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# Business Requirements Specification

## Reliability Services Initiative Phase 1B

**Document Version: 1.1**

**Date Created: 3/3/2017**

## Revision History

| Date | Version | Description |
|------|---------|-------------|
| 12/23/2016 | 1.0 | Creation of Document |
| 3/3/2017 | 1.1 | All edits to the document have been made in red along with strikethrough of requirements or language that either is not needed or will be delivered at another point in time.  Specifics on strikethrough requirements will be denoted below:<br><br>• BRQ201: Eliminated the Records Retention Business Rule.  This will be implemented as an enhancement at a future date.<br><br>• BRQ005 verbiage refinements<br><br>• BRQ021 is a duplicate of BRQ012, therefore BRQ021 has been removed.<br><br>• BRQ204 has the following clarification added to the BRS: *OIA is part of the monthly module and will run based on the schedule by the internal user.  For the forced outage piece, the forced outage impact would be a UI screen (on-demand).  This UI screen would be accessible by internal ISO users and external users.*<br><br>• BRQ031/32: CSRM/CLRC is now separated into two sentences.  This has been completed |

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| | | within BRQ031 and BRQ032. <br><br> • Annual NQC Section 4.9 has been descoped for Fall 2017. <br><br> • Updated CPRM-BRQ005 (scope from RSI1A) numbering to differentiate it from RSI1B-BRQ005 (caused confusion). Updated CPRM-BRQ005 to RSI1B-BRQ632. <br><br> • RSI1B-BRQ620 was listed twice. Updated second requirement dealing with CPM MWs to BRQ633. <br><br> • BRQ205: Eliminate Settlements as an impacted system. <br><br> • Removal of BRQ107 since this scope is already covered in BRQ207 <br><br> • BRQ055: Removed Settlements as an impacted system and updated requirement with minor verbiage changes. <br><br> • BRQ058, 073,074,620,621,622: Removed Settlements as an impacted system. <br><br> • Section 4.11 has been removed as a scope item for this initiative <br><br> • Section 4.8 has been removed as a scope item for this initiative <br><br> • Section 4.9 has been removed as a scope item for this initiative <br><br> • BRQ043 has been updated to reflect T-9 to T-8. Also changed T-8 to T-7. <br><br> • BRQ206 removed Settlements as an impacted system. <br><br> • BRQ105, 633, 621, 622, and 2001 were removed from scope for this initiative <br><br> • The following requirements were removed from Fall 2017 scope: <br>     o BRQ013: Record retention/storage requirement <br>     o BRQ075: Reorganization of UI screens |

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# Table of Contents

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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 determining the scope of projects and to all Business Process Modeling and System Requirements Specifications 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 delivery, satisfy or meet the business requirements (what). The Initial BRS will provide sufficient information to determine the scope of the project and will provide the functional business requirements so that the Architecture Decision can be made. 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.

The purpose of this initiative is to finish implementing BOG (Board of Governors) approved policy. This initiative address issues with the current RA process: Replacement process is extremely complicated and cumbersome, overlapping cure periods lead to complexity, replacement outage responsibility is difficult to track, contracting complexity, and inaccurate outage assessments due to current Monthly RA process.

# 2. Details of Business Need/Problem

## 2.1 Description

| Business Opportunity/Problem Statement: | |
|---|---|
| **What:** | The proposed provisions define new resource adequacy rules for pllaned outage substitution for generic RA resources. The proposal also creates changes to the monthly RA process in terms of timeline and deficiency analysis of RA data. |
| | **Key Notes:** |
| | • Board approved policy |
| | • Tariff stakeholder process completed |
| | • Issues with current RA process |
| | ○ Complicated RA process leads to data transparency issues, administrative and coordination costs for market, and customer satisfaction concerns. |
| | • Overlapping cure periods leads to complexity |
| **When:** | Must be completed prior to or in conjunction with RSI Phase 2 (Fall 2017) |
| **Why do we have this opportunity/problem:** | The increase in renewable and preferred resources has led to the need for new resource adequacy rules to maintain reliability during the unprecedented change in the ISO's resource mix and subsequent increased flexibility needs. |
| **Who does this opportunity/problem impact:** | Market Participants, PSTO, Operations Engineering Services (OES), ITPD, Customer Service, Market Services, Operations |

