



California ISO



RC West

RC West Oversight Committee

Public Session

November 20, 2025

1:00pm-2:30pm Pacific Time

Housekeeping Reminders

- This call is being recorded for informational and convenience purposes only. Please request permission from RC West before reprinting any related transcriptions.
- Materials related to the RC West Oversight Committee are available on www.caiso.com / Products and Services/ RC West.

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- Today's meeting is hosted by Pacificorp on Microsoft Teams.
- **Desktop Client or Web App:** Click on the "Raise your hand" button in the meeting toolbar at the top of the screen. This action notifies everyone in the meeting, including presenters, that you wish to speak.
- **Mobile App:** Tap on the More icon (three horizontal dots) on the meeting controls toolbar and select "Raise my hand" from the dropdown menu.
- Please state your name and affiliation before asking your question.

Agenda

Time:	Topic:	Presenter:
1:00 - 1:05	Welcome/agenda	Yelena Kopylov-Alford
1:05-1:15	Oversight Committee Business RCWOC Annual Charter Review	Chris Sanford & Ashley Kelly & Tricia Johnstone
1:15- 1:45	RC West Operations Update - Emergency Declarations - Procedures Update - RC metrics Q3 update	Raja Thappetaobula Kathleen Fernandez Kendall Parra, Ran Xu, Kyle Clayton
1:45 – 2:05	Working Group Updates - 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 <i>*Note Executive session will start immediately following Public session. This may be earlier than 2:30 pm.</i>	

Oversight Committee Business

Christopher Sanford
Committee Chair

Ashley Kelly
Vice Chair

Tricia Johnstone
RC West/ Operational Readiness

Annual Charter Review

- Charter redline version is available on the RC Portal
- Changes were due by October 24 to ISORC@caiso.com
- Only one change requested; updating the Oversight Committee Structure chart to reflect the new merged Operations Working Group.
- Electronic vote sent out on 11/18. *Please vote here if you haven't done so yet:*
<https://www.surveymonkey.com/r/QVPWWCH>

RC West Operations Update

Raja Thappetaobula
Samson Adigun
Kathleen Fernandez

Operations update

Energy Emergency Alert	2025	2024	2023	2022	2021	2020
EEA - W	16	38	9	9	4	NA
EEA - 1	1	12	14	19	7	26
EEA - 2	0	0	0	7	3	9
EEA - 3	6	11	6	7	3	12
Total	23	61	29	42	17	47
IOS	2	1	2	4		
TE	1	13	1	3		

RCWEST Summer Operations:

- RCWEST footprint wide 2025 summer peak load was ~124870 MW on 8/21/2025 17:39.
 - Historical peak load 130986 MW
- Overall summer 2025 has not resulted in major operational concerns or capacity shortages for RCWEST BA and TOPs. Only one BA was in EEA -3 due to forced outages & derates and armed load for contingency reserves. Some lessons learned which resulted in our tool improvements, but overall good coordination between RCWEST and TOP operators.
- Multiple fires across northern California in summer months resulted in potential open loop conditions for the next contingency. Good coordination between RCWEST/CAISO/BPA operators to help mitigate reliability concerns.
- Fires in western Colorado in August resulted in Path30 reliability concerns. Great coordination between RCWEST/SPP/PAC to address reliability concerns by re dispatching generation and phase shifter movements.

RCWEST Summer Operations:

- Fires in Utah in August forced out multiple BES lines in PAC area. Great coordination between RCWEST/PAC/SPP RC. Transmission reconfiguration and some load shed helped resolve the reliability issues.
- Continued Fern road (new Stacom near Round mountain- Table mountain 500 kV) construction project through summer has resulted in COI derates. No reliability concerns resulted in with this derate through summer.
- Fault Induced delayed voltage recovery issues in CENACE triggered UV RAS in the distribution network, affecting load ~1000 MW. (High penetration of inductive load (A/C)). RCWEST is investigating modeling improvement for our real time transient stability tools to model these events.
- PSPS events or wild fire encroachment related BES outages did not result in major BES impacts for this summer.

