



EDAM

EXTENDED DAY-AHEAD MARKET

Working Group – March Debrief Meeting

March 18, 2022



California ISO

Agenda

Time	Topic	Presenter
9:00 – 9:05	Introduction/agenda	Kristina Osborne
9:05 – 9:15	Welcome and opening remarks	Elliot Mainzer Mark Rothleder
9:15 – 9:30	EDAM stakeholder process overview	Milos Bosanac Phil Pettingill
9:30 – 10:30	Working group updates	Mark Richardson Deb Le Vine Kevin Head
10:30 – 10:45	WEIM Governance Review Committee update	Therese Hampton, Committee Chair
10:45 – 10:55	Upcoming EDAM activities	Milos Bosanac
10:55 – 11:00	Next steps	Kristina Osborne

Meeting Objectives

- Identify the upcoming stage in the EDAM stakeholder process.
- Share a comprehensive progress update and impressions across EDAM stakeholder working groups.
- Describe emerging framework design coming out of the working groups.

The logo for EDAM, consisting of the letters 'E', 'D', 'A', and 'M' in a bold, sans-serif font. The letters are white with a slight gradient and are set against a dark blue background. The background of the entire slide features a faint, light blue grid and various data points, including numbers like -16.75, -6.08, 26.93, 10.96, 10.09, 13.13, 13.13, 1.00, 0.09, 10.96, 10.09, 13.04, 14.32, -4.9, 3.540, 1.091, 1.8, 0.2, 0.40, 0.98, 32.36, 10.9, -34.0, -55.7, 16.04, 9.61, 0.79, 8.59, 5.4, 5.84, 1.520, 45.12, 0.77, 2.34, 0.09, 3.48, 1.74, 1.214, 8.49, 2.69, 0.51, 0.55, 27.72, 36.17, 81,029, 7,284, 17,288,600, 13,224, 2,913,100, 40,573, 16,273,100, 247,000, 38,265,200, 183,197, 3,888,600, and 81,029.

Opening Remarks

Elliot Mainzer, President and Chief Executive Officer
Mark Rothleder, Sr. Vice President and Chief
Operating Officer

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EDAM Initiative Stakeholder Process Overview

