

 California ISO	Reliability Coordinator Procedure	Procedure No.	RC0140
		Version No.	1.1
		Effective Date	7/01/2019
Guidelines for Sending Messages Across RC Seams		Distribution Restriction: None	

Table of Contents

Purpose	2
1. Responsibilities	2
2. Scope/ Applicability	2
2.1. Background	2
2.2. Scope	3
2.3. Applicability	3
3. Messaging Guidelines	3
3.1. WECC-WIDE Messaging	3
3.2. Regional Messaging	6
3.3. Questions and Comments	7
4. Supporting Information	7
Operationally Affected Parties	7
References	7
Definitions	8
Version History	8
5. Periodic Review Procedure	8
Review Criteria & Incorporation of Changes	8
Appendix	8

 California ISO	Reliability Coordinator Procedure	Procedure No.	RC0140
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Purpose

This document is to provide guidance to applicable functional entities on expectations for sending messages across the RC seams in the Western Interconnection.

1. Responsibilities

All of the following entities who have access to the California ISO RC West (RC West) GMS and the SPP R-Comm messaging tools have responsibilities for sending reliability messages via the GMS tool in accordance with these guidelines:

- Balancing Authorities (BA),
- Transmission Operators (TOP), and
- Reliability Coordinators (RC).

2. Scope/ Applicability

2.1. Background

Starting on December 3, 2019, there will be five Reliability Coordinators operating in the Western Interconnection. Those five Reliability Coordinators will be:

1. AESO – Alberta Electric System Operator,
2. BC Hydro – British Columbia Hydro,
3. Gridforce – Gridforce Energy Management,
4. RC West – California Independent System Operators (RC West), and
5. SPP – Southwest Power Pool.

Several of the RCs, AESO, BC Hydro, and RC West (along with their member entities), have agreed that to use the same messaging platform, an application called Grid Messaging System (GMS). SPP will use a custom messaging application called the Reliability Communication Tool (R-Comm). An interface will be created by RC West and SPP whereby both messaging tools (GMS and R-Comm) will communicate with each other. RC West and SPP have also created a communication protocol whereby neighboring BA/TOP entities that lie across the RC West/SPP RC Seam may send messages to each other using GMS and R-Comm.

In the interim, starting July 1, 2019, if an RC West BA/TOP sends a message that impacts neighboring RC areas in the Western Interconnection, the RC West RC will copy that message and broadcast a duplicate of that message over the PEAK RMT Tool. RC West will also monitor the Peak RMT Tool and post messages to GMS for the RC West BAs and TOPs.

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2.2. Scope

This document will focus on providing guidance on the types of messages that will be sent across the RC West/SPP RC seam starting on December 3, 2019. This document will also discuss the process of including the SPP RC as a recipient on messages that could impact the reliability of the Western Interconnection and provide guidance on how BAs and TOPs that lie on the RC West/SPP seam can send messages to a neighboring BA/TOP that may reside in a neighboring RC's footprint with the messaging applications available to them.

2.3. Applicability

This document is applicable to all BAs and TOPs who fall under the following RC footprints, and who may need to send a message to provide information on the reliability of the Western Interconnect:

- AESO RC,
- BC Hydro RC,
- Gridforce,
- RC West, and
- SPP RC.

3. Messaging Guidelines

3.1. WECC-WIDE Messaging

There are twenty types of messages that all, BAs, TOPs and RCs in the Western Interconnection will use to send WECC-Wide reliability messages. The RC-RC Messaging Working Group will create templates of these WECC-Wide message types. GMS Users, along with the SPP RC, will be a recipient of these twenty types of messages, additionally, GMS or R-Comm Users will be able to send WECC-Wide messages, with the exception of GMD and Time Error Correction messages. Only RCs will be able send GMD and Time Error Correction messages. WECC-Wide messages will be outgoing informational messages only. There will be no functionality to acknowledge, comment or respond to any message sent using a WECC-Wide Template. The twenty WECC-Wide messages are listed in the table below:


Type of Message	Definition of the type message When that message should be sent
EEA	<u>Emergency Energy Alert</u> Send EEA to notify everyone in the Western Interconnection of capacity emergencies.

 California ISO	Reliability Coordinator Procedure	Procedure No.	RC0140
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Type of Message	Definition of the type message When that message should be sent
Evacuation	<p><u>Evacuation</u></p> <p>Send Evacuation messages to notify everyone in the Western Interconnection that an entity has evacuated (or returned to) its primary control center.</p>


Type of Message	Definition of the type message When that message should be sent
Forced Outage	<p><u>Forced Outage</u></p> <p>Send Forced Outage to notify everyone in the Western Interconnection that a forced outage has occurred that could cause a transmission emergency, insecure operating state or impact to the IROL.</p>
Frequency Excursions	<p><u>Frequency Excursions</u></p> <p>Send Frequency Excursion messages when the frequency passes a Frequency Trigger Level (+/- .068 Hz).</p>
Informational	<p><u>Informational</u></p> <p>Send Informational messages any time an entity has relevant information that would aid in the safe and reliable operation of the Western Interconnection.</p>
Potential Open Loop	<p><u>Potential Open Loop</u></p> <p>Send Potential Open Loop messages when a forced outage occurs on the 500 kV system, causing an entity to be a single Contingency away, or a RAS operation that could potentially cause an Open Loop condition. An Open Loop condition exists when the path on the West side of the Western Interconnection is open. Operating in an Open loop condition could potentially cause excessive unscheduled flow through the east side of the interconnection to serve load in the Southwest and southern California.</p>
Open Loop	<p><u>Open Loop</u></p> <p>Send Open Loop messages when a forced outage causes the Western Interconnection to operate under Open Loop conditions. An Open Loop condition exists when the path on the West side of the Western Interconnection is open. Operating in an Open Loop condition could potentially cause excessive unscheduled flow through the east side of the interconnection to serve load in the Southwest and southern California</p>

