

# **Business Requirements Specification**

## **WEIM Enhancements API Services**

**Document Version: 1** 

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WEIM Enhancements API Services Business Requirements Specification - Planning		Date Created:	7/29/2020

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## 1 Introduction

### 1.1 Purpose

This WEIM Enhancements project includes the following:

- 1. Develop API services to for WEIM entity to submit
  - Contingency Status by BAA
  - Imbalance Conformance (aligning market load forecasts with real conditions) by BAA
  - Telemetry Following instructions by resource
  - Manual Dispatches (MD) by resource, where MD submission subject to the same validation rules as provided in the BAAOP display
- 2. Enhance user-interface (UI) in BAAOP to support the "telemetry following" manual dispatch instruction

### 1.2 Acronyms and Definitions

Term	Description/Definitions
A2A	Application-to-Application (internal API)
AG	Aggregate Generation
AIM	Access and Identity Management
ALFS	Automated Load Forecast System
API	Application Program Interface
B2B	Business-to-Business (describing APIs for use by external participants)
BAA	Balancing Authority Area
BAAOP	Balancing Authority Area Operations Portal
BPA	Bonneville Power Administration
BRS	Business Requirement Specification
BSAP	Base Schedule Aggregation Portal
CAISO	California Independent System Operator
CISO	See CAISO
CMRI	CAISO Market Results Interface
DAM	Day Ahead Market
DOT	Dispatch Operating Target
ED	Exceptional Dispatch
WEIM	Western Energy Imbalance Market
EMS	Energy Management System
ETSR	Energy Transfer System Resource
GRDT	Generator Resource Data Template



Term	Description/Definitions
HVDC	High Voltage Direct Current
IFM	Integrated Forward Market
IE	Interval-Ending, time convention (e.g. 15-minute IE 0:30 would be the time period 0:15 to 0:30)
ISO	Independent System Operator
ITC	Intertie Transmission Constraint
LMP	Locational Marginal Price
MD	Manual Dispatch
MF	MasterFile
MRI-S	Market Results Interface – Settlements
MW	Mega-Watt
OASIS	Open Access Same Time Information System
oos	Out-of-Sequence
ORA	Overlapping Resource Aggregation
PSH	Pumped Storage Hydro
ROC	Rate-of-Change
RTBS	Real-Time Balance Schedule. Application that performs resource sufficiency tests for the WEIM.
RTD	Real-Time Dispatch
RTM	Real-Time Market
RTMO	Real-Time Market Operator (ISO BAA Operator)
RTPD	Real-Time Pre-Dispatch
RTSI	WEIM Real Time Schedule Interchange. Schedule representation of tags sent to market for dispatch.
RTUC	Real-Time Unit Commitment
SC	Scheduling Coordinator
SCADA	Supervisory Control and Data Acquisition
SE	State Estimator
SFTP	Secured File Transfer Protocol
SIBR	Scheduling Infrastructure and Business Rules
SQMD	Settlement Quality Meter Data
STUC	Short-Term Unit Commitment
TG	Tie Generator (Inter-tie Generator)
TMSG	(Inter-)Tie Multi-Stage Generator
TNGR	Tie Non-Generator Resource
TSR	Transmission Service Reservation: A service request from the Transmission Customer to the Transmission Service Provider to move energy from a Point of Receipt to a Point of Delivery.

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Term	Description/Definitions
UI	User-Interface
XSD	XML Schema Definition

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# 2 Details of Business Need/Problem

# 2.1 Description

	Business Opportunity/Problem Statement:		
What:	The WEIM enhancements API Services were developed as a pilot to support the BPA WEIM activation. These enhancements include 4 new APIs allowing automated submissions to BAAOP by the WEIM Entity, modification of the Manual Dispatch BAAOP UI to support Telemetry Following instructions.		
When:	The functions were activated for BPA WEIM integration in March, 2022.  The functions will be available for all WEIM Entities in Fall 2022, based on the pilot proof of concept.		
Why do we have this opportunity/problem:	Based on its size and topology, BPA offers a unique challenge to expand the scale and automate core functions of the Western Energy Imbalance Market (WEIM). Incorporating BPA into the WEIM markets, WEIM software will require substantial enhancements of the manual dispatch substantial WEIM capabilities. These enhancements will also benefit other WEIM entities, and following the BPA proof of concept will be deployed for other WEIM entities. This sequencing allows development of the enhancements while ensuring all WEIM Entities will have the benefit of the enhancements.		

