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		Version No.	3.0
		Effective Date	6/24/2020
Guidelines for Sending Messages Across RC Seams		Distribution Restriction: None	

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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


There are four Reliability Coordinators operating in the Western Interconnection:

1. AESO – Alberta Electric System Operator,
2. BCRC – British Columbia Reliability Coordinator,
3. RC West – California Independent System Operator (RC West), and
4. SPP West RC – Southwest Power Pool

Several of the RCs - AESO, BC Hydro, and RC West (along with their member entities), have agreed to use the same messaging platform, an application called Grid Messaging System (GMS). SPP is using a custom messaging application called the Reliability Communication Tool (R-Comm). An interface has been created by RC West and SPP whereby both messaging tools (GMS and R-Comm) 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.

2.2. Scope

This document provides guidance on the types of messages that are sent across the RC West/SPP RC seams. This document also includes the process for 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 RC seams can send messages to a neighboring BA/TOP that may reside in a neighboring RC's footprint with the messaging applications available to them.

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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 Interconnection:


- AESO RC,
- BCRC,
- RC West, and
- SPP West 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 are using to send WECC-Wide reliability messages. The RC-RC Messaging Working Group helped create templates of these WECC-Wide message types. GMS Users, along with the SPP, are recipients of these twenty types of messages, additionally; GMS or R-Comm Users are able to send WECC-Wide messages, with the exception of the following messages:

- EEA
- Frequency Excursion
- GMD
- Potential Open Loop
- Open Loop
- SOL/IROL
- Time Error Correction, and
- USF


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Only RCs **are** able send **the types of messages listed above**. WECC-Wide messages **are** outgoing informational messages only. There **is** no **ability** 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	<p><u>Emergency Energy Alert</u></p> <p>Send EEA to notify everyone in the Western Interconnection of capacity emergencies.</p>
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>
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>
GMD	<p><u>Geomagnetic Disturbances</u></p> <p>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.</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>

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

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Type of Message	Definition of the type message When that message should be sent
	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.
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>
Transmission Emergency	<p><u>Transmission Emergency Messages</u></p> <p>Send Transmission Emergency messages when a Transmission Emergency could impact the reliability of the Western Interconnection. Fires are classified as a Transmission Emergency.</p>
USF	<p><u>Unscheduled Flow</u></p> <p>Send Unscheduled Flow messages to declare the initiation of, and provide updates for, USF operations.</p>
Voltage	<p><u>Voltage</u></p> <p>Send Voltage messages on equipment 230 kV and above when voltage levels (either high or low) could impact the reliability of the Western Interconnection.</p>
Weather	<p><u>Weather</u></p> <p>Send Weather messages when extreme weather could threaten the reliability of the Western Interconnection.</p>
Time Error Correction	<p><u>Time Error Correction</u></p> <p>The Time Monitor (RC West) will send Time Error Correction messages when the Western Interconnection enters, exits or updates a time error correction.</p>

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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 West **have created** an interface between the R-Comm and GMS messaging tools. A common distribution list of all the BAs and TOPs that reside along the SPP/RC West RC seam **has been created** to be used in conjunction with the R-Comm/GMS interface. BAs and TOPs that reside across the SPP/RC West seam **are** 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 recognizes the recipient(s) selected from the distribution list and sends the message to the appropriate recipient(s) on either side of the SPP/RC West seam.

The RC West RC 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

Shared with the Public and AESO RC, BC Hydro RC, SPP RC, and all Western Interconnection BAs and TOPs.

References

NERC Requirements	
BA/TOP Operating Procedure	
RC West Operating Procedures	RC0110 Communications Protocols RC0130 Notification Requirements for Real-Time Events RC0330 Coordination with Neighboring Reliability Coordinators

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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.	4/04/19
1.1	Minor updates to remove facility specific references and change distribution restriction to “none” for public posting.	5/01/19
2.0	Updated for November 1 release (Minor formatting and grammar updates along with RC West Logo).	11/01/19
3.0	Periodic review - Removed references to 2019 transition activities. Minor format and grammar updates.	6/24/20

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 major **process changes are implemented** in this document be published:

- AESO RC
- BCRC
- RC West
- SPP **West** RC

Frequency

Review at least once every three years.

Appendix

No appendices at this time.

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