California ISO | RC West

RC West Oversight Committee

Public Session

Aug 21, 2025

1:00pm-2:30pm Pacific Time

Housekeeping Reminders

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- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon at the bottom of the participant panel to raise your hand.
- **Note**: *3 only works if you dialed into the meeting.
  - Please remember to state your name and affiliation before making your comment.
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Agenda

Time:	Topic:	Presenter:
1:00 - 1:05	Welcome/agenda	Yelena Kopylov-Alford
1:05-1:15	**Oversight Committee Business** • Start RCWOC Annual Charter Review	Chris Sanford & Ashley Kelly & Tricia Johnstone
1:15- 1:45	**RC West Operations Update** • Emergency Declarations • Procedures Update • RC metrics Q2, process change feedback	 Raja Thappetaobula Kathleen Fernandez Lucas Rasmussen, Ran Xu
1:45 – 2:05	**Working Group Updates** • SOL Methodology • Oscillation Task Force Update • FERC 881 Update • ECC Expansion Update	RajaShekar Thappetaobula
2:20 – 2:25	**Future agenda items**	Tricia Johnstone
2:25	**Public Comment**	
2:30	**Public Session Adjourned** **Note Executive session will start immediately following Public session. This may be earlier than 2:30 pm.*	

Oversight Committee Business

Christopher Sanford
Committee Chair

Ashley Kelly
Vice Chair

Tricia Johnstone
RC West/ Operational Readiness

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Annual Charter Review

- Charter redline version is available on the RC Portal
- Please submit your changes to ISORC@caiso.com by October 24.
- If changes are minor, we will take electronic vote ahead of Q4 session.
- Q4 meeting to review voting results.

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RC West Operations Update

Raja Thappetaobula
Samson Adigun
Kathleen Fernandez

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Operations update

Energy Emergency Alert	2025	2024	2023	2022	2021	2020
EEA - W	12	38	9	9	4	NA
EEA - 1	0	12	14	19	7	26
EEA - 2	0	0	0	7	3	9
EEA - 3	3	11	6	7	3	12
Total	15	61	29	42	17	47
IOS	2	1	2	4		
TE	1	13	1	3		

Peak Load	YTD	Historical
WECC	167,988 MW (07/10/2024	167,988 MW (07/10/2024)
RC West	128,470 MW (07/10/2024)	130,986 MW (9/6/2022)

Procedures Update

Upcoming Changes:

RC Proc. #	Procedure Title	Status	Description of changes
RC0100A	RC Desk Area of Responsibility	**Target Publish 9/30 – Effective 10/1**	Updated Table 1, RC North Desk removed WWA (now with GWA). Minor grammar and punctuation edits.
RC0120A	RC West IRO-010 Data Specification	**Target Publish 9/30 – Effective 10/1**	Updated exceptions Tab, removing WWA from Entity.
RC0210A	Reserve Sharing Group Information	**Target Publish 9/30 – Effective 10/1**	Removed BHE Montana (WWA) - combining into GWA.
RC0540	WIT Administration	**Target Publish 9/30 – Effective 10/1**	Updates to align with BAL-004-WECC-4.
RC0610A	Criteria for Determining Facilities Critical to Derivation of IROL	**Target Publish 10/9**	Periodic Review: Included NERC FAC-011 and FAC-014 Requirements in References section. Minor format and grammar edits.
RC9220	WECC Transfer Path 83 (Montana-Alberta Line)	**Target Publish 9/30 – Effective 10/1**	Annual Review: Replaced WWA with GWA, as WWA is combining with GWA. Minor formatting and grammar edits.
RC9250	Mitigating Thermal Exceedances in the Dave Johnston Area	**External Coord. – Post Summer - TBD**	Procedure to potentially be retired after completion of procedure review with PAC and SPP.
RC9540	Monitoring IID System	**Target Publish 10/9**	Periodic Review: Minor format and grammar edits for procedures consistency and removed history prior to five years.
RC9550	Monitoring Heavy E-W Flows on SWPL, HANG2, SRPL, and Parallel Transmission	**Target Publish 10/9**	Periodic Review: Included title with CAISO procedure 7820 references in Appendix A. Minor grammar edits and removed history prior to five years.