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# 3 Business Impacts

## 3.1 Business Practice Manuals (BPM)

ВРМ	Description of Impact(s)
Energy Imbalance Market	BAAOP Enhancements to support:
	- Resources in Manual Dispatch (MD) display (BAAOP)
	- Telemetry Following as MD (BAAOP)
	Automation of Manual Dispatch, BAA Contingency Status, and Imbalance Load Conformance API submission timelines supported for WEIM Entities

### 3.2 Other

Impact	Description (optional)
Market Simulation	Yes WEIM Participant Unstructured Scenarios (API submissions)
Market Participant Impact	Yes
External Training	Yes
Policy Initiative	No

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# 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.

### 4.1 Business Process: Managing the Real-Time Market Operations

#### 4.1.1 Business Requirements

ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA-	Allow WEIM entity submit own BAA's Contingency Status through API:	Core	ВААОР
BRQ100	<ul> <li>At any given time, an WEIM Entity may submit an update to its BAA contingency status to the ISO system</li> </ul>		
	<ul> <li>WEIM entities may only submit contingency status updates for their own BAA.</li> </ul>		
	• The contingency status update may reflect either an active or inactive contingency event status for the BAA.		
	<ul> <li>WEIM entity receive receipt of successful or failed transaction.</li> </ul>		

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ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA- BRQ105	<ul> <li>Validate WEIM entity submission on Contingency Status through API and display it accordingly:         <ul> <li>Upon successfully receiving the status update, RTM system shall validate and accept the Contingency Status is for its own BAA. System will ignore the Contingency Status that is for other BAA.</li> </ul> </li> <li>RTM immediately update the accepted BAA's contingency status flag as well as the status updated timestamp, and reflect these changes within its RTD Dispatch Control display. The Status Updated timestamp shall reflect the last successful Contingency Status submission, regardless of whether the status changed or not.</li> <li>WEIM operator shall allow to update the Contingency</li> </ul>	Core	- BAAOP - RTM
WEIM- BPA- BRQ106	<ul> <li>Status of their own BAA through UI.</li> <li>Allow override previous Contingency Status value:         <ul> <li>Operator can override Contingency Status value through UI or API</li> </ul> </li> <li>The latest update supersede the prior Contingency Status value</li> <li>Only latest Contingency Status is valid and displayed for each BAA with update timestamp</li> </ul>	Core	- BAAOP - RTM



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted		
WEIM- BPA- BRQ110	Allow WEIM entity submit own BAA's load imbalance (i.e. load bias) through API:	Core	ВААОР		
	WEIM Entity can submit <b>imbalance conformance</b> (i.e. zonal load forecast adjustments used to conform to actual market conditions) on an interval market interval basis, can have a different value of each interval.				
	<ul> <li>WEIM entity can specify a time period that include multiple intervals for the specified market with one value. The market system will specify the value to each interval (15- minute or 5-minute) in the defined period.</li> </ul>				
	WEIM entity must specify which market execution type the conformance will apply towards (STUC, FMM, or RTD).				
	WEIM entities should make sure only submit <b>imbalance</b> conformance for their own BAA.				
	<ul> <li>WEIM entity should make sure to only include one load conformance MW for a market execution type for an interval in one submission.</li> </ul>				
	<ul> <li>WEIM entity should make sure to only include one load conformance MW for a market execution type for a time period.</li> </ul>				
	<ul> <li>If WEIM entity submit load conformance for multiple intervals in rolling process, later submission will override the prior submission for the intervals.</li> </ul>				
	<ul> <li>WEIM entity receive receipt of successful or failed transaction, indicate if the format of is valid.</li> </ul>				
	<ul> <li>If the market receive the submission after the start the run for the interval, the value of submission will not be used in this run. Market will pick up the effective value for dedicated intervals at next run.</li> </ul>				



