Clean Power Plan, Proposed Federal Plan & Model Trading Rules, and the Clean Energy Incentive Program

Presentation for Communities
December 2015

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Summary

Climate change is a threat in the US

EPA is taking three actions that will significantly reduce carbon pollution from the power sector, the largest source of carbon pollution in the US

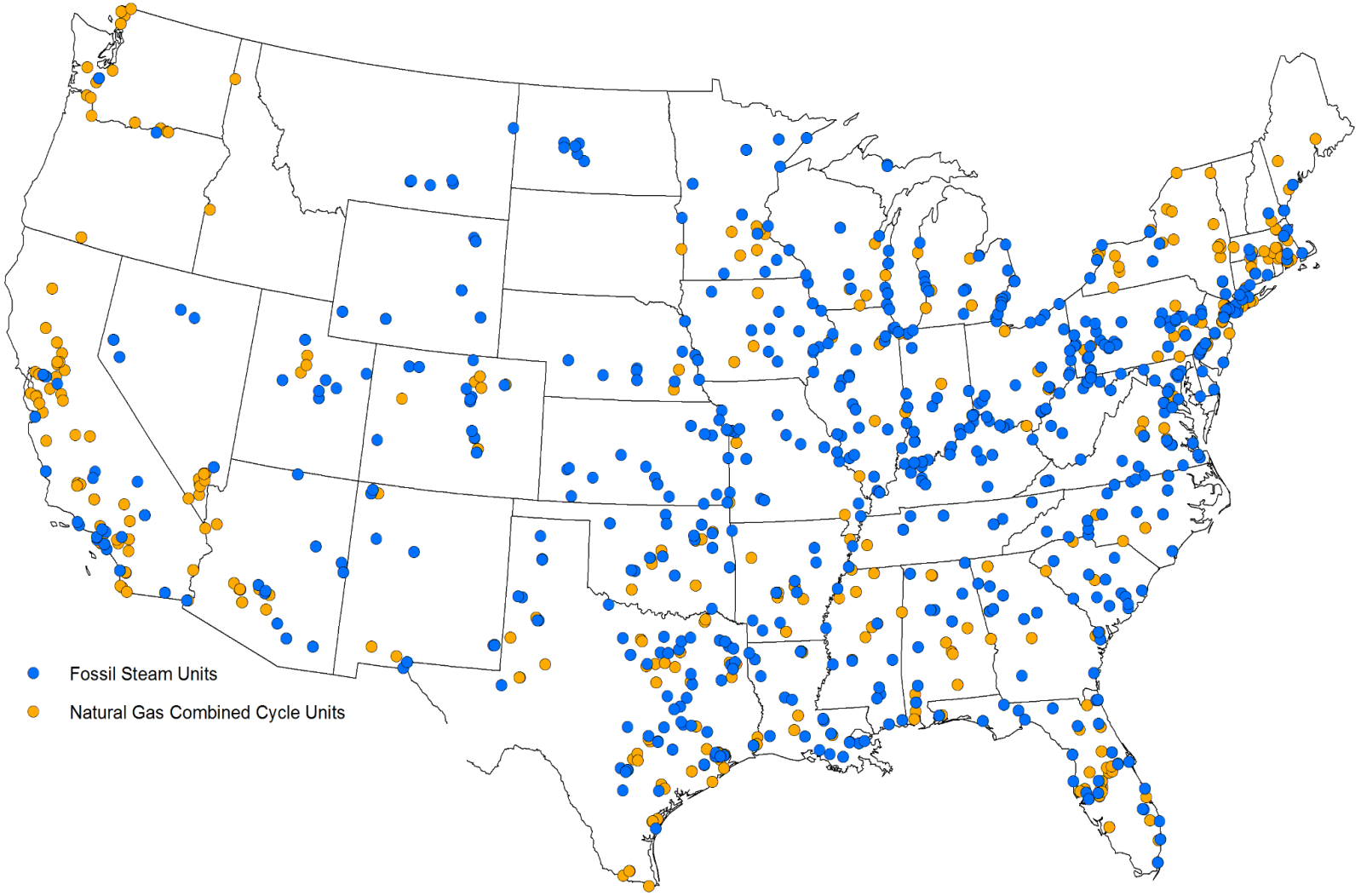
- Clean Power Plan (CPP) – existing power plants, also known as electric generating units (or EGUs) -- (Final)
- Carbon Pollution Standards – new, modified and reconstructed power plants (Final)
- Federal Plan and Model Rules (FP/MR) proposal – out for public comment. EPA would implement the federal plan in any state that does not submit an approvable CPP plan. Model rules provide an optional approach that states may choose to adopt.

