



# THE CLEAN POWER PLAN

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#ActOnClimate #CleanPowerPlan

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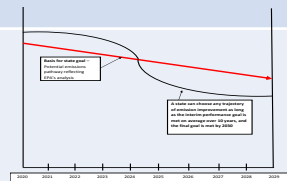
# Today's Presentation

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- Key Changes
- State Plans & Compliance Pathways
- Proposed Federal Plan & Model Rules
- Clean Energy Incentive Program
- Community and EJ Considerations
- What We're Been Hearing So Far
- Next Steps
- Information and Resources

# Changes from Proposal to Final Respond Directly to Comments

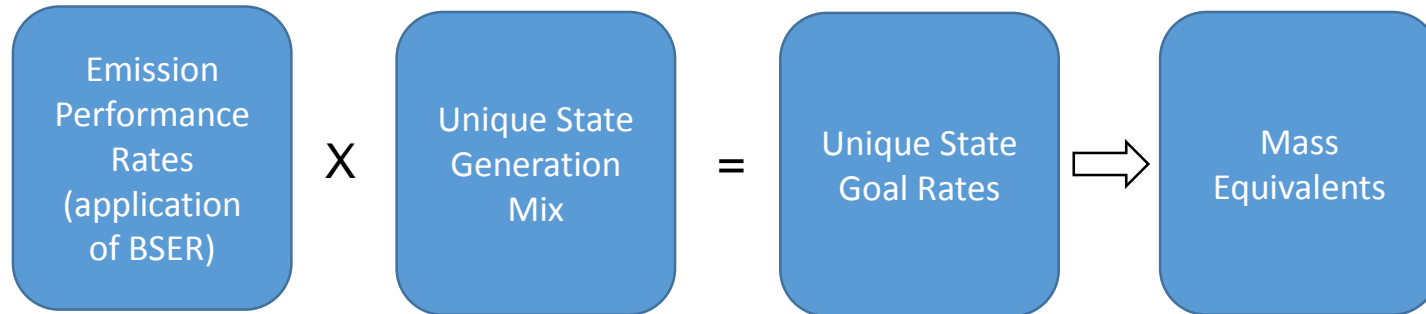
ITEM	PROPOSAL	FINAL
Compliance timeframe	2020	2022
Building Blocks	Four Building Blocks	Three Building Blocks (see next row) and refinements to Building Blocks
Demand-Side Energy Efficiency	Included as a Building Block	No longer a Building Block – though EPA anticipates that, due to its low costs and large potential in every state, demand-side energy efficiency will be a significant component of state compliance plans under the CPP
Timing of reductions	S-curve. Commenters disliked the “cliff”	Steps down glide path more gradually: 2022-2024 2025-2027 2028-2029
Goal Setting	Formula included energy efficiency (EE), new nuclear, and existing renewable energy (RE) sources in the Best System of Emission Reduction (BSER)	BSER: Apply three building blocks to set two uniform CO <sub>2</sub> emissions rates: generally, 1. Fossil and 2. natural gas. EE, nuclear and existing RE not included in goal setting
Geographic focus	State/tribe/territory	Contiguous U.S.
Deadline for final state plan	June 2016 with opportunity for one or two year extension	September 2018: after initial submittal by September 2016
State plans options	Two Types: Direct emission limits and portfolio approach	Two types: emissions standards and state measures
Interstate trading mechanisms	Up-front agreements	Up-front agreements not required Trading-ready option





# Category-Specific Performance Rates

**Power plants are subject to the same standards no matter where they are located.**



EPA is establishing carbon dioxide **emission performance rates** for two subcategories of existing fossil fuel-fired electric generating units (EGUs):

1. Fossil fuel-fired electric generating units (generally, coal-fired power plants)
2. Natural gas combined cycle units

Emission performance rates have been translated into equivalent state goals. In order to maximize the range of choices available to states, EPA is providing state goals in three forms:

- rate-based goal measured in pounds per megawatt hour (lb/MWh);
- mass-based goal measured in short tons of CO<sub>2</sub>
- mass-based goal with a new source complement (for states that choose to include new sources) measured in short tons of CO<sub>2</sub>



