

# Business Requirements Specification


## FERC Order 881 – Track 2

Document Version: 2.0

Current Version Date: 3/28/2025


### Revision History

Date	Version	Description
11/01/2024	1.0	Document Created. Note: External BRS subject to change, changes shall be reflected in future External BRS.
03/28/2025	2.0	Added BRQs to cover all systems impacted by this project: <ul style="list-style-type: none"><li>MasterFile: BRQ276</li></ul> Added the following webLineR™ requirements: <ul style="list-style-type: none"><li>BRQ277, BRQ261, BRQ262, BRQ227, BRQ081, BRQ215</li></ul> Updated the following webLineR™ requirements: <ul style="list-style-type: none"><li>BRQ281, BRQ282, BRQ268, BRQ213, BRQ030, BRQ031, BRQ046, BRQ069A, BRQ202</li></ul> Updated the following AIM requirements: <ul style="list-style-type: none"><li>BRQ251, BRQ264</li></ul> Updated all Market Sim requirements to state Market Participants instead of authorized External Entities Updated Appendix C

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# 1 Introduction

## 1.1 Purpose

### **Disclaimer:**

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### **Background**

On December 16, 2021, the Federal Energy Regulation Commission issued a final rule in RM20-16 – Managing Transmission Line Ratings (Order No. 881), which adopts various reforms pursuant to section 206 of the Federal Power Act. Order No. 881 directs public utility transmission providers, transmission owners, and regional transmission operators (RTOs) and independent system operators (ISOs) to implement the following reforms:


- **Ambient-adjusted ratings and seasonal ratings:** Public utility transmission providers (RTOs/ISOs and non-RTOs/ISOs) must implement ambient-adjusted ratings (AARs) and seasonal ratings. They must use ambient-adjusted ratings for evaluating requests for near-term transmission service (defined as transmission service that ends within 10 days of the date of the request). They must use seasonal ratings for evaluating other, longer-term transmission service requests.
- **Electronic updates to transmission ratings:** RTOs/ISOs must establish and implement the systems and procedures necessary to allow transmission owners to electronically update transmission line ratings at least hourly.
- **Use of emergency ratings:** Public utility transmission providers (RTOs/ISOs and non-RTOs/ISOs) must use uniquely determined emergency ratings for contingency analysis in the operations horizon and in post-contingency simulations of constraints.
- **Transparency:** Transmission owners must share transmission line ratings and transmission line rating methodologies with their respective transmission providers and, in RTOs/ISOs, with their respective market monitors. Order No. 881 requires transmission providers to maintain a database of each transmission owner’s transmission line ratings and transmission line rating methodologies

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on the transmission provider's open access same-time information system website, or on another password-protected website.

## Project Scope:

### Track 1: Real Time Reliability Applications

- System updates include: RTM ,DAM

### Track 2: Operational

- AAR submission and validations for CAISO TOPs and RCs in new application webLineR™
- Seasonal ratings submission and validations for CAISO TOPs and RCs, based on reasonability limits (upper and lower limits) check
- Adjacent TOPs/RCs to have the capability to view ratings information in webLineR™

### Track 3: Market Applications and Look Ahead Applications

- Market updates/changes and downstream systems
- Align integration across market and look ahead system functionality, timing, and processes
- Meet reporting requirements
- Impacts to transmission scheduling priorities

**Note: This Business Requirements Specifications document describes high level business requirements to support the FERC Order 881 Track 2 Initiative. Also, the requirements in Section 4.2 are being implemented alongside FERC881 Track 2 in order to accommodate NERC requirements for FAC – 011.**

## 2 Details of Business Need/Problem

### 2.1 Description


<b>Business Opportunity/Problem Statement:</b>	
<b>What:</b>	This initiative will allow the ISO to utilize regularly updated AARs for near-term transmission service requests and in market

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<b>Business Opportunity/Problem Statement:</b>	
	<p>processes. AARs provide more accurate transmission line ratings, and regular updates will better reflect real-time weather conditions.</p> <p><b>Note: The requirements in Section 4.2 are being implemented alongside FERC881 Track 2 requirements in order to accommodate NERC requirements for FAC – 011.</b></p>
<b>When:</b>	<b>Refer to Release Users Group (RUG) for updated implementation timeline for individual tracks.</b>

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## 3 Project Impact Assessment (IA)

### 3.1 Business Practice Manuals (BPM)


<b>BPM</b>	<b>Description of Impact(s)</b>
<b>BPM Change Management</b>	Not Impacted
<b>Candidate CRR Holder Registration</b>	Not Impacted
<b>Compliance Monitoring</b>	Not Impacted
<b>Congestion Revenue Rights</b>	Updates to reflect shift from two to four seasonal ratings
<b>Credit Management and Market Clearing</b>	Not Impacted
<b>Demand Response</b>	Not Impacted
<b>Direct Telemetry</b>	Not Impacted
<b>Distributed Generation for Deliverability</b>	Not Impacted
<b>Energy Imbalance Market (EIM)</b>	Not Impacted
<b>Generator Interconnection and Deliverability Allocation Procedures</b>	Not Impacted
<b>Generator Interconnection Procedure (GIP)</b>	Not Impacted
<b>Generator Management</b>	Not Impacted
<b>Managing Full Network Model</b>	Impacts to FNM update processes
<b>Market Instruments</b>	Overview of webLineR™
<b>Market Operations</b>	Use of AARs and seasonal ratings in market processes.
<b>Metering</b>	Not Impacted
<b>Outage Management</b>	Changes to reflect AARs, seasonal ratings in outages.