EPA's actions

- Achieve significant pollution reductions
- Deliver an approach that gives states and utilities plenty of time to preserve ample, reliable and affordable power

The Clean Power Plan

What sources?



The Clean Power Plan

- Relies on a federal-state/tribal partnership to reduce carbon pollution from the biggest sources – power plants
- Using the Clean Air Act, the CPP sets carbon dioxide emissions performance rates for two types of power plants:
  - Natural gas combined cycle (771 pounds per megawatt hour (lbs/MWh) in 2030)
  - Fossil fuel-fired steam generating units-- generally, coal-fired power plants (1305 lb/MWh in 2030)
- Then, EPA translated that information into a state or tribal goal – expressed in mass and rate – based on the unique mix of fossil fuel and natural gas power plants in 2012 in each state or tribe
- States can use either rate-based and mass-based goals in their plans
- As implementation of the Clean Power Plan goes forward, the agency will conduct air quality evaluations to determine impacts that state plans may have on vulnerable communities. EPA encourages states to conduct analyses to help states, communities and utilities understand the potential localized and community impacts of state plans.

http://www2.epa.gov/cleanpowerplan/clean-power-plan-community-page

Federal Plan and Model Trading Rules Proposal

Overview of the Federal Plan and Model Trading Rules Proposal

- The federal plan and model trading rules demonstrate a readily available path forward for Clean Power Plan implementation, and present flexible, affordable implementation options for states.
- EPA would implement the federal plan in any state that does not submit an approvable plan under the Clean Power Plan.
- 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. It does the heavy lifting for states who may choose to use a model rule as their state plan.
- The federal plan and model rules proposal contains four key actions:
  - A rate-based model trading rule
  - A mass-based model trading rule
  - A rate-based federal plan
  - A mass-based federal plan

EPA intends to finalize <u>both</u> the rate-based and mass-based model trading rules in summer 2016

EPA intends to finalize **<u>either</u>** the mass-based or rate-based approach for a federal plan

Clean Power Plan and Federal Plan/Model Rules Timeline

- August 3, 2015 – Carbon Pollution Standard, Clean Power Plan & Federal Plan/Model Rules proposal signed
- Summer 2016 – Final Model Rules
- September 6, 2016 – States submit Final Plan or make initial submittal with extension request
- September 6, 2018 – States with extensions submit Final Plans for approval
- January 1, 2022 – 1st compliance period begins

