

# Affordable Clean Energy (ACE) Rule

Proposal Overview

# Overview of the ACE Rule

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- ▶ EPA is proposing the Affordable Clean Energy (ACE) rule, which empowers states to reduce carbon dioxide (CO<sub>2</sub>) emissions and provides reliable power at an affordable cost
- ▶ ACE would replace the Clean Power Plan, which EPA has proposed to repeal because it exceeded EPA's authority
  - ▶ CPP was stayed by the Supreme Court and has never been implemented
- ▶ The ACE rule has several components:
  - ▶ Establish emission guidelines for state plans to address greenhouse gas emissions from existing coal-fired power plants
  - ▶ Determine on-site efficiency improvements to be the best system of emission reduction at existing coal plants
  - ▶ Revise New Source Review permitting to streamline these improvements
  - ▶ Revise implementing regulations to give states adequate time and flexibility to develop state plans

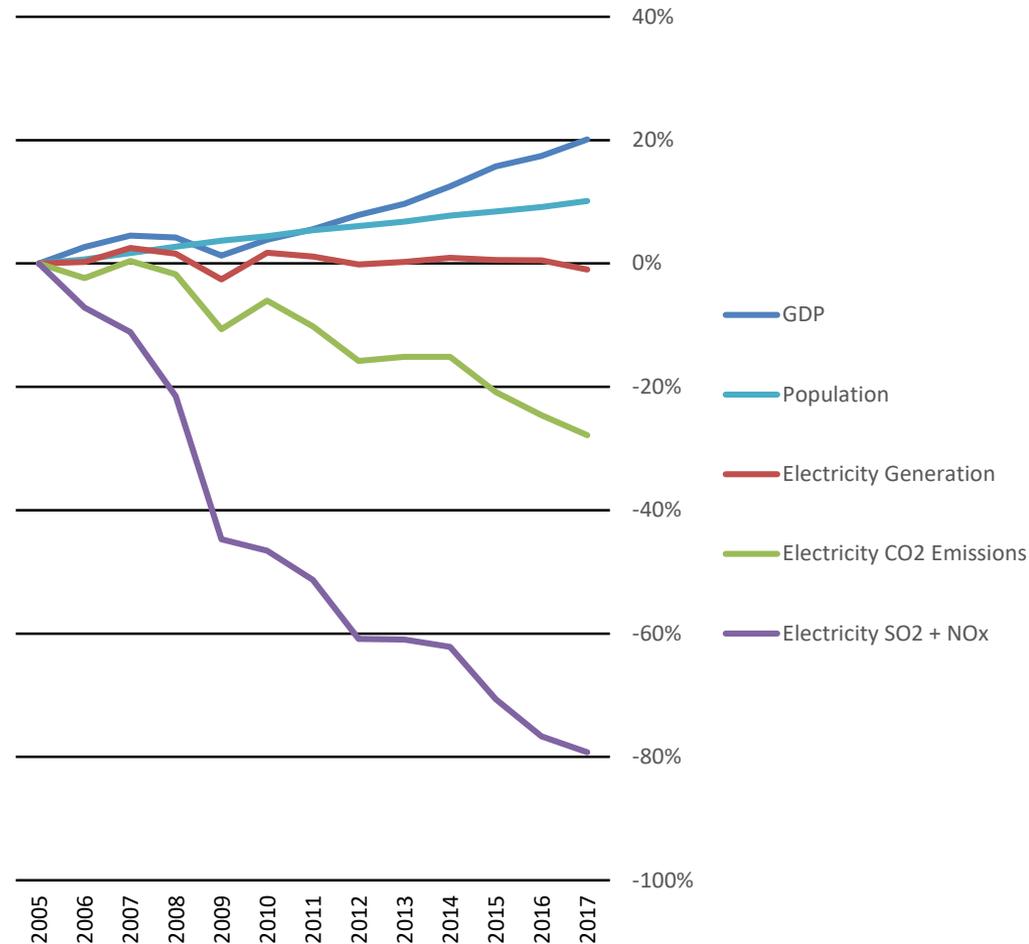
# Background

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- ▶ EO 13783 – Promoting Energy Independence and Economic Growth
- ▶ Proposed Repeal
  - ▶ Published October 16, 2017
  - ▶ Received more than 1.3 million comments
  - ▶ Measures taken only at facility level
- ▶ Advance Notice of Proposed Rulemaking (ANPRM)
  - ▶ Published December 28, 2017
  - ▶ Received more than 270,000 comments

# Trends in the Power Sector

- ▶ CO<sub>2</sub> emissions from the power sector are already dropping
  - ▶ Factors include market forces, technology improvements, and policy changes
- ▶ ACE rule continues downward CO<sub>2</sub> trend, pushing power sector CO<sub>2</sub> emissions to around 34% below 2005 levels (similar to CPP)



# Clarifies EPA and State Roles

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- ▶ ACE rule rebalances state and federal roles in developing and implementing rules under Clean Air Act (CAA) section 111(d)
- ▶ EPA determines the best system of emission reduction (BSER)
  - ▶ Technology and practices
  - ▶ Information on the degree of emission limitation
  - ▶ No presumptive standard of performance
- ▶ States establish standards of performance based on application of the BSER
  - ▶ States have a better understanding of the individual units within their borders
  - ▶ Consideration of unique factors of a power plant – *e.g.*, technology and practices already being implemented, remaining useful life, etc.

