# Outage Management System Replacement Revised Straw Proposal

## Stakeholder Comments

### Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside

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**Six Cities Comments:**

In response to the ISO’s request, the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (collectively, the “Six Cities”) submit the following comments on the ISO’s October 18, 2013 Straw Proposal for Outage Management System Replacement (the “Straw Proposal”):

At Section 5.5, page 13 of the Straw Proposal, the ISO proposes to increase the length of the notice period for submission of requests for approval of planned outages. The ISO indicates that the goal of the proposed increase in the prior notice requirement is to align the outage submittal timeline for generation resources with the outage submittal timeline for transmission facilities. Although the Straw Proposal characterizes the prior notice requirement as seven days in advance, the deadline effectively is eight days in advance, because “[t]he determination of seven day prior notice excludes the date of submission and the date of the outage.” Straw Proposal at 13.

While the Six Cities understand that the outage submittal timeline for transmission outages applies the same approach to counting the notice days (i.e., excluding both the day notice is provided and the day of the outage), other provisions of the ISO Tariff that establish deadlines for various actions typically apply the more common counting convention of excluding the day of the act or event from which the time period begins to run but including the final day of the counting period. Applying an approach to counting the notice period for submittal of outage requests that is different from the counting rule applied in other provisions of the ISO Tariff is confusing and creates a significant risk of inadvertent failure to meet the deadline for notice of a planned outage. The Six Cities request that the ISO conform the counting approach for submission of notices of planned outages (both for generation resources and for transmission facilities) to the counting method applied in other provisions of the ISO Tariff (i.e., excluding the day the notice is provided but including the day the outage commences.)

**ISO Response**

The CAISO’s proposal to require seven days advance notice of a forced outage, excluding the day the outage request is submitted and the day the outage starts, is consistent with the counting method already in use for transmission outages. (Tariff Section 9.3.6.3.2). The CAISO understands that this method may be confusing and will consider changing it in the future after full impacts to the tariff and other processes can be evaluated.
In PG&E’s August 22, 2013 comments submitted in response to the CAISO’s Straw Proposal, PG&E did not support the shift to seven days advance notice absent CAISO providing generators a reasonable opportunity to mitigate their exposure to Standard Capacity Product (SCP) non-availability charges. The Revised Straw Proposal makes progress towards mitigating this concern by proposing modifications to the existing RA unit substitution rules (e.g., allowing system RA to be provided between seven and four calendar days prior to the start of an outage if local, like-for-like capacity is unavailable and introducing “one-for-many” SCP substitution functionality in lieu of the current “many-to-many” requirement). PG&E supports the modifications to the substitution rules and urges the CAISO to ensure that the planned implementation of the one-for-many SCP substitution functionality within RAAM occurs prior to implementation of the change to seven calendar day advance notice for planned outages. With the ability to provide substitution, as proposed by CAISO, PG&E can support the increased advance notice. PG&E believes several additional reforms to the unit substitution rules merit the CAISO’s consideration. First, PG&E requests that CAISO allow substitution in real-time for system RA resources on Forced Outage. This change would enable SCs to provide additional system capacity to the CAISO. Under current CAISO rules, SC’s are not allowed to provide such substitution. Second, as suggested by SDG&E in its comments, PG&E recommends that CAISO add substitution capability into the new OMS, rather than moving it from RAAM into CIRA. Building out the OMS to include substitution will streamline workflows for SCs.

PG&E further requests that the CAISO address the following issues in the Draft Final Proposal:

- **Given the complex interplay between the OMS proposal and the Replacement Requirement for Scheduled Generation Outage rules, the CAISO needs to carefully elaborate in the Draft Final Proposal how the OMS reforms interact with the notification timelines and replacement requirements of the existing RA replacement rules. As an example, PG&E understands that the OMS reforms will necessitate a change from three business days to seven calendar days advance notice for RA replacement outage requests with replacement (Section 9.3.1.3.3.1 of the Tariff). What other tariff provisions relating to the RA replacement program will require conforming changes? Please provide a graphic illustrating how the OMS notification timelines, including unit substitution timeframes match up against the timelines of the Replacement Requirement for Scheduled Generation Outage program. Providing this additional information in the Draft Final Proposal will help promote a better understanding of the OMS initiative by market participants.**

- **To further promote clarity of the CAISO’s OMS proposal, please indicate in the Draft Final Proposal whether and how the proposal will require any changes to the CAISO’s SCP Unit Substitution Matrix.**

- **Shifting the planned outage notification timeline will necessitate a change to the CAISO’s calculation of the monthly Availability Standards, which are used to assess RA resources for availability incentives or non-availability charges. In the Draft Final Proposal the CAISO should address how the Availability Standard calculation will change to conform with the OMS.**
The Revised Straw Proposal states that the “Seven Day” advance notice requirement for planned outages does not include the date of submittal of the outage request nor the date of the outage itself. To more clearly capture the CAISO’s intent, the Draft Final Proposal should include explicit references to calendar days or business days where appropriate. The CAISO may also wish to add clarity to the proposal by characterizing the change to the timeline as requiring nine calendar days advance notice instead of seven days. The CAISO’s short-hand reference to “Seven Days” is not fully expository of the CAISO’s intent and adds confusion to an already complex process.

Page 13 of the Revised Straw Proposal includes a reference to “Opportunity Outages.” This is not a defined term in Appendix A of the CAISO Tariff and the policy proposal does not provide a formal definition for this capitalized term. Based on information provided by the CAISO during the October 31, 2013 stakeholder call, PG&E understands that it refers to both Off-Peak Opportunity Outages and Short-Notice Opportunity Outages. The Draft Final Proposal should provide a formal definition of Opportunity Outages.

**ISO Response**

In response to stakeholder comments, the CAISO proposes to change the RA unit substitution requirements that would otherwise apply to the seven-day forced outage period. The changes will reduce implementation complexity and eliminate the potential financial impact of SCP during calendar days 4–7 of the new forced outage period. Under this proposal, a resource will be subject to SCP if an outage is submitted within three calendar days of the start date of the outage, not to include the date of the request and the date of the outage, rather than the current three business day rule. SCP will not apply to forced outages requested 4-7 calendar days in advance of the outage. All other SCP rules remain the same as today.

Outages submitted 4–7 calendar days prior to the outage start date will be classified as forced outages but the resource will permitted to replace the unavailable capacity under the current RA Replacement Rules.

Integration includes whether or not a unit has an RA designation and completed substitution requests. Any additional changes for RA substitution are not in scope for the fall release.

PG&E’s request that the CAISO allow substitution in real-time for system RA resources on Forced Outage will not be adopted. It would prevent bids by the substituting resource from being included in the IFM.

