



California ISO

Gas Resource Management Working Group 7

January 25, 2024

Housekeeping reminders

- This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO's permission.
- If you need technical assistance during the meeting, please send a chat to the event producer.

Instructions for raising your hand to ask a question

- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon  located on the bottom of your screen.
- **Note:** #2 only works if you dialed into the meeting.
 - Please remember to state your name and affiliation before making your comment.
- You may also send your question via chat to either Isabella Nicosia or to all panelists.

Today's Working Group Agenda

Time	Topic	Presenter
1:00-1:05pm	Welcome and housekeeping	Isabella Nicosia
1:05-1:30pm	WG6 recap: Survey feedback, updated problem statements, action items	Mark Richardson
1:30-1:40pm	Objectives of problem statement assessment	Mark Richardson
1:40-2:40pm	Initial data analysis of GRM problem statements	Katie Wikler
2:40-3:00pm	Next steps	Mark Richardson

WG6 RECAP

Summary

- After the last working group, we sent out a survey
 - We'll take formal comments after the next working group
- Proposed problem statement updates

Stakeholder feedback from WG6 Survey

How would an 8:30/9:00am deadline for manual reference level adjustments **before the day-ahead market run** impact your organization?

- Stakeholders generally support this option because it allows for better informed decision making
- Stakeholders noted that the value-add of this proposed change may be limited given how the electric market uses/publishes the price index

How would an 8:30/9:00am deadline for manual reference level adjustments **before the real-time market run** impact your organization?

- Stakeholders highlighted more challenges than benefits with a 9:00am deadline in RT
- Stakeholders clarified that reliance on intra-day trading periods poses unique issues

Proposed changes to problem statements based on survey feedback

Update problem statements related to the manual reference level change requests for resource specific cost adjustments:

- PS 7A: Stakeholders do not have the actual gas cost information necessary to submit a manual reference level change request by the 8 a.m. deadline for the **day-ahead market run**.
- PS 7B: To procure additional supply for **real-time**, stakeholders may have to rely on intra-day 2 and intra-day 3 trading periods for which pricing information necessary to inform cost adjustments is not available until the afternoon of that gas day.

Stakeholder feedback from WG6 survey (cont.)

How often does your organization have to switch to a significantly higher cost fuel region?

- Most stakeholders only switch fuel regions in response to exceptional gas system constraints, critical events, pipeline outages
- Some stakeholders noted that they switch fuel regions regularly

Does your organization ever rely on a different type of fuel?

Does switching fuel types have an impact on unit characteristics?

- Most stakeholders say switching fuel types is rare and/or doing so does not have a significant impact on unit characteristics
- Some stakeholders must rely on higher cost fuel that changes a unit's heat rate
- Some stakeholders do not currently switch fuel but support the working group's considering this topic

Proposed changes to problem statements based on survey feedback

Update problem statements related to switching fuel regions:

- PS 9A: When switching fuel hubs/fuel regions **in response to critical events**, generators are unable to reflect accurate costs in the market in a dynamic or timely manner.
- PS 9B: Generators that switch fuel regions **regularly** have trouble reflecting their costs accurately in the market.

Objective of

PROBLEM AND SOLUTION ASSESSMENT

Tying it all together



Certainty for DA Fuel Procurement	<ul style="list-style-type: none">• Lack of confidence in advisory information• Under-procurement exacerbates issues related to illiquidity
Accessible resource specific cost adjustments	<ul style="list-style-type: none">• New and more frequent challenges with reflecting changing gas market conditions in resource costs and operating parameters
Accuracy of inputs used for ISO market processes	<ul style="list-style-type: none">• Prices used in market processes are not precise• Threshold used to assess resource cost adjustments are limiting

Objectives of working group analysis effort

Explore the implications of stakeholder problem statements, and identify the potential benefits of proposed solutions

Today's Focus:

Cost adjustments, gas market inputs

Next time:

Certainty for DA procurement, advisory inputs

- What might be driving the patterns that we're seeing
- How do findings support the impact of problem statements
- What information should we look for to illustrate expected trends
- What findings help illustrate the potential benefits of proposed solutions
- What additional information would help answer stakeholder questions
- How should assessment inform prioritization and next steps

MARKET ANALYSIS INITIAL ASSESSMENT

Katie Wikler, Sr. Market Engineering Specialist

High-level overview of analysis

- Gas prices
 - Long-term price trends
 - Comparison of settled price to high/low bid spreads*
 - Price distribution
- Bidding
 - How frequently gas resources are hitting the Default Commitment Cost bid cap*
- Reference Level Change Requests
 - Overview/breakdown of RLCR utilization
 - How frequently gas resources who submit RLCRs are hitting reasonableness thresholds*

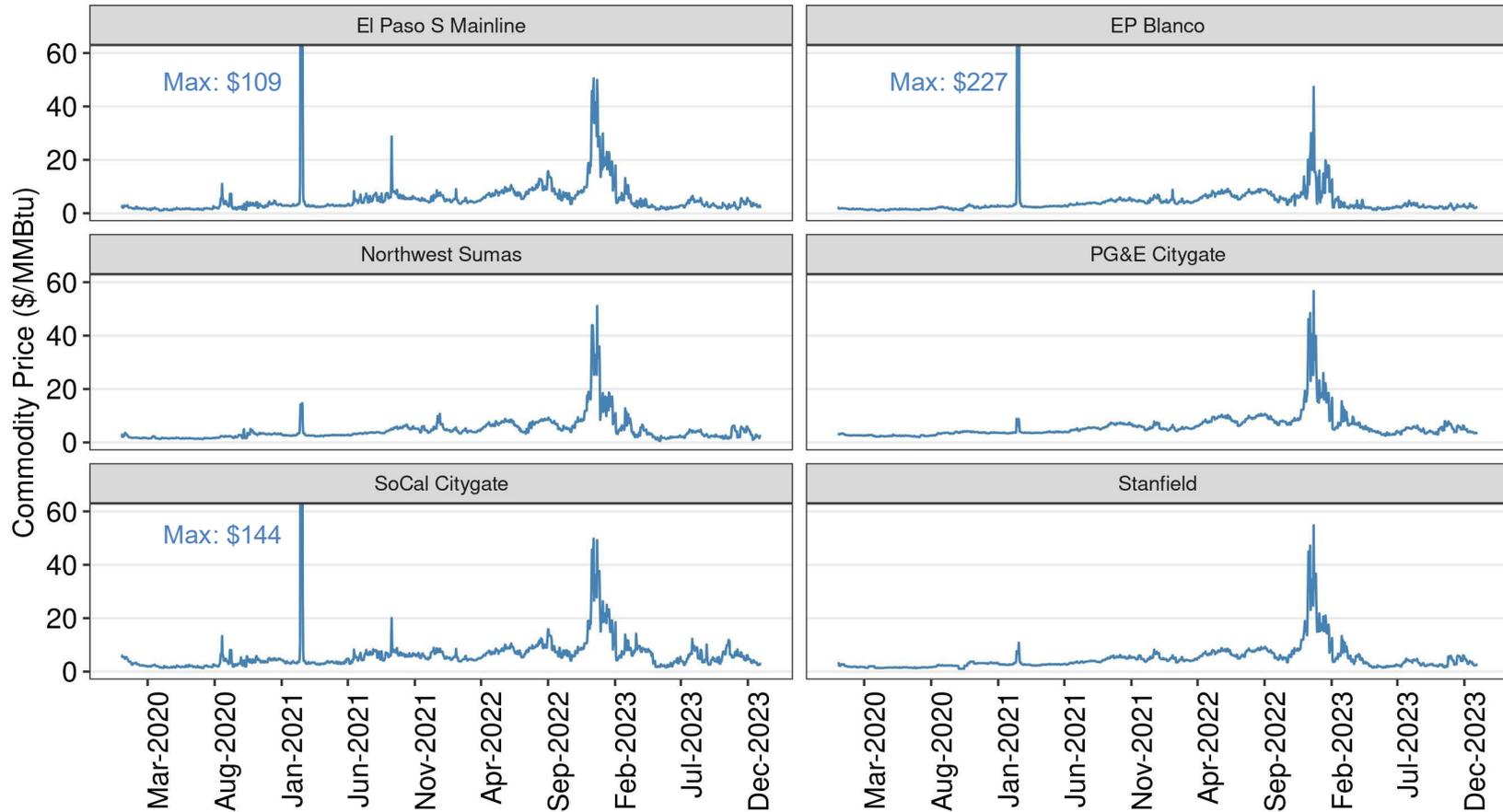
* During volatile periods

Volatile periods studied

- Feb. 12 – 19, 2021 (winter storm Uri)
- Sep. 1- 9, 2022 (West-wide heatwave)
- Dec. 10 – 22, 2022 (winter gas volatility/winter storm Elliot)