Procedures Update

Upcoming Changes:

RC Proc. #	Procedure Title	Status	Description of changes
RC Coord. Plan	RC Coordination Plan	Target Publish – Effective 12/4	Appendix C: Updated RC West Reliability Area Map and removed MATL from list below for GWA Phase 2.
RC0100A	RC Desk Area of Responsibility	Target Publish – Effective 12/4	Table 2: Replaced MATL with NWMT under TOP for RC North Desk.
RC0120A	RC West IRO-010 Data Specification	Target Publish – Effective 12/4	Exceptions Tab: Replaced MATL with GWA.
RC0220	Time Error Correction	Ready - Effective 11/20	Periodic Review: Minor format and grammar edits and removed history prior to five years.
RC0330A	List of Ties with Neighboring RCs	Target Publish – Effective 12/4	Table 1: Replaced MATL with GWA as the TOP for 120S Picture Butte-Great Falls and updated footnote for GWA. Table 3: Included (GWA) with BHE Montana and replaced NATU with GWA as BA/TOP. Table 5: Added GWA (BHE Montana Power Watch Authority) Removed history prior to five years.
RC0600	RC West Implementation of Common Interconnection-wide Methodology	Target Publish 12/18 - Effective 1/01	Annual Review: Minor formatting and grammar edits and removed history prior to five years.
RC0600A	Western Interconnection Modeling and Monitoring Common Methodology	Target Publish 12/18 - Effective 1/01	Annual Review: Minor formatting and grammar edits
RC9040	Frequency Response Monitoring and Mitigation	Ready - Effective 11/20	Annual Review: Minor formatting and grammar edits for consistency and no other changes required at this time.
RC9110	NW Washington Area Import IROL	Target Publish – Effective 1/08	Annual Review: Updated from Western Energy Imbalance Market (WEIM) to Western Energy Market (WEM) and from CAISO Market Operator to WEM Market Operator. Minor formatting and grammar edits and removed history prior to five years.

Procedures Update

Upcoming Changes - continued:

RC Proc. #	Procedure Title	Status	Description of changes
RC9220	WECC Transfer Path 83 (Montana-Alberta Line)	Target Publish – Effective 12/4	Section 3: Updated to reflect that BHE Montana Power Watch Authority owns the MATL transmission elements within Montana and that GWA is a BA that contains all the MATL elements in Montana and operations Rim Rock and Glacier Wind resources. Minor formatting and grammar edits.
RC9230	Path 14 Operating Guide	Target Publish – Effective 1/08	Periodic Review: Minor formatting and grammar edits and removed history prior to five years.
RC9250	Mitigating Thermal Exceedances in the Dave Johnston Area	Target Publish – Effective 12/4	Annual Review: Minor formatting and grammar edits only.
RC9320	Montana Facility Seams	Target Publish – Effective 12/4	Annual Review: Replaced instance of NATU with GWA in Section 5. Minor formatting and grammar edits and removed history prior to five years.
RC9320A	Montana Facilities Seams Overview	Target Publish – Effective 12/4	Annual Review: Replaced diagram.
RC9410	Olinda 500 kV High Voltage Mitigation	Target Publish – Effective 1/22	Periodic Review: Minor formatting and grammar edits.
RC9710	Southeastern New Mexico Area	Target Effective 12/19	Annual Review: Minor formatting and grammar edits and removed history prior to five years.

Procedures Update - Continued

Recently Published:

RC Proc. #	Procedure Title	Status	Description of changes
RC0120	Guidelines for RC West IRO-010 Data Specification and Collection	Effective 11/13/25	Section 3.1: Updated to include Operationally Affected Parties' Contact Types, "Procedure Control" and "TOP-003 Data Specification." Clarification regarding hybrid resources to data requests 2.16 and 2.17. Updated from Net Scheduled to Scheduled Net, per BAL-004-WECC-4 updated for 10/01/2025. Updated versions for NERC TOP-002 references effective 10/01/25. Minor format and grammar edits.
RC0120A	RC West IRO-010 Data Specification	Effective 11/13/25	Data Specification tab: Updated line 22 Data Item, replacing Net Actual Interchange with Actual Net Interchange (NIA) and line 23 Data Item, replacing Net Scheduled Interchange with Scheduled Net Interchange (NIS) to align with NERC BAL-004-WECC-4 update 10/01/25. Exceptions tab: Removed WWA from Entity list.
RC0470	Loss of Control Center Functionality	Effective 11/13/25	Annual Review: Updated terminology from Manager of Real-Time Operations (MRTO) to Manager of Balancing Authority (BA) Operations (MBAO). Updated decision-making authority for control center transfer to Lead RC Operator. Minor formatting and grammar edits and removed history prior to five years.
RC0470B	Evacuation and Loss of Control Center Functionality Checklists	Effective 11/13/25	Annual Review: Changed decision-making authority back to Lead RC Operator. Updated to Manager, BA Operations. Minor formatting and grammar edits and removed history prior to five years.
RC0650	Steady-State and Dynamic System Model Validation: NERC MOD-033	Effective 11/13/25	Annual Review: Minor formatting and grammar edits and removed history prior to five years.
RC9030	Mitigating Forced and Inter-area Natural Oscillations	Effective 11/13/25	Annual Review: Minor formatting and grammar edits and removed history prior to five years.
RC9570	CENACE EEAs and Requests for Emergency Assistance	Effective 11/13/25	Periodic Review: Minor formatting and grammar edits.

Procedures Update - Continued

Recently Published -Continued:

RC Proc. #	Procedure Title	Status	Description of changes
RC9020	Nuclear Plant Interface Coordination	Effective 10/30/25	Periodic Review: Minor format and grammar edits and removed history prior to five years. Removed reference of SRP PDO OP-41216, as it was expired and the COI RAS was removed from service 12/20/18. Appendix A: Updated 500 kV CGS Steady-Stage range.
RC9330	NWMT Path 80 Operating Guide	Effective 10/09/25	Added Black Hills Energy to blast call list in Item 15 in Section 4 and to updated Operationally Affected Parties list to include Black Hills and replaced BHP with GWA. Minor formatting and grammar edits.
RC9540	Monitoring IID System	Effective 10/09/25	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	Effective 10/09/25	Periodic Review: Included title with CAISO procedure 7820 references in Appendix A. Minor grammar edits and removed history prior to five years.
RC Coord. Plan	RC West Coordination Plan	Effective 10/01/25	Section 13.2: Replaced NaturEner with BHE Montana, removed WWA and rearranged alphabetically. Appendix D: Included RC0130B and minor edit to title of RC0540A. Minor formatting and grammar edits and removed history prior to five years.
RC0100A	RC Desk Area of Responsibility	Effective 10/01/25	Updated Table 1, RC North Desk removed WWA (now with GWA). Minor grammar and punctuation edits.
RC0210A	Reserve Sharing Group Information	Effective 10/01/25	Removed BHE Montana (WWA), now with BHE Montana (GWA).
RC0410A	EOP-011 Plan Review Checklist	Effective 10/01/25	Updated to include Operating Process for extreme cold weather for NERC TOP-002-5 R8. Minor format and grammar edits.

Procedures Update - Continued

Recently Published -Continued:

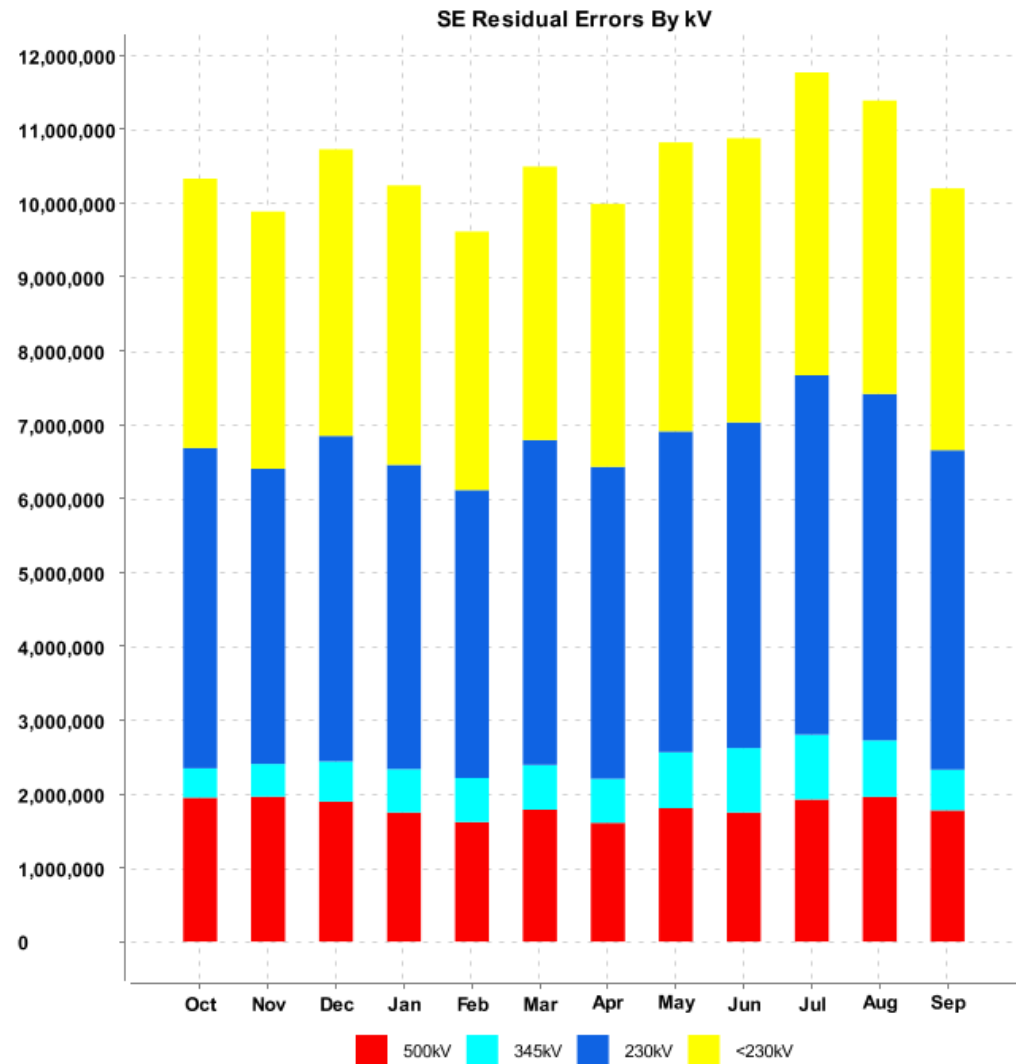
RC Proc. #	Procedure Title	Status	Description of changes
RC0610A	Criteria for Determining Facilities Critical to Derivation of IROL	Effective 10/01/25	Periodic Review: Minor edit to Operationally Affected Parties, Included NERC FAC-011 and FAC-014 Requirements in References section. Minor format and grammar edits.
RC9220	WECC Transfer Path 83 (Montana-Alberta Line)	Effective 10/01/25	Annual Review: Replaced WWA with GWA, as WWA is combining with GWA. Minor formatting and grammar edits.
RC0520	Loss of Monitoring and Analysis Tools	Effective 9/25/25	Sections 3.1, 3.2 and 3.3: Added language on dynamic ratings for loss of ICCP. Added Section 3.5 for loss of WebLineR Application. Minor formatting and grammar edits.
RC0610	System Operating Limits Methodology for the Operations Horizon	Effective 9/08/25	Section G: Added less stringent criteria implementation for credible multiple contingencies. Minor grammar edits in Appendix D. Section G changes have been coordinated with and approved by the RC West Operations Working Group (ROWG).

