



California ISO

**GHG Coordination Working Groups  
Discussion Paper**  
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California Independent System Operator

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## Executive Summary

This paper provides stakeholders with an overview of the upcoming ISO-hosted and stakeholder-driven greenhouse gas (GHG) Coordination Working Group. Specifically, the paper discusses the background on the working group effort, offers a strawman for the structure of the GHG Coordination Working Group, and provides a synthesis of the GHG stakeholder survey results on the recommended topics the working group should consider. This paper is also a tool to assist the GHG Coordination Working Group in organizing discussions and a means of accelerating collaboration between stakeholders.

The GHG Coordination Working Group effort is a pre-initiative process. This is to follow up on the commitment the ISO made to continue working collaboratively with stakeholders and regulatory agencies to explore how GHG accounting functionality could evolve after the ISO implements and gains experience with the Extended Day Ahead Market (EDAM). A recommended output of this effort is a “GHG Action Plan”, containing recommendations to the ISO for a future GHG policy initiative to support GHG design(s) that are durable and can reflect an array of western climate policies.

The ISO anticipates the GHG Coordination Working Group can greatly enhance the quality of market policy design by giving stakeholders a more active role in informing proposal development. As a starting point, the working group could develop the logistics of how frequently the working group will meet, establish GHG principles and problem statements, determine topic prioritization, justify any proposals, and ultimately develop a GHG Action Plan for a future policy initiative.

Lastly, this document outlines proposed topics for the working group based on the results of the ISO’s GHG Coordination Working Group survey. The ISO issued this survey in June and requested feedback from stakeholders on GHG topics the working group should address as well as a recommended prioritization of those topics.<sup>1</sup> Survey results coalesced around four themes, including a need to: 1.) review the ISO market operations and GHG design 2.) coordinate with state air regulators on climate policies 3.) discuss data needs for emissions tracking and accounting and 4.) re-examine how the market could reflect climate policies that do not explicitly price carbon. These survey results do not preclude the discussion of other topics, but rather offer a starting point for working group discussion, collaboration, and continued refinement.

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<sup>1</sup> See the Appendix for a more detailed summary of the survey results.

# Introduction

## Background

In the ISO's EDAM initiative process, stakeholders focused on developing a market model that could accommodate the price-based GHG emissions policies of multiple states. In addition, stakeholders questioned how participation in ISO's market could support the objectives of non price-based climate related policies like renewable portfolio standards (RPS) and GHG emission reduction goals. The ISO committed to continue working collaboratively with stakeholders and regulatory agencies to explore how the ISO market's GHG accounting functionality could evolve after it implements the EDAM and gains operational experience.

To date, GHG market design has reflected price-based emissions policies, like those adopted by California and Washington. These policies increase the marginal cost of electricity from fossil-fueled resources. An objective of the market design in the WEIM, and now in the EDAM, is to account for GHG costs associated with day ahead and real time transfers consistent with state policy. However, climate policies are in place and developing that will not price carbon. The working group is an opportunity for stakeholders to discuss if the ISO's market should also account for non-price based policies, and if so, how. The ISO hopes the GHG Coordination working groups can focus on design(s) are durable and can reflect an array of western climate policies.

The GHG Coordination working groups will enhance the quality of proposal development by offering diverse stakeholders opportunities for engagement and alignment. The working groups offer stakeholders new to the conversation an opportunity to gain a better understanding of current ISO market design and processes, and introduce new scope items for consideration. The ISO acknowledges the effort that stakeholders put into the EDAM process and envisions the working groups to be an opportunity to build on that momentum.

## GHG Coordination Working Group Process

The working group process reflects general stakeholder feedback and input early in an initiative process, which can lead to more alignment on the scope of an initiative and proposed design.

The GHG Coordination working group will focus on possible future GHG accounting design(s) evolution including potential enhancements to the current EDAM design. However, the ISO will not immediately consider proposed alternatives to the GHG design approved by ISO Board of Governors and WEIM Governing Body for EDAM go-live. Doing so could conflict with, or impose delays on, planned implementation and concurrent state rulemakings.

During the working group process, the ISO expects stakeholders will focus on three essential components necessary for future proposal development:

1. **Problem Statements and Principles:** Establish principles and problem statements. The principles can be used to evaluate problem statements and any proposals developed.
2. **Prioritization:** Determine topic priorities timing for review in order to balance stakeholder bandwidth.
3. **Analysis:** Illustrate problem statements through review and assessment of current market solutions, data analysis, and/or agreed upon modeling.