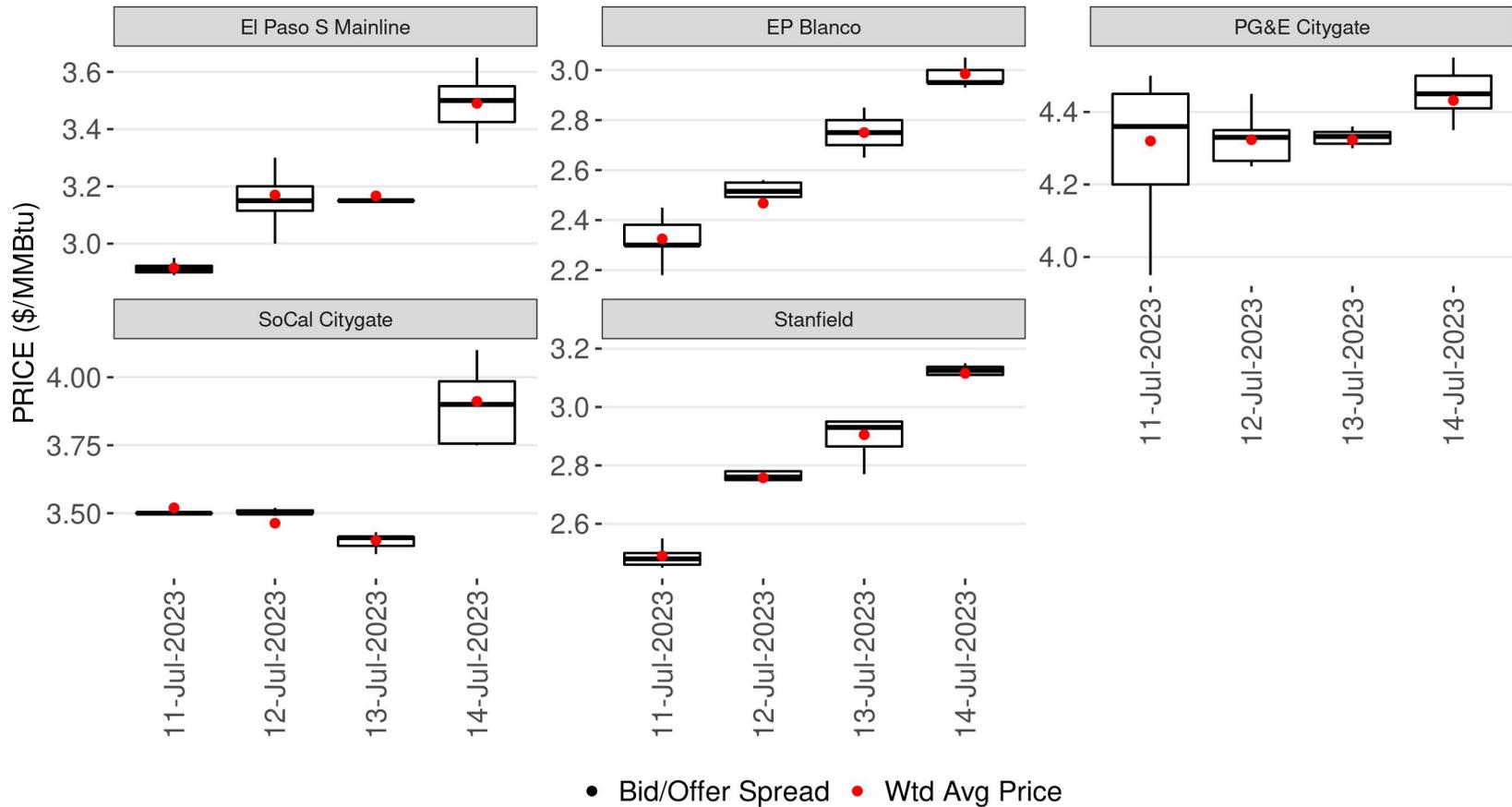
- Volatile periods were defined by considering both high prices and system conditions
- Also including a “non-volatile” period for comparison to normal market conditions
 - Jul. 11 – 14, 2023

Next-day gas prices have experienced increased price movement and volatility since 2021

