

[US Environmental Protection Agency Effort to Repeal Clean Power Plan](#)

Proposes to repeal the Obama-era Clean Power Plan over concerns about US Environmental Protection Agency jurisdiction, regulatory overreach, and harm to the coal industry.

Updated last **February 12, 2018**



WHAT IT DOES

The rule “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” also known as the Clean Power Plan (CPP), was established on August 3, 2015 by the US Environmental Protection Agency (EPA) under the Obama administration to reduce carbon dioxide (CO₂) emissions from the existing power sector. On October 16, 2017, in response to [Executive Order 13783](#), the EPA published a [proposed rule](#) to repeal the policy on the grounds that the CPP exceeded the EPA’s authority.

The EPA leadership under the Trump administration justified the repeal of the CPP as consistent with their interpretation of [Section 111\(d\)](#) of the [Clean Air Act \(CAA\)](#). Under this interpretation, the “[best system of emission reduction](#)” (BSER) for pollutants is limited to measures that can be applied to or at an individual stationary source. Under EPA’s current interpretation, this prevents the EPA from setting standards based on emission reductions “beyond the fence line” of power plants, for instance by shifting generation from coal-fired plants to lower CO₂-emitting natural gas plants or renewable energy sources.

The repeal of the CPP will make it [more difficult](#) for the US to curb its national greenhouse gas (GHG) emissions, which the EPA had previously established are dangerous pollutants that contribute to climate change. Projected impacts associated with climate change include economic costs from public health risks, property and ecological damages, and expenses incurred from adaptation policies. However, the repeal will [likely benefit](#) stakeholders that would have faced increased regulatory pressure and compliance costs from the CPP, such as coal power generators and their customers.

BACKGROUND

In the 2007 US Supreme Court case [Massachusetts v. EPA](#), the Court ruled 5-4 that the EPA had jurisdiction to regulate GHGs under the Clean Air Act (CAA) if they are found to be air pollutants. In December 2009, the EPA issued an [endangerment finding](#) that stressed the long-lasting negative impacts that greenhouse gas pollution has on human health and the environment, such as increases in food and water-borne pathogens, changes in air quality, and changes in extreme weather events.

For the CPP, the EPA used Section 111(d) of the CAA to establish CO₂ emission performance rates for existing fossil fuel-fired steam-electric generating units and natural gas-fired combined cycle generating units. Section 111(d) of the CAA [directs](#) the EPA to determine the “best system of emission reduction” (BSER) for pollutants emitted by existing sources, taking into account cost, non-air quality health, environmental impacts, and energy requirements. States then set standards based on the BSER and submit their plans to the EPA for approval. This division of labor is consistent with the “[cooperative federalism](#)” model of the Clean Air Act.

The EPA created the CPP as part of President Barack Obama’s 2013 [Climate Action Plan](#). In that document, President Obama directed the EPA to write a federal rule limiting carbon dioxide emissions from new and existing power plants. In order to achieve the desired carbon emissions targets, the EPA calculated that the US power sector needed to reduce its CO₂ emissions by 32% from

2005 levels. To that end, the EPA identified three building blocks for BSER under the CPP. The first building block involves reducing the carbon intensity of existing power plants by improving the heat rate, or the amount of energy used to produce power. The second and third building blocks require generation shifting, or substituting electricity generation from coal-fired plants to lower-emitting existing natural gas plants or renewable energy sources. New natural gas plants would be covered separately under Section 111(b) of the CAA.

The final version of the CPP was announced on August 3, 2015, and published in the *Federal Register* on October 15 of the same year. However, 27 states, led by West Virginia, along with industry and labor groups [challenged the EPA](#) on the grounds that the CPP was a violation of the CAA and unconstitutional. In February 2016, the US Supreme Court [prohibited the EPA](#) from enforcing the CPP, pending a ruling by the US Court of Appeals for the District of Columbia Circuit on the plan's legality. On March 28, 2017, President Donald Trump issued Executive Order 13783, which directed federal agencies to review actions that would put unnecessary burden on the domestic development of energy resources, spurring the EPA to reconsider the CPP. Accordingly, the D.C. Circuit Court agreed to suspend legal proceedings on the CPP.