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<b>BPM</b>	<b>Description of Impact(s)</b>
	TBD – Overview of webLineR
<b>Reliability Coordinator Services</b>	Not Impacted
<b>Reliability Requirements</b>	Not Impacted
<b>Rules of Conduct Administration</b>	Not Impacted
<b>Scheduling Coordinator Certification and Termination</b>	Not Impacted
<b>Settlements and Billing</b>	Not Impacted
<b>Transmission Planning Process</b>	Not Impacted

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## 3.2 Other

<b>Impact</b>	<b>Description (optional)</b>
<b>Market Simulation</b>	<b>Yes</b> Refer to Market Sim Section 5.2 for more information.
<b>Market Participant Impact</b>	<b>Yes</b> TO submission of data in Track 1 and Track 2, and usability of Track 2 User Interface.
<b>User Acceptance Testing (UAT)</b>	<b>Yes</b> <b>Track 2:</b> TO's and internal users functionality of new UI.
<b>Customer Readiness Impact</b>	<i>Yes, see below.</i>
<ul style="list-style-type: none"> <li><b>External Communication Needed</b></li> </ul>	<b>Yes</b> External Communication is being managed through the stakeholder process, and visibility of externally facing items will be disclosed in publication of External BRS to CAISO.com.
<ul style="list-style-type: none"> <li><b>External Onboarding and Maintenance</b></li> </ul>	No
<ul style="list-style-type: none"> <li><b>External Training</b></li> </ul>	<b>Yes</b> <b>Track 1:</b> Training for TO submission of TLRs and limit duration. <b>Track 2:</b> External training for utilizing webLineR™. <b>Track 3:</b> TBD
<ul style="list-style-type: none"> <li><b>External Computer Based Training</b></li> </ul>	<b>Yes</b> Will be completed in parallel to External Training.


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<b>Impact</b>	<b>Description (optional)</b>
<b>Policy Initiative</b>	<b>Yes</b> Refer to Policy Initiative site for more information. <a href="#">Track 1</a> <a href="#">Track 2</a>

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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 Requirements: Track 2

#### 4.1.1 Business Requirements: HANA


ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
F881 – BRQ293	System (HANA) must have branch limits display and reflect the ratings that are being used at that time (Season, Active Limits, webOMS).	Core	HANA
<u>F881 – BRQ062</u>	<u>System (HANA) must display electronic transmission line rating data submitted through ICCP.</u>	<u>Existing</u>	<u>HANA</u>

#### 4.1.2 Business Requirements: webLineR™

ID#	Business Feature	Req. Type	Potential Application(s) Impacted
<u>F881 – BRQ277</u>	<u>System (WebLineR) must receive Participant Data from MasterFile.</u>	<u>Core</u>	<u>webLineR™</u>

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<b>ID#</b>	<b>Business Feature</b>	<b>Req. Type</b>	<b>Potential Application(s) Impacted</b>
F881 – BRQ281	<p>System (webLineR™) must have the capability for <u>CAISO Market Participants and other</u> authorized external parties to see and download CAISO PTO submitted data.</p> <p>Note: Refer to Appendix C for list of external entities that have read access to webLineR.</p> <p>Note:</p> <p><u>CAISO Market Participants and other a</u>Authorized parties must have READ ONLY access to see and download CAISO PTO data [CAISO PTOs that have executed the Transmission Control Agreement with CAISO control flag set to yes] and <u>should not be able</u> to access other RC WEST <del>TOP</del> <u>or WEIM Entity</u> data.</p>	Core	webLineR™

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<b>ID#</b>	<b>Business Feature</b>	<b>Req. Type</b>	<b>Potential Application(s) Impacted</b>
F881 – BRQ282	<p>System (webLineR™) must have the capability for <u>Balancing Authorities to see and download all submitted TOP/RC data.</u><del>External Participants to see and download all of their own submitted data.</del></p> <p>Note: Refer to Appendix C for list of external entities that have read access to webLineR.</p>	Core	webLineR™
F881 – BRQ283	<p>System (webLineR™) must have the following user roles:</p> <ul style="list-style-type: none"> <li>• Internal Read Only</li> <li>• Internal Read/Write</li> <li>• Internal Super User</li> <li>• Internal IT Admin</li> <li>• External Read Only (see BRQ282 and Appendix C).</li> <li>• External Read/Write</li> <li>• External Read Only (only see CAISO PTO data, see BRQ281)</li> </ul> <p>Implementation note: Refer to Appendix C for Role matrix to see additional details on user roles and types.</p>	Core	webLineR™

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ID#	Business Feature	Req. Type	Potential Application(s) Impacted
F881 – BRQ268	<p>System (webLineR™) must send AARs to downstream systems for new equipment introduced-in the latest Network Model promotion.</p> <p>Implementation note: webLineR™. may send AARs for retired equipment for several days after new Network Model promotion.</p> <p><del>Note: webLineR shall also send AARs to downstream systems for existing equipment.</del></p>	Core	webLineR™
<u>F881 – BRQ261</u>	<u>System (webLineR) must have the capability to identify and flag any expired equipment during Network Model promotion after receiving new CIM.</u>	<u>Core</u>	<u>webLineR™</u>
<u>F881 – BRQ262</u>	<u>System (webLineR) must continue sending AARs to expired equipment until midnight of the date when new Network Model goes online.</u>	<u>Core</u>	<u>webLineR™</u>
F881 – BRQ260	System (webLineR™) must have the capability to send Real-Time AARs to Internal ISO System in the event ICCP is down.	<del>Core</del> Existing	webLineR™
F881 – BRQ182	System (webLineR™) must display English/Common name along with CIM model name for equipment on the UI.	Core	webLineR™

