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Applying GHG Programs To Energy Imports

EIM Regional Issues Forum Carbon Workshop

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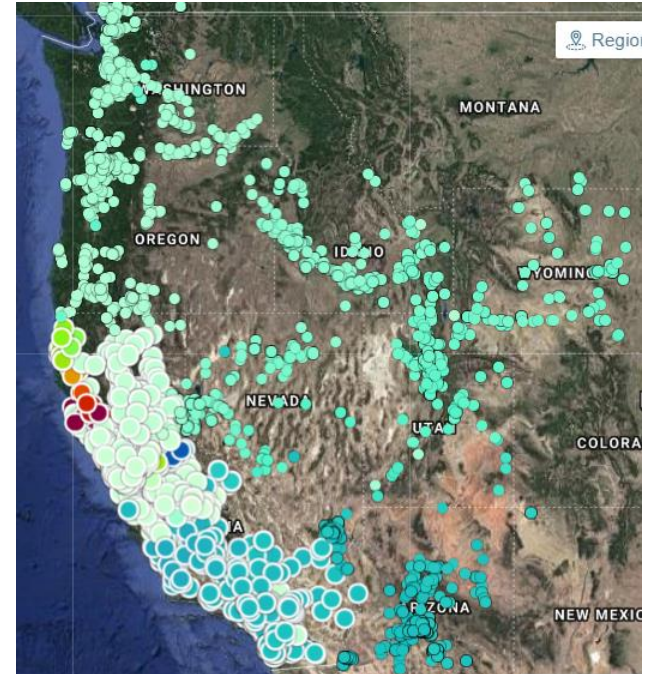
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Experience Gained Through California Cap-And-Trade

- Energy is imported to California through various means:
 1. Long-term resource ownership / bilateral energy agreements
 2. Short-term **bilateral** wholesale energy transactions
 3. Short-term **organized** energy markets (e.g., EIM)
- Identifying the **specific resources** that are being imported to California is **very challenging**, particularly for short-term markets:
 - What are the principle(s) for identifying which specific external resources are serving load in California?
 - How are GHG emissions of imports actually tracked in practice?
 - When tracking of GHG emissions of imports is inaccurate:
 - Who benefits? Who is harmed?

GHG Accounting in Organized Markets Can Be Even More Complex

- Organized markets are flow-based, centrally-dispatched “nodal” markets
- Market operator simultaneously dispatches **all** resources to meet **all** loads within a large regional footprint
- **No explicit link** between any individual resource and any individual load



CAISO Price Map available at <http://www.caiso.com/PriceMap/Pages/default.aspx>

Objectives of GHG Treatment for Imports

Approaches to carbon policies may vary, but they share many common objectives for energy imports:

1. Accurate tracking of GHG emissions of external resources used to serve load in the GHG region
2. Accurate accountability to market participants through accurate charges (or benefits) of incremental GHG emissions (or lack thereof) for imports serving load in the GHG region
3. Market signals that encourage the investment, participation and dispatch of clean external resources

Looking Forward

- Wholesale markets are evolving
 - Carbon policies in multiple jurisdictions: California, BC, Oregon, Washington, New Mexico
 - EIM continues to expand
 - Potential organized day-ahead market
- Regulators and participants should collaborate to establish principles of a workable framework
 - Acknowledge shortcomings of current GHG approach for imports
 - Don't treat imports as resource specific unless accurate identification is achievable
 - Develop more robust framework for verifying “clean” import eligibility

Optimistic that a comprehensive western GHG allocation framework can be compatible with the carbon policies of multiple jurisdictions, even if those policies are not uniform

- Consistency in **some areas** may be necessary for effective application in short-term markets



Thank You

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