



California ISO



RC West

RC West Oversight Committee

Public Session

February 23, 2021

1:00 - 2:30 p.m. Pacific

Agenda

| Time*: | Topic: | Presenter: |
|-------------|--|---|
| 1:00 - 1:05 | Welcome/agenda | Kristina Osborne |
| 1:05 - 1:15 | Roll call | Ben Brandt - Chair |
| 1:15 – 1:45 | RC West Operations Update <ul style="list-style-type: none">• COVID-19 Update• Procedures update• RC metrics update | Tim Beach, RC West Kathy Fernandez, CAISO Rachel Lucas, CAISO |
| 1:45 – 2:15 | Working Group Updates <ul style="list-style-type: none">• OPWG• RTWG• TWG | Dede Subakti, CAISO Tim Beach, RC West Tami Elliott, CAISO |
| 2:15 – 2:20 | Future agenda items | |
| 2:20 | Public Comment | |
| 2:30 | Public Session Adjourned | |

Update: RC West Operations

Tim Beach
Director, Reliability Coordination

Rachel Lucas
Operations Compliance Analyst

Kathy Fernandez
Operations Procedure Control Specialist

Operations Update

- No change to COVID operating posture
- Winter Peak 87.2 GW on January 26th
- January and February winter storms had no lasting impacts to BES
- 12 long term BES outages >345kV
- 10 long term Gen outages >300MW

RC Procedures Update

Recently Published Procedures:

| Procedure Title | Status | Description of changes |
|--|-----------------------------------|---|
| RC9210 Path 3 (Northwest – British Columbia) Operating Procedure | Published 2/18 | Annual Review. Section 3: Updated Operating Characteristics in Table 2. Provided clarifications throughout the procedure that Path 3 limitations associated in the South-to-North direction; clarification that provided mitigation steps may also be used to assist BCRC for mitigation of other BCRC internal constraints; clarification that South-to-North SOL is provided by BPA through ICGP. Included "Insecure Operating State" in Definitions section. Changed review frequency to "Annual". Minor format and grammar updates. Coordinated and reviewed with all affected parties. |
| RC0210 Monitoring Frequency and Balancing Authority Performance | Published 2/4 | Updated guidelines in Sections 3.4.1 and 3.4.2 for evaluating contingency reserve deficiency with non-RSG and RSG BAs. Clarified references to RC0410 to determine criteria for EEA level. Replaced CAISO RC with RC West. |
| RC0410 System Emergencies | Published 2/4 | Updated criteria for issuing EEAs in Section 3.1, and clarified references to RC0210. Updated procedure review frequency to "Annual". |
| RC0560 Limiting Access to BES Cyber Assets | Published 2/4 | Updated to RC West and updated references. Minor edits for consistency. |
| RC0660 Transmission Relay Loadability: NERC PRC-023-4 | Published 2/4 | Updated instances of CAISO RC to RC West. Section 3: Removed first item from RC West Operations Engineering Team responsibilities and updated CIDI references. |
| RC0670A PRC-002-2 RC West DDR List | Published 2/4 | Updated Appendix I - DDR list. Minor edit to Operationally Affected Parties list. |
| RC0430 GMD Operating Plan | Published 2/1 | Section 2 & 3.2: Updates made due to BCRC assuming GMD Monitor obligations from RC West as of 2/1. Sections 3.3 & 3.5, 2nd bullet: Removed "Western Interconnection RCs" since this is no longer applicable. Section 4: Removed RC West from list of rotating RCs. Changes were coordinated with BCRC. Replaced blackout with Black Start throughout and minor grammar edit to Section 5. |
| RC9410 Olinda 500 kV High Voltage Mitigation | Published 2/1 | Table 3: Updated to RC West as the RC and minor update to References. |
| RC0130 Notification Requirements for Real-Time Events | Published 1/29 | Updated from CAISO RC to RC West. Added RC0130A reference to Section 3.3, Item 3.3.2 and under Appendix Section. Added note referencing RC0420 to Section 3.3, Item 3.3.6. Updated NERC references. Minor format and grammar updates for consistency. Approved by Real-Time Working Group (RTTWG). |
| RC0130A SOL Exceedance Reporting Guideline | Published 1/29 | Actual exceedance of normal Facility Ratings changed from Category 1 to 2. Clarified language in category 3. Updated RC West procedure references. Minor format and grammar updates for consistency. Approved by Real-Time Working Group (RTTWG). |
| RC0470B Evacuation an Loss of Control Center Functionality Checklists | Published 1/29 | Replaced instances of ISO with CAISO. Update Conference Bridge information throughout. |
| RC0680 RC Guidelines for Seasonal Assessment and Coordination Process | Published 1/29 | Section 8: Replaced CAISO RC with RC West. Updated Operationally Affected Parties to include "Publicly posted" and updated procedure footer format. Updated NERC references. Attachment I: Minor grammar update in first paragraph. |
| RC0600 RC West Implementation of Common Interconnection-wide Methodology | Published 12/18 Effective 1/21/21 | Annual Review. Minor correction of procedure reference at the end of Section 3.4 and grammar updates in Sections 3 & 4. |
| RC0600A West Interconnection Modeling and Monitoring Common Methodology | Published 12/18 Effective 1/21/21 | Annual Review. Identified changes to Section 2.1.3, a few formatting changes and recommended deletion of Appendix A. In addition, Methodology was classified as a "Public" document, included RC West procedure reference in header, minor format and grammar updates. |
| RC9120 Oregon Export IROL | Published 12/18 | Section 3: Updated dynamic limit in table. Appendix C: Updated limits and added units to listing. |
| RC9720 PACE Path Operating Procedure | Published 12/11 | Retired: Due to changes in equipment and protection, these Paths are no longer stability limited. |
| RC9010 Unscheduled Flow Mitigation on Qualified Transfer Paths | Published 12/04 | Annual Review. Changed review frequency to "Annual." Section 4.1: Updated to address routine operation of PSTs to maintain schedules. Added AESO RC and BCRC to Affected Parties. Coordinated with AESO RC, BCRC and SPP West RC and approved by RTTWG. |
| RC0100 Reliability Coordinator Authority | Published 12/01 | Updated Signature block for John Phipps, as Eric Schmitt has retired from the CAISO. |
| RC0110 Communications Protocols | Published 12/01 | Annual Review. Updated Review Criteria to include COM-002 requirements. Updated procedure references. Minor format and grammar updates. |
| RC0330A List of Ties with Neighboring RCs | Published 12/01 | Annual Review. Table 3: Updated notes for Flagstaff-Youngs Canyon, "SJ-MCK1" and "SJ-MCK2". Updated Springerville 345 kV-Socorro 34.5 kV Tie detail and note. Updated Springerville 345 kV-Coronado 500 kV line detail and note with footnote. Updated to include NTUA Load note for Flagstaff-Youngs Canyon 345 kV Line. Updated to ensure all "pseudo-tie" instances are consistent. Updated review frequency to Annual with RC0330. |
| RC0330B Contingency Monitored for Neighboring RC Area | Published 12/01 | Updated review criteria to reflect "Annual" and with RC0330. Minor grammar edit in Purpose section. |
| RC0610 System Operating Limits Methodology For The Operations Horizon | Published 12/01 | Coordinated changes with Operations Planning Working Group: Included note about SOLs for generating facilities. Provided clarification about utilization of stability limits template for communication of stability limits identified as part of seasonal studies. Added note for TOPs to communicate any Non-BES facilities that impact BES or BES facilities that should be excluded. Included minor changes and updates to Transient Stability criteria. Minor format and grammar updates. |
| RC0610A Criteria for Determining Facilities Critical to Derivation of IROL | Published 12/01 | Replaced CAISO RC with RC West throughout. Added note on where the specific facilities critical to IROL derivation can be located. Minor format and grammar updates. |