# 3. Business Process Impacts

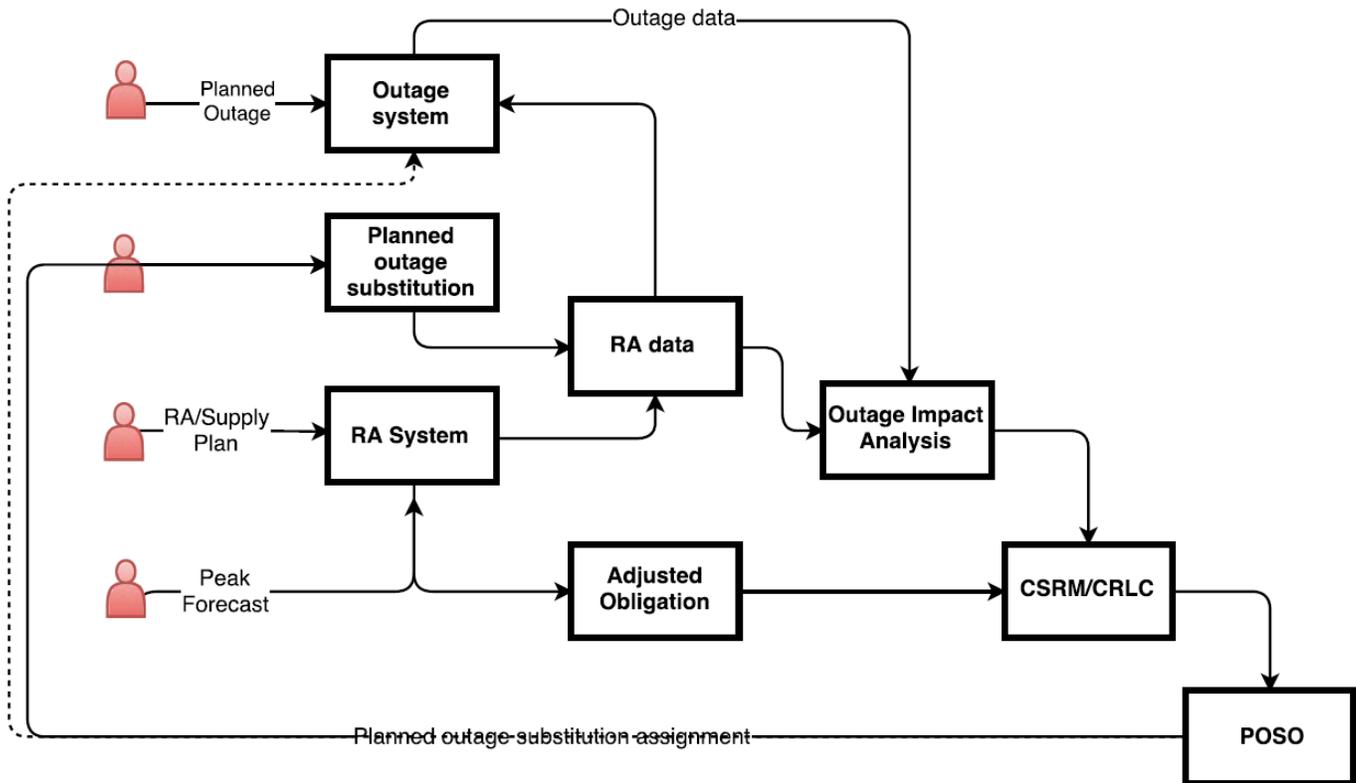## 3.1 High Level Description of Business Process

The Reliability Services Initiative Phase 1B initiative impacts the following existing business process diagram:

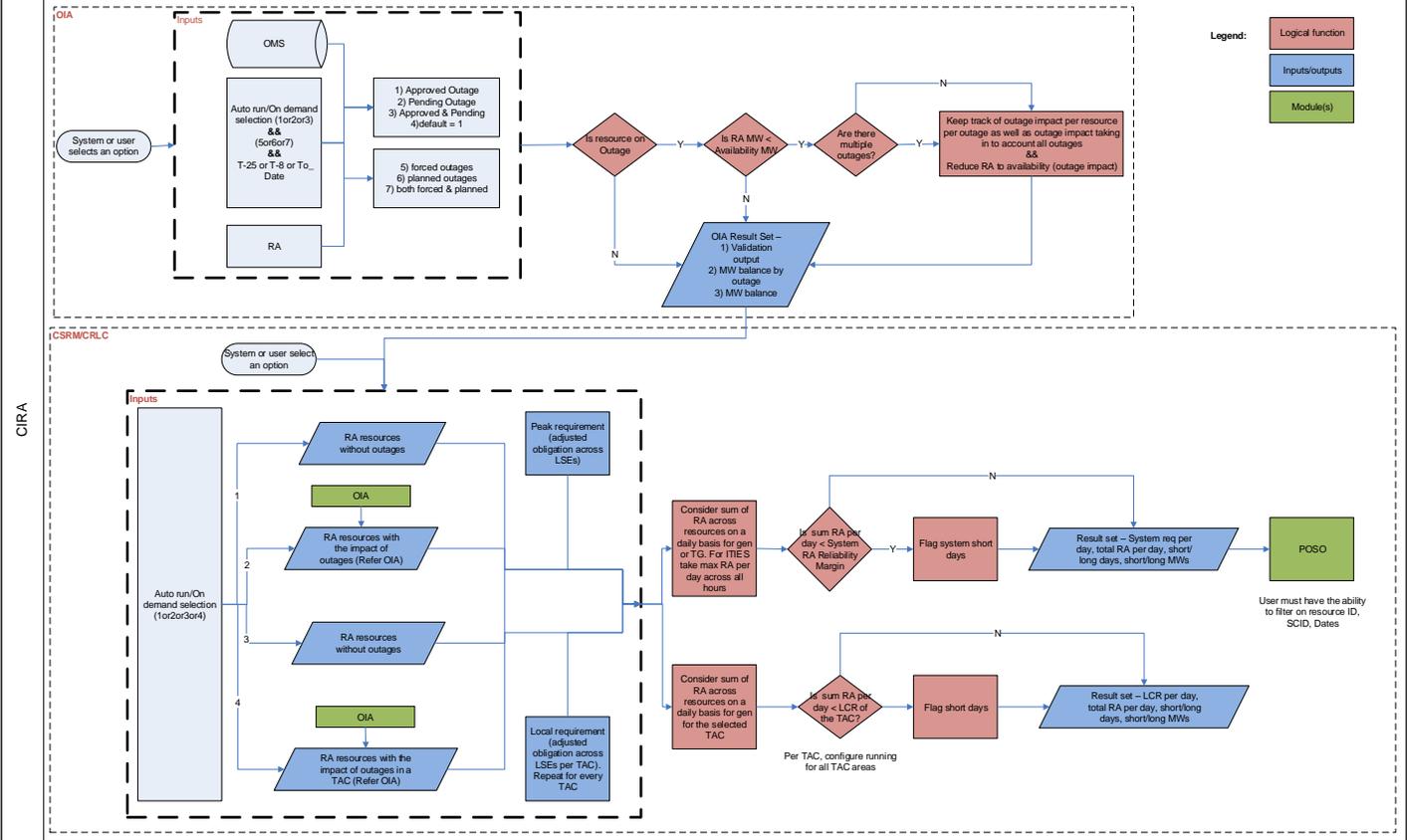- Manage Market & Reliability Data & Modeling
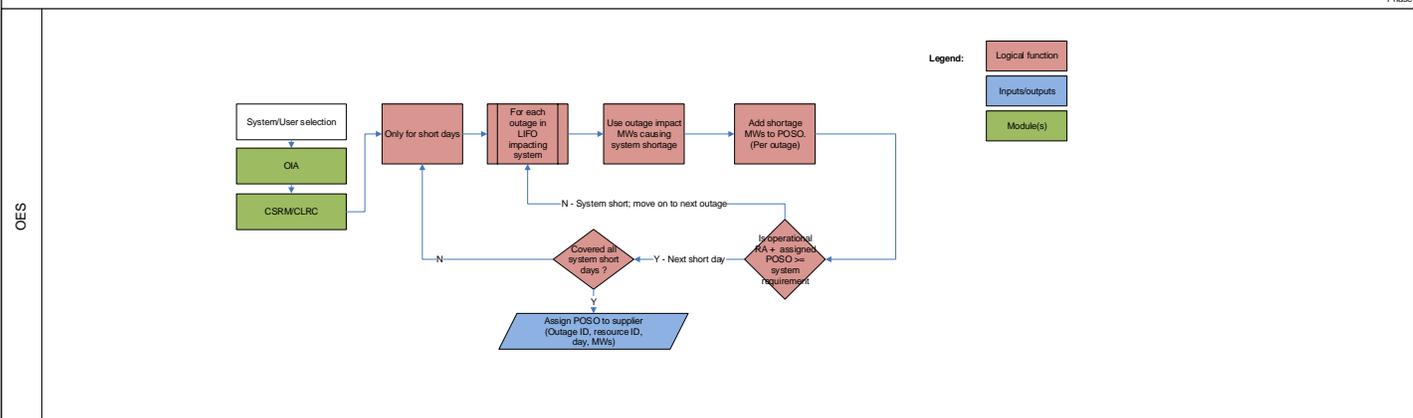
## 3.2 Visual Aides

