California ISO	Reliability Coordinator Procedure	Procedure No.	RC0130
		Version No.	1.1
		Effective Date	7/01/2019
Notification Requirements for Real-Time Events		**Distribution Restriction: None**	

Table of Contents

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Purpose

Provide the notification requirements for events that occur in Real-time to ensure the Reliability Coordinator (RC) has accurate data and timely information necessary for Real-time monitoring and assessment of the Bulk Electric System (BES).

1. Responsibilities

- Balancing Authorities (BA)
- Transmission Operators (TOP)
- Reliability Coordinator

2. Scope/Applicability

NERC IRO-010-2 requires the RC to maintain a documented specification of the data necessary for the RC to perform Operational Planning Analyses, Real-time monitoring and Real-time Assessments; and provide these to applicable entities. The CAISO RC data specifications are addressed within two documents:

1. *IRO-010 Data Specifications*:
    - Addresses specifications for forecast data, resource commitment data, power system modelling data, scheduled outage data, Real-time telemetry data, procedures and documentation.
2. *RC0130 Notification Requirements for Real-time Events:*
    - Addresses Real-time transmission and balancing area *events* that require immediate notification to the RC operator by phone, the Grid Messaging System (GMS) and/or CAISO Outage Management System (OMS).

3. Procedure Detail

3.1. Real-time Transmission Events

TOP shall report any Real-time transmission events that affect the status or reliability of the BES, including but not limited to the following:

Item #	Event	Responsible Party	Medium	Time Requirement
3.1.1	Forced Outages of BES transmission facilities/equipment and non-BES facilities/equipment that impact the BES.	TOP	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable
3.1.2	Urgent Outages of BES transmission facilities/equipment and non-BES facilities/equipment that impact the BES.	TOP	OMS and Phone notification	As soon as practicable; with as much advanced notice as possible.
3.1.3	Any unplanned **telemetering and control equipment** outages of 30 minutes or more in duration[1]	BA or TOP	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable
3.1.4	Protective relay or equipment failure that reduces system reliability[2]	TOP	Phone notification or GMS	As soon as practicable
3.1.5	Forced Outage of BES Remedial Action Scheme (RAS), non-RAS automatic schemes, or protection systems when functionality is affected (i.e., when normal fault clearing zones are impacted) or	TOP	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable

[1] TOP-001-4 R9 (applicable to BA and TOP)
[2] PRC-001-1 R2.2 (applicable to TOP)

	Contingency definitions are impacted			
3.1.6	Any unplanned Facility Ratings changes[3]	TOP	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable

3.2. Real-time Balancing Events

BAs shall report any Real-time balancing and generation events that affect the status or reliability of the BES, including but not limited to the following:

Item #	Event	Responsible Party	Medium	Time Requirement
3.2.1	Any Forced Outage **generating unit derate** of > 50 MW reduction of available capacity (30 minutes or more in duration)	BA	OMS notification	As soon as practicable
3.2.2	Any Urgent Outages **generating unit derate** of > 50 MW reduction of available capacity (30 minutes or more in duration).	BA	OMS notification	As soon as practicable; with as much advanced notice as possible.
3.2.3	Any Forced Outage of a generation unit connected to BES ≥ 20 MVA gross nameplate rating or ≥ 75 MVA facility aggregate rating (30 minutes or more in duration)	BA	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable
3.2.4	Any Urgent Outage of a generation unit connected to BES ≥ 20 MVA gross	BA	OMS and Phone notification	As soon as practicable; with as much

[3] FAC-014-2 R2 (applicable to TOP)

Item #	Event	Responsible Party	Medium	Time Requirement
	nameplate rating or ≥ 75 MVA facility aggregate rating (30 minutes or more in duration).			advanced notice as possible.
3.2.5	Any forced **Automatic Voltage Regulator (AVR) or Power System Stabilizer (PSS)** outage (30 minutes or more in duration) on a BES facility	BA or TOP (if operating synchronous condenser)	OMS and phone call if no ICCP data available	As soon as practicable
3.2.6.	Any Forced Outage of a **Blackstart certified unit** (30 minutes or more in duration)	BA	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable
3.2.7	Inability to **calculate ACE** for more than 30 minutes[4]	BA	Phone notification to the RC & GMS.	Within 45 minutes of beginning inability to calculate ACE

3.3. Other Events

Other events that affect, or potentially affect, the reliability of the BES as listed below shall be reported by the affected BA and/or TOP:

Item #	Event	Responsible Party	Medium	Time Requirement
3.3.1	Actual or expected operations that result in, or could result in, an **Emergency or BES Emergency** (as defined in the NERC Glossary)[5]	BA or TOP	Phone notification or GMS	As soon as practicable

[4] BAL-005-1 R2 (applicable to BA)
[5] TOP-001-4 R8 (applicable to TOP)