# Best System of Emission Reduction: Three Building Blocks

Building Block	Strategy EPA Used to Calculate the State Goal	Maximum Flexibility: Examples of State Compliance Measures
<b>1. Improved efficiency at power plants</b>	Increasing the operational efficiency of existing coal-fired steam EGUs on average by a specified percentage, depending upon the region	<ul style="list-style-type: none"> <li>-Boiler chemical cleaning</li> <li>-Cleaning air preheater coils</li> <li>-Equipment and software upgrades</li> </ul>
<b>2. Shifting generation from higher-emitting steam EGUS to lower-emitting natural gas power plants</b>	Substituting increased generation from existing natural gas units for reduced generation at existing steam EGUs in specified amounts	Increase generation at existing NGCC units
<b>3. Shifting generation to clean energy renewables</b>	Substituting increased generation from new zero-emitting generating technologies for reduced generation at existing fossil fuel-fired EGUs in specified amounts	Increased generation from new renewable generating capacity, e.g., solar, wind, nuclear, and combined heat & power

# Clean Power Plan Timeline





# Two State Plans Designs:

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- States are able to choose one of two state plan types:

**Emission Standards Plan** – state places federally enforceable emission standards on affected electric generating units (EGUs) that fully meet the emission guidelines

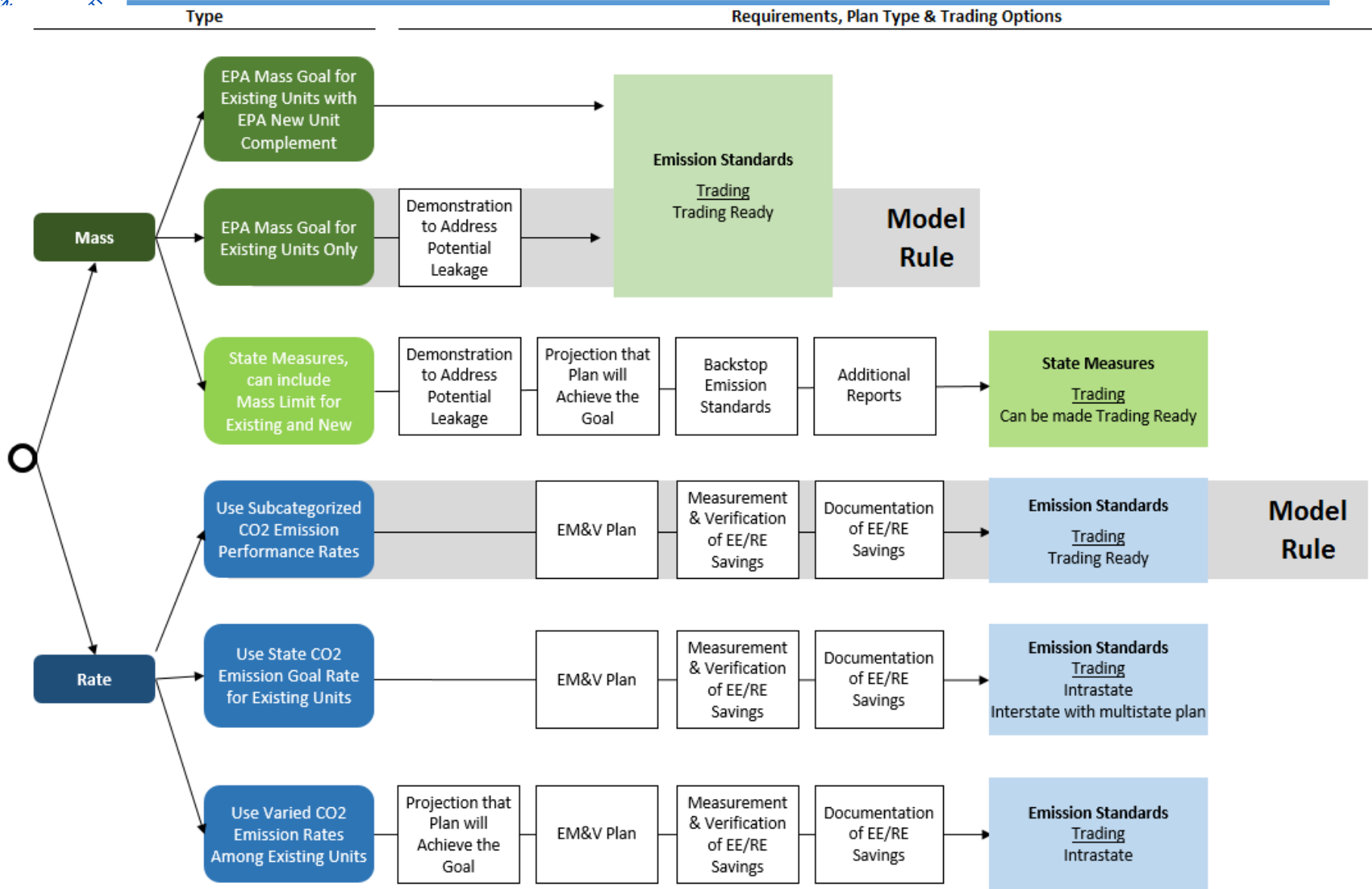
- can be designed to meet the CO<sub>2</sub> emission performance rates or state goal (rate-based or mass-based goal)

