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Independent Emissions Market Advisory Committee (IEMAC)  
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Dear Dr. Fowlie and Dr. Burtraw,

This letter is intended to clarify an issue that I brought to the IEMAC in a letter dated October 5, 2018, and at IEMAC meetings on April 5 and June 14 of this year. The issue pertains to greenhouse gas (GHG) accounting for California electricity imports, which was identified as an area of focus for the Markets Overlap Subcommittee for this year at the June 14 meeting. Below I have described one specific policy interaction scenario in an attempt to make our perspective more straightforward. I welcome your feedback.

### **Washington's Clean Energy Transformation Act**

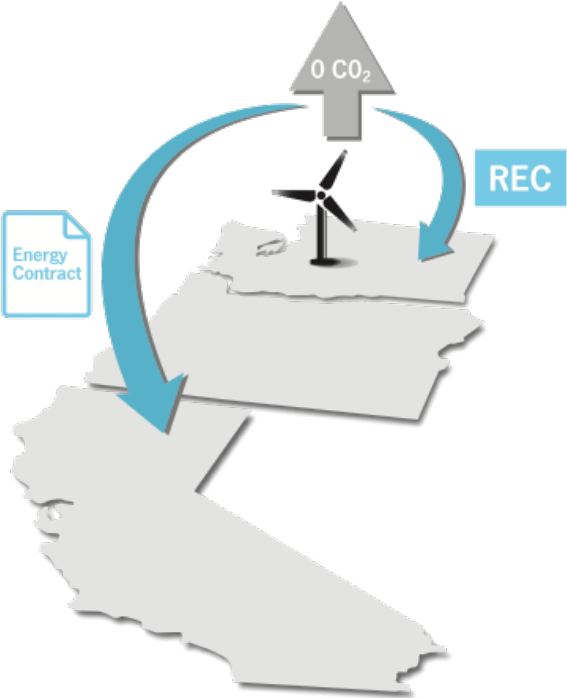
Washington's Clean Energy Transformation Act (CETA) requires that, "nonemitting electric generation and electricity from renewable resources supply one hundred percent of all sales of electricity to Washington retail electric customers by January 1, 2045" (Section 5(1) of Washington Senate Bill 5116). That program counts GHG emissions to the atmosphere from electricity generation that is sold to Washington customers to verify compliance.

Emissions either sold to Washington retail electric customers or "delivered to serve load located inside the state of California" (Section 95802(a) California's Cap-and-trade Regulation) can only be determined contractually, and California and Washington use different contractual instruments to verify delivery of electricity with zero or specified emissions. California uses energy delivery contracts, North American Electric Reliability Corporation (NERC) energy tags (e-tags), and other data, and/or the California Independent System Operator's (CAISO's) optimization model for deemed deliveries from the Western Energy Imbalance Market (EIM). Washington will use renewable energy certificates (RECs).

Even though any given quantity of electricity and the direct GHG emissions associated with its generation can only be delivered to serve load or to be consumed by customers in one state, the use of different tracking mechanisms to account for direct GHG emissions from power delivered to customers makes it possible for either state to undercount GHG emissions (or double-count zero-emissions generation). As a result, there are emissions delivered to load in either state that are hidden and not regulated.

Figure 1 illustrates a scenario in which a zero-emitting wind facility in Washington is contractually delivering power to California and the RECs associated with the same generation are used in Washington. In this case, the same emissions to the atmosphere can be counted as emissions delivered to load in California (under cap-and-trade) and counted as emissions associated with retail sales to customers in Washington (under CETA). The same zero emissions to the atmosphere are being counted by both states, and somewhere GHG emissions are being released to the atmosphere without being counted in either state.

**Figure 1. Illustration of Potential Undercounting of Emissions Between California and Washington**



Although Washington may choose to address this issue in its own rulemaking to implement CETA, e.g. by excluding RECs associated with power imported to California, potential interactions with Washington’s CETA illustrate our core concern with California’s policy. We believe neighboring state Renewable Portfolio Standard (RPS) and voluntary renewable energy (VRE) programs are also potentially affected.

In the remainder of this letter, I provide some additional context and explanation related to questions that have come up around this issue in the past.

### **No Conflict between Source-based and Load-based GHG Accounting**

We have described programs that count GHG emissions (or other generation attributes) associated with electricity that is sold, delivered, or consumed in the state variously as “consumption-based,” “demand-based,” or most recently “load-based” programs. That would include Washington’s CETA as well as the portion of California’s cap-and-trade program that counts emissions associated with imported electricity. We have described California’s regulation of emissions from in-state generation sources as “source-based” or “generation-based,” since these emissions are counted based on the location of the source regardless of whether the electricity is delivered or consumed in-state or to another state. Whereas the same electricity may be generated in one state and consumed in another, we do not see a conflict between neighboring source-based and load-based GHG accounting. For example, zero-emissions generation may be located in California and delivered to Washington, in which case it will be counted as zero emissions generated in California under cap-and-trade and zero emissions delivered to Washington. States may work together to avoid double regulation.

### **RPS and VRE Programs are Also Affected**

RPS and VRE programs also implicitly count emissions to the atmosphere that are sold, delivered, or consumed, even though the compliance or transaction unit in these programs is a megawatt-hour (MWh) of renewable electricity generation rather than a ton of carbon dioxide-equivalent (tCO<sub>2</sub>e). According to state REC definitions, generation information tracking systems, the stated purpose of many RPS and VRE programs, and the reasonable claims and expectations of RPS ratepayers, the renewable electricity delivered to customers through these programs includes the direct GHG emissions to the atmosphere from those renewable sources.

Fuel type and emissions should always be transacted together. The fuel type used for power generation determines the emissions to the atmosphere from that generation. For example, wind power cannot be generated or delivered without the direct emissions profile of wind power or while the emissions profile of that generation is delivered somewhere else, and vice versa. As a result, the same undercounting of emissions described above is also possible between renewable electricity that is imported under California’s cap-and-trade program and any other state’s RPS program that uses RECs.

### **No Conflict between RPS and Cap-and-trade**

There is no double counting or other conflict between California’s RPS and California’s cap-and-trade program. Renewable, zero-emission generation in California can be counted toward the state’s RPS as electricity sold to California customers and also counted as zero emissions generated in California

under cap-and-trade. Similarly, renewable, zero-emission generation located outside of California can be imported to California and counted as zero emissions imported or serving load in the state under cap-and-trade and also counted toward the state's RPS as electricity delivered to California customers, provided the associated RECs are retired. In either case, the cap-and-trade program and the RPS are complementary with respect to GHG emissions from the power sector.

It is our view that only the part of cap-and-trade that pertains to imported electricity is affected by accounting for RECs. We are not suggesting that the RPS and cap-and-trade be mutually exclusive in terms of renewable electricity generation. For in-state renewable generation, cap-and-trade should not restrict movement of RECs at all. For imported renewable electricity, cap-and-trade should not restrict the movement of RECs within California. Cap-and-trade should only be concerned with RECs associated with imported electricity because this part of the program affects load-based carbon, RPS, and VRE programs in other states.

Thank you both for your continued consideration of this issue. I would like to reiterate that, as a nonprofit organization with a mission to advance the development of sustainable energy through policy and market solutions, CRS strongly supports California's cap-and-trade program. Our objective is to help ensure that when California's cap-and-trade program has the potential to interact with other programs, its intended impacts are preserved.

Sincerely,

\_\_\_\_\_/s/\_\_\_\_

Todd Jones

Director, Policy

Center for Resource Solutions