

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

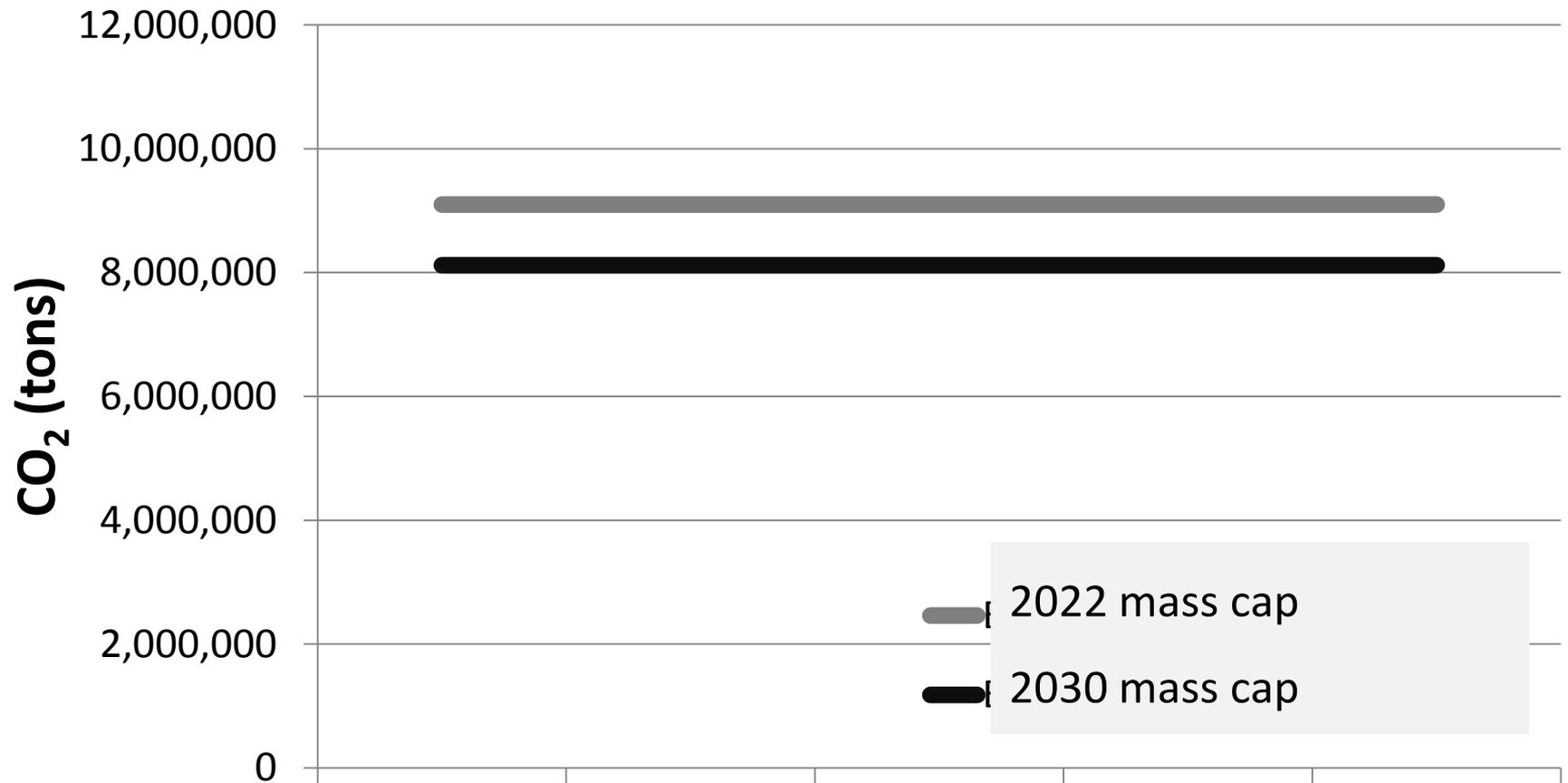
States have 2 options:

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

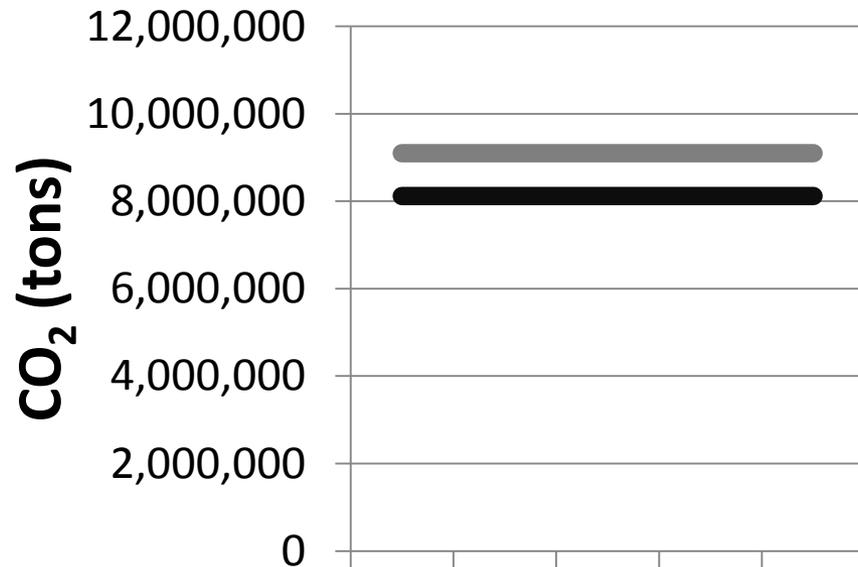
Consideration for Oregon: Role of Biomass

- 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



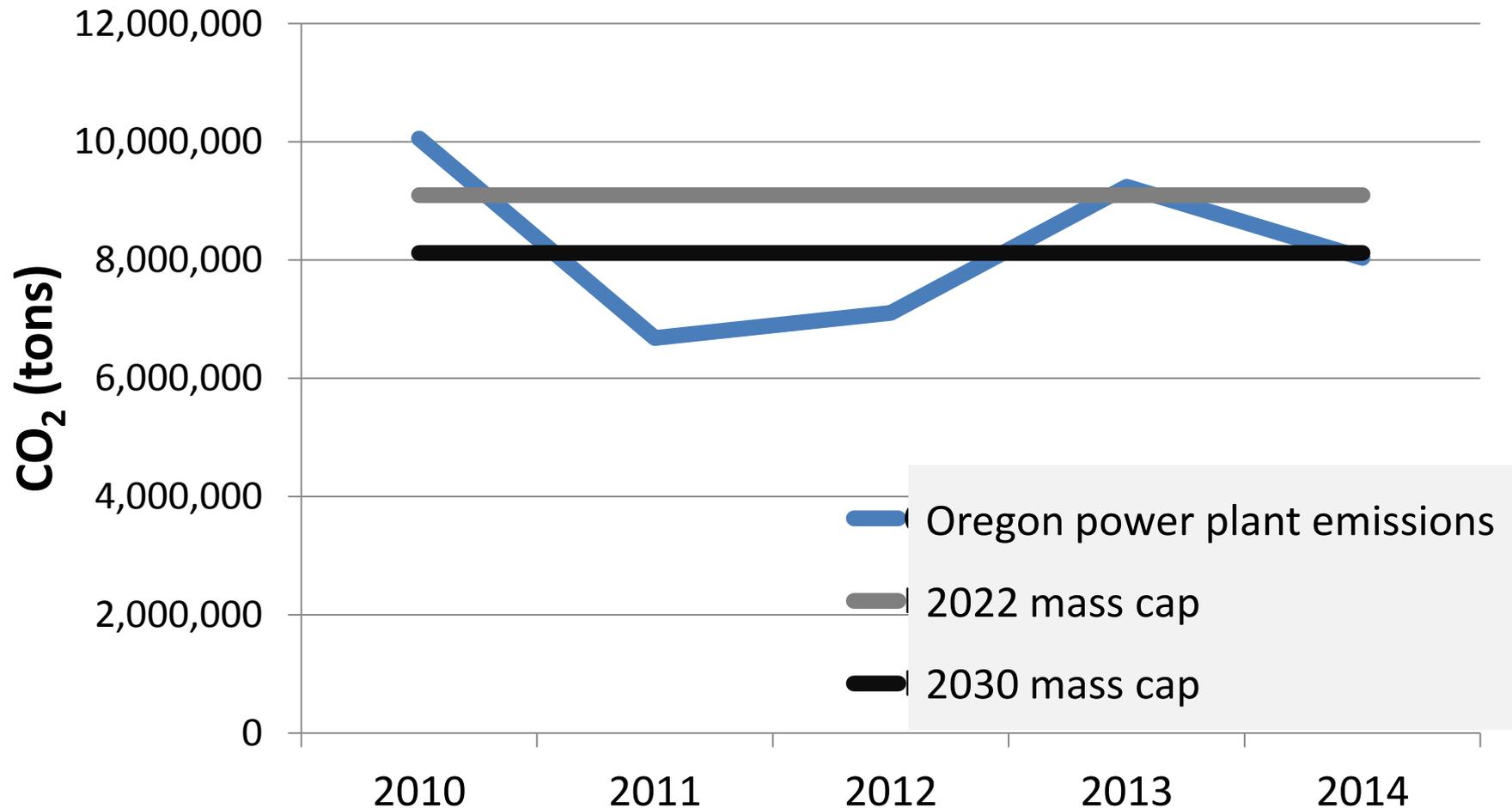
Consideration for Oregon: Our Emissions vs. EPA Target