Shifting the planned outage notification timeline will not necessitate a change to the CAISO’s calculation of the monthly Availability Standards. SCP will continue to apply to forced outages requested 0-3 days in advance of the outage, which aligns with the determination of the monthly availability standards.

If system conditions permit, a resource may be granted a CAISO approved Short Notice Opportunity Outage in the seven day forced timeframe. If approved, it will not be subject to SCP penalties. Short Notice Opportunity Outages will no longer be evaluated prior to the forced timeframe.

Off-Peak Opportunity Outages will continue to be accepted and evaluated consistent with today’s...
current business practices.

These comments are further addressed in section 5.5 of the Draft Final Proposal.

**Accounting for “Partial Forced” Resource Outages (Section 5.6)**

While PG&E appreciates that the CAISO included a range of examples in the Revised Straw Proposal illustrating the application of the proposed Partial Forced outage designation, PG&E remains concerned with the proposal’s lack of flexibility for allowing SC’s to make modest adjustment to Approved Maintenance Outage schedules (e.g., extensions or earlier starts to outages). PG&E therefore continues to urge the CAISO to build in a modest level of tolerance for changes to Approved Maintenance Outage schedules, particularly in instances where such flexibility can be provided without any detrimental impact on grid reliability. This will reduce the incentive for an SC to otherwise “pad” the outage length and allow necessary work to be completed efficiently within a single outage period. Overall, PG&E strongly believes that the OMS policy needs to reflect a practical approach that accommodates situations where the scope of maintenance work has expanded due to circumstances that were not anticipated at the time of the original outage request while providing SCs the ability to reduce their SCP risk.

Specifically, PG&E requests that the CAISO modify its proposal to provide an SC the ability to: (1) request an Opportunity Outage (Off-Peak or Short-Notice) for the forced portion of the Approved Maintenance Outage, just as an SC would be able to do under the existing replacement rules for a new outage made during the forced timeframe; (2) mitigate its SCP exposure by providing substitution for the forced portion of the outage, consistent with the applicable substitution rules; and (3) extend the Approved Maintenance Outage in a manner and practice consistent with the provisions of Section 5.3 of the Business Practice Manual for Outage Management. Additionally, PG&E requests that the functionality for substituting the partial forced portion be fully integrated into RAAM (CIRA) to reduce manual processing for market participants and CAISO. Lastly, PG&E requests clarification as to whether the partial forced portion of a planned outage, will be represented on a pre-populated forced outage card or will it be identified separately on the planned outage card submitted in support of the original planned outage.

With the modifications described above, PG&E could support the CAISO’s proposed new Partial Forced designation.

**ISO Response**

Partial forced functionality will be postponed to a future phase due to stakeholder concerns and complexity of implementation. An automated process for partial forced will be considered as part of a future phase of the OMS Project.

A change to a Planned outage in the forced timeframe will require a new Forced outage card only if the request is denied due to reliability concerns.

**Structured PTO Outage Data (Section 5.3)**

PG&E does not support the CAISO’s proposal to mandate the use of a structured format of transmission outage data by PTOs. While PG&E appreciates the CAISO’s desire to reduce or eliminate manual process steps for outage coordination and facilitate its modeling of transmission outages, the CAISO’s proposal would require a significant commitment of resources by PG&E to redesign, develop, test, and implement changes to its outage management software and processes. Further, PG&E has not budgeted for this
A project and does not have the manpower allocated to execute the proposed changes. Finally, it is not clear what benefits would accrue to the PTO as a result of implementing a structured transmission data system as part of the CAISO OMS relative to the current outage application/record. Until such time as the CAISO can present a compelling business case demonstrating that there are clear benefits to PTOs resulting from this significant undertaking (i.e., benefits in excess of costs), PG&E cannot support this element of the proposal.

**ISO Response**

The CAISO performs a reliability analysis to ensure that in the pre-contingency state, no transmission facilities are expected to carry power flow above the normal continuous facility rating. In addition, NERC and WECC reliability standards require the CAISO to perform an N-1 contingency analysis, ensuring that no N-1 contingencies will create an overload above the emergency ratings of the facilities. To accurately perform these analyses, the power flow model reflects the following:

1. Each piece of equipment that could change the way power flows
2. Each piece of equipment that could change the way “N-1” contingencies impact the system

The above information is essential in performing reliability analyses to meet normal operational planning requirement under NERC and WECC standards. To perform these analyses, it is imperative that the CAISO be made aware of all changes in switch positions.

These comments are further addressed in section 5.3 of the Draft Final Proposal.

**Structured PTO Outage Data (Section 5.3)**

With respect to the CAISO’s proposal to require PTOs to submit separate outages for each switch configuration associated with the same underlying outage request, PG&E finds this proposal to be impractical and overly burdensome on the part of the PTO. It will result in at least a doubling of the work process steps on the PTO side with no apparent benefit to the PTO. Further, configurations can change and may not be known in advance due to loading issues in real time.

**ISO Response**

While this may result in additional outage processing, it will also result in a more accurate network model to be used for Day Ahead Reliability Studies, the State Estimator, Real Time Contingency Analysis and Market Applications. Increased system reliability and greater price certainty are ultimately achieved. The CAISO estimates that less than 5% of PTO outages fall into this category.

The CAISO performs a reliability analysis to ensure that in the pre-contingency state, no transmission facilities are expected to carry power flow above the normal continuous facility rating. In addition, NERC and WECC reliability standards require the CAISO to perform an N-1 contingency analysis, ensuring that no N-1 contingencies will create an overload above the emergency ratings of the facilities. To accurately perform these analyses, the power flow model reflects the following:

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The above information is essential in performing reliability analyses to meet normal operational
planning requirement under NERC and WECC standards. To perform these analyses, it is imperative that the CAISO be made aware of all changes in switch positions.

These comments are further addressed in section 5.3 of the Draft Final Proposal.

**Introduction of Nature of Work Categories (Section 5.1)**

PG&E supports the CAISO’s proposal to introduce eight Nature of Work categories for transmission outage cards. PG&E also supports the CAISO’s proposal to maintain the use of GADS Cause Codes in the new OMS as an optional field. This is important feature that will enable generators to maintain compliance with NERC standards. With respect to the 15 Nature of Work categories for generator resource outages, PG&E supports the CAISO’s proposal with the understanding that the “Ambient Not Due to Temperature” card will convert automatically to an “Ambient” card and as such will be exempt from SCP assessment. This approach would be a continuation of the current process within the SLIC system whereby these cards are not identified as “Forced,” but as “Ambient” and if the “Ambient Not Due to Temperature” box is checked then the resource will not be assessed for SCP. PG&E requests confirmation in the Draft Final Proposal that “Ambient Not Due to Temperature” will continue to be exempt from SCP assessment.