Procedures Update - Continued

Recently Published:

RC Proc. #	Procedure Title	Status	Description of changes
RC9120	Oregon Export IROL	Effective 8/07/25	Buckley station is temporarily bypassed by BPA. Contingencies related to Buckley station have been updated throughout this document as well as limit changes in Appendix C. Minor format and grammar edits.
RC0110	Communications Protocols	Effective 7/31/25	Annual Review: Minor grammar edits and removed history prior to five years.
RC0320	Outage Review and Coordination	Effective 7/31/25	Periodic Review: References: Included NERC Standards FAC-014 and IRO-017. Minor format and grammar edits and removed history prior to five years.
RC0420	Event Reporting	Effective 7/31/25	Appendix 1: Added lines 25 and 26 to Table for reporting fires with and without potential reliability impacts. Minor format and grammar edits and removed history prior to five years.
RC0610	System Operating Limits Methodology for the Operations Horizon	Effective 7/31/25	Removed clarification for less stringent CMC performance requirement from Section G. Removed Footnote 7 regarding TOP discretion on contacting the RC for post-contingency high voltage exceedances. Footnote is no longer applicable with FAC-011-4.
RC9260	Path 24 Operating Procedure	Effective 7/31/25	Annual Review: Minor grammar edits and other minor edits for clarity.
RC0520	Loss of Monitoring and Analysis Tools	Effective 7/24/25	Removed Section 3.11 Loss of WIT due to retirement of INT-020-WECC-CRT-4 WR6. The RC no longer has a specific role when WIT fails. Updated several sections to remove the requirement to coordinate tool failures and to request additional personnel support via MRTO due to recent organizational changes. Minor formatting and grammar edits and removed history prior to five years.
RC0640	Transmission Near-Term Planning Assessments: NERC IRO-017	Effective 7/10/25	Periodic Review: Minor format and grammar edits and removed history prior to five years.
RC0660	Transmission Relay Loadability: NERC PRC-02	Effective 7/10/25	Periodic Review: Minor formatting and grammar edits and removed history prior to five years.

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Procedures Update - Continued

Recently Published -Continued:

RC Proc. #	Procedure Title	Status	Description of changes
RC0670	NERC PRC-002 Disturbance Monitoring and Reporting Requirements Process	Effective 7/10/25	Periodic Review: Updated PRC-002 version throughout. Minor formatting and grammar edits and removed history prior to five years.
RC0670A	PRC-002 RC West DDR Lis	Effective 7/10/25	Periodic Review: Updated PRC-002 version throughout. Defined CIDI in Section 2. Minor format and grammar edits.
RC9310	Northern Nevada (NNEV) N-1-1 Mitigation Procedure	Effective 7/10/25	Periodic Review: Minor format and grammar edits and removed history prior to five years.
RC9520	Monitoring of LDWP N-1-1 Potential Cascading	Effective 7/10/25	Periodic Review: Updated section reference in Section 4. Minor formatting and grammar edits and removed history prior to five years.
RC9530	Monitoring South of San Onofre	Effective 7/10/25	Periodic Review: Minor formatting and grammar edits.
RC0210A	Reserve Sharing Group Information	Effective 7/03/25	Periodic Review: No content changes, only removed history prior to five years.
RC0560	Limiting Access to BES Cyber Assets	Effective 7/03/25	Periodic Review: Minor formatting and grammar edits.
RC9120	Oregon Export IROL	Effective 7/03/25	Periodic Review: Section 6.2.2. Clarified criteria for triggering EMS alarm when RTVSA limit is below study limit. References: Added version to NERC FAC-014 reference. Minor formatting and grammar edits and removed history prior to five years.
RC0120	Guidelines for RC West IRO-010 Data Specification and Collection	Effective 7/01/25	RC0120 Guidelines for RC west IRO-010 Data Specification and Collection 5.6 7/01/25 Annual Review: Updated Section 3.5 on performance criteria based on discussions with DEWG on 2/5/2025 and RC-RC IRO-010 subgroup. Updated from RC real-time “desk” to “dispatcher” in Sections 3.7.1 and 3.7.2. Removed undefined asterisk (*) from Section 3.7.6.10. Added information to scope Section 2.2 that data provided to CAISO is shared with CAISO RC, same language as is in CAISO BA/TOP Operating Procedure 3140. Minor edit to Section 5 under Document Maintenance regarding periodic reviews. Updated version numbers for NERC Standards IRO-010 and PRC-002. Minor formatting and grammar/punctuation edits and removed history prior to five years.