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA- BRQ112	<ul> <li>Market system shall validate the load imbalance submission:</li> <li>For FMM/STUC, the start and end time must be on 15-minute basis as ISO market. If the start/end time is not on 15 minute, system will ignore it and not display it in the market.</li> <li>For RTD, the start and end time must be on 5-minute basis as ISO market. If the start/end time is not on 5 minute, system will ignore it and not display it in the market.</li> <li>The start time must be at the start of the corresponding 15 or 5 minute interval, the end time must be at the end of the corresponding 15 or 5 minute interval.</li> <li>WEIM entities must specify which market execution type the conformance will apply towards (STUC, FMM, or RTD). If the market execution type is not specified, this submitted record will not be accepted nor displayed in the</li> </ul>	•	Application(s)
	<ul> <li>WEIM entities shall only submit imbalance conformance for their own BAA. If the record specifies other BAA, system will ignore it and not display it in the market.</li> <li>WEIM entity shall only include load conformance MW once for a market execution type for an interval in one submission. Otherwise, the later submission will superseded the previous one.</li> <li>In the same submission, if multiple records for the same market, then system will reject the entire submission and communicate rejection message to WEIM entity.</li> <li>WEIM entity shall only include load conformance MW once for a market execution type for a time period. If there are any overlapping time period for a market execution type for a load forecast zone in one submission, system will pick larger/largest conformance MW for the</li> </ul>		



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM-	Display accepted imbalance conformance records and	Existing	- BAAOP
BPA- BRQ115	Tr 7	Function	- RTM
	After receive the imbalance conformance submission through API and perform the validation, the market systems shall:		
	<ul> <li>Display accepted imbalance conformance for each Market (STUC, FMM, or RTD) for each interval for WEIM own BAA on existing Load conformance UI.</li> </ul>		
	<ul> <li>Market Operator can view imbalance conformance for each Market (STUC, FMM, or RTD) for each interval for All WEIM BAAs on existing Load conformance UI.</li> </ul>		
	<ul> <li>Apply the accepted imbalance conformance in the specified market optimization (RTD, RTPD, or STUC).</li> </ul>		
WEIM-	Allow override previous imbalance conformance value:	Core	- BAAOP
BPA- BRQ120	<ul> <li>Modification of a pre-existing imbalance conformance value is allowed, as long as the modification is made prior to that interval becoming binding (i.e., enters into the past).</li> </ul>		-RTM
	<ul> <li>Pre-existing conformance values can be cancelled by overwriting the prior submitted conformance with a zero value.</li> </ul>		
	<ul> <li>Submission time periods must align with current UI convention of the applicable market's intervals if updates through Load Forecast UI.</li> </ul>		
	<ul> <li>WEIM Operator can override own BAA the imbalance conformance value through UI or API. Market Operator can override all BAAs the imbalance conformance value through UI or API.</li> </ul>		



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA- BRQ125	Include optional Imbalance Conformance reason code in API:  With each imbalance conformance submission, the WEIM Entity may optionally include an Imbalance Conformance reason code, as currently defined as one of the following reasons:  - ATEC-Automatic Time Error Correction  - Disturbance Response  - Generation Deviation  - Load Forecast Deviation  - Other - Described event  - RBC-Reliability Based Control  - Stranded Generation  - Stranded Load  - Schedule Interchange Variation	Core	- BAAOP API
WEIM- BPA- BRQ130	Market receive WEIM entity submission on resource telemetry following instructions through API:  ISO market systems shall receive resource-level telemetry following instructions from WEIM Entity systems for market intervals when a resource will manage its MW output according to telemetry input rather than market optimization.  Providing receipt of successful transaction if the data format is correct.  Providing receipt of failed transaction if the data format is incorrect, system will not take in any data from this submission.	Core	BAAOP