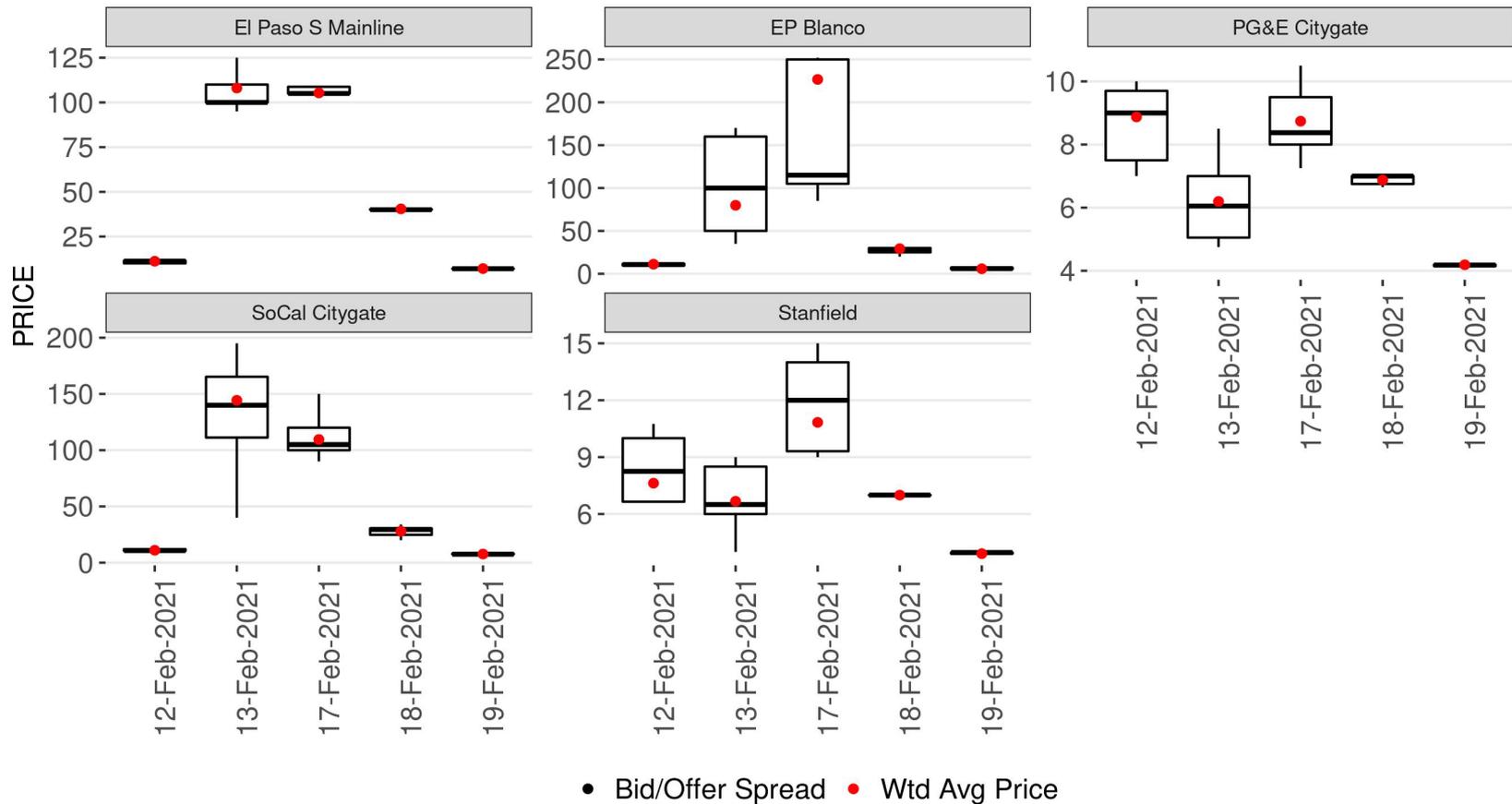


*Y-axis truncated for readability

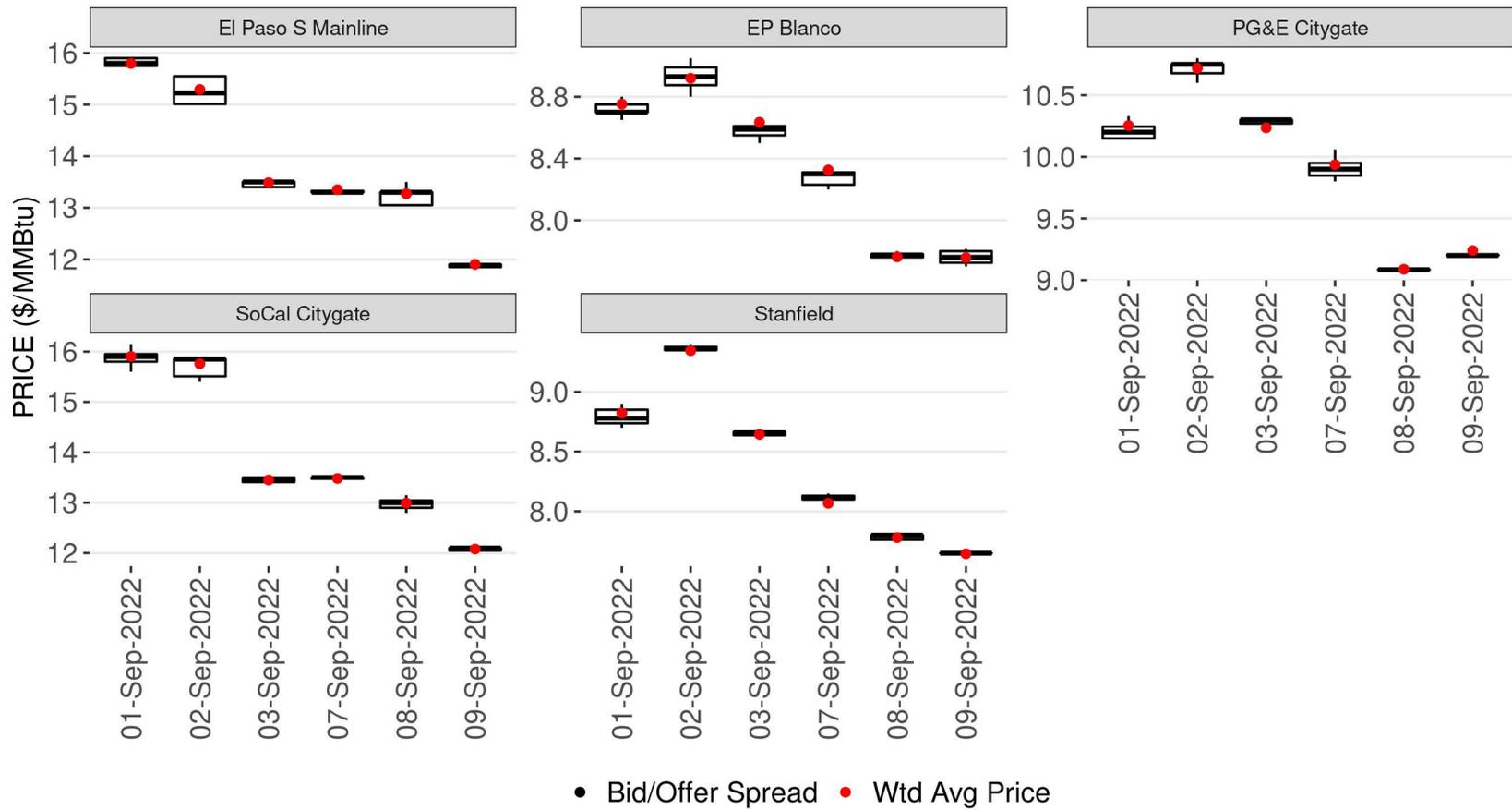
During the period of Jul. 11 – 14, 2023 when prices were stable, settled index price remains close to median with thin bid spreads



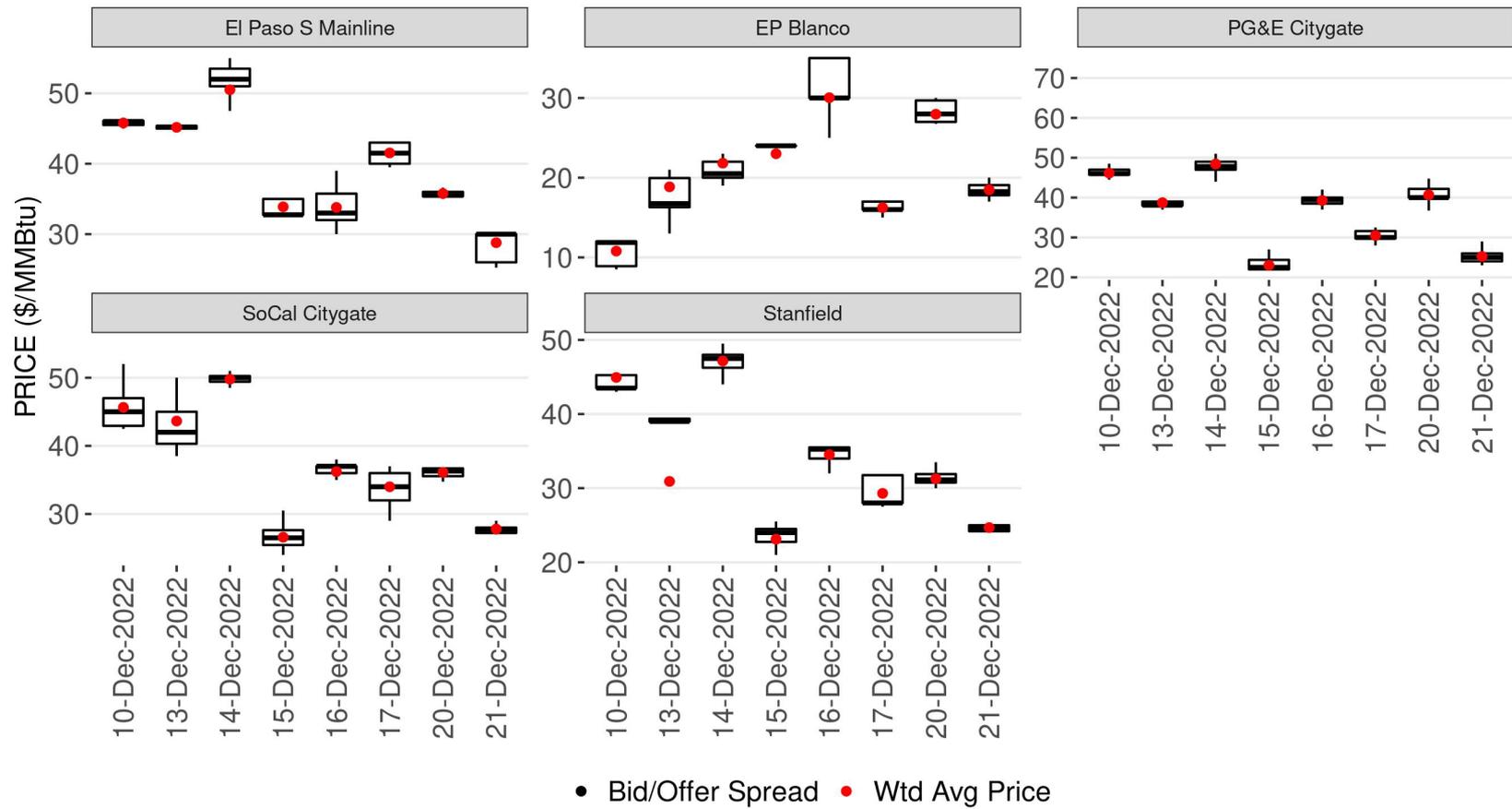
During volatile days with large bid/offer spreads, settled index prices can exhibit larger variance, like certain days within the period of Feb. 12-19, 2021