**State Measures Plan** - state includes, at least in part, measures implemented by the state that are not included as federally enforceable emission standards

- designed to achieve the state CO<sub>2</sub> mass-based goal
- includes federally enforceable measures as a backstop



# More State Options, Lower Costs







# Trading Options in State Plans

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- Many states are discussing plans that would enable them to collaborate with other states, including multi-state plans or linking plans through common administrative provisions (i.e. “trading ready”)
  - Trading-ready mechanisms allow states or power plants to use creditable, out-of-state reductions to meet their goal without the need for up-front interstate agreements
  - If states elect to collaborate, EPA can support the option for trading as a suitable choice for both EPA and states to implement the CPP
    - Examples of trading in NO<sub>x</sub> SIP and CSAPR, Acid Rain program
    - Appropriate for carbon emissions
    - Eases administrative burdens
    - Reduces costs to electricity consumers and utilities



# Proposed Federal Plan & Model Rules

## Overview

- The federal plan and model trading rules provide a readily available path forward for Clean Power Plan implementation and present flexible, affordable implementation options for states
- The model rules provide a cost-effective pathway to adopt a trading system supported by EPA and make it easy for states and power plants to use emissions trading
- Both the proposed federal plan and model rules:
  - Contain the same elements that state plans are required to contain, including:
    - Performance standards
    - Monitoring and reporting requirements
    - Compliance schedules that include milestones for progress
  - Ensure the CO<sub>2</sub> reductions required in the final CPP are achieved
  - Preserve reliability
- Co-proposing two different approaches to a federal plan— a rate-based trading plan type and a mass-based trading plan type
  - Both proposed plan types would require affected EGUs to meet emission standards set in the Clean Power Plan
- EPA invites comment on mass and rate based model trading programs for EGUs, and on the idea that all types of state plans can participate in trading



# Proposed Federal Plan – More Information

How does it work?

- Will be finalized only for those affected states with affected EGUs that EPA determines have failed to submit an approvable Clean Air Act 111(d) state plan by the relevant deadlines set in the emission guidelines
  - Even where a federal plan is put in place, a state will still be able to submit a plan, which if approved, will allow the state and its sources to exit the federal plan
- EPA currently intends to finalize a single approach (i.e., either the mass-based or rate-based approach) for every state in which it finalizes a federal plan
- Affected states may administer administrative aspects of the federal plan and become the primary implementers
  - May also submit partial state plans and implement a portion of a federal plan
- Affected states operating under a federal plan may also adopt complementary measures outside of that plan to facilitate compliance and lower costs to the benefit of power generators and consumers
- Proposes a finding that it is necessary or appropriate to implement a section 111(d) federal plan for the affected EGUs located in Indian country. CO<sub>2</sub> emission performance rates for these facilities were finalized in the Clean Power Plan