**ISO Response**

All outages submitted in the forced timeframe will be designated as Forced. Different outage card “types” will not exist in the new OMS, including Ambient and Normal cards. Forced outages that are not subject to SCP penalties will be identified based on information found on the outage card and be identified to downstream CAISO systems for exclusion from SCP processing. A method to report the current “Ambient Not Due to Temperature” type of outage will be provided.

These comments are further addressed in section 5.1 of the Draft Final Straw Proposal.

**PTO Outage Processing Efficiencies (Section 5.4)**

PG&E supports this element of the OMS proposal including the proposed criteria to distinguish approved transmission outages for which Final Approval is Required and those for which Final Approval is Not Required before work commences. PG&E supports the CAISO’s efforts to streamline real time outage processing.

**ISO Response**

Thank you for your comments.

**De-Aggregation of Resources for Outage Reporting (Section 5.2)**

As PG&E stated in its August 22, 2013 comments on the Straw Proposal, PG&E is concerned that the use of a pre-populated template within each outage card without a built-in option for manual data entry may produce inaccurate and erroneous tabulations of plant availability. As an example consider a 50 MW resource that has an outage with a 15 MW derate due to a boiler controller. If the same resource has an additional outage with a 15 MW derate due to a feed water controller, how will the OMS system know if this is cumulative or additive? Will the OMS calculate the two outages as a 30 MW derate and
reflect the availability as 20 MW? In actuality, two separate events can cause the resource to be derated by a total of 15 MW thus reducing the plant’s availability to 35 MW, not 20 MW. This example demonstrates that the OMS may not always be able to factor in the specific plant information necessary to automatically calculate availability, and as a result, manual entry by the SC is the appropriate control. To mitigate this concern, PG&E again recommends that the CAISO add a control feature to the OMS that would give an SC the option to either (i) have the CAISO’s OMS perform an automatic tally for a particular resource or (ii) let the SC manually input the relevant data.

PG&E further notes that this element of the OMS proposal may be potentially over burdensome for the SC, especially in light of the CAISO’s Revised Straw Proposal on Expanding Metering and Telemetry Options, which is intended to promote the participation of an ever growing number of aggregated distributed energy resources in CAISO markets. PG&E seeks clarification from CAISO to determine if any size threshold would be applicable for this element of the OMS. For example, if an SC has a collection of small QF resources (each < 1MW) that are currently aggregated under one Resource ID in SLIC, would these now be broken out individually (down to which level: 1MW, 200kW, 50kW, 5kW, etc . . .)? PG&E would not be supportive of changing the way outages for aggregated resources are currently reported.

**ISO Response**

The CAISO does not intend to create any new resource ID’s for the purpose of availability reporting in OMS. OMS will require availability to be reported at the aggregate, or market resource, level. In addition, aggregate resources that contain child resource generators with a capacity of 50MW or greater will be required to report availability on each child resource greater than 50MW. Aggregate resources that do not contain child resources with a capacity of 50MW or greater will not be required to report de-aggregated child resource data to the CAISO.

All availability changes on blackstart designated resources will be reported to the CAISO regardless of capacity.

**Elimination of the Forced Outage Report (Section 5.7)**

PG&E continues to support the CAISO’s proposal to eliminate this report since it is no longer required.

**ISO Response**

Thank you for your comments.

**Ancillary Services Availability Reporting (Section 5.8)**

PG&E continues to support the CAISO’s proposal to replace current free text reporting with a structured format for purposes of identifying limitations for each type of ancillary service.

**ISO Response**

Thank you for your comments.
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<thead>
<tr>
<th>Company</th>
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<tbody>
<tr>
<td>Southern California Edison (SCE)</td>
<td>11/7/13</td>
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**Overall Comment**

SCE agrees with the CAISO that the new OMS will provide additional efficiency and modeling functionality relative to the current SLIC outage management system. SCE’s main concerns revolve around two issues:

1. Changing the Forced Outage designation period from 3 business days to “9” calendar days may result in yet to be identified unintended consequences.
2. The complexities of creating yet to be identified/discussed user interface protocols may result in not only some identified new efficiencies not materializing but also the loss of some existing efficiencies.

As mentioned in our previous set of comments, SCE Grid Control personnel previously were not involved in the ISO’s referenced OMS Customer Partnership Group and we believe that the proposed changes to the Transmission Outage process should be adequately vetted within in the CAISO Transmission Maintenance Coordination Committee. Going forward, SCE PTO personnel look forward to being actively involved in the OSM Customer Partnership Group workshops. SCE also appreciates the CAISO outreach to better understand Grid Control issues; however, given the significant proposed changes and expected impacts on the PTO, SCE encourages continued future communications as this project progresses.

The CAISO must consider the needs of the user and provide adequate time for all stakeholders to identify and discuss existing user interface protocols that need to be continued as well as new user interface protocols to be created. These activities typically include stakeholders having sufficient time to develop, among other activities: a) approved internal budgets, b) information technology (IT) Scope-of-Project work-orders to make internal IT updates consistent with the CAISO’s new initiative, and c) the CAISO developing an implementation plan that is feasible and allows for adequate testing.

**ISO Response**

The ISO appreciates the concerns SCE raises. The ISO has not identified any unintended consequences or loss of efficiencies caused by the OMS proposal. If SCE is aware of any such impacts, please bring specific examples to our attention so that they can be considered and addressed.

**4.1: Reduction of Manual Processes**

SCE became more aware during the Oct. 31 teleconference that the replacement of the existing SLIC system with the new OMS may result in existing user interface efficiencies being (temporarily?) eliminated. Specifically, SCE is concerned that the requirement for a generation outage extension designated as Forced to require a new Forced outage card will create additional work and inefficiencies relative to the current SLIC system. Data already entered in the OMS that is associated with a resource’s
Planned outage should not need to be re-entered when that same outage is extended.

SCE appreciates the CAISO stating their initial desire for the new OMS to have as much automation as possible; however, SCE is becoming concerned with the potential implications associated with user interface discussions having not yet even begun.

ISO Response

Partial forced functionality will be postponed to a future phase due to stakeholder concerns and complexity of implementation. An automated process for partial forced will be considered as part of a future phase of the OMS Project.

A change to a Planned outage in the forced timeframe will require a new Forced outage card only if the request is denied due to reliability concerns.

4.3 Enhanced Usability Features

SCE requests clarification on the following excerpt:

- If a data input rule is violated, the system will reject the request and notify the submitter why the request was rejected.

Would the CAISO please clarify when/how this rejection notification is initiated:

- After a line-item has been entered (i.e. after tabbing to the next entry field)?
- After submitting an invalid entry?

SCE opines that receiving the rejection notification immediately after entering any invalid data would be appreciated instead of having to wait after the submittal of all data.