7 Years

Federal Plans may be done as needed on a state-by-state basis

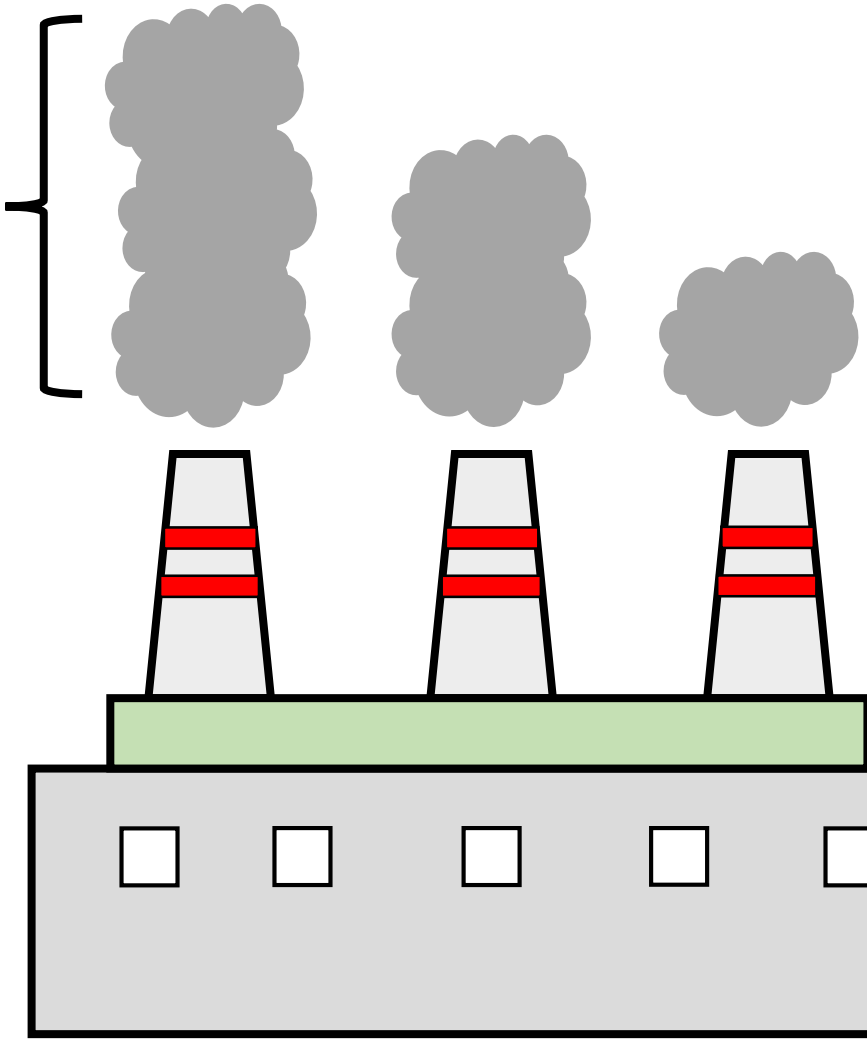
What You Need to Know about the Proposed Mass-Based Federal Plan

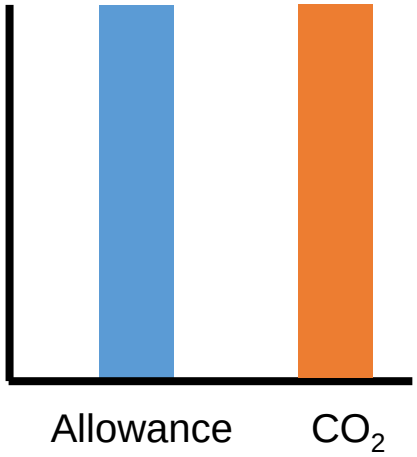
Mass-Based Approach: Emission Budget and Distribution Basics

- Emissions budget = total tons of carbon dioxide(CO_2) that can be emitted
- Each allowance authorizes emission of a ton of CO_2
- State budget is distributed to power plants or other entities in the form of allowances
- Allowances can be bought, sold, or banked for future use
- The initial distribution of allowances is called allocation
  - In state plan, state determines allocation approach
  - In federal plan, EPA determines allocation approach OR a state can choose its own approach
- In either case, some or all allowances can be distributed for a specific purpose.
  - Example: allowance set-asides to ensure use of RE resources or help electricity ratepayers in the state
  - Proposing three allowance set-asides