**Context flow (business level):**

Outage Impact Analysis (OIA) & CAISO System Reliability Margin (CSRM)/CAISO Local Reliability Check (CLRC)



Planned Outage Substitution Obligation

# 4. 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.

General Notes:

- RA resources in the context of this initiative refer to System (generic) RA Resources.

## 4.1 Business Process: Monthly RA Process and Outage Snapshot

Change in timeline to separate monthly RA process from planned outage assessment is required. This eliminates overlapping cure periods for SC FOR THE LSE monthly RA requirements and planned outage responsibility. This reduces over-procurement and simplifies the process.

### 4.1.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ001 | RA system shall no longer reference the following fields in the RA & Supply Plan template:<br><br>• Specified replacements<br><br>• Non-Specified replacements<br><br>• Contract ID column<br><br>• Capacity designation<br>  ○ Upload validation on above must be removed<br><br>Business Rule: Corresponding validation rules on other fields must be updated. | Core | CIRA |
| RSI1B-BRQ200 | System must have the ability to support effective dating for the plan template. | Core | CIRA |

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| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ106 | Upload of RA and supply plan interface must be updated to include a comments field (free form text for user to enter). The comments must be displayed on the download page for user to view. Only SC for the plan and ISO users shall have the capability to view these comments.<br><br>The ISO expects external users to provide comments when their Plans are late (missed the submission timeline). | Core | CIRA |
| RSI1B-BRQ002 | RA system users must retain the ability to view historical replacements, replacement approvals, replacement rejections, replacement requirements, RA plans, and Outage Management (OM) replacements. | Existing requirement | CIRA |
| RSI1B-BRQ003 | RA system users must retain the ability to view historical Outage Impact Assessments (OIA), CSRM, SR, NR, and Replacement requirement modules for dispute resolution purposes. | Core | CIRA |
| RSI1B-BRQ201 | ~~Record Retention Business Rule: Historical timeframe is defined as a six year period. Currently we do not have a limitation on the duration that we keep this data.~~ (The strikethrough requirement will be implemented as an enhancement at a future date)<br><br>Internal system users must have the ability to view and download historical runs. The internal system user shall not have the ability to rerun historical runs. | Core | CIRA |
| RSI1B-BRQ004 | RA system must retain the ability to rerun historical trade dates for any of the existing modules for dispute resolution purposes. Based on the logic effective for those trade dates. | Core | CIRA |