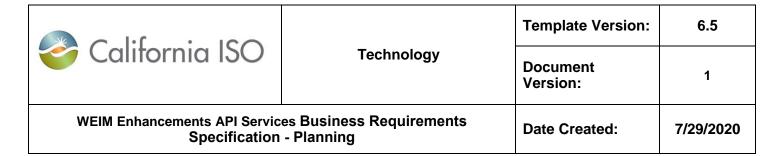
ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA-	Validation for Telemetry Following submission before Display on Telemetry Following UI:	Core	ВААОР
BRQ135	<ul> <li>System only take in and display the resources that belong to the BAA, ignore the resources that do not belong to the BAA.</li> </ul>		
	System only take in and display one telemetry following instruction for one resource for any given RTD time period. For the resource, the later submission of resource telemetry following instruction will supersede the previous instruction.		
	If multiple telemetry following instructions for the same resource in one submission, System will not take in the resource.		
	<ul> <li>Instruction start and end times must align with 5-minute RTD market interval times. If the start/end time does not align with 5-minute RTD market intervals, System shall automatically align start time with end of the corresponding interval (i.e., the telemetry following instruction will start in next interval), and align end time with end of the interval of end time. Instruction end time must be set equal to or after the start time. System will ignore the Telemetry Following instruction with end time before the start time.</li> </ul>		



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA- BRQ138	<ul> <li>Display in Telemetry Following UI for accepted submission:</li> <li>System shall provide ISO and WEIM Entity Opera with a new display (new UI) to view the latest tele following instructions received by the Real-Time.</li> <li>WEIM Entity Operator users may only view their resources located within their own BAA. ISO Opusers may view all resource instructions.</li> <li>Display Telemetry Following Instructions for the otime period.</li> <li>Clean up the previous expired instructions the saas MD instruction UI.</li> <li>Display shall provide the users with the following information, all of which can be filterable and sort</li> <li>BAA ID</li> <li>Resource ID</li> <li>Resource SC ID</li> <li>Telemetry Following Instruction Start Times</li> </ul>	Core  ator users emetry Market. instructed erator  defined  me way  resource table:	
	<ul> <li>Telemetry Following Instruction End Time</li> <li>Instruction Last Updated Timestamp</li> </ul>	9	
	<ul> <li>Display/update current telemetry value</li> </ul>		



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA-	Timing and override rules for telemetry following instruction in the Telemetry Following UI:	Core	- BAAOP API
BRQ140	WEIM entity can update the telemetry following instruction by:		
	<ul> <li>Submitting an updated instruction record for the same resource via API.</li> </ul>		
	<ul> <li>Manually updating the instruction start and/or end time through Telemetry Following UI, align start time with end of the interval, align end time with end of the interval.</li> </ul>		
	The latest update (either through UI or API) will supersede the previous one.		
	<ul> <li>Manually adding Telemetry Following instruction for resources within the BAA through Telemetry Following UI.</li> </ul>		
	<ul> <li>Manually deleting Telemetry Following instruction for resources through Telemetry Following UI.</li> </ul>		
	<ul> <li>Instruction end time shall be set equal to or after the start time.</li> </ul>		
	<ul> <li>Valid Telemetry Following instruction end time shall be set after the start time.</li> </ul>		
	<ul> <li>When the instruction end time is equal to the start time, this resource will not be converted to manual dispatch instruction.</li> </ul>		
	<ul> <li>Submit instructions prior to the execution times of the 5-minute Real-Time Dispatch (RTD) market for the binding instruction intervals to be included. If a telemetry instruction is submitted after the market run execution time, the start time will be delayed to the binding interval of the next market run.</li> </ul>		
WEIM- BPA- BRQ165	Create and broadcast ED instruction for the telemetry following instruction, these EDs shall not be visible on MD UI:	Core	-BAAOP RTM
	ED instruction shall be created for the telemetry following with:		
	Instruction Type: PTEST		
İ	Constraint Type: Fixed		