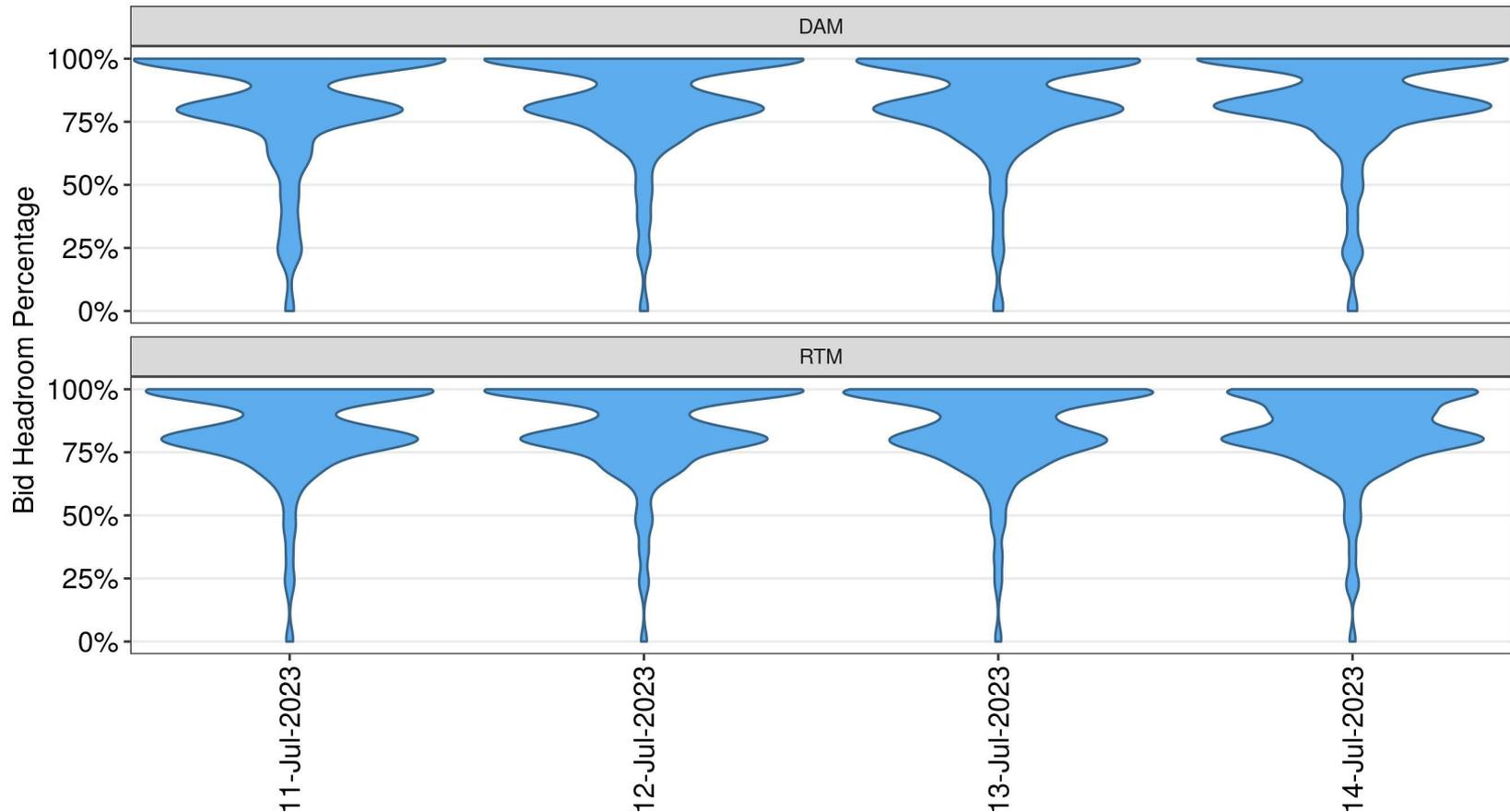
The period of Sep. 1 – Sep. 9, 2022 saw thin bid/offer spreads with settled index prices closer to median



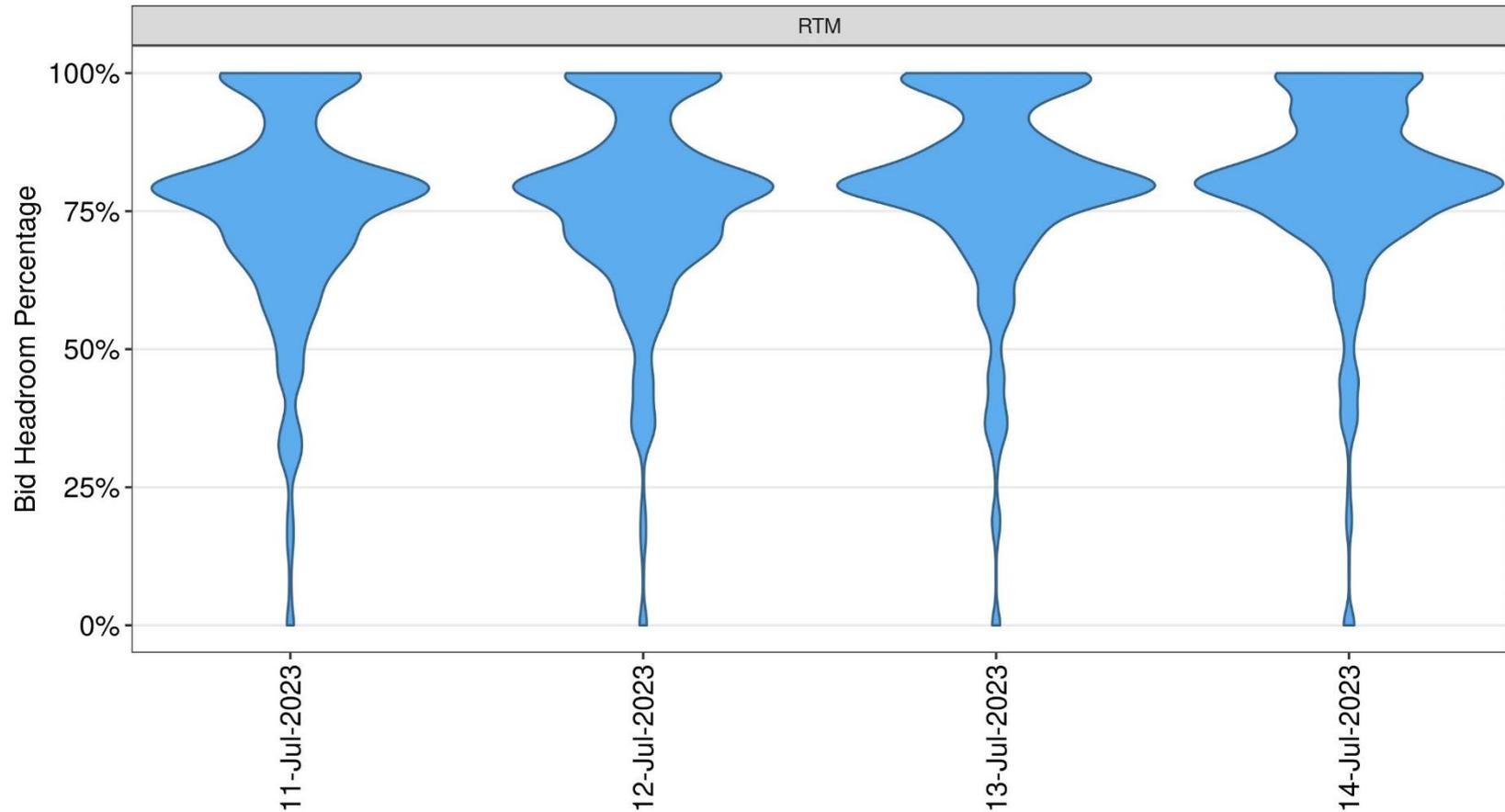
The period of Dec. 10 – 21, 2022 had both wide and thin bid/offer spreads with settled index prices also closer to median



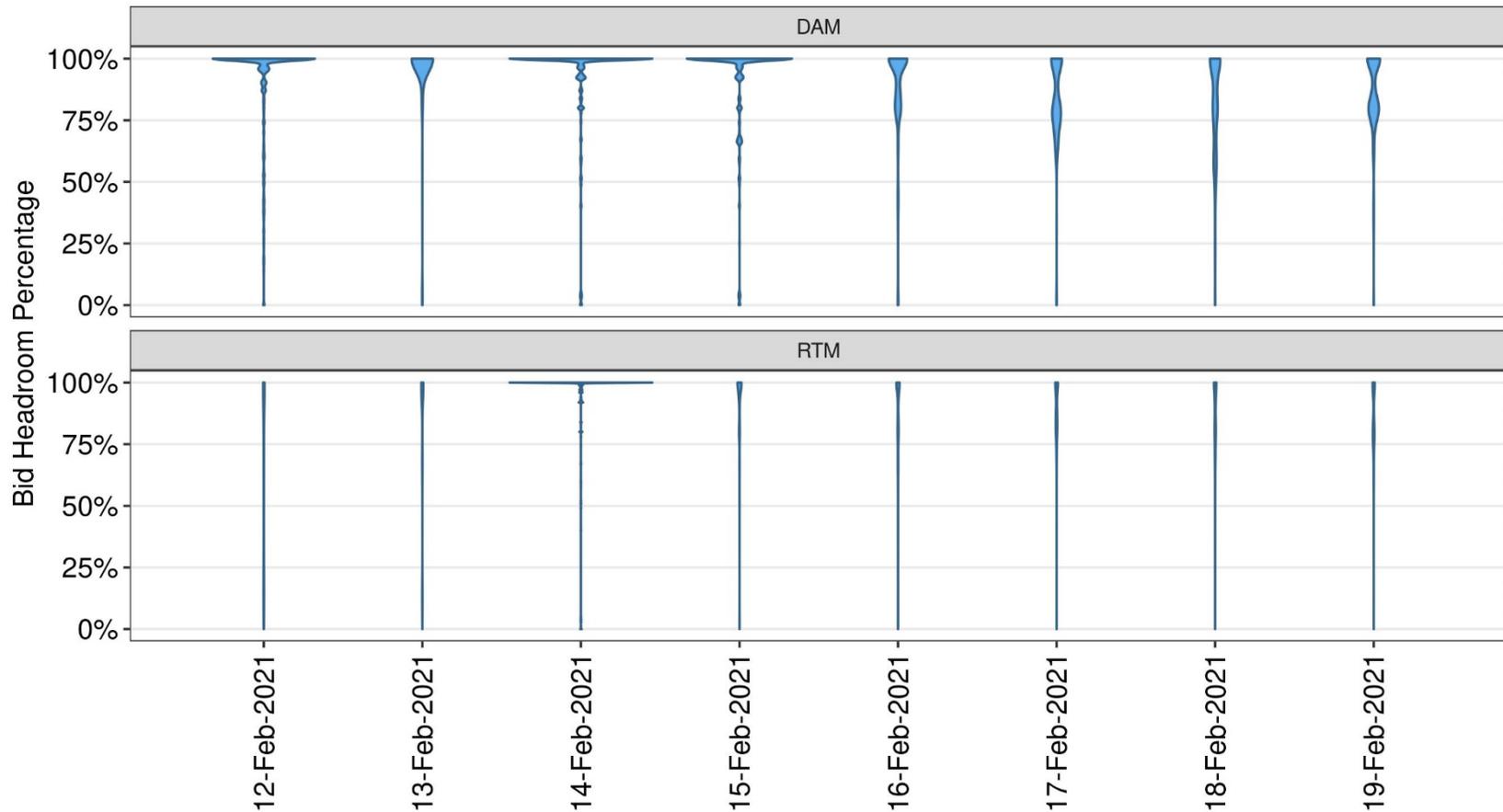
During a “non-volatile” period like Jul. 11 – 14 2023, CISO gas resources were generally bidding commitment costs either at their caps or somewhat below



