RC West Oversight Committee

Public Session
May 12, 2020
1:00 - 2:30 p.m. Pacific
# Agenda

<table>
<thead>
<tr>
<th>Time:</th>
<th>Topic:</th>
<th>Presenter:</th>
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<tbody>
<tr>
<td>1:00 - 1:05</td>
<td>Welcome/agenda</td>
<td>Kristina Osborne</td>
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<tr>
<td>1:05 - 1:10</td>
<td>Roll call</td>
<td>Michelle Cathcart - Chair</td>
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<tr>
<td>1:10 – 1:30</td>
<td><strong>Committee Business</strong></td>
<td>Committee members</td>
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<tr>
<td>1:10 – 1:30</td>
<td>• Decisional Item: Chair &amp; Vice Chair</td>
<td>Committee members</td>
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<td>1:10 – 1:30</td>
<td>• Update: Finance</td>
<td>Committee members</td>
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<td>1:30 – 1:55</td>
<td><strong>RC West Operations Update</strong></td>
<td>Tim Beach</td>
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<td>1:30 – 1:55</td>
<td>• COVID-19 Update</td>
<td>Tim Beach</td>
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<td>1:30 – 1:55</td>
<td>• Procedures Update</td>
<td>Michael Martin, Rachel Lucas</td>
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<td>1:30 – 1:55</td>
<td>• RC Metrics</td>
<td>Ginger Quintavalla</td>
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<td>1:30 – 1:55</td>
<td>• CIDI/ Issue Resolution Progress</td>
<td>Tim Beach</td>
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<td>1:55 – 2:20</td>
<td><strong>Working Group Updates</strong></td>
<td>Tim Beach</td>
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<td>1:55 – 2:20</td>
<td>Dede Subakti (OPWG)</td>
<td>Tim Beach</td>
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<td>1:55 – 2:20</td>
<td>Tricia Johnstone (DEWG)</td>
<td>Tim Beach</td>
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<td>1:55 – 2:20</td>
<td>Ankit Mishra (HANA CPG)</td>
<td>Tim Beach</td>
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<td>1:55 – 2:20</td>
<td>Tricia Johnstone (TWG)</td>
<td>Tim Beach</td>
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<td>2:20</td>
<td>Public Comment</td>
<td>Tim Beach</td>
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<td>2:30</td>
<td>Public Session Adjourned</td>
<td>Tim Beach</td>
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CIDI = Collaborative Incident Development Initiative

ISO Public
Oversight Committee Business
Decisional Item: Chair and Vice Chair Elections
Chair and Vice Chair Nominees and Election

- Chair: Benjamin Brandt, Idaho Power Corporation
- Vice-Chair: Chris Hofmann, Salt River Project
Finance Update

April Gordon
Director, Financial Planning and Procurement
FINANCE: No new RC West customers; Settlements CBT available

• General Updates
  – No new RC West customers
  – No 2020 financial adjustments

• Resources
  – 2020 RC West Service Charge rates:
    http://www.caiso.com/Documents/GridManagementChargeRates
  – RC West Payment Calendar:
  – RC Customer Settlements Training Module:
    http://www.caiso.com/participate/Pages/LearningCenter/ComputerBasedTraining.aspx
FINANCE: 2021 GMC Revenue Requirement process kicks off July 2020

- Initial 2021 Budget Stakeholder Meeting: July 2020
- Internal Budget Process: July - Oct 2020
- Present Draft 2021 Budget to Board: Nov 2020
- 2021 Budget Stakeholder Call: Nov 2020
- Board Decision: Dec 2020
- 2021 Rates Posted: Dec 2020

New rates effective Jan 01, 2021
<table>
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<tr>
<th>DATE</th>
<th>ACTION</th>
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<tbody>
<tr>
<td>9/1/20</td>
<td>MRI-S portal opens to submit 2019 MWhs for 2021 RC service charges</td>
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<td>9/30/20</td>
<td>RC Customer’s deadline to submit 2019 NEL/NG MWh in MRI-S</td>
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<td>10/30/20</td>
<td>RC West publishes Information Statements, which lists volumes provided in MRI-S for review prior to invoicing</td>
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<td>11/30/20</td>
<td>RC Customer’s deadline to validate volumes on Information Statement</td>
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<td>1/4/21</td>
<td>RC West publishes RC Services Statement &amp; Invoice</td>
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<td>2/3/21</td>
<td>RC Customer payment due date</td>
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<td>» Federal entity payments are due monthly in 1/12 increments</td>
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Update: RC West Operations

Tim Beach
Director, Reliability Coordination

Ginger Quintavalla
Manager, Customer Experience

Michael Martin
Sr Advisor, Market Operations

Rachel Lucas
Operations Compliance Analyst
RC West  Operations and COVID-19 Update

• Operations
  – Oscillation Event April 28th

• COVID-19
  – No CAISO/RC West staff have been diagnosed with the Novel Coronavirus (COVID-19)
  – COVID-19 and Antibodies testing has not been available
  – Operating measures and posture
RC West Measures and Operating Posture