# How the ACE Rule Works

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- ▶ The proposed ACE rule includes four main actions:
  - ▶ Defines the BSER for existing coal-fired power plants as on-site, heat-rate efficiency improvements
  - ▶ Provides states with a list of “candidate technologies” for states to consider in establishing standards of performance and in developing state plans
  - ▶ Revises EPA’s New Source Review permitting program to streamline associated efficiency improvements at existing power plants
  - ▶ Proposes new CAA section 111(d) general implementing regulations to give states adequate time and flexibility to develop state plans

# The BSER – Candidate Technologies

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- ▶ EPA determined the BSER
- ▶ EPA's analysis finds that coal-fired power plants can reduce CO<sub>2</sub> emissions by making on-site efficiency upgrades, or “heat rate improvements”
  - ▶ Efficiency upgrades reduce the amount of CO<sub>2</sub> released per unit of electricity generated
- ▶ EPA is proposing a list of “candidate technologies” states would need to consider in establishing standards of performance for individual units at existing plants
  - ▶ States will identify which candidate technologies are appropriate for each unit and establish a standard of performance that reflects the degree of emission reduction from their application.

# State Plans

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- ▶ ACE rule sets “emission guidelines” for states to develop and submit to EPA; these state plans establish standards of performance for existing units based on revised BSER
- ▶ States will evaluate the BSER technologies for each source, and can adjust a standard of performance based on remaining useful life and other factors
- ▶ ACE rule proposes rate-based standards and takes comment on whether mass-based should be allowed
- ▶ Proposes that states can allow for compliance flexibilities
- ▶ Solicits comment on whether trading and averaging should be allowed

# Implementation

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- ▶ New implementing regulations for ongoing and future section 111(d) rules
- ▶ Modernize and conform more closely to CAA
- ▶ Clarifies roles
  - ▶ EPA determines BSER
  - ▶ States establish standards of performance
  - ▶ Unit level consideration for standards
- ▶ Timing adjustments
  - ▶ 3 years for state plan submittals
  - ▶ 12 months for EPA to act on complete state plan submittal
  - ▶ 2 years to issue a federal plan after a finding of failure
- ▶ New definitions of “standard of performance” and “emission guideline”
- ▶ Completeness criteria
- ▶ Variance provision

# New Source Review (NSR)

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- ▶ For many years, electric utilities have raised concerns that the NSR program's applicability test for modifications can result in efficiency projects triggering burdensome permitting requirements, which discourages sources from undertaking such projects
- ▶ ACE proposes a new preliminary applicability test for determining whether a physical or operational change made to a power plant might be a “major modification” under the NSR program
- ▶ ACE proposes revisions to the NSR rules that would give states the option to adopt an *hourly* emissions increase test for power plants, to be used alongside the current annual emissions test required by NSR
  - ▶ Projects that increase a unit's maximum hourly rate of pollutant emissions would then be evaluated under the annual emissions test before determining whether they are subject to major NSR requirements
  - ▶ EPA previously considered such a test for power plants but did not complete the rulemaking
- ▶ Hourly test would be a tool for states, so adoption would not be mandatory

# Costs and benefits of ACE rule

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- ▶ EPA's regulatory impact analysis (RIA) includes a variety of scenarios
  - ▶ Scenarios are illustrative because the statute gives states, in establishing standards of performance, the flexibility to consider unit-specific factors, including the unit's remaining useful life
- ▶ The RIA calculates the benefits and costs of three replacement scenarios and one repeal scenario; all four scenarios show future CO<sub>2</sub> emissions would be below current levels
  - ▶ EPA projects that, compared to a no CPP scenario, the ACE rule will reduce CO<sub>2</sub> emissions in 2025 by between 13 and 30 million short tons, resulting in \$1.6 billion in monetized domestic climate benefits
  - ▶ EPA estimates the ACE rule could reduce 2030 CO<sub>2</sub> emissions to an amount equivalent to the annual emissions of up to 5 million cars
  - ▶ The rule could also reduce co-pollutant emissions by up to 2%
- ▶ EPA projects replacing the CPP with the ACE rule could result in \$3.4 billion in net benefits, including \$400 million annually.
- ▶ Under some scenarios, avoided compliance costs total \$6.4 billion compared to the CPP
- ▶ Approximately 600 coal-fired electric generating units at 300 facilities could be covered by this proposed rule

# How to Comment

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- ▶ **Comment period:** Through October 31, 2018
- ▶ **Public hearing:** October 1, 2018, in Chicago
- ▶ Comments on the ACE rule should be identified by Docket ID No. EPA-HQ-OAR-2017-0355, and may be submitted by one of the following methods:
  - ▶ **Online:** Go to <https://www.regulations.gov> and follow the online instructions for submitting comments to Docket ID No. EPA-HQ-OAR-2017-0355.
  - ▶ **Email:** Comments may be sent to [a-and-r-Docket@epa.gov](mailto:a-and-r-Docket@epa.gov). Include Docket ID No. EPA-HQ-OAR-2017-0355 in the subject line of the message.
  - ▶ **Mail:** Environmental Protection Agency, EPA Docket Center (EPA/DC), Mail Code 28221T, Attention Docket ID No. EPA-HQ-OAR-2017-0355, 1200 Pennsylvania Avenue, NW, Washington, DC 20460
  - ▶ For the full EPA public comment policy, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

# For More Information

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- ▶ <https://www.epa.gov/stationary-sources-air-pollution/proposal-affordable-clean-energy-ace-rule>