ISO Response

Basic validation will be provided on a field by field basis during outage creation through the User Interface. More complex validation will be performed upon outage submittal.

5.2 De-Aggregation of Resources for Outage Reporting

SCE’s previously commented concerns and requests for clarification on the proposed de-aggregation of resources were mostly favorably addressed within the Revised Straw Proposal and/or during the Oct 31 teleconference.

During the teleconference, the CAISO requested SCE to provide a written clarification request regarding if/how the proposed de-aggregation language may impact Big Creek.

The primary issue with de-aggregating Big Creek has to do with accurately reporting the total Physical Scheduling Plant (PSP) availability which takes into consideration the hydraulic impact on downstream units.
With the current SLIC system, SCE’s practice is to report outage work for a specific unit by de-rating the specific unit that is being worked on AND by revising the “Water Management” SLIC availability value to report the total PSP capacity (which includes the hydraulic impact “chain effect”).

In essence, on one hand SCE treats the PSP resource on a de-aggregated basis by reporting specific unit outage information and on the other hand SCE treats the PSP resource on an aggregated basis by reporting the PSP net availability in order to reflect the hydraulic impact. This modeling approach requires two outages (i.e. two SLIC) for each outage.

SCE is interested in fully understanding how the CAISO anticipates SCE reporting de-aggregated and/or aggregated outage information for Big Creek (as well as small aggregated hydro units and even Palo Verde) using the new OMS.

As a corollary to this concern, SCE opines that no aspects of the proposed de-aggregation modeling within the new OMS should cause new or individual Resource ID’s for scheduling at any aggregated Resource ID. Any additional Resource ID’s for scheduling associated with the SLIC “child” resource reporting should not be contemplated.

SCE would also like the CAISO to confirm that availability for both existing and future wind and solar projects will be modeled as an aggregated value.

SCE also requests the CAISO to clarify how RA substitution would apply to a de-aggregated PSP. Will substitution apply at the PSP level or at a more granular level?

ISO Response

The CAISO will not calculate a resource’s availability; this value will still be manually entered and maintained by the SC. The SC will be responsible for providing the total availability for each market resource for each period of time. To aid the SC in providing child resource information to the CAISO, the new OMS system will provide a pre-populated template, providing the parent-child resource structure based on the plant level resource selected within each card. The participant will enter relevant de-aggregated data.

The CAISO will continue to support aggregate resources. OMS will require availability to be reported at the aggregate, PSP, or market resource level. In addition, aggregate resources that contain child resource generators with a capacity of 50MW or greater will be required to report availability on each child resource greater than 50MW. Aggregate resources that do not contain child resources with a capacity of 50MW or greater will not be required to report de-aggregated child resource data to the CAISO.

RA substitution will remain at the aggregate plant or PSP level.
5.3: Structured PTO Outage Data

In this section the CAISO states, "Each outage mapped to switch level". It appears that this will require extensive database update and construction which will take time. SCE requests that the CAISO provide more detail and incorporate feedback so that a realistic time line is agree upon to incorporate the users’ requirements on how long it will take to design, implement and test this level of detail.

SCE understands that the CAISO is making changes in the implementation of OMS to directly transfer outage information input by PTOs into Siemens Outage Scheduler (Network Model). The primary benefit cited by the CAISO is the elimination of a manual process required of the CAISO that could introduce errors into the data and therefore impact the accuracy of the Network Model. SCE agrees with this concept provided the development of the new user interface is planned and scheduled in a manner such that the PTO can develop the necessary interface to transfer data from its systems to OMS. Without such an interface, the potential for errors due to manual entry will simply be transferred from the CAISO to the PTO.

ISO Response

The CAISO will use the Transmission Registry (TR) names, and perform a mapping process of each PTO’s network model to the ISO’s network model at the facility (bus, bank, line, etc.) and at the switch level. The PTO will submit a facility name, and the system will return a list of associated switches. The list of switches will either be derived dynamically from our network model or from a pre agreed list of switches. The PTO will review and augment if needed then submit the outage.

When creating an outage, the PTO will select either the pre-modeled facility or individual isolation points associated with the outage. For outages that are not pre-modeled or outages with other than normal isolation points, the PTO will model their outage at the appropriate facility level, which could include switches. The modeled points will be presented to the PTO for validation or modification if required. This will ensure that the outage is modeled accurately based on the PTO input and reduce the need for manual interpretation. The structured modeling format will allow for direct integration with downstream systems needed for accurate reliability studies, State Estimator, Contingency Analysis, and Market Application results.

System updates will be needed to implement the new OMS system. The extent to which this item affects the database schema will depend upon the how the participant chooses to implement it.

5.3: Structured PTO Outage Data

Regarding the following excerpt:

- “For work that requires switches to change position during the job, the outage submitter will submit separate outages for each configuration”.

Outage Management System Replacement Revised Straw Proposal Comments
SCE believes that submitting separate outages for each configuration will increase redundant work load.
SCE is interested in knowing how start/end time overages will be addressed by real time personnel?

ISO Response
While this may result in additional outage processing, it will also result in a more accurate network model to be used for Day Ahead Reliability Studies, the State Estimator, Real Time Contingency Analysis and Market Applications. Increased system reliability and greater price certainty are ultimately achieved. The CAISO estimates that less than 5% of PTO outages fall into this category.

The CAISO performs a reliability analysis to ensure that in the pre-contingency state, no transmission facilities are expected to carry power flow above the normal continuous facility rating. In addition, NERC and WECC reliability standards require the CAISO to perform an N-1 contingency analysis, ensuring that no N-1 contingencies will create an overload above the emergency ratings of the facilities. To accurately perform these analyses, the power flow model reflects the following:
1. Each piece of equipment that could change the way power flows
2. Each piece of equipment that could change the way “N-1” contingencies impact the system

The above information is essential in performing reliability analyses to meet normal operational planning requirement under NERC and WECC standards. To perform these analyses, it is imperative that the CAISO be made aware of all changes in switch positions.

These comments are further addressed in section 5.3 of the Draft Final Proposal.

5.3: Structured PTO Outage Data

Regarding the following excerpt:

- “Each transmission element will be mapped to the new OMS down to the switch level. Upon outage creation and submission, the PTO can select the specific elements related to the outage card from this structured list. This will ensure that the outage is modeled accurately based on the PTO input and reduce the need for manual interpretation. The structured modeling format will allow for direct integration with downstream systems needed for accurate State Estimator and Market functions, reducing the need for redundant work. An intuitive user interface and API will be provided to aid in outage modeling, with the long term goal being interactive one-line diagrams.”

SCE notes that the above excerpt is from the initial Straw Proposal and that the Revised Straw Proposal replaces this text with language (“... perform a mapping process...”) that appears to provide additional clarity of intent. SCE continues to have a concern regarding how the proposed mapping process (or “intuitive user interface” previously mentioned) will interface with SCE’s current outage management system? When and how will a PTO’s IT concerns be identified and addressed?

