



Extended Day Ahead Market

Working Group 3 Weekly Report

Week 8 Report

2/21/22 – 2/25/22

# Progress Tracker

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| --- | --- |
| **General Accounting: GHG Compliance Area(s)** |  |
| Boundaries (State, GHG Compliance Areas, BAA, LSE, International?) | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| Implications for BAA spanning multiple states | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| Impacts to EIM | ***In progress (RS) - 2/24*** |
| Rules that need to be established for renewable resource dispatch in/out of a GHG zone | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **General Accounting: Availability** |  |
| Rules for availability to serve load in GHG compliance area | **Completed - 1/13/2022** |
| **General Accounting: Costs being optimized** |  |
| Are we optimizing Carbon prices? RPS/CES? | **Completed - 1/11/2022** |
| Types of pricing : carbon pricing, clean energy/renewable | **Completed - 1/11/2022** |
| Transactions: GHG zone (Gen in GHG zone, Imports into GHG zone) vs Non-GHG zone (Gen in non-GHG zone, Exports into GHG zone ) | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **General Accounting: Emissions attribution** |  |
| Resource specific, Unspecified | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| Determining emissions rate attribution with different participation options | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **General Accounting: Participation options** |  |
| Determining emissions attribution with different participation options: | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **General Accounting: Multiple GHG Zones** |  |
| Can the model accommodate multiple GHG zones? If so, how? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **Approach-specific Issues: Baseline for evaluation of attribution** |  |
| (Resource-specific approach only)  What should the baseline for evaluating GHG attribution? | ***In Progress (RS) – 2/24*** |
| **Approach-specific Issues: Hurdle rate calculation** |  |
| (Unspecified/zonal approach only)  How would the hurdle rate calculation work? | ***In Progress***  ***1/26/2022*** |
| **Approach-specific Issues: Alternate pathways to serve GHG zones** |  |
| (Unspecified/zonal approach only)  What alternative pathways would exist for a resource in a non-GHG zone to serve a GHG zone? | ***In Progress***  ***1/26/2022*** |
| **Secondary Dispatch and Other Consequences: Leakage minimization** |  |
| What mechanisms exist to limit leakage and secondary dispatch? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **Secondary Dispatch and Other Consequences: Other consequences of approach** |  |
| Are there other unintended consequences of the model and how does the approach deal with these? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **Reporting and Settlements: Market Results** |  |
| What type of information and at what granularity will GHG information be reported to support state reporting requirements? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| Should we consider policy that is in effect/will be in effect by Jan 2024 or try to accommodate hypothetical reporting systems? | **Completed – 2/14/2022** |
| What data needs to be tracked for compliance and harmonization with clean energy policy purposes (including other instruments that attribute generation to load)? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| How would energy be identified/tracked or tagged under a specified approach? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **Reporting and Settlements: Settlements** |  |
| Will entities bearing GHG compliance obligations be made whole for purchasing credits? If so, how? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| In the unspecified approach, how will the hurdle rate revenue be distributed to the suppliers? |  |
| **Miscellaneous: Bidding of GHG costs** |  |
| Should GHG costs be reflected in bids? If so, how? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| How do cost reference level (DEBs and proxy costs) reflect GHG costs? | ***Completed (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| **Miscellaneous: EIM (roll over to real Time)** |  |
| Do we need to make updates to the RTM EIM GHG model to align it with EDAM? | ***In Progress (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |
| What are the associated settlement impacts to any variation allowed? | ***In Progress (RS) – 2/24***  ***In Progress (U/Z) – 1/26*** |

**Key:**

*Completed (RS)*: Scope area has been completed for the resource-specific approach

*Completed (U/Z)*: Scope area has been completed for the unspecified/zonal approach

*In progress (RS)*: Scope area has been discussed but not completed for the resource-specific approach

*In progress (U/Z)*: Scope area has been discussed but not completed for the unspecified/zonal approach

# Weekly Discussion

## February 22

**Scope Items Discussed**: Foundational items

**Presenters**: Kevin Head, California ISO

Continuing the review of WG3 participant questions from the “homework assignment, Kevin reviewed the category of “foundational” questions, which are questions not specific to an individual WG3 Scope Item, but rather more general. These eight questions and Kevin’s responses are posted on the WG3 website. Each item was discussed and then a Q&A session following his review.

**Discussion**:

There was limited discussion on these items. One comment requested that the upcoming WG3 sessions on deeper dive into Resource Specific and Unspecified Resource EDAM design alternatives include a com pare and contract approach, specifically regarding leakage and secondary dispatch impacts.

