

Clean Power Plan: Frequently Asked Questions

Legislative Energy Commission

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In 2015, the U.S. Environmental Protection Agency (EPA) issued its final Clean Power Plan rule regulating carbon dioxide (CO₂) emissions from existing power plants, following a draft plan issued the year before. This FAQs document describes the Clean Power Plan as issued by EPA. However, due to a legal challenge (also described below), the rule is not currently being enforced, and it could be changed or overturned by the courts.

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1. What is the Clean Power Plan?

The Clean Power Plan establishes the first national standards to limit greenhouse gas emissions from existing power plants, the nation's largest source of greenhouse gases. (The electric sector contributed 31% of greenhouse gas emissions nationwide in 2013, and the same portion in Minnesota in 2012).¹

With the Clean Power Plan, EPA established national performance standards for existing coal and natural gas power plants, using its authority under section 111(d) of the Clean Air Act. EPA then translated the performance standards into unique state-level goals based on each state's mix of coal and gas power plants. States are given interim goals (three periods between 2022 and 2029) and final goals (2030 and beyond). The goals are expressed in two ways – either rate-based (CO₂ emitted per megawatt-hour of power generated) or mass-based (pounds of CO₂ emitted by power generation) – and states must choose which system they wish to use.

States must develop implementation plans, outlining how they will comply with the goals, and submit the plans to EPA for approval. EPA is also developing a federal implementation plan, which will be used in any state that does not develop its own plan or whose plan EPA determines is not adequate.

¹ US Environmental Protection Agency. "Sources of Greenhouse Gas Emissions."

<https://www3.epa.gov/climatechange/ghgemissions/sources.html>. Accessed April 4, 2016.

Minnesota Pollution Control Agency. "Greenhouse Gas Emission Reduction: Biennial report to the Minnesota Legislature." January 2015.

A state body will lead Clean Power Plan implementation in each state. In Minnesota, this body is the Pollution Control Agency (MPCA). For more information from the MPCA on its efforts, visit <https://www.pca.state.mn.us/clean-power-plan-minnesota>.

2. Where does the Clean Power Plan stand in the courts?

In February 2016, the Supreme Court halted the implementation of the Clean Power Plan until a legal challenge is resolved.

The Clean Power Plan has been challenged by 29 states and dozens of corporations and industry groups, which assert that the Clean Air Act does not give EPA authority to regulate carbon dioxide emissions in the way it has. The challengers also asked for a stay on the implementation of the rule while the case moves through the courts. In January, a 3-judge panel of the DC Circuit Court agreed to hear the case (and to expedite it) but declined to stay the rule in the meantime. This question was then elevated to the Supreme Court, which granted the stay in a 5-4 vote on February 9.

The Supreme Court's action was not a ruling on the legality of the Clean Power Plan. The legal challenge is scheduled to be heard in the DC Circuit Court in June, and the Circuit Court's decision is almost certain to be appealed to the Supreme Court. The courts' rulings could uphold the rule entirely, strike it down entirely, or strike down portions of the rule and require EPA to address the flawed portions. If there is a 4-4 tie in a Supreme Court without Justice Scalia, the Circuit Court's decision would stand, but it would not set legal precedent.

The first Clean Power Plan filing from states was set to be due in September 2016 (see #5, below). This due date is suspended because of the stay. If the rule is upheld, depending on the timing of court decisions, additional deadlines may be shifted back. A timeline shift may not have a huge impact in the long-term, since emission reductions are not required until 2022. However, the rule's implementation would likely be delayed until there is a new president and a new Congress, who could change, repeal or neglect to enforce the rule.

As of early April, 20 states had suspended their implementation planning activities while the case proceeds.² In Minnesota, planning has continued. The Minnesota Pollution Control Agency has stated that it expects the Clean Power Plan will be upheld and anticipates the implementation timeframe could be compressed when that happens, so has continued its planning activities in order to be prepared.

The following sections describe the Clean Power Plan as issued by EPA in 2015.

3. How much would the Clean Power Plan reduce emissions?

EPA has said that by 2030, the standards would reduce carbon emissions 32% from 2005 levels. This talking point uses the year 2005 as a basis of comparison, perhaps because it is a common baseline year in other greenhouse gas emission reduction policies and discussions. However, EPA uses 2012 baseline data to set emission targets in the rule itself.

² E&E Publishing. "E&E's Power Plan Hub." http://www.eenews.net/interactive/clean_power_plan. Accessed April 4, 2016.

The actual degree of emission reduction may depend upon whether states choose to regulate the rate of CO₂ emitted per megawatt-hour of power generated (rate-based regulation) or the simple amount of CO₂ emitted (mass-based regulation). EPA gives states targets for both systems. Each state must choose which it will use, and the two approaches would not necessarily result in equal emissions reductions.

The amount that energy demand grows between now and 2030 could also have an impact on the amount that emissions are reduced.

4. What is required of Minnesota?

Below is EPA's table showing its calculation of Minnesota's historic CO₂ emissions and the state's Clean Power Plan goals (both rate- and mass-based options).

MINNESOTA ³		
	CO ₂ Rate (lbs/Net MWh)	CO ₂ Emissions (short tons)
2012 Historic ⁴	2,033	28,263,179
2020 Projections (without CPP)	1,658	30,734,566
	Rate-based Goal	Mass-based Goal (annual average CO ₂ emissions in short tons)
Interim Period 2022-2029	1,414	25,433,592
Interim Step 1 Period 2022-2024	1,535	27,303,150
Interim Step 2 Period 2025-2027	1,383	24,868,570
Interim Step 3 Period 2028-2029	1,277	23,476,788
Final Goal 2030 and Beyond	1,213	22,678,368

At 1,213 lbs/MWh, Minnesota's rate-based goal is the 13th least stringent of all states.

