

The Proposed Clean Power Plan Rule: What Does It Say and What Does It Mean for Arkansas?

Teresa Marks
Director, ADEQ



The goals of the proposed plan: Interim and Final

EPA assigned an **interim emissions goal** and a **final emissions goal** to each state for their existing power plants.

*The targets were set in two phases: one beginning in **2020** and another in **2030**.

States meet their **interim** goals through an adjusted average emissions rate.

*Existing in-state power plants' emissions averaged over a 10-year period from **2020 to 2029**.

Each state must meet its **final** goal on a three-calendar year rolling average starting **January 1, 2030**.

BSER: EPA's Four "Building Blocks"

According to EPA's proposal, the interim and final state emission goals were developed based on its definition of the "best system of emissions reduction" (BSER) for CO₂ emissions from existing power plants.

EPA calculated the goals by taking into account four categories of potential emission reductions, or "building blocks", which **taken together** represent the BSER. These carbon emission-reduction measures include:

1. Improving efficiency at individual coal-fired units;
2. Increasing use of existing natural gas units in place of higher-emitting coal-fired units;
3. Expanding low- and zero- emissions generation, such as renewable energy sources or nuclear energy; and
4. Implementing demand-side efficiency measures.

Arkansas Snapshot

For our state's power plants under consideration in the rule, we had a total of 37 million metric tons of CO₂e GHG emissions in 2012¹.

The change in carbon pollution in Arkansas from the power sector from 2005 to 2012 was a 35% increase².

Our 2012 carbon emission rate, as calculated by EPA, was 1,634 lbs/MWH³.

Of our sources of electricity produced in AR in 2012, the breakdown was as follows:

Coal- 43.7%

Natural gas- 26.3%

Nuclear- 23.8%

Renewables- 5.9%⁴

<http://ghgdata.epa.gov/ghgp/main.do#/facility>

U.S. Energy Information Administration. "U.S. Electric Power Industry Estimated Emissions by State: 1990-2012." State Historical Tables EIA-767, EIA-906, EIA-920, and EIA-923. <http://www.eia.gov/electricity/data/state/> (accessed May 12, 2014).

Goal Computation Technical Support Document, EPA, Office of Air and Radiation (June 2014).

Aggregated from the following for 2012. U.S. Energy Information Administration. "Net Generation by State by Type of Producer by Energy Source: 1990-2012." State Historical Tables EIA-906, EIA-920, and EIA-923. <http://www.eia.gov/electricity/data/state/> (accessed May 9, 2014).

EPA's Proposal for Arkansas's Goals

To develop each state's interim and final emissions goals, EPA applied each building block of the BSER to each state's emissions and generations for 2012.

As stated, according to EPA's calculations, Arkansas's intensity-based emission standard for 2012 was 1,634 lbs/MWh.

After applying the four building blocks, Arkansas's interim goal (the average for 2020-2029) was set at 968 lbs/MWh.
*That calculates out to a 41% reduction in the emission rate compared to 2012.

Application of the four building blocks yielded a 2030 state goal of 910 lbs/MWh.
*That calculates out to a 44% reduction in the emission rate compared to 2012.

Only 5 other states have a 2030 goal percent reduction greater than AR.

The Building Blocks

According to EPA, use of the Building Blocks is designed to promote **flexibility** in reaching each states target.

Does each state have to utilize each building block as specified in EPA's proposal?

No. A state can develop a plan that achieves more or less reductions from each of the four building blocks (or none of them at all, i.e., an alternative plan), as long as the state ultimately reaches its final CO₂ emission rate reduction goal for its combined affected electric generating units.

Available CO₂ Reduction Options for Implementation

There is a wide range of CO₂ reduction options that may count towards compliance. These include:

1. Heat rate improvements (process & equipment) at affected EGUs;
2. Fuel switching/co-firing (natural gas & biomass) at affected EGUs;
3. Coal and oil/gas steam plant retirements;
4. Shifting dispatch from higher emitting to lower/zero emitting;
5. End-use energy efficiency
6. Reductions in transmission & distribution losses; and
7. Carbon capture and storage.¹

8. ¹ Clean Power Plan MISO June 19, 2014 webinar, Bipartisan Policy Center.

EPA's approval of our state plan

EPA is proposing to evaluate and approve state plans based on four general criteria:

- Enforceable measures that reduce EGU CO₂ emissions;
- Projected achievement of emission performance equivalent to the goals established by the EPA, on a timeline equivalent to that in the emission guidelines;
- Quantifiable and verifiable emission reductions; and
- A process of biennial reporting on plan implementation, progress toward achieving the CO₂ goals, and implementation of corrective actions, if necessary.

Deadlines

EPA will issue its final guidelines/goals in June 2015.

State plans are currently due on June 30, 2016.

However, EPA is proposing a two-phase submittal process for **individual** state plans.

1. Required components submitted on June 30, 2016.
2. Complete plan submitted by June 30, 2017.

If a state develops a plan that includes a **multi-state** approach, it would have until June 30, 2018 to submit a complete plan.

States participating in a multi-state plan may submit a **single joint** plan on behalf of all the participating states.