WEIM- BPA- BRQ170	System shall automatically convert for Telemetry Following instruction to normal Manual Dispatch Instruction every 5 minutes:	Core	- RTM -BAAOP
	<ul> <li>Set the convert switch on automatic in Telemetry Following UI.</li> </ul>		
	<ul> <li>AT the start of every RTD, the system shall auto- convert Telemetry Following instruction to a Goto Fixed manual dispatch instruction for the resource in the next RTD market run. This process run every 5 minute, converting the latest Telemetry Following instructions into MD instructions. (Therefore, for a given hour, there are up to 12 MD instructions created for the resource).</li> </ul>		
	<ul> <li>If the Telemetry Following instruction End time before or equal to Start time, system shall <b>not</b> convert it into MD instruction.</li> </ul>		
	<ul> <li>MD Instruction Start time will be set to the submitted telemetry following start time if the Telemetry Following start time is in future RTD binding interval.</li> </ul>		
	<ul> <li>If the submitted telemetry following start time prior to the next binding RTD interval, MD Instruction Start will be set to the next binding RTD interval. Same logic is applicable to RTPD.</li> </ul>		
	<ul> <li>MD Instruction End Time will set to the Min (End Time of Telemetry Following instruction, End of Current Operating Hour).</li> </ul>		
	<ul> <li>Goto Fixed MW instruction value will be the resource telemetry value available at the start of RTD process (about T-7.5 minute) if the telemetry quality flag is Y (from EMS).</li> </ul>		
	<ul> <li>If the telemetry quality flag is N, Goto Fixed MW instruction value will use the resource previous last good telemetry value.</li> </ul>		
	<ul> <li>For each RTD run, use the MD instruction with latest Fixed MW value of each resource for applicable binding and advisory 5-minute intervals, in the same manner as other MD instructions.</li> </ul>		
	<ul> <li>For each RTD run, for the resource, the latest MD instruction of the binding and advisory intervals have updated latest Fixed MW value will be used. System shall automatically cancel the resource previous MD</li> </ul>		



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
	instructions for applicable intervals with previous Fixed MW value.		
	<ul> <li>When the MD instruction end time is in the past, RTM shall expire this MD instruction for Telemetry Following.</li> </ul>		
	<ul> <li>Same as other MD instruction, if the resource all telemetry following MD instructions' start time and end time be outside of the RTD horizon, the market treat the resource as normal setting without active MD instruction, go back to base schedule or bids accordingly.</li> </ul>		
WEIM-	Incrementally extend the instruction end time:	Core	-BAAOP
BPA- BRQ175	If the telemetry following-generated manual dispatch instruction spans into the next operating hour, RTM shall:		RTM
	<ul> <li>Create a new MD instruction after the TH-22.5 RTPD market run execution where TH is the start time of the next operating hour's first interval.</li> </ul>		
	New MD instruction start time is the start of the next operating hour, the instruction end time to Minimum (End Time of Telemetry Following instruction, End of Operating Hour).		
	Consistent with the first operating hour, MW instruction value will update to the current MW telemetry at the time of the current market run execution for all binding and advisory intervals.		
	Use last good telemetry value of the previous hour if the first interval telemetry quality is N.		



ID#	Business	Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA-	Receive M through A	anual Dispatch instructions from WEIM entity PI:	Core	BAAOP API
BRQ200	ISO marke	t systems shall:		
	0	Receive resource manual dispatch instructions through API from WEIM Entity systems.		
	0	The submitted manual dispatch instruction shall include all the required attributes and optional attributes if applicable.		
	Required fi	elds (*):		
	0	Resource MRID *		
	0	StartDate*		
	0	EndDate*		
	0	ConstraintType*:		
		Allow: Minimum/Maximum/Fixed		
		<b>Not Allow</b> : startup/shutdown/offline/configuration ((new ED function)		
	0	InstructionType*: Manual Dispatch Reason Code:		
		PASTEST/PBS/PNONTMOD/PRMRR/		
		PRMRRC2/PSYSEMR/PTEST/PTMODEL/PVS		
	0	GOTO MW*		
	Optional fie	elds:		
	0	ManualDispatchID: Optional data element provided by user, if the user is trying to update an existing MD		
	0	Reason		
	0	OtherReason		
	0	Notes		
	0	RuleResults: for receiving the validation reply		
		o Rule Message		
		o Rule type		