In instances where the subject matter is complex and/or majority agreement or disagreement does not exist for a proposed approach, the ISO suggests hosting additional stakeholder working groups to discuss key elements of the proposal that need further development.

### Working group deliverables

This Discussion Paper will serve as a resource for stakeholders by tracking the decision making process. After each working group meeting, ISO facilitators and scribes will provide notes, key decisions, and action items identified by stakeholders. The ISO will post these notes for review between working group meetings.

### GHG Action Plan

The intended end state of the Discussion Paper is a “GHG Action Plan” that reflects the outcome of stakeholder discussions during the working group process. The recommendations in the GHG Action Plan will bridge the working group and ISO initiative process.

## Discussion Paper Summary

### Working Group Topics

The topics proposed in this first iteration of the Discussion Paper synthesize stakeholder feedback from the GHG survey results.

1. Review of ISO Market Operations and Existing GHG Market Design
2. State Coordination
3. Emissions Tracking and Accounting
4. Beyond GHG Pricing Policies

### Principles

The following principles reflect a starting point for the GHG working group discussion. Throughout the working group process, stakeholders will consider how problem statements relate to principles to facilitate assessment of prioritization and potential trade-offs. The ISO encourages feedback on these principle topics:

1. Efficiency
2. Simplicity
3. Transparency
4. Non-discrimination
5. Jurisdictional roles and responsibilities
6. Feasibility

As background, the EDAM GHG Working Group developed the following GHG Design Objectives which could serve as a springboard for future principle discussions:

1. No inappropriate or unacceptable GHG impact in non-GHG zone.
2. Leakage should be minimized.
3. Enable similarly situated/similar technology resources in non-GHG zone to compete on a level playing field with resources inside GHG zone and vice versa (objective not fully finalized).
4. Do not inadvertently undermine RPS and CES policies.
5. Allow for market efficiency by accurately reflecting relevant including GHG compliance costs.
6. Seeking simple solutions where possible while balancing precision and implementation feasibility to support state policy objectives.
7. Durable market design including but not limited to allowing for future policy designs and potential linkage

### Problem Statements

Identified problem statements should offer a clear path toward analysis and proposal development. These will be developed in the working groups.

# Proposed Discussion Topics and Related Concepts

As part of ISO's role facilitating these discussions, the ISO gathered proposed discussion topics through a survey sent out in June. This section synthesizes those survey results into four themes.

## 1. Review of ISO Market Operations and GHG Design

This topic reflects stakeholder feedback expressing the importance of a common understanding of ISO market operations and GHG design. Stakeholders requested more transparency and comprehension of the current and planned GHG design to prepare for EDAM go-live, to inform ongoing state rulemaking processes, and to facilitate deeper engagement with future proposal development. Stakeholders expressed concern that conflicting processes and concurrent opportunities would put a strain on resources and limit participation in ISO discussions.

This topic offers an opportunity for alignment over the current and planned GHG market design to inform analysis and create a benchmark for comparison for future proposal development. The ISO intends to meet stakeholders where they are by offering a venue for stakeholders to decide what opportunities for review would best suit their needs (e.g., presentations from the ISO), at what cadence, and with input from appropriate subject matter experts.

Stakeholders suggested the following scope items be considered for problem statement formation:

1. A deeper understanding of:
  - a. The optimized attribution process to assess how the results (price and emissions impacts) reflect state policy goals.
  - b. Market GHG price signals, and how GHG marginal revenue allocation settles the intended cost and benefits of GHG policy.
  - c. The GHG counterfactual, and the impact of attributing resource capacity below that resource's counterfactual
2. Further consideration of the scalability of the planned GHG market design with multiple distinct GHG areas and prices.
3. Further discussion of the possible reliability and price impacts under scarce or insufficient GHG bids.
4. Development of GHG rules to account for dispatch from storage resources

## 2. State Coordination

This topic reflects stakeholder feedback related to state agency decisions, rules, and processes. Stakeholders expressed a need for greater consistency and coordination across state GHG program administrators. Stakeholders requested more ISO leadership in ensuring program rules align with market processes and functionality.

While the working group process is intended to expand, not limit, the scope of discussion, the ISO is cognizant that its markets operate across multiple states who have authority over GHG emission policies. The working group process is a mechanism to support but not intrude on that state authority.

