Replacement Requirement for Scheduled Generation Outages

ISO Straw Proposal

March 6, 2012

Prepared by: Market and Infrastructure Policy
Version: 1.0
California Independent System Operator
Contents
1.0 Introduction ........................................................................................................................................2
2.0 Background .........................................................................................................................................2
   2.1 Resource Adequacy ............................................................................................................................2
   2.2 CPUC’s Existing RA Replacement Rule ...........................................................................................3
   2.3 ISO’s Current Outage Management Procedures .............................................................................3
   2.4 Previous Stakeholder Process .........................................................................................................4
3.0 RA Outage Management Principles .................................................................................................4
   3.1 Resource Adequacy ............................................................................................................................4
   3.2 Outage Management ..........................................................................................................................5
4.0 Issues With the Existing CPUC Replacement Rule ...........................................................................5
5.0 ISO RA Outage Management Proposal ............................................................................................7
   5.1 ISO RA Outage Management Proposal ............................................................................................9
      5.1.1 ISO Proposed Flexibility Requirements for RA ........................................................................10
   5.2 The ISO’s Proposal is Just and Reasonable and Assures Sufficient RA Capacity for Reliability ............................................................................................................................10
   5.3 The ISO’s Proposal Resolves Issues From the Existing Replacement Rule ................................11
6.0 Next Steps ..........................................................................................................................................12
1.0 Introduction

In D.11-06-022¹, the California Public Utilities Commission (CPUC) decided that, starting with the 2013 Resource Adequacy (RA) year, the CPUC would no longer apply a replacement rule requiring its jurisdictional load serving entities (LSEs) to provide replacement RA capacity under certain circumstances when RA resources were on planned outages. The ISO is initiating this stakeholder process to develop changes to its outage management and resource adequacy procedures to address the elimination of the CPUC’s RA replacement rule.

2.0 Background

2.1 Resource Adequacy

Resource Adequacy (RA) was instituted in California after the Energy Crisis to help ensure that sufficient resources would be available to meet the expected peak demand. Its structure requires a unique cooperation between the CAISO and local regulatory authorities, including the California Public Utilities Commission. The program has changed since its inception, but the basics have so far remained unchanged: it is currently a one year forward and monthly demonstration that Load Serving Entities (LSEs) have sufficient capacity to meet their expected demand peak plus a planning reserve margin.

The RA program consists of an annual showing and monthly showings. The annual showing is submitted by LSEs in October for the following year. LSEs are required to meet two main requirements. First, they are required to show they have procured 90% of their need for the 5 summer months of the following year. Additionally, if their load is located in any of the Local Capacity Regions which the ISO has defined, they must demonstrate 100% of their need for local capacity for the entire year. The local capacity showings can also count towards the system level. These annual showing is preliminary and the LSEs can change their resources when they get to the monthly showings.

Then, monthly showings are made approximately 1 month before the operating month and must demonstrate the full amount of the capacity requirement for the month (i.e., 115% of the expected peak load for the month). The Local Regulatory Authority determines if the RA showing is sufficient to meet the RA requirements. If an LSE is deficient in its resource adequacy capacity in the monthly showings and fails to cure this deficiency, the ISO may use its Capacity Procurement Mechanism to procure the needed capacity and allocate the costs to the deficient LSE.

In the current CPUC RA proceeding the ISO has proposed modifying the RA program to include three flexible capacity procurement requirements: 1) maximum ramping, 2) load following, and 3) regulation. In addition, the ISO has proposed to extend the annual showing for system requirements to include all twelve months. This paper will address sufficiency of RA in terms of meeting reliability requirements. To the degree that the ongoing RA proceeding ultimately adds the flexible capacity requirements to the existing 115% (system) and 100% (local capacity) reliability requirements for RA, references to RA Reliability Requirements will eventually be meant to include all of these.

