

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

**Table of Contents**

<u>9.</u>	<u>Outages.....</u>	<u>2</u>
<u>9.1</u>	<u>Coordination And Approval For Outages.....</u>	<u>2</u>
<u>9.2</u>	<u>Responsibility For Authorized Work On Facilities .....</u>	<u>2</u>
<u>9.3</u>	<u>Coordination Of Outages And Maintenance.....</u>	<u>2</u>
<u>9.3.1</u>	<u>CAISO Outage Coordination Office.....</u>	<u>2</u>
<u>9.3.2</u>	<u>Requirement For Approval .....</u>	<u>18</u>
<u>9.3.3</u>	<u>Request Submission and Information.....</u>	<u>19</u>
<u>9.3.4</u>	<u>Single Point Of Contact .....</u>	<u>20</u>
<u>9.3.5</u>	<u>Method Of Communications .....</u>	<u>20</u>
<u>9.3.6</u>	<u>Maintenance Outage Planning .....</u>	<u>21</u>
<u>9.3.7</u>	<u>Maintenance Outage Requests By The CAISO .....</u>	<u>28</u>
<u>9.3.8</u>	<u>CAISO Notice Required Re Maintenance Outages.....</u>	<u>30</u>
<u>9.3.9</u>	<u>Final Approval, Delay And Withholding .....</u>	<u>31</u>
<u>9.3.10</u>	<u>Forced Outages .....</u>	<u>33</u>
<u>9.4</u>	<u>Outage Coordination For New Facilities.....</u>	<u>37</u>
<u>9.4.1</u>	<u>Coordination By CAISO .....</u>	<u>37</u>
<u>9.4.2</u>	<u>Types Of Work Requiring Coordination.....</u>	<u>37</u>
<u>9.4.3</u>	<u>Uncomplicated Work.....</u>	<u>38</u>
<u>9.4.4</u>	<u>Special Procedures For More Complex Work .....</u>	<u>38</u>
<u>9.5</u>	<u>Information About Outages.....</u>	<u>39</u>
<u>9.5.1</u>	<u>Approved Maintenance Outages .....</u>	<u>39</u>
<u>9.5.2</u>	<u>Publication to Website .....</u>	<u>39</u>
<u>9.6</u>	<u>Facility Owner.....</u>	<u>39</u>
<u>9.7</u>	<u>Multi-Stage Generating Resources Outages.....</u>	<u>40</u>

**9. Outages**

**9.1 Coordination And Approval For Outages**

The CAISO shall have authority to coordinate and approve Outages and returns to service of all facilities comprised in the CAISO Controlled Grid and Reliability Must-Run Units in accordance with Section 9.3. The CAISO will coordinate and approve Maintenance Outages and coordinate responses to Forced Outages of all transmission facilities in the CAISO Controlled Grid and Reliability Must-Run Units in accordance with this Section 9. Any scheduled Outages that are cancelled by CAISO Real-Time operations due to system requirements must be rescheduled with the CAISO Outage Coordination Office in accordance with Section 9.3.

**9.2 Responsibility For Authorized Work On Facilities**

The CAISO shall have authority to approve requests by Participating TOs to work on all energized transmission equipment under the Operational Control of the CAISO.

**9.3 Coordination Of Outages And Maintenance**

**9.3.1 CAISO Outage Coordination Office**

The CAISO Outage Coordination Office shall be established by the CAISO and shall coordinate and approve Maintenance Outages of: (i) all facilities that comprise the CAISO Controlled Grid and (ii) Participating Generators. The CAISO shall additionally coordinate and approve Outages required for new construction and for work on de-energized and live transmission facilities (e.g., relay maintenance or insulator washing) and associated equipment. The CAISO Outage Coordination Office will be operational Monday through Friday, except holidays. The Outage Coordination Office is located in Folsom. Each office and the areas of responsibility of that office are detailed in the most recent version of the applicable CAISO Operating Procedures, which are posted on the CAISO Website.

**9.3.1.1 Coordinating Maintenance Outages of UDC Facilities**

Each UDC and the Participating TO with which it is interconnected shall coordinate their Outage requirements that will have an effect on their transmission interconnection prior to the submission by that Participating TO of its Maintenance Outage requirements under Section 9.3.

