Intersections Between Wholesale Energy Markets and State Carbon Policies

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Issue Overview

- **Efficient Wholesale Energy Markets Support State Greenhouse Gas Policies:** efficient markets minimize seams, shorten market intervals, and create a large footprint with a deep pool of geographically diverse resources to balance varying supply and demand—to help integrate high penetrations of non-emitting technologies while also maintaining reliability and affordability

- **State Greenhouse Gas Policies Typically Require Association of Resources to Loads:** a number of state policies in the west rely on identification, calculation and verification of resource types and emissions associated with or attributed to serving load or retail sales in individual states

- **Organized Markets Do Not Associate Resources to Loads:** a market with a large footprint and few seams makes it harder to precisely and accurately account for the quantity and type of energy dispatched or attributed to serve load in each individual state

- **State Approaches to Associating Resources to Loads Can Create Unintended Consequences:** multiple states with different approaches to accounting methodologies for different types of programs exacerbates the challenge of definitively quantifying the type and emissions profile of energy dispatched or attributed to serve load in each state while assuring no over-counting of renewable energy or emissions

Issue Overview, con't

- **Efficient Wholesale Energy Markets Support State Greenhouse Gas Policies**
  - The EIM has resulted in significant cost savings, avoided curtailment of California renewables, and enabled sustained step-reduction of PacifiCorp greenhouse gas emissions
  - Increased market efficiency and harnessing geographic load and resource variation is very likely to be necessary as significant quantities of capacity are retired over the next ten years

- **State Greenhouse Gas Policies Typically Require Association of Resources to Loads**
  - California, Oregon, New Mexico, Nevada, Washington RPS (including SB 5116) require load-based accounting of renewable and non-emitting procurement verified by renewable energy credits or portfolio energy credits—undifferentiated system power does not "count"
  - California, Oregon, and Washington (and potentially others) require reporting of emissions associated with imported electricity—EIM transfers to CAISO are resource-specific attributions while all other EIM transfers are treated as unspecified

- **Organized Markets Do Not Associate Resources to Loads**
  - EIM transfers are undifferentiated system power transfers between EIM Entities
  - Transfers to and from multi-state EIM Entities are not identified by state but by balancing authority area e.g., transfers to PacifiCorp's system is to PACE or PACW, not individual states
  - Resources are not dispatched to serve specific loads—system resources serve system loads

- **State Approaches to Associating Resources to Loads Can Create Unintended Consequences**
  - Policy barriers to market efficiency creates the potential for: 1) disincentives for individual entities to participate in the market; 2) under-utilization of existing resources; 3) costly over-build of renewable resources; and 3) market signals that do not incentivize desired behavior