¹ June 23, 2011; http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/138375.PDF
2.2 CPUC’s Existing RA Replacement Rule

In D.06-07-031, the CPUC adopted the replacement rule that requires each jurisdictional load serving entity to meet its RA requirement with RA capacity that is available and not on an extended scheduled maintenance outage during a compliance month. The current replacement rule specifies the CPUC’s rule for determining the impact of scheduled outages to assess whether an LSE has procured sufficient RA capacity to meet its monthly RA obligations. Under this existing replacement rule, scheduled outages have been recognized as an impact to reliable operations and required replacement by the LSE. The rule states that a resource cannot be counted as monthly RA capacity if scheduled outages of the resource exceed the levels defined in the replacement rule. Under the current rule, an LSE that has contracted with a resource subject to such an outage then has an obligation to procure replacement RA capacity. The CPUC then informs the LSE that its RA showing is deficient if the planned outage exceeds the thresholds, and therefore a deficiency exists. The LSE is given until the final showing to cure the deficiency, or it will be “backstopped” by the ISO using the ISO’s Capacity Procurement Mechanism (CPM).

In the CPUC’s June 2011 decision (D.11-06-022), the CPUC eliminated the Replacement Rule starting with the 2013 RA year. The Commission stated “We direct Energy Division to work with the CAISO and stakeholders to develop an alternate to the LSE replacement rule which can be implemented by the start of the 2013 RA compliance year.” In the decision the CPUC rejected both a proposal to add a Planned Outage Adder proposed by SCE and an Energy Division Proposal that the “LSE replace” provision be eliminated once the FERC approves a supplier-based replacement rule.

2.3 ISO’s Current Outage Management Procedures

Currently, the ISO accepts or rejects each planned outage based on whether the outage presents a reliability risk when all possible generation that may avert that risk are also considered. The ISO currently cannot reject planned outages or extensions to those outages by generators on the basis that they would reduce the level of RA generation below appropriate levels. Through the 2012 RA year the risks in this regard to the ISO has been mitigated (but not eliminated) by the CPUC rule which requires the generator’s LSEs to provide replacement RA capacity due to planned outages of their RA units according to the rule. Currently, the ISO cross-validates the supply plans of generators and the corresponding RA plans of LSEs, and provides this information to the CPUC along with information on planned outages. The CPUC determines if its jurisdictional entities are RA sufficient, and orders them to cure any deficiencies. The CPUC has eliminated this LSE Replacement Rule starting with the 2013 RA year.

The ISO currently manages outages based on the fleet of available resources without regard for RA capacity. However, a continuing tenet of the RA program is that RA requirements secure the appropriate amount of capacity to support reliability. Absent a replacement rule to address planned outages, a change in the outage management process to consider RA reliability requirements is fundamental to maintaining the appropriate level of capacity. However, relying exclusively on managing outages to a RA reliability requirement may too severely reduce outage opportunities for needed maintenance (adversely impacting longer term reliability), and may preclude opportunities to economically replace the RA resource to allow maintenance and preserve reliability.

2 July 20, 2006; http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/138375.PDF
2.4 Previous Stakeholder Process

During several recent RA proceedings, CPUC jurisdictional some load serving entities suggested that the Commission consider eliminating the replacement rule from its RA requirements. Elimination of the replacement rule would relieve these load serving entities of the obligation to procure additional RA capacity to meet their RA requirement for months where some of their RA capacity is unavailable due to a scheduled maintenance outage. The parties that supported eliminating the rule primarily argue that it limits the tradability of RA capacity as a standard capacity product by imposing an obligation on the individual load serving entity to replace RA capacity on scheduled outage.

In 2010, before the CPUC decision to remove its replacement rule on LSEs, the ISO started a stakeholder process to consider implementing a replacement rule at the ISO, rather than through the CPUC. Numerous proposals were examined, which would have imposed a replacement rule on generators, rather than on the LSEs as the CPUC does. The initiative was suspended because there was not broad support among the stakeholders for any of the proposed options. Generators indicated that they, unlike the LSEs which were the focus of the CPUC replacement rule, did not have portfolios of generation from which they could find replacement capacity and that the costs would be prohibitive. The generators also argued that at least some RA capacity is procured annually – local capacity for example – and often the LSEs procure the RA capacity annually since the generators need to recover costs for the entire year, not just a few months. They further argued that, given such annual RA procurement, in non-peak months there will be sufficient RA capacity available so that some of that capacity could be on planned outages while the remaining available capacity provides the RA reliability requirement. If this were true, requiring automatic replacement of capacity would result in over-procurement of RA resources. However, if planned outages created a situation where RA Reliability Requirements were not met, such outages could not be allowed without a provision for some replacement or substitute capacity.

3.0 RA Outage Management Principles

The ISO offers the following general RA and outage management principles. Discussion on the alternative process to the LSE replacement rule (including any potential tariff changes) can be more focused and effective by using these principles to evaluate alternative proposals by how well they address the principles.