• Changed to a 5 week rotation
  – This pre-positions for lost staff
  – RCs do not rotate between control centers
  – Control Room access limited to RCs, BA Operators, IT for priority items, and cleaning staff
  – Health checks before entering

• 6 Step RC Reduced Staffing Plan
• Converted simulation room into 3rd control room
• Training sessions held remotely
• Developed sequester plan
• Coordinating with CAISO’s general staff return to work plan
RC West Return to Normal

- Subject to change

- CAISO general staff population to return to work in phases starting June 1st (projected)

- Operating posture will not change
  - Control Room access restricted to Operations Staff, IT Staff to address priority items, and cleaning crew
  - Training to be held remotely
  - Control Room entry health screening to continue
  - And will remain in this operating posture until a vaccine is administered or herd immunity is known
RC Procedures Update

• Procedures scheduled to Publish:
  – RC0460 – RC Restoration Plan and attachments – Scheduled to Publish 5/22/20
  – RC0650 - Steady-State and Dynamic System Model Validation: NERC MOD-033-1 – Scheduled to Publish 5/12/20

• Recently Published Procedures:
  – RC0410 - System Emergencies – Effective 4/21/20
  – RC0430 - GMD Operating Plan – Effective 4/21/20
  – RC9130 - Path 61/Lugo-Victorville IROL – 4/07/20

• Procedures planned for Q2 review:
  – RC0110 Communications Protocols
  – RC0330 Coordination with Neighboring RCs
  – RC0330A List of Ties with Neighboring RCs
  – RC9000 Open Loop Guideline
  – RC9010 Unscheduled Flow Mitigation on Qualified Paths
RC Metrics Q1 – State Estimator Quality

• SE Residual Error – MW flow on 500kV, 345kV/230kV lines
• Observed significant improvement on 500kV line accuracy
• 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.*

![Graph showing SE Residual MW Totals on 500kV Lines Q1 2020](image1)

![Graph showing SE Residual MW Totals on 345kV/230kV Lines Q1 2020](image2)
RC Metrics Q1 – State Estimator Quality

- SE Residual Error – MVAR flow on 500kV, 345kV/230kV Facilities
- Some improvement observed in Q1 on both facilities
- **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.
Day Ahead Contingency Analysis (DACA) tool is designed to identify potential contingencies in the day ahead timeframe.
RC Metrics Q1 – RTCA Non-Converged Contingencies

- Count of RTCA Non-Converged Contingencies in five minute intervals
- Averaging close to nine (9) non-converged contingencies every run
- Note: Over 8,500 contingencies are solved in every RTCA solution

![Average Count of RTCA Non-Converged Contingencies Q1 2020](image)
RC Metrics Q1 – CIDI/Issue Resolution Progress

CIDI Tickets

- January: Opened (85), Closed (70), Average Days to Close (10)
- February: Opened (40), Closed (80), Average Days to Close (5)
- March: Opened (50), Closed (55), Average Days to Close (3)
- April: Opened (60), Closed (45), Average Days to Close (2)
RC Issue Support Structure

RC Working Groups

1. Data Exchange
   Liaisons: Rachel Lucas, Tricia Johnstone

2. HANA
   Liaisons: Aung Oo, Rada Ristanovic

3. Ops Planning
   Liaisons: Dede Subakti

4. Real Time Ops
   Liaisons: Tim Beach

5. Training
   Liaisons: Tami Elliott

   Liaisons: Tricia Johnstone

Data Exchange Queue
Hana Queue
Ops Planning Queue
Real Time Ops Queue
Training Queue
Emergency Prep. Queue

CIDI System

• Each Liaison manages their WG queue

General pool of all other CIDI tickets (EIM, SCs, General RC, etc.)

Phone Calls
Email
Meeting Action Items
Customer Submitted
Working Group Updates
Real-Time Operations Working Group

Tim Beach
Director, Reliability Coordination
RTWG Wide-Area View Situational Awareness (WAVSA) Ad-hoc Task Force

Scope

• The intent of WAVSA is to provide a consistent platform to share overview and custom displays

• Task force is comprised of RC members, RC West operational and RC West IT staff

• The deliverable is to shepherd development of the initial display sets as well as a long-term process to manage displays review, and building

• PI Vision is a product of OSI Soft (replacement for Proc-Book)
WAVSA-TF Next Steps

- TF-Kickoff held May 4\textsuperscript{th}
- Provision TF members for PI-Vision
- TF members to develop mock-up for trail display
- RC West to replicate RC BA performance displays
- RC West to develop framework for user guide and training plan
- Next Meeting May 18th
Operations Planning Working Group

Dede Subakti
Director, Operations Engineering Services
OPWG Activities

• Retirement of SDGE IROL:
  – With transmission and generation upgrade in Southern California, the cutplanes become thermally limited instead of stability limited
  – RC West and the impacted entities, have agreed to retire the SDGE IROLs and retire these procedures RC09140 and RC09150