ISO Response
The CAISO will use the Transmission Registry (TR) names, and perform a mapping process of each PTO’s network model to the ISO’s network model at the facility (bus, bank, line, etc.) and at the switch level. The PTO will submit a facility name, and the system will return a list of associated switches. The list of
switches will either be derived dynamically from our network model or from a pre agreed list of switches. The PTO will review and augment if needed then submit the outage.

Details around system integration will be discussed in January during Customer Partnership Group sessions.

### 5.4: PTO Outage Process Efficiencies

SCE has strong concerns with the implications of the following two excerpts that were new additions within this section of the Revised Straw Proposal:

- “The PTO will report the start and end times of the (Final Approval Not Required) outages electronically to directly update the OMS outage card.”
- “...(Real Time) outages will be electronically submitted by the PTO.”

SCE opposes these requirements to establish electronic communication protocols. We believe that continuing the current verbal communication protocol is more efficient and provides immediate returns compared to the amount of resources (time, software, training, etc.) that will be required to implement electronic communication protocols.

Should the CAISO deem existing communications protocols to be inefficient, SCE encourages the CAISO to engage the PTO users to provide input to develop enhancements that benefit all stakeholders.

### ISO Response

PTO Outage Coordination groups are currently submitting and managing outages to the CAISO electronically in the pre-real time timeframe. Electronic processing in this timeframe has resulted in a reduction of manual work for PTO’s and the CAISO, as well as the ability to electronically update outages without having to resend the entire outage manually. The CAISO would like to extend these efficiencies to real time.

The CAISO expects that the introduction of Final Approval Required and Final Approval Not Required criteria, as well as electronic processing of outages, will greatly reduce the volume of phone calls between control rooms concerning routine outages, allowing operators to regain the time to devote to other reliability related tasks. The CAISO continues to encourage the use of phone communication when necessary; however, the CAISO would like to encourage the use of electronic processing when possible.

### 5.5 Planned Resource Outage Submittal Timeline

SCE appreciates the clarification provided by the additional language within the Revised Straw Proposal describing the applicable RA Unit Substitution Process during the seven calendar day submittal time period.

As mentioned during the Oct. 31 teleconference, SCE has a concern regarding the following potential situation:

- 500 MW of System Capacity is available.
- 100 MW of local like-for-like capacity is available
- An extension for an existing 100 MW planned outage is requested with 5-day notice
- An extension for an existing 100 MW planned outage is requested with 2-day notice

The local like-for-like capacity needs to be used for the 5-day notice extension because it is available (even though system capacity would have been accepted). But this then results in local like-for-like capacity being unavailable three days later when an outage extension is requested with a 2-day notice. Using system capacity for substitution for the 5-day notice extension request would have allowed the local capacity to be available as substitution capacity for the 2-day notice extension request, thus removing the otherwise resulting SCP penalties.

SCE would like to have additional discussion with the CAISO regarding options to eliminate this type of situation.

SCE also supports SDG&E’s comments voiced during the teleconference regarding the CAISO proactively evaluating whether or not substitution capacity is required for any outage extension requested within the 4-7 day period.

**ISO Response**

In response to stakeholder comments, the CAISO proposes to change the RA unit substitution requirements that would otherwise apply to the seven-day forced outage period. The changes will reduce implementation complexity and eliminate the potential financial impact of SCP during calendar days 4–7 of the new forced outage period. Under this proposal, a resource will be subject to SCP if an outage is submitted within three calendar days of the start date of the outage, not to include the date of the request and the date of the outage, rather than the current three business day rule. SCP will not apply to forced outages requested 4-7 calendar days in advance of the outage. All other SCP rules remain the same as today.

Outages submitted 4-7 calendar days prior to the outage start date will be classified as forced outages but the resource will permitted to replace the unavailable capacity under the current RA Replacement Rules.

**5.6 Accounting for “Partial Forced” Resource Outages**

As mentioned above, SCE believes that changing the Forced Outage designation period from 3 business days to “9” calendar days will result in yet to be identified unintended consequences.

Below are two concerns that were identified after the Oct. 31 teleconference:

With regards to the following current outage designation process:

- In those situations when the ISO becomes aware of a Transmission outage that results in an outage of a generating resource, the ISO enters the generation outage on behalf of the generation scheduling coordinator…and, regardless of number of notification days, classifies that generation outage as “Planned”.

**Outage Management System Replacement Revised Straw Proposal Comments**
SCE would like the ISO to clarify if this activity and Planned outage designation by the CAISO will continue with the implementation of the new OMS. SCE opposes these types of generation outages being classified as “Forced” strictly due limitations associated with new software.

SCE also notes that Section 40.9 within the CAISO Tariff describes how Forced Outages are an integral component of the Availability Standard calculations and how the results of the Availability Standard calculations are used to determine compensation for Resource Adequacy (RA) Capacity. SCE is concerned that the impacts on the availability incentives and non-availability charges for RA Capacity associated with the proposed changes to the Forced Outage notification time period have not been fully vetted.

**ISO Response**

Because of the removal of the “Make Planned” functionality, an outage submitted in the forced timeframe will be identified as Forced on the outage card. Forced outages that are not subject to SCP penalties will be identified based on information found on the outage card and be identified to downstream CAISO systems for exclusion from SCP processing.

While the ISO is changing the forced outage period to seven calendar days in advance of the outage start date, we will apply SCP to days 0-3 and not to days 4-7 of that period. Accordingly, the application of SCP will continue to align with the calculation of the availability standard, availability incentive payments and non-availability charges.

These comments are further addressed in section 5.1 of the Draft Final Straw Proposal.

**5.7 Elimination of the Forced Outage Report**

SCE supports the CAISO’s proposal to eliminate the CAISO’s requirement to submit a Forced Outage Report.

**ISO Response**

Thank you for your comments.

**5.8 A/S Availability Reporting**

SCE does not oppose the changes proposed within this section.

**ISO Response**

Thank you for your comments.

**Other:**

The CAISO mentioned during the Oct. 31 teleconference their intention to move SCP substitution from RAAM to CIRA sometime within the next 12-18 months. SCE supports SDG&E recommendation to have the SCP substitution functionality moved from RAAM into the new OMS rather than into CIRA.
ISO Response

The CAISO will continue to investigate additional usability and integrated features between the applications for consideration after the fall 2014 release. Currently OMS integration includes whether or not a unit has an RA designation and completed substitution request. Any additional integration changes for RA substitution are not in scope for the fall release.

Conclusion:

SCE recommends the CAISO take a step back and ensure there is enough time to work with the end-users on this proposal and to receive coordinated feedback to develop a proposal that is workable for all stakeholders. SCE also looks forward to the CAISO’s response to SCE’s clarification requests.

