



California ISO



RC West

RC West Oversight Committee

Public Session


Feb 22, 2024

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 / Stay Informed / RC West.

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- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon  located at 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.
- If you need technical assistance during the meeting, please send a chat to the event producer.
- You may also send your question via chat to either Yelena Kopylov-Alford or to all panelists.

Agenda

Time:	Topic:	Presenter:
1:00 - 1:05	Welcome/agenda	Yelena Kopylov-Alford
1:05-1:15	Oversight Committee Business <ul style="list-style-type: none"> RC Customer Onboarding activities 	Chris Hofmann & Tricia Johnstone
1:15- 1:40	RC West Operations Update <ul style="list-style-type: none"> General operations Procedures update RC metrics update 	Tim Beach Kathleen Fernandez Kendall Parra & Daniel Tiang
1:40 – 2:20	Working Group Updates <ul style="list-style-type: none"> April 8, 2024 Solar Eclipse Planning FAC-011/FERC 881 Update SOL Methodology Changes for 2024 	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

- RC Customer Onboarding

Chris Hofmann
Committee Chair

Christopher Sanford
Vice Chair

Tricia Johnstone
RC West/ Operational Readiness

RC West Operations Update

Tim Beach
Kathleen Fernandez

RC West Operations Update

Peak Load	YTD	Historical
WECC	164,235 MW (08/16/2023)	167,530 MW (9/6/2022)
RC West	126,317 MW (08/16/2023)	130,986 MW (9/6/2022)
RC West 2024 Winter Peak	92,935 MW (1/12/24 at 17:47)	
WECC 2024 Winter Peak	131,293 MW (1/12/24 at 17:47)	

RC West Operations Update – Emergency Events

Energy Emergency Alert	2024	2023	2022	2021	2020
EEA - W	9	7	9	4	NA
EEA - 1	0	12	19	7	26
EEA - 2		0	7	3	9
EEA - 3	5	6	7	3	12
TE	1				
IOS	1				
Total	16	25	42	17	47

Transmission Emergency – TE
 Insecure Operating State - IOS

Operations update

January 13-15th cold weather event.

- **Cold weather over a holiday weekend increased demand in the Northwest above available resources.** The Pacific Northwest and Rocky Mountain States experienced severe winter weather on the weekend of Jan. 13-15, with extreme cold, snow and high winds. Temperatures fell to 15 degrees in Portland and Seattle, 10 degrees in Boise and minus 10 degrees in Spokane.
- **Grid conditions were strained and at least six balancing authority areas in the Pacific Northwest issued energy emergency alerts.** The alerts ranged from EEA1 for most BAAs to EEA3 in at least one case. Four EEA-Watches were requested and declared. The EEA declarations were required to access emergency energy.





Date / Level	EEA-Watch	EEA-1	EEA-2	EEA-3
January 13	2	3		1
January 14	2	3		
January 15		1		
total	4	7	0	1

Operations update

- Other Issues during the cold weather period
 - Jackson Prairie NG storage facility went off line forced outage
 - Congestion on Path 80
 - S/N limit on PDCI
 - Forced outage of North of COI constrained energy transfer from California into the PNW.
- Lessons Learned
 - The early morning conference call did not appear to be effective. Each day BA's reported having no concerns, but mere hours later entered into emergency procedures
 - RC West needs visibility or coordination into Natural Gas network in the PNW
 - WIEM, Assistance Energy Transfer (AET) function
 - CAISO planning outreach of AET process and potential training
 - Develop Daily System RC West status indicator,
 - NERC and FERC leadership have agreed to complete a joint review of system performance encompassing the Winter Storm Gerri and Heather.

RC West Daily Condition Status

The purpose of the Daily Condition Status is to provide visual status representation.

<i>RC West Condition Status Legend</i>	
RED - Existing condition poses risk to BPS reliability or Firm Load	
ORANGE - Existing or Emerging condition may present risk to BPS reliability OR Firm LOAD	
YELLOW - Conditions warrant elevated monitoring of potential threats to BPS reliability or Firm load	
GREEN - Conditions do not indicate an elevated risk or abnormal threat to BPS reliability	

E.g. if there is an EEA-3 with firm load shedding then the status would be red.

