

December Meeting

Chair: Gabriel Aguilera

Commissioner, New Mexico Public Regulation Commission

Vice-Chair: John Hammond

Commissioner, Idaho Public Utilities Commission

December 13, 2024

Agenda

1. Opening Remarks and Announcements
2. West-Wide Governance Pathways Initiative
3. CAISO Policy Initiative Update – GHG Coordination Working Group

- CAISO submitted Step 1 tariff changes to FERC on November 22, 2024
 - Changes include shifting from the current joint authority governance structure to primary authority for WEIM and EDAM
 - CAISO has requested FERC issue an order accepting the tariff amendment by March 31, 2025
- The Pathways Launch Committee (LC) approved the Step 2 Governance Proposal on November 22, 2024
 - Transitions the oversight of WEIM and EDAM from the Step 1 primary authority model under the WEM GB to sole authority under the independent Regional Organization (RO)

Changes to Final Proposal

- **Public Interest**
 - Moved BOSR funding under tariff with caveat that POU's/non-jurisdictional entities will not be subject to these costs
 - Added clarification and information regarding DMM recommendations, including FERC Order 719 compliance
 - Clarified that state commissions and consumer advocates will have access to at least the same amount of data and analysis as the California agencies and the California Public Advocates Office receive today. There should be no restrictions on the provision of information other than those imposed by FERC requirements
 - Expanded Market Expert role to include evaluation that the market is operating consistently with public interest principles and the protection of retail consumers



Legislation

- The California legislative process will commence in early 2025, with February 21 scheduled as the last day for bills to be introduced
- While the Launch Committee's charter does not permit its engagement in legislative advocacy, several California stakeholders – including past opponents of regionalization efforts – will be engaged
- Successful legislation would be designed to authorize the CAISO and California IOUs to participate in energy markets managed by the new RO, rather than the CAISO, but will not control RO formation or participation by other entities (including California POUs) in those markets
- The Legislature could enact a bill at any time during the legislative session but not later than September 12, 2025



WWGPI Update Formation Committee

- The LC approved the Formation Committee (FC) Charter on December 2, 2024
 - Tasked with facilitating the activities required to implement the final Step 2 Governance Proposal
 - 12–15-month process beginning in January 2025
- The FC will focus its work in 3 stages:
 - 1) Preparation activities prior to California legislation enactment
 - 2) Implementation activities after California legislation enactment/before seating RO Board
 - 3) Implementation activities after California legislation enactment and after seating RO Board
- The FC is a sub-committee of the LC consisting of up to 10 members representing a diversity of sectors
 - Assisted by a less than quorum of the WEM GB and CAISO Board serving as liaisons
 - BOSR or state regulator representative - TBD



California ISO

Greenhouse Gas Coordination Working Group Update

Sylvie Spewak
Senior Policy Developer

December 13, 2024

Greenhouse Gas (GHG) Coordination Working Groups

Working group progress in three key areas:

Design

- Educational review of GHG design in the WEIM and EDAM
- Consideration of alternatives for the GHG counterfactual approach

GHG Information and Metrics

- Average Emissions data monthly and annual reports
- Monitoring for EDAM go-live

Accounting for Non-Price Based GHG policies

- Two approaches discussed:
 - An out-of-market GHG “Accounting and Reporting” approach; moving to policy development
 - An in-market GHG “Emission Constrained Dispatch” approach; needed by Oregon by 2030

GHG Price Formation Evergreen Trainings

- This pre-recorded training on the ISO's youtube page gives stakeholders an opportunity to get up-to-speed on, or dive more deeply into, price formation with GHG.
- The material in this training is intended to be a durable representation of the fundamentals of GHG market design in ISO markets, with a focus on GHG attribution.
- Stakeholders have expressed interest in future trainings to include:
 - The GHG counterfactual (WEIM) and optimized reference pass (EDAM)
 - The GHG net export constraint (EDAM)
 - GHG attribution with more than one GHG area (EDAM)

Overview of GHG Price Formation Evergreen Training

Chapter 1: Background and Context

- Overview of principles and key terms
- Why reflect GHG in the market?
- Connecting market data to GHG price formation concepts

Chapter 2: Optimization Basics

- Solving least-cost dispatch and setting efficient prices
- Solving for the congestion component of the LMP between two BAs

