



Extended Day-Ahead Market Working Group – February Debrief Meeting

February 16, 2022

Agenda:

Time:	Topic:	Presenter:
9:00 – 9:05	Introduction/agenda	Kristina Osborne
9:05 – 9:20	Welcome and opening remarks	Mark Rothleder
9:20 – 9:40	Overview of EDAM working groups	Phil Pettingill Milos Bosanac
9:40 – 10:40	Working group updates	Mark Richardson Deb Le Vine Kevin Head
10:40 – 10:50	Upcoming EDAM activities	Milos Bosanac
10:50 – 11:00	Next steps	Kristina Osborne

Meeting Objectives:

- Share overall working group design, progress update, and impressions across EDAM stakeholder working groups.
- Identify forthcoming topics across EDAM stakeholder working groups.
- Acknowledge interdependencies between working group topics to be aware of.



Opening Remarks

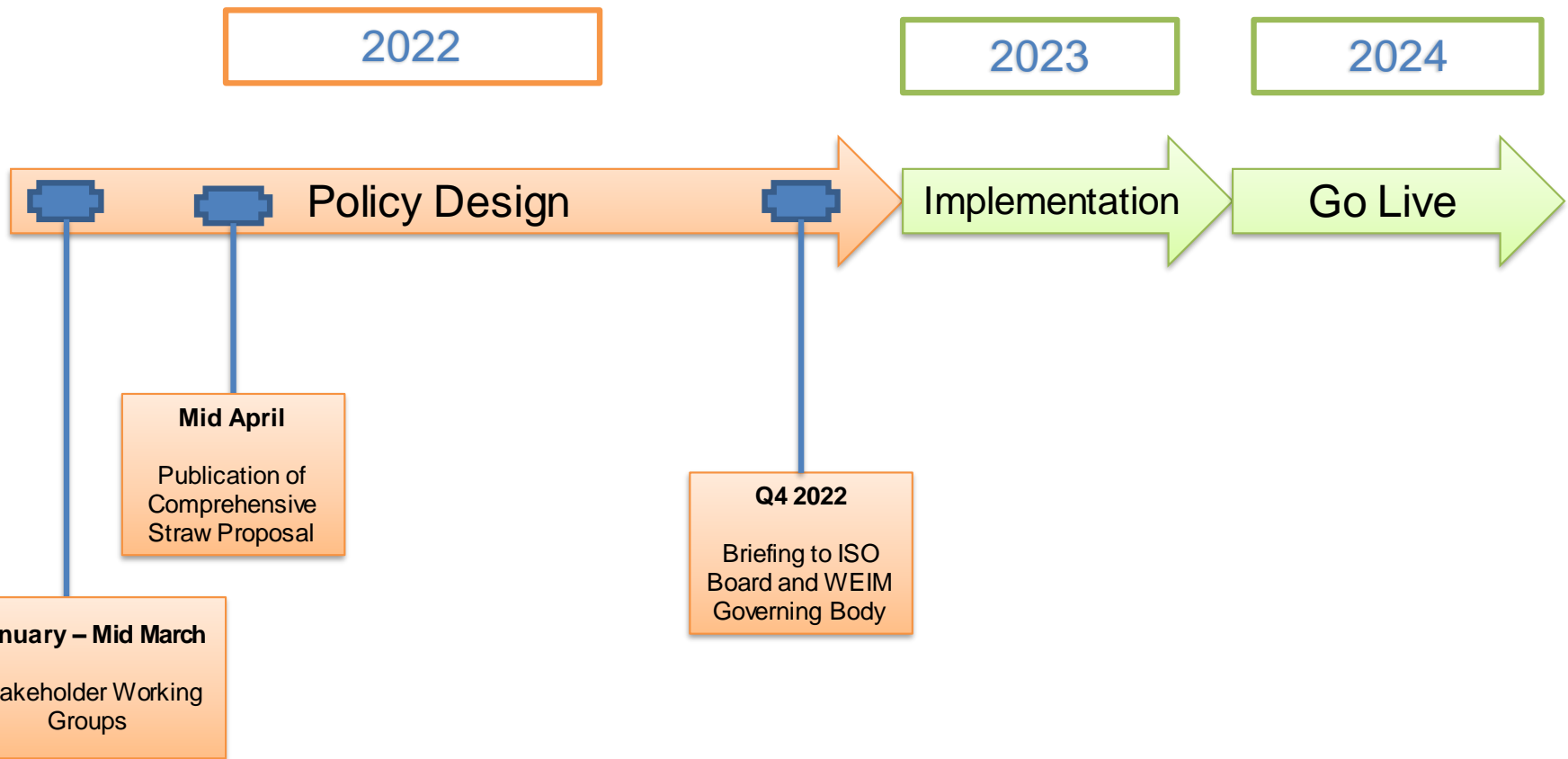
Mark Rothleder, Sr. Vice President and Chief Operating Officer



EDAM Initiative Stakeholder Process Overview

Phil Pettingill, Coordinator, EDAM Working Groups
Milos Bosanac, EDAM Policy Lead

EDAM Stakeholder Process & Design Timeline



Comprehensive Straw Proposal - Timing

Date	Milestone
1/3	Launch of EDAM Working Groups
2/16	Monthly EDAM Working Group Briefing
3/17	Conclusion of Working Group Meeting
3/18	Monthly EDAM Working Group briefing
3/21	(week of 3/21) Working group summary report
4/25	(week of 4/25) Publish straw proposal
5/6	(week of 5/6) Stakeholder meeting on straw proposal
5/18	(week of 5/18) Stakeholder comments due on straw proposal

EDAM Stakeholder Working Groups

- Stakeholder working groups launched on January 3rd, and will proceed through March 17th.