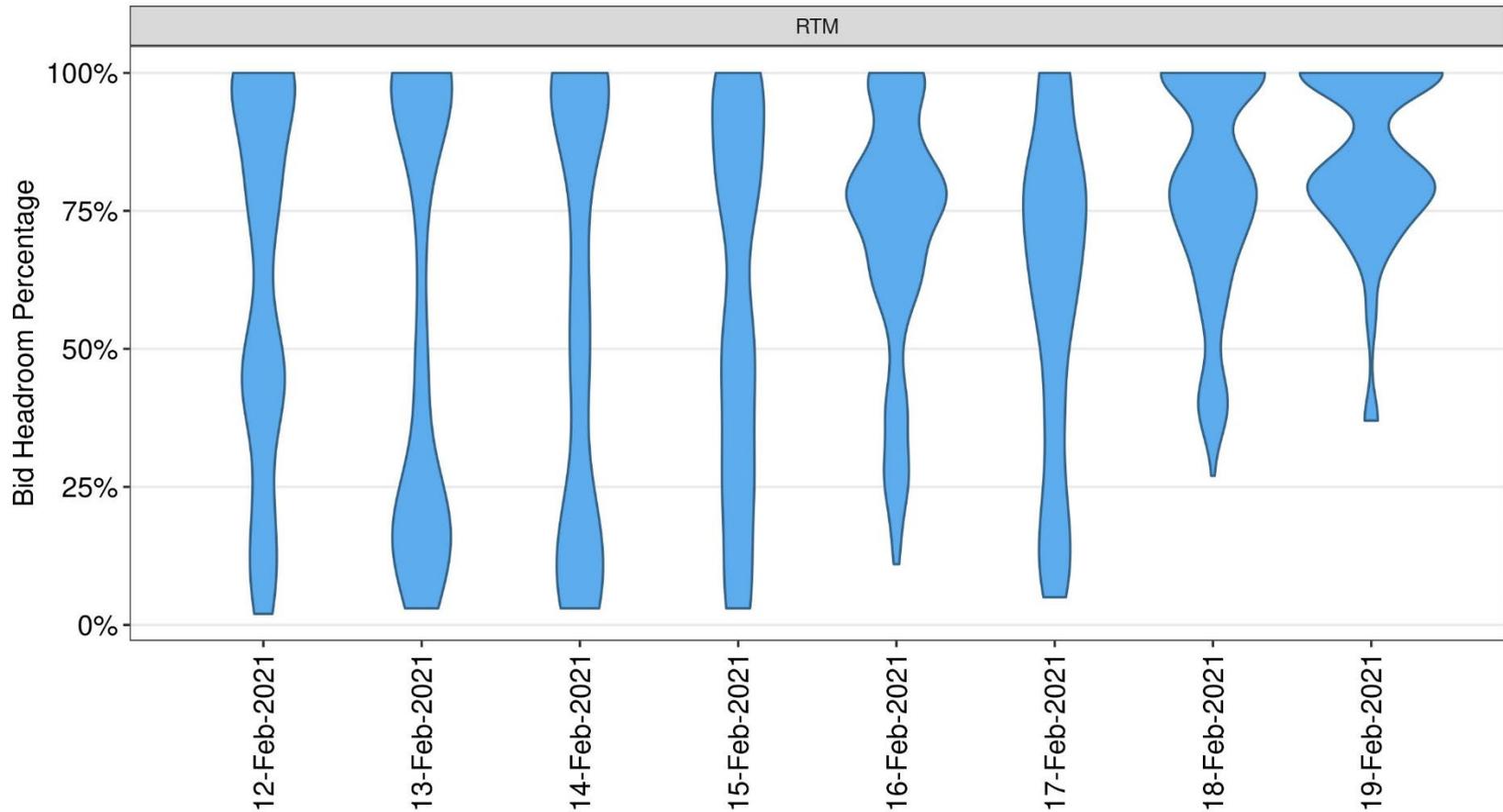
During the same “non-volatile” period, fewer WEIM gas resources utilized the full amount of headroom available



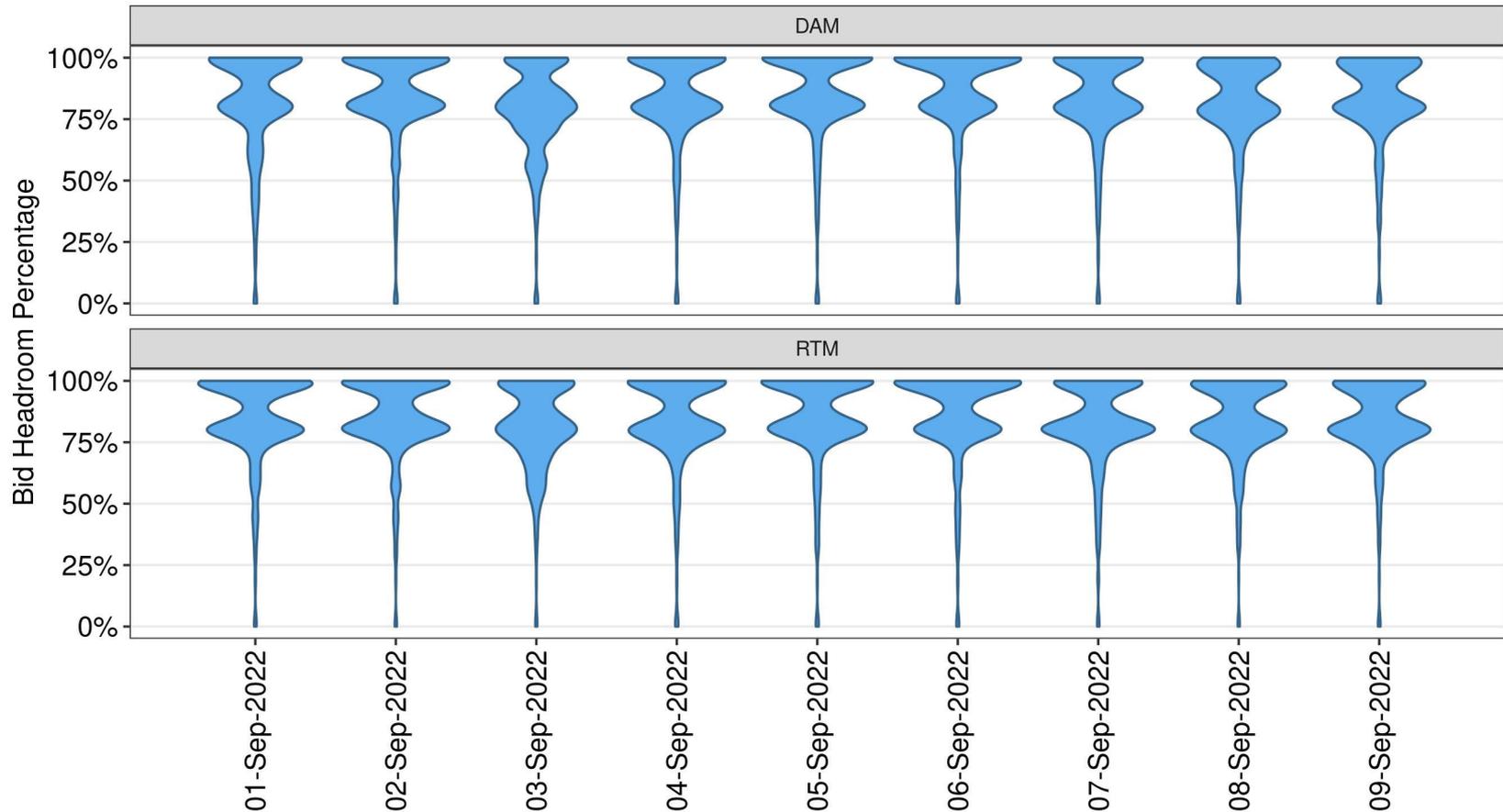
During certain days/markets between Feb. 12-19, 2021, CISO gas resources utilized almost all of their commitment cost bid headroom in their bids



