Navigating EPA’s Clean Power Plan: Opportunities for Energy Efficiency

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Overview

• Clean Power Plan and Carbon Pollution Standards for Power Plants Timeline

• Navigating the Clean Power Plan Pathways and Options

• How Energy Efficiency Fits into the Clean Power Plan

• Role of EPA Regional Offices—Western Region as an example

• Next Steps
Clean Power Plan and Carbon Pollution Standards for Power Plants--Timeline

August 3, 2015
- Final Clean Power Plan (CPP) for Existing Power Plants
- Final Carbon Pollution Standards for New Power Plants
- Proposed Federal Plan, Model Rules, and EM&V Guidance
  - 90 day public comments periods when publish in Federal Register

Summer 2016
- Expect to finalize Model Rules and Emission Measurement and Verification (EM&V) Guidance

September 6, 2016 – Initial State Plan Submittals Due

September 6, 2018 – Final State Plan Submittals Due
CPP State Plan Development - Pathways

**Mass**
- Emission Standards
  - State Measures
    - Address Leakage
      - Compliance/Enforcement (e.g., backstop, EM&V)
      - Trading Options
        - Model Rule Option
  - Demonstrate Measures Meet Mass Goal

**Rate**
- Emission Standards in CPP
  - Customized Emission Standards
    - Demonstrate Standards Meet Rate Goal
      - Compliance/Enforcement (e.g., EM&V, ERC)
      - Trading Options
        - Model Rule Option
Mass-Based Plan

- **Mass-Based** *(short tons CO\textsubscript{2})* – State complies by meeting the CO\textsubscript{2} emission goal for the particular state – through 2 potential paths:
  - *Emission Standards* – State complies based entirely on a plan with federally enforceable emission standards imposed directly on affected electric generating units (EGUs)
  - *State Measures* – State complies based on a plan that contains programs/policies (“measures”) being implemented by the State, or other entity, that result in avoided generation or CO\textsubscript{2} reductions.
    - Can use any combination of measures, not necessarily on the affected EGUs, that will ensure the tons of CO\textsubscript{2} allowed for the particular state is met
    - Measures need only be applicable under state law, but plan must include federally enforceable contingency plan (“backstop”)
Rate-Based Plan

- **Rate-Based (lb CO₂/MWh)** – State complies by meeting:
  1. The particular state’s *rate-based* goal, determined using the particular mix of units in the state; or
  2. The subcategorized rate
     - 771 lb/MWh for combustion turbines
     - 1,305 lb/MWh for steam generating or integrated gasification combined cycle (IGCC) units; or
  3. Customized emission rate standards developed by the state
     - Must demonstrate standards meet state-specific goal
What is Leakage and the New Source Complement?

- “ Leakage” - for mass-based plans, the potential for CO₂ reductions at affected EGU’s to cause increases in CO₂ emissions by EGUs subject to the New Source Performance Standards
- **Mass-based** plans must address leakage, options include:
  - New Source Complement – a CO₂ emissions goal that covers affected EGUs and units subject to the NSPS
  - Budget allowance and allocation methods that address leakage
  - Other method demonstrated by the State
How does EE fit into the major pathways?

- For **mass-based** plans, there is no limit on how energy efficiency (EE) can be used to comply or type of EE measures – does not need to be included in plan
- For **rate-based plans**, EE measures only available through zero emission rate credits (ERC)s
  - ERCs need to meet certain standards
- However, states can incentivize EE through allocation/allowance methods or the Clean Energy Incentive Program (CEIP)
**EE Incentives**

- Various allowance and allocation methods can be used through mass-based plans, such as:
  - Providing a portion of the state’s CO$_2$ emission goal for EE projects, which reduces overall allowances available or allocated to affected EGUs
  - Auction allowances to affected EGUs and use the revenue to fund EE projects
- The CEIP program is available to mass-based programs (through allowances) and rate-based programs (through ERCs)
  - Includes EE demand-side measures implemented in low income communities
  - Installed after final plan submission that deliver quantified and verified MWh savings between 2020-2021
EE in Proposed Model Rules