Working Group 1

Supply Commitment &
Resource Sufficiency
Evaluation

Working Group 2

Transmission Commitment
& Congestion Rent
Allocation

Working Group 3

GHG Accounting and
Costs

- Working groups open and inclusive of all stakeholders
 - Meetings are publicly noticed and added to CAISO calendar

Using Working Groups to begin the EDAM design

- Reviewed *Common EDAM Design Principles*
- Review, modify, and add scope items for discussion
- Facilitated stakeholder discussion to seek agreement and provide key inputs to ISO design team
- Taking stock of where we are:
 - Engaged WGs in 7th of 11 weeks, (thru March 17th)
 - Began dialog with foundational understanding
 - Shifted to specific frameworks for discussion as opposed to design from blank slate
 - Delving into substance and working through issues
 - Encouraging parties to engage offline, speak up

Weekly Working Group Summary Reports

- Capture key discussion points each week.
- Posted on associated EDAM working group webpage, along with recordings of the meeting.
- Identify any consensus items, widely supported alternatives, and otherwise key discussion points.
- Establish upcoming tentative schedule for each scope item.

Final Working Group Summary Reports

- Published at the conclusion of each working group, in mid-March.
- Will capture key consensus points across topics discussed, supported alternatives, and key discussion considerations.
 - Will largely rely on weekly working group summary reports.
- Supports development of the comprehensive EDAM straw proposal in April.



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EDAM Working Group Briefings

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Working Group 1 – Supply Commitment and Resource Sufficiency Evaluation

Mark Richardson, Facilitator

Bob Kott, Scribe

EDAM Resource Sufficiency Design Update

- Purpose of RSE is to ensure each EDAM BAA provides sufficient schedules into the EDAM to meet their own balancing authority area obligations.
- RSE design qualities:
 - Day-ahead sufficiency hourly evaluation across 24-hour period.
 - The evaluation considers sufficiency based on hourly demand, reserves, and uncertainty needs of the BAA.
 - The evaluation tests sufficiency from an overall capacity and flexible capacity perspective.
 - The demand forecast component could be developed by the ISO, or self provided by the EDAM entity.
- The overall RSE process needs to provide the ability to evaluate progress toward meeting the RSE through advisory runs or alternate tools to allow opportunity to remedy deficiencies.
- Discussed 45-day ahead advisory showing of plan to meet monthly peak demand, but this item was taken offline to evaluate structure and value of framework. May be brought back to working group.

Resource Sufficiency Design Topics

Components

- Capacity Test ✓
- Daily Energy and Start Limitations ✓
- Ramping Capability (Hourly Demand and BAA Imbalance Reserve Allocations)
- Timing Requirements ✓

Failure Consequences

- Freezing of incremental transfers
- Consideration of financial consequences
- Priorities for constraint relaxation

Resource Requirements

- Treatment of VERs ✓
- Imports from non-EDAM BAAs **In progress**
- Counting of storage resources ✓
- Demand response treatment ✓

RSE Inputs

- What demand forecast is used ✓
- Common AS or reserve rules
- Treatment of existing reserve sharing group obligations

Framework for Demonstrating Resource Sufficiency

- A few frameworks for demonstrating resource sufficiency have been discussed to this point; with the group finding common ground on a version of the below framework;
 - **Optimized sufficiency portfolio:** this approach optimizes offered supply bids, not based on costs as in the actual market run, but to evaluate whether or not the EDAM entity has sufficient capacity and flexibility demonstrated across the 24 hour horizon.

EDAM Resource Sufficiency Evaluation – Next Focus

- Treatment and qualification of different types of import arrangements for resource sufficiency.
- Consequences for failing the RSE
 - Introduce options on topics such as: financial penalties, limiting participation, and/or freezing of transfers.
- Confidence of EDAM Transfers
 - Level of certainty and priority of transfers coming out of EDAM and into RT.

Working Group 2 – Transmission Commitment and Congestion Rents Allocation

Deb Le Vine, Facilitator
Emily Hughes, Scribe

Transmission Commitment in EDAM

- Purpose of working group is to define how transmission is made available to support EDAM transfers and the associated compensation structure.
- Transmission capacity at transfer points between EDAM areas, and the usage of transmission within EDAM areas, is key to facilitate EDAM and derive benefits.
- Market design should seek to incentivize making the maximum transmission available for EDAM optimization, while seeking to respect existing transmission contracts.