But if there is a EEA-3 declared with no load shedding the status would be orange

Status would be posted on RC Portal

RC West Operations Update – Procedure Update

Recently Published Procedures:

RC Proc. #	Procedure Title	Status	Description of changes
RC0430	GMD Operating Plan	Published 2/01/24	Revised for GMD Monitor transition to RC West on February 1, 2024.
RC9110	NW Washington Area Import IROL	Published 1/25/24	Annual Review : Section 3: Replaced "Real-Time Market Operator (RTMO)" with "Market Operator" in last paragraph. Sections 4.1, 4.2, 4.3 and 5: Added step to evaluate returning planned outages. Sections 4.2 and Section 6: Clarified effectiveness of generation mitigation. Section 4.2: Minor edit to #7, replacing "separate call" with "a conference call".
RC0630	Outage Coordination Process	Published 1/18/24	Section 5: Removed option #3, as it is no longer applicable. Section 12.3: Minor edit in the last paragraph under RC West Responsibilities.
RC0690	PRC-012 Remedial Action Schemes	Published 1/18/24	Periodic Review : No content changes, only minor formatting.
RC0690A	PRC-012 Remedial Action Schemes - RAS Review Checklist	Published 1/18/24	Periodic Review : No content changes, only minor formatting.
RC0690B	PRC-012 Process - RAS Design Review	Published 1/18/24	Periodic Review : No content changes, only minor formatting.
RC0690C	PRC-012 Remedial Action Schemes - Corrective Action Plan (CAP) and Results	Published 1/18/24	Periodic Review : No content changes, only minor formatting.
RC0630	Outage Coordination Process	Published 1/04/24	Section 3.1: Included Section 12.3 reference for link, which was inadvertently removed with last update. Minor formatting with Footnote references.
RC9330	NWMT Path 80 Operating Guide	Published 1/03/24	Annual Review : Section 4: Added steps to assess the impact of EMRAS actions on the constraint. Added steps to assess impact of Miles City DC flows and adjust schedule curtailments accordingly. Section 5: Updated list of impacted WECC Paths. Section 6: Added new section for Related RAS Schemes. Added WAUW and BPA as impacted entities.

RC West Operations Update – Procedure Update

Recently Published Procedures - *continued*:

RC Proc. #	Procedure Title	Status	Description of changes
RC0600	RC West Implementation of Common Interconnection-wide Methodology	Published 1/01/24	Annual Review : Minor formatting and update in references section.
RC0600A	Western Interconnection Modeling and Monitoring Common Methodology	Published 1/01/24	Annual Review : No content changes to this document were requested.
RC0620	Operations Planning Analysis (Next Day)	Published 12/13/23	Periodic Review : Updated instance of ISO to CAISO, minor formatting and grammar edit. No other content changes.
RC0630	Outage Coordination Process	Published 12/13/23	Periodic Review : Updated instances of ISO RC with RC West. Replaced instances of ISO with CAISO, where appropriate. Updated IRO-010 & TOP-003 NERC Standard references. Minor formatting and grammar edits.
RC0630A	webOMS User Manual	Published 12/13/23	Periodic Review : Section 13.1: Corrected figure numbers in verbiage above screenshot. Minor formatting throughout.