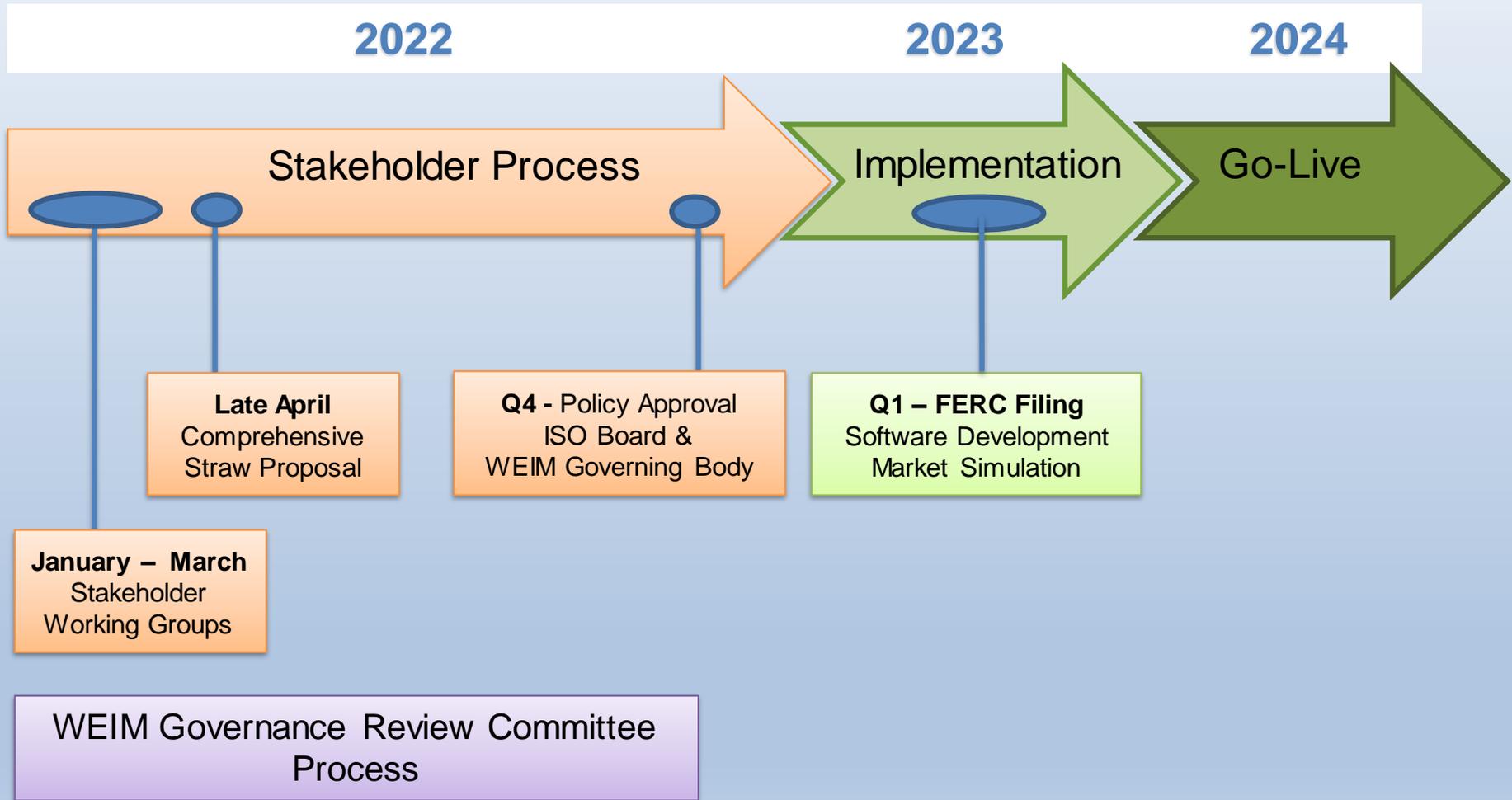
Milos Bosanac, EDAM Policy Lead

Phil Pettingill, Working Group Coordinator

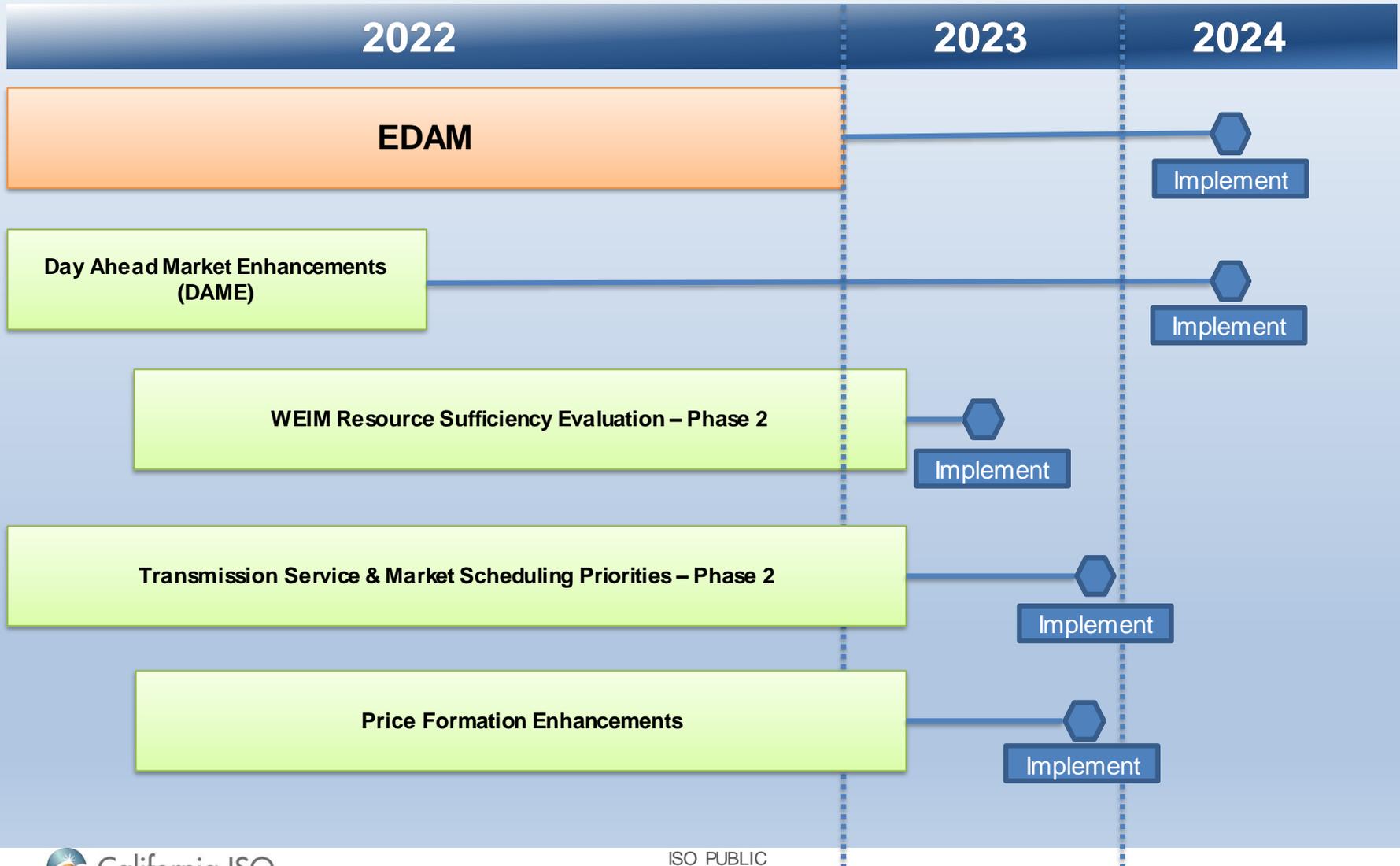


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EDAM Development and Implementation Timeline



Broader Interdependency Roadmap



Milestones to Straw Proposal

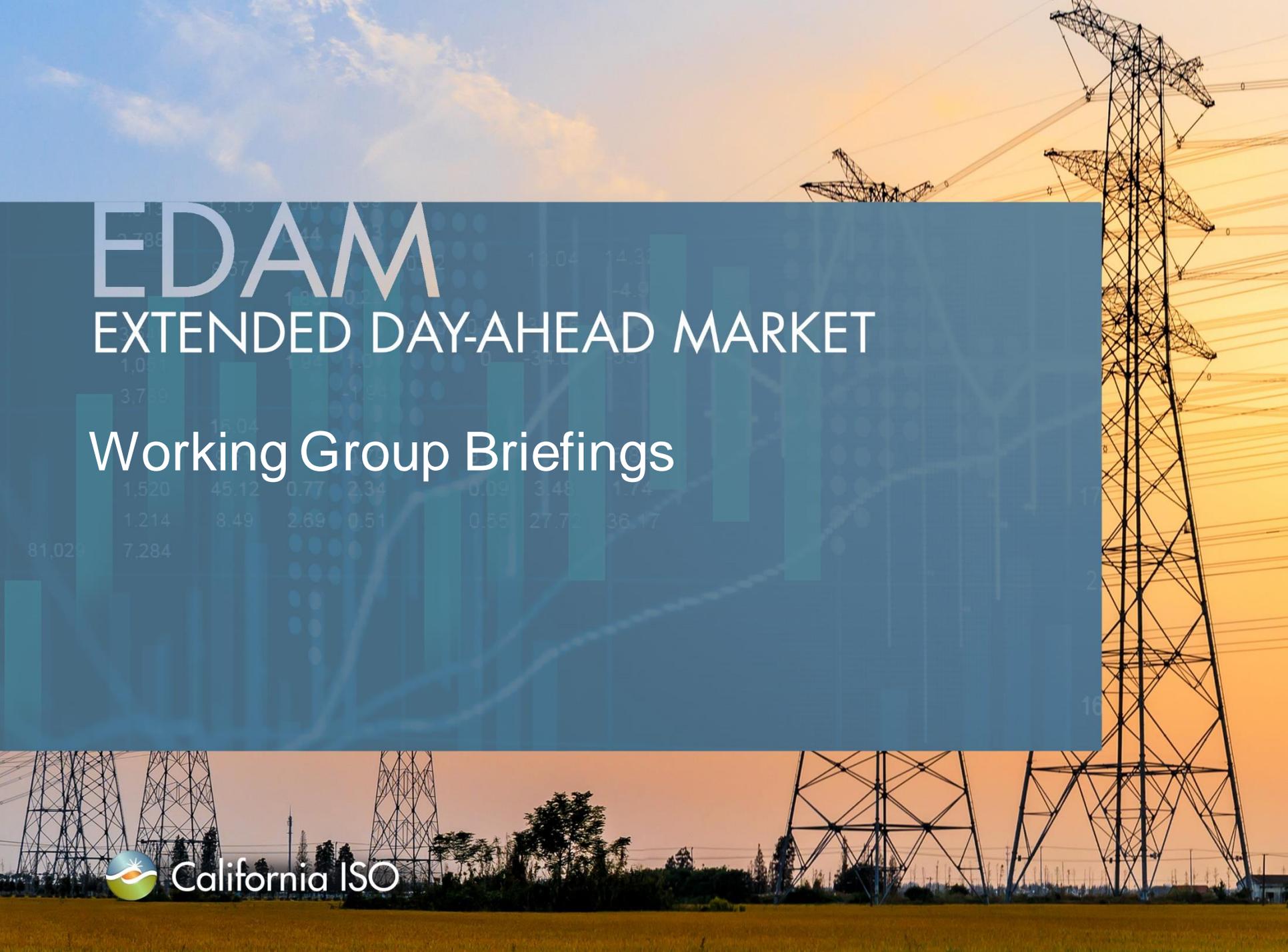
Date	Milestone
1/3	Launch of EDAM Working Groups
2/16	Monthly EDAM Working Group Briefing
3/17	Conclusion of Working Group Meeting
3/18	Monthly EDAM Working Group briefing
3/21	(week of 3/21) Working group summary report
4/25	(week of 4/25) Publish straw proposal
5/15	(week of 5/15) Stakeholder meeting on straw proposal
5/30	(week of 5/30) Stakeholder comments due on straw proposal