RC Metrics Q3 2025

Kendal Parra
Ran Xu
Kyle Clayton

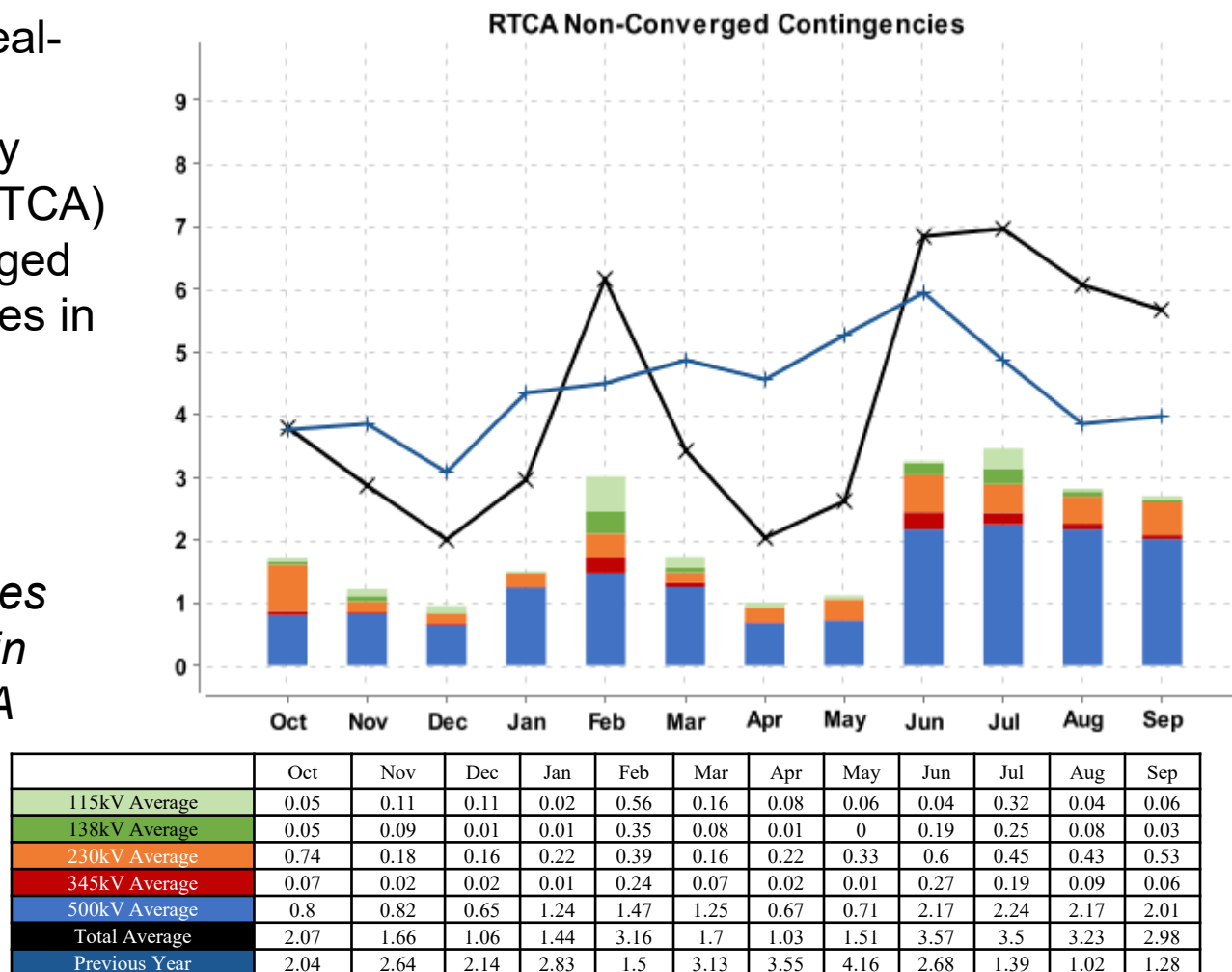
RC Metrics Q3 2025 - SE Residual Errors

- 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.*



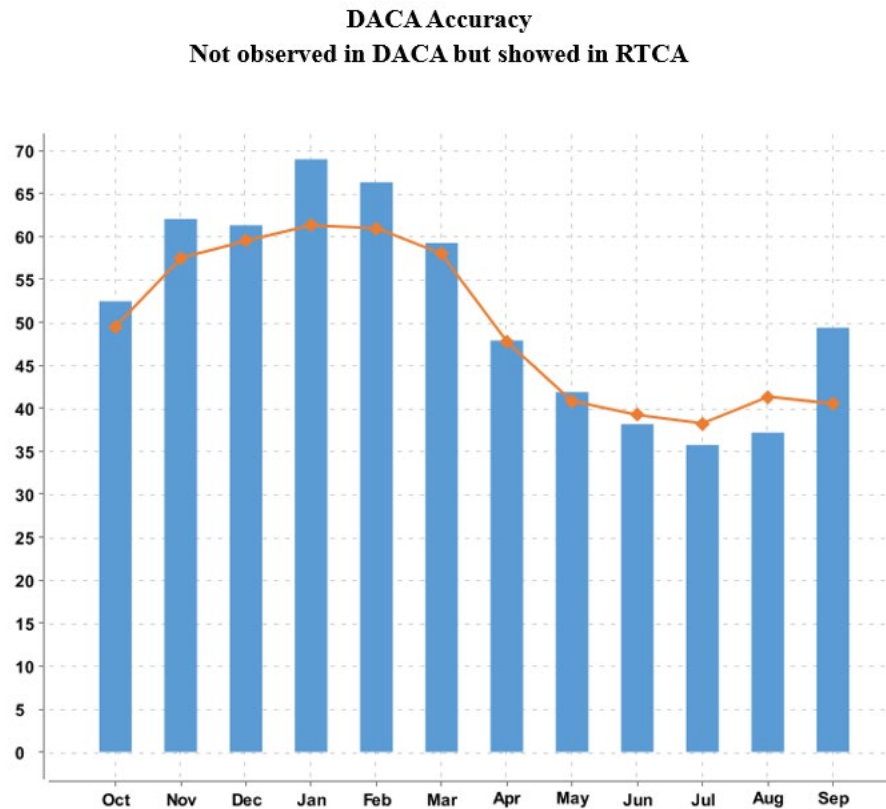
RC Metrics Q3 2025 - RTCA Non-Converged Contingencies