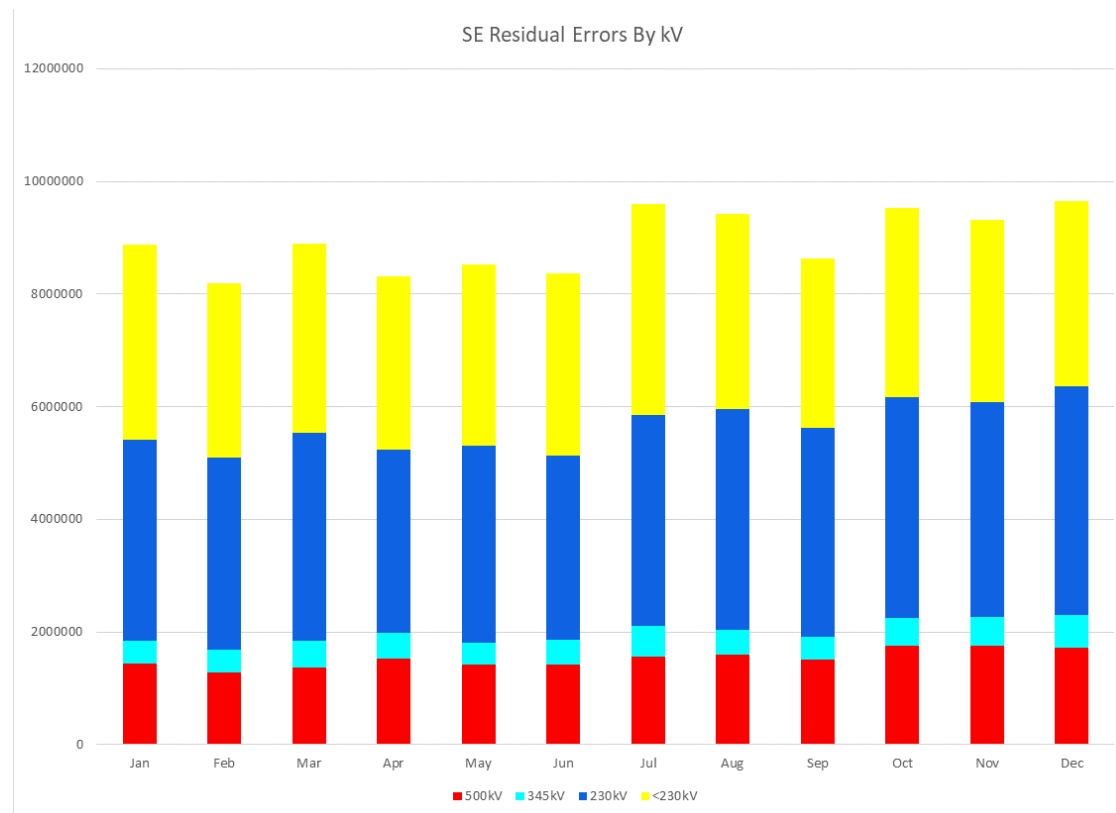
RC West Operations Update – Procedure Update

Upcoming Procedure Updates:

RC Proc. #	Procedure Title	Status	Description of changes
RC0130A	SOL Exceedance Reporting Guideline	Target Publish 3/29 Effective 4/01/24	Retired: SOL Reporting Guidelines have been incorporated into RC0310 procedure, new Section 3.3.
RC0310	Mitigating SOL and IROL Exceedances	Target Publish 3/29 Effective 4/01/24	Major revisions to several sections to align procedure with revised FAC-011-4 and revised RC0610 SOL Methodology, which will be effective April 1, 2024. Retired RC0130A, and incorporated SOL Reporting Guidelines into new Section 3.3 (TOP Notification Requirements for SOL Exceedances). Revised definition of System Operating Limit (SOL), and added definition for System Voltage Limit, to align with updated definitions in NERC Glossary. (approved by Joint RTWG OPWG).
RC0510	Quality Assurance of Monitoring and Analysis Tools	Target Publish 3/7	Periodic Review: Minor grammar change under Operationally Affected Parties, no other content changes.
RC0610	System Operating Limits Methodology for the Operations Horizon	Target Publish 3/29 Effective 4/01/24	Major revision by Joint RTWG OPWG SOL IROL Methodology Task Force to address changes due to FAC-011-4 and FAC-14-3 standard change (approved by Joint RTWG OPWG).
RC9000	Open Loop Guideline	Target Publish 3/29 Effective 4/01/24	2024 Annual Review : Major reorganization of procedure for clarity: <ul style="list-style-type: none"> - Added background Section 3.1 and clarified content. - Merged steps related to NE/SE Separation mitigation to the section for Potential Open Loop (3.3). - Merged steps related suspending WEIM and steps related to disabling NE/SE Separation scheme during islanded conditions, into the section on Open Loop (3.2). - Reorganized and renamed sub-headings for clarity.
RC9540	Monitoring IID System	Target Publish 2/22	Updated Sections 2, 3, 4, 5, 6 and Appendix B per latest IID rating table and CAISO procedure 7820.
RC9550	Monitoring Heavy E-W Flows on SWPL, HANG2, SRPL, and Parallel Transmission	Target Publish 2/22	Updated Sections 4.2, 4.3, Appendix A and Appendix D per latest IID rating table and CAISO procedure 7820.