Working Groups – Recognizing the Sizeable Effort



Working groups have been productive

- Facilitated stakeholder discussion
 - Seek agreement and provide key inputs to ISO design team
 - Review, modify, and add scope items for discussion
 - Delve into substance and openly work through issues
- Captured the discussion
 - Key discussion points each week
 - Post along with recordings of the meeting
 - Establish and adjust tentative schedule for each scope item
 - Summary report – will capture areas of broad agreement, supported alternatives, key discussion considerations
- Still to come:
 - Survey to seek improvement on WG process: March 18th
 - Work Group Summary Report: week of March 21st



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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 Evaluation (RSE)

- The purpose of the RSE is to ensure that each EDAM balancing authority area (BAA) brings forward sufficient capacity into the Day Ahead Market to meet their demand and uncertainty obligations.
- A foundational objective is a fair and equitable RSE for all EDAM Entities.
- Robust stakeholder participation:
 - Sharing of perspectives shaping design
 - Presentations from stakeholders on discrete elements
 - Discussed additional important items not directly in WG scope (RUC, convergence bidding)

Resource Sufficiency Design Topics

Components

- Capacity test ★
- Daily energy and start limitations ★
- Ramping capability (hourly demand & BAA imbalance reserve allocations) ★
- Timing requirements ★
- Confidence in EDAM Transfers ★

Failure consequences

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

Resource requirements

- Treatment of VERs ★
- Imports from non-EDAM BAAs ★
- Counting of storage resources ★
- Demand response treatment ★
- Other Resource Constraints* ★

Other

- Demand forecast ★
- Common AS or reserve rules
- Treatment of existing reserve sharing group obligations
- RUC and Convergence Bidding Overview* ★

Emerging Framework Design

- Resource sufficiency evaluation structure:
 - Evaluation in the Day Ahead Market (10am), at the BAA level (not individual LSE)
 - Hourly evaluation, across the full 24-hour period
 - The evaluation tests sufficiency from an overall capacity and flexible capacity perspective
 - Ability to meet demand forecast, reserves, and uncertainty
- Ahead of the DA Market (10am), a sufficiency optimization model considers the submitted supply bids toward meeting the overall sufficiency obligation.
 - Allows for ability to test sufficiency in advance on advisory basis
 - Considers all resource constraints
 - Searches optimal sufficiency solution considering the obligation and supply offers

Emerging Framework Design

- Firm energy contracts (i.e., WSPP Schedule C) can be used to demonstrate sufficiency.
 - Widely utilized and relied upon construct in west, including for RA imports into CAISO.
- Application of consequences for failure to pass the resource sufficiency evaluation.
 - Freezing transfers in DA may not be appropriate, providing ability to cure ahead of RT.
 - Leaning toward some form of financial consequences.
- Providing certainty in market transfers is an important aspect of overall confidence in EDAM.
 - In emergency conditions, seeking common treatment for transfers across participating EDAM Entities.