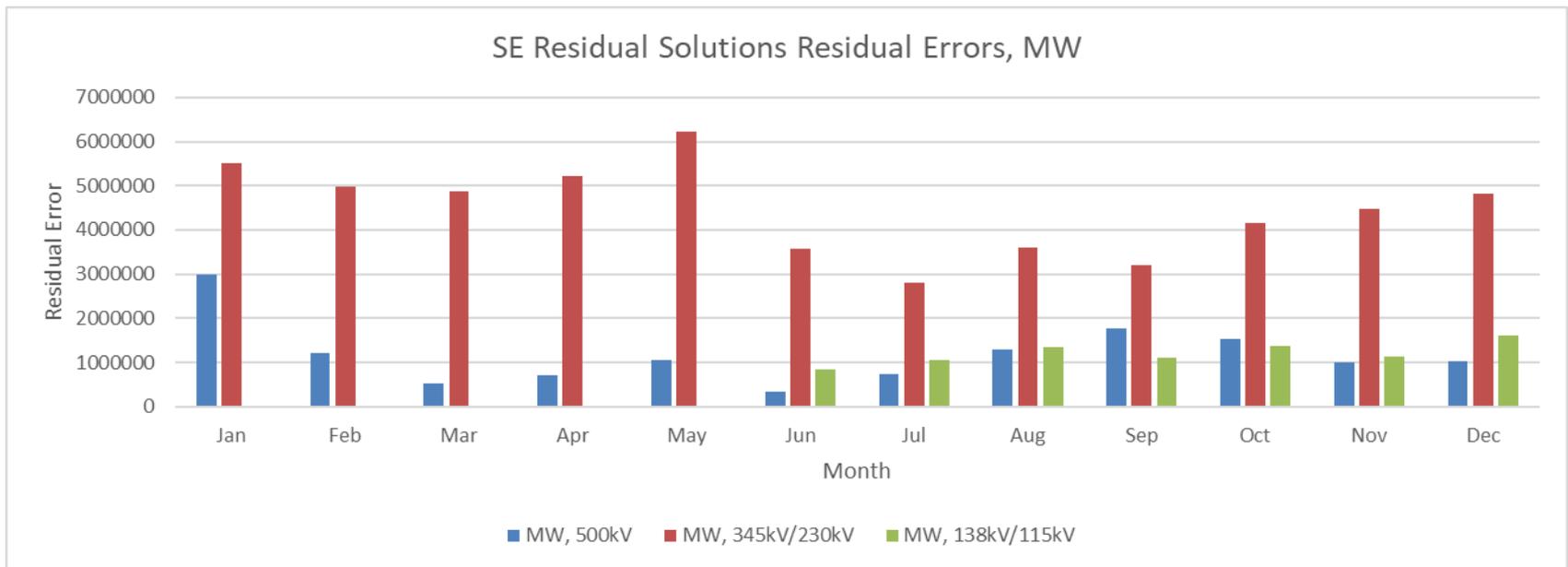
RC Procedures Update - continued

Upcoming Procedure Updates

| RC Proc. # | Procedure Title | Status | Description of changes |
|------------|---|-----------------------|---|
| RC9000 | Open Loop Guideline | Internal Coordination | Major revision: Clarified expectations on USFM procedures for Open-Loop at Path 66 in Section 3.1. Added new Section 3.3: WECC-1 RAS. Added new Appendix C: WECC-1 RAS Island Cutplane. Minor format and grammar updates. Approved by Real-Time Working Group (RTWG). |
| RC9015 | Configurable Shift Factors for USFMP | Internal Coordination | New initial procedure. |
| RC9110 | NW Washington Area Import IROL | Internal Coordination | (Expected Effective Date: 4/01/21) Included SPP West RC as an Affected Entity. Changed contact for Centralia Units from GRID to SPP. Removed references to Bellingham Area Load Tripping RAS. |
| RC9310 | Northern Nevada (NNEV) N-1-1 Mitigation Procedure | Internal Coordination | Section 5: Updated language for clarification. Updated table labeling and table references throughout. Minor format and grammar updates. |