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| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ005 | RA system must have the ability to run the monthly module ~~multiple times~~ twice daily at ~~a configurable time~~ predetermined times (3 am and 10 am) automatically ~~by an internal business user~~.<br><br>Business Rule: Initially, the system shall be configured to run twice daily.<br><br>Business Rule: Monthly module shall consist of the following modules:<br><br>• Cross validation for generic RA<br>   o Publish generic deficiency results<br>• Cross validation for flexible RA<br>   o Publish flexible deficiency results<br>• Outage Impact Analysis<br>• CSRM/CLRC<br>• Planned Outage Substitution Obligation<br>   o Publish Planned Outage Substitution Obligation results | Core | CIRA |
| RSI1B-BRQ006 | The monthly module job must contain flex cross validation (flex cv) and flex deficiency analysis. The job must make available externally to market participants the flex deficiency results upon every run. | Core | CIRA |
| RSI1B-BRQ007 | RA system must preserve the following results and reports for historical recalculation:<br><br>• OM report<br>• TAC/Peak results (for internal ISO users. SC for the supplier shall have the ability to request historical reports via offline mechanism). | Core | CIRA |
| RSI1B-BRQ008 | ISO users and SC for the supplier must have the ability to view outage impact and outage availability screens. | Core | CIRA |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ068 | SC FOR THE LSEs must *not* have the ability to view outage impact and outage availability screens within the RA system.<br><br>SC for the LSE shall have the ability to request historical reports via offline mechanism). | Core | CIRA |
| RSI1B-BRQ009 | RA system must cap the local RA obligation at the system obligation (if the system obligation exists) for both annual and monthly RA.<br><br>Business Rule:  System shall **not** store the initial local/system values.  The system shall only retain the adjusted values. Obligation = min (system obligation, local obligation)<br><br>Business Rule: If the obligation numbers change, the business unit shall rerun the validation suite.<br><br>Business Rule: Upon upload of system or local, this check must be completed. | Core<br>Tariff | CIRA |
| RSI1B-BRQ010 | RA system must have separate user roles for the SC FOR THE LSE and SC for the supplier.  SC FOR THE LSEs must be responsible for the monthly RA plan and SC for the supplier shall be responsible for planned outage RA substitution with the ISO.<br><br>Business Rule: The business recommends a new user role for the RA system.  Below is an outline of the new roles that are required:<br><br>1. Create a new role for SC FOR THE LSEs<br>2. Consume SC FOR THE LSE from Master File<br>3. Create a new role for supplier SCs<br><br>Note: Separation of certain UI screens could be necessary depending on design of user roles. | Core | CIRA; AIM; Master File |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ012 | RA system must have the ability to automatically run and display OIA, CAISO System Reliability Margin (CSRM), and Planned Outage Substitution Obligation (POSO) based on the configuration defined by internal system user.<br><br>Business Rule: The system must execute the above defined modules for the T-25 Outage Snapshot and for new planned outages that are submitted after T-25.<br><br>RA system must use the T-25 outage snapshot to assign POSO at T-22.<br><br>Business Rule: Any outages submitted after T-25 shall be placed under "outages to date".<br><br>Example:  Assign POSO to supplier at T-22 and T-8 based on T-25 Outage Snapshot (including any outage updates in the snapshot – see diagram in Visual Aide section).  Assign POSO to supplier once every day for any new planned outages for the compliance month.<br><br>Business rule: The above is also required for on demand execution. | Core | CIRA |
| RSI1B-BRQ013 | For all RA data validation runs (on all modules), data shall be purged after T+60 (T is the start of the compliance month) but must have the ability to be recreated for point in time values.  Retain audit results for 60 days with the latest run for each calendar date. | Core | CIRA; EDR |
| RSI1B-BRQ016 | Changes to an outage that results in an extension of the duration or increase in the curtailment within the RA compliance month timeframe shall result in the lowering of the priority within the outage stack. | Existing Requirement | CIRA |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| ~~RSI1B-BRQ075~~ | ~~System UI screens must be reorganized to reflect the functionality (example: reports should be contained within the reports tab, validations should be logically grouped under the appropriate tabs).~~ | ~~Core~~ | ~~CIRA~~ |

## 4.2  Business Process: Outage Impact Analysis (OIA)

The outage impact analysis is the impact of outages to RA from supply plan.

### 4.2.1  Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ020 | System must include planned outages for the purpose of OIA (for outages to date purposes).<br><br>Business Rule: Internal and External user must have the ability to view the outage results. | Core | CIRA |

| ID# | Business Feature | Require ment Type | Potential Applicatio n(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ202 | System must include planned outages for T-25 purposes. | Core | CIRA |
| RSI1B-BRQ203 | System must include planned, forced, or all outages (both planned and forced) for the purpose of OIA.<br><br>Business Rule: POSO must not have the ability to select OIA runs that included forced outages. | Core | CIRA |
| RSI1B-BRQ021 | The OIA automated job must run only using planned outages with T-25 snapshot. | Core | CIRA |

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| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ204 | The OIA automated job must have the ability to run for both forced and planned outages with outages to date.<br><br>Clarification: OIA is part of the monthly module and will run based on the schedule by the internal user.  For the forced outage piece, the forced outage impact would be a UI screen (on-demand).  This UI screen would be accessible by internal ISO users and external users. | Core | CIRA |