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WG 1 - Questions/Open Forum



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Working Group 2 – Transmission Commitment and Congestion Rents Allocation

Deb Le Vine, Facilitator
Emily Hughes, Scribe



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Transmission Commitment and Compensation in EDAM

- The purpose of the 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 internal transmission within EDAM areas, is key to facilitate EDAM and derive benefits.
- Market design should seek to maximize the transmission available for EDAM optimization, while seeking to respect existing transmission rights.

Transmission and Compensation Design

Availability

- Quality of transmission ★
- Modeling energy transfers and exports ★
- Existing transmission uses ★
- Risks ★

Timing and duration

- Timing of availability ★
- Duration of availability ★
- Assessing impact to WEIM ★

Compensation

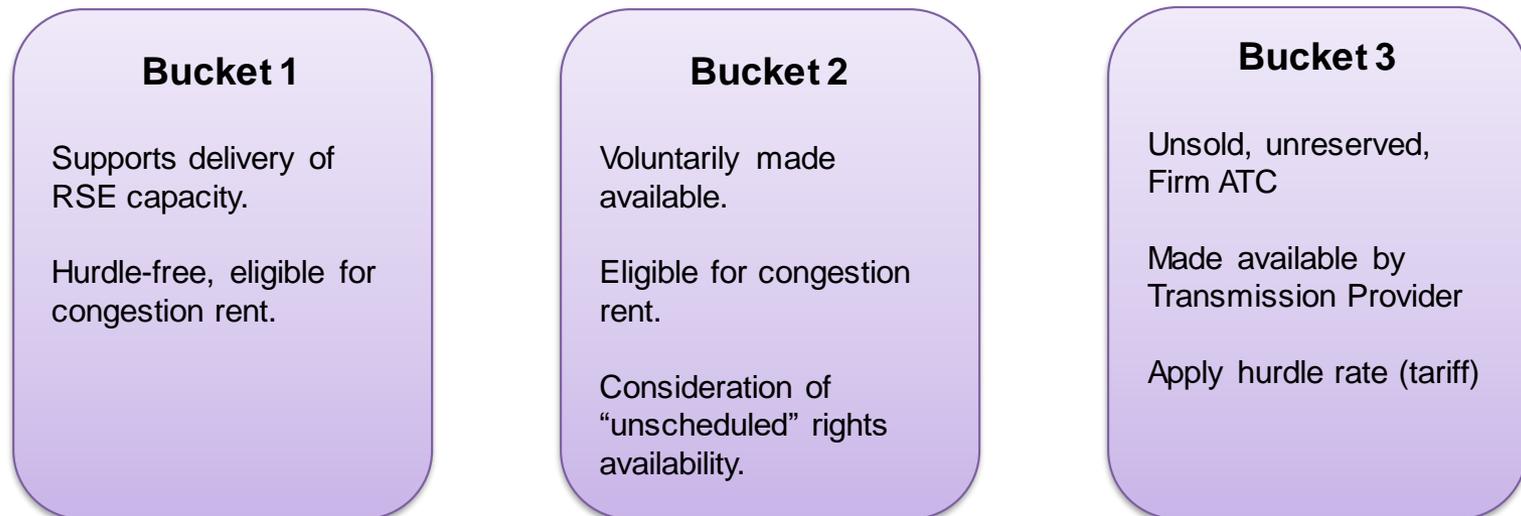
- For Buckets 2 and 3:
 - What rate/fee is conveyed ★
 - How are rates/fees conveyed ★
 - Settlement implications ★

Congestion Rent Allocation

- Allocation of rents supporting EDAM transfers ★
- Allocation of rents for internal transmission ★
- Process for allocation of rents and distribution ★

Emerging Framework Design

- Transmission internal to an EDAM BAA is available to support optimized commitment of generation in DA market.
 - Transmission customers can exercise their existing rights (contracts) and market will accommodate.
- Transmission at interfaces between EDAM BAAs can support robust EDAM transfers under “*buckets*” concept.



