California ISO

Business Requirements Specification

RC Forecast and Schedules Data Reporting Automation

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1 Introduction

1.1 Purpose

The purpose of this document is to capture and record a description of what the Users and Business Stakeholders of the project wish to obtain, by providing high level business requirements. This document establishes the basis for the agreement between the initiators and implementers of the project. The information in this document serves as input to determine the scope of projects and all Business Process Modeling and System Requirements Specifications (SRS) efforts.

Business requirements are what must be delivered to provide value for the Users and Business Stakeholders. Systems, software, and processes are the ways (how) to deliver, satisfy, or meet the business requirements (what).

- Initial BRS: The Initial BRS will provide sufficient information to determine the scope of the project and will provide the functional business requirements needed to make the Architecture Decision.
- Final BRS: Following the Architecture Decision, the remaining non-functional business requirements, such as data, performance, web services, and security can be added to complete the Final BRS.

Background:

The purpose of this project is to implement an externally-facing reporting functionality based on load forecast, generation forecast, and contingency reserve data that is submitted daily from Reliability Coordinator (RC) customers and adjacent RCs. This reporting functionality should show the entity which errors for lack of submission are present. This data is requested as a part of the North American Electric Reliability Corporation (NERC) Standard IRO-010 in order for RC West to run operational performance analysis in accordance with NERC Standards IRO-008 and TOP-002. Phase One is focused on reporting automation to show RCs and adjacent RCs which errors for lack of submission are present, and Phase Two is focused on validation notifications that extend RCs and adjacent RCs visibility for clearing such errors.

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2 Intellectual Property Ownership

Intellectual Property covers a broad array of information and materials, including written works, computer programs, software, business manuals, processes, symbols, logos and other work products. Determining ownership of Intellectual Property is very important in preserving the rights of the California ISO, and helps to avoid Intellectual Property infringement issues. In considering the business requirements or service requirements to be performed, the business owner of the project must determine Intellectual Property Ownership.

2.1 Guidelines

Intellectual Property ownership must be considered by all applicable stakeholders before the services are performed. The level of analysis is two-fold:

- One, the business owner must determine if the Intellectual Property necessary to perform the services is owned by the California ISO or whether it must be obtained from a third party. Once the California ISO has secured the proper Intellectual Property rights to perform the services (i.e., the Intellectual Property is owned by the California ISO or we have licensed it from a third party), the California ISO can undertake the next step.
- The second step in the analysis is to consider whether new Intellectual Property will be created as a result of the business requirements or service requirements to be performed, and how that Intellectual Property will be owned and protected by the California ISO.

In order to assist the business owner in the analysis previously described, refer to the California Intellectual Property Policy available at: http://www.caiso.com/rules/Pages/LegalPoliciesNotices/Default.aspx, which provides a brief tutorial on what Intellectual Property is and how the California ISO can protect its Intellectual Property. Contact the Legal Department if you have any questions regarding Intellectual Property.

There are no impacts to intellectual property based on the requirements stated in this document.

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2.2 Acronyms and Definitions Table

Acronym	Definition
ALFSWS	Automated Load Forecast System Web Services
BA	Balancing Authority
BSAP	Base Schedule Aggregation Portal
CMRI	CAISO Market Results Interface
MW	Megawatt
NERC	North American Electric Reliability Corporation
PT	Pacific Time
RC	Reliability Coordinator
RCBSAP	Reliability Coordinator Base Schedule Aggregation Portal

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3 Details of Business Need/Problem

3.1 Description

Business Opportunity/Problem Statement:	
What:	The externally-facing reporting functionality based on load forecast, generation forecast, and contingency reserve data that is submitted daily from Reliability Coordinator (RC) customers and adjacent RCs data is requested as a part of the North American Electric Reliability Corporation (NERC) Standard IRO-010 in order for RC West to run operational performance analysis in accordance with NERC Standards IRO-008 and TOP-002.
When:	Refer to Release Users Group (RUG) postings for up-to-date implementation dates for each phase.
Why do we have this opportunity/problem:	Is part of the North American Electric Reliability Corporation (NERC) Standard IRO-010 in order for RC West to run operational performance analysis in accordance with NERC Standards IRO-008 and TOP-002.
Who does this opportunity/problem impact:	RC Customers and adjacent RCs. Operations Compliance and Controls.