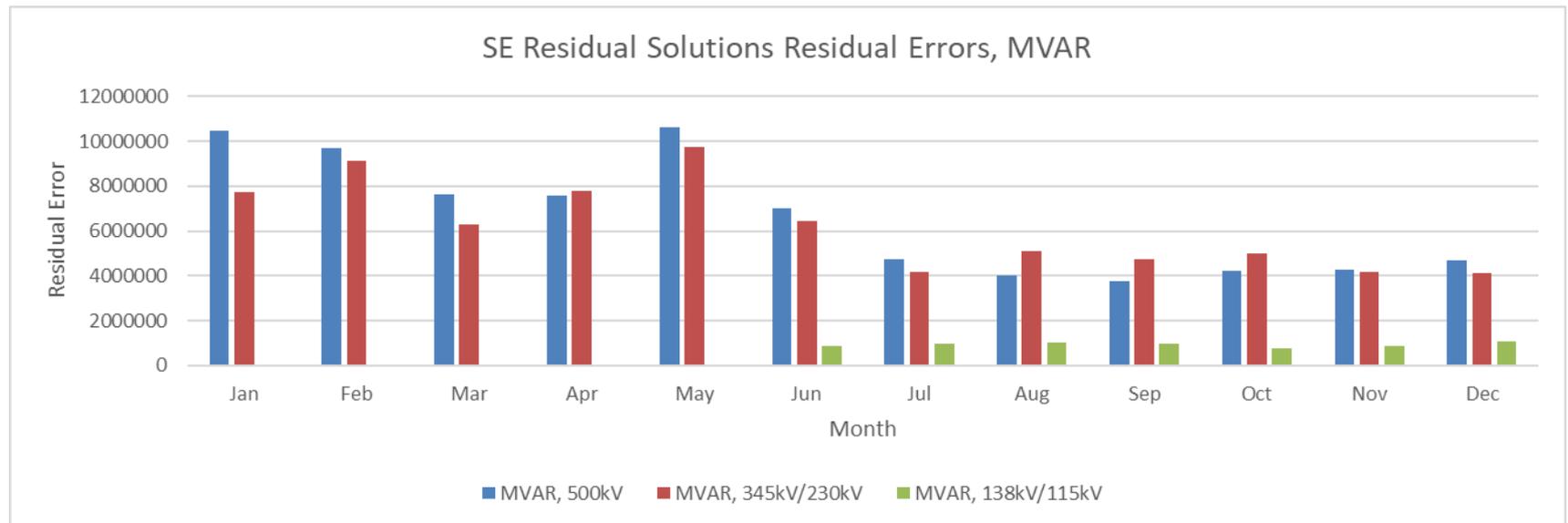
RC Metrics Year End 2020 - State Estimator Solutions Residual Errors

- SE Residual Error – MW flow on 500kV, 345kV, 230kV, 138kV, and 115kV lines
- While the quality of solution has remained stable over Q3-Q4, there have been significant changes to the CAISO production model that have been implemented in this time frame.
- *Note: Residual flow is the difference between the calculated SE solution flow on each line compared to the actual telemetry value. This is a reflection of SE accuracy in RC West area.*