Chapter 3: Optimizing with GHG

- Key market design elements of GHG attribution
- Solving for the marginal cost of GHG
- Basic examples with a single GHG area and three resources

Chapter 4: Examples of Price Formation with GHG

- How separate GHG preferences impacts dispatch and prices
- How GHG revenue is calculated, collected, and allocated
- How resources are compensated
- Who pays for what

Discussion of GHG counterfactual alternatives

- The purpose of the counterfactual is to reduce secondary dispatch by limiting GHG attributions to resource capacity not scheduled in a GHG counterfactual
- The GHG counterfactual method approved by FERC for EDAM uses an optimized GHG reference pass to determine what capacity would have been dispatched without transfers to the GHG area.
- Stakeholders have discussed two alternatives that result in different trade-offs, but discussions have not prompted consideration of any formal proposals

Comparison of counterfactual approaches

Effect	No GHG Cost Method	Approved CAISO Method	Stakeholder suggested method
Overall IFM cost (objective function)	Lowest	Baseline for comparison	Lower
Secondary dispatch	Lower	Baseline for comparison	Higher
Settlement for GHG cost	GHG attribution payment at the marginal GHG cost and import reference charge to GHG load	GHG attribution payment at the marginal GHG cost	GHG attribution payment at the marginal GHG cost
Settlement impact to GHG load	Lowest	Baseline for comparison	Lower
Settlement impact to no GHG load	Lowest	Baseline for comparison	Higher