3.1 Resource Adequacy

Established principles of the RA program:

- The RA program has established Reliability Requirements (i.e., currently including capacity at 115% of demand for system and 100% of demand for local) on a forward (i.e., monthly or annual) planning basis.\(^3\)
  - The Planning Reserve Margin (PRM) of 15% above demand is designed to ensure sufficient resources are available to meet peak demand during the planning period, taking into account three additional factors. First, is the need to maintain operating reserves as required by NERC and WECC Reliability

\(^3\) The CPUC has adopted a planning reserve margin of 115-117%, and the ISO tariff (section 40.2.2.1) adopts 115% for those LSEs whose “Local Regulatory Authority or federal agency has not established a Reserve Margin(s).” Local Regulatory Authorities and federal agencies may adopt their own Reserve Margins for use in the annual and monthly RA showings.
Standards. Second, is to allow for some level of forecast error in the demand forecast. Third, is recognition that at any point in the planning time horizon, some units are likely to be on forced outage (i.e., beyond the immediate recovery period covered by Operating Reserves). The PRM is not designed to accommodate planned outages.

- The RA program, through the annual and monthly showings to meet the RA reliability requirements, are designed to ensure that the ISO can reliably operate the grid while meeting the load obligations of the LSEs,
  - The ISO must have sufficiency with regard to RA reliability requirements and therefore should not enter a month with RA deficiencies.
- If an RA unit is on outage and this reduces the amount of capacity below the RA reliability requirements, it doesn’t matter if the outage is forced or planned, the reliability of the grid might be compromised.
  - The ISO must have the authority to backstop capacity to cure continuing deficiencies in RA reliability requirements to ensure the reliability of the grid. This backstop should include both monthly backstopping of deficiencies in the RA showings, and procuring resources within the month to replace RA capacity on outages.
- Replacement or substitution of RA capacity, by either the LSE or generator, should be allowed.

### 3.2 Outage Management

Established principles of reliable outage management:

- Units should be allowed to take planned outages as long as system reliability is not compromised.
- RA units should be allowed to go on planned outages as long as RA reliability requirements are not impinged on
  - If a requested planned outage by a unit providing RA capacity during the month would result in not meeting the RA reliability requirements, the outage cannot be accommodated as a planned outage.
  - If a generator requests a planned outage and is told it can’t be accommodated because RA reliability requirements would not be met, but takes the outage anyway, it should be considered a forced outage.
- In considering requested planned outages, the principle of first come first served should continue to be followed in determining which units would cause a potential insufficiency in RA reliability requirements.
- The ISO must be able to backstop sufficient capacity to ensure reliability, and costs should be, if possible, allocated to the party causing the insufficiency being backstopped.

### 4.0 Issues with the Existing CPUC Replacement Rule

The existing RA replacement rule, especially in combination with certain ISO rules and procedures, creates incorrect incentives for RA resources in scheduling and/or replacing resources on planned outages. Many of these issues arise because, for RA resources, forced outages are factored into the unit’s availability calculation under Standard Capacity Product (SCP) and may result in penalties or diminished amounts of RA capacity in the future, while
Replacement requirement for scheduled generation outages

March 6, 2012

planned outages are excluded from the calculations. This combined with the ISO’s current outage management procedures often result in strange outcomes. An issue that has plagued implementation of the replacement rule is the rules application regarding the amount of time and the selection of days to allow outages. The concept was that during about 25% (summer) and 50% (winter) of the time outages could be taken without serious impact to reliability. This was translated in the rule to 50% of the days. Additionally problematic was that the concept of planning RA for the peak of the month (i.e., peak week) offered opportunities during the non-peak portions of the month for some outages to occur without impinging on reliability. However, the existing CPUC rule allows 50% of days irrespective of the peak of the month, meaning that the outages would be allowed (i.e., without replacement) possibly during the very time the resource is needed most.

One example of such an incorrect incentive can occur if a unit needs a three-week maintenance outage. The current CPUC Replacement Rule would force the LSE owning or contracting with this resource to replace this unit with other RA capacity if the maintenance outage were scheduled all in one month. However, if the outage is scheduled across two months, starting in one month and finishing in the other, it could be under the thresholds for replacement in each month. By doing so, there is no requirement for replacement capacity in either month, and the outage doesn’t affect the unit’s availability calculation in either month, even though the unit is unavailable to provide RA capacity for a total of three weeks during the two months.