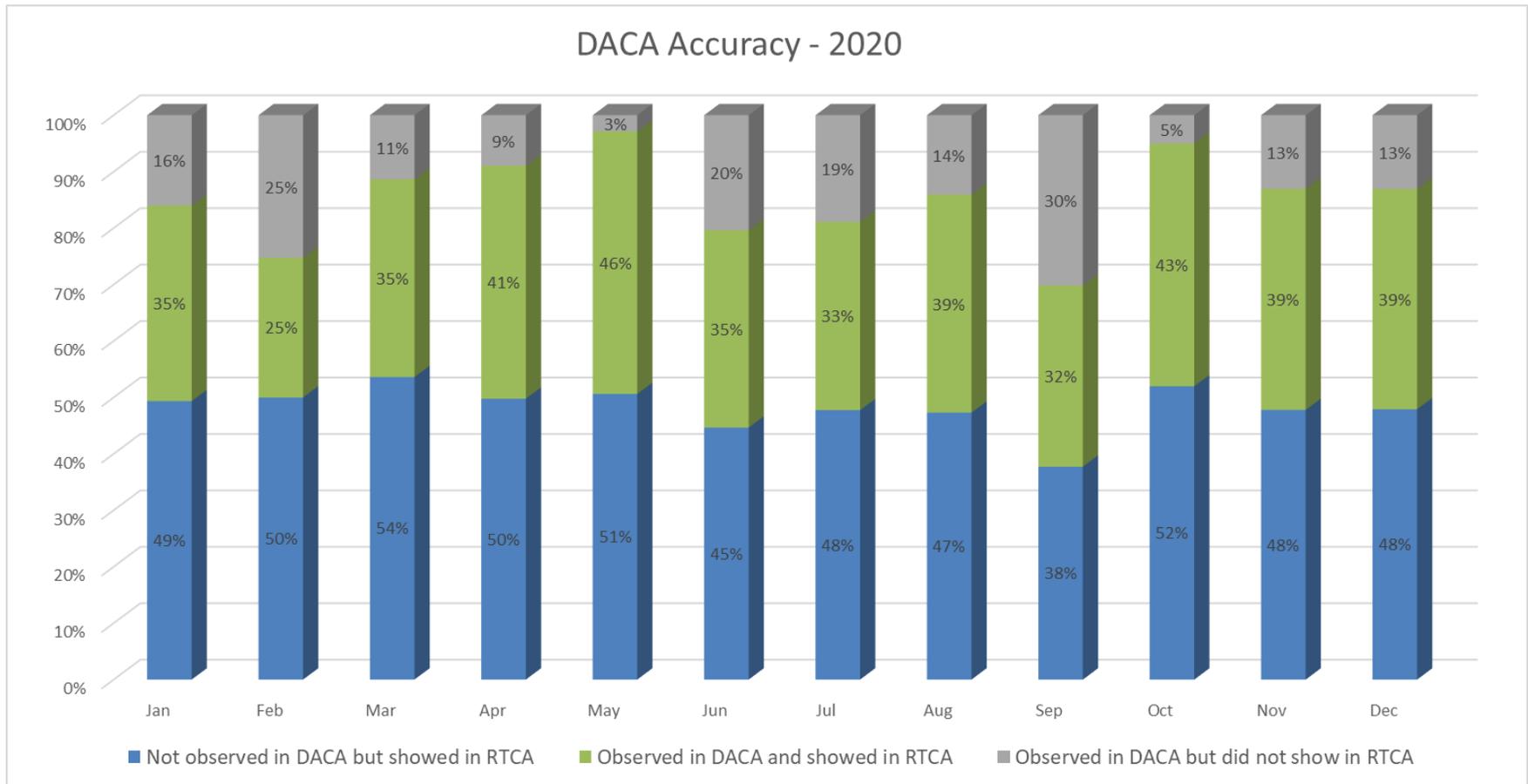
RC Metrics Year End 2020 - State Estimator Solutions Residual Errors

- SE Residual Error – MVAR flow on 500kV, 345kV, 230kV, 138kV, and 115kV lines
- Observed significant improvement on accuracy of 500kV, 345kV, and 230kV lines
- *Note: Residual flow is the difference between the calculated SE solution flow on each line compared to the actual telemetry value. This is a reflection of SE accuracy in RC West area.*