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Procedures Update - Continued

Recently Published -Continued:

RC Proc. #	Procedure Title	Status	Description of changes
RC0120A	RC West IRO-010 Data Specification	Effective 7/01/25	Annual Review: Updated data request 6.8.2 to extreme weather template to remove NERC Alert 3 language and add reference to EOP-012-1 effective 10/1/2024. Updated data request 6.10.2 as FERC 881 mapping can now be submitted via a CIM file. Updated data request 6.23 to remove CIM file as a method of submitting information as the RC Data Gathering Template has RDFIDs to map to the equipment. Added Reference Section in Version History tab to include NERC Requirements IRO-010-4 and PRC-002-4. Added columns for Data Validation Method, Performance Criteria, and Last Revision Date. Removed Note for Req. 2.15 since NERC Standard is inactive and this no longer applies. Updated NERC Standard version numbers, where applicable. Updated Exclusion information for Req. 1.13 & 1.15 and included LSPGC in Exceptions tab. Extended FERC 881 data requests and included series devices. Minor formatting and punctuation edits for consistency and removed history prior to five years.
RC0120B	RC West IRO-010 Data Specification for Adjacent RCs	Effective 7/01/25	Annual Review: Added columns for Data Validation Method and Last Revision Date in main Data Specifications tab. Added References section in Version History tab to include NERC Requirements. Extended effective dates for FERC 881 data requests to 1/1/2026 and updated for series devices included in template. Minor formatting and punctuation edits for consistency. Removed history prior to five years.
RC120C	ICCP or PMU Data Request Procedure	Effective 7/01/25	Annual Review: Updated Sections 3.1, Item 1 and 32, Item 1 for PMU Registry data availability. Updated Operationally Affected Parties language. Updated versions of NERC Standards IRO-010 and TOP-003 under References. Minor format and grammar edits and removed history prior to five years.
RC9000	Open Loop Guideline	Effective 7/01/25	Section 1: Added NWMT and WACM to the Responsibilities section. Section 3.2.3: Updated fourth CCMC bullet due to new configuration at Buckley. Section 3.2.5: Added steps to address scenarios when CAISO or BPA is unable to reduce COI/NWACI path flows using existing TOP Operating Plans to a level needed to disable the Separation Scheme in a timely manner. Included use of PDCI circulation, PSTs in RCW and SPP area, and curtailing parallel paths. Added NWACI S-N Study SOL of 1000 MW, for potential open loop condition. Minor formatting and grammar edits throughout.

Procedures Update - Continued

Recently Published -Continued:

RC Proc. #	Procedure Title	Status	Description of changes
RC0100	Reliability Coordinator Authority	Effective 6/27/25	Periodic Review: Removed last sentence from first paragraph of Statement of Authority, as it no longer applies due to reorganization. Added References section and included NERC IRO-002-7 and minor format and grammar edits.
RC0100A	RC Desk Area of Responsibility	Effective 6/27/25	Periodic Review: Minor format and grammar edits and removed history prior to five years
RC0430A	EOP-010 Plan Review Checklist	Effective 6/27/25	Periodic Review: Defined GMD in Purpose section. Updated Operationally Affected Parties to align with other Plan Review Checklist procedures. Minor format and grammar edits.
RC0610	System Operating Limits Methodology for the Operations Horizon	Effective 6/27/25	Added clarification for less stringent CMC performance requirement. Updated EOP-011 and IRO-010 reference version numbers. Minor formatting and grammar edits.
RC0630A	OATI webSmartOMS User Manual	Effective 6/26/25	Section 13.3: Updated for clarification to include RIMS Outage information. Section 14: Provided description for accessing webSmartOMS CBT. Minor formatting and grammar edits
RC0530	Communications Systems and Testing	Effective 6/19/25	Periodic Review: Updated Section 3.1.3 to clarify that weekly GMS test is sent to RC West BA/TOP 24/7 control centers. Added new Section 3.1.4 for Cyber Security Collaboration Working Group (CSCWG) Cyber Security Operation Center (CSOC) Call Activation Test. Minor formatting and grammar edits and removed history prior to five years.
RC9510	Operating Plan for IPP DC Bi-pole Contingency	Effective 6/19/25	Periodic Review: Updated instances of phase shifter for procedure consistency. Updated instance of California ISO RC to RC West in Section 3. Updated Appendix A to align with LADWP's 81 Appendix A Summer 2025. Minor formatting and grammar edits and removed history prior to five years.