**9.3.1.2 Coordinating Maintenance Outages of CDWR-SWP Participating Generating Units**

The provisions of Section 9.3 shall apply to CDWR-SWP Participating Generating Units. The submission by CDWR-SWP of an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, and the CAISO's treatment of Outage schedules and requests relating to CDWR-SWP Participating Generating Units, shall be in accordance with Section 9.3, except as otherwise provided in Section 9.3.1.2.1.

**9.3.1.2.1 Coordinating Maintenance Outages of CDWR-SWP**

- (a) In each Outage schedule, Outage request, and request to change or cancel an Approved Maintenance Outage that CDWR-SWP submits to the CAISO for a CDWR-SWP Participating Generating Unit, CDWR-SWP will state whether CDWR-SWP has determined that the proposed maintenance work, and/or the timing of the Outage, is necessary in order for CDWR-SWP to:
  - (i) Comply with various federal and state legal and regulatory requirements that govern stream flow, water temperature, water quality and quantity, flood control space, after-bay, reservoir, or lake elevation, and other environmental and wildlife constraints ("CDWR-SWP Statutory Compliance Outage"); or
  - (ii) Maintain reliable operations of critical water infrastructure and not impair its ability to satisfy water delivery or conservation requirements ("CDWR-SWP Water System Reliability Outage").
- (b) CDWR-SWP will identify each CDWR-SWP Statutory Compliance or Water System Reliability Outage by designating the Outage with an appropriate cause code in the Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage and will provide a description of the requirement or constraint. If the designation of an Outage changes, or the Outage no longer meets the criteria of

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Section 9.3.1.2.1(a)(i) or (ii), CDWR-SWP will notify the CAISO about this change in status as soon as practical but no more than one (1) Business Day after it occurs.

- (c) The CAISO will not deny, cancel, or reschedule a CDWR-SWP Statutory Compliance or Water System Reliability Outage that CDWR-SWP submits to the CAISO in an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, provided that the Outage request is timely, designates the Outage as a CDWR-SWP Statutory Compliance or Water System Reliability Outage by an appropriate cause code and includes a description of the requirement or constraint.
- (d) The CAISO may contact CDWR-SWP to inquire whether the timing of a CDWR-SWP Statutory Compliance or Water System Reliability Outage can be changed. CDWR-SWP may agree to the change or, after making best efforts to accommodate the change, may notify the CAISO that the change is not feasible as determined by CDWR-SWP in its sole discretion due to the described requirement or constraint. In the event that CDWR-SWP determines that changing the timing of the Outage is not feasible due to the described requirement or constraint, the CAISO will not deny, cancel, or reschedule that CDWR-SWP Statutory Compliance or Water System Reliability Outage.
- (e) The CAISO will process any Outage that CDWR-SWP submits in an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, that is not timely, does not contain a cause code identifying the Outage as a CDWR-SWP Statutory Compliance or Water System Reliability Outage or does not include a description of the requirement or constraint, under the otherwise applicable provisions of Section 9.3 and CAISO Operating Procedures.

### **9.3.1.3 Coordinating Maintenance Outages of RA Resources**

In performing outage coordination management under Section 9, and this Section 9.3.1.3, the CAISO Outage Coordination Office may take into consideration the status of a Generating Unit as a Resource Adequacy Resource. The CAISO Outage Coordination Office may deny, reschedule or cancel an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid or Generating Units of Participating Generators if it determines that the outage is likely to have a detrimental effect on the availability of Resource Adequacy Capacity or the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

#### **9.3.1.3.1 Replacement Requirement for LSEs**

##### **9.3.1.3.1.1 LSE RA Plans**

Each Scheduling Coordinator for a Load Serving Entity shall submit to the CAISO a monthly Resource Adequacy Plan that meets the requirements set forth in Sections 40.2.2.4 or 40.2.3.4, as applicable. Resource Adequacy Capacity included in the monthly Resource Adequacy Plan that, as of the due date for the plan, is scheduled to take an Approved Maintenance Outage during the period of designation may be subject to replacement. To the extent that a resource included in a monthly Resource Adequacy Plan as Resource Adequacy Capacity is scheduled to take an Approved Maintenance Outage for all or portion of its capacity during the resource adequacy month, the capacity scheduled for outage is not operationally available to the CAISO and may be required by the ISO to be replaced with capacity from another resource(s) that is operationally available in the amount and for the duration of the scheduled outage during that month, as discussed in Sections 9.3.1.3.2.2 through 9.3.1.3.2.5.