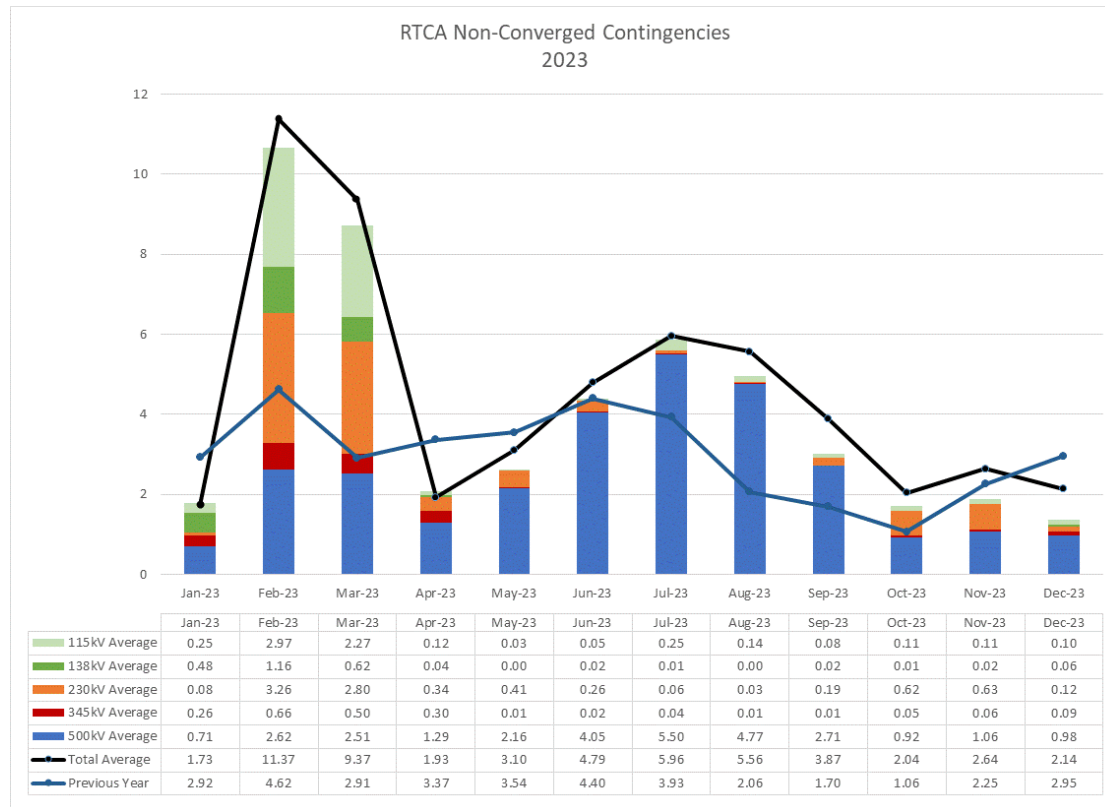
RC Metrics Year End 2023 - SE Residual Errors