Another example is that a three-week planned outage scheduled several months in advance would require the LSE to replace the RA capacity under the CPUC’s RA replacement rule, however, if the same outage is scheduled five days before the month in which it occurs it would not trigger any replacement. The determination of RA capacity for LSE will have already been done, and assuming that the outage doesn’t cause any reliability issues it would be approved as a planned outage by the ISO. A unit could actually be out for the entire month on a planned outage and still count for RA capacity. Further, it could receive payments for its availability, since its availability calculation would not be reduced for any outage.

The current ISO rules require that planned outages be noticed to the ISO at least three days before the outage. One implication of this is that forced outage status often doesn’t exceed three days, even if the unit is out for several weeks. This is because when a unit is forced out and realizes that it will take two weeks to come back on line, it will request a planned outage for the last eleven days, and current rules often do not allow the rejection of that planned status for the outage unless there are resulting reliability issues considering all available generation. During the three days of forced outage the unit would be required to find substitute RA capacity or have its availability calculation impacted by the outage, however, once the outage is converted to a planned outage there is no more need to substitute RA capacity and there is no impact on the unit’s availability calculation.

The implication of these examples is that the outage allowances of the replacement rule prevent the RA program from meeting the criteria for which it was designed. Instead of ensuring that the ISO has sufficient RA resources to ensure 115% of system peak for the month and local reliability, the current RA program and ISO outage rules allow units to count for RA capacity even when they are not available (nor ever expected to be available). More concerning is that this aspect of the rule fails to impose any incentives on the LSEs and generators to rely on RA capacity that is expected to be available. Worse, it may encourage the opposite.

Indeed, since a unit on planned outage can never see its availability calculation diminished by a forced outage, it may be better financially to be on a planned outage. Absent some replacement requirement or alternative incentive, some gaming opportunities may also
exist relative to RA capacity contracted at lower price that is expected to be on outage with the expectation that a cost shift will occur to other LSEs or generators. At the same time the LSE and/or generator are failing to see any financial consequences from the failure to actually supply RA capacity, their actions may be causing costs to be imposed on other entities. Federal reliability requirements do not allow the ISO to let the reliability of the system be compromised, and if there is insufficient generation provided through the RA program, the ISO will use its backstop authority to procure capacity through its CPM, the costs of which will be allocated, at least partially, to others. The backstop method is recognized to be the least cost-effective approach for securing RA capacity that should have been secured in advance and expected to be genuinely available when needed.

5.0 ISO RA Outage Management Proposal

In designing an RA outage management program, the desire of the ISO is not simply to replicate the existing CPUC Replacement Rule. While the existing rule does help ensure RA capacity is available, as explained in the last section there are numerous perverse incentive issues under the current system. More importantly, the current approach may fail to provide the ISO with the needed capacity for reliable operation of the grid. The goal of the ISO in this RA Outage Management Proposal is to create a just and reasonable, resource adequacy and outage management program that ensures sufficient capacity to reliably operate the grid and meet the load obligations of the LSEs while minimizing ISO procurement of capacity through its backstop mechanisms.

The ISO recognizes that special consideration must be given to the structure of RA. RA requires the cooperation of LSEs, suppliers, and the local regulatory authorities, which includes the CPUC. The ISO relationship is with the scheduling coordinators for the LSEs; the LSEs are under the regulation of their local regulatory agencies, which determine resource adequacy.

The premise of the RA Outage Management Program is that the ISO will manage outages to ensure the RA reliability requirements are met. Planned outages for RA resources will not be allowed if they would decrease the level of RA capacity below RA reliability requirements.

This proposal differs from both the existing CPUC Replacement Rule, and previously proposed ISO replacement rules in that it doesn’t impose the obligation for replacement entirely on LSEs (like the CPUC rule) or generators (like previous ISO proposals). Instead, this proposal is offered out of recognition that a reasonable application of responsibility for assuring RA capacity sufficiency depends on the timing of the planned outage request. If a supplier knows that a resource is planned to be on an outage it should not offer that capacity as RA capacity when it expects it be unavailable. Similarly, an LSE that includes a unit that will be on planned outage when it submits its RA showing for the month should not be considered sufficient in its showing. However, once the RA showings for the month have been finalized, and determined to sufficiently meet RA reliability requirements, the risk to RA sufficiency caused by subsequent outages should rest with the generator. It should be recognized that the fact that a generator has a pre-planned outage for a resource that is being counted in an LSE RA showing does not necessarily equate to an insufficiency in meeting overall RA Reliability requirements. To the degree there is an excess of RA created through meeting local requirements or by the lumpy nature of some RA procurements, RA reliability requirements may still be met. Only when RA reliability requirements are not met would any LSE or generator be advised to cure an RA
insufficiency. Additionally, to the degree that RA reliability requirements are known to be jeopardized by a planned outage request, that request would be denied by the ISO.