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<b>ID#</b>	<b>Business Feature</b>	<b>Req. Type</b>	<b>Potential Application(s) Impacted</b>
F881 – BRQ185	<p>All participants that submit model data can submit a request during the FNM process to expand their rating slots (seasonal or AAR).</p> <p>Note: Refer to Appendix C for full list of submitting entity types.</p> <p>Implementation note: Entities may request to expand rating slots to up to 5 total slots (1 Normal and 4 Emergency).</p>	Business Process	N/A
F881 – BRQ176	System (webLineR™) must automatically assign Geo and Sub-geo to both sides of the Tie-Line for spanning transformer.	Core	webLineR™
F881 – BRQ147	System (webLineR™) must receive Full Network Model (FNM) data from the Common Information Model (CIM).	Core	webLineR™

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F881 – BRQ027	<p>System (webLineR™) must have both UI and API capability for RC West TOPs, Non RC West Non WEIM Market RCs, and Non RC West WEIM Market TOP-EIMs, to submit the following (but not limited to) for Seasonal, Real-Time, and Forward Looking Transmission Line Ratings (TLR's):</p> <ul style="list-style-type: none"> <li>-Seasonal Ratings (TOP/RC submitted)</li> <li>- Transmission Line Ratings (TOP/RC submitted)</li> <li>-Temporary Alternate Transmission Line Ratings (TOP/RC TOP/RC submitted)</li> <li>-Exceptions (TOP/RC submitted)</li> <li>-Effective Date Initiated (for each of the above points)</li> <li>-Effective Date Withdrawn (for each of the above points if withdrawn)</li> <li>-Transmission Line Rating methodologies (TOP/RC submitted)</li> <li>-Date and Time of record submission into database (system generated)</li> </ul> <p>Implementation note: Could be submitted in UI, API, and can also be bulk submission. TOP/RC can submit/upload bulk file into UI.</p> <p>Implementation note: There are three rating types:</p>	Core	webLineR™
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<b>ID#</b>	<b>Business Feature</b>	<b>Req. Type</b>	<b>Potential Application(s) Impacted</b>
	<p>Normal- Operating under this rating is allowable 24x7</p> <p>Emergency – These ratings have associated time durations. Operating under an Emergency rating is allowable for the associated duration</p> <p>Highest Emergency Rating- HER is the Emergency rating with the shortest duration. Operating over this rating is not allowable. TOPs/RCs shall submit their durations, these do not necessarily have to be standardized across TOPs/RCs.</p>		




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F881 – BRQ156	<p>System (webLineR™) must have the capability for user to bulk upload via UI and API.</p> <p>Implementation note: refer to BRQ027 for list of information being submitted.</p> <p>Note: Refer to Appendix C for list of entity types that have read/write access to webLineR.</p> <p>Note: If authorized external parties do not have APIs, they may download directly from webLineR™, make the updates in the excel sheet and reupload to the UI on webLineR™. This would be done per entity, but could be done for several facilities at the same time.</p>	Core	webLineR™

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F881 – BRQ181	<p>System (webLineR™) must have the capability for internal and external users to filter fields from BRQ027 and generate reports.</p> <p>Note: filter in order to lookup ratings for equipment.</p> <p>Note: Filter by TOPs --&gt; Line --&gt; equipment --&gt; Rating. Similar to how searched in TR today. Organization, Component ID, TR ID if needed, Station, Equipment Type, Voltage. Logical filter for ascending and descending.</p> <ul style="list-style-type: none"> <li>• Search for Tformer (Tformer or Tformer Bay). Line, and Line Segment.</li> <li>• Whether stationed, or field equipment.</li> <li>• Filter equipment by sub-stations</li> </ul>	Core	webLineR™

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F881 – BRQ178	<p>System (webLineR™) must have the capability to take the minimum (lowest) of the ratings submitted by TOPs for a specific Tie-line.</p> <p>Note: if two TOPs submit ratings for the same line then webLineR™ would take the minimum of the two values. This would be the value webLineR™ then sends to downstream systems.</p>	Core	webLineR™
F881 – BRQ179	<p>System (webLineR™) must display notification to authorized external parties stating that “In the event additional ratings are submitted on this Tie-line, the minimum rating shall be utilized.”</p> <p>Note: Notification displays upon TOP clicking submit for rating changes. This BRQ relates to BRQ178.</p>	Core	webLineR™
F881 – BRQ028	<p>System (webLineR™) must have the capability to store the Seasonal, Real Time (Current day) and Forward Looking data from BRQ027 for five years on UI.</p>	Core	webLineR™

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F881 – BRQ029	<p>System (webLineR™) must have a user interface for RC West TOPs, Non RC West Non WEIM Market RCs, and Non RC West WEIM Market TOP-EIMs to view and retrieve their information as outlined in BRQ027.</p> <p>Note: Refer to Appendix C for more information on entities types and access to webLineR.</p> <p>Note: Certificate managed in AIM.</p> <p>Note: joint owners to be able to view and edit their own line data but not edit other joint TOP line data.</p>	Core	webLineR™
F881 – BRQ198	System (webLineR™) must have programmatic interface (API) for RC West TOPs, Non RC West Non WEIM Market RCs, and Non RC West WEIM Market TOP-EIMs to retrieve their information as outlined in BRQ027.	Core	webLineR™
<u>F881-BRQ227</u>	<u>System (webLineR™) must have Acceptable Use Policy</u>	<u>Core</u>	<u>webLineR™</u>