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM-	Accept or reject the API submission:	Core	-BAAOP
BPA- BRQ210	Accept the API xml submission if the format passes the validation.		RTM
	Reject the API xml submission if the format fails the validation.		
	Pass successful submission to the market system for further validation.		
WEIM-	Automatically activate the manual dispatch validation:	Core	-BAAOP
BPA- BRQ230	<ul> <li>Upon the market receiving the manual dispatch successful submission through API, system shall automatically activate the validation.</li> </ul>		RTM
	<ul> <li>Apply the validation rules the same as Manual Dispatch UI inputs.</li> </ul>		
	<ul> <li>System shall accept the resources that pass the validation.</li> </ul>		
	<ul> <li>System shall ignore the resources that fail the validation.</li> </ul>		
WEIM- BPA-	Record the error messages of manual dispatch instruction validation in the reply of submission:	Core	-BAAOP RTM
BRQ250	Include resource with error messages if the validation failed.		ICTIVI
	The validation log file include the manual dispatch submitted through API and UI.		
	The error message shall be consistent for API and UI for the same type of error.		
	Allow WEIM entity to view and export the log file or report.		
	Upon the Submission, Market shall reply to the WEIM entity's submission in XML with validation results, include the field values that WEIM entity submitted, and the RuleResults include Rule message and Rule type.		



ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA- BRQ260	Display accepted resources on Manual Dispatch UI:  System shall:  Display only the accepted resource instructions that pass the validation for the MD API submission.  Display the compete resource manual dispatch instruction, include:  Required fields and optional fields listed in BRQ200.  Automatically fill in following fields based on the RES ID and association:  BAA  SC name  Verbal Flag, default value as: N  Start Time Flag, default value as: Use Defined time  Limit AS, default value as Limit Energy	Core	- RTM -BAAOP
WEIM- BPA- BRQ270	Allow operator override the resource manual dispatch instruction through UI  Add new manual dispatch instructions  Override/update existing manual dispatch instructions, include accepted MD instructions that submitted through API or UI  Apply the same update/validation rule for MD instructions accepted through API or UI. For each existing MD instruction, all the fields can be updated through UI, subject to the existing UI validation rules, same function currently available  Cancel the existing manual dispatch instruction with all the updates through export function, same function currently available.	Existing Function	- RTM -BAAOP

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ID#	Business Feature	Requireme nt Type	Potential Application(s) Impacted
WEIM- BPA- BRQ280	System automatic adjust start and end intervals align the market intervals  If the start time submitted through API or UI not at the start of the RTD interval, system will automatically adjust to the start time of the interval.  If the end time submitted through API or UI not at the end of the RTD interval, system will automatically adjust to the end time of the interval	Existing Function	- RTM -BAAOP
WEIM- BPA- BRQ290	Override or cancel previous MD  The latest update (either through UI or API) will supersede the previous one for the same resource for the same interval.  Update or Cancel MD through API:	Core	- RTM -BAAOP
	<ul> <li>WEIM entity shall submit the Manual Dispatch, specified the MDID for the resources.</li> <li>The System shall replace the previous MD with latest submission for the same MDID.</li> <li>To cancel manual dispatch, participant will submit and end time equal to the next 5 minute interval breakpoint, the system will end Manual Dispatch, 1, at the nearest market time. The start time and MW is not updated for Manual Dispatch 1 because the start time is in the past time horizon.</li> </ul>		