Average Emissions Rate data

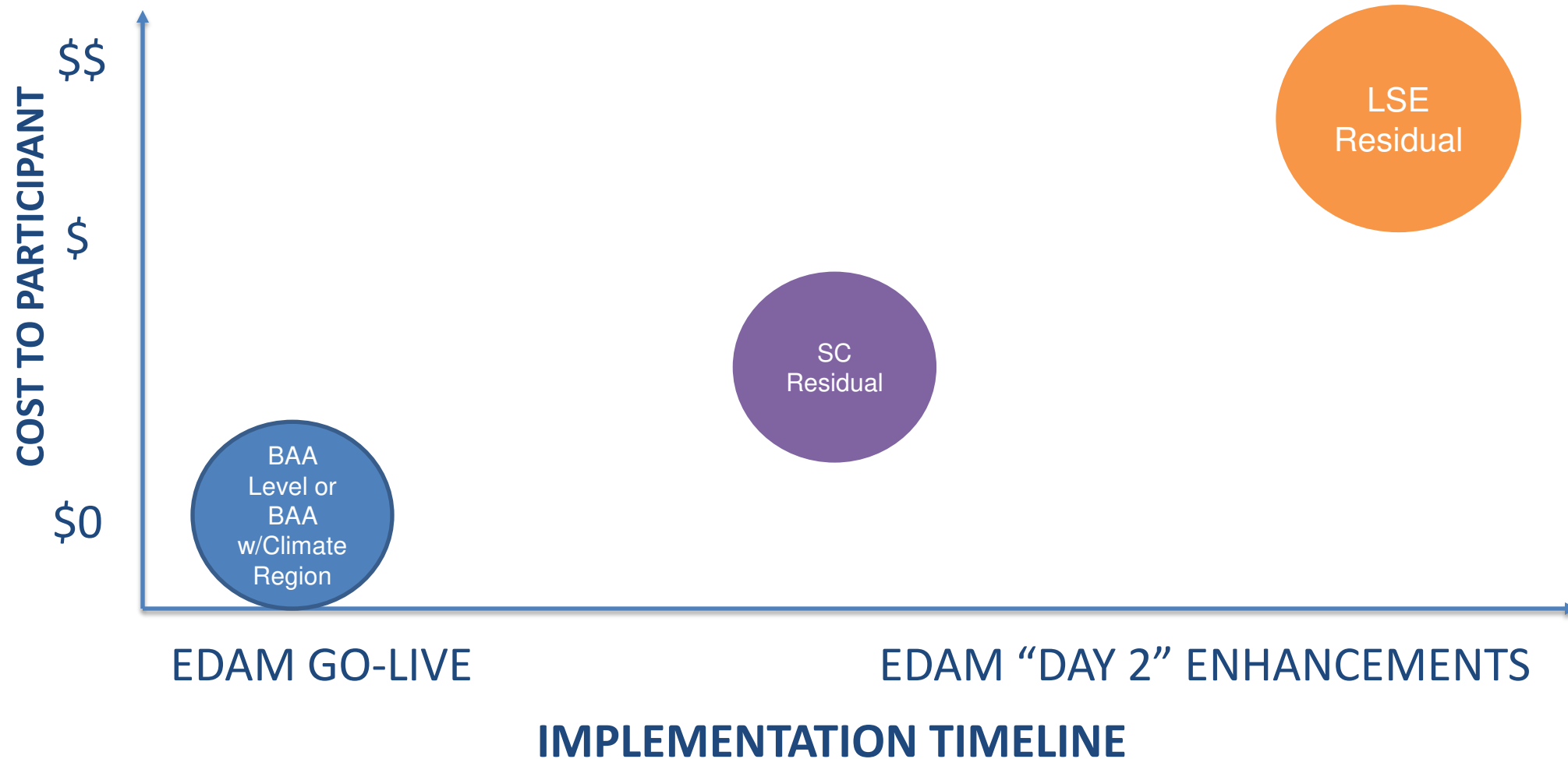
A	B	C	D	E	F	G	H	I	J	K	L
TRADE	TRADE	GEN_MWH	IMP_MWH	EXP_MWH	GEN_GHG	IMP_GHG	EXP_GHG	AVG_EM_RATE	ATTR_MWH	ATTR_GHG	ATTR_AVG_EM_R
9/1/2024	1	76415	12352	-10059	25786	5287	-4305	0.34	1046	193	0.185
9/1/2024	2	72229	12280	-10098	24415	5256	-4322	0.341	621	149	0.24
9/1/2024	3	68823	12386	-10095	23325	5301	-4320	0.342	564	136	0.241
9/1/2024	4	66908	12882	-10637	22917	5514	-4553	0.345	440	111	0.252
9/1/2024	5	65924	12604	-10378	22559	5395	-4442	0.345	353	61	0.173
9/1/2024	6	65598	13950	-11699	22190	5970	-5007	0.341	286	31	0.108
9/1/2024	7	65802	14521	-12112	21738	6215	-5184	0.334	447	58	0.13
9/1/2024	8	66828	13147	-10979	18909	5627	-4699	0.288	286	22	0.077
9/1/2024	9	70557	11828	-10023	16841	5063	-4290	0.243	44	0	0
9/1/2024	10	73621	11801	-10065	16347	5051	-4308	0.227	0	0	0
9/1/2024	11	76670	11459	-9882	16881	4904	-4229	0.224	0	0	0
9/1/2024	12	80996	11296	-9941	17521	4835	-4255	0.22	0	0	0
9/1/2024	13	85478	12029	-10715	18523	5148	-4586	0.22	0	0	0
9/1/2024	14	91009	12267	-10903	20108	5250	-4667	0.224	0	0	0
9/1/2024	15	95907	13244	-11759	22103	5669	-5033	0.233	0	0	0
9/1/2024	16	101014	13109	-11725	23866	5611	-5018	0.239	0	0	0
9/1/2024	17	105644	13548	-12654	25471	5798	-5416	0.243	0	0	0
9/1/2024	18	106765	14456	-13392	27083	6187	-5732	0.255	141	0	0

- Average Emissions Rate Reports are posted monthly on the ISO's public library for Market Reports: [Library | Average emissions rate reports | California ISO](#)

Accounting and Reporting Approach: out of market and after-the-fact

- Stakeholders broadly identified two primary objectives: 1) facilitate residual emissions rate calculation, 2) prevent double counting
- Reports would provide data to support entities subject to climate policies not based on a price of carbon
 - Allow entities to after the fact, outside of the market, account for the energy and emissions of their owned and contracted fleet as well as what they are long/short in the market as compared to their load
 - Recognize the data supports both compliance and voluntary purposes
- Approach would not impact market dispatch, emissions, or costs on other states