Stakeholders suggested the following concepts and scope items be considered for problem statement formation. The ISO highlights these here, but recognizes these issues will be addressed in the other topic areas for working group consideration:

1. The role of the ISO in fostering consistency for GHG reporting programs, and reducing the administrative burden for market participants
2. The role of the ISO in addressing the double counting of emissions between state programs
3. The market's ability to accommodate linkage between state GHG programs, and consideration of the prospective impacts of linkage
4. The role of the ISO in facilitating and informing state processes, including the calculation of metrics for reporting

## 3. Emissions Tracking and Accounting

This topic reflects stakeholder interest in considering issues related to how emissions are tracked and monitored, accounted for, and reported to various entities. Stakeholders expressed concern over leakage, resource shuffling, and secondary dispatch. Stakeholders also expressed a need to illustrate and verify these impacts with data prior to the consideration of enhancements or alternative approaches.

This topic allows stakeholders to align on common definitions and expected impacts of identified issues. It can also promote discussion on how the current market functionality intends to address these issues, explore what data the ISO can provide to inform an assessment of these issues, and receive consensus on the appropriate metrics or methodology for analysis moving forward.

Stakeholders suggested the working group consider the following concepts and scope items to identify problem statements:

1. The emissions related data the ISO has access to and could provide, including emissions attributes of system capacity



2. A methodology to more accurately track the emissions from generating resources dispatched both to serve a GHG and non-GHG areas
3. Consideration of possible technical or legal constraints involved with reporting emissions beyond what is available for the purpose of reporting and compliance with state regulations
4. The role of contracts as it relates to the wholesale market (e.g., renewable energy certificates, resource adequacy, etc.)

## 4. Beyond GHG Pricing Policies

This topic reflects stakeholder interest in considering concepts related policy frameworks other than GHG policies that assign an explicit cost to carbon (i.e., Cap-and-Trade or cap-and-invest). Stakeholders with obligations under these non-priced programs expressed concern that participation in ISO's markets would put them at a disadvantage or prevent compliance. Stakeholders also requested consideration of metrics, monitoring and reporting methods to accommodate a broad range of GHG policies.

This topic allows stakeholders to consider if, how, and when distinct policies can be reflected by the ISO's markets. This could also be a venue to discuss what data or metrics the ISO can produce to facilitate reporting and compliance with these policies.

Stakeholders suggested the following concepts and scope items be considered for problem statement formation:

1. Meeting targets for GHG policies that set an emissions budget with no explicit cost obligation
2. Current 'Unspecified' rates may not accurately reflect the average emissions rate of the system
3. Reporting and determining compliance with load-based GHG policies require tracking flows of power with more granularity than net imbalance transfers allow for
4. Some stakeholders have compliance obligations with GHG policies that require tracking of attributes, like Renewable Portfolio Standards, RECs, and Clean Energy Standards

## Next Steps

The ISO will host a public hybrid working group meeting on Aug. 16, 2023 to launch the GHG Coordination Working Group. If you plan to attend the meeting in-person, please [register](#) on the GHG Working Group webpage by end of day August 11. Written comments on the working group meeting and discussion paper are due by end of day August 30.

# Appendix

The table below categorizes the sub-topics within the four themes described in this paper. In some cases a topic may appear in multiple areas due to the cross-cutting nature of topics.

Topic	Count of Comments
<b>Beyond GHG Pricing Policies</b>	
Average Emissions Factor	4
Certificate Tracking	4
Load-based Accounting	4
Non Price-based Emissions Reduction Policy	19
RPS	4
Voluntary Emissions Reduction	1
<b>Emissions Tracking and Accounting</b>	
Accuracy	4
Average Emissions Factor	7
Capacity Attribution Tracking	3
California	2
Consistent Reporting	4
Leakage	3
Load-based Accounting	3
Public Emissions Reporting	8
Secondary Dispatch	4
<b>Review of ISO Market Operations</b>	
Attribution	4
Dynamic Transfers	1
Efficiency	2
GHG Reference Pass	4
Monitoring	4
Multijurisdictional BAAs	1
Non-discrimination	2
Secondary Dispatch	3
Storage Operations	2
<b>State Coordination</b>	
California	4
Compliance and Reporting	4
Data	2
Double Counting	4
Free Allowances	1
Linkage	4
Regional Coordination	5
Reporting and Compliance	4
Seams	5
Unspecified Rate	4
Washington	5
<b>Uncategorized</b>	<b>5</b>