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| ID# | Business Feature | Require ment Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ022 | RA system user must have the ability to choose approved and/or pending outages. | Core | CIRA |

| T45-Approved | T45-Approved & Pending | Outage To |
|---|---|---|
| APPROVED | APPROVED | APPROVED |
| ETOTIMEOUTSLIC | ETOTIMEOUTSLIC | ETOTIMEO |
| ETRTIMEOUTSLIC | ETRTIMEOUTSLIC | ETRTIMEO |
| INOK | INOK | INOK |
| INOKSLIC | INOKSLIC | INOKSLIC |
| INSERVICE | INSERVICE | INSERVICE |
| INSERVICEEDITABLE | INSERVICEEDITABLE | INSERVICE |
| INSERVICESLIC | INSERVICESLIC | INSERVICE |
| ISOHOLD | LATETOEND | LATETOEN |
| LATETOEND | LATETOSTART | LATETOST |
| LATETOSTART | OENOTRECOMMENDED | OENOTREC ED |
| OUT | OERECOMMENDED | OERECOM |
| OUTOK | OUT | OUT |
| OUTOKSLIC | OUTOK | OUTOK |
| | OUTOKSLIC | OUTOKSL |
| | PENDINGSLIC | PENDINGS |
| | RECEIVED | RECEIVED |
| | REQUESTEDSLIC | REQUEST |
| | SCHEDULEDSLIC | SCHEDUL |
| | STUDY | STUDY |
| | UNKNOWN | UNKNOW |

| ID# | Business Feature | Require ment Type | Potential Applicatio n(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ023 | Only passed records from generic CV shall be used for OIA.  Note: RSI Phase 2 will consider include Flex CV for POSO purposes. | Core | CIRA |
| RSI1B-BRQ024 | System must receive updates on outages, cancelations, changes in derates, and timing. | Existing Require ment | CIRA |
| RSI1B-BRQ025 | System must have the ability to calculate resource availability due to outages for RA resources on the supply plan (current implementation takes resource availability off of RA Plan).  This calculation shall result in the "operational RA MW".  Business Rule:  The calculation of operational RA MW is described below:  a.  Calculate daily sum of RA for all resources sold to multiple SC FOR THE LSEs  b.  Check against the outage availability for each resource  c.  Take the minimum availability for each resource for each day of the month  d.  If the resource is on outage and the resource availability < RA MW then reduce the RA MW to equal the resource availability for that day | Core | CIRA |

| ID# | Business Feature | Require ment Type | Potential Applicatio n(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ067 | System user must have the ability to view OIA data for the entire RA compliance month. | Core | CIRA |
| RSI1B-BRQ026 | The output of the OIA shall be validation by outage ID, MW balance, and MW balance by outage ID. | Core | CIRA |
| RSI-BRQ200 0 | For trade dates effective after go-live the following displays shall not be applicable (but will be kept for historical purposes):<br><br>• OIA Details: LSE Ratio<br>• Peak result report<br>• TAC result report | | |

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## 4.3 Business Process: CAISO System Reliability & Local Reliability Check (CSRM/CLRC)

This module is required to determine if ISO has enough operational RA for each day.  This is done by comparing the operational RA against the system requirement/local requirement per TAC.

### 4.3.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ027 | System must have the ability to determine if the ISO has enough operational RA for each day of the month.  RA system shall compare the operational RA against the system and local (aggregated TAC wide) requirement. | Core | CIRA |
| RSI1B-BRQ028 | System user must have the ability to run on-demand runs for CSRM and CLRC. | Core | CIRA |
| RSI1B-BRQ029 | CSRM/CLRC shall use the CEC system requirement (adjusted obligation), OIA output (see BRQ026), and local requirement (adjusted obligation) as inputs to its calculations. | Core | CIRA |
| RSI1B-BRQ030 | CSRM/CLRC shall sum the operational RA MW per day across all resources for local and system. RA system user must have the ability to perform this analysis for each TAC area.<br><br>a. Example – PGE, then consider all resources in PGE TAC<br><br>b. Example – Local + System, then consider all resources in all local areas, CIASO system and ITIE/TG resources | Core | CIRA |

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| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ031 | CSRM/~~CLRC~~ shall check if the total RA per day (sum of RA) < CAISO system reliability margin. <br><br> CLRC shall check if the total RA per day (sum of RA) < CAISO local requirement. <br><br> The RA system shall flag any days that are considered short of the RA obligation. <br><br> Note: This calculation is for Generic RA. | Core | CIRA |
| RSI1B-BRQ032 | CSRM/~~CLRC~~ shall check if the total RA per day (sum of RA) >= CAISO system reliability margin/local requirement. <br><br> CLRC shall check if the total RA per day (sum of RA) >= CAISO system reliability local requirement. <br><br> The RA system shall flag any days that are considered long of the RA obligation. <br><br> Note: This calculation is for Generic RA. | Core | CIRA |
| RSI1B-BRQ033 | The output of the CSRM/CLRC shall display (only to Suppliers and system users) : <br><br> • System/Local short day(s) <br> • System/Local long day(s) <br><br> Business rule – Display of above results shall be required at aggregated granularity per TAC/system area. | Core | CIRA |

# 4.4 Business Process: Planned Outage Substitution Obligation (POSO)

This module is required to assign planned outage substitution obligation to SC for the supplier.