# Clean Energy Incentive Program

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- EPA is providing the Clean Energy Incentive Program (CEIP) to incentivize early investments that reduce end-use energy demand in low income communities or that generate wind and solar power during 2020 and 2021
- The CEIP is an optional, “matching fund” program states may choose to use to incentivize early investments in wind or solar power, as well as demand-side energy efficiency measures that are implemented in low-income communities
- EPA will provide matching allowances or Emission Rate Credits (ERCs) to states that participate in the CEIP, up to an amount equal to the equivalent of 300 million short tons of CO<sub>2</sub> emissions nationally. The match is larger for low-income EE projects, targeted at removing historic barriers to deployment of these measures. Also, states with more challenging emission reduction targets will have access to a proportionately larger share of the match
- To be eligible for allowances or ERCs under the CEIP a qualifying RE project must begin construction, and a qualifying EE project must begin operation, following submittal of a final state plan to the EPA that contains requirements for CEIP participation.
- The CEIP will help ensure that momentum to no-carbon energy continues and give states a jumpstart on their compliance programs
- EPA will engage with stakeholders in the coming months to gather feedback on specific elements of the program and finalize implementation details



# Community and EJ Considerations

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**In developing the Clean Power Plan, EPA took steps to help ensure that vulnerable communities (low-income, communities of color and indigenous populations) benefit from and are not disproportionately impacted by this rulemaking. Actions include:**

- Conducting a proximity analysis that provides demographic information on the communities living near affected power plants
- Recommending states conduct an analysis of their own to identify vulnerable communities; EPA will provide resources to assist states
- Requiring that states engage with all stakeholders throughout the state plan development process, including vulnerable communities; EPA will provide resources to assist communities and states with engaging with one another
- Encouraging consideration of multi-pollutant approaches
- Enabling communities to benefit from clean energy

**EPA also took steps to help ensure that communities benefit from clean energy. Actions include:**

- Designing the Clean Energy Incentive Program to incentivize energy efficiency programs in low-income communities
- Providing information on extensive federal resources that help low-income communities access renewable energy and energy efficiency
- Cataloging state and local programs that have successfully delivered energy efficiency and renewable energy to communities



# What We're Hearing So Far...

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- Stakeholders appreciate the extensive outreach EPA conducted during development and rollout. We intend to continue this constructive dialogue as we move toward implementation.
- Industry reactions have been generally positive, and many states and industry appreciate the changes that were made since proposal.
- States are digging into the details about plan options and flexibilities to determine how they will implement the CPP, and some say they are in the beginning stages of plan development; other states are considering whether to develop a state plan vs. complying with a Federal Plan.
- States have a high level of interest in issues related to trading.
- The location and timing of renewable energy projects are of interest, as states consider how these existing or planned projects might fit into their plans.
- There is significant interest in learning more about the CEIP, how it works and how states can take advantage of it.



# Information and Resources

How can I learn more?

After two years of unprecedented outreach, the EPA remains committed to engaging with all stakeholders as states implement the final Clean Power Plan.

- For more information and to access a copy of the rule, visit the **Clean Power Plan website**: <http://www2.epa.gov/carbon-pollution-standards>
- Through graphics and interactive maps, the **Story Map** presents key information about the final Clean Power Plan. See: <http://www2.epa.gov/cleanpowerplan>
- For community-specific information and engagement opportunities, see the **Community Portal**: <http://www2.epa.gov/cleanpowerplan/clean-power-plan-community-page>
- For additional resources to help states develop plans, visit the **CPP Toolbox for States**: <http://www2.epa.gov/cleanpowerplantoolbox>
- For a graphical and detailed walk through of the EGU category-specific CO<sub>2</sub> emission performance rate and state goals, see **State Goal Visualizer**: <http://www2.epa.gov/cleanpowerplantoolbox>
- EPA provides **webinars** and **training** on CPP related topics at the air pollution control learning website. See: <http://www.apti-learn.net/lms/cpp/plan/>