The ISO is proposing to work with generators so that if they request a planned outage and it can be accommodated without reducing RA capacity below RA reliability requirements, it will be accepted as a planned outage. If, however, the requested outage would reduce RA capacity below the RA reliability requirements, the planned outage would be denied. In keeping with established and long-standing practice, if the unit then still takes the outage, it would be counted as a forced outage. As a forced outage, the generator would still have the opportunity to provide appropriate substitute RA capacity. This will establish a clear set of rules for RA units and contribute to a unified standard capacity definition. In the event substitute capacity was not provided, the ISO may procure backstop capacity as necessary to meet or maintain RA reliability requirements.

If the planned outage is scheduled before the LSEs’ month-ahead showing, the LSE should know that the unit will be unavailable during the month, and the LSE should not include the unit in the RA showing. In such case, the ISO proposes to let the LSE and the local regulatory authority know that its RA showing was deficient because one or more of the resources included in the showing will be on a planned outage and would thus cause RA to be insufficient for the month.

In the CPUC proceedings leading up to the elimination of the Replacement Rule, LSEs argued that to create a standard capacity product the replacement obligation should fall only on the generators. Generators argue that the LSE is often in a better position to secure replacement capacity. The ISO prefers to leave the decision of which party is responsible for providing replacement RA capacity prior to the month-ahead showings to the market place. The structure we are proposing does put the responsibility on the generators after the LSE RA showings have been made, since the generators have the responsibility at that point to provide the RA capacity. However, before the LSE showing the responsibility should be part of the negotiations between the generators and the LSEs. In this manner the market can determine the least expensive method for providing replacement capacity. Various parties argue that it would be easier for the other party to provide the replacement capacity, but this structure will let the market decide which is most cost-effective, without mandating a specific solution and without precluding the most efficient economic outcome. If, as the generators argue, LSEs have a portfolio of resources and can easily substitute another resource from this portfolio, then the difference in prices for capacity with or without replacement capacity supplied by the generator would be so great that the LSEs would procure the capacity without the replacement and provide it themselves. If generators can most cheaply provide the replacement capacity then LSEs will chose to procure the capacity with replacement. By leaving this to the market to decide it will likely be the case that which entity can more cheaply provide the replacement capacity actually depends on the specific LSE and supplier being considered. Ultimately, if the deficiency remains uncured, the ISO should be in a position to assure reliable operation of the grid while meeting the load obligations of the LSEs by backstopping the RA procurement as needed to meet RA Reliability Requirements. It is recognized this represents the least cost-effective approach, and therefore should be minimized by providing an adequate opportunity for other affected parties to cure the deficiency. The cost allocation for the backstop procurement is posed to be applied to the deficient LSE if the deficiency is identified at the monthly showing and to the generator if the deficiency occurs after the monthly showings.
5.1 ISO Proposal – Replacement Requirement for Scheduled Generation Outages

The basic structure that the ISO is proposing is:

1. The ISO would use the annual year-ahead RA showings to indicate to LSEs any generation that is part of their showing and which is scheduled for planned outages during the time it is listed as RA capacity alerting LSE for the potential need to cure.
2. The ISO requests that the initial monthly RA showings be moved earlier, to 90 days prior to the month, to allow time for the analysis of planned outages, and to enable adequate time for any deficiencies to be cured before the ISO enters into backstop capacity procurement.
3. As part of the cross-validation of supply and RA plans (at the 60-90 day time frame), the ISO will analyze the planned outages scheduled for RA resources. Outages which would result in an insufficient amount of RA capacity for the month will be indicated as creating a deficiency for LSEs relying on that generation. The deficit would be communicated to the LRA and LSEs. If the deficiency was not cured by the final RA submission data (i.e., 30-45 days prior to operating month), the ISO would use its RA CPM to procure replacement capacity and allocate the costs to the LSE which was deficient.
4. Requests for planned outages for RA units received after the submission of initial RA monthly showings will be considered using the same rules. If the outage would violate these conditions the generator would be told the outage was not allowed as a planned outage for RA. If the generator takes the outage, it would be treated as a forced outage. As a forced outage, the outage would impact the availability calculation in SCP unless the generator provides substitute capacity. The ISO may backstop the capacity through CPM if it is required for reliability. The costs for this backstop will be charged to the generator on forced outage, and this backstop capacity will be considered substitute capacity for the generator.
5. According to long-standing practice, the ISO will evaluate requests for planned outages in the order in which they are received. Outages will be initially approved based on annual advisory showings. Requests for planned outages already submitted will be used in evaluating annual RA showings. These initial outage approvals are only advisory. After the initial monthly RA showings, the ISO will evaluate all previously scheduled outages and determine which can be accommodated without reducing RA resources for the month below RA reliability requirements. Each subsequent request will be done assuming that previous requests which have been approved are taken.
6. The criteria for determining if a requested planned RA unit outage can be accommodated are:
   - Would the outage reduce the system RA resources to less than 115%?
   - If the unit is a local resource, would the outage reduce the local resources to less than required for the month?
     - In general, the ISO will consider the monthly amount for the local area by scaling the annual local capacity amount by the ratio of the month’s peak load to the annual peak load
     - If necessary for local reliability, the ISO may use other local criteria, but must identify these
   - Would the outage reduce any RA reliability requirements to unacceptable levels? (Refer to section 5.1.1, below, regarding flexible capacity.)
7. As in current practice, all approvals for planned outages are subject to change due to changes in systems conditions. Unanticipated transmission outages or forced generation outages may require the ISO to restrict any planned outages to maintain reliability. The ISO retains this right in order to ensure reliability of the grid.

8. Transmission Outages:
   - All analysis of requested planned outages for generation units will be done accounting for any scheduled transmission outages.
   - Requests for planned transmission outages will similarly be evaluated by examining the RA capacity available, and if the transmission outage would result in RA capacity levels below the RA reliability requirements, the planned outage would be denied unless the PTO makes arrangements for sufficient capacity to ensure RA reliability requirements are met.

5.1.1 ISO Proposed Flexibility Requirements for RA

The CPUC RA decision for 2013 will determine which of the ISO’s proposed Flexibility Requirements will be included as part of the total RA reliability requirements for the 2013 RA year. The ISO envisions that approval of planned outages would be based on meeting and maintaining the Flexibility Requirements. For 2013, the ISO’s Flexible Capacity proposals use an interim method to determine the flexible requirements so that the program can be instituted and experience gained while a more rigorous method of determining the flexible requirements is developed. The ISO thus suggests that for the RA Outage Management, unless the ISO notices a dramatic issue with flexible capacity, the inclusion of the flexible requirements in the RA Outage Management process be delayed until 2014. This will provide time for all parties to become familiar with both the RA Outage Management Process and the RA Flexible Requirements before the complications are incorporated into both programs. More information on how the Flexible Capacity requirements will be calculated and measured can be found in the ISO documents in the CPUC’s 2013 RA proceeding and in the ISO’s Flexible Capacity Procurement Stakeholder Process.

5.2 The ISO’s Proposal is Fair and Assures Sufficient RA Capacity for Reliability

The ISO’s proposal is designed to ensure that the RA capacity supplied is sufficient to allow the ISO to reliably operate the grid and meet the load obligations of the LSEs. The proposal ensures that LSEs and generators who are providing RA capacity to the ISO appropriately shoulder the costs of ensuring that sufficient RA capacity actually is available to the ISO during the month. If an RA capacity deficiency exists, the ISO would be compelled to use its backstop procurement mechanism, most likely CPM, to procure the necessary resources to ensure the reliability of the grid. Because the cost of such CPM procurement is currently allocated to all LSEs in the area where the capacity is required, this can result in an unfair distribution of costs. All LSEs in the area are forced to pay a share of the costs of the backstop procurement, even if their RA capacity was fully procured and actually available.

Similarly, the requirements on generation ensure just and reasonable treatment of all RA generation. Without the ISO’s proposed mechanism, generators can collect payments for capacity from their contracts with LSEs whether or not they are available, and LSEs would have no incentive to ensure that their capacity actually shows up. Indeed, a generator which goes on planned outage for either a day or more than an entire month, absent the ISO’s proposal, may represent a deficiency in RA capacity without any obligation to be cured.