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F881 – BRQ213	<p><del>Authorized external parties</del> <u>External users (TOPs)</u> must have read-only access to view other <u>TOP</u> rating submission data per BRQ027.</p> <p>Note: Refer to Appendix C for list of entities with read access to webLineR.</p> <p>Note: TOPs can only edit their own submissions, but may view other TOP submissions. This is similar to how TOPs view neighboring TOP submissions today in RC Portal. See AIM requirements in section 4.1.3 for more information.</p>	Core	webLineR™
F881 – BRQ214	Anytime edits are made to data outlined in BRQ027, by internal or external user, a history log must be created with name of submitter, change made, and time of change.	Core	webLineR™
F881 – BRQ151	System (webLineR™) must follow the standard authentication and authorization protocols for this initiative utilizing AIM.	Core	webLineR™

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F881 – BRQ030	System (webLineR™) must have the capability for RC West TOPs, <del>Non-RC West Non-WEIM Market RCs, and Non-RC West WEIM Market TOP-EIMs</del> and <u>CAISO PTOs</u> to update their information submitted in BRQ027.	Core	webLineR™
F881 – BRQ031	<p>System (webLineR™) must have the capability for <u>CAISO TOPs, CAISO RCs, and Adjacent RC/TOPs</u> <del>to be able authorized external parties</del> to view each other's' transmission line rating information, as well as query, and download their rating information.</p> <p>Note: Refer to Appendix C for list of entities with read access.</p> <p>Note: RCs in the Western interconnection must have the capability to view, query, and download this data as well. See AIM requirements in section 4.1.3 for more information.</p> <p>Note: See BRQ027 for a list of rating information.</p>	Core	webLineR™


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F881 – BRQ258	<p>System (webLineR™) must select the most limiting AAR for interconnected facilities.</p> <p>Note: Two TOPs may submit different ratings, webLineR™ to select lowest in order to display to TOPs.</p> <p>Note: System must send the most limiting rating to downstream systems.</p> <p>Note: the most limiting AAR must be selected whenever ratings are submitted per BRQ027 or updated per BRQ030.</p>	Core	webLineR™

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F881 – BRQ046	<p>The CAISO will coordinate with Participating Transmission Owners in their development of Transmission Line Rating methodologies to ensure methodology elements listed in the Tariff Appendix JJ are accounted for.</p> <p><del>Note: CAISO to review RC West TOP's methodologies every 5 years per tariff requirements.</del></p> <p><del>Note: Entities other than RC West TOPs are also able to submit their methodologies into webLineR per BRQ027. Refer to Appendix C for more information on entity types.</del></p>	Internal Business Process	Not Applicable




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F881 – BRQ154A	<p>When authorized external parties submit TLR's, System (webLineR™) must have the following automated validations before the data is accepted for both initial and updated dataset for <u>Ambient Adjusted Rating (AARs)</u> submission:</p> <ol style="list-style-type: none"> <li>1. Reasonability Limits (Min/Max), if outside of bounds then reject submission (automated)</li> <li>2. Percentage Rate of Change validation when compared against prior limit submission (automated). If % threshold is significantly higher or lower from prior submission then reject submission. E.g., 50% higher rating submitted than the last hour for specific facility. Note: This field must be configurable by internal admin users.</li> <li>3. The model data submission must be consistent with ISO CIM model. Must have primary attribute set that matches TOP submission Resource Description Framework IDs (RDFIDs) with the FNM.</li> <li>4. Require Transmission Line Rating to be completely filled out. Cannot be left blank.</li> <li>5. Authenticate data being submitted for components belongs to TOP that is the owner of the components.</li> <li>6. Reject TLR submission if values are not in ascending order.</li> </ol> <p>Note: If uploading bulk and has errors then would reject erroneous</p>	Core	webLineR™
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	submissions and accept all other records. A notification must be provided to show which individual items were rejected.		

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F881 – BRQ154B	<p>When authorized external parties submit TLR's, System (webLineR™) must have the following automated validations before the data is accepted for both initial and updated dataset for <u>seasonal ratings</u>:</p> <ol style="list-style-type: none"> <li>1. Reasonability Limits (Min/Max), if outside of bounds then reject submission (automated)</li> <li>2. Percentage Rate of Change validation when compared against prior limit submission (automated). If % threshold is significantly higher or lower from prior submission then reject submission. E.g., -50% higher rating submitted than the last time for specific resource. Note: This field must be configurable by internal admin users.</li> <li>3. The model data submission must be consistent with ISO CIM model. Must have primary attribute set that matches TOP submission Resource Description Framework IDs (RDFIDs) with the FNM.</li> <li>4. Require Transmission Line Rating to be completely filled out. Cannot be left blank.</li> <li>5. Authenticate data being submitted for components that belongs to TOP that is the owner of the components.</li> <li>6. Reject submission if values are not in ascending order.</li> <li>7. Most limiting TLR factor component validation for setting seasonal limits</li> </ol>	Core	webLineR™
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<b>ID#</b>	<b>Business Feature</b>	<b>Req. Type</b>	<b>Potential Application(s) Impacted</b>
F881 – BRQ063A	System (webLineR™) must have the capability for authorized external parties to set and update reasonability limits for TLR, DLR, AAR.  Note: Must have default set configurations.	Core	webLineR™
F881 – BRQ063B	System (webLineR™) must have the capability for authorized external parties to set and update reasonability limits for seasonal ratings.	Core	webLineR™
F881 – BRQ069A	If TOP submission is rejected due to not passing validations in <u>BRQ154A</u> , System (webLineR™) must have error message log on UI and API that specifies why submission was rejected <del>for specific submission records.</del>	Core, Internal Business Process	webLineR™