Item #	Event	Responsible Party	Medium	Time Requirement
3.3.2	**SOL or IROL exceedance**, and actions taken to return system within limits[6]	BA or TOP	Phone notification or GMS	As soon as practicable
3.3.3	Viable **post-Contingency mitigation plan**[7]	BA or TOP	Phone notification or GMS	Within 30 minutes, if the pre-contingent exceedance cannot be mitigated by implementing the primary Operating Plan.
3.3.4	**Inability to perform an Operating Instruction** because the instruction cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements[8]	BA or TOP	Phone notification or GMS	As soon as practicable
3.3.5	**Inability to perform a Real-time Assessment (RTA)** within 30 minutes of the last RTA	BA or TOP	Phone notification to the RC or GMS message	As soon as practicable
3.3.6	NERC or DOE reportable event per CAISO procedure RC0420-Event Reporting	BA or TOP	Phone notification to the RC	As soon as practicable
3.3.7	Any Forced Outage that affects a WECC Path Total Transfer Capability (TTC) used as part of SOL or IROL mitigation plan; or affects a neighboring RC	BA or TOP	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable

[6] TOP-001-4 R15 (applicable to TOP)
[7] See RC0310-Mitigating SOL and IROL Exceedances Sections 3.6 and 3.7
[8] IRO-001-4 R2, R3 (applicable to BA and TOP)

Item #	Event	Responsible Party	Medium	Time Requirement
3.3.8	Any Urgent Outage that affects a WECC Path TTC used as part of SOL or IROL mitigation plan; or affects a neighboring RC	BA or TOP	Phone notification or GMS. (OMS required if 30 minutes or more in duration; even if submitted after the fact).	As soon as practicable
3.3.9	Any Forced Outage that reduces Reserve Sharing Group (RSG) deliverability	BA or TOP	Phone notification or GMS or ICCP	As soon as practicable

4. Supporting Information

Operationally Affected Parties

Shared with Public.

References

NERC Requirements	BAL-005-1 R2; PRC-001-1 R2.2; TOP-001-4 R8, R9, R15; IRO-001-4 R3; IRO-010-2
BA/TOP Operating Procedure	
Other References	CAISO IRO-010 RC Data Specifications CAISO RC0310 - Mitigating SOL and IROL Exceedances CAISO RC0420 - Event Reporting

Definitions

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

Term	Description
Forced Outage	Facility/equipment that is removed from service real-time with limited or no notice.
Urgent Outage	Facility/equipment that is known to be operable, yet carries an increased risk of a Forced outage occurring. Facility/equipment remains in service until personnel, equipment and/or system conditions allow the outage to occur.
Remedial Action Schemes (RAS)	A scheme designed to detect predetermined System conditions and automatically take corrective actions that may include, but are not limited to, adjusting or tripping generation (MW and MVar), tripping load, or reconfiguring a System(s). RAS accomplish objectives such as: • Meet requirements identified in the NERC Reliability Standards, • Maintain Bulk Electric System (BES) stability, • Maintain acceptable BES voltages, • Maintain acceptable BES power flows, and • Limit the impact of Cascading or extreme events. The following do not individually constitute a RAS: a. Protection Systems installed for the purpose of detecting Faults on BES Elements and isolating the faulted Elements, b. Schemes for automatic underfrequency load shedding (UFLS) and automatic undervoltage load shedding (UVLS) comprised of only distributed relays, c. Out-of-step tripping and power swing blocking, d. Automatic reclosing schemes, or e. Schemes applied on an Element for non-Fault conditions, such as, but not limited to, generator loss-of-field, transformer top-oil temperature, overvoltage, or overload to protect the Element against damage by removing it from service. (See NERC Glossary for continued definition)

Term	Description
System Operator on mitigating System Operating Limit (SOL)	The value (such as MW, MVar, amperes, frequency or volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. System Operating Limits are based upon certain operating criteria. These include, but are not limited to: • Facility Ratings (applicable pre- and post-Contingency Equipment Ratings or Facility Ratings), • Transient stability ratings (applicable pre- and post-Contingency stability limits), • Voltage stability ratings (applicable pre- and post-Contingency voltage stability), and • System voltage limits (applicable pre- and post-Contingency voltage limits).
Interconnection Reliability Operating Limit (IROL)	A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System.
Reliability Coordinator (RC) Area	The collection of generation, transmission, and loads within the boundaries of the Reliability Coordinator. Its boundary coincides with one or more Balancing Authority Areas.

Version History

Version	Change	Date
1.0	Approved by Steering Committee.	9/26/18
1.1	Section 3.3, Item 3.3.5: Replaced RMT with GMS..	11/19/18

5. Periodic Review Procedure

Appendix

No references at this time.