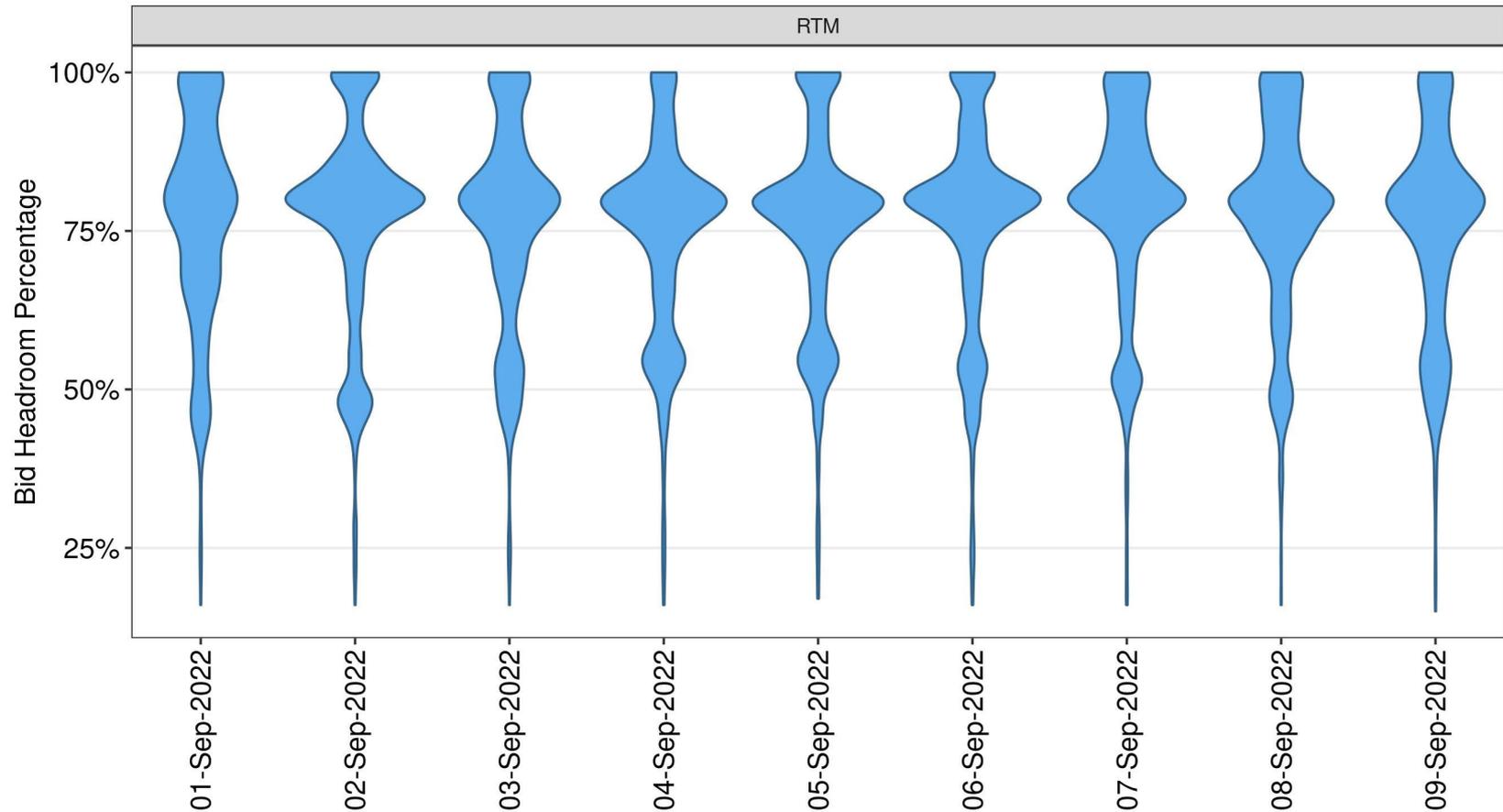
Headroom distribution shows wider spread for WEIM gas resources during Feb. 12-19, 2021



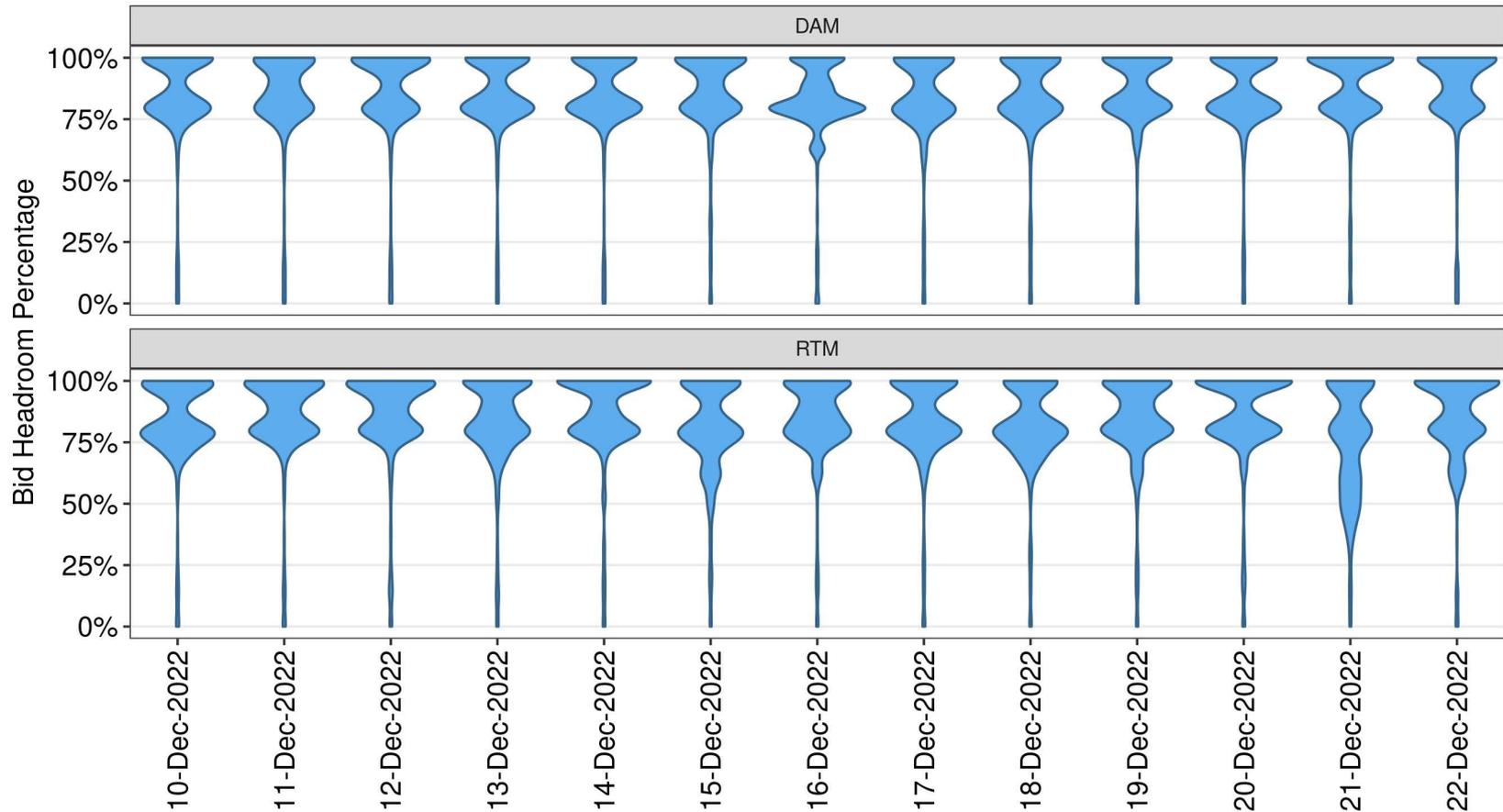
During Sep. 1 – 9, 2022, distribution of CISO gas resources bidding up to the commitment cost bid caps mimicked the “non-volatile” period