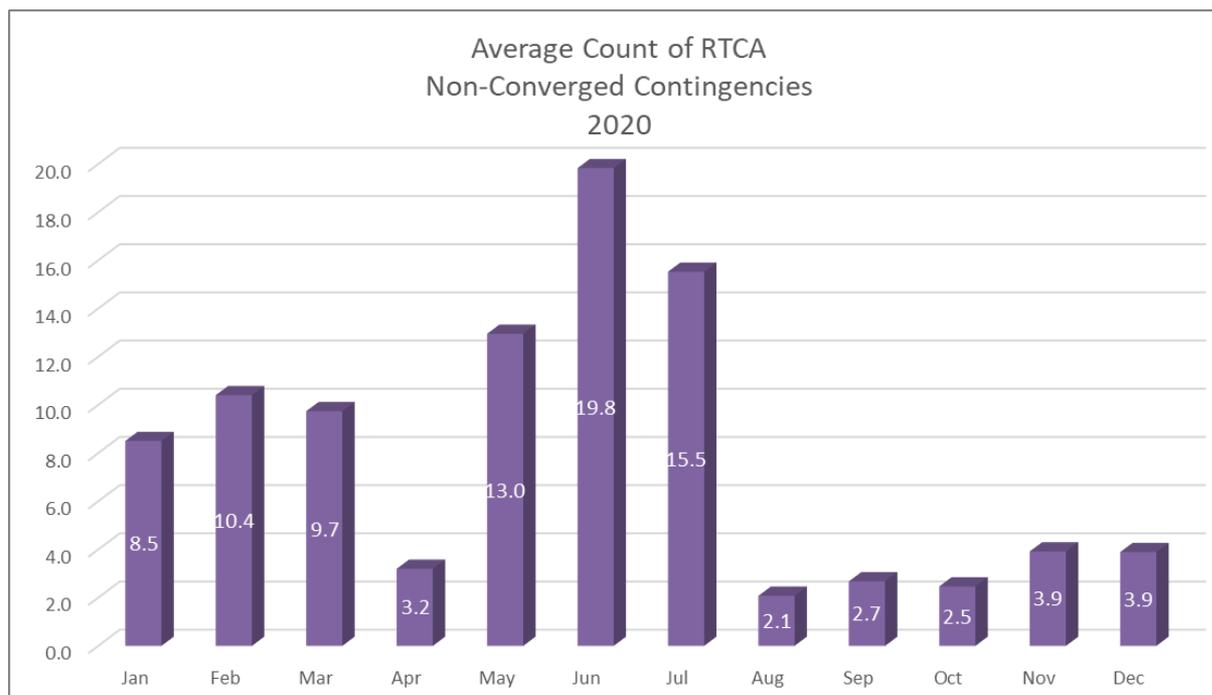
RC Metrics Year End 2020 - DACA Accuracy