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4 Business Impacts

4.1 Business Practice Manual (BPM)

BPM	Description of Impact(s)
BPM Change Management	Not Impacted
Candidate CRR Holder Registration	Not Impacted
Compliance Monitoring	Not Impacted
Congestion Revenue Rights	Not Impacted
Credit Management and Market Clearing	Not Impacted
Definitions & Acronyms	Not Impacted
Demand Response	Not Impacted
Direct Telemetry	Not Impacted
Distributed Generation for Deliverability	Not Impacted
Energy Imbalance Market (EIM)	Not Impacted
Generator Interconnection and Deliverability Allocation Procedures	Not Impacted
Generator Interconnection Procedure (GIP)	Not Impacted
Generator Management	Not Impacted
Managing Full Network Model	Not Impacted
Market Instruments	Not Impacted
Market Operations	Not Impacted
Metering	Not Impacted
Outage Management	Not Impacted
Reliability Coordinator Services	Not Impacted
Reliability Requirements	Not Impacted
Rules of Conduct Administration	Not Impacted
Scheduling Coordinator Certification and Termination	Not Impacted

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4.2 Other

Impact:	Description: (optional)
Market Simulation	No
Market Participant Impact	**Yes** RC Customers and adjacent RCs. Release note specifying information to participants.
User Acceptance Testing (UAT)	**Yes** Accuracy of notifications and reporting.
Internal Training	**Yes** Train users of reported data.
External Training	**Yes** User trainings for searching, filtering, sorting CMRI reports.
Policy Initiative	Not Applicable
Vendor	**Yes**
Architectural Framework and Roadmap	Design will follow existing architectural framework and will align with the roadmap.

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5 Business Requirements

The sections below describe the Business processes and the associated business requirements involved in the project. These may represent high-level functional, non-functional, reporting, and/or infrastructure requirements. These business requirements directly relate to the high-level scope items determined for the project.

5.1 Business Process: Manage Day Ahead Market - Automated Load Forecast System Web Services (ALFSWS)

5.1.1 Business Requirements

ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ001	Every morning at 10:00AM PT the system must process and report on the "load forecast submission data issues" for a forecast horizon up to the next 7 days, for the following issues: • 0 MW by submitted interval • Gaps or lack of submission of hourly values for load forecast data	Core Phase One	ALFSWS
FDRA – BRQ002	Every hour the system shall report on all successful load forecast submissions and report on: • Submission Time • ForecastZone • Certificate User ID • Start/end date • Start/end time of the data set	Core Phase One	ALFSWS

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ003	Load Forecast validation results should be sent back to the customer in an automated fashion. Every morning at 10:00AM PT the system must process and report on the “load forecast submission data issues” for a forecast horizon up to the next 7 days, for the following issues: • 0 MW by submitted interval • Gaps or lack of submission of hourly values for load forecast data	Core Phase Two	ALFSWS, Central Notification System

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5.2 Business Process: Manage Day Ahead Market – Base Schedule Aggregation Portal (BSAP)

5.2.1 Business Requirements

ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ004	Every morning at 10:00AM PT the system must process and report on the "gen forecast submission data issues" for the next 7 days for the DA submission data, for the following issues: 1. Sum of Balancing Authority (BA) generation forecast equal to 0 MW for any hour of data checks 2. Gaps in hours of gen forecast data due to no submission (no submission for the hour) 3. Gaps in hours of gen forecast data due to invalid submissions (All submissions for the hour are invalid)	Core Phase One	BSAP
FDRA – BRQ005	Every Hour the system shall report on all successful gen forecast submissions and report on: • Submission Time • BA • Certificate User ID • Start/end time of the data set • Market type	Core Phase One	BSAP

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ006	Generation forecast validation results should be sent back to the customer in an automated fashion. Every morning at 10:00AM PT the system must process and report on the “gen forecast submission data issues” for the next 7 days for the DA submission data, for the following issues: 1. Sum of BA generation forecast equal to 0 MW for any hour of data checks 2. Gaps in hours of gen forecast data due to no submission (no submission for the hour) 3. Gaps in hours of gen forecast data due to invalid submissions (all submission for the hour are invalid)	Core Phase Two	BSAP, Central Notification System
FDRA – BRQ007	Generation forecast validation results should be sent back to the customer in an automated fashion. Every hour at XX:50 the system must process and report on the “gen forecast submission data issues” for the next four hours of the current day for the RT submission data for the following issues: 1. Sum of BA generation forecast equal to 0 MW for any hour of data checks 2. Gaps in hours of gen forecast data due to no submission (no submission for the hour)	Core Phase Two	BSAP, Central Notification System

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5.3 Business Process: Manage Real Time Operations – Transmission & Electric System - Reliability Coordinator Base Schedule Aggregation Portal (RCBSAP)