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<b>ID#</b>	<b>Business Feature</b>	<b>Req. Type</b>	<b>Potential Application(s) Impacted</b>
F881 – BRQ069B	If TOP submission is rejected due to not passing validations in <u>BRQ154B</u> , System (webLineR™) must display error message on UI and API that specifies why submission was rejected.	Core, Internal Business Process	webLineR™
F881 – BRQ202	<p>If <del>authorized-external-entity</del>TOP updates Seasonal ratings in webLineR, System (webLineR™) must send payloads to downstream systems at the start of the updated rating change.</p> <p>Note: Where the start date may be in the future. When TOP or PTO submits rating changes into webLineR™, webLineR™ has payloads triggered based on the start dates for the updated ratings.</p> <p>Note: These start dates are different from the effective dates for seasons which may be different for each entity and are defined at the subgeo level.</p>	Core	webLineR™

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F881 – BRQ190	<p>System (webLineR™) must broadcast Current Hour dynamic data and Next Hour data to EMS every hour for all equipment (included but not limited to):</p> <p>Note: At the top of every hour, a payload will be sent with data for the current hour and next hour. If there are any updates to the data already sent that is for the current 2 hour horizon, webLineR™ will send updated payload.</p> <ul style="list-style-type: none"> <li>• Sub Geographical Region,</li> <li>• Substation Name,</li> <li>• TLR type (fall, spring, summer, winter)</li> <li>• Device Type (line/XFRM),</li> <li>• Nominal Voltage,</li> <li>• Equipment Name and Equipment Resource Description Framework ID (RDFID),</li> <li>• Measurement RDFID and Limits/Ratings RDFID (Primary key), Duration in minutes for each ratings,</li> <li>• Reasonability min and max.</li> <li>• TLR Methodology (AAR, DLR, Seasonal),</li> <li>• Highest Emergency Rating (HER) with duration</li> </ul>	Core	webLineR™
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<b>ID#</b>	<b>Business Feature</b>	<b>Req. Type</b>	<b>Potential Application(s) Impacted</b>
F881 – BRQ142	System (webLineR™) must have the capability to broadcast 10 days of Look Ahead data to downstream systems:  Note: FERC881 Track 3 initiative focuses on downstream applications receiving data from webLineR, refer to Release User Group (RUG) for updated implementation timelines.	Core	webLineR™
F881 – BRQ203	System (webLineR™) must have EquipmentIDs (TRIDs) mapped to various equipment (TR components).	Core, Internal Business Process	webLineR™
<u>F881-BRQ215</u>	<u>System(webLineR™) must have note field for internal/external users with read/write access to write notes on UI.</u>	<u>Core, Internal Business Process</u>	<u>webLineR™</u>

#### 4.1.3 Business Requirements: AIM


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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ251	System (AIM) must be updated with the following external user type with the following access provisioning:	Core	AIM												
	<table><tr><td>Belongs To</td><td>CAISO BAA Market Participants</td></tr><tr><td>Org Type</td><td>N/A</td></tr><tr><td>Read</td><td>Yes</td></tr><tr><td>Define Read Data</td><td>CAISO <u>PTO</u> only Equipment and Rating data</td></tr><tr><td>Write</td><td>No</td></tr><tr><td>Define Write Data</td><td>N/A</td></tr></table>			Belongs To	CAISO BAA Market Participants	Org Type	N/A	Read	Yes	Define Read Data	CAISO <u>PTO</u> only Equipment and Rating data	Write	No	Define Write Data	N/A
	Belongs To			CAISO BAA Market Participants											
	Org Type			N/A											
	Read			Yes											
	Define Read Data			CAISO <u>PTO</u> only Equipment and Rating data											
	Write			No											
	Define Write Data			N/A											
Note: See User Roles as described in Appendix C for additional information on access provisioning.															




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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted		
F881 – BRQ252	System (AIM) must be updated with the following external user type with the following access provisioning:	Core	AIM		
	<table><tr><td>Belongs To</td><td>RC WEST</td></tr></table>			Belongs To	RC WEST
	Belongs To			RC WEST	
	<table><tr><td>Org Type</td><td>RC</td></tr></table>			Org Type	RC
	Org Type			RC	
	<table><tr><td>Read</td><td>Yes</td></tr></table>			Read	Yes
	Read			Yes	
	<table><tr><td>Define Read Data</td><td>All Equipment and Rating Data</td></tr></table>			Define Read Data	All Equipment and Rating Data
Define Read Data	All Equipment and Rating Data				
<table><tr><td>Write</td><td>No</td></tr></table>	Write	No			
Write	No				
<table><tr><td>Define Write Data</td><td>N/A</td></tr></table>	Define Write Data	N/A			
Define Write Data	N/A				
Note: See User Roles as described in Appendix C for additional information on access provisioning.					

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
F881 – BRQ264	System (AIM) must be updated with the following external user type with the following access provisioning:	Core	AIM

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
F881 – BRQ265	System (AIM) must be updated with the following external user type with the following access provisioning:	Core	AIM
Note: See User Roles as described in Appendix C for additional information on access provisioning.			

