



California ISO

Generator Contingency and Remedial Action Scheme Modeling Implementation Plan

Version 1.0

January 24, 2019

Contents

Revisions	3
Introduction	4
Executive Summary.....	4
Project Description.....	4
Implementation Strategy	5
Implementation Schedule Overview	5
Web Services.....	5
Implementation and Activation Timeline	6
Implementation Timeline	6
Implementation Times, Outages, and Market Participant Actions	6
CRR – January 31, 2019.....	6
Market (IFM/RTN/BAAOP) – February, 2019.....	6
Communication and Support.....	7
Market Notices.....	7
Routine Issues and Support	7

Revisions

Date	Version	Description	Author
01/24/2019	1.0	Initial for GCARM	Trang Deluca

Introduction

Executive Summary

The California ISO will implement multiple system changes for the Generator Contingency and Remedial Action Scheme Modeling project. The intent of this document is to provide market participants with a description of the timeline and activities for GCARM.

Project Description

The ISO approximately represents constraint impacted by generator contingencies and Remedial Action Scheme (RAS) operation outside the market through manual intervention or in the market using static nomograms which are not optimal.

ISO therefore intends to enhance the Security Constrained Economic Dispatch (SCED) to:

- 1) Model generation/load loss in the dispatch
- 2) Model transmission loss along with subsequent generation/load loss due to RAS operation in the dispatch
- 3) Model transmission reconfiguration due to RAS operation in the dispatch

The generator contingency and remedial action scheme modeling proposal for the day-ahead and real-time markets reserves transmission capacity to account for the change in flows caused by the loss of generation/load. When generation/load is lost, the system has an immediate response whereby all frequency response enabled resources on the system automatically increase their output to compensate for the load and supply imbalance. The loss of the generator/load and the system response to the loss of the generator/load creates dramatically different flows on the system in the post-contingency state. The purpose of this initiative is to ensure that if the contingency were to happen, the resulting flows would not be greater than the emergency ratings on any transmission elements in the system. The proposal seeks to reserve enough transmission capacity in the right places to ensure that no transmission element would be loaded above its emergency rating if the contingency were to occur.

The functionality in this proposal does not reserve generation capacity.

More information can be found under Independent 2019 on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Implementation Strategy

Implementation Schedule Overview

The system changes will be implemented in a phased manner. The system changes will be implemented/activated according to the following drops and dates.

Description	Implementation
Preliminary GCARM Contingency Definitions Published	January 9, 2019
CRR FNM Publication for March 2018 – Initial	January 28, 2019
CRR Code Implementation	January 31, 2019
CRR FNM Publication for March 2018 – Final	February 6, 2019
Market (IFM/RTN/BAAOP) Code Deployment	February 2019
Activation/Effective Trade Date	March 1, 2019

The strategy of spreading the implementation over time is in the interest of minimizing impact on resources and is consistent with implementation strategies for previous major implementations. Some of these implementations will require brief outages. See *Implementation Times, Outages, and Market Participant Actions* section of this document for times and durations for each application.

The technical details for these system changes can be found on the GCARM site located at: <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Web Services

Refer to the System Access Information document and System Interface Change Summary document for details about specific URLs:

- http://www.caiso.com/Documents/SystemAccessInformation_MarketParticipants.pdf
- <http://www.caiso.com/Documents/SystemInterfaceChangeSummary.pdf>

N/A for GCARM

Implementation and Activation Timeline

GCARM is scheduled for implementation across multiple dates. Each Implementation may incur outages of varying lengths to specific systems. The table below highlights the systems that will be impacted by each implementation and provides relevant details for market participants.

Implementation Timeline

Date	Implementation Information	Status
January 9, 2019	Preliminary GCARM Contingency Definitions Published	Complete
January 28, 2019	CRR FNM Publication for March 2018 – Initial	On-Track
January 31, 2019	CRR Code Implementation	On-Track
February 6, 2019	CRR FNM Publication for March 2018 – Final	On-Track
February 2019	Market (IFM/RTN/BAAOP)	On-Track
March 1, 2019	Activation/Effective Trade Date	On-Track

Implementation Times, Outages, and Market Participant Actions

CRR – January 31, 2019

System	Implementation Time	Outage	MP Action
CRR	9:00 AM to 10:00 AM	CRR Unavailable	N/A

All times are Pacific

Market (IFM/RTN/BAAOP) – February, 2019

System	Implementation Time	Outage	MP Action
Market (IFM/RTN/BAAOP)	TBD	Brief interruption for BAAOP UI/API	N/A

All times are Pacific

Communication and Support

Below is the GCARM communication schedule:

Description	Method	Frequency	Responsible
GCARM Implementation Market Notice	E-mail www.caiso.com	As Needed	ISO
Release Users Group (RUG)	(866) 528-2256 5251941	Every Other Week	ISO

Market Notices

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Routine Issues and Support

All normal support processes should be followed for support functions. The ISO Help Desk can be reached at (916) 351-2309.