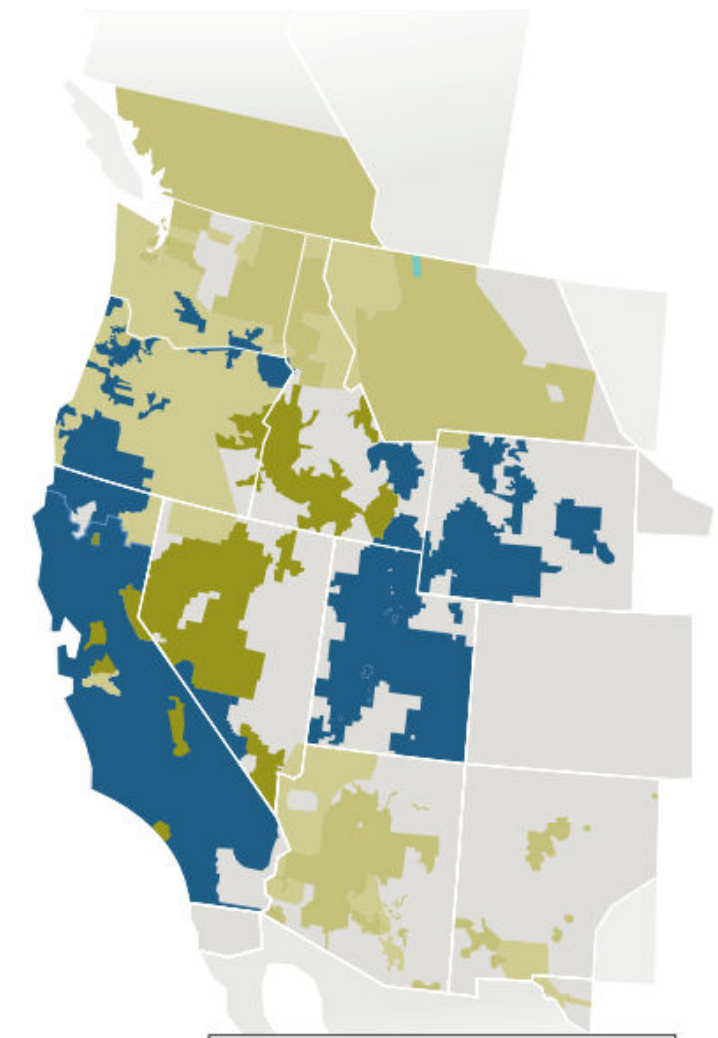
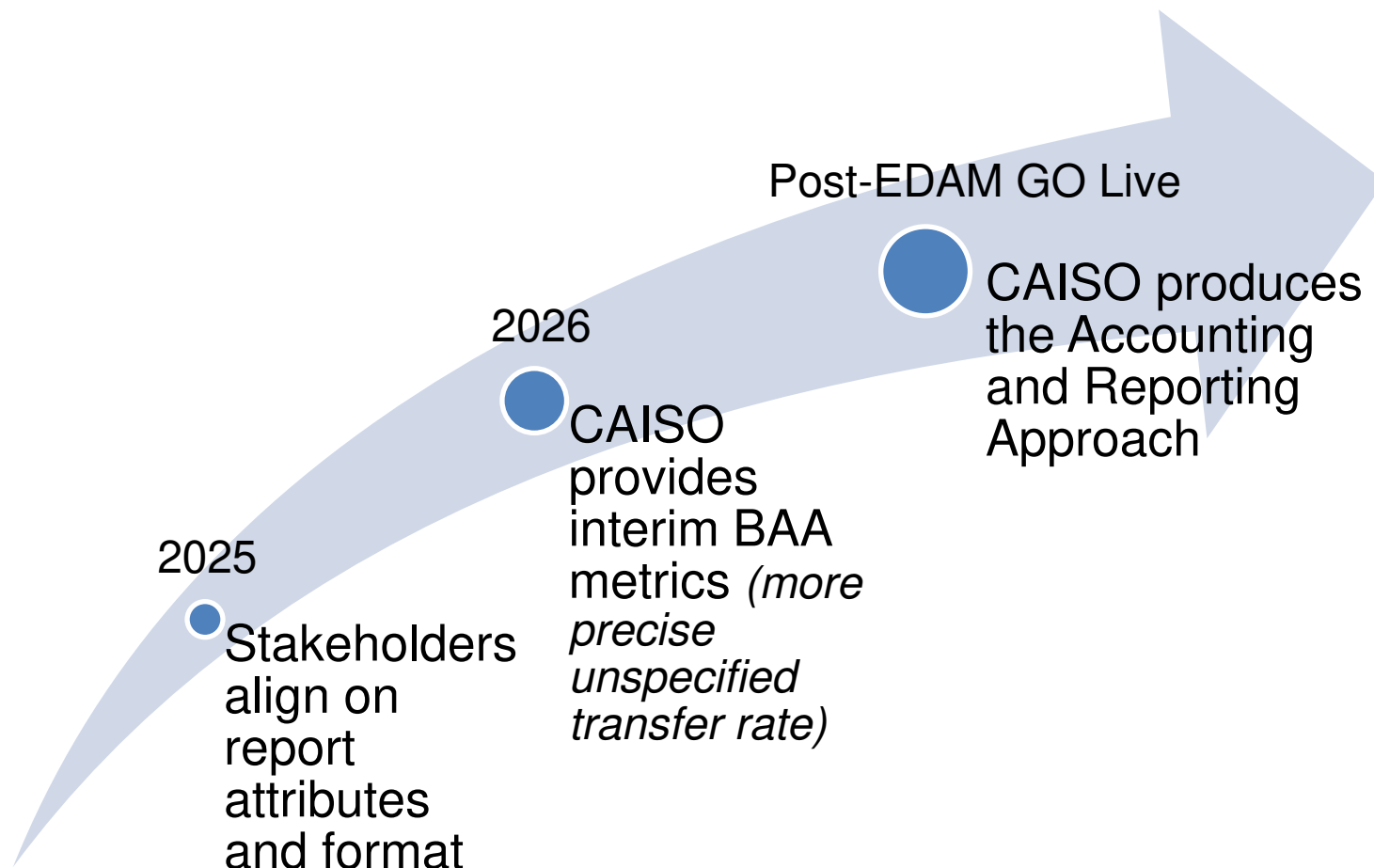
Illustrative Cost vs. Implementation of Approaches