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ284	<div>System (AIM) must not grant access and provisioning to the following external entity as follows:</div> <table><tr><td>Belongs To</td><td>NOT RC WEST (Not WEIM Market)</td></tr><tr><td>Org Type</td><td>TOP</td></tr><tr><td>Read</td><td>No</td></tr><tr><td>Define Read Data</td><td>N/A</td></tr><tr><td>Write</td><td>No</td></tr><tr><td>Define Write Data</td><td>N/A</td></tr></table> <div>Note: See User Roles as described in Appendix C for additional information on access provisioning.</div>	Belongs To	NOT RC WEST (Not WEIM Market)	Org Type	TOP	Read	No	Define Read Data	N/A	Write	No	Define Write Data	N/A	Core	AIM
Belongs To	NOT RC WEST (Not WEIM Market)														
Org Type	TOP														
Read	No														
Define Read Data	N/A														
Write	No														
Define Write Data	N/A														

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ285	<p>System (AIM) must not grant access and provisioning to the following external entity as follows:</p> <table><tr><td>Belongs To</td><td>NOT RC WEST (Not WEIM Market)</td></tr><tr><td>Org Type</td><td>BAA</td></tr><tr><td>Read</td><td>No</td></tr><tr><td>Define Read Data</td><td>N/A</td></tr><tr><td>Write</td><td>No</td></tr><tr><td>Define Write Data</td><td>N/A</td></tr></table> <p>Note: See User Roles as described in Appendix C for additional information on access provisioning.</p>	Belongs To	NOT RC WEST (Not WEIM Market)	Org Type	BAA	Read	No	Define Read Data	N/A	Write	No	Define Write Data	N/A	Core	AIM
Belongs To	NOT RC WEST (Not WEIM Market)														
Org Type	BAA														
Read	No														
Define Read Data	N/A														
Write	No														
Define Write Data	N/A														

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ286	<p>System (AIM) must be updated with the following external user type with the following access provisioning:</p> <table><tr><td><b>Belongs To</b></td><td>Not RC WEST (Not WEIM Market)</td></tr><tr><td><b>Org Type</b></td><td>RC</td></tr><tr><td><b>Read</b></td><td>Yes</td></tr><tr><td><b>Define Read Data</b></td><td>All Equipment and Rating Data</td></tr><tr><td><b>Write</b></td><td>Yes</td></tr><tr><td><b>Define Write Data</b></td><td>Write to their own TOP equipment only</td></tr></table> <p>Note: See User Roles as described in Appendix C for additional information on access provisioning.</p>	<b>Belongs To</b>	Not RC WEST (Not WEIM Market)	<b>Org Type</b>	RC	<b>Read</b>	Yes	<b>Define Read Data</b>	All Equipment and Rating Data	<b>Write</b>	Yes	<b>Define Write Data</b>	Write to their own TOP equipment only	Core	AIM
<b>Belongs To</b>	Not RC WEST (Not WEIM Market)														
<b>Org Type</b>	RC														
<b>Read</b>	Yes														
<b>Define Read Data</b>	All Equipment and Rating Data														
<b>Write</b>	Yes														
<b>Define Write Data</b>	Write to their own TOP equipment only														


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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ287	<p>System (AIM) must be updated with the following external user type with the following access provisioning:</p> <table><tr><td><b>Belongs To</b></td><td>Not RC WEST (WEIM Market)</td></tr><tr><td><b>Org Type</b></td><td>TOP-EIM</td></tr><tr><td><b>Read</b></td><td>Yes</td></tr><tr><td><b>Define Read Data</b></td><td>All Equipment and Rating Data</td></tr><tr><td><b>Write</b></td><td>Yes</td></tr><tr><td><b>Define Write Data</b></td><td>Write to their own equipment only</td></tr></table> <p>Note: See User Roles as described in Appendix C for additional information on access provisioning.</p>	<b>Belongs To</b>	Not RC WEST (WEIM Market)	<b>Org Type</b>	TOP-EIM	<b>Read</b>	Yes	<b>Define Read Data</b>	All Equipment and Rating Data	<b>Write</b>	Yes	<b>Define Write Data</b>	Write to their own equipment only	Core	AIM
<b>Belongs To</b>	Not RC WEST (WEIM Market)														
<b>Org Type</b>	TOP-EIM														
<b>Read</b>	Yes														
<b>Define Read Data</b>	All Equipment and Rating Data														
<b>Write</b>	Yes														
<b>Define Write Data</b>	Write to their own equipment only														


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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ288	<p>System (AIM) must be updated with the following external user type with the following access provisioning:</p> <table><tr><td><b>Belongs To</b></td><td>Not RC WEST (WEIM Market)</td></tr><tr><td><b>Org Type</b></td><td>RC</td></tr><tr><td><b>Read</b></td><td>Yes</td></tr><tr><td><b>Define Read Data</b></td><td>All Equipment and Rating Data</td></tr><tr><td><b>Write</b></td><td>No</td></tr><tr><td><b>Define Write Data</b></td><td>N/A</td></tr></table> <p>Note: See User Roles as described in Appendix C for additional information on access provisioning.</p>	<b>Belongs To</b>	Not RC WEST (WEIM Market)	<b>Org Type</b>	RC	<b>Read</b>	Yes	<b>Define Read Data</b>	All Equipment and Rating Data	<b>Write</b>	No	<b>Define Write Data</b>	N/A	Core	AIM
<b>Belongs To</b>	Not RC WEST (WEIM Market)														
<b>Org Type</b>	RC														
<b>Read</b>	Yes														
<b>Define Read Data</b>	All Equipment and Rating Data														
<b>Write</b>	No														
<b>Define Write Data</b>	N/A														