RC Metrics Q2 2025

Lucas Rasmussen
Ran Xu

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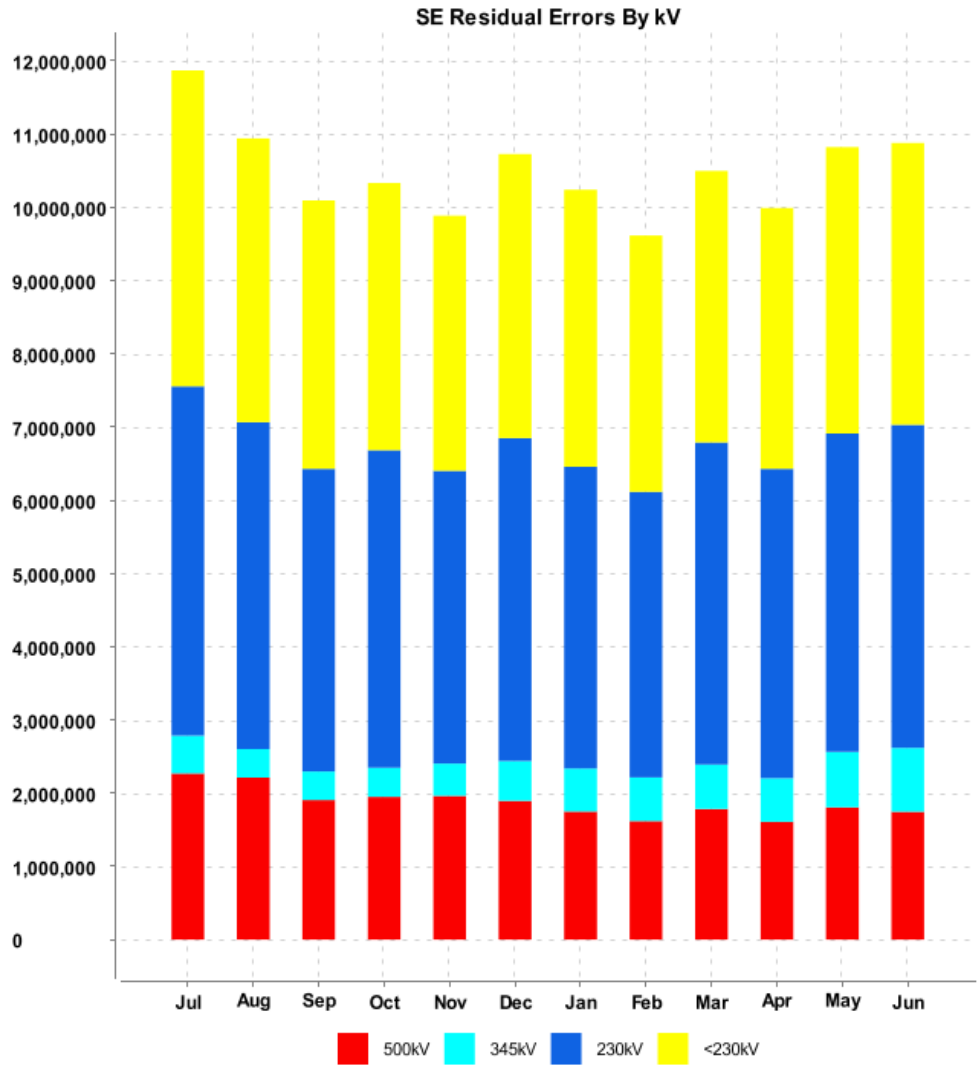
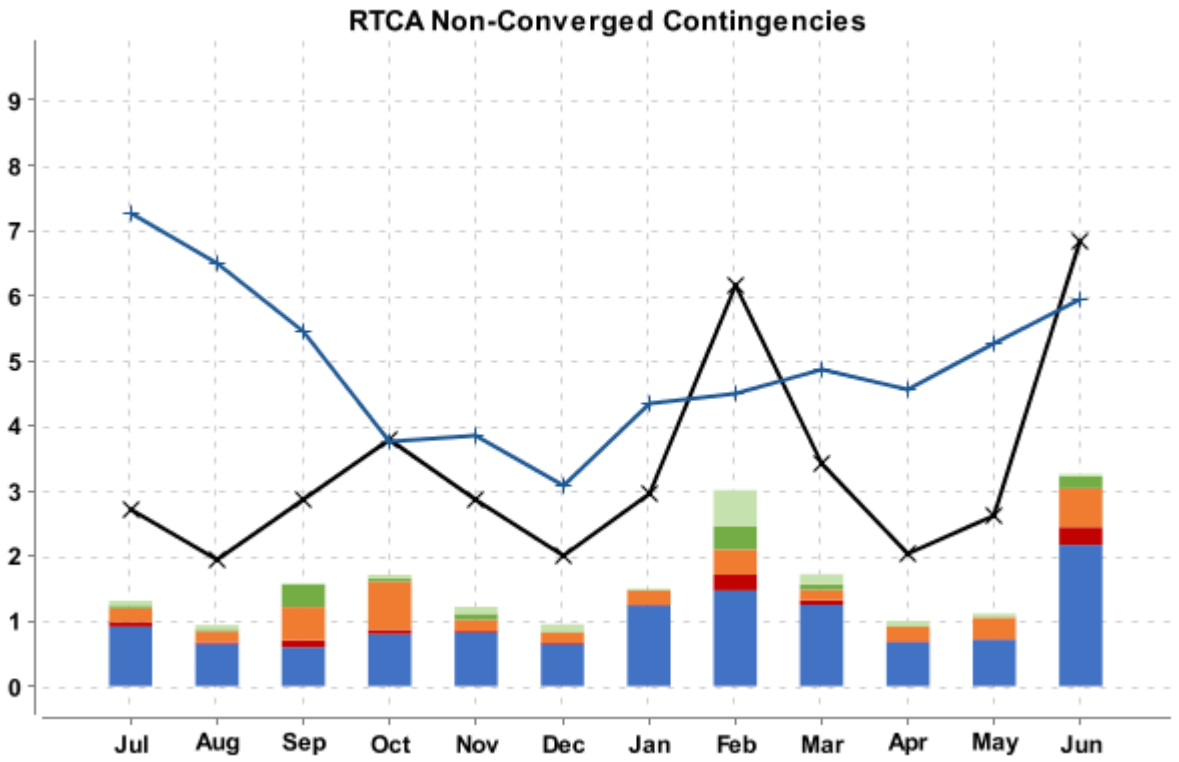
RC Metrics Q2 2025 - SE Residual Errors

- Residual Errors for line MW flow observed on 500kV, 345kV, 230kV, and less than 230kV lines
- *Note: Though the measurements in anomaly are not used by SE in estimating the solution, the count of anomalies provide opportunity of reducing them.*