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



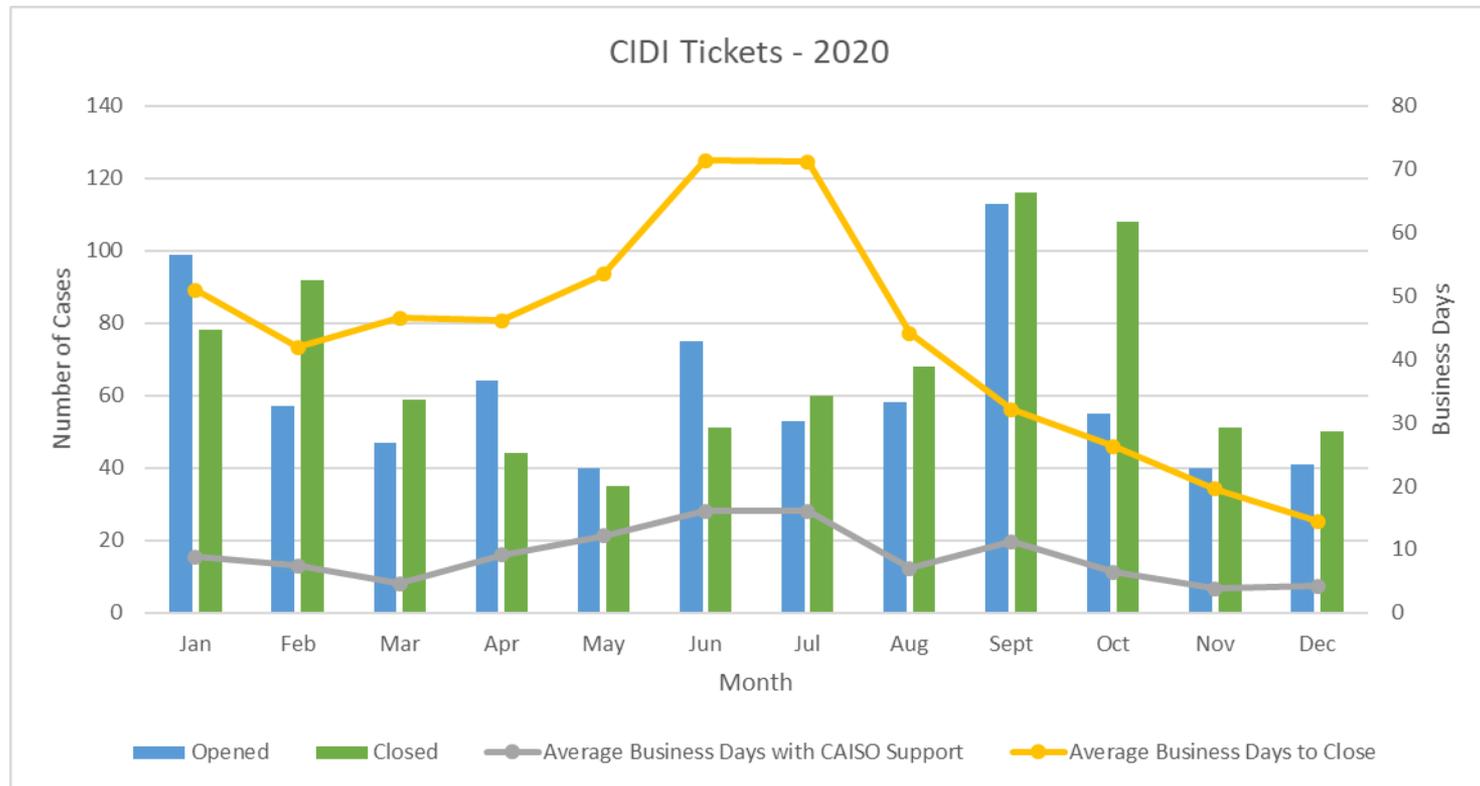
RC Metrics Year End 2020 - RTCA Non-Converged Contingencies

- Average count of Real-Time Contingency Analysis (RTCA) Non-Converged Contingencies in five-minute intervals
- Consistent performance was seen in Q4 relative to the remainder of the year
- *Note: Over 8,500 contingencies are solved in every RTCA solution*



RC Metrics Year End 2020 - 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 earlier in the year that haven't been closed.



Working Group Updates

Operations Planning Working Group

Dede Subakti
Director, Operations Engineering Services

Real-Time Operations Working Group

Tim Beach
Director, Reliability Coordination

RTWG Activities

- OREX IROL in annual review
- Revised Procedures
 - RC0410 System Emergencies
 - RC0210 Monitoring Frequency and BA Performance
 - RC9000 Open Loop
- RC Restoration drills Areas A, B and C in progress
 - Feb 2nd – March 12th
- Coordinating with SPP to transition Grid BA to SPP
- Coordinated with BCRC to transition of GMD Monitor duties to BCRC
- Continuing Metrics Reviews

Training Working Group

Tami Elliott
Manager, SAT Development and Administration

Future Agenda Items

- The next RC West Oversight Committee meeting will be on May 18, 2021.

Open for Public Comments

Public Session Adjourned