- 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*



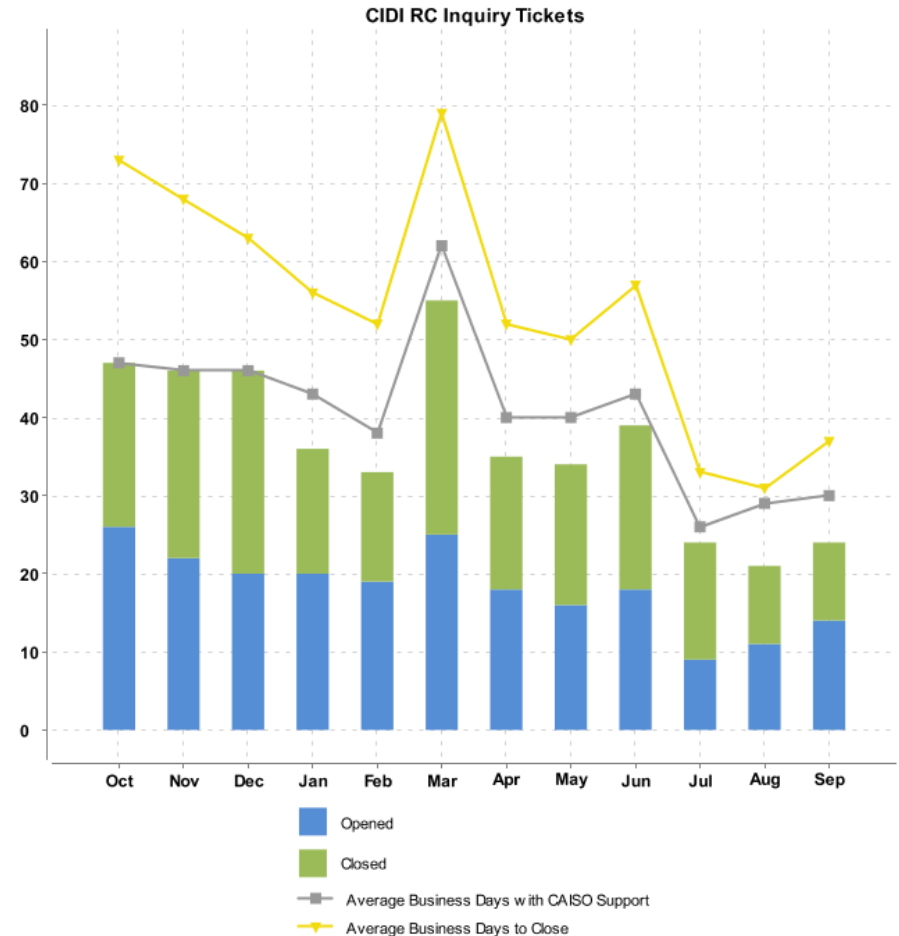
RC Metrics Q3 2025 - DACA Accuracy

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



RC Metrics Q3 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.