RC Metrics Q2 2025 - RTCA Non-Converged Contingencies

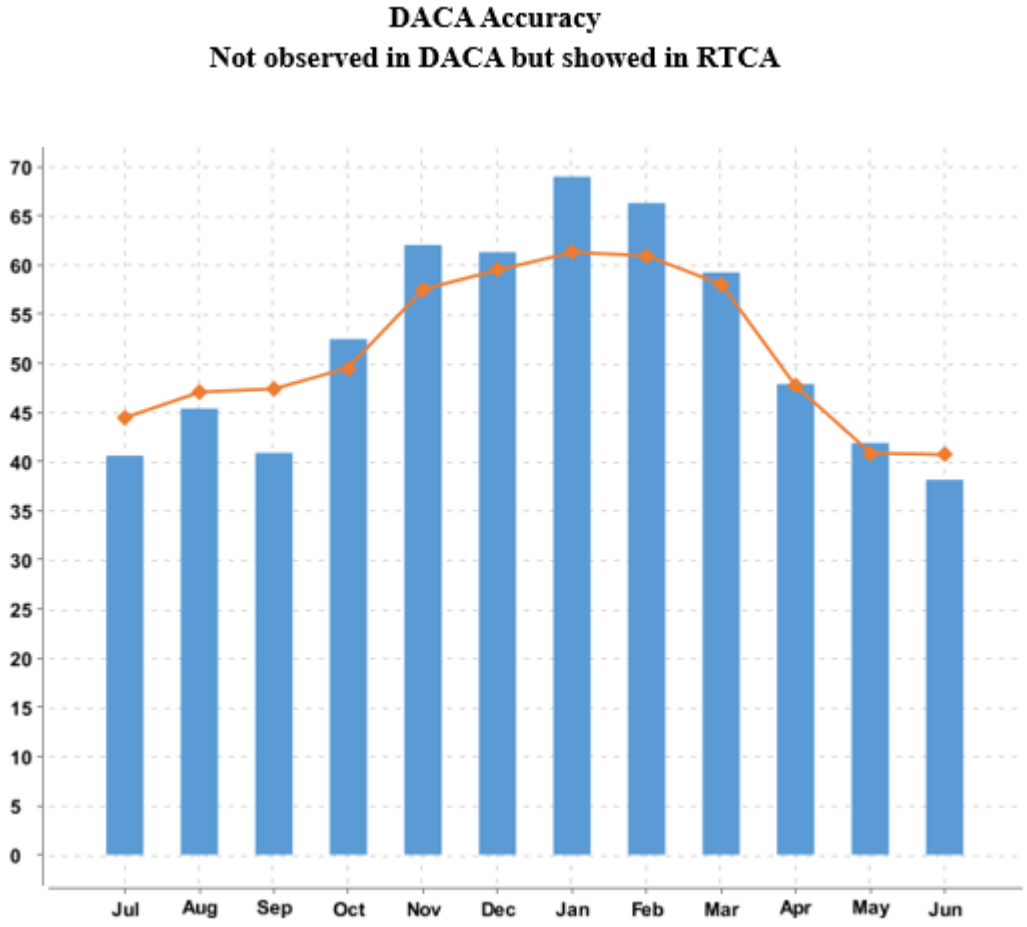
- Count of Real-Time Contingency Analysis (RTCA) non-converged contingencies in five-minute intervals
- *Note: Over 10,000 contingencies are solved in every RTCA solution*



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
115kV Average	0.07	0.07	0.02	0.05	0.11	0.11	0.02	0.56	0.16	0.08	0.06	0.04
138kV Average	0.05	0.03	0.34	0.05	0.09	0.01	0.01	0.35	0.08	0.01	0	0.19
230kV Average	0.21	0.17	0.51	0.74	0.18	0.16	0.22	0.39	0.16	0.22	0.33	0.6
345kV Average	0.07	0.03	0.11	0.07	0.02	0.02	0.01	0.24	0.07	0.02	0.01	0.27
500kV Average	0.91	0.65	0.59	0.8	0.82	0.65	1.24	1.47	1.25	0.67	0.71	2.17
Total Average	1.39	1.02	1.28	2.07	1.66	1.06	1.44	3.16	1.7	1.03	1.51	3.57
Previous Year	5.96	5.56	3.87	2.04	2.64	2.14	2.83	1.5	3.13	3.55	4.16	2.68

RC Metrics Q2 2025 - DACA Accuracy

Day Ahead Contingency Analysis (DACA) tool is designed to identify potential contingencies in the day ahead timeframe



