



California ISO

Extended Day Ahead Market
Working Group 3 Weekly Report

Week 2 Report
1/10/22 – 1/14/22

Progress Tracker

Topic	Schedule
Accounting: GHG Compliance Area(s)	
Boundaries (State, GHG Compliance Areas, BAA, LSE, International?)	
Implications for BAA spanning multiple states	
Impacts to EIM	
Rules that need to be established for renewable resource dispatch in/out of a GHG zone	
Accounting: Availability	
Rules for availability to serve load in GHG compliance area	1/13/2022
Resource schedules that could inform capacity available to support transfers with a GHG compliance area	
Market Optimization	
Are we optimizing Carbon prices? RPS/CES?	1/11/2022
Types of pricing : carbon pricing, clean energy/renewable	1/11/2022
Transactions; Generator emissions covered, Delivered emissions covered	
Accounting: Emissions rate attribution	
Resource specific, Unspecified	
Transactions/jurisdictions; Generator emissions covered, Delivered emissions covered	
Determining emissions rate attribution with different participation options	1/13/2022
Costs: Compliance	
How should GHG costs be calculated?	
How should GHG costs be reflected?	
How should GHG costs be reflected across GHG compliance areas?	
How are reference level (DEBs and proxy costs) calculated? And how are they used in market power mitigation?	
Costs: Settlements	
What implications of GHG settlement must be incorporated into EDAM design?	
Costs: Compliance	
Should GHG compliance costs be recovered by a Scheduling Coordinator at a resource specific or marginal resource specific level?	
Market Efficiency: EIM (roll over to real Time)	
What allowable changes to either GHG quantity or bid price between DA and RT should be allowed?	

What are the associated settlement impacts to any variation allowed?	
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Accounting: Market Results

What type of information and at what granularity: Settlements	
What type of information and at what granularity: State reporting	

Renewable Energy Certificates (RECs)

How can EDAM design best interact with current Renewable Portfolio Standards (RPS) and RECs accounting practices?	1/13/2022
What is the interplay of e-Tags used to track RECs vs. the role of e-Tags in EDAM and what is an appropriate interplay?	
What REC impacts may there be when it comes to EDAM intertie bidding and scheduling points?	

Costs: Bidding to serve demand in the GHG compliance are

How should RPS costs be calculated?	
How should RPS costs be reflected?	
How should RPS costs be reflected across compliance areas?	
How are reference level (DEBs and proxy costs) calculated? And how are they used in market power mitigation?	

Weekly Discussion

January 11

Scope Items Discussed: Finalize Design Objectives and begin Optimization Discussion

Presenters: Kevin Head

Discussion: Design Objectives

Discussion and real-time editing of the Design Objectives continued from the Thursday 1/6 meeting. Posted from the 1/6 meeting were the original six items and an additional ten items for discussion and possible inclusion in the final list.

Discussion items included:

- Significant discussion on item #6 : Balancing precision and implementation feasibility; durability (of design) was highlighted, but also to allow for adaptability to future policies.
- Simplicity objective must not preclude accurate and correct accounting
- Simplicity objective applies equally to the optimization as well as the accounting/reporting
- Simplicity objective must not preclude the objective to avoid double counting
- Respecting transmission constraints is adequately captured in the “accurate and correct” addition to item #6
- Leveraging EIM model and consistency to roll into EIM shall not be an Design Objective, but rather is already captured as a Design item for discussion

Conclusion:

After all potential Design Objectives items were discussed and edited in real-time, there was broad agreement on the final list. This final list will be posted along with this Week 2 status report.

Discussion: What should be optimized in the EDAM? (high level)

Based on comments from several participants, implementation of carbon price optimization is far more straight-forward compared to optimizing CES/RPS constructs, but there was substantial concern that the market optimization should somehow *consider* RPS/CES policies.

Optimizing carbon price has the direct benefit of feasibility of implementation and yields GHG marginal costs. However, several participants urged that RPS/CES policies can't be neglected in the market design.

Discussion started regarding whether LSE's should have capability to control how much carbon intensive energy serves their load, but this topic was tabled for the next workshop.

Conclusion:

There was substantial agreement that the core of the market optimization would likely be centered on carbon pricing optimization, but there did not appear to be consensus on whether or how to include RPS/CES policy constructs in the optimization. Some participants offered that these policy elements could/should be managed within the EDAM design but outside of the optimization.

Discussion: Optimization : Definition and Granularity of Optionality of Participation

Two core concepts discussed; (1) hourly versus daily granularity, and (2) demand versus supply options

The voluntary nature of GHG participation in the EDAM does not seem to be in question, based on FERC ruling. Discussion focused on how the optionality could be implemented to ensure a level playing field for participants opting in versus out. Comments on this topic included:

- Key element is for optimization reflects the different costs in respective GHG areas
- Hourly granularity of participation election may lead to strategic bidding and gaming opportunities
- This discussion is dependent on the discussion on GHG area definitions.
- May be beneficial to separate Supply and demand in this conversation; enable LSE to control its load being served from carbon intensive energy. This proposal did not receive consensus support
- The objective to follow the EIM model is informative to this discussion, but difference in DA demand bidding versus real time demand forecast is the key hurdle

Conclusion:

There was not consensus on either of the main themes : daily versus hourly election and LSE control over carbon intensive energy. Both of these topics were tabled for the next workshop.

January 13

Scope Items Discussed: Continued discussion of the two unresolved optimization topics from previous workshop; (1) hourly versus daily granularity, and (2) LSE control of carbon intensive energy

Presenters: Kevin Head

Discussion: Hourly versus daily option for GHG bid optimization

Primary concern regarding the hourly granularity of participation election is that it may lead to strategic bidding and gaming opportunities. There was substantial comment on both sides:

- The objective is for market optimality across all intervals (hours, presumably) in the market run; need to dive into the specifics of the market optimization to fully understand the gaming risks, and specifically the energy optimization formulation and market power mitigation provisions.
- Important to keep in mind that GHG bids should be, by definition, cost based, thus mitigating the gaming concern
- Need more specific details on gaming scenarios to inform this discussion
- This discussion may be pre-supposing the open question (EDAM design discussion) on attribution; request that the discussion avoid a premature conclusion on that topic.
- George Angelidis of CAISO offered relevant EIM unit commitment principles that could (likely) extend to the EDAM design that mitigate the unit commitment gaming concerns for GHG participation options.

Conclusion:

This topic is tabled for a future workshop date in order to integrate this topic to other more detailed market optimization and participation topics.

Discussion: LSE control of carbon intensive energy

Key element of this question is to be compliant with our stated Design Objective not to undermine RPS/CES policies. Issue statement: failure to include a provision in the EDAM design to enable LSE's to exert control over carbon intensive energy serving their load may be disruptive to CES policies. This topic is complicated in that cap and trade policies versus mandate policies would likely need different market constructs, if implemented in the optimization.

Discussion also pointed out that this topic should include and differentiate market optimization elements from reporting elements. They are connected but not the same.

Conclusion :

This topic is tabled for a future workshop date in order to integrate this topic to other more detailed market optimization and reporting topics.