## 4.4.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ034 | System must have the ability to assign planned outage substitution obligations to SC for the supplier. | Core | CIRA |
| RSI1B-BRQ035 | System must receive OIA (planned outages), CSRM, and CV as inputs into its calculations. | Core | CIRA |
| RSI1B-BRQ036 | System users must have the ability to run on demand scheduled runs for POSO. | Core | CIRA |
| RSI1B-BRQ037 | Appropriate warning messages should be displayed to RA system user if OIA used inputs containing only Approved state outages. Business Rule: This only applies to on-demand jobs. | Core | CIRA |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ038 | System must perform the following:<br><br>For days in which the total RA is less than the system requirement (adjusted obligation) i.e. short days resulting from CSRM, the following steps must be taken:<br><br>• Order outages in LIFO order (last in first out based on outage priority)<br><br>• For outages in LIFO, stack up the impacted MW (not whole outage derate)<br>　○ Ex: System is short only 100 MW but the outage curtailment might be 500 MW. Consider only 100 MW as the impact MW.<br><br>• Use the outage impact MW which is causing the system shortage and add this to the POSO of the supplier.<br><br>• Outage ID must be specified to the supplier to inform which outage is causing the POSO. This information shall allow the user to cancel or move the outage.<br><br>Business rule:<br><br>1. LSEs short/long status shall no longer be considered for assiging POSO.<br><br>2. System shall automatically notify SCs who created the outage within OMS regarding POSO assignment. | Core | CIRA |
| RSI1B-BRQ040 | System must check if the cumulative system + assigned POSO meets the peak system (this would denote that the cumulative system requirement was met for the day – thus move onto next day). If POSO does not meet the peak system move onto the next outage in stack.<br><br>Business Rule: The entire outage MW of the last outage in the stack shall be used for POSO assignment. | Core | CIRA |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ041 | System shall ensure that approved substitutions remain approved for the RA life cycle.<br><br>Business Rule: Update/cancel logic shall work based on the substitution cutoff timeline (follow forced outage substitution rules implemented in RSI 1A). | | CIRA |
| RSI1B-BRQ042 | Rerun of POSO shall include new substitute capacity provided to satisfy previous POSO. | Core | CIRA |
| RSI1B-BRQ043 | POSO shall be assigned before the start of the RA month.<br><br>• T-22 through T-98 based on outage snapshot at T-25<br><br>• T-87 through T+end of month based on outages to date<br><br>Business Rule: This data must be published automatically. | Core | CIRA |
| RSI1B-BRQ046 | The output of POSO must be displayed to SC for the supplier and ISO users similar to the existing replacement requirement/peak results screen.<br><br>Note: Participants have requested for a positive confirmation if they don't have a POSO. | Core | CIRA |

# 4.5 Business Process: Submission of Planned Outage Substitution

## 4.5.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ047 | RA system shall allow the supplier to submit a substitute resource to meet POSO. This shall only occur once the POSO is assigned to the supplier. | Core | CIRA |
| RSI1B-BRQ048 | Substitute resources must be submitted and approved (including third party approval) prior to a configurable cut off time for the following day.<br><br>The substitution submission shall follow the forced outage substitution submission timeline for both Day Ahead and Real Time.<br><br>Each resource can have multiple outages. Each outage can have multiple POSO by day. Each POSO can have multiple substitutions. We should be able to keep track of each POSO with corresponding substitution. | Core | CIRA |
| RSI1B-BRQ066 | System must allow the creation of POSO substitutes for pending or approved outages.<br><br>Business: Definitions of the current outage states (in production) shall apply. | Core | CIRA |
| RSI1B-BRQ049 | RA system must display the outage ID and POSO assignment information.<br><br>The outage and POSO information should be visible to suppliers and ISO users. | Core | CIRA |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ050 | If the supplier submits a substitution, the RA obligation from the outage resource is transferred to the substitute resource. | Core | CIRA |
| RSI1B-BRQ051 | Only internal ISO BA resources shall be used to satisfy the POSO.<br><br>Note: In future initiatives, we will consider external resources to the ISO BAA. | Core<br>Tariff | CIRA |
| RSI1B-BRQ205 | CIRA must send total generic exempt MW and total flexible exempt MW to settlements to perform RAAIM calculation | Core | CIRA<br>~~Settlements~~ |
| RSI1B-BRQ206 | CIRA UI for RAAIM pre-calculation needs to be updated to include total flexible exempt MW and total generic exempt MW | Core | CIRA<br>~~Settlements~~ |
| RSI1B-BRQ065 | System must have the ability for POSO outages to be flagged within the RA system so that ISO users have the ability to deny the outage within the outage system. | Core | CIRA |
| RSI1B-BRQ053 | The ISO shall allow the supplier to release any provided planned outage substitute capacity.<br><br>Business Rule: Similar to the release of forced outage substitution. (Implemented in RSI 1A).<br><br>Note: Same functionality as for forced outage substitution as in RSI 1A. | Core<br>Tariff | CIRA |

## 4.6 Business Process: Planned Outage Substitution Obligation (POSO) for Outages to Date

Once the planning activities are complete, POSO is required for the operational period (within the RA month).

### 4.6.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ054 | Any new planned outages submitted after T-25 must be evaluated for POSO (outages to date). | Core | CIRA |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ055 | System must have the ability to run on a configurable basis ~~(configuration shall be based on time of day up to two times a day) for planned outages, the~~ and perform the following business logic ~~must be performed~~: <br><br> 1. Determine if resource is RA <br><br>    a. If yes determine if the outage MW impacts the system requirement (taking into account operational RA MW) <br><br>       i. If the outage MW impacts the system requirement, assign a POSO to the supplier. The MWs assigned must be impact MW and not the whole curtailment <br><br> Business rule: <br><br> 1. System shall run OIA, CSRM and POSO for planned outages to date at configurable times and assign POSO to suppliers automatically <br><br> 2. ~~The configuration can be set by internal users under admin tab~~ <br><br> 3. Apart from auto runs the system shall allow internal users to run POSO on demand and publish the requirements to the suppliers <br><br> 4. POSO assignment would not consider the effect of a forbidden zone of a resource or the pmin of the resource. | Core | CIRA; OMS; ~~Settlements~~ |

## 4.7 Business Process: Outage Management Report

Requirements defining the Outage Management Report.