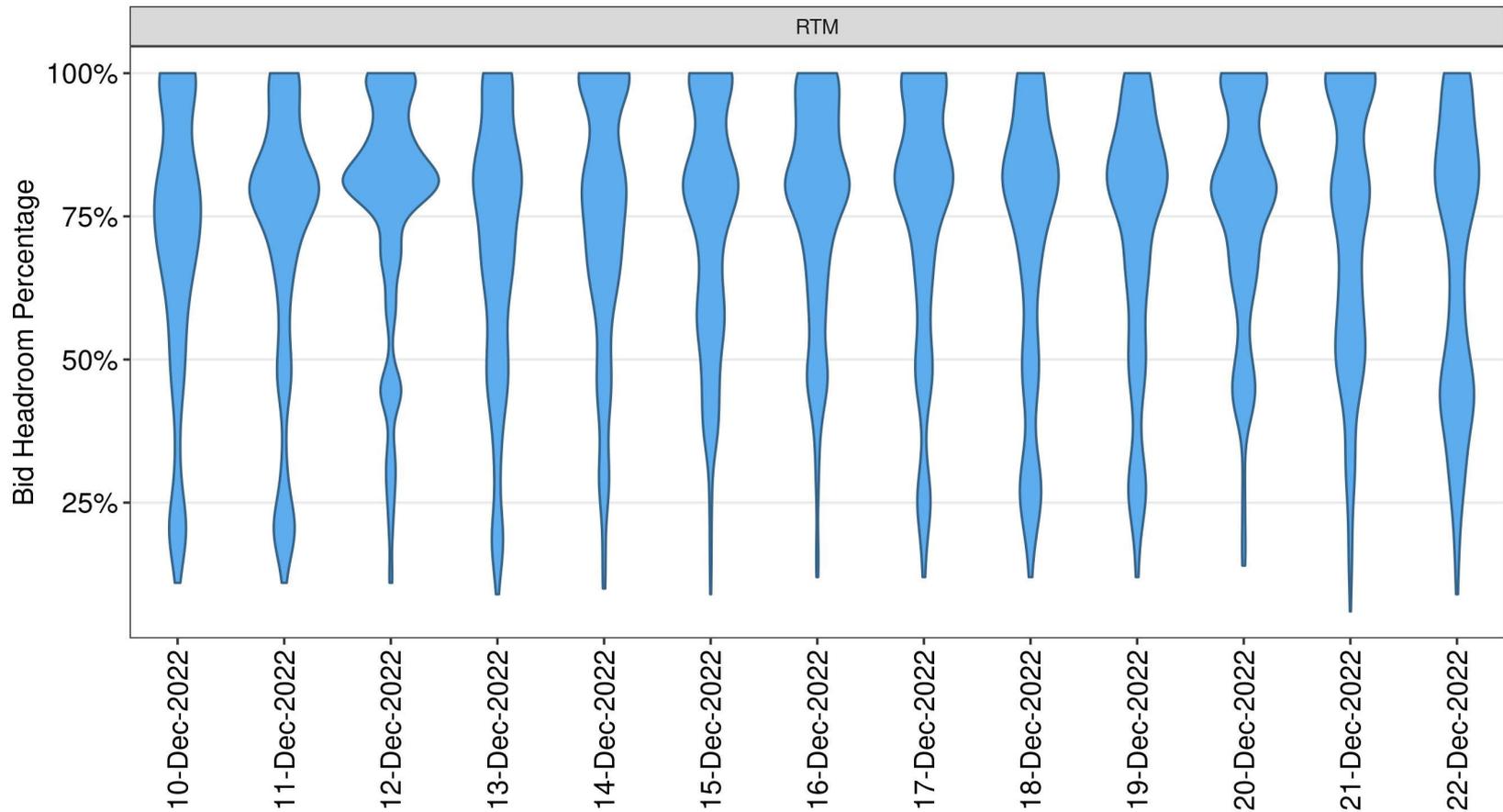
WEIM gas resources did not always utilize full commitment cost bid headroom between Sep. 1 – 9, 2022



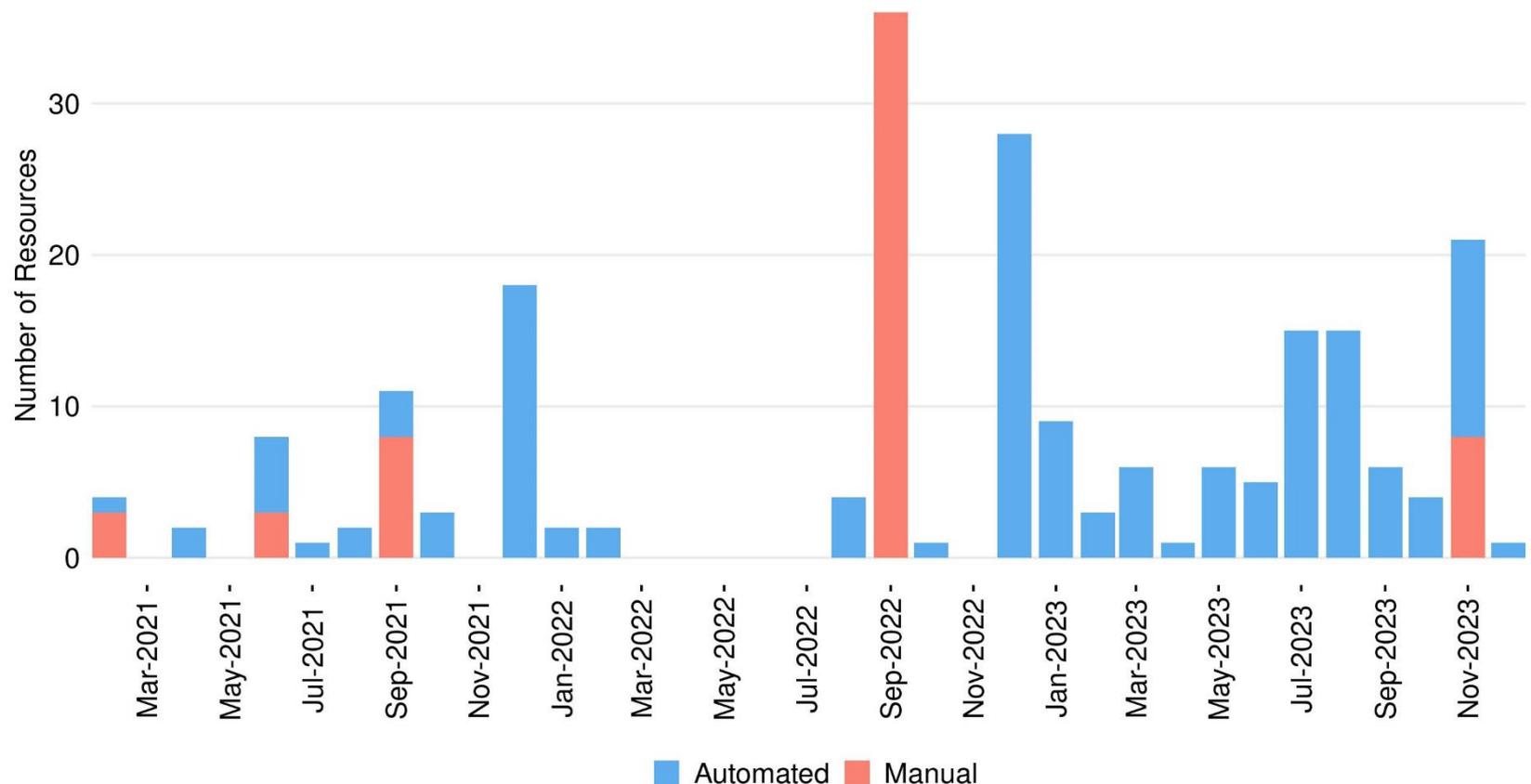
CISO gas resources exhibit a similar bidding behavior during Dec. 10 – 22, 2022 with commitment cost bids either at caps or somewhat below caps