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

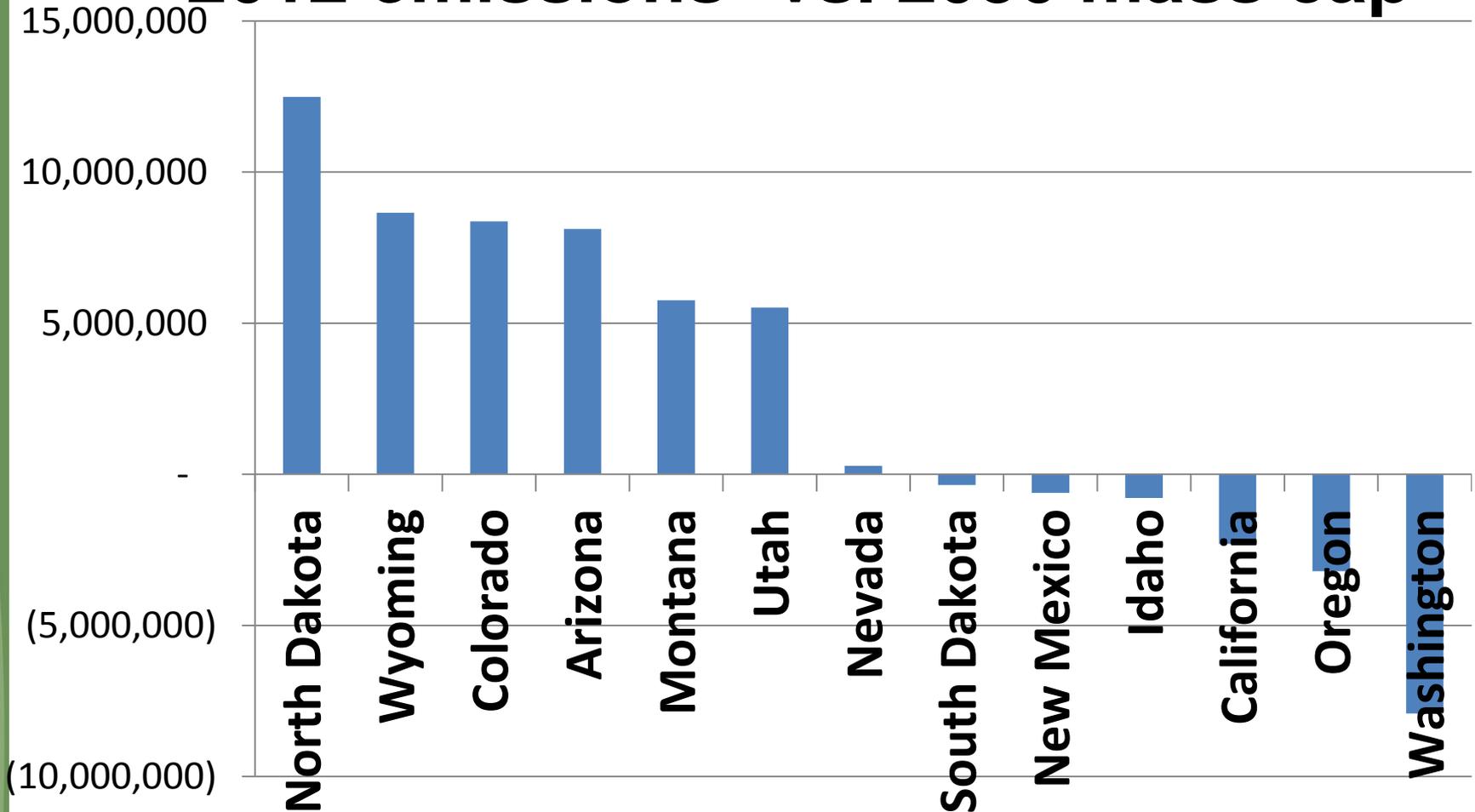


Consideration for Oregon: Connect with other states?