- 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.*



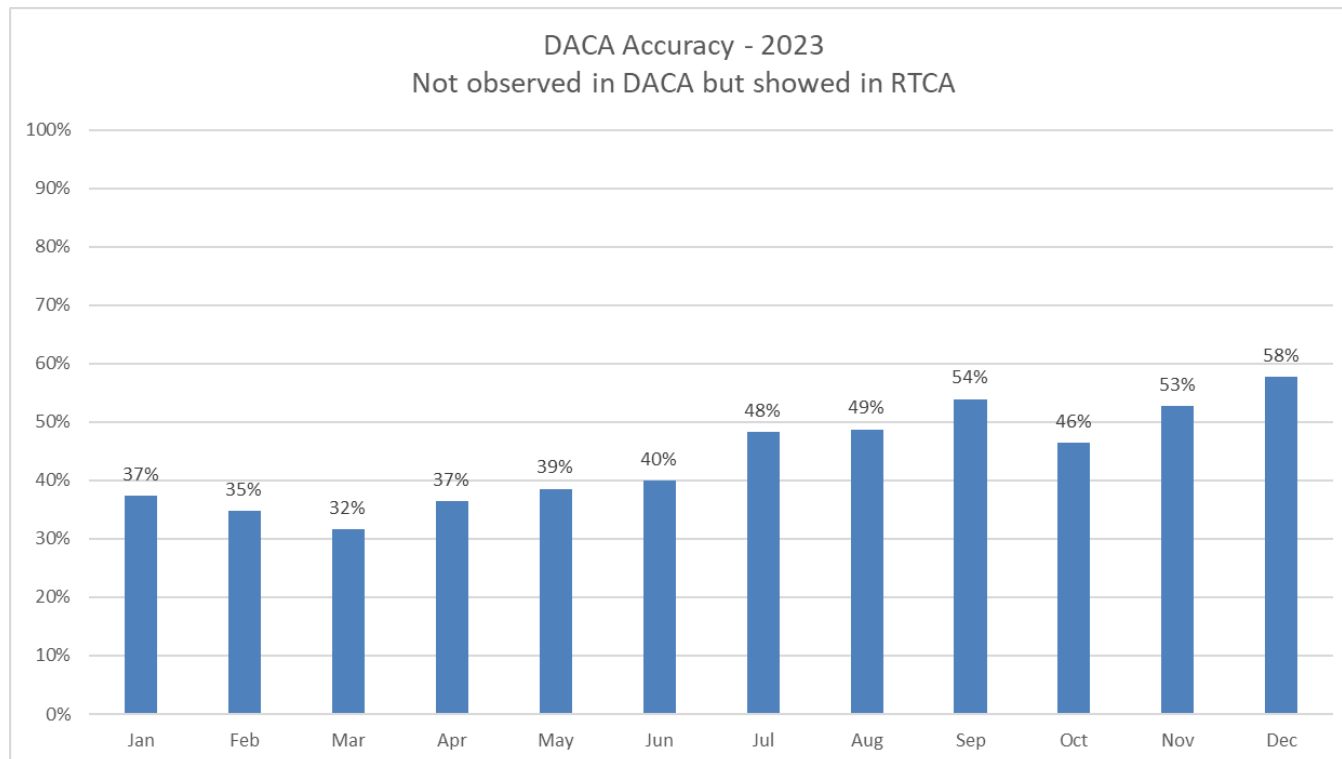
RC Metrics Year End 2023 - RTCA Non-Converted Contingencies