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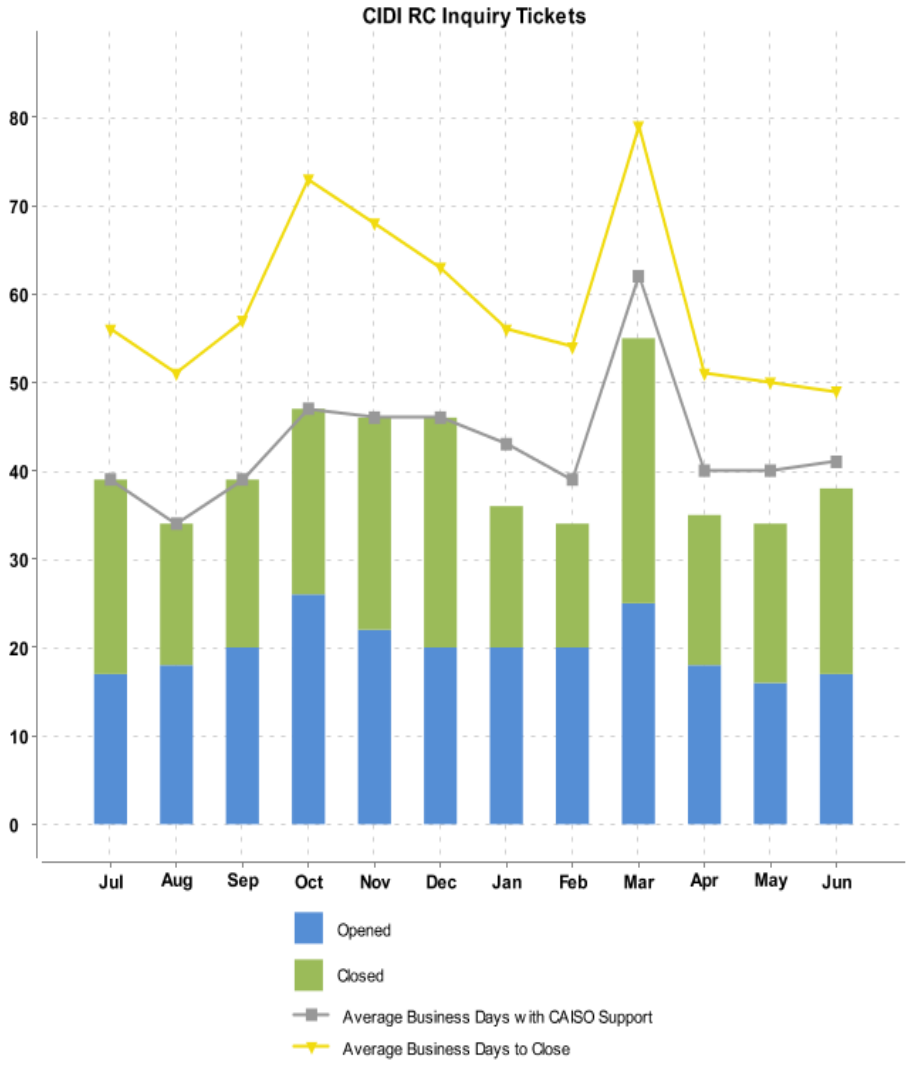
RC Metrics Q2 2025 - CIDI/Issue Resolution Progress

- Count of Customer Inquiry and Dispute Information (CIDI) tickets of the RC Inquiry case record type
- The number of opened cases will not change each time the data is pulled, but the other numbers can change as there are still cases opened from a prior month that haven't been closed.



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RC Metrics Upcoming Changes

Initiative to make RC Metrics more meaningful and actionable

- Current Metrics were developed with RC Go-live back in 2019. Will review metrics to see if still relevant
- For metrics that are still relevant, will review to see if data can be presented in a better way like adding more granularity to pinpoint where the actual issues are
- Will make metrics more actionable by including acceptable criteria. Currently some metrics have red, yellow, green criteria but not all.
- Will share more details in Q4 meeting

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Working Group Updates

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SOL Methodology

Raja Thappetaobula
Director, Operations Engineering Services

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Oscillation Task Force Update