ISO Response

The CAISO is committed to working with stakeholders on the details of the new OMS during Customer Partnership Group sessions to address concerns and develop workable solutions.

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<thead>
<tr>
<th>Company</th>
<th>Date</th>
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<tbody>
<tr>
<td>San Diego Gas &amp; Electric (SDG&amp;E)</td>
<td>11/7/13</td>
<td>Maurizio De Julio (619) 725-8610</td>
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Opening Comments

SDG&E has several questions and concerns about the CAISO’s proposal. SDG&E is providing here a non-exhaustive list of questions. SDG&E reserves the right to ask additional questions and to comment substantively on the proposal in the future, after the CAISO explains its proposal in greater detail. Preliminarily, SDG&E does not support this initiative to the extent it causes SDG&E to incur substantial costs (products, labor, etc.) with no apparent benefit to the grid. If such a benefit exists, the CAISO should explore whether other approaches could solve the purported “problem” in a more effective and efficient manner. Moreover, SDG&E is concerned that this proposal would inappropriately shift responsibilities to SDG&E that belong with the CAISO, as the grid operator. SDG&E’s questions are as follows.

ISO Response

The OMS project will enhance the reliability of the grid and bring efficiencies to the outage management process for the ISO and market participants.

3.1 states: “Increase efficiency by using a single system to process and manage all outages”

Can the ISO assure the PTO’s that any system modifications will consider the capabilities of the PTO OMS Systems to minimize impacts/system changes for the PTO’s?

ISO Response

Participants will be given the opportunity to provide input on the technical specifications through the Customer Partnership Group.
4.1 states: “The OMS system will be designed for Transmission Owners to provide outage data in a structured format. This data will directly interface with the Network Model”

- How will our existing outage data directly interface with the Network Model?
- It appears extensive changes and database creation and management could be required for our organization.
  - Who pays for these changes that are not required for our own business purposes?
  - Who maintains the databases with day-to-day system changes?
  - How will the time required to make possible PTO related IT changes be taken into consideration?

ISO Response

An accurate network model is necessary for reliable system operations within the CAISO BA and the rest of the Western Interconnection and is in the best interest of all participating entities.

The CAISO will maintain the network model through our existing processes. The elements in the model are provided as input into the OMS system for outage modeling purposes.

System updates will be needed by PTO’s and Scheduling Coordinators to implement the new OMS system. The extent to which this affects the participant’s database schema will depend upon the how the participant chooses to implement it.

4.1 states: “To assist Transmission Owners in the modeling of their transmission outages, OMS will have an intuitive User Interface, one-line diagrams and an API to interface to their systems automatically”

- How will the API interface to our system automatically when our system doesn’t include the switches that are being mentioned as required for modeling?
- Who builds and maintains the database required for the “API to interface to their systems automatically”?
- Before the ISO OMS becomes final, how will the ISO assure the PTOs IT groups will receive a “sandbox” to be sure their OMS systems can work properly with the new ISO interface?

ISO Response

The CAISO will use the Transmission Registry (TR) names, and perform a mapping process of each PTO’s network model to the ISO’s network model at the facility (bus, bank, line, etc.) and at the switch level. The PTO will submit a facility name, and the system will return a list of associated switches. The list of switches will either be derived dynamically from our network model or from a pre agreed list of switches. The PTO will review and augment if needed then submit the outage.

The CAISO will maintain the network model through our existing processes. The elements in the model are provided as input into the OMS system for outage modeling purposes.

System updates will be needed by PTO’s and Scheduling Coordinators to implement the new OMS system. The extent to which this affects the participant’s database schema will depend upon the how the participant chooses to implement it.
The Market Simulation environment will be available for testing.

**4.1 states: “For outage work that requires different pieces of equipment out of service at different times, each timeframe with a different augmentation shall be required to have an individual outage card. This will promote more accurate modeling.”**

- Why does the CAISO need this level of detail rather than a line being classified energized or de-energized? This will require an incredible amount of additional work for the PTOs not only at the Outage Coordination level but for the real-time desk as well as field personnel.

**ISO Response**

While this may result in additional outage processing, it will also result in a more accurate network model to be used for Day Ahead Reliability Studies, the State Estimator, Real Time Contingency Analysis and Market Applications. Increased system reliability and greater price certainty are ultimately achieved. The CAISO estimates that less than 5% of PTO outages fall into this category.

The CAISO performs a reliability analysis to ensure that in the pre-contingency state, no transmission facilities are expected to carry power flow above the normal continuous facility rating. In addition, NERC and WECC reliability standards require the CAISO to perform an N-1 contingency analysis, ensuring that no N-1 contingencies will create an overload above the emergency ratings of the facilities. To accurately perform these analyses, the power flow model must reflect the following:

1. Each piece of equipment that could change the way power flows
2. Each piece of equipment that could change the way “N-1” contingencies impact the system

The above information is essential in performing reliability analyses to meet normal operational planning requirement under NERC and WECC standards. To perform these analyses, it is imperative that the CAISO be made aware of all changes in switch positions.

These comments are further addressed in section 5.3 of the Draft Final Proposal.

**4.3 states: “OMS will clearly identify mandatory versus optional fields as well as pre-populated default values that can be modified by the user where applicable.”**

- How will the ISO assure that the PTOs have a voice in the “mandatory” fields and that the ISO will provide alternatives if the PTO systems cannot provide the ISO that information automatically as they currently stand?

**ISO Response**

This will be discussed with participants during the Customer Partnership Group workshops.

**4.3 states: “If a data input rule is violated, the system will reject the request and notify the submitter why the request was rejected”**

- How will the ISO assure that enough testing will be performed during a “validation” phase (if one is planned) that PTOs will not be inundated with outage rejections once the final cutover occurs?
ISO Response

The ISO will provide the opportunity for participants to engage in testing during Market Simulation.

5.1 states: “Each piece of equipment in the network model will be mapped to the OMS”

- Why does the CAISO model require details to this level? Shouldn’t just the line status be sufficient for the model (line status, in or out)?
- How will this be done if each piece of equipment isn’t in our Outage Application (substation disconnects)?
- Will the CAISO be responsible for maintaining these databases? If not, our organization is not currently set to provide this support without significant impacts to the operating and construction departments.

ISO Response

The CAISO performs a reliability analysis to ensure that in the pre-contingency state, no transmission facilities are expected to carry power flow above the normal continuous facility rating. In addition, NERC and WECC reliability standards require the CAISO to perform an N-1 contingency analysis, ensuring that no N-1 contingencies will create an overload above the emergency ratings of the facilities. To accurately perform these analyses, the power flow model must reflect the following:

1. Each piece of equipment that could change the way power flows
2. Each piece of equipment that could change the way “N-1” contingencies impact the system

The above information is essential in performing reliability analyses to meet normal operational planning requirement under NERC and WECC standards. To perform these analyses, it is imperative that the CAISO be made aware of all changes in switch positions.