What Power Plants Must Do: Mass-Based Approach

Every plant must measure, monitor and report its CO_2 emissions

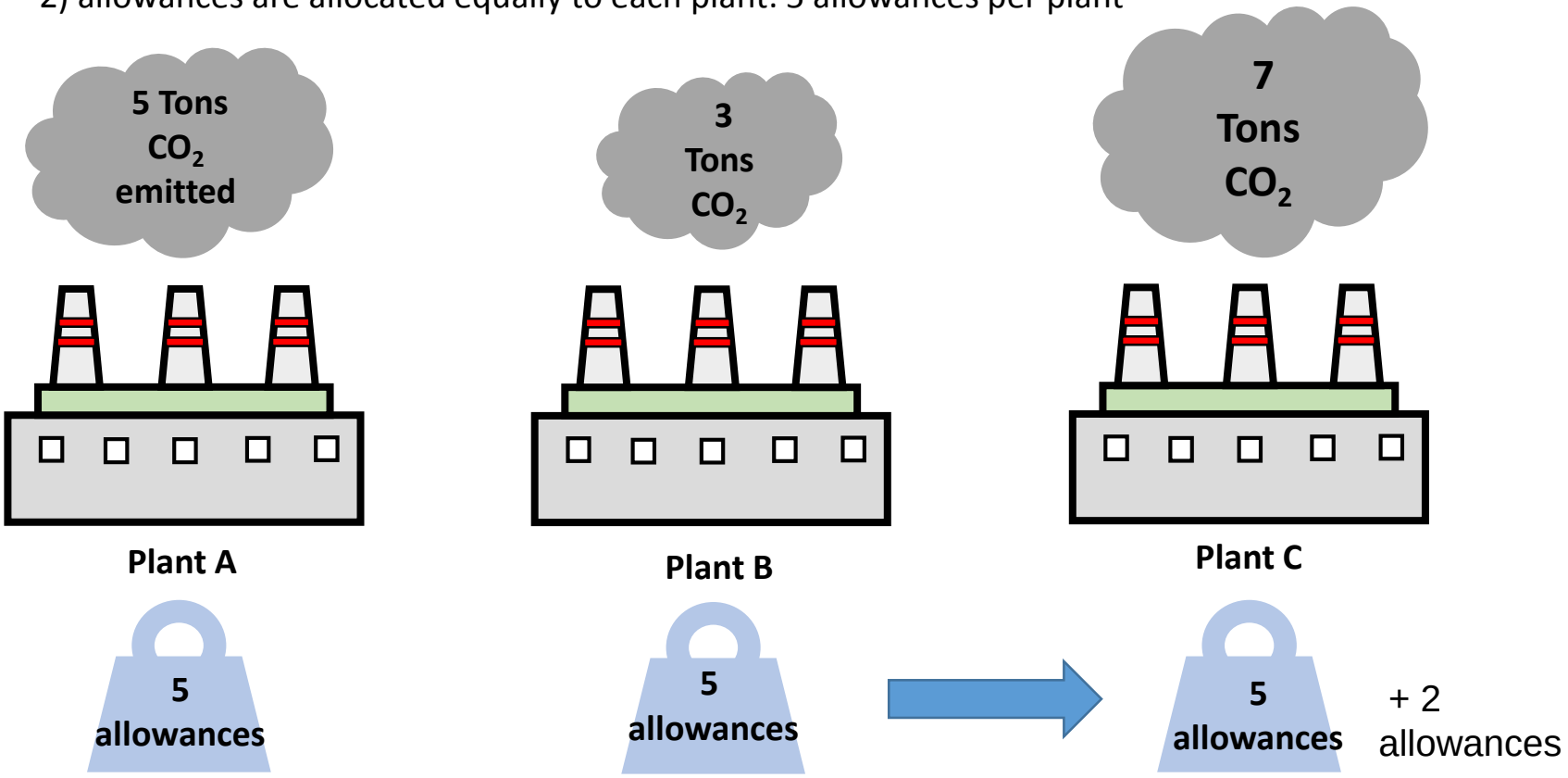




Every plant must have sufficient allowances to cover its emissions at the end of each compliance period

How Mass-based Trading Works

Example Assumptions:
1) a total budget of 15 tons of CO_2 for a state with 3 plants
2) allowances are allocated equally to each plant: 5 allowances per plant



5 Tons = 5 Allowances

Plant B has two allowances (2 tons) available to trade with Plant C

Mass-Based Trading Approach in the Federal Plan Proposal

- State emissions budgets equal the mass goals in the CPP
- Emission standard on affected units is the requirement to hold allowances equal to reported emissions
- Allowance tracking and compliance system
- Interstate allowance trading across federal plan states and with sources in states with approved mass-based plans that
  - Are “trading ready”
  - Use same compliance instrument (short tons)
  - Use EPA-administered tracking system
- A plan using mass-based trading must address potential incentives, unique to mass-based approaches, to shift generation from lower-emitting existing sources to new sources