5.3.1 Business Requirements

ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ008	Every morning at 10:00AM PT the system must process and report on the "gen forecast submission data issues" for the next 7 days for the DA submission data, for the following issues: 1. Sum of BA generation forecast equal to 0 MW for any hour of data checks 2. Gaps in hours of gen forecast data due to no submission (no submission for the hour) 3. Gaps in hours of gen forecast data due to invalid submissions (all submission for the hour are invalid)	Core Phase One	RCBSAP
FDRA – BRQ009	Every Hour the system shall report on all successful gen forecast submissions and report on: • Submission Time • BA • Certificate User ID • Start/end time of the data set • Market type	Core Phase One	RCBSAP

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ010	Generation forecast validation results should be sent back to the customer in an automated fashion. Every morning at 10:00AM PT the system must process and report on the "gen forecast submission data issues" for the next 7 days for the DA submission data, for the following issues: 1. Sum of BA generation forecast equal to 0 MW for any hour of data checks 2. Gaps in hours of gen forecast data due to no submission (no submission for the hour) 3. Gaps in hours of gen forecast data due to invalid submissions (all submission for the hour are invalid)	Core Phase Two	RCBSAP, Central Notification System
FDRA – BRQ011	Generation forecast validation results should be sent back to the customer in an automated fashion. Every hour at XX:50 the system must process and report on the "gen forecast submission data issues" for the next four hours of the current day for the RT submission data for the following issues: 1. Sum of BA generation forecast equal to 0 MW for any hour of data checks 2. Gaps in hours of gen forecast data due to no submission (no submission for the hour)	Core Phase Two	RCBSAP, Central Notification System

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5.4 Business Process: Manage Day Ahead Market – CAISO Market Results Interface (CMRI)

5.4.1 Business Requirements

ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ012	System must report the successfully submitted Load Forecast information and provide the ability for only the submitting BA or Neighboring RC to view.	Core Phase One	CMRI
FDRA – BRQ013	System must report the successfully submitted Gen Forecast information and provide the ability for only the submitting BA or Neighboring RC to view.	Core Phase One	BSAP RCBSAP
FDRA – BRQ014	System must report the successfully submitted contingency reserve information and provide the ability for only the submitting BA or Neighboring RC to view.	Core Phase One	CMRI
FDRA – BRQ015	Every hour the system shall report on all successfully submitted contingency reserve information and report on: • Submission Time • BA • Certificate User ID • Start/end time of the data set • Contingency type – Available/Requirement	Core Phase One	CMRI
FDRA – BRQ016	System must report the successfully submitted Load Forecast data issues and provide the ability for only the submitting BA or Neighboring RC to view.	Core Phase One	CMRI

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ017	System must report the successfully submitted Gen Forecast data issues and provide the ability for only the submitting BA or Neighboring RC to view.	Core Phase One	BSAP RCBSAP
FDRA – BRQ018	System must report the successfully submitted Contingency Reserve data issues and provide the ability for only the submitting BA or Neighboring RC to view.	Core Phase One	CMRI
FDRA – BRQ019	System must retain the reporting data for a Calendar Year.	Core Phase One	CMRI
FDRA – BRQ020	Contingency reserve forecast validation results should be sent back to the customer in an automated fashion. Every morning at 10:00AM PT the system must process and report on the “contingency reserve forecast submission data issues” for the next seven days for the DA submission data, for the following issues: 1. Gaps in hours of contingency reserve requirement forecast data due to no submission (no submission for the hour) 2. Gaps in hours of contingency reserve availability forecast data due to no submission (no submission for the hour)	Core Phase Two	CMRI, Central Notification System

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ021	Every morning at 10:00AM PT the system must process and report on the “contingency reserve submission data issues” for the next 7 days for the DA submission data on gaps in hours of contingency reserve requirement or availability data (no submission for the hour).	Core Phase One	CMRI

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5.5 Business Process: Manage Day Ahead Market – Central Notification System

5.5.1 Business Requirements

ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FDRA – BRQ022	CAISO system implementation shall include functionality to send validation notifications to customers.	Core Phase Two	Central Notification System
FDRA – BRQ023	Validation notifications delivery failures will be logged and monitored.	Core Phase Two	Central Notification System
FDRA – BRQ024	CAISO system implementation shall provide the ability for customers to register and modify targets for validation notifications.	Core Phase Two	Central Notification System
FDRA – BRQ025	Validation notification data matches report at the time of notification.	Core Phase Two	Central Notification System

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