### 4.7.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ056 | The existing Outage Management report within the RA system must have the ability to pull RA data from the RA tracker.<br><br>Note: The report needs to be enhanced to accommodate forced outage impact. | Core | CIRA |
| RSI1B-BRQ057 | The Outage Management report must use the output from the OIA and CSRM/CLRC. | Core | CIRA |
| RSI1B-BRQ071 | The Outage Management report must be able to display the latest record version of the historical trade dates.  All historical data prior to RSI 1B shall be accessible to show only planned outage impact.  No versioning is required for this report. | Existing Requirements | CIRA |
| RSI1B-BRQ072 | The Outage Management report must be updated when a new job runs.  If no data exists, a message will be displayed. | Existing Requirements | CIRA |

## 4.8 Business Process: ~~Acquired Contracts Management (Descoped from RSI 1A)~~

~~Requirements defining the acquired contracts management.~~

### 4.8.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| ~~RSI1B-BRQ058~~ | ~~RA system must allow SC's to submit, review, download, and update acquired contract information (database table exists). Any contract signed before SCP in 2009 could still be valid and would not be subject to any of the RAAIM penalties (there were previously called grandfathered or GF).~~ ~~Current production process is an email manual process. Affidavits will be in pdf format and not as a template.~~ ~~Business Rule: Acquired contract information includes affidavits.~~ ~~The contract to affidavits relationship is many to many. The contract is associated to the resource.~~ ~~When a resource ownership changes, there is no change in the contract. The only change is in the access and display rights.~~ | ~~Core~~ | ~~CIRA; Settlements~~ |
| ~~RSI1B-BRQ073~~ | ~~System must provide the capability for SCs to submit supporting documentation (affidavits) for acquired contracts. The ISO cannot request a copy of the contract.~~ ~~Note on timeline: For the annual process, a market notice is published in October for submittal of the affidavits on the last business day of October. Submittals are always new affidavits and not reload existing affidavits.~~ | ~~Core~~ | ~~CIRA; Settlements~~ |
| ~~RSI1B-BRQ074~~ | ~~System must allow ISO users to manage the supporting documentation (affidavits).~~ | ~~Core~~ | ~~CIRA; Settlements~~ |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| ~~RSI1B-BRQ059~~ | ~~Settlements must have the ability to receive and process acquired contract information.~~ | ~~Core~~ | ~~CIRA; Settlements~~ |

## 4.9  Business Process: ~~Annual Net Qualifying Capacity (NQC)~~

~~Requirements defining the NQC process.  The system requirements have already been developed for this as part of RSI 1A.~~

### 4.9.1  Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| ~~RSI1B-BRQ060~~ | ~~RA system must have the ability to receive PMAX test data results.  This data is needed to cap the NQC value to the PMAX test result.~~<br><br>~~Business Rule:  Apply the logic for annual NQC values.  The validation must run anytime a new NQC request is submitted.~~<br><br>~~System shall not allow users to reduce the NQC values for the current year data.~~ | ~~Core~~ | ~~CIRA~~ |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ207 | OES users shall have the ability to download the NQC values for all resources. User shall have the ability to differentiate edits made by OES users and external users. OES users shall have the ability to upload NQC values across SCIDs for all resources – Bulk upload. The existing validation logic shall apply to the bulk upload data set. Note: If area, deliverability, path designation exist in the upload data set then CIRA shall consume and display the data. On approval the area table shall be updated accordingly. External users (SCs) shall have the capability to edit the NQC values only. Area, Path designation, deliverability and comments (ISO user comments) are read only fields. SCs shall have a separate comments field to comment on any changes. System shall track changes made by external users. (Store the latest change). System shall not allow external users to update approved NQC requests. OES users shall have the capability to approve NQC requests. | Core | CIRA |
| RSI1B-BRQ064 | RA system must publish the NQC list/updates externally to market participants. This is considered non-confidential data. | Core | CIRA; OASIS |

Program Office

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ619 | Master file shall store and maintain COM MW for use by downstream systems. When the resource reaches its full operational capacity the COM MW shall be null.  Business Rule: The COM value shall be read-only within the GRDT. This shall only apply to generators and tie generators. | Core | Master File |
| RSI1B-BRQ620 | Master File shall use the COD date to reflect the COM date until the resource reaches it full operational capacity. | Core | Master File |
| RSI1B-BRQ089 | RA system must consume COM MW (commercial operation to markets) for validation of NQC requests from master file.  Note: This is required to remove manual work around in place to evaluate NQC requests. The validation logic implemented in RSI 1A remains the same and only data source will change. | Core | CIRA |
| RSI1B-BRQ107 | RA system must provide internal ISO users the capability to upload NQC requests for resources across SCs (bulk upload capability required). This applies for both annual and monthly. | Core | CIRA |
| RSI1B-BRQ621 | System must publish the NQC/EFC for each resource ID for the RA compliance year.  System must publish the latest tech factors to OASIS for each compliance year for all fuel types. | Core | CIRA; OASIS |

## 4.10 Business Process: CSP Offer Publication (Descoped from RSI 1A)

Requirements defining the business need for publication of CSP offers.  System requirements have already been developed as part of RSI 1A.

