

Greenhouse Gas Policy & Energy Market Interaction

EIM Entity Update
Regional Issues Forum
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Preamble

- The EIM Entities are a diverse group of utilities in the Western U.S., each uniquely situated based upon geography, resource portfolios, and jurisdictional status, among other differentiating factors.
- This summary does not represent the viewpoint of any individual EIM Entity on specific market design issues, but does present some general principles identified by the EIM Entities.

Overview

- Various state environmental policies will interact with each other and with the potential expansion of organized energy markets in the West
- An organized Market can produce efficiencies by enabling higher deployment of renewable energy at lower costs to customers, but an organized market cannot easily accommodate:
 - Accurate identification of specific resources delivered to load
 - Efficient dispatch of resources reflecting the costs of each individual state environmental policy/programs
- Harmonizing these state Environmental programs and efficient market design require:
 - Some coordination between various state regulations
 - Compatibility with organized market design
 - Appropriate accounting methodologies

Policy Framework

- Several states and provinces in the West have or are likely to pass legislation to decarbonize the electric grid
- Policies generally come in two forms:
 - Regulation of GHG emissions through cap-and-trade or carbon tax (carbon pricing)
 - Renewable and clean energy procurements mandates equal to a percentage of load
- Challenges arise in harmonizing different programs in an interconnected electricity market

State Environmental Policy Programs

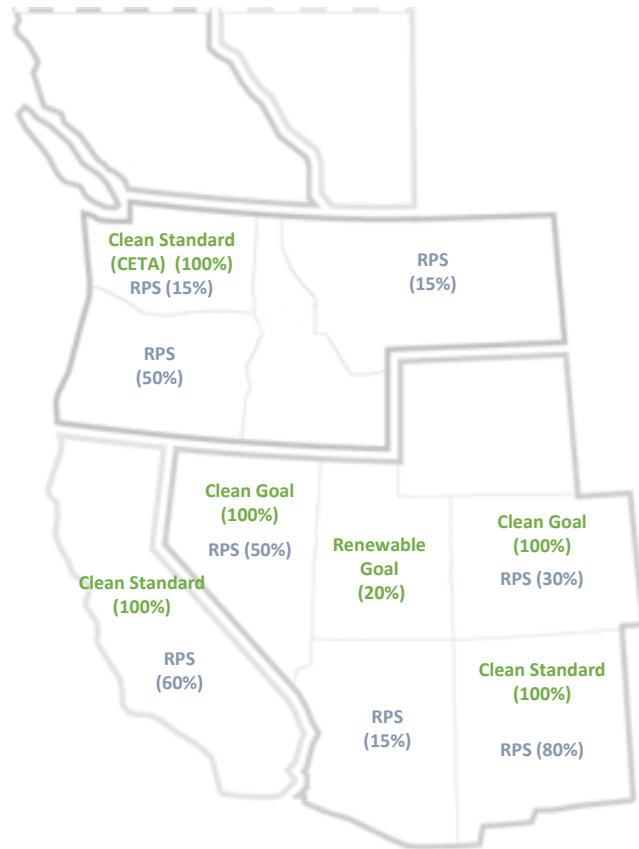
Carbon Pricing



- Charged at smokestack
- Challenges:
 - Trade between states with different carbon pricing programs
 - Differing approaches to imports from other states

State Environmental Policy Programs

Clean / Renewable Procurement Programs



- Annual procurement requirement and reporting
- Requires assignment of (eligible) resources or attributes to states or entities
- Challenges:
 - No west-wide agreement on accounting methodology

Efficient Wholesale Electricity Markets Support State Environmental Policy Objectives

State Environmental Policy Objectives

- Reduce greenhouse gases
- Create clean jobs
- Increase local renewable resources
- Decrease reliance on fossil fuels
- Support electrification
- Achieve objectives at acceptable cost

Efficient Wholesale Electricity Markets

- Keep rates affordable through efficient trade
- Integrates renewable resources at lowest cost
- Reduces renewable curtailment
- Reduces GHG emissions

... while respecting individual state autonomy and ensuring reliability

Efficient Markets Cannot be Achieved Without Policy Coordination

- Regional organized markets help achieve efficient renewable integration, reducing GHGs, and maintaining affordable electricity rates (example Western EIM)
- Fragmented state environmental policies create challenges in achieving efficient wholesale electricity markets (both organized and bilateral markets)
 - Challenges largely limited to interstate electricity trade (imports and exports)
 - Significant volume of interstate trade occurs every hour and is required

Principles for Market Design and State Policy Integration

1. To the maximum extent possible, market design should fairly reflect and be consistent with state policy objectives;
2. Jurisdictions that have not adopted a greenhouse gas or renewable procurement policy should not be improperly affected, directly or indirectly, by policies adopted by other jurisdictions;
3. The entity responsible for the output of a resource, as defined by a jurisdiction's policy, should receive the full greenhouse gas or renewable benefit and bear the full greenhouse gas cost of that resource;
4. The method for assigning and verifying compliance obligations under a specific greenhouse gas or renewable procurement policy should be consistent with or reconciled to how the market design allocates costs and benefits; and
5. Renewable and non-emitting resources outside of jurisdictions with greenhouse gas policies should not be unfairly disadvantaged compared to renewable and non-emitting resources inside jurisdictions with greenhouse gas programs.

Conclusion

- An organized market can enable efficiencies and higher deployment of renewable energy, however, market design must be compatible with the policy objectives of individual states.
- Similarly market expansion objectives must be supported by state requirements, enabled by:
 - Data transparency
 - Harmonized accounting methodologies
 - Uniform tracking