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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ289	System (AIM) must be updated with the following external user type with the following access provisioning:	Core	AIM												
	<table><tr><td>Belongs To</td><td>Not RC WEST (WEIM Market)</td></tr><tr><td>Org Type</td><td>BAA (Like EIM Non RC, OMS Contract for EIM) I</td></tr><tr><td>Read</td><td>Yes</td></tr><tr><td>Define Read Data</td><td>All Equipment and Rating Data</td></tr><tr><td>Write</td><td>No</td></tr><tr><td>Define Write Data</td><td>N/A</td></tr></table>			Belongs To	Not RC WEST (WEIM Market)	Org Type	BAA (Like EIM Non RC, OMS Contract for EIM) I	Read	Yes	Define Read Data	All Equipment and Rating Data	Write	No	Define Write Data	N/A
	Belongs To			Not RC WEST (WEIM Market)											
	Org Type			BAA (Like EIM Non RC, OMS Contract for EIM) I											
	Read			Yes											
	Define Read Data			All Equipment and Rating Data											
	Write			No											
	Define Write Data			N/A											
Note: See User Roles as described in Appendix C for additional information on access provisioning.															

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ290	<div>System (AIM) must be updated with the following external user type with the following access provisioning:</div> <table><tr><td>Belongs To</td><td>Not RC WEST (WEIM Market)</td></tr><tr><td>Org Type</td><td>EDAM</td></tr><tr><td>Read</td><td>Yes</td></tr><tr><td>Define Read Data</td><td>All Equipment and Rating Data</td></tr><tr><td>Write</td><td>No</td></tr><tr><td>Define Write Data</td><td>N/A</td></tr></table> <div>Note: See User Roles as described in Appendix C for additional information on access provisioning.</div>	Belongs To	Not RC WEST (WEIM Market)	Org Type	EDAM	Read	Yes	Define Read Data	All Equipment and Rating Data	Write	No	Define Write Data	N/A	Core	AIM
Belongs To	Not RC WEST (WEIM Market)														
Org Type	EDAM														
Read	Yes														
Define Read Data	All Equipment and Rating Data														
Write	No														
Define Write Data	N/A														

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ291	<p>System (AIM) must be updated with the following external user type with the following access provisioning:</p> <table><tr><td>Belongs To</td><td>Not RC WEST (WEIM Market)</td></tr><tr><td>Org Type</td><td>EIM</td></tr><tr><td>Read</td><td>Yes</td></tr><tr><td>Define Read Data</td><td>All Equipment and Rating Data</td></tr><tr><td>Write</td><td>No</td></tr><tr><td>Define Write Data</td><td>N/A</td></tr></table> <p>Note: See User Roles as described in Appendix C for additional information on access provisioning.</p>	Belongs To	Not RC WEST (WEIM Market)	Org Type	EIM	Read	Yes	Define Read Data	All Equipment and Rating Data	Write	No	Define Write Data	N/A	Core	AIM
Belongs To	Not RC WEST (WEIM Market)														
Org Type	EIM														
Read	Yes														
Define Read Data	All Equipment and Rating Data														
Write	No														
Define Write Data	N/A														

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ID#	Business Feature	Requirement Type	Potential Application(s) Impacted												
F881 – BRQ292	<p>System (AIM) must be updated with the following external user type with the following access provisioning:</p> <table><tr><td><b>Belongs To</b></td><td>Not RC WEST (WEIM Market)</td></tr><tr><td><b>Org Type</b></td><td>EIM BA TO</td></tr><tr><td><b>Read</b></td><td>Yes</td></tr><tr><td><b>Define Read Data</b></td><td>All Equipment and Rating Data</td></tr><tr><td><b>Write</b></td><td>No</td></tr><tr><td><b>Define Write Data</b></td><td>N/A</td></tr></table> <p>Note: See User Roles as described in Appendix C for additional information on access provisioning.</p>	<b>Belongs To</b>	Not RC WEST (WEIM Market)	<b>Org Type</b>	EIM BA TO	<b>Read</b>	Yes	<b>Define Read Data</b>	All Equipment and Rating Data	<b>Write</b>	No	<b>Define Write Data</b>	N/A	Core	AIM
<b>Belongs To</b>	Not RC WEST (WEIM Market)														
<b>Org Type</b>	EIM BA TO														
<b>Read</b>	Yes														
<b>Define Read Data</b>	All Equipment and Rating Data														
<b>Write</b>	No														
<b>Define Write Data</b>	N/A														

#### **4.1.4 Business Requirements: MasterFile**

<b><u>ID#</u></b>	<b><u>Business Feature</u></b>	<b><u>Requirement Type</u></b>	<b><u>Potential Application(s) Impacted</u></b>
<u>F881 – BRQ276</u>	<u>System (MasterFile) must broadcast Participant Data to webLineR.</u>	<u>Existing</u>	<u>MasterFile</u>


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## 4.2 Business Requirements: FAC011 Requirements (Track 2 Timing)


*Note: The following requirements are being implemented alongside FERC881 Track 2 requirements and accommodate NERC requirements for FAC – 011.*

### 4.2.1 Business Requirements: EMNA-RT, HANA

ID#	Business Feature	Requirement Type	Potential Application(s) Impacted
FAC011 - BRQ081	On both the <b>Operator RT Monitor</b> for Base Case Thermal Violation and Post Contingent Thermal Violations UI, when the <u>Normal Rating</u> is exceeded AND the violation timer is within 15 minutes of the ER Duration, the % Violation, Violation Timer, and ER Duration fields should highlight in <b>Pink Color</b> (Note: this is the same highlight color currently for “% Violation Highest ER” for RTCA violations above between 100 – 125%).	Core	HANA
FAC011 - BRQ083	On both the <b>Operator RT Monitor</b> for Base Case Thermal Violation and Post Contingent Thermal Violations UI, when the <u>Highest Emergency Rating</u> is exceeded, the % Violation, Violation Timer, and ER Duration fields should highlight in <b>Orange Color</b> (Note: this is the same highlight color currently for “% Violation Highest ER” for RTCA violations above 125%).	Core	HANA

