Outage Management System
Customer Partnership Group
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Customer Partnership Group
Scope and Objective

• Created in response to customer’s request to have more involvement in the planning, design and usability validation phases of ISO application development
• Provide an open interactive partnership forum to identify potential opportunities to improve the overall customer experience
• Share ideas, opinions and provide feedback
• Discuss issues and concerns, and answer customer questions
• All ideas are welcome and will be considered based upon feasibility, prioritization and timeline constraints. Not all ideas may be feasible to implement
• Meetings vary in frequency to review progress, provide feedback on design and usability and discuss implementation approaches
• Active participation is critical to the CPG success and to improve our customer’s experience interacting with ISO applications
Agenda

• Functional Changes Planned

• Improving WebOMS Usage & Enforcing Guidelines

• Data Retention in WebOMS
Functional Changes Planned in WebOMS
Discovery Date Changes – targeted for Q1 2020

• Per tariff section 9.3.10.3(a &b), in anticipation of a forced outage, the CAISO control center must be notified as soon as feasible if:
  – Generating Unit or Resource specific system resource has a reduction of current availability >10MW
  – Eligible intermittent resource of Pmax >10MW has reduction in current availability>1MW

• If prior notice is not possible,
  – Transmission facilities must notify the ISO through OMS within 30 minutes of the outage occurring.
  – Generating units and resource specific system resources and Eligible intermittent resources with Pmax>10MW must notify through OMS within 60 minutes of discovery of outage with the discovery time of the issue.

• WebOMS system will not default the discovery date
• Refer section 7.2.1 of the Outage Management (OM) BPM
TransmissionOutageResults_v3 Service – Q1 2020

- Fix to include all pending requests
- No XSD version change
- XSD will be modified to allow including multiple pending requests in the response. (MessagePayload -> TransmissionOutage -> OutageChangeRequest)
Improving WebOMS System Usage
Plan to Improve WebOMS Usage

• Raise awareness – effort started in 2019
• Publish detailed guidelines/ requirements – Q1 2020
• Enforce guidelines – 10/01/2020
# WebOMS Usage Guidelines

<table>
<thead>
<tr>
<th>Topic</th>
<th>Do:</th>
<th>Don’t:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outage event</td>
<td>✓ Create a separate outage for each event</td>
<td>✗ Span an outage across months when the resource comes back into service</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Availability</td>
<td>✓ Consolidate availability and split the outage points only when availability changes</td>
<td>✗ Split outage points on an hourly or daily basis if the availability has not changed</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Span</td>
<td>✓ Limit outage period to a:</td>
<td>✗ Create an outage with several break-points spanning 1 or more months</td>
</tr>
<tr>
<td></td>
<td>• Week for hourly changes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Month for daily changes</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Outage Updates</td>
<td>✓ Submit changes to outage when the availability changes by 1 MW or more</td>
<td>✗ Submit changes when the availability changes are &lt; 1 MW</td>
</tr>
<tr>
<td></td>
<td>✓ Limit the change submission to once every 12 hours, when the outage start time is more than 48 hours from current time</td>
<td>✗ Frequently submission of changes to outages that have a start time well into the future</td>
</tr>
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<tr>
<td>API queries</td>
<td>✓ Spread API requests over a few minutes between submits &amp; retrieves</td>
<td>✓ Submit multiple requests at or around the same time</td>
</tr>
<tr>
<td></td>
<td>✓ Read CAISO’s Acceptable Use Policy (AUP)</td>
<td></td>
</tr>
<tr>
<td>Retrieve volume</td>
<td>✓ Retrieve over a near term interval for studies using the UPDATE</td>
<td>✓ Retrieve without UPDATE parameter</td>
</tr>
<tr>
<td></td>
<td>parameter to pull only changes since the last pull</td>
<td>✓ Frequently query (within 5 minutes)</td>
</tr>
<tr>
<td></td>
<td>✓ Retrieve each day to keep data current &amp; within 24 hours of</td>
<td>✓ Query for large time periods (several future months/years)</td>
</tr>
<tr>
<td></td>
<td>outage changes</td>
<td>✓ Pull large volumes of data for a total refresh of your records</td>
</tr>
<tr>
<td>Retrieve Resource/Transmission Outage</td>
<td>✓ Use v3 version of the service</td>
<td>✓ Use the ‘Change Request’ service frequently to sync data (as it pulls all outage versions)</td>
</tr>
<tr>
<td></td>
<td>✓ Check for warnings &amp; errors to correct the outage under (OutageValidation)</td>
<td>✓ Use v2 or v1 service</td>
</tr>
<tr>
<td>Retrieve Availability</td>
<td>✓ Use v2 version of the service</td>
<td>✓ Use v1 service</td>
</tr>
</tbody>
</table>
Performance Improvements in the Pipeline for 2020

• WebOMS UI:
  – Rewrite with browser compatibility

• WebOMS API:
  – Broadcast Outage Updates
Aggregate Resources with Several Child Resources

- Too many break-points causes performance issues
- Solution options:
  a. Submit outages for child resources on a separate outage card
  b. Select child resource that have a curtailment and submit on the parent outage card
     - Requires XSD changes
     - Parent and child curtailment points will not be kept in sync in OMS
<table>
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<tr>
<th>Criteria</th>
<th>Value</th>
</tr>
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</table>
| Enforcement of the AUP                          | • Applied per service per user certificate in production and Map_Stage  
  • No non-production use in production             |
| Expected size of payload (average & maximum)     | Variable (1KB to 1MB+)                                                |
| Expected frequency (average & maximum)           | • On demand (50/day –1,000/day)                                      
  • A service shall be invoked no more than once every 5 seconds |
| Longest unavailable time for a service           | • 30 minutes unless planned WebOMS maintenance                       
  • Outage Coordinators can call ISO directly with critical near-term outages |
| Expected response time for a service             | Variable (.1 sec –30 sec)                                            |
| Expected time to exchange                        | Variable (.1 sec –30 sec)                                            |
| Service time out                                 | Request–to–Response 5 minutes                                       |
Plan to Improve WebOMS Usage

• Raise awareness – effort started in 2019

• Publish detailed guidelines/requirements – Q1 2020

• Enforce guidelines – 10/01/2020
WebOMS Data Retention
Data Retention & Purging in WebOMS

- Access to on-line outage data is for a 6 year period from the actual end date of the outage

- Outages that are older than this period will be purged from the WebOMS system, starting in October 2020 and will be an ongoing process
Questions

For follow-up questions or to suggest future topics please contact your client representative or submit a CIDI ticket.