

February 22, 2022

EDAM working group #3 participants,

Below I have responded back to several questions that were raised via the “homework” questions. These questions can be broadly categorized as either asking about foundational concepts or are outside of the CAISO’s purview. As such, they didn’t fit neatly into the buckets we are using to categorize the remaining scope items. For the foundational concepts, I have attempted to respond to these in a factual manner. For the other questions, I have encouraged the submitter to refer their question to the appropriate organization.

We will review this document briefly in the Feb 22, 2022 meeting and this will be posted onto the working group website for future reference.

Best,

Kevin Head

EDAM working group #3 facilitator

Q		Foundational questions	
Q-1	PAC	PAC: Why can’t the resources that are actually dispatched above base schedule be used to deem the GHG obligation?	<p>KH: Per the CAISO SME: “the dispatch and GHG attribution are calculated simultaneously; limiting the GHG attribution dynamically to incremental dispatch above base schedule introduces a nonlinearity that could result in uneconomic dispatch and thus inconsistent dispatch and pricing.”</p> <p>Instead, GHG attribution in the WEIM is limited to the resource’s upper economic limit minus the resource’s base schedule. The upper economic limit can be thought of the highest bid-in MW capacity of the resource. For example, if the resource’s highest bid-in MW is 150 MW and its base schedule</p>

**Q-2 SCE** SCE: SCE understands that emitting resources may be dispatched up in the EIM while renewable resources may be deemed to deliver to California in their place. How often does this occur? How large is the impact of this type of dispatch attribution?

is 90MW, the GHG attribution cannot exceed 60MW.

KH: The phenomenon that you are referring to is what the working group has been referring to as secondary dispatch. While it's difficult to precisely determine this metric, the CAISO Market Analysis team has provided a metric for this. Based on the materials presented during the Jan 25, 2022 Regional Issues Forum, it appears that the range is around 45-50%. See slides 6 and 7 in that presentation [here](#).

**Q-3 SDGE** SDGE: Why is the current EIM incorrectly "deeming" power as delivered to CA when its base schedule shows 100% delivery outside of CA? Which resource types are being affected? Are the errors leading to an over or under estimation of GHGs? Is this error fixable? If so, can we fix the EIM GHG Accounting system and export it to EDAM as the Resource Specific approach?

KH: As mentioned above, GHG attribution in the WEIM is limited to the resource's upper economic limit minus the resource's base schedule. If the upper economic limit equals the base schedule, then 100% of the base schedule will be considered to be 100% delivered outside of California and no GHG attribution will occur (for non-California EIM entities).

The Resource Specific approach for EDAM is effectively the same approach as used by the WEIM, with some minor modifications.

**Q-4 SCE** SCE: If there are renewables that are deemed to be delivered to CA when emitting resources are dispatched elsewhere by the EIM, how well does the out-of-market action (e.g. CARB' pro-rata reduction of LSE's annual GHG allowance reduction) account for this?

KH: I'd encourage you to review the EIM Outstanding Emissions equation that CARB uses for this calculation. In terms of how well this calculation works, this is unfortunately not something that the CAISO can weigh in on and might be a question better directed to CARB.

**Q-5 BPA** BPA: And in a related vein, what are the thresholds for state regulators accepting this level of secondary dispatch and not applying an

KH: This is unfortunately not something that the CAISO can weigh in on. If you have questions for

“outstanding emissions calculation” like CARB currently does for EIM imports?

**Q-6 PAC** PAC: If CARB and Washington Department of Ecology looks at the GHG attribution enhancement and don’t feel that it minimizes leakage enough, will they still apply an outstanding emissions calculation? And if so, what benefit remains to this enhancement?

**Q-7 BPA** BPA: How does the EDAM method for minimizing leakage compare to the EIM method? Does the CAISO expect the secondary dispatch level to be more, less, or about the same?

the state regulators, we encourage you to reach out to them.

KH: This is unfortunately not something that the CAISO can weigh in on. If you have questions for the state regulators, we encourage you to reach out to them.

That said, the fact remains that the CAISO needs to determine how to proceed with the design of the GHG optimization in the day-ahead timeframe as part of the overall EDAM market design. The purpose of this working group is to propose that GHG market design and to propose potential enhancements to it if any are identified during the process.

KH: At this point, it is too early to determine. The extent to which leakage is minimized depends on which approach is taken (resource-specific versus unspecified/zonal) and the specific design elements of that approach. As we proceed over the next two meetings – Feb 24 and March 1 – we should hear specifically how each approach attempts to minimize leakage.

Regarding leakage in the EDAM versus WEIM, there are two points to be aware of: 1) the volume of transactions in the day-ahead timeframe is likely greater than in the real-time market, 2) under the current framework, Deemed Delivered EIM Emissions are only based on RTD (the 5-minute real-time market in the WEIM). Accordingly, while the volume of the transactions can reasonably be expected to increase, it is unclear how this will

**Q-8 SDGE** SDGE: CARB ultimately signed-off on the current EIM GHG accounting structure despite its inaccuracies. Powerex claims that expanding the current Resource Specific EIM system to EDAM would result in inaccuracies that are too great. To date, has CARB been consulted on whether the existing GHG accounting system on a larger footprint would be acceptable or corroborate Powerex’s concerns? CARB is the California entity responsible for GHG accounting and their opinion on the viability of any proposals should be provided to adequately weigh any options.

affect the Deemed Delivered EIM Emissions figure that CARB calculates for the purpose of determine compliance obligations.

KH: This is unfortunately not something that the CAISO can weigh in on. If you have questions for the state regulators, we encourage you to reach out to them.