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<b>ID#</b>	<b>Business Feature</b>	<b>Requirement Type</b>	<b>Potential Application(s) Impacted</b>
FAC11 - BRQ089	In SA Thermal Violations UI, when Post-Contingency flows exceed the Highest Emergency Rating between 100 – 125%, the % Violation of Highest ER, Highest Rating Timer, and ER Duration fields should highlight in <b>Pink Color</b> (Note: this is the same highlight color currently for “% Violation Highest ER” for RTCA violations above between 100 – 125%).	Core	HANA
FAC11 - BRQ091	In SA Thermal Violations UI, when the <u>Highest Emergency Rating</u> is exceeded above 125%, the % Violation of Highest ER, Highest Rating Timer, and ER Duration fields should highlight in <b>Orange Color</b> (Note: this is the same highlight color currently for “% Violation Highest ER” for RTCA violations above 125%).	Core	HANA

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### 4.3 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 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.

#### 4.3.1 Business Requirements

 California ISO	Technology	Template Version:	6.8
		Document Version:	2.0
FERC Order 881 Business Requirements Specification - Planning		Date Created:	8/18/2023

<b>ID#</b>	<b>Guidance on External Entities Impacts</b>	<b>Source System</b>	<b>Sink System</b>	<b>Reason for Potential Scenario</b>
MKT-001	<p><b>Unstructured, End-to-End</b></p> <p><del>Authorized External Entities</del><u>Market Participants</u> must be able to submit their rating information via UI and API.</p> <p>Note: Refer to Appendix C and AIM requirements for more information on entity type and access provisioning.</p> <p>Note: See BRQ027, BRQ029, BRQ198.</p>	N/A	webLineR™	New Application, New UI
MKT-002	<p><b>Unstructured, End-to-End</b></p> <p><del>Authorized External Entities</del><u>Market Participants</u> must be able to view and retrieve their information.</p> <p>Note: See BRQ029, and BRQ198.</p>	N/A	webLineR™	New Application, New UI
MKT-003	<p><b>Unstructured, End-to-End</b></p> <p><del>Authorized External Entities</del><u>Market Participants</u> must be able to adjust their information (original submission) via UI and API.</p> <p>Note: See BRQ030.</p>	N/A	webLineR™	New Application, New UI
MKT-004	<p><b>Unstructured, End-to-End</b></p> <p><del>Authorized External Entities</del><u>Market Participants</u> must be able to filter and download their information.</p> <p>Note: See BRQ027, BRQ156, BRQ181.</p>	N/A	webLineR™	New Application, New UI


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<b>ID#</b>	<b>Guidance on External Entities Impacts</b>	<b>Source System</b>	<b>Sink System</b>	<b>Reason for Potential Scenario</b>
MKT-005	<b>Unstructured, End-to-End</b> <del>Authorized External Entities</del> <u>Market Participants</u> must be able to override failed validation for items #1 and #2 in BRQ154A and BRQ154B.	N/A	webLineR™	New Application, New UI
MKT-006	<b>Unstructured, End-to-End</b> <del>Authorized External Entities</del> <u>Market Participants</u> must be able to correct errors for validations #3 through #6 in BRQ154A, BRQ154B and resubmit.	N/A	webLineR™	New Application, New UI

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		Document Version:	2.0
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## Appendix C: Display Mockup and Report Questionnaire

### External Access to webLineR™

Belongs to	Org Type	Read Only	Define Data	Read/Write	Define Data
CAISO BAA <del>and EDAM/WEIM</del> Market Participants and Non-Market Participants		Yes	CAISO only Equipment and Rating Data	No	N/A
RC WEST	RC	Yes	All Equipment and Rating Data	No	N/A
RC WEST	TOP	Yes	All Equipment and Rating Data	Yes	Read to all and Write to their own equipment only
RC WEST	BAA	Yes	All Equipment and Rating Data	No	N/A
Not RC WEST (Not WEIM Market)	TOP	No  Note: Cannot access webLineR data directly but can get information if needed through their Reliability Coordinator.	N/A	No	N/A

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Belongs to	Org Type	Read Only	Define Data	Read/Write	Define Data
Not RC WEST (Not WEIM Market)	BAA	No  Note: Cannot access webLineR data directly but can get information if needed through their Reliability Coordinator.	N/A	No	N/A
Not RC WEST (Not WEIM Market)	RC	Yes	All Equipment and Rating Data	Yes	Read to all and Write to their own TOP equipment only
Not RC WEST (WEIM Market)	TOP-EIM	Yes	All Equipment and Rating Data	Yes	Read to all and Write to their own equipment only
Not RC WEST (WEIM Market)	RC	Yes	All Equipment and Rating Data	No	N/A
Not RC WEST (WEIM Market)	BAA (Like EIM NON RC OMS CONTRACT FOR EIM)	Yes	All Equipment and Rating Data	No	N/A
Not RC WEST (WEIM Market)	EDAM	Yes	All Equipment and Rating Data	No	N/A
Not RC WEST (WEIM Market)	EIM	Yes	All Equipment and Rating Data	No	N/A
Not RC WEST (WEIM Market)	EIM BAA TO	Yes	All Equipment and Rating Data	No	N/A