Emerging Framework Design

- Introduction of concept of “reciprocity” or “matching” of hurdle free transmission along interfaces between EDAM BAAs, including CAISO.
 - Transmission otherwise subject to hurdle (Bucket 3) could be made available hurdle free to match amount at interface.
 - Consideration of viability and variations on such approach.
- Consideration of compensation approaches for transmission made available to support EDAM transfers.
 - Consideration of congestion rents for bucket 1 and 2 transmission made available.
 - Discussion on viability of hurdles for transmission beyond bucket 3.
- Consideration of intertie bidding framework comparable to WEIM today.
 - Retaining intertie bidding (economic bidding/self scheduling) at CAISO interfaces/interties.
 - Ability to self schedule, but not economically bid at the interties of the EDAM footprint (transmission free riding concerns).

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WG 2 - Questions/Open Forum



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Working Group 3 – Greenhouse Gas Accounting and Costs

Kevin Head, Facilitator
Brian Jacobsen, Scribe



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GHG Accounting in EDAM

- The purpose is to develop an approach to account for the costs and reporting requirements arising from state GHG policies.
 - How to factor in the costs arising from carbon pricing into the optimization.
 - How state GHG emission reduction programs and reporting requirements can be supported.
- Robust working group engagement:
 - Stakeholder presentations on various elements, including presentations from regulatory agencies.
 - Received 75 responses to “homework” assignment.
 - Vetted updated “2.0” versions of two overarching frameworks.
 - Performed qualitative evaluation using agreed-upon design objectives.

GHG Accounting Design

Accounting

- Compliance area
- Voluntary nature of participation
- Costs being optimized
- Multiple GHG zones

Resource specific *Unspecified/
Zonal*



Reporting and Settlements

- Entity bearing the compliance obligation
- Distribution of GHG revenue

Resource specific *Unspecified/
Zonal*



Approach Specific Issues

- Baseline for evaluation of GHG attribution
- Hurdle rate calculation
- Source-specific pathway to serve GHG zone

Resource specific *Unspecified/
Zonal*



Miscellaneous

- Bidding of GHG costs
- Effects on WEIM
- Leakage minimization mechanism

Resource specific *Unspecified/
Zonal*



Emerging Framework Design

- Two approaches have emerged for consideration:
 - **Resource-specific:** Market optimizes based on the GHG costs bid in by specific generators.
 - Two potential new GHG baseline methodologies raised
 - Newly proposed design elements include limiting MW of GHG attribution based on hourly net export
 - **Unspecified/Zonal:** Market optimizes by allowing transfers from the non-GHG zone to the GHG zone if price differential is sufficiently high.
 - Source-specific pathways clarified
 - Hurdle rate calculation further solidified
 - Compliance/reporting/settlements approach discussed, and may continue to evolve and have more specificity

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WG 3 - Questions/Open Forum



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WEIM Governance Review Committee Update

Therese Hampton, Committee Chair



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Upcoming EDAM activities

Milos Bosanac, EDAM Policy Lead



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Straw Proposal Publication

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Next Steps

- ISO soliciting stakeholder feedback on the working group process and structure
 - Feedback survey will be emailed following this meeting
 - Responses requested by April 1st
- EDAM briefing at the WEIM Governance Review Committee public meeting on March 31st
- Publication of straw proposal in late April, and opportunity for stakeholders to submit formal written comments.
- Working group and related EDAM materials are located on the initiative webpage:

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



- The ISO is pleased to be hosting the Stakeholder Symposium in-person at the Safe Credit Union Convention Center in downtown Sacramento on Nov. 9 – 10, 2022
- Registration will be open in May
 - Public notice will be issued once the site is available
- Additional information is available on the Stakeholder Symposium page on ISO's website at:
<http://www.caiso.com/informed/Pages/MeetingsEvents/StakeholderSymposium/Default.aspx>
- Please direct questions to symposiumreg@caiso.com