

**Topic Area 1: EDAM Market Optimization**

*Whether and how an EDAM market optimization should factor in GHG costs in arriving at an efficient dispatch while balancing state policy objectives and not inappropriately impacting resources in non-GHG zones.*

Issue	Key Market Design Question	Detailed Market Design Question(s)
<b>Group 1</b>		
<b>Accounting: Area</b> Identify GHG Compliance Area(s)	Are entities aligned that state boundaries are the GHG compliance area?	Decide: What should the GHG compliance area be? Options include:  <b>Geographic</b> <ul style="list-style-type: none"> <li>- State</li> <li>- GHG compliance area</li> <li>- Balancing Authority Area (BAA)</li> <li>- Load Serving Entity</li> <li>- <b>International considerations</b></li> </ul> Topics: <ul style="list-style-type: none"> <li>- <b>Boundaries and potential need for alignment of transmission boundary concepts developed in Transmission working group</b></li> <li>- Implications for BAA spanning multiple states</li> <li>- Impacts to EIM</li> <li>- Rules that need to be established for renewable resource dispatch in/out of a GHG zone</li> </ul>
<b>Accounting: Availability:</b> Eligibility to serve demand in the GHG compliance area	What rules for availability need to be developed for EDAM for GHG?	Decide: What will availability to serve load in a GHG compliance area look like? Options include: <ul style="list-style-type: none"> <li>- Optional</li> <li>- Never</li> <li>- Always</li> <li>- Daily</li> <li>- Hourly</li> </ul> Topics: <ul style="list-style-type: none"> <li>- Determining availability</li> </ul>

		<ul style="list-style-type: none"> <li>- Resource schedules that could inform capacity available to support transfers with a GHG compliance area</li> </ul>
<b>What are we optimizing?</b>	Which costs should be included in the market optimization?	<p>Are we optimizing:</p> <ul style="list-style-type: none"> <li>- Carbon prices?</li> <li>- RPS/CES?</li> </ul> <p>Types</p> <ul style="list-style-type: none"> <li>- Carbon pricing (including how to consider GHG costs reflected in natural gas prices)</li> <li>- Clean energy/renewable</li> </ul> <p>Transactions</p> <ul style="list-style-type: none"> <li>- Generator emissions covered</li> <li>- Delivered emissions covered</li> </ul>
<b>Group 2 – Core design components</b>		
<b>Accounting: Emissions rate attribution:</b> Associating resources to loads in the EDAM	How should GHG emission rate attribution be determined?	<p>Decide: How should emissions rates be attributed? Options include:</p> <ul style="list-style-type: none"> <li>- Resource specific</li> <li>- Unspecified</li> </ul> <p>Transactions/jurisdictions</p> <ul style="list-style-type: none"> <li>- Generator emissions covered</li> <li>- Delivered emissions covered</li> </ul> <p>Topics:</p> <ul style="list-style-type: none"> <li>- Determining emissions rate attribution with different participation options: <ul style="list-style-type: none"> <li>o Imports</li> <li>o Pseudo-ties</li> <li>o Wheels though GHG compliance area</li> <li>o Virtual bids</li> <li>o Energy storage</li> </ul> </li> </ul>
<b>Costs: Compliance:</b> Bidding to serve demand in the GHG compliance area	How will GHG costs be reflected to EDAM within, between, and outside a GHG zone?	<p>Topics:</p> <ul style="list-style-type: none"> <li>- How should GHG costs be calculated?</li> <li>- How should GHG costs be reflected?</li> <li>- How should GHG costs be reflected across GHG compliance areas?</li> </ul>

		<ul style="list-style-type: none"> <li>- How are reference level (DEBs and proxy costs) calculated? And how are they used in market power mitigation?</li> </ul>
<b>Costs: Settlements</b>	How are GHG costs settled?	Topic: What implications of GHG settlement must be incorporated into EDAM design?
<b>Costs: Compliance:</b> Payment of GHG compliance costs	How will GHG compliance costs be recovered?	Topic: Should GHG compliance costs be recovered by a Scheduling Coordinator at a resource specific or marginal resource specific level?
<b>Group 3</b>		
<b>Market Efficiency: EIM:</b> Roll over to Real Time (EIM)	What GHG bid and settlement implications arise from DA vs. RT deviation?	Topics: <ul style="list-style-type: none"> <li>- What allowable changes to either GHG quantity or bid price between DA and RT should be allowed?</li> <li>- What are the associated settlement impacts to any variation allowed?</li> </ul>
<b>Accounting: Market Results</b>	How will EDAM provide transparency to the emissions intensity and market results to market participants?	Topic: <ul style="list-style-type: none"> <li>- What type of information and at what granularity will GHG information be reported?                             <ul style="list-style-type: none"> <li>o Settlements</li> <li>o Alignment with state reporting</li> </ul> </li> </ul>

**Topic Area 2: Carbon intensity reporting**

*Whether and how information about the carbon intensity of energy transacted through the CAISO's market is affected by the implementation of an EDAM (e.g. RPS, CES).*

Issue	Key Market Design Question	Detailed Market Design Question(s)
<b>Renewable Energy Certificates (RECs)</b>	What rules need to be developed for REC <b>support</b> ?	Topics: <ul style="list-style-type: none"> <li>- How can EDAM design best interact with current Renewable Portfolio Standards (RPS) and RECs accounting practices?               <ul style="list-style-type: none"> <li>- <b>RPS</b></li> <li>- <b>Non-RPS</b></li> </ul> </li> <li>- 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?</li> <li>- What REC impacts may there be when it comes to EDAM intertie bidding and scheduling points?</li> </ul>
<b>Accounting:</b> Market Results	How will EDAM provide transparency to the emissions intensity <b>and market results</b> to market participants?	Topic: <ul style="list-style-type: none"> <li>- What type of information and at what granularity will GHG information be reported?               <ul style="list-style-type: none"> <li>o <b>Settlements</b></li> <li>o <b>Alignment with state reporting</b></li> </ul> </li> </ul>
<b>Costs:</b> Bidding to serve demand in the GHG compliance area	How will GHG costs be reflected to EDAM within, between, and outside a GHG zone?	Topics: <ul style="list-style-type: none"> <li>- How should RPS costs be calculated?</li> <li>- How should RPS costs be reflected?</li> <li>- How should RPS costs be reflected across compliance areas?</li> <li>- How are reference level (DEBs and proxy costs) calculated? And how are they used in market power mitigation?</li> </ul>