



California ISO

Price Formation Enhancements

Working Group Session #13

Sprint 3

1/24/2023

Housekeeping reminders

- This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO's permission.
- These collaborative working groups are intended to stimulate open dialogue and engage different perspectives.
- Please keep comments professional and respectful.
- Note: The ISO encourages any verbal or written agreements to comments made during this working group session.
- You may also send your question via chat to either Brenda Corona or to all panelists.

Great news with Intellor platform, specifically around audio while joining meetings

- The “call me” feature now enabled when joining Operator assisted meetings.
- I have a very positive update regarding the Webex Webinar(s) you have scheduled with us for January 2024. Integrated Webex telephone audio is now enabled for these webinars – meaning, speakers and attendees can join Webex and then use the call-me feature for the best experience. (We will still open the separate teleconference in case any of your attendees choose to use it.)

Instructions for WebEx

- The “raise hand” icon is located in the lower tool bar. You will hear a beep tone when you are un-muted; at that time please state your name, and question. Attendees dialed in on the phone only press #2 will hear a notification when you are un-muted; at that time please state your name and question. 
- WebEx platform will **LOCK** and mute you if you mute yourself once you have finished your question. Do not mute yourself until you have completed your question or comment.

Today's Working Group Agenda

Time	Topic	Presenter
9:00 – 9:05 AM	Welcome, Today's Agenda, Stakeholder Process Overview	Brenda Corona
9:05 – 9:10 AM	Today's Goals / Next Sessions	Juan Buitrago
9:10 – 10:45 AM	Sprint 3 – Scarcity Pricing Problem Statements	Sylvie Spewak
10:15 – 10:45 AM	Stakeholder Discussion : Scarcity Pricing	Juan Buitrago
10:45 – 11:00 AM	Next Steps	Brenda Corona

Goals of Today's Working Group Session

The Working Group structure is meant to embrace flexibility to allow organic and robust conversation on the topics at hand – it is still key for us to drive towards solutions collaboratively

- **Continue the Working Group conversation to Scarcity Pricing**
 - Review three potential problem statements, reflecting a cross section of stakeholder discussion to date, focusing on actions being taken to resolve shortages and their impact on pricing.
- **Stakeholder Discussion on Problem Statement**
 - What opportunities exist to 'bring rationality to prices' in scarce conditions
 - Identify other opportunities to improve how price formation rules capture and reflect the impact of actions taken to resolve
 - Receive feedback on necessary considerations for solutions

ISO Policy Initiative Stakeholder Process



Stakeholder meetings, working groups and workshops may occur throughout the stakeholder process.

We are here

- Working groups will inform the Phase 1 straw proposal
- The ISO will take notes and produce reports of each of our working group meetings.



Price Formation Enhancements

Working Group Session – Scarcity Pricing Sprint #3
Staff Presentation

January 24, 2024

Scarcity Sprint: What we covered and what's next

- Sprint 1 we discussed the market's response to actual shortages.
- Sprint 2 we discussed actions the market should take before a shortage occurs.
- This week, we'll discuss how actions being taken to resolve shortages impact market prices

Problem Statement

The impact on market prices from reliability use-limited resources and non-market actions during emergency events is not holistically captured by price formation

Examples of actions not fully captured by price formation

Economic participation is reliability use-limited

- Strategic reserves reliability program (SRRP)
- Reliability Demand Response Resources (RDRR) participate in the market during an EEA watch

No economic participation; costs are defined out-of-market

- Paid retail programs, e.g. demand response programs, interruptible load
- Emergency Load Reduction Program (ELRP)

No defined cost

- Flex Alert encourages voluntary conservation initiated by the ISO
- Arming load, and manual load shedding by market operators

These actions put downward pressure on prices and impact operations

- Downward pressure on prices may confound the price signal indicating emergency conditions,
 - and limit the opportunity for prices to rise ahead of time.
- Prices may be insufficient to incentivize market participants to perform and deliver in tight conditions.
 - Increases risk of reliance on market operator actions.