Further, as explained above, the ISO believes that the structure we are proposing, with LSEs expected to include only generation in their RA shows that are expected to be available and
suppliers having the responsibility to replace after the RA showings, allows for the most efficient substitution of capacity. The marketplace for capacity will allow LSEs and suppliers to have the substitute capacity provided by the party which can most cheaply provide it. This structure even accommodates situations where the various parties have different costs. For example, some LSEs may have a large portfolio of resources and easily be able to substitute for a unit on outage, while other LSEs may not have such a portfolio and will look to the supplier to provide the substitute capacity to ensure they meet their RA requirements. Insisting on the replacement requirement being assigned to only suppliers or LSEs would sacrifice this efficiency.

The ISO’s RA proposal is fair. The existing rule is based only on the length of the planned outage and does not address whether the capacity is actually necessary to ensure sufficient RA resources for the month. Under the current CPUC replacement rule some outages would not require replacement even though they cause a shortage or RA capacity and potentially require the ISO to use its backstop procurement authority, while other outages would require replacement even though there are sufficient resources available to ensure RA requirement levels. The ISO’s proposal will examine each proposed outage to determine its impact on the level or RA resources, and will only require replacement of the RA capacity when the planned outage would reduce RA levels below those considered sufficient.

5.3 The ISO’s Proposal Resolves Issues from the Existing Replacement Rule

A large benefit from the ISO’s RA Outage Management Proposal is that it will eliminate many of the incorrect incentives that exist under the current CPUC Replacement Rule regime. Most of this improvement is due to the change in how planned outages are accepted. The ISO’s proposal institutes an improved analysis before approving planned outages from RA units; the ISO would accept them as an RA planned outage only if they didn’t reduce the level of RA capacity below the RA reliability requirements.

The ISO’s proposal will remove any incentive to not schedule a planned outage until after RA showings have been made for the month. Currently, if the outage is scheduled after the date that RA showings are made, even if the unit schedules an outage for the entire month it will still count for RA capacity and as a planned outage would not impact the unit’s availability calculation. Under the ISO proposal, waiting until after the RA showing increases the likelihood that the unit would not be able to be accommodated as a planned outage without reducing RA capacity below the required levels. Under such a situation the generator’s request for a scheduled outage would be rejected and the outage, if taken, would be treated as a forced outage. This would impact the availability calculation or potentially subject the generator to charges for backstop procurement to make up RA capacity during the outage. Because of the first-come first-served method of approving outages, those units who submit their outage requests earlier will be more likely to be able to be accommodated without reducing RA capacity too far.

Similarly, there will no longer be a potential benefit to scheduling an outage across months. Since each outage will be evaluated as to how it impacts RA capacity for each month, scheduling across months will no longer automatically make a planned outage not require replacement.
6.0 Next Steps

The ISO is proposing an aggressive schedule in order to allow us to file required tariff changes at FERC to be effective January 1, 2013.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 6, 2012</td>
<td>Issue paper/straw proposal posted</td>
</tr>
<tr>
<td>March 13</td>
<td>On-site stakeholder meeting *</td>
</tr>
<tr>
<td>March 20</td>
<td>Comments due on issue paper/straw proposal **</td>
</tr>
<tr>
<td>April 11</td>
<td>Revised straw proposal posted</td>
</tr>
<tr>
<td>April 18</td>
<td>Stakeholder conference call</td>
</tr>
<tr>
<td>April 25</td>
<td>Comments due on revised straw proposal **</td>
</tr>
<tr>
<td>May 17</td>
<td>Draft final proposal posted</td>
</tr>
<tr>
<td>May 24</td>
<td>Stakeholder conference call</td>
</tr>
<tr>
<td>June 1, 2012</td>
<td>Comments due on the draft final proposal **</td>
</tr>
<tr>
<td>July 12-13, 2012</td>
<td>Board of Governors Meeting</td>
</tr>
<tr>
<td>August, 2012</td>
<td>FERC Filing</td>
</tr>
<tr>
<td>January 1, 2013</td>
<td>Implementation</td>
</tr>
</tbody>
</table>

* RSVP to SMC@caiso.com by March 9, 2012
** Please submit comments to OutageReplacement@caiso.com