The CAISO will use the Transmission Registry (TR) names, and perform a mapping process of each PTO’s network model to the ISO’s network model at the facility (bus, bank, line, etc.) and at the switch level. The PTO will submit a facility name, and the system will return a list of associated switches. The list of switches will either be derived dynamically from our network model or from a pre agreed list of switches. The PTO will review and augment if needed then submit the outage.

The CAISO will maintain the network model through our existing processes. The elements in the model are provided as input into the OMS system for outage modeling purposes.

These comments are further addressed in section 5.3 of the Draft Final Proposal.

5.2 states: “The ISO is the only entity in the WECC that does not provide this level of granularity”

Can the ISO provide additional information from WECC regarding this statement?

ISO Response

Part of the WECC RC data request states that CAISO is required to submit generator outages and derates for units 50mw or greater. This information is currently only available at the plant level for aggregated resources.
5.3 states: “The PTO will model their outage at the appropriate facility level, which could include switches”

- Since our current application isn’t mapped down to the switch level, how will the CAISO direct PTO’s to accomplish this? If ultimately mandatory, how will this program be funded and how much time would be allowed to achieve if successful? Jami
- It appears that this Initiative could have a tremendous impact on the PTOs real-time desks, Outage Coordination, and Construction Teams if the interface to the new ISO OMS system is not seamless? How will the ISO minimize these impacts?

ISO Response

An accurate network model is necessary for reliable system operations and is in the best interest of all participating entities.

The CAISO will use the Transmission Registry (TR) names, and perform a mapping process of each PTO’s network model to the ISO’s network model at the facility (bus, bank, line, etc.) and at the switch level. The PTO will submit a facility name, and the system will return a list of associated switches. The list of switches will either be derived dynamically from our network model or from a pre agreed list of switches. The PTO will review and augment if needed then submit the outage.

System updates will be needed by PTO’s and Scheduling Coordinators to implement the new OMS system. The extent to which this affects the participant’s database schema will depend upon the how the participant chooses to implement it. OMS will follow the Fall 2014 release schedule and technical specifications will be provided to the participants in January 2014. The extent to which this item affects the database schema will depend upon the how the participant chooses to implement it. Details around IT concerns will be discussed in January during Customer Partnership Group sessions.

5.3 states: “For work that requires switches to change position during the job, the outage submitter will submit separate outages for each configuration”

- This statement appears to transfer a lot of work from the CAISO back to the PTOs real-time desk? If misunderstood, please explain.
- The ISO stated during the stakeholder conference call that real-time updates can still be communicated verbally to the ISO via phone calls. Will the ISO clearly state this as an option in the final filing?

ISO Response

While this may result in additional outage processing, it will also result in a more accurate network model to be used for the State Estimator, Real Time Contingency Analysis and Market Applications. Increased system reliability and greater price certainty are ultimately achieved. The CAISO estimates that less than 5% of PTO outages fall into this category.

The CAISO continues to encourage the use of phone communication when necessary; however, the CAISO would like to encourage the use of electronic processing when possible.
5.4 states: “Based upon ISO configurable business rules outages are either Final Approval Required (FAR) or Final Approval Not Required (FAN)” and that “The PTOs will be responsible for maintaining their scheduled outage start and end times accurate at all times”.

- With FAR/FAN designations, communication is reduced between control centers and diminishes situation awareness.
- Compliance concerns with regards to handling the existing process in this manner.
- Workload concerns being passed down to PTOs and impact to staffing requirements for both real-time desks and Outage Coordination teams.
- The ISO stated during the stakeholder conference call that real-time updates can still be communicated verbally to the ISO via phone calls. Will the ISO clearly state this as an option in the final filing?
- Should the PTOs Real-Time teams decide to update these times via OMS systems; can the ISO assure that the PTOs can enter that information into their systems for upload to the ISO OMS system versus direct input to the ISO system?

ISO Response

PTO Outage Coordination groups are currently submitting and managing outages to the CAISO electronically in the pre-real time timeframe. Electronic processing in this timeframe has resulted in a reduction of manual work for PTO’s and the CAISO, as well as the ability to electronically update outages without having to resend the entire outage manually. The CAISO would like to extend these efficiencies to real time.

The CAISO expects that the introduction of Final Approval Required and Final Approval Not Required criteria, as well as electronic processing of outages, will greatly reduce the volume of phone calls between control rooms concerning routine outages, allowing operators to regain the time to devote to other reliability related tasks. The CAISO continues to encourage the use of phone communication when necessary; however, the CAISO would like to encourage the use of electronic processing when possible.

The CAISO will continue to support electronic communication using an API by providing new technical specifications.

5.4 states: “outages that are initiated in real time, outages will be electronically submitted by the PTO”.

- How does the ISO proposal not add additional responsibility to the PTO real time desks?
- The ISO stated during the stakeholder conference call that real-time updates can still be communicated verbally to the ISO via phone calls. Will the ISO clearly state this as an option in the final filing?

ISO Response

PTO Outage Coordination groups are currently submitting and managing outages to the CAISO electronically in the pre-real time timeframe. Electronic processing in this timeframe has resulted in a reduction of manual work for PTO’s and the CAISO, as well as the ability to electronically update outages.
without having to resend the entire outage manually. The CAISO would like to extend these efficiencies to real time.

The CAISO expects that the introduction of Final Approval Required and Final Approval Not Required criteria, as well as electronic processing of outages, will greatly reduce the volume of phone calls between control rooms concerning routine outages, allowing operators to regain the time to devote to other reliability related tasks. The CAISO continues to encourage the use of phone communication when necessary; however, the CAISO would like to encourage the use of electronic processing when possible.

The CAISO continues to encourage the use of phone communication when necessary; however, the CAISO would like to encourage the use of electronic processing when possible.

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**Opening Comments**

SDG&E appreciates the opportunity to comment on the Revised Straw Proposal for Outage Management System Replacement. SDG&E is supportive of system improvements without major changes to established policies and procedures in the Tariff. However, SDG&E continues to not be able to support all of the policies proposed by the CAISO. SDG&E would like to provide some recommendations to help CAISO clarify and make the proposed policy changes more consistent with existing Tariff.

SDG&E supports the addition of the Nature of Work to identify the reason for the outage card. SDG&E also supports removal of the Forced Outage Report. SDG&E appreciates that the CAISO has added the GADS Cause Codes functionality back into OMS.

**ISO Response**

Thank you for your comments.