RELEVANT SCIENCE

Environmental science

- *Greenhouse gases (GHGs)*: GHGs are gases that allow solar radiation to pass through to the Earth's surface, but block outgoing longwave radiation. In doing so, GHGs trap heat energy from the sun and warm the planet's surface, a process known as the "[greenhouse effect](#)." This process is crucial to maintaining Earth's habitable, stable temperatures, but anthropogenic emissions have increased the amount of CO₂ released into the atmosphere at an unprecedented rate. Between 1997 and 2015, the global surface [warming](#) trend was approximately 0.14 degrees Celsius per decade. By implementing policy to curb greenhouse gas emissions, nations are trying to mitigate, avoid, and adapt to the [consequences](#) associated with a changing climate. Carbon dioxide is a GHG and accounted for 82% of U.S. greenhouse gas emissions in [2013](#). Other examples include methane, nitrous oxide, ozone, and fluorinated gases. Fossil fuel-fired electric generating units are the [largest](#) stationary sources of GHG emissions in the U.S., primarily in the form of CO₂.
- *Carbon dioxide (CO₂)*: CO₂ is the main greenhouse gas emitted from fossil fuel combustion. For centuries, the global atmospheric CO₂ concentration did not peak above 300ppm. In 2018, it has reached about [403ppm](#). The increase in atmospheric CO₂ is contributing significantly to climate change and rising global temperatures.
- *Carbon cycle*: Carbon on Earth moves through short-term and long-term [cycles](#). In the short-term cycle, carbon is transferred between the biosphere, ocean, and atmosphere, generally through respiration and photosynthesis. Carbon from the short-term cycle eventually moves into rock reservoirs in the lithosphere or dissolves into the ocean, where it becomes part of the long-term cycle. The long-term cycle transfers carbon between the lithosphere, ocean, and atmosphere over many thousands of years. By burning fossil fuels, [humans](#) are increasing the rate that carbon moves from long-term sinks into the short-term cycle, releasing carbon from reservoirs and directly adding it to the atmosphere as carbon dioxide.
- *Climate change*: Climate change occurs partially as a result of increased atmospheric CO₂ levels. It is associated with rising temperatures, rising sea levels, reduced sea ice extent, and more extreme weather events, among other environmental [impacts](#). These changes have implications on public health, ecological systems and the [economy](#). Impacts of climate change on [human health](#) include injuries; fatalities and mental health impacts from severe weather; increased incidence of respiratory allergies, asthma, and cardiovascular disease; heat-related illness and death; forced migration and civil conflict; changes in vector diseases; increase of diseases associated with poor water quality; and malnutrition associated with food and water shortages. Climate impacts on [ecosystems](#) include extinction risks, forced migration of species, food web disruptions, and increased species and ecosystem vulnerability.

Engineering

- *Fossil fuel-fired electric generating units (EGUs)*: Power plants that use fuel from deposited hydrocarbon sources, such as coal or natural gas, to generate electricity.
 - *Fossil fuel-fired [steam-electric generating units](#)*: Fossil fuels (such as coal) are burned to heat water into steam. The steam spins a turbine, which generates an electric current.
 - *Gas-fired [combined-cycle generating units](#)*: Combined-cycle plants use both gas and a steam turbine to produce more electricity than a traditional unit with the same amount of fuel. The gas turbine burns fuel to create a hot air-fuel mixture, which spins the gas turbine. A Heat Recovery Steam Generator (HRSG) captures heat from the gas turbine to heat water and create steam. This is delivered to the steam turbine to create additional electricity.
- *Heat rate*: The amount of energy used by a power plant (in the U.S., typically expressed in British Thermal Units [BTU]) to generate one kWh of electricity.
- *Carbon intensity*: The emission rate of CO₂ relative to the energy consumed by some activity or process. Carbon intensity is usually expressed in terms of carbon by weight per unit of energy, e.g., burning anthracite coal [emits](#) 103.7 kilograms of CO₂ per million BTU.

CONTROVERSIES & IMPLICATIONS

From its very beginning, the CPP faced extensive political opposition in the form of legislative and legal challenges that eventually stalled the policy's implementation. These challenges included [statutory and constitutional objections](#) to the EPA's jurisdiction to enforce the CPP. During his 2016 presidential campaign, then-candidate Donald Trump did not directly address the CPP but was [generally skeptical of climate science and the need to address climate change](#). Upon taking office, President Trump sided with opponents of the CPP, labelling the policy as an example of "[job-killing](#)" regulation. These viewpoints were criticized and disputed by the CPP's supporters, including [environmental groups](#) and many members of Congress, particularly [Democratic policymakers](#).

