Clean Power Plan
Initial assessment of EPA’s §111(d) rule
Overview

• Rule basics and context
• EPA’s emission target
• State plan choices
• Considerations for Oregon
• Next steps
Clean Power Plan Basics

- Reduces national CO2 pollution 32% from existing power plants by 2030 from 2005 levels
- Focused on companies that own existing coal and gas power plants
- Directs states to develop plans for achieving CO2 emission reductions
Clean Power Plan History

• **September 2013**: EPA proposed CO2 reductions from new power plants under §111(b),

• **June 2014**: EPA proposed CO2 emissions guidelines for existing power plants under §111(d)

• **August 2015**: Final CO2 standards for new and existing power plants
Clean Power Plan
Key Upcoming Dates

• **September 2016:** States submit initial plan with request for extension
• **September 2018:** States’ final plans due
• **January 2022:** Compliance period begins
• **January 2030:** Final emission targets are met
Section 111(d)

Section 111(d) defines the following roles:

- **EPA** sets emission target
  - All adequately demonstrated measures to reduce CO2 emissions at existing coal and gas power plants
- **States** develop compliance plans
  - Broad flexibility to select preferred approach for achieving the emission guideline
  - Must include enforceable measures
EPA’s Emission Target

Block 1: Coal plant efficiency

Block 2: Shift to natural gas

Block 3: Renewable energy
Emission Target: State Goals

States have 2 options:

1. Emission Rate: CO2 emissions per MWh

2. Mass Cap: total tons CO2 emitted per year
Emission Target: State Goals

States have 2 options:

1. Emission Rate: CO2 emissions per MWh
   - Nationally uniform emission rates:
     - Coal: 1305 lbs/MWh
     - Gas: 771 lbs/MWh
   - State-specific average rates
     - Oregon: 871 lbs/MWh

2. Mass Cap: total tons CO2 emitted per year
   - Oregon’s annual cap: 8.1 million tons CO2
Consideration for Oregon: Role of Biomass

• EPA starting point: not all forms of biomass are approvable
  – Framework for Assessing Biogenic CO2: “not scientifically valid to assume that all biogenic feedstocks are carbon neutral”

• States must propose qualified feedstocks and treatment of biogenic CO2; EPA will review
  – This applies to biomass co-firing and repowering, and the issuance of ERCs

• Biomass can play a role under either a rate-based or mass-based compliance system
Consideration for Oregon: Our Emissions vs. EPA Target

- 2022 mass cap
- 2030 mass cap
Consideration for Oregon: Our Emissions vs. EPA Target

Power plants that must collectively meet these targets:

- Beaver
- Coyote Springs 1
- Coyote Springs 2
- Port Westward
- Hermiston Generating Plant
- Hermiston Power Partnership
- Klamath Cogeneration Plant
- Boardman
Consideration for Oregon: Our Emissions vs. EPA Target

- Oregon fossil EGU emissions
- EPA 2022 cap for Oregon
- EPA 2030 cap for Oregon
Consideration for Oregon: Connect with other states?

• Oregon has compliance options without connecting to other states
  – Emission rate plan – state specific rate approach
  – Mass cap plan – “state measures” approach

• However, we have to consider our connections to Western States…
Consideration: Other Western States

2012 emissions* vs. 2030 mass cap

* Minus known plant retirements
PacifiCorp & Western States

Legend:
- PacifiCorp service area
- Coal plants (11 total)
- Natural gas plants (6 total)
- Geothermal and other (2 total)
- Hydro systems (47 total plants)
- Wind plants (12 total)
- Wind plants under construction (1 total)
- Coal mines (3 total)
- PacifiCorp-owned primary transmission lines
- Transmission access (a)
## PGE & Montana

<table>
<thead>
<tr>
<th></th>
<th>2012 emissions (million tons)</th>
<th>PGE ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colstrip unit 1</td>
<td>1.6</td>
<td>0%</td>
</tr>
<tr>
<td>Colstrip unit 2</td>
<td>1.7</td>
<td>0%</td>
</tr>
<tr>
<td>Colstrip unit 3</td>
<td>5.6</td>
<td>20%</td>
</tr>
<tr>
<td>Colstrip unit 4</td>
<td>5.9</td>
<td>20%</td>
</tr>
<tr>
<td>Other Montana plants</td>
<td>2.7</td>
<td>0%</td>
</tr>
<tr>
<td>Montana total</td>
<td>17.5</td>
<td>13%</td>
</tr>
</tbody>
</table>
Stakeholder Outreach

Meetings since release of final rule:

- PGE
- PacifiCorp
- Consumer-owned utility representatives
- Business and customer/rate-payer interest groups
- Energy efficiency providers
- Environmental interest groups
- Independent power plant operators
Next Steps

• Continue to analyze the rule
• Convene stakeholder meetings
  – Large stakeholder meeting (October 27)
  – Outreach to low-income communities
• Work with Western states
• Update Legislature
Questions?

Contact info:

Jessica Shipley, ODOE: jessica.shipley@state.or.us
Colin McConnaha, ODEQ: colin.mcconnaha@state.or.us
Jason Klotz, OPUC: Jason.klotz@state.or.us
Consideration for Oregon: Clean Energy Incentive Program

• Early action credit for wind and solar and low-income energy efficiency

• Eligible projects must be:
  – Installed after state plan is finalized
  – Generating energy or savings during 2020-2021

• Priority given to states with more challenging goals