**SDG&E would like to recommend building the Unit Substitution functionality of RAAM into OMS rather than CIRA.**

This is also to reduce the manual processes for Scheduling Coordinators so that these functions can be all accessed through one application. With the proposed change to the Forced Outage timeline to 7 calendar days, SDG&E believes the CAISO will have more requests for Unit Substitution. SDG&E believes this should be a critical part of OMS. Likewise, the remaining functions of RAAM, Unit Prequalification and Settlements tracking can be moved into CIRA. SDG&E also wonders why Unit Prequalification should not be an automatic feature. The resources in Local Areas that can substitute for another should
be relatively static. The CAISO should not need to prequalify the same resources annually. SDG&E believes the CAISO should consider performing the prequalification automatically without requests from generators.

**ISO Response**

The CAISO will continue to investigate additional usability and integrated features between the applications for consideration after the fall 2014 release. Currently OMS integration includes whether or not a unit has an RA designation and completed substitution request. Any additional integration changes for RA substitution are not in scope for the fall release.

In response to stakeholder comments, the CAISO proposes to change the RA unit substitution requirements that would otherwise apply to the seven-day forced outage period. The changes will reduce implementation complexity and eliminate the potential financial impact of SCP during calendar days 4–7 of the new forced outage period. Under this proposal, a resource will be subject to SCP if an outage is submitted within three calendar days of the start date of the outage, not to include the date of the request and the date of the outage, rather than the current three business day rule. SCP will not apply to forced outages requested 4-7 calendar days in advance of the outage. All other SCP rules remain the same as today.

Outages submitted 4-7 calendar days prior to the outage start date will be classified as forced outages but the resource will be permitted to replace the unavailable capacity under the current RA Replacement Rules.

**SDG&E’s primary concern is with the changes to the Planned Resource Outage Submittal Timeline.**

The change from 3 business days to 7 calendar days is potentially 4 earlier calendar days which the CAISO would consider an outage as Forced rather than Planned. While this change seems innocuous to line up with the submittal timeline for transmission outages, there are downstream effects that should cause all generators concern.

First, generators will have up to 4 fewer days to replace its resource with another system resource. In resource constrained local areas, such as San Diego, it is nearly impossible to find the like for like and local for local resource as required by the CAISO for a Forced outage so that the generator can avoid the Non-Availability Charges. This will have a direct impact on SDG&E and its ratepayers.

**ISO Response**

In response to stakeholder comments, the CAISO proposes to change the RA unit substitution requirements that would otherwise apply to the seven-day forced outage period. The changes will reduce implementation complexity and eliminate the potential financial impact of SCP during calendar days 4–7 of the new forced outage period. Under this proposal, a resource will be subject to SCP if an outage is submitted within three calendar days of the start date of the outage, not to include the date of the request and the date of the outage, rather than the current three business day rule. SCP will not apply to forced outages requested 4-7 calendar days in advance of the outage. All other SCP rules remain the same as today.

Outages submitted 4-7 calendar days prior to the outage start date will be classified as forced outages but the resource will be permitted to replace the unavailable capacity under the current RA Replacement Rules.
**SDG&E’s primary concern is with the changes to the Planned Resource Outage Submittal Timeline.**

Second, the current annual Availability Standards Target is based on the 3 year historical average of all RA resources that had Forced Outages requested within 3 business days. If the CAISO were to change this submittal window to 7 calendar days, then the Target must be calculated based whether or not the generator requested such an outage 7 calendar days in advance. The new Target will also affect both the availability incentives as well as the non-availability charges. Comparing apples and oranges is not just and reasonable.

**ISO Response**

While the ISO is changing the forced outage period to seven calendar days in advance of the outage start date, we will apply SCP to days 0-3 and not to days 4-7 of that period. Accordingly, the application of SCP will continue to align with the calculation of the availability standard, availability incentive payments and non-availability charges.

**SDG&E believes CAISO can enhancements to remedy this proposal by including the following:**

First, only require local for local replacement if committed total local RA capacity that is operationally available to the CAISO falls below the annual local requirement for that day of the month. This is similar to replacement requirement for system resources such that only if the System Total RA Capacity is below the Reserve Margin, then the RA Resource will be required to replace its RA capacity for the Outage. If there is sufficient local RA capacity above the annual local requirement, then the CAISO will not require local replacement and will move to the System Total RA Capacity evaluation.

Based on the current process, SDG&E believes the below structure would be how the replacement designation should be assessed.

1. **T-45 to N-9** (45 days before compliance month to 9 days before outage starts) for new or change of duration or increase of derate of existin outage
   a. Generator submits outage, to get immediate approval, resource provides replacement
   b. Generator may also request short notice opportunity outage or off peak opportunity outage, ISO evaluates System Total RA Capacity and requires system replacement or no replacement at all
      i. If generator does not provide required replacement, generator can move outage, or make it a Forced Outage
2. **N-9 to N-0** (9 days before start of outage or the 7 calendar days to the time to the start of the outage)
   a. Generator submits outage, if it’s new outage, then short notice opportunity outage or off peak opportunity outage is allowed
   b. If it’s change which increases the duration or derate of an existing outage, short notice opportunity outage and off peak opportunity outage is not allowed (that is the current rule, although currently those days are within the 3 business days, rather than the 7 calendar days)
   c. SDG&E recommends the CAISO now calculate if there’s sufficient Local capacity
operationally available to determine if Local resource substitution is required first
i. If no sufficient local resources is operationally available, then require local resource substitution and like for like
ii. If sufficient local resources is operationally available, then calculate if there is sufficient System capacity required for substitution
   1. If no sufficient system resources is operationally available, then require System substitution
   2. If sufficient system capacity is operationally, then no replacement is needed and no non-availability charges will be assessed.
3. N-0 to N+i (some time after the start of the outage) – only a change to the existing outage can be requested
   a. Same as 2b and 2c

SDG&E does realize that this changes the current evaluation of the Non-Availability Charges and Incentives. However, SDG&E believes this method will fairly treat all outages based on CAISO’s first come first served methodology while maintaining grid reliability and also decreasing costs to the resource owner.

ISO Response

In response to stakeholder comments, the CAISO proposes to change the RA unit substitution requirements that would otherwise apply to the seven-day forced outage period. The changes will reduce implementation complexity and eliminate the potential financial impact of SCP during calendar days 4–7 of the new forced outage period. Under this proposal, a resource will be subject to SCP if an outage is submitted within three calendar days of the start date of the outage, not to include the date of the request and the date of the outage, rather than the current three business day rule. SCP will not apply to forced outages requested 4-7 calendar days in advance of the outage. All other SCP rules remain the same as today.

Outages submitted 4-7 calendar days prior to the outage start date will be classified as forced outages but the resource will be permitted to replace the unavailable capacity under the current RA Replacement Rules.