Nearly 40 electric generating units (EGUs) in Minnesota are regulated under the Clean Power Plan.⁵ In addition, Minnesota utilities own and/or are supplied by affected generating units located in other states.

³ US Environmental Protection Agency. "Clean Power Plan: State at a Glance, Minnesota." <http://www3.epa.gov/airquality/cpptoolbox/minnesota.pdf>. Accessed March 28, 2016.

⁴ EPA made adjustments to the 2012 baseline, because in 2012, Unit 3 at Xcel's Sherburne County (Sherco) coal-powered generating plant was offline due to an accident, so the year's actual carbon emissions level was not representative of an average year.

⁵ Minnesota Pollution Control Agency staff. April 8, 2016.

5. What is the timeline going forward?

The following timeline was issued in the 2015 rule, but it will likely be changed after a final court ruling on the Plan.

September 2016	States must submit an implementation plan to EPA, or may make an initial submission requesting an extension. If any state does not submit a plan or an extension request, the federal implementation plan is triggered, and EPA would have the plan in place in that state within a year. <i>This deadline is suspended due to the legal stay on the Clean Power Plan, and the following deadlines are in question.</i>
September 2017	States that received an extension in 2016 must file an update, including any draft regulations or legislation needed and a comprehensive roadmap with a schedule and milestones for completing the plan.
September 2018	Final plan is due, and any legislation, rulemaking and funding needed to implement it must be in place. The federal plan is triggered if a state does not submit an adequate plan.
July 1, 2021	Milestone (status) report due.
2020-2021	Clean Energy Incentive Program: States can give emissions credits to incentivize early investments in wind and solar generation and demand-side energy efficiency measures in low-income communities. States' participation in this program is optional.
2022-2024	States must meet Interim Step 1 goals.
2025-2027	States must meet Interim Step 2 goals.
2028-2029	States must meet Interim Step 3 goals.
2030 and beyond	States must meet final goals. Reports are due every two years after 2030.

6. How did EPA determine the state targets?

EPA's calculations were based on three building blocks:

1. Improving efficiency within coal plants. This relies largely on operation and maintenance improvements rather than equipment upgrades.
2. Increasing generation at existing natural gas combined cycle (NGCC) plants and reducing generation from fossil steam plants. EPA assumed NGCC plants would run at 75 percent of their summer capacity.
3. Increasing zero-emitting renewable generation and reducing generation from fossil fuel plants.

Using these building blocks, EPA established national performance standards (emission rates) for coal- and natural gas-fired power plants. EPA then used the national standards to create rate-based goals for each state, based on existing power generation in the state. Finally, EPA converted the rate-based state goals into mass-based goals. States must choose either a rate or mass target option.

For more information on how the state targets were set, see EPA's fact sheet at <https://www.epa.gov/sites/production/files/2015-08/documents/fs-cpp-state-goals.pdf>.

7. How can a state meet its target?

States have flexibility in how to achieve emissions reductions. EPA applied the three building blocks described above only for making the state targets; states can use any combination of these and/or other measures to achieve their targets. Additional measures could include efficiency improvements at power plants other than coal plants, fuel switching from coal to natural gas or biomass, increasing efficiency in the use of electricity, new or updated nuclear generating capacity, and other options.

States may choose whether to place requirements directly on affected electricity generating units (called an "emission standards plan") or to have a mix of measures that may apply to generators and/or other entities (called a "state measures plan"). Either way, states must demonstrate that their approach will get the required emissions reductions from affected generating units on the required timeline.

8. Is emission trading allowed?

Trading is encouraged in the rule, similarly to how pollutants such as sulfur dioxide are traded under other air regulations. Trading is often cited as a way to keep compliance costs down.

Affected electric generating units can trade within a state or among states that choose the same approach (rate-based or mass-based). To be "trading ready," states must meet certain requirements, such as having an EPA-approved or EPA-administered trading system. The federal implementation plan is expected to be trading ready.

9. Does the Clean Power Plan take reliability concerns into account?

EPA cites several features that it says should minimize any potential impacts on reliability:

- Compliance does not start until 2022, and targets ramp down over time, allowing time for planning and investment.
- States and power generators have flexibility in how they will comply, including the option to trade within and among states.
- States must demonstrate in their implementation plans that they have considered reliability issues.
- A state can seek a revision to its plan if unanticipated or significant reliability challenges arise.
- There is a “reliability safety valve” allowing an affected power plant to provide reliability-critical generation notwithstanding emissions constraints that would otherwise apply.

Additional sources

Center for Climate and Energy Solutions. “Q&A: EPA Regulation of Greenhouse Gas Emissions from Existing Power Plants.” <http://www.c2es.org/federal/executive/epa/q-a-regulation-greenhouse-gases-existing-power>.

Litz, Frank. Center for Clean Air Policy. “Clean Power Plan Stakeholder Webinar.” September 17, 2015. <https://mpca.webex.com/mpca/lr.php?RCID=3183542160744ac9b7f4c78f0e9105d3>.

US Environmental Protection Agency Clean Power Plan. 80 Fed. Reg. 64661. October 23, 2015.

US Environmental Protection Agency. “Clean Power Plan – Technical Summary for States.” <http://www3.epa.gov/airquality/cpptoolbox/technical-summary-for-states.pdf>.

US Environmental Protection Agency. “Fact Sheet: Overview of the Clean Power Plan.” <http://www.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan>.