### 4.10.1 Business Requirements

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| CPRM-BRQ005 RSI1B-BRQ632 | The ISO shall publish all finalized offers into the competitive solicitation process on a rolling five-quarter delay. Business Rule: This information is considered public. Business Rule: Supplier offers shall be described by generation technology type, MW quantity, price, RA capability (system, flexible, local), and competitive solicitation process offered.  Offers shall be aggregated in the event less than three resources are in a single generation technology type. | Core Tariff 43.A.6.4 | OASIS |
| RSI1B-BRQ105 | CSP offer submission interface must be enhanced in the following way: 1. Ability for internal users to view offers across SCs 2. Ability for internal users to download all offers across SCs in to a spreadsheet 3. Ability for external and internal users to search for a particular offer on view offers screen | Core | CIRA |
| | | | |

| ID# | Business Feature | Requirement Type | Potential Application(s) Impacted |
|---|---|---|---|
| RSI1B-BRQ620 | Upon calculation of CPM MWs resulting from an exceptional dispatch or significant event the system shall also calculate the price for each segment of CPM capacity as follows - Example- Resource has RA from Pmin to 50 MW (base price is $0), 50 MW to 100 MW at CSP price $3.20 and 100 to 150 MW at extended price $7.31. ED is issued in the market for 150 MW and CIRA calculates CPM of 100 MW. System shall spilt the CPM in to two price segments – 50 MW at CSP price and 50 MW at extended price capped at $6.31. The logic applies to any incremental CPM MW as well. | Core | CIRA; Settlements; |
| RSI1B-BRQ621 | CPM designation screen shall be enhanced to include the reason code, run_status_description. These two fields shall be visible only to internal ISO users. | Core | CIRA; Settlements; |
| RSI1B-BRQ622 | RA report shall include PMAX, PMIN, NQC and EFC, Fuel Type, Resource Type for each RA resource | Core | CIRA; Settlements; |
| RSI1B-BRQ2001 | CIRA shall set CPM designation for local reason to 60 days and for system reason to 30 days. The following logic shall be used to determine if the CPM was system or local: 1. If the CPM instruction type in the ED payload is SYSEMR then the CPM is a system CPM 2. If the CPM instruction type in the ED payload is TMODEL, | Core | CIRA; Settlements; |

## 4.11 Business Process: ~~Decommissioning of RAAM~~

~~RAAM requirements de-scoped from RSI 1A.  System requirements have already been developed for this section as part of RSI 1A.~~

| ID# | Business Feature | Requirement Type | Potential Application Impacted |
|---|---|---|---|
| ~~RSI-BRQ600~~ | ~~CAISO website must no longer display the RAAM application~~<br><br>~~Internal and External users must not be able to see RAAM in CAISO website~~<br><br>~~www.caiso.com~~ | ~~Core~~ | ~~RAAM~~ |
| ~~RSI-BRQ601~~ | ~~RAAM API documents must be removed from the following locations:~~<br><br>~~http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=0DE59C1A-3306-4A32-905D-C89EF26BD3CB~~<br><br>~~http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=b4fde4bc-37da-42d1-8bee-38f5a6dfb4e4~~<br><br>~~http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=83a3b406-9fc5-43c7-b05b-93862ed24633~~ | ~~Core~~ | ~~RAAM~~ |

| RSI-BRQ603 | MPP (Market Participants Portal) shall no longer display the RAAM application

Internal and External both users must not be able to access RAAM in the MPP. | Core | RAAM |
|---|---|---|---|
| RSI-BRQ604 | External/Internal users shall not have any direct access to RAAM through saved bookmarked URLs. | Core | RAAM |
| RSI-BRQ605 | RAAM shall be removed from Application Access Request Form (AARF). | Core | RAAM |
| RSI-BRQ606 | CPM availability Calculation functionality must be migrated to CIRA.

Note: Currently existing in RAAM | Core | RAAM |
| RSI-BRQ607 | Historic outage correction process (OCP) data/functionality shall be migrated to CIRA. | Core | RAAM |
| RSI-BRQ608 | Historic Pre-qualification data shall be accessible. | Core | RAAM |
| RSI-BRQ609 | Historic Substitution data shall be migrated to CIRA and must be accessible via the new user interface. | Core | RAAM |

| RSI-BRQ610 | T+1, T+8 and T+41 SCP/CPM availability runs must be scheduled to run in CIRA going forward up until the calculated cutoff date. | Core | RAAM |
|---|---|---|---|
| RSI-BRQ611 | All the existing users of RAAM must be granted access to CIRA/OMS as per the mapping below: Note: User must not have to request Certs as part of this process | Core | RAAM |
| RSI-BRQ612 | All the existing roles of RAAM must be deprecated in LDAP RAAM roles shall be merged to CIRA roles as per their functionality. | Core | RAAM |
| RSI-BRQ613 | Point to point interaction of RAAM and settlements should be deprecated • SCP Availability data • Substitution data • CPM Run Data • SCP Transpath data | Core | RAAM |
| RSI-BRQ614 | CIRA must broadcast all data related to SCP/CPM availability calculation to settlements directly via web services going forward. | Core | RAAM |

| RSI-BRQ615 | Existing RAAM APIs must be decommissioned. List below:<br><br>• Create, Retrieve OCP requests.<br>• Submit Prequalification's<br>• Submit Unit Substitutions<br>• Third party SC accept Prequalification's requests etc. | Core | RAAM |
|---|---|---|---|
| RSI-BRQ616 | Existing RAAM notifications must be disabled. List below:<br>• Email notification sent when a new prequalification request is submitted<br>• Email notification sent when prequalification request is approved.<br>• Email notification sent when a new substitution request is submitted.<br>• Email notification sent when a substitution request is approved. etc | Core | RAAM |