However, the EPA's move to repeal the CPP has provoked its own opposition, including [public protests](#) and [lawsuits](#). Beyond the civil society response, many bureaucratic and legal uncertainties remain. For instance, the Obama and Trump administration EPAs employed different methodologies in their economic assessments of the CPP, coming to drastically different conclusions on the costs and benefits of the CPP. While the [original 2015 cost-benefit analysis](#) estimated \$26-45 billion in net gains from climate and health benefits, an October [2017 press](#) release by the Trump EPA downplayed the beneficial impacts of the CPP and instead highlighted that the policy would have cost the country up to \$33 billion in total compliance expenses by 2030. However, using updated projections from the US Energy Information Administration, the [2017 Trump EPA report](#) states that the forgone benefits of repealing the CPP would be between \$16.8-44.9 billion by 2030, compared to \$14.4 billion in avoided compliance costs.

Furthermore, it is unclear if the EPA can legally repeal the CPP without offering a replacement policy. This is because the EPA is judicially required to regulate CO₂ under the terms of its 2009 endangerment finding, with the CPP having been its chief vehicle for carrying out that mandate. EPA Administrator Scott Pruitt has historically been [wary](#) of mainstream climate science and the causal link between human activity and observed global warming. On December 28, 2017, the EPA announced an [Advance Notice of Proposed Rulemaking](#) to solicit public comment for what a replacement policy to the CPP should include.

Despite the repeal, [25 states are likely to meet or beat targets outlined by the CPP](#), including a number of Republican-controlled states that sought to block the CPP through litigation. An additional ten states are reducing emissions but may not reach the CPP's goals while twelve states may miss their targets.

ENDORSEMENTS & OPPOSITION

Supporters of the proposed repeal have cited the potential costs of the CPP – including costs on electricity consumers and the fossil fuel industry – and the need for a better regulatory approach to curbing GHG emissions:

- Peabody Energy, [Statement](#): “We encourage continued steps to protect affordable, reliable and resilient coal-fueled generation for American families and businesses, and support repeal of regulations that would have raised power costs and damaged reliability with no significant benefit.”
- US Chamber of Commerce’s Global Energy Institute, [Statement](#): “We have always believed that there is a better way to approach greenhouse gas regulations than the CPP. The CPP exceeded EPA’s authority, but we are optimistic that a true collaboration between the federal government, states, and affected stakeholders will provide a more durable and achievable approach.”

Opponents of the repeal proposal have cited the likelihood of a much weaker plan being put into place following the repeals; the consequences of increasing emissions on climate change,; and the support of the CPP from large sectors of the economy, such as the service and information technology sectors:

- Information technology companies (including Apple Inc., Amazon.com, Inc.; Google LLC; and Microsoft Corp.), [Statement](#): “We believe that strong clean energy and climate policies, like the Clean Power Plan, can make renewable energy supplies more robust and address the serious threat of climate change while also supporting American competitiveness, innovation, and job growth.”
- Ken Kimmell, President of the Union of Concerned Scientists, [Statement](#): “With this legal sleight of hand, EPA Administrator Scott Pruitt once again forsakes the mission of the agency he heads—to safeguard human health and the environment—to pander fossil fuel interests.”

STATUS

The EPA has announced an [Advance Notice of Proposed Rulemaking](#) soliciting [public comment](#) on how to replace the CPP. The comment period closes on February 26, 2018.

RELATED POLICIES

- [S.O. 3348](#) – Concerning the Federal Coal Moratorium, The Secretary of the Interior (Introduced 03/29/2017): Lifts moratorium on new coal leases on federal land and suspends review of federal coal-leasing rates.
- [S.O. 3349](#) – American Energy Independence, The Secretary of the Interior (Introduced 03/29/2017): Implements review of agency action directed by President’s Executive Order “Promoting Energy Independence and Economic Growth.”

POLICY HISTORY

- August 3, 2015: The EPA produces final version of CPP
- February 9, 2016: The Supreme Court blocks enforcement of CPP pending D.C. Circuit Court ruling
- March 28, 2017: President Trump signs E.O. 13783
- October 16, 2017: The EPA publishes proposed rule to repeal CPP

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ENERGY SUBCATEGORY

[Production, Conversion, Distribution](#)

RECOMMENDED CITATION

Duke SciPol, "US Environmental Protection Agency effort to repeal Clean Power Plan", available at <http://scipol.duke.edu/content/us-environmental-protection-agency-effort-repeal-clean-power-plan> (02/12/2018).

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