• PRC-012 Task Force
Transmission and Generation Upgrade in Southern California

- Synchronous Condensers (225 MVAR lagging and -121 MVA leading)
  - Santiago (3),
  - San Onofre (1),
  - San Luis Rey (2),
  - Talega (2),
  - Miguel (2)

- Suncrest SVC (-100 MVAR to 300 MVAR (capacitive))

- New 230kV TL23071 from Sycamore Canyon to Penasquitos

- New Vincent – Miro Loma 500 kV line

- New Huntington Beach 2X1 combined cycle unit

- Two phase shifters on TL23050 line
2020 Summer Assessment Results

• Observed Historical Import level (All Line In Service):
  • 2018 3450 MW
  • 2019 3250 MW
• Study Results for 2020:
  • Thermal limit happens around 3300 MW (N-1 loss of Miguel bank
    overload the other bank and for the loss of TL50002 overload S Line
  • Based on Cascading test, there is no thermally limited IROL as well.
  • SDGE/CENACE N-1-1 stability limit is found at 4150 MW
• Conclusion:
  • No IROL was established based on summer assessment
  • Retire procedure RC9140 and RC9150
  • CAISO BA to update Procedure 7820 to reflect mitigation and
    monitoring for thermal limitation
PRC-012: New RAS Review Process

- RC West is coordinating with other RCs through WECC RAS RS

- Interim process of submission submit to ISORC@caiso.com with Subject “PRC-012 RAS submission” one month prior to WECC RAS RS

- During 2020, all submission will be forwarded to WECC RAS RS

- Permanent process is being developed via this PRC-012 Task Force
PRC-012 Task Force Status

• Comments Review and Discussion of three new Procedures
  – RC0690
  – RC0690A
  – RC0690B

• Next Steps:
  – Drafts available for comment period 5/4-5/18
  – Next PRC-012 webinar will discuss further details based on comments
Potential Future Work for OPWG

• Annual review and update to:
  – RC0610: SOL Methodology
  – RC0620: OPA Process
  – RC0630: Outage Coordination Process
Data Exchange Working Group

Tricia Johnstone
Director, Operations Compliance and Controls
IRO-010 Data Specification – proposed updates

• RC0120 – IRO-010 Guidance
  – Expanded 6.1 to include default Load P\text{fixed} and Q\text{fixed} values

• RC0120A – IRO-010 Specification
  – Added new request - 6.25 for the Dynamic Model for Transient Stability Analysis
    • Same GE PSLF format that is being submitted to WECC base case development, with mapping between the EMS model and the GE PSLF dynamic model
  – Effective date of 9/1/2020
Model Process Updates

- FNM Monthly Model process working well
- March and April models implemented successfully
- Timelines, Tools, Templates and Scoping clarifications
- All model changes are processed through RIMS tool
- Model Validation enhancements from vendors to improve model quality
- Western Interconnection Model data library
- Solution Quality ↔ Model Data validation
HANA Customer Partnership Group

Ankit Mishra
Sr Advisor, EMS Power Technology Engineer
HANA CPG Activities

HANA Status Updates
- Status of HANA
- CAISO updates
- Open comments

Review of CIDI
- Review of CIDI
- Categorization of issues
- Prioritization

Enhancements
- Some issues are enhancements
- Voting and prioritization of enhancements
Training Working Group

Tricia Johnstone
Director, Operations Compliance and Controls
TWG Activities

• Delayed – 2020 TOP Restoration Drills
  – Northwest Area A: every Tues for 6 weeks- Jul 21 to Aug 25
  – Southwest Area B: every Wed for 6 weeks- Sep 16 to Oct 21
  – California Area C: every Fri for 6 weeks- Sep 18 to Oct 23

• 2020 GOP Restoration Exercises
  – March 13 (completed)
  – September 9

• Scheduling 2021 Restoration Exercises

• Soliciting input re: additional training topics
## Upcoming Working Group and Oversight Committee Meetings

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<th>Working Group</th>
<th>Dates</th>
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<tr>
<td>Data Exchange</td>
<td>April 16, Sept 17</td>
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<tr>
<td>Emergency Prep. &amp; Power System Restoration</td>
<td>June 17</td>
</tr>
<tr>
<td>HANA CPG</td>
<td>March 17, April 21, May 19, June 16, July 21, Aug 18, Sept 15, Oct 20, Nov 18, Dec 15</td>
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<tr>
<td>Operations Planning</td>
<td>Jan 23, April 21, Jul 23, Oct 22</td>
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<tr>
<td>Oversight Committee</td>
<td>Feb 27, May 12, Aug 19, Nov 10</td>
</tr>
<tr>
<td>Real-Time Operations</td>
<td>Jan 21, Feb 18, March 17, April 21, May 19, June 16, July 21, Aug 18, Sept 15, Oct 20, Nov 18, Dec 15</td>
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<tr>
<td>Training</td>
<td>Feb 6, May 7, Aug 6, Nov 12</td>
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Future Agenda Items

• Determine agenda topics for next public session on August 19, 2020 (webinar)
New RC West Regulatory Liaison

- Welcome Commissioner Mary Throne, Wyoming Public Service Commission
Open for Public Comments
Public Session Adjourned