**Conclusion**:

With the discussion of these Foundational questions, this concludes the review of the submitted homework assignment questions. Going forward, these content of these questions have been imbedded into the discussion on individual scope items in upcoming WG sessions.

**Scope Items Discussed**: Foundational

**Presenters**: Abhishek Hundiwale, California ISO *Current Framework for Greenhouse Gas*

*(GHG) Accounting within CAISO Markets*

California ISO subject matter expert (SME) presented on the existing GHG framework in CAISO markets. The presentation covered GHG compliance costs bids, basic attribution principles, and how the design has evolved since WEIM go-live with a focus to reduce the potential magnitude of secondary dispatch.

**Discussion**:

There were questions and clarifying discussion on the basic dispatch example from the presentation showing three dispatch levels relative to base schedule. There was also discussion on the graph showing the general reduction of percentage of transfers serving CAISO load that are potential secondary dispatch following the 1/1/2018 market enhancements. A concern over the existence of potential secondary dispatch and the magnitudes shown in the graph was expressed and discussed. In response to this concern, multiple participants offered that full participation in an EDAM GHG optimization (full market footprint GHG zone) could mitigate the level these potential secondary dispatches.

**Conclusion**:

This review of existing CAISO market GHG features and principles serves as a foundation for Thursdays Resource Specific 2.0 discussion.

**Scope Items Discussed**: Foundational

**Presenters**: Kevin Head, California ISO

The WG3 Scope Items document, which was updated last week to include references to participants questions, was further updated to include context related to current CAISO market design. This document was reviewed in its entirety in this session.

**Discussion**:

Due to time constraints, there was not much opportunity for Q&A on this topic. The sole discussion topic was on the difference between current single GHG zone construct and the EDAM with potentially more than one GHG zone. Currently, the single GHG zone is consistent with BAA boundary, but not necessarily in EDAM. Some discussion took place regarding how a GHG bid adder might work under this EDAM scenario.

**Conclusion**:

This review of existing CAISO market GHG features and principles serves as a foundation for Thursdays Resource Specific 2.0 discussion.

## February 24

**Scope Items Discussed**: All – WG Schedule

**Presenters**: Anja Gilbert & George Angelidis, California ISO *Resource Specific Option Version 2.0*

Anja presented “version 2.0” of the Resource Specific EDAM design option. The presentation covered design objectives and a comprehensive review of design topics, from GHG zone definitions, participation options, optimization, and attribution/accounting. George presented a second part focusing on the RSE optimization model as the base schedule for secondary dispatch accounting.

**Discussion**:

Discussion / Q&A topics included:

* Discuss the scenario of a non “pseudo tied” resource located external to a GHG zone but contracted to serve load in the GHG zone. George commented that such a resource could be treated as if it were pseudo tie resource to the GHG zone, for attribution purposes.
* A clarifying question on the scenario of a self schedule that is dispatched and attributed to a GHG zone; the clarification is that a self schedule also needs to have an energy and a GHG bid to be deemed to serve a GHG zone.
* Discussion on a how to differentiate participation options between multiple schedulers for a JOU resource. The shares could be accounted independently, and for attribution proposes, the GHG zone of the resource is always based on whether it is subject to GHG regulations which is often tied to its physical location.
* What is the definition of linkage in the context of EDAM design. The definition of linkage is established by each corresponding regulatory agency, CARB and Washington Department of Ecology in this discussion. This led to a more detailed discussion of the “initial phase” implementation (where the CAISO is not proposing to build functionality to support cross regulation area GHG attribution) versus a potential longer term design to support linkage between dissimilar GHG zones within the market optimization.
* There was a discussion on the current CAISO proposal to enhance the GHG attribution deeming algorithm to include an aggregate transfer limit from within a BAA. The current implementation treats all resources outside the GHG zone the same with respect to transmission limits. The newly proposed model would create differential GHG marginal prices across the non-GHG zone because of this additional transfer limitation that is proposed to be added to the model.
* James Lynn of CAISO responded to a request to provide an overview of how EDAM GHG dispatch and pricing would carry forward to the real time market. Key points made were (1) EDAM produces a market award, not a dispatch, (2) the real time market solution may increase or decrease the DA award (attributions), and (3) the reporting of market attributions (to CARB, in today’s WEIM context) will be based on the RT market.
* In response to Georges overview of the RSE optimization model for the base schedules; there was a debate regarding whether this optimization should be based on load forecast versus bid in demand. George clarified that this is not a market, it’s a counterfactual basis for the market, and as such, should be based on load forecast, where the objective is BAA resource adequacy.

**Conclusion**:

The Resource Specific V2.0 discussion was concluded and all questions discussed.