- 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

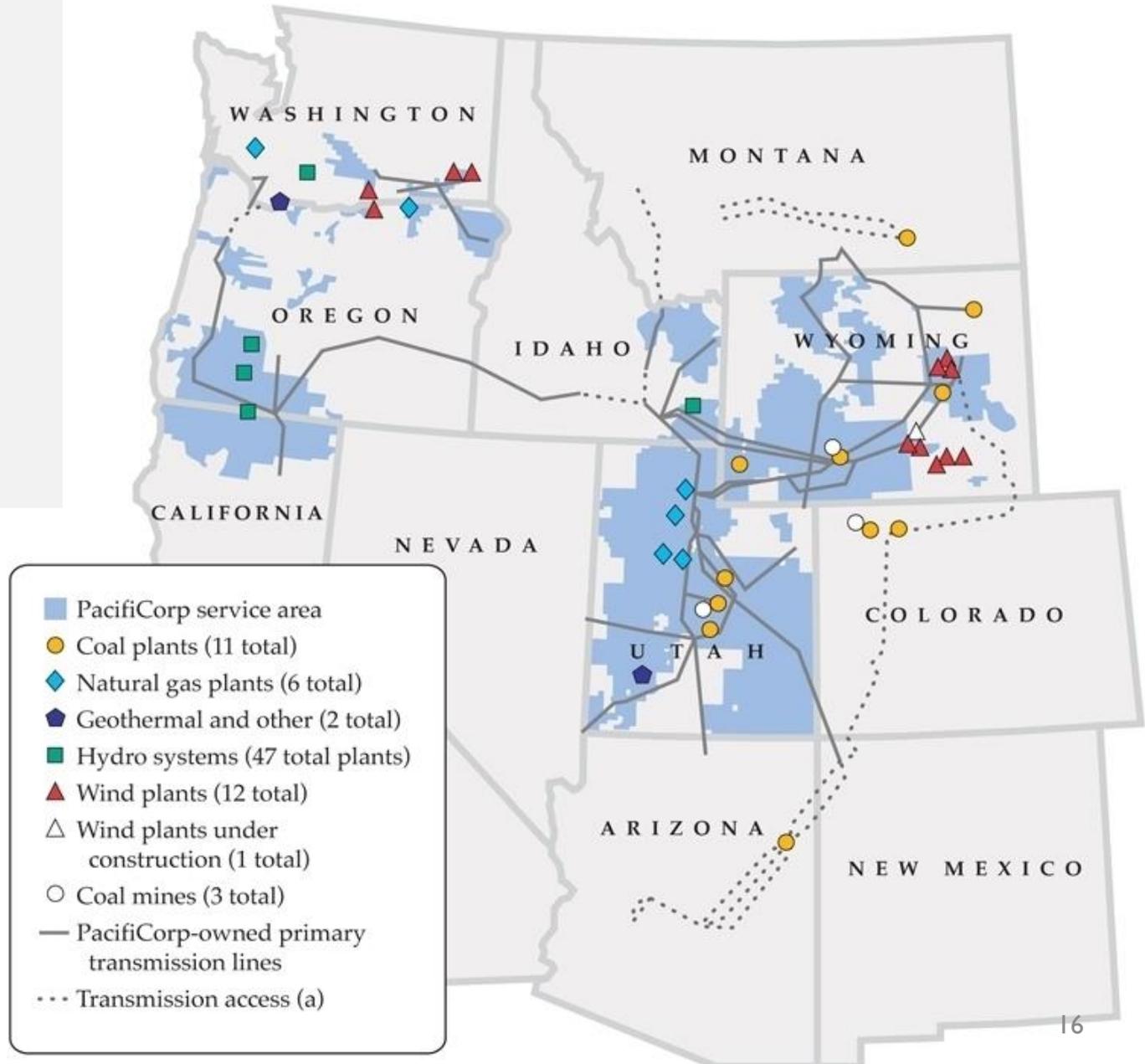
2012 emissions* vs. 2030 mass cap



* Minus known plant retirements



PacifiCorp & Western States



PGE & Montana

	2012 emissions (million tons)	PGE ownership
Colstrip unit 1	1.6	0%
Colstrip unit 2	1.7	0%
Colstrip unit 3	5.6	20%
Colstrip unit 4	5.9	20%
Other Montana plants	2.7	0%
Montana total	17.5	13%

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