Raja Thappetaobula
Director, RCWEST Operations

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Oscillation Monitoring Improvement task force

Goals

Core Goals

1. Coordinate oscillation detection thresholds across TOP and RC areas
   - Coordinate/align PMU signals for mode-meter monitoring.
2. Define criteria for PMU installation and coverage for the RC West area

Other potential goals

1. Recommendations on IBR controls standard for WECC/NERC
2. Ad-hoc review of oscillation events to help in informing decisions related to the core goals

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Oscillation Monitoring Improvement task force

Participants

- APS
- BPA
- CAISO
- PGAE
- SCE
- SDGE
- AESO RC
- BC RC
- SPP RC
- RC West

More entities encouraged to sign up!
To sign up, please email isorc@caiso.com

Oscillation Monitoring Improvement task force
Kick-off Plan

- Kick-off meeting
  - **Thursday, September 18, at 9:00 AM PPT.**
  - Recurring monthly meetings every 3rd Thursday

- Task Force Chair
  - Daniel Goodrich (BPA) dagoodrich@bpa.gov

- RC West Liaisons
  - Caelin Hickey CHICKEY@caiso.com
  - John Marusenko JMARUSENKO@caiso.com

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FERC 881 Ambient Adjusted Rating & Dynamic Line Ratings

Raja Thappetaobula
Director, RCWEST Operations

CAISO/RCWEST FERC 881 Implementation:

- Track1 and Track2 are completed and went live July 2025.
  - **Track 1 – Real Time Reliability Applications**
    - We are working with TOP to enable the usage of AAR through ICCP.
  - **Track 2 – Operational/EMS Model Data and Applications**
    - WeblineR product was put in production. Ratings will be sent to downstream applications through Track3.
- **Track 3 – Market Application and RC Look Ahead Reliability Applications**
  - Delayed phased in implementation.
  - Filed at FERC additional tariff changes seeking for extension upto **December 17, 2026**

The CAISO filed a motion to extend the date to implement Order No. 881 requirements

- In its motion the CAISO requested:
  - an extension of time to implement its Order No. 881 tariff provisions **up to and including December 17, 2026**, subject to the CAISO filing a notice with the Commission 7 days before the actual effective date;
  - an extension of time **up to and including October 15, 2027** for the CAISO's participating transmission owners to implement their requirements under Order No. 881 and the CAISO tariff; and
  - An extension of time **up to and including October 15, 2027** for public utility transmission providers in EDAM and Western Energy Imbalance WEIM as Order No. 881 relates to their submission of ratings for use in the day-ahead and real-time markets administered by the CAISO
- The CAISO is targeting a date in **Q1/Q2 2026** for real-time and day-ahead market implementation
- The CAISO requested the Commission issue an order addressing its motion for extension by April 15, 2025

Discussion on where the TO's are with respect to their compliance on FERC 881.

- CAISO/RCWEST plans to send out a survey after this meeting and gather implementation timelines for TOP.
- This survey results will help TOP to understand the status of their neighbors.

ECC Expansion

Raja Thappetaobula
Director, RCWEST Operations

ECC Expansion NAESB Standard Effort:

- SPP and RC West coordinated effort on ECC model validation and constraint benchmarking.

- Ongoing effort to standardize curtailment methodology with NAESB through a WEQ Congestion management working group.
  - The standard draft is in the final stages.
  - WG seeking second round of informal comments =.

ECC Expansion NAESB Standard Effort:

– The informal comment period regarding the revised standards began on August 13, 2025 and responses are requested by the close of business on August 27, 2025. The informal comment request may be accessed through the following hyperlink: https://urldefense.com/v3/__https://naesb.org/pdf4/weq_bps_WICM081325reqcom.doc__;!!ETIorfI!kWJhpstP4A4Z6dOeUSwWCMXO_VXOVSwuTROxltGqItJZgDUVSstbICFJ7hKrRoDDH4X19wBlkITAn2K84EbE7A$.

Future Agenda Items

- The next RC West Oversight Committee meeting is November 13, 2025. Visit RC West webpage for additional details

- Send topic suggestions to isorc@caiso.com.

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Open for Public Comments

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Public Session Adjourned