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Type of Message	Definition of the type message When that message should be sent
RAS	<p><u>Remedial Action Scheme</u></p> <p>Send Remedial Action Scheme messages to update the status of Remedial Action Schemes.</p>

Type of Message	Definition of the type message When that message should be sent
Restoration	<p><u>Restoration</u></p> <p>Send Restoration messages to initiate and provide updates on the status of restoration operations when a RC or TOP restoration plan is utilized.</p>
RMO	<p><u>Restricted Maintenance Operations</u></p> <p>Send Restricted Maintenance Operations messages to declare and provide updates on conservative (or “no touch”) operations.</p>
RSG	<p><u>Reserve Sharing Group</u></p> <p>Send Reserve Sharing Group messages to declare the initiation of, and provide updates on, Reserve Sharing Group actions,</p>
SOL/IROL	<p><u>System Operating Limits/Interconnection Reliability Operating Limits</u></p> <p>Send System Operating Limits messages when potential or actual SOL exceedances could impact neighboring RCs.</p> <p>Interconnection Reliability Operating Limits messages will be sent to inform neighboring RCs of an IROL limit change, to provide an alert to neighboring RCs that we are approaching IROL limits, and to notify neighboring RCs of potential or actual IROL exceedance.</p>
Suspected Sabotage	<p><u>Suspected Sabotage</u></p> <p>Send Suspected Sabotage messages to inform the Western Interconnection of suspected physical or cyber sabotage.</p>
Systems/Coms/Data	<p><u>Systems/Coms/Data</u></p> <p>Send Systems/Coms/Data messages whenever the loss of a member entity’s computer application, communication systems or ICCP data degrades situational awareness to a point that compromises an RC’s wide area view.</p>

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Type of Message	Definition of the type message When that message should be sent
Transmission Emergency	<u>Transmission Emergency Messages</u> Send Transmission Emergency messages when a Transmission Emergency could impact the reliability of the Western Interconnection. Fires are classified as a Transmission Emergency.
USF	<u>Unscheduled Flow</u> Send Unscheduled Flow messages to declare the initiation of, and provide updates for, USF operations.


Type of Message	Definition of the type message When that message should be sent
Voltage	<u>Voltage</u> Send Voltage messages on equipment 230 kV and above when voltage levels (either high or low) could impact the reliability of the Western Interconnection.
Weather	<u>Weather</u> Send Weather messages when extreme weather could threaten the reliability of the Western Interconnection.

Type of Messages only RCs can send	Definition of the type message When that message should be sent
GMD	<u>Geomagnetic Disturbances</u> Send Geomagnetic Disturbance messages when NOAA informs an RC in the Western Interconnection of a solar magnetic disturbance Warning, Alert, or Watch of a K-7 or higher.
Time Error Correction	<u>Time Error Correction</u> The Time Monitor (currently Peak RC, after December 3 will be RC West) will send Time Error Correction messages when the Western Interconnection enters, exits or updates a time error correction.

3.2. Regional Messaging

SPP and RC West have come up with the concept of Regional Messaging to facilitate the sending of messages between BAs and TOPs that reside along the RC West/SPP RC seam. SPP and RC

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West are creating an interface between the R-Comm and GMS messaging tools. They are also creating a common distribution list of all the BAs and TOPs that reside along the SPP/RC West RC seam, to be used in conjunction with the R-Comm/GMS interface. BAs and TOPs that reside across the SPP/RC West seam will be able to send a reliability message to a neighboring BA or TOP across the SPP/RC West RC seam by selecting the desired recipient from the distribution list. The R-Comm/GMS interface will recognize the recipient(s) selected from the distribution list and send the message to the appropriate recipient(s) on either side of the SPP/RC West seam.

The RC West RC will monitor all messages that are sent or received via the GMS tool. Any messages that require confidentiality should not be sent or received by the GMS Tool.

3.3. Questions and Comments

RC West will work with each entity to address questions and requests for clarification, or to address issues related to the technical nature of the data. All inquiries on messaging should be sent to the ISORC@caiso.com email.


4. Supporting Information

Operationally Affected Parties

AESO RC, BC Hydro RC, Gridforce, SPP RC, Peak RC, all Western Interconnection BAs and TOPs

References

NERC Requirements	
BA/TOP Operating Procedure	
Other References	RC0110 – Communications Protocols RC0130 -- Notification Requirements for Real-Time Events RC0330 -- Coordination with Neighboring Reliability Coordinators

 California ISO	Reliability Coordinator Procedure	Procedure No.	RC0140
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Definitions

The following terms capitalized in this Operating Procedure when used are defined below:

Term	Description
None	

Version History

Version	Change	Date
1.0	Approved by RC-RC Messaging Working Group.	4/04/2019
1.1	Minor updates to remove facility specific references and change distribution restriction to “none” for public posting.	5/01/19

5. Periodic Review Procedure

Review Criteria & Incorporation of Changes

The following operationally affected parties will be given an opportunity to review and provide feedback prior to any updated versions of this document is published:

- AESO RC
- BC Hydro RC
- Gridforce
- Peak RC
- RC West
- SPP RC

Frequency

Review at least once every three years.

Appendix

No appendices at this time.