Impact of EIM Imports on Carbon and REC accounting

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Western Power Trading Forum
Regional Issues Forum
September 7, 2017

Treatment of Electricity Imports under California Cap and Trade Program

- The Cap and trade program is a source-based system
  - All in-state generation and electricity imports covered under the cap
    - In-state resources responsible for emissions from generation
    - Importer responsible for emissions attributed to generation and transmission losses of imported power
- Responsible importer and quantity of power imported determined by
  - E-tags for imports through bilateral and CAISO day-ahead markets
    - Purchasing-Selling Entity on physical path at California border and MWH
  - EIM algorithm for EIM Participating resources
    - Scheduling Coordinator and quantity “Deemed delivered” to California
- Emissions
  - Bilateral or DA imports:
    - Facility-specific emission rate if resource Identified in contract terms and e-tag corresponds
    - System (default) emission rate otherwise
  - EIM imports
    - Facility-specific emission rate for all resources deemed delivered to California

Cap and Trade Compliance Costs Reflected in Wholesale Energy Prices

- Bidders in CAISO, both in-state resources and importers, include anticipated carbon costs in energy bids
  - Generators and importers bear compliance obligation
- In bilateral transactions, importer passes carbon costs through to buyer via contracts
  - Importer bears compliance obligation
- EIM participating resources submit “GHG Adder”, separate from energy bid, that reflects anticipated carbon costs if output is deemed delivered to California
  - Resource Scheduling coordinator bears compliance obligation if deemed delivered

The cap and trade program creates economic benefit, not GHG Adder

- The GHG adder enables EIM participating fossil resources to ensure that they are compensated for carbon operating costs in the event their output is assigned to California
  - GHG Adder must be separated from the energy bid to prevent resources from being disadvantaged for dispatch outside of California
- The economic benefit to a renewable resource under California's cap and trade program results from an avoided *operating* cost due to being zero-emission:
  - Renewable resources do not have to procure allowances; Fossil resources do
  - Benefit accrues to both in-state renewable resources and electricity imports
- This economic benefit is no different from the profit margin that a renewable resource receives from electricity prices due to the lack of fuel costs

Both Carbon Pricing and RPS Programs Benefit Renewable Generation

- RPS programs create demand for renewable generation and create a value stream that is captured by the sale of RECs
- Carbon pricing creates additional value for zero emission resources by enabling capture of additional revenue for power sales into electricity markets where there cost of carbon is included in energy prices
- WREGIS approach would make the financial benefits of carbon pricing and RPS programs mutually exclusive
  - A EIM renewable resource would have to choose whether to make its output available to California, in which case it could get a higher price for its energy and be dispatched more often, but may forego the value of the associated RECs in other state programs, or vice versa.
  - Would hinder participation of Renewable Resources in EIM

Distinction between GHGs, RECs & Energy

- GHG attributes in RECs usually defined as ‘GHG benefits’ or ‘avoided GHG emissions’
  - In contrast, GHG reporting/accounting concerned with direct emissions
  - RECs were designed to account for renewable claims, not carbon accounting
- Disposition of RECs is different from disposition of associated renewable energy
  - Evident from existence of delivery requirements and distinction between ‘bundled’ and ‘unbundled’ RECs
  - States decide rules and requirements for bundling of RECs/delivery requirements for renewable energy
- Need to avoid double-counting of each of GHG emissions, RECs and energy, but separate use of each component does not constitute double-counting:
  - E.g. a California renewable resource that exports power to Nevada and sells RECs to Oregon utility
    - Direct GHG emissions ‘used’ in California by generator,
    - Energy consumed by load in Nevada
    - RECs retired by utility in Oregon

EIM Imports to California are no different from other interstate transfers

- EIM imports of renewable energy may result in unbundling of REC and energy
  - Dependent on whether RECs purchased and retired in California or elsewhere
- WREGIS does not currently distinguish between bundled and unbundled RECs
  - Supports matching of RECs to e-tags for bundled transactions, but does not flag specific RECs
- Flagging RECs associated with electricity imported into California would inappropriately suggest that these RECs are different and are of lesser value than others