Working Group Updates

Oscillation Task Force Update

Raja Thappetaobula
Director, RCWEST Operations

RC West Oscillation Monitoring Improvement Task Force

Chair: Daniel Goodrich (BPA)

RC West Liaisons: Caelin Hickey, John Marusenko, Samson Adigun

Task Team Goals:

- Coordinate oscillation detection thresholds across wide area to ensure entities are utilizing similar criteria for detection
- Define criteria and develop a proposal for PMU installation and coverage for the RC West

Other Considerations:

- Consider recommendations on IBR Controls Standard for WECC/NERC
- Review oscillation events

RC West Oscillation Monitoring Improvement Task Force

- Kickoff meeting held Sept 18
- Wide representation across the west on the task force
 - 19 member entities, 43 individuals
 - WECC, BPA, AESO RC, BCRC, RC West, SPP RC, APS, Avista, BANC/SMUD, IPCO, IID, NWMT, PAC, PG&E, PNM, SRP, SCE, SDGE, TSGT
- Future meetings held on Third Thursday of the month 9am PPT

RC West Oscillation Monitoring Improvement Task Force

- Number of action items from kickoff
 - PMU registry future
 - RC West Tools Demo
 - Develop a PMU Data Quality PI to RC West Portal

FERC 881 Ambient Adjusted Rating & Dynamic Line Ratings

Raja Thappetaobula
Director, RCWEST Operations

CAISO/RCWEST FERC 881 Implementation :

- CAISO/RCWEST has implemented the Track1 on July 12, 2025
 - Six entities real time ratings through ICCP are being utilized in RCWEST EMS/RTCA/HANA
 - Working with couple of other entities to enable the usage
- CAISO/RCWEST has implemented the Track2 Webliner on July 12, 2025
 - Idaho has been sending in their look ahead 240 hr AAR.
 - These ratings are not being utilized in downstream applications.
- **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**

CAISO RCWEST Compliance Phased In Implementation

January 2026

FERC 881 code changes for real time markets into production.

Enable usage of AAR in EIM market for WEIM entities.

Entities can choose to enable usage of AAR in real time markets

April 2026

FERC 881 code changes for Day ahead markets into production. Entities that participate in both markets can choose to enable usage of AAR.

Enable Usage of AAR in Contingency Apps. Look ahead reliability applications.

Dec 2026

Complete remaining compliance work.

Nomograms and usage of AAR in RAS.

Usage of AAR in TTC calculations and post hourly ATC.

Seasonal COI and other Path Limits calculations.

ECC Expansion

Raja Thappetaobula
Director, RCWEST Operations

ECC Enhancement NAESB Effort (Phase1):

- Flow based curtailment tool on SOLs/IROL's in real-time
- RC led process that can be utilized along with other existing congestion management process (Market Optimization ,UFMP ,Local Op procedures)
- Standardized curtailment methodology
 - Tag Curtailments
 - Very similar to tag curtailments currently being done in UFMP Step 4 but with TDF calculated to the SOL not a proxy path
 - Balancing area Generation to Load relief obligations (GTL)
 - Real time MW acquisition for dynamic schedules
 - NAESB Congestion Management WG and NEASB Executive committed has voted and approved. The standard is going through final stage of member ratification. (Dec 2nd 2025)
 - Implement the curtailment methodology into ECC and plan to go live in Q3/Q4 2027

Future Agenda Items

- The next RC West Oversight Committee meeting is February 19, 2026. Visit [RC West webpage](#) for additional details
- Send topic suggestions to isorc@caiso.com.

Open for Public Comments



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Public Session Adjourned