Preliminary options for discussion

- Price floor
 - An administrative way to prevent prices from collapsing
- Value of lost load (“VOLL”)
 - A price signal reflecting the economic opportunity to reduce potential reliance on market operator intervention

Problem Statement

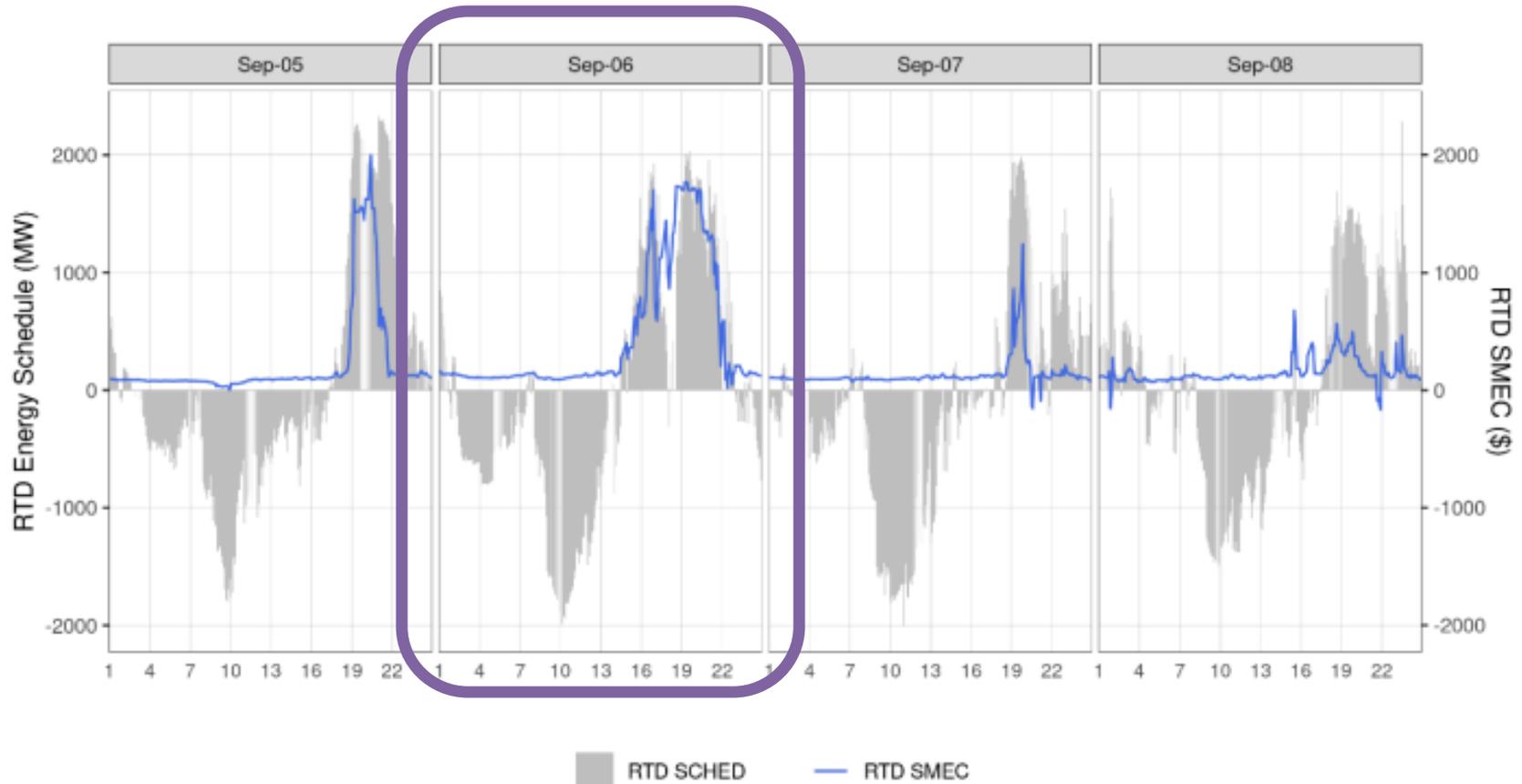
Energy storage resource bids/DEBs are limited to a bid cap of \$1000/MWh which may not reflect opportunity costs in tight system conditions when the bid cap is raised to \$2000/MWh.