Example “Scorecard” Considerations

Option	Stakeholder Feedback	CAISO	Market Participant	Working Group Coordination
BAA level	<ul style="list-style-type: none"> Some stakeholders support BAA-level reporting as an overview of market GHG impacts in addition to more granular reporting 	<ul style="list-style-type: none"> Public, raw data may require aggregation to maintain data privacy BAA-level residual would require new validation, calculation 	<ul style="list-style-type: none"> ISO-BAA coordination exists today 	<ul style="list-style-type: none"> How do MJE’s want to be modeled?
LSE level	<p>Most stakeholders support LSE level reporting:</p> <ul style="list-style-type: none"> more precise tracking reduce double counting better aligned with state LSE-specific targets monitoring and analysis 	<ul style="list-style-type: none"> New systems: data collection, mapping, and publication process New means of facilitating authority to access ISO systems and share data New rules for data collection, validation, and revision 	<ul style="list-style-type: none"> Financial cost: LSEs would pay for service Administrative cost: LSEs may need to manage data inputs and outputs 	<ul style="list-style-type: none"> What are stakeholder suggestions for how LSEs could receive data? How do we model non-participating LSEs? Alignment on load data: forecast vs. actual
Climate Region	<ul style="list-style-type: none"> Concerns with cost shifts/ leaning/ sharing attribution Support from PGE 	<ul style="list-style-type: none"> Requires new rules to establish the “climate region” 		<ul style="list-style-type: none"> Who gets to be in a climate region? Does a BAA level approach alleviate attribution concerns?

Timeline: Accounting and Reporting Approach



- WEIM
- WEIM + leaning towards* EDAM
- WEIM + EDAM
- Planned WEIM entry 2026

*These entities have publicly indicated a leaning towards EDAM as their preferred day-ahead market.

Upcoming Meetings

WIEB Webinar

GHG Accounting and Reporting in the Western States

Monday, December 16, 2024, 2:00 – 4:00 PM PST / 3:00 – 5:00 PM MST

January 2025 BOSR Meeting

Friday, January 10, 2024, 9:00 AM PST / 10:00 AM MST