#### 4.2 Business Process: Market/Business Simulation

This section shall provide a basis for the development of the Market/Business Simulation Scenarios. These requirements will provide guidance on the market participant impacts, inputs into the Scenarios, endpoints to the Scenarios and reasons for potential Scenarios. The guidance on market participant impacts shall be gathered from the requirements that impact rules, interfaces, applications/reports, new system processes, new/modified data models, and new user roles. The source and sink systems shall be determined through the development of the system context diagram and the web service requirements. The *Reason for the Potential Scenario* column will be to offer guidance regarding what potential scenarios, and their context, may be needed for this project. This section applies to all policy development projects, market enhancements, technology enhancements, operation enhancements, Energy Imbalance Market (EIM) implementations, and Reliability

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Coordination (RC) service implementations. If the project team has deemed that no structured testing is needed, an end-to-end test case must be specified.

In the Reason for Potential Scenario column, select one or more of the following reasons:

- 1. Rule Impacts: Generalized changes in market rules, bidding rules, settlements rules, market design changes, or other business rules.
- 2. Interface changes: Changes that impact templates (e.g., the Resource Adequacy (RA) supply plan), user interface (UI), and application programming interface (API) (e.g., retrievals of new shadow settlement data).
- **3. New application/report**: Changes that cause addition/modification of market software or reports, especially when market data input is required by the market participant.
- **4. New system process**: Modification of data flow in systems, especially if the new process requires the market participant to demonstrate proficiency prior to production.
- **5.** New/Modified model data: Addition or substantial modification of model data as a market solution or export provided by the ISO.
- **6.** New user role: The addition or modification of access permissions for a user role applied to specific business units within an EIM entity or market participant organization (e.g., Load Serving Entity (LSE) as a Local Regulatory Authority (LRA) role). Scenarios are beneficial for market participants taking on a new function or process within their organization.

#### 4.2.1 Business Requirements

ID#	Guidance on Market Participant Impacts	Source System	Sink System	Reason for Potential Scenario
WEIM-BPA- MKTSIM001	Contingency Status Submission to ISO by WEIM Entity via B2B API.	WEIM entity	BAAOP RTM	2. Interface changes
	In the RTM, WEIM Entities may submit their BAA's contingency status via a business-to-business API.			
	Once submitted via API, the WEIM Entity user may view the updated status in the BAAOP RTD Dispatch Control display.			
	Scenario is considered unstructured.			



ID#	Guidance on Market Participant Impacts	Source System	Sink System	Reason for Potential Scenario
WEIM-BPA- MKTSIM002	Imbalance conformance (Load Bias) Submission to ISO by WEIM Entity via B2B API.	WEIM entity	BAAOP RTM	2. Interface changes
	In the RTM, WEIM Entities may submit their BAA's <b>Imbalance conformance</b> via a business-to-business API.			
	Once submitted via API, the WEIM Entity user may view the updated status in the BAAOP RTD Load Forecast.			
	Scenario is considered unstructured.			
WEIM-BPA- MKTSIM003	Telemetry Following Instruction Submission to ISO by WEIM entity via B2B API	WEIM entity	BAAOP RTM	2. Interface changes
	In the RTM, WEIM Entities may submit their BAA's Resource Telemetry Following Instruction via a business-to-business API.			
	Once submitted via API, the WEIM Entity user may view the updated status in the BAAOP RTD New Display Telemetry Following UI.			
	Scenario is considered unstructured.			
WEIM-BPA- MKTSIM004	Convert Telemetry Following Instruction to the Manual Dispatch instruction.	WEIM entity	BAAOP RTM	5. New/Modified model data
	Scenario is considered unstructured.			
WEIM-BPA- MKTSIM005	Manual Dispatch Instruction Submission to ISO by WEIM entity via B2B API.	WEIM entity	BAAOP RTM	2. Interface changes
	In the RTM, WEIM Entities may submit their BAA's Resource MD Instruction via a business-to-business API.			
	Once submitted via API, the WEIM Entity user may view the updated instruction in the BAAOP RTD MD UI.			
	Scenario is considered unstructured.			