- 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*



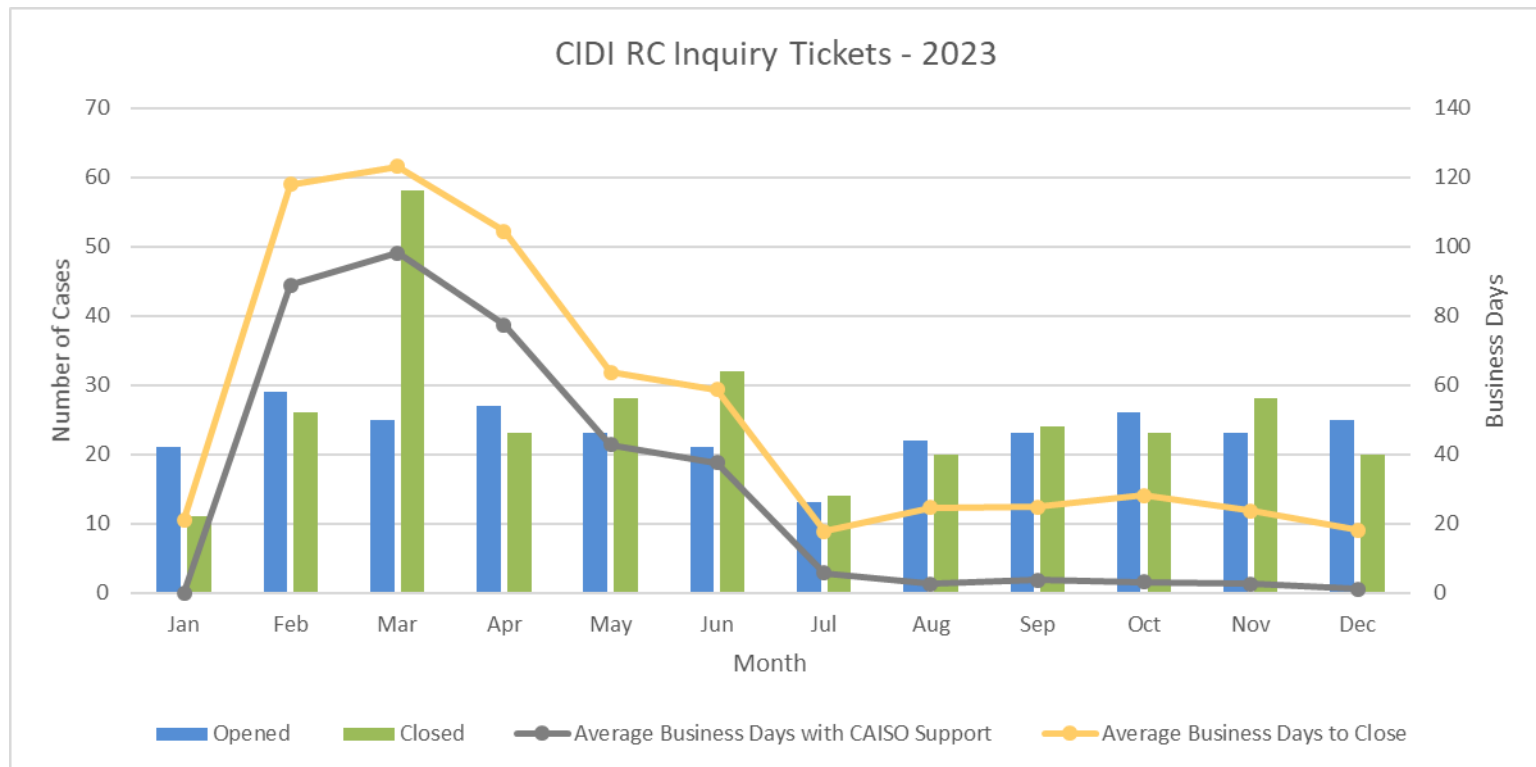
RC Metrics Year End 2023 - DACA Accuracy

