:
 - A. Assume all under-construction nuclear comes on line + assume “at-risk” nuclear (assumed to be 6% of each state’s total current nuclear) is not retired.
 - B. Assume significant increases in use of renewable energy.
- Block 4: Assume significant increases in demand-side resources - electricity consumption in 2030 to be about 11% less than BAU (national average), little more than today.

Establish State Power-Sector CO2 Emission-Rate Goals

- “Interim” goals are set for 2020, based on blocks 1 and 2.
 - What would the state’s power sector CO2 emissions rate (lbs. CO2/MWh) have been in 2012 had blocks 1 and 2 been in place? That is the 2020 goal.
- “Final” requirements for 2030 based on all 4 blocks.
- Annual 2021-2029 goals are phased in from “interim” to “final.”
- States have “flexibility” to meet emissions rate anyway they want/can. Do not have to make the building block changes. But must meet the rate.

Power Sector Coal Generation

	2012	2016	2020	2025	2030
Coal GW	302	259/220	255/195	254/193	254/191
Coal GWh	1,478	1,513/ 1,510	1,606/ 1,302	1,650/ 1,250	1,652/ 1,216

EIA projections without ESES but with MATS/EPA projections with ESES and MATS, compared with EIA report of 2012 actual. MATS compliance deadline is 2015-16; ESPS compliance deadline is 2020.

Source: 2012 figures from EIA AEO2014 Early Release Overview. Other figures from AEO2014 and EPA spreadsheet showing Integrated Planning Model run for state compliance scenario, option 1, ESPS.

Power Sector Coal Use

EPA Projections

(1,000,000 tons)

	2009	2013	2016	2020	2025	2030
U.S.	928	861	747	606	579	565
App.	246		147	91	74	69
Interior	129		202	222	221	220
Western	553		398	292	284	277

2016, 2020, 2025, and 2030 figures reflect compliance with ESPS and MATS.

Source: 2009 figures from EPA's Regulatory Impact Analysis for the Mercury and Air Toxics Standards rule (net of figures for waste coal and imports); 2013 figure from EIA; other figures from EPA spreadsheet of model runs for ESPS)

Litigation Expected

- Does EPA have authority at all to set performance standards for coal generators?
- Is EPA impermissibly intruding on state authority?
- Can EPA set performance standards based on “outside the fence” measures?
- Has EPA gone too far under recent Supreme Court case that partially overturned EPA’s greenhouse gas permitting regulations?

Timing

- Rule expected to be finalized June 2015.
- Proposed rule is already subject to three different legal challenges.
- Final rule will be appealed to D.C. Circuit. 1 1/2 -2 years to decide.
- 1-3 years for states to submit plans and 1 year for EPA to approve or adopt federal plan.