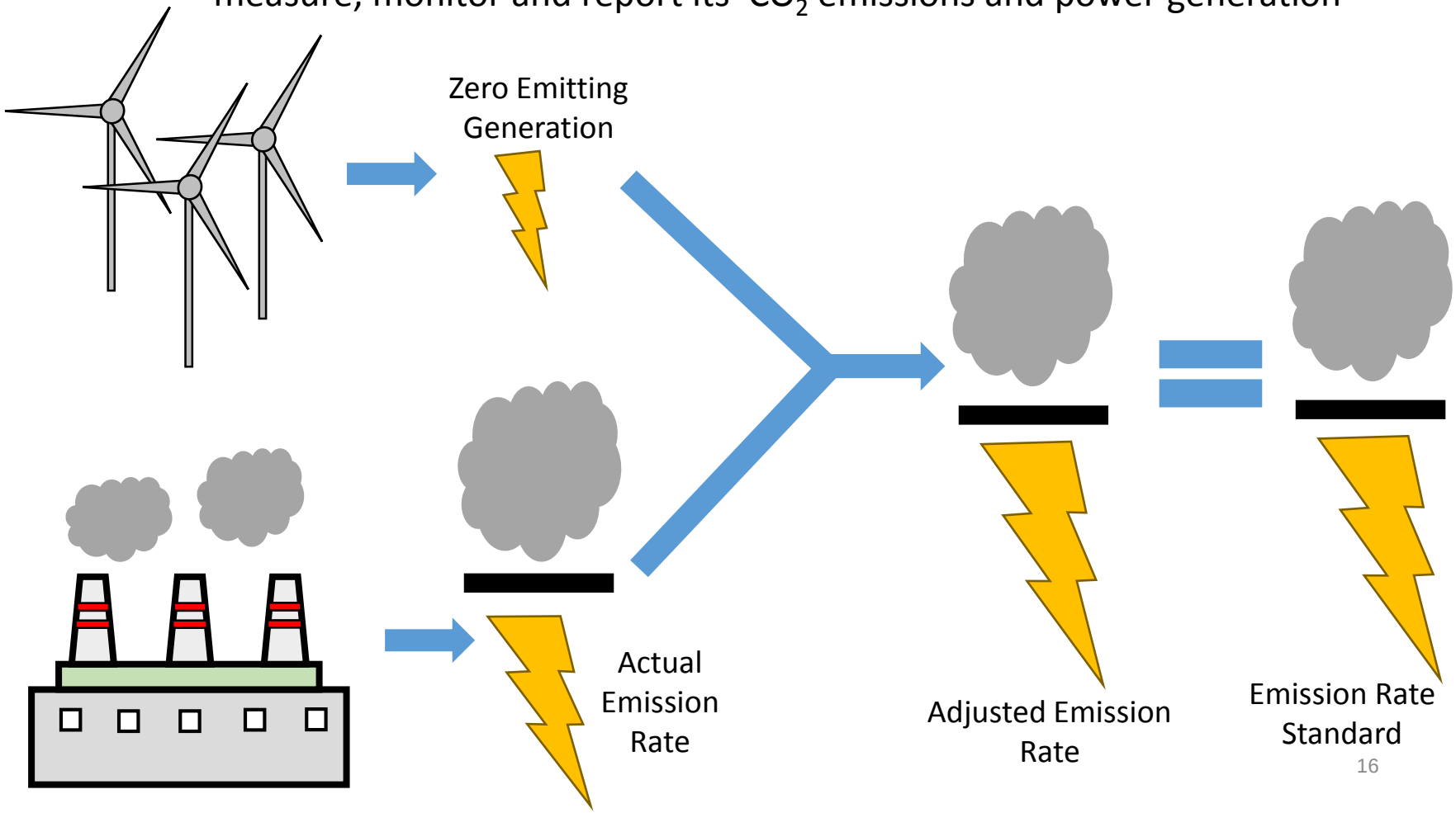
What You Need to Know about the Proposed Rate-Based Federal Plan