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



RC Metrics Year End 2023 - 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

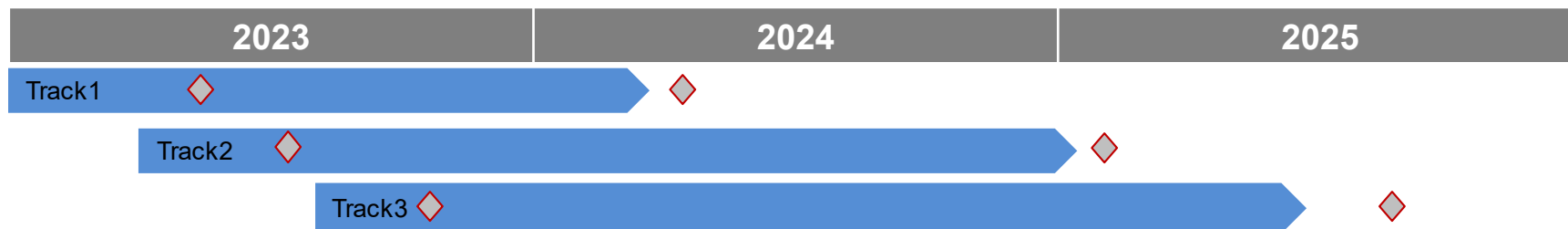
April 8, 2024 Solar Eclipse Planning

Raja Thappetaobula
Director, Operations Engineering Services

FERC 881 Ambient Adjusted Rating & Dynamic Line Ratings

Raja Thappetaobula
Director, Operations Engineering Services

FERC 881 Project Timelines by Tracks



- **Track 1 – Real Time Reliability Applications**
 - Minor delays in application deliver timeline with FAC-11 additions to the project
 - Estimated - Target Capability to be ready by Q2 2024
- **Track 2 – Operational/EMS Model Data and Applications**
 - July 2023 - Complete Business Requirements
 - OATI Webliner product will be utilized for receiving Look ahead ratings.
 - Estimated - Target Capability to be ready in 2024
- **Track 3 – Market Application and Look Ahead Applications**
 - Requirements phase will be started in Jan 2024.
 - Based on requirements gathering and vendor/internal resources constraints potential for delay in some aspects of implementation.
 - Estimated - Target Capability to be ready in Q2 2025.

WECC Seasonal Base case Models

- RCWEST had discussions with WECC and WECC System Review Subcommittee (SRS) leadership on the need for development of 4 seasonal base cases incorporating appropriate 4 seasonal ratings once FERC order No.881 is effective.
- WECC indicated that they have placeholders in the existing process to receive 4 seasonal ratings.

WECC Seasonal Base case Models

- WECC and SRS indicated that if stakeholders agree that there is a need for WECC developing the 4 seasonal base case they will work on those models.
- WECC SRS will add this discussion item to their April meeting and seek feedback from stakeholders on next steps.

Real Time Voltage stability and Transient Stability

- As part of Track 3 RCWEST is planning to update our real time voltage stability and transient stability tools with available AAR from TOP's.
- These tools will provide updated limits on monitored interfaces.
- RC operators will monitor these tools for updated limits.

Total Transfer Capability (TTC) Studies

- If an interface is made up of multiple transmission equipment then impact of AAR on TTC of interface can be identified by transfer analysis studies.
- WECC base case models with appropriate seasonal ratings could be used to perform seasonal TTC studies on interfaces.
- CAISO/RCWEST has internally developed tools that can perform TTC studies on key interfaces. We plan to have discussions with impacted TOP's on next steps.

FAC-011 Update for 4/1/24

Raja Thappetaobula
Director, Operations Engineering Services

SOL Methodology Changes for 2024

Raja Thappetaobula
Director, Operations Engineering Services

Major SOL Methodology Change Summary

- Broader Acceptable system performance:
 - Emergency Ratings may be used during pre-contingency situation
 - Emergency System Voltage Limits may be used during pre-contingency situation
 - Steady state post-Contingency flow through a Facility must not be above the Facility's highest Emergency Rating.
- Detailed SOL exceedance definition
- Communication of SOL Exceedance
- Stability limit establishment – Major change for RC to validate stability limit that has impact on more than one TOP
- RC West Process for Addressing Corrective Action Plans Submitted by Planning Coordinators (PC) and Transmission Planners (TP) instead of IROLs
- RC West communication of SOL and IROLs to other functional entities

Future Agenda Items

- The next RC West Oversight Committee meeting is May 16, 2024. Visit [RC West webpage](#) for additional details
- Send topic suggestions to isorc@caiso.com.

Open for Public Comments

Public Session Adjourned