Design Development Progress

- Transmission held under contract and supporting delivery of resource sufficiency capacity between EDAM areas must be made available to EDAM at no additional charge. (*Bucket 1*)
- Additional transmission held under contract at transfer points between EDAM areas can be made available voluntarily and be compensated. (*Bucket 2*)
- Transmission service provider can make unsold transmission available to EDAM at its tariff rate. (*Bucket 3*)
- Under the EDAM, parties should still be able to exercise the rights under their contracts and mechanisms should be developed to allow for this ability.
- Transmission rights of different duration (annual, monthly, weekly or daily) are made available to market via an automated mechanism by 9 am before EDAM run.

Transmission Commitment & Congestion Rent Allocation Design Topics

Availability

- Definition – quality of transmission ✓
- Modeling energy transfers and exports ✓
- Existing Transmission Uses ✓
- Risks ✓

Timing and Duration

- Timing of availability ✓
- Duration of availability ✓
- Assessing impact to EIM

Compensation

- For Buckets 2 and 3:
 - What rate/fee is conveyed ✓
 - Congestion rents are conveyed ✓
 - How are rates/fees conveyed ✓
 - Settlement implications ✓

Congestion Rent Allocation

- Allocation of rents supporting EDAM transfers ✓
- Process for allocation of rents and distribution ✓

Upcoming Topics of Discussion

- Compensation associated with transmission available to EDAM should be equitably allocated and the work group is currently evaluating different approaches.
- Focused discussion on illustrating the types of transmission rights that can be made available to the market.
 - EDAM to EDAM transfers; non-EDAM to EDAM transmission; from non-EDAM across multiple EDAM entities transmission and transfers.
 - Use of internal transmission to support EDAM
 - CAISO transmission service available to EDAM
- Discussion on how intertie bidding will function in an EDAM.
 - Bidding at the border of the EDAM footprint and bidding at the border of the individual EDAM entity.

Working Group 3 – Greenhouse Gas Accounting and Costs

Kevin Head, Facilitator
Brian Jacobsen, Scribe

GHG Accounting in EDAM – Design Update

- Purpose: develop approach to account for the costs and reporting requirements arising from state GHG policies.
 - Primary effort is to identify how to factor in the costs arising from carbon pricing into the optimization.
 - Secondary consideration is how state GHG and RPS/CES reporting requirements can be supported.
- Received input from WA and CA regulators
- Two approaches have been offered for market design:
 - Resource-specific: Market optimizes based on the GHG costs bid in by specific generators.
 - Unspecified: Market optimizes based on price differential between GHG and non-GHG zones is sufficiently high to allow transfers.

GHG Design Topics

Accounting

- Compliance area ✓
- Voluntary nature of participation **IP**
- Costs being optimized ✓
- Multiple GHG zones ✓
- GHG cost optimization approach (resource-specific vs unspecified)

Reporting and Settlements

- Determination of which entity holds GHG reporting obligation
- Financial settlement of GHG revenues created by market

Approach-specific issues

- Res-specific: Metric used to determine GHG attribution **IP**
- Unspecified: Hurdle rate calculation
- Unspecified: Alternative pathways to serve GHG zones

Miscellaneous

- Bidding of GHG costs **IP**
- Impact on EIM real-time market
- Interaction with other proposed GHG tracking systems ✓

Upcoming Discussion Topics

- Both approaches will be further fleshed so that an evaluation can be conducted against design objectives
- Upcoming expected milestones:
 - End of February: working group should have discussed “version 2.0” of each approach.
 - Mid-March: working group evaluation of each approach will be completed and reported
 - Remaining meetings will clean up remaining topics:
 - GHG cost settlement
 - Roll-over to real-time market
 - Reporting of results



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Upcoming EDAM Activities

Milos Bosanac, EDAM Policy Lead

Additional items that will be raised during the working groups for discussion

- *Residual Unit Commitment (RUC)* – As an important component of DA Market whose function is to commit additional generation to meet differences in forecasted demand and DA schedules. Consideration of potential implications and enhancements of application across broader EDAM footprint.
- *Convergence Bidding* – A market mechanism that can improve market efficiency through reduction in the price gap between DA and RT markets. Consideration of the role of convergence bidding across EDAM entities and whether this may be an optional or necessary feature.

Acknowledging Interdependencies Between Topics Across Working Groups

- Resource sufficiency evaluation and transmission committed across EDAM area transfer points.
 - WG 1 discusses resource sufficiency framework, timing and demonstrations.
 - WG 2 discusses how transmission at transfer points is made available to market if it is supporting delivery of resource sufficiency generation.
- As we delve into inertia bidding in the EDAM, this will touch on implications for resource sufficiency and transmission commitment.
 - WG 2 will discuss the overall inertia bidding framework and implications on transmission across EDAM footprint.
 - WG 1 will consider how import resources support the resource sufficiency evaluation.

Next Steps

- Working groups will continue through March 17th.
- Next monthly EDAM working group debrief meeting scheduled for March 18th.
- Working group materials – recordings, presentations, postings – and background/historical EDAM materials can be found on the initiative web page.

<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-day-ahead-market>