Rate-Based Approach in Federal Plan Proposal

- In a rate-based emission trading program, power plants are assigned a rate of emissions measured in pounds per megawatt hour (lbs/MWh)
- Compliance is achieved by lowering the unit's rate of emissions and/or using Emission Rate Credits (ERCs) representing clean MWhs
- Tracking via an EPA-administered system
- EPA proposes that EGUs subject to a federal plan may trade with EGUs subject to rate-based state plans that are deemed to be "ready for interstate trading" and that use the EPA-administered tracking system

Rate-Based Approach
What Power Plants Must Do:

- Every affected EGU must
  - achieve its emission rate, and/or have sufficient ERCs to achieve its performance rate at the end of each compliance period
  - measure, monitor and report its CO_2 emissions and power generation



Rate-based Trading: Types of Emissions Rate Credits (ERCs)

- ERCs are generated for every megawatt avoided and certain megawatts generated
- ERCs are generated by:
  1. Renewable Energy (RE) wind, solar, geothermal, and hydro and nuclear generation
     - Asking for comments about other RE and demand-side energy efficiency (EE) as eligible resources for ERC generation
  2. Natural Gas Combined Cycle operation to reflect incremental increases in existing NGCC generation
  3. Megawatts avoided by an EGU operating below its applicable sub-category emission standard

Requesting Comment on the Federal Plan and Model Trading Rules Proposal

List of items in the proposal on which EPA is requesting comment is available at:

http://www2.epa.gov/cleanpowerplan/summary-requests-comments-clean-power-plan-federal-plan-and-model-trading-rules

Examples:

- Which approach, i.e., either mass-based or rate-based trading, should be selected if EPA opts to finalize a single approach for a Federal Plan. EPA currently intends to finalize a single approach (i.e., either the mass-based or rate-based approach).
- Whether the methods of approval and distribution of allowances to projects that benefit low-income communities should differ from the methods that are proposed to apply to other RE projects.
- Whether a portion of the RE set-aside should be targeted to RE projects that benefit low-income communities.

Understanding
Energy Efficiency,
Renewable Energy and
The Clean Energy Incentive Program

Bringing Benefits of Clean Energy to Communities

- In addition to minimizing any burdens on low-income communities, EPA wants to help communities access the benefits of the clean energy economy (e.g., energy efficiency and renewable energy).
- Administration-wide effort via a new White House Task Force
  - Highlight existing federal resources and opportunities
  - Explore new opportunities
  - Identify private commitments to support this work
- EPA is leading multiple efforts
  - Working with states on implementation
  - Outreach to community and environmental justice organizations
  - Clean Energy Incentive Program (CEIP)
  - Products: catalog of case studies of successful state/local programs; webinars on successful state/local programs; resource guide of relevant EPA programs

Benefits of, and barriers to, energy efficiency and renewable energy for communities

- EE/RE adoption can support multiple benefits for low-income communities
  - Economic: reducing or stabilizing household energy bills; create local, high-quality jobs
  - Health and Safety: improve indoor air quality; improve comfort levels; reduce carbon monoxide and fire risks from space heaters, ovens, and other heating substitutes
  - Environmental Benefits: reduce greenhouse gas emissions; reduce smog, acid rain, and airborne particles
- Low-income households face specific barriers in adopting EE/RE
  - Competing priorities for available income
  - Up-front costs for EE/RE measures
  - Lack of credit or access to financing
  - Lack of information on resources
  - Tenant-landlord dynamics (who pays bills vs. who owns units)
  - Administrative hurdles
  - Others

Incentives for Early Action and the Clean Energy Incentive Program – in the CPP and the Proposed Federal Plan

- The final CPP includes a Clean Energy Incentive Program (CEIP) to provide additional incentives for early investments that generate wind and solar power or reduce end-use energy demand during 2020 and/or 2021.