Why is this a problem? What is the impact?

- Absent a defined opportunity cost for storage resources, ISO systems cannot process these resources' requests to bid above the soft offer cap
- Storage may be dispatched inefficiently early, putting downward pressure on prices leading up to a shortage.
- Inappropriately charged/discharged storage capacity increases reliance on manual actions, use of operational constraints

Storage was dispatched as prices rose above \$1000/MWh

Figure 147: RTD Energy Awards for Storage and SMEC



Source: Summer Market Performance Report September 2022

Preliminary options for discussion

- Develop logic for the opportunity cost of storage resources

Problem Statement

The ISO market does not have a circuit breaker mechanism in the event scarcity pricing occurs over an extended period of time.

Why is this a problem? What is the impact?

- “**A circuit breaker** is an administrative mechanism intended to protect consumers and market participants from the financial impact of in-actionable scarcity price signals” - PJM



California ISO

Stakeholder Feedback

Next steps

Comments on PFE Working Group Sprint

- Provide your organizations official comments on the topics covered in the sprint sessions
- Upcoming Sessions - Continue conversation on BAA-Level MPM and scoping of Fast Start Pricing Analysis.

Next steps

Tentative Dates of Upcoming PFE Working Group Sessions

- Feb 2024
- Fast Start Pricing
- BAA-Level MPM



Meeting
 Holiday Office Closed

Please note the working group session is tentative until confirmed through a notice in the ISO's Daily Briefing

Price Formation Enhancements Working Group Tentative Schedule

January						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- Jan 10, 2024 – Working Group – Scarcity Pricing
- Jan 15, 2024 - *Holiday Office Closed*
- Jan 17, 2024 – Working Group – Scarcity Pricing
- Jan 24, 2024 – Working Group – Scarcity Pricing

February						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

- Feb 12, 2024 – Working Group – Fast Start Pricing
- Feb 19, 2024 – *Holiday Office Closed*
- Feb 26, 2024 – Working Group – BAA Level Market Power Mitigation (MPM)

- <http://www.caiso.com/InitiativeDocuments/Price-Formation-Enhancements-Working-Group-Schedule-2024.pdf>

For reference

- Visit Price Formation Enhancements Working Group initiative webpage for more information:
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Price-formation-enhancements>
- Price Formation Working Group Schedule
<http://www.caiso.com/InitiativeDocuments/Price-Formation-Enhancements-Working-Group-Schedule-2024.pdf>
- If you have any questions, please contact Brenda Corona at bcorona@caiso.com or isostakeholderaffairs@caiso.com

Upcoming meetings

- Jan 30th - **Annual Policy Initiatives Roadmap Process 2024** – [pre-register](#), notice going out today.

NEWS RELEASE: FERC accepts ISO tariff changes for a Western day-ahead electricity market

- New rules adopted for the Day-Ahead Market Enhancements (DAME) and the Extended Day-Ahead Market (EDAM).
- Stakeholders were deeply engaged in designing the market rules through a collaborative working group process, which included regional utilities, independent energy providers, state regulators, public interest organizations, and a variety of entities representing various interests and points of view throughout the Western Interconnection.
- Learn more about EDAM through this [link](#).
- Find out [What They're Saying](#), [News Release](#)



- *Energy Matters* blog provides timely insights into ISO grid and market operations as well as other industry-related news

<http://www.caiso.com/about/Pages/Blog/default.aspx>.



January 18, 2024

Inside the ISO, Leadership, Operations

The great transformation: Designing the grid of the future

By Mark Rothleder

California ISO executives and staff members are frequently asked to address energy conferences across the U.S. and abroad. The following is a keynote speech from Mark Rothleder, the ISO's Senior Vice President and Chief Operating Officer, delivered at "The Great Transformation: Designing the Grid of the Future" conference hosted Jan. 16 ...

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