- Mass-Based – Emission Standards – Trading Ready Plan:
  - EE measures outside the plan can be used to lower the costs of meeting emission limits – no limits on these measures
  - Currently EE measures are not eligible to receive allowances under a set-aside to address leakage (RE eligible)
    - Seeking comment on this approach
- Rate Based – Subcategorized Emission Rates – Trading Ready Rule:
  - Includes presumptively approvable provisions for EE ERCs
  - Additional allowances/ERCs can be generated under the CEIP for mass or rate-based plans
EE in Proposed Federal Plan

• Mass-Based – Emission Standards – Trading Ready Federal Plan:
  • EE measures outside the plan can be used to lower the costs of meeting emission limits – no limits on these measures
  • Currently EE measures are not eligible to receive allowances under a set-aside to address leakage, but seeking comment

• Rate-Based – Subcategorized Emission Rates – Trading Ready Federal Plan:
  • Currently, EE measures not eligible for ERCs, but seeking comment
  • Additional allowances/ERCs can be generated under the CEIP for mass or rate-based plans
EPA Regions and Western States

EPA Region 9
AZ, CA, HI, NV, Pacific Islands, Navajo Nation and 147 Other Tribal Nations

EPA Region 10
ID, OR, WA

EPA Region 8
CO, MT, ND, SD, WY, UT
(not all states shown on map)

EPA Region 6
AR, LA, NM, OK, TX and 66 Tribes
(not all states shown on map)
The Western Interconnection: Will Need CPP Coordination

Source: WECC
Western States Resource Mix
Net annual generation 2001 – 2014 by fuel type

Source: EIA
2030 Forecast Load is, on average, 14% higher than 2013 Load

Source: EIA & Utility Forecasts
Renewable Portfolio Standards in Western States

Hawaii currently has the longest-dated RPS, and the most aggressive.

Utah’s RPS is a goal, not a requirement.

Wyoming and Idaho do not have RPS.

Source: DSIRE
## Energy Efficiency Resource Standards in Western States

<table>
<thead>
<tr>
<th>State</th>
<th>Energy Efficiency Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Varies by Utility</td>
</tr>
<tr>
<td>Washington</td>
<td>All cost effective EE</td>
</tr>
<tr>
<td>Arizona</td>
<td>22% by 2020</td>
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<tr>
<td>New Mexico</td>
<td>8% of 2005 sales by 2020</td>
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<tr>
<td>Colorado</td>
<td>5% of 2006 sales by 2018</td>
</tr>
<tr>
<td>Hawaii</td>
<td>In rulemaking, effective 2015</td>
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</tbody>
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*Source: DSIRE*
CPP Next Steps: Opportunities for Comment

- Clean Energy Incentive Program Framework
- Proposed CPP Federal Plan
- Proposed Model Rule
- Draft EM&V Guidance

For more information, see [http://www.epa.gov/airquality/cpp/fs-cpp-proposed-federal-plan.pdf](http://www.epa.gov/airquality/cpp/fs-cpp-proposed-federal-plan.pdf)
CPP Next Steps: State Plan Development

- Develop plan with your State – initial submittal due September 6, 2016, final due September 6, 2018
  - States and EPA Regional Offices coordinate and collaborate during this phase
  - Unique opportunity for state energy offices to work with your state’s air program
  - CPP continues to support the existing work state energy offices have been promoting
- EPA Regional offices have 12 months to review and approve plans (in coordination with HQ)
Attend the NASEO Clean Power Plan Workshop:
Wednesday September 16 from 11:30 am - 4:00 pm
Pacific Ballroom D, Lobby Level

Agenda includes:
• The CPP Final Rule: Pathways, Options, and Opportunities
• CPP and the States: Roles and Perspectives of States, EPA and its Regional Offices
• Overview of the CEIP, Proposed Federal Plan, and Draft EM&V Guidance
• Private Sector Views on the Final Rule and Proposed Programs
• State Questions for the Experts
• Planned Technical Assistance and Next Steps
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](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](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](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](http://www2.epa.gov/cleanpowerplantoolbox)

- For a graphical and detailed walk through of the EGU category-specific CO₂ emission performance rate and state goals, see **State Goal Visualizer**: [http://www2.epa.gov/cleanpowerplantoolbox](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/](http://www.apti-learn.net/lms/cpp/plan/)