- The CEIP is an optional, "matching fund" program that states may choose to use to incentivize:
  - Wind or solar power generation in all communities, and
  - Energy efficiency measures in low-income communities

- All EE/RE that achieves energy savings or clean generation helps states meet their CPP goals for affected EGUs.

- States that want to participate in the CEIP indicate that to EPA in their September 6, 2016 Clean Power Plan submittal (non-binding)

- EPA is also proposing to implement the CEIP for federal plan states.

How Does the CEIP Work?

- A state that chooses to participate in the CEIP may award early action credits (either allowances or ERCs) to qualifying CEIP projects

- The state must then request that EPA provide matching credits, which are issued to the state for distribution to the project provider

- EPA will ***match*** these awards up to a limit equal to 300 M tons of CO_2
  - A portion of the matching tons will be reserved for wind and solar projects, and a portion will be reserved for low-income EE projects
  - **EPA match will be double for low-income EE projects**

How Can Communities Benefit from the CEIP?

- All communities can benefit from solar and wind projects incentivized by the CEIP
  - Potential for local jobs in the marketplace
  - Potential for reduced energy bills
  - Less air pollution

- In addition, low-income communities can also see these benefits from energy-efficiency projects

- Another advantage is that the CEIP promotes realization of these benefits earlier than would be required under the final Clean Power Plan- up to two years earlier

- In addition, the RE set-aside in a mass-based federal plan, or an ERC-issuance program in a rate-based federal plan, would provide incentives similar to the CEIP during the performance periods starting in 2022

CEIP Design and Implementation: Your Input Needed!

- We are in the process of conducting stakeholder outreach calls on the CEIP in order to gather feedback

- CEIP questions
http://www2.epa.gov/cleanpowerplan/clean-energy-incentive-program

- Submit written answers to these questions by December 15, 2015

- We are interested in hearing from communities on a variety of issues, including the:
  - Definition of low-income community
  - Criteria states may use to evaluate an eligible low-income EE project
  - Portion of the 300M ton matching pool that should be reserved for low-income EE projects vs. wind and solar projects

- We encourage stakeholders to submit comments on the CEIP's inclusion in the proposed Federal Plan and Model Rules

CEIP : How to Comment on CEIP and Proposed Federal Plan and Model Rules

- Go to www.regulations.gov and follow the on-line instructions for submitting comments.
- Send comments by e-mail to a-and-r-Docket@epa.gov.
- Fax your comments to: (202) 566-9744.
- Mail your comments to:

  EPA Docket Center,
  Environmental Protection Agency, Mail Code: 28221T
  1200 Pennsylvania Ave., NW
  Washington, DC 20460

- **CEIP:**
  - Docket ID Number EPA-HQ-OAR-2015-**0734**
  - Deadline December 15, 2015.
  - http://www2.epa.gov/cleanpowerplan/clean-energy-incentive-program
- **CEIP and the Proposed Federal Plan and Model Trading Rules:**
  - Docket ID Number EPA-HQ-OAR-2015-**0199**
  - Deadline: January 21, 2016

Be sure to reference the appropriate docket number or numbers.

EPA Contacts

We welcome your feedback and questions!

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Information and Resources

- For more information and to access a copy of the rule, visit the **Clean Power Plan website**: http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants
- 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 **Clean Power Plan Community Page**: http://www2.epa.gov/cleanpowerplan/clean-power-plan-community-page
- For more information on the **Clean Energy Incentive Program**, see the CEIP page: http://www2.epa.gov/cleanpowerplan/clean-energy-incentive-program
- For a graphical and detailed walk through of the EGU category-specific CO_2 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/
- Federal programs and activities to support renewable energy and energy efficiency in low- and moderate-income communities: https://www.whitehouse.gov/sites/default/files/low-income_and_energy_efficiency_programs.pdf
- Federal initiative to increase solar access for all Americans: https://www.whitehouse.gov/the-press-office/2015/07/07/fact-sheet-administration-announces-new-initiative-increase-solar-access