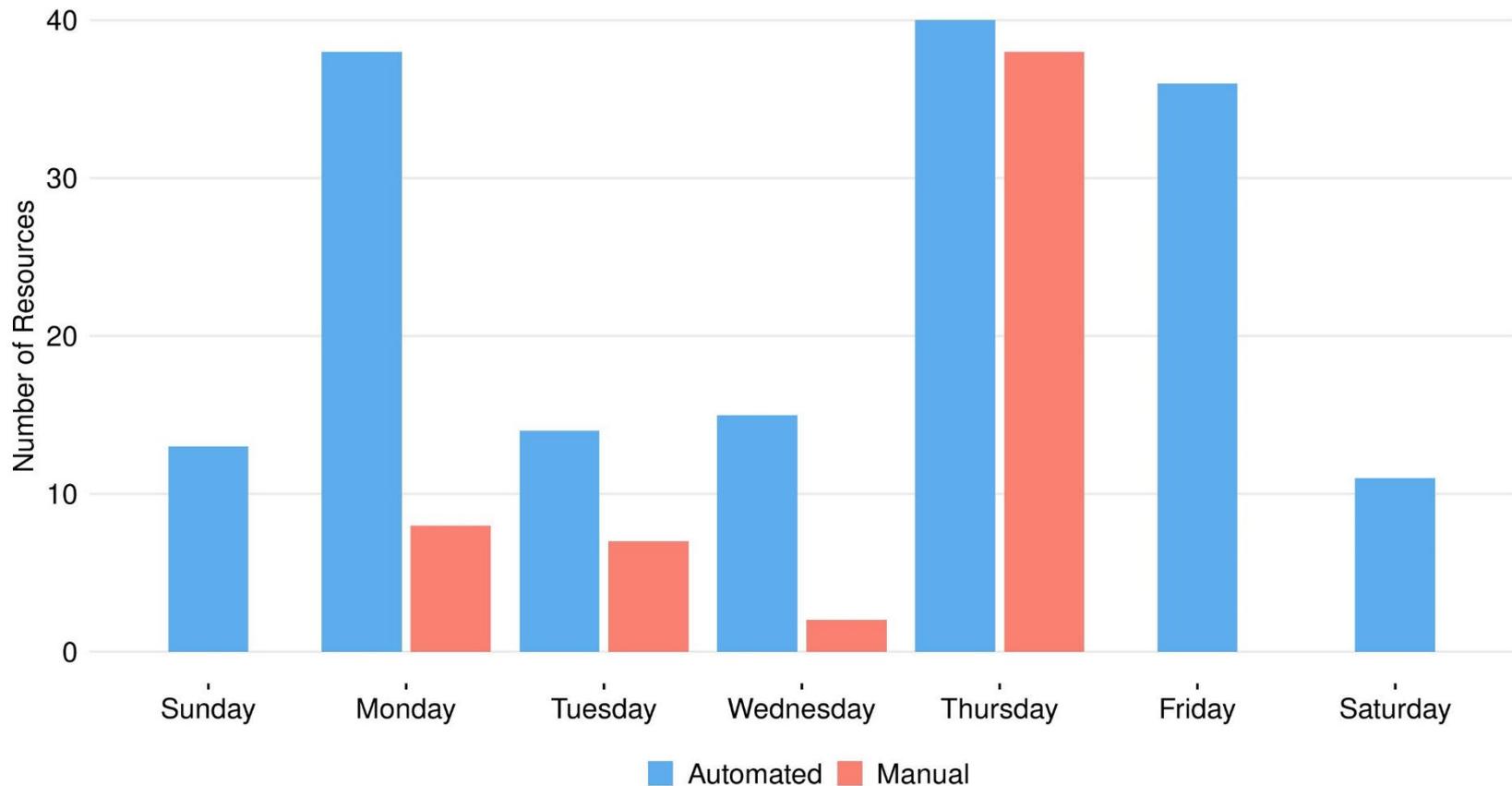
During the same period Dec. 10 – 22, 2022, WEIM gas resources had a wider distribution of headroom for commitment cost bids



The total amount of Reference Level Change Requests (RLCRs) submitted to the CAISO increased over the last year, since the functionality's implementation in 2021



Submission of automated and manual RLCRs varies by day of the week since the functionality's implementation in 2021

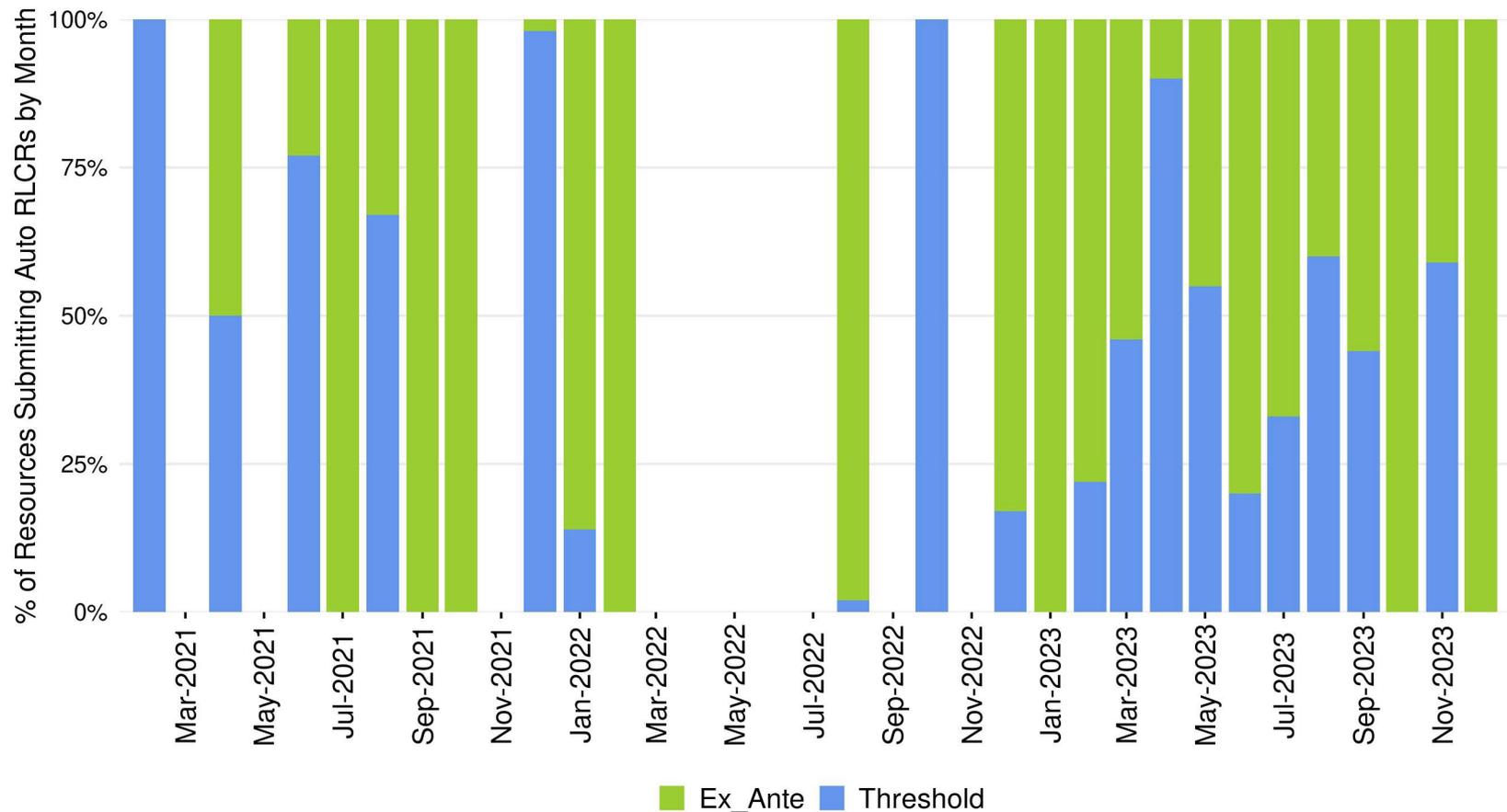


Of the 72 Manual RLCR tickets* the CAISO has received since 2021, only 11% have met criteria for approval

Rationale	Total Approved	Total Rejected
Met all required criteria and approved	8	
Invalid cost basis for request		26
Ticket lacked necessary supporting documentation		21
Requested adjustment for gas hub which is not mapped to resource		2
SC asked for request to be cancelled		2
Duplicate ticket		2
Requested price not greater than threshold of 10%/\$0.50		1
CCDEBE tariff provisions not yet effective		1
Ticket not submitted by 8:00 AM PST		1
Total:	8	64

Note: one ticket may contain requests for multiple resources

Automated RLCRs are generally being submitted below reasonableness thresholds (i.e. “ex ante”)



Next Steps

Date	Time	Topic/Focus
January 25, 2024	1 - 3 p.m.	<ul style="list-style-type: none">• Problem statements 1-4• Review of data
February 21, 2024	9 a.m. - 12 p.m.	<ul style="list-style-type: none">• Data available in 2 day-ahead and day-ahead markets• Problem statements 1-2
March 26, 2024	9 a.m. - 12 p.m.	<ul style="list-style-type: none">• Updated discussion paper & issue paper

Next Steps

- Survey on WG7 discussion as it relates to PS 1-4
 - Responses due February 8, 2024
- All materials related to the Gas Resource Management working group are available on the ISO website at <https://stakeholdercenter.caiso.com/StakeholderInitiatives/Gas-resource-management-working-group>