##### **9.3.1.3.1.2 RA Resource Pending Maintenance Outage Requests**

If a Resource Adequacy Resource requested a planned Maintenance Outage, or change to an Approved Maintenance Outage, more than forty-five days prior to the first day of the resource adequacy month but does not receive approval or denial of the request by the CAISO Outage Coordination Office as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO Outage Coordination Office, as part of the validation under Sections 9.3.1.3.2.3 and 40.7(b), will determine whether the outage should be approved and, if so, whether it must be

replaced in the Resource Adequacy Plan with capacity from another resource that is operationally available in the amount and for the duration of the scheduled outage during the month.

**9.3.1.3.1.3 Optional List of Specified RA Replacement Capacity**

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Specified RA Replacement Capacity for the CAISO's use as RA Replacement Capacity to replace specific Resource Adequacy Capacity identified by the Load Serving Entity that is in its plan and that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.2 and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Specified RA Replacement Capacity, the CAISO, in its discretion, will use the specified capacity as RA Replacement Capacity to automatically replace the identified Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days specified by the Load Serving Entity that the Resource Adequacy Resource is scheduled to take an Approved Maintenance Outage during the month. The Specified RA Replacement Capacity will not be subject to the must-offer obligations in Section 40.6 nor the standard capacity product provisions in Section 40.9, unless the specified capacity is used by the CAISO as RA Replacement Capacity as provided in Section 9.3.1.3.2.2. The list of Specified RA Replacement Capacity included with a monthly Resource Adequacy Plan shall:

- (a) Identify the resource being replaced,
- (b) Identify the resource that will provide the Specified RA Replacement Capacity, the MW amount and time period of the replacement, and other information as may be required in the Business Practice Manual, and
- (c) Be submitted in the format required by the Business Practice Manual.

**9.3.1.3.1.4 Optional List of Non-Specified RA Capacity**

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Non-Specified RA Capacity for the CAISO's use as RA Replacement Capacity to replace Resource Adequacy Capacity included in that Load Serving Entity's monthly Resource Adequacy Plan that is scheduled to take an Approved Maintenance Outage during the

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

month, as provided in Sections 9.3.1.3.2.3, 9.3.1.3.2.4 and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Non-Specified RA Capacity in its plan, the CAISO, in its discretion, will select capacity from the list and use the selected capacity as RA Replacement Capacity to automatically replace Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days on which the CAISO's validation of the plan determines that the designated capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month must be replaced. The listed Non-Specified RA Capacity will not be subject to the must-offer obligations in Section 40.6 nor the standard capacity product provisions in Section 40.9, unless the Non-Specified Capacity is selected by the CAISO and used as RA Replacement Capacity as provided in Section 9.3.1.3.2.4. The list of Non-Specified RA Capacity included with a monthly Resource Adequacy Plan shall:

- (a) Rank each resource that has available Non-Specified RA Capacity in the order of use preferred by the Load Serving Entity;
- (b) Provide the identity of the resource, the MW amount of available capacity, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual;
- (c) Indicate the willingness of the Load Serving Entity to offer each resource that has available Non-Specified RA Capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43; and
- (d) Be submitted in the format required by the Business Practice Manual.

**9.3.1.3.2 CAISO Replacement Determination For LSE RA Plans**

**9.3.1.3.2.1 Review of LSE RA Plans**

The CAISO shall review each monthly Resource Adequacy Plan pursuant to Section 40.7(b) to validate that the capacity provided is equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for the Load Serving Entity and shall provide the results of this review to the Local Regulatory Authority. Additionally, the CAISO will review each monthly Resource Adequacy Plan to identify any Resource Adequacy Capacity included in the plan that

will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month.

**9.3.1.3.2.2 Replacement By Specified RA Replacement Capacity**

If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes no capacity that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, no replacement by Specified RA Replacement Capacity will occur. If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes capacity that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, and the Load Serving Entity has provided a list of Specified RA Replacement Capacity, then the CAISO will verify that the Specified RA Replacement Capacity is available during the specified replacement period and will replace the unavailable capacity in that Load Serving Entity's Resource Adequacy Plan with the available Specified RA Replacement Capacity. The CAISO will not accept any Specified RA Replacement Capacity that is unavailable during the specified replacement period. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity that the Specified RA Replacement Capacity has been accepted as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity must verify their agreement to provide the Specified RA Replacement Capacity. For the duration of the period that the resource is providing Specified RA Replacement Capacity, the resource shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the standard capacity product provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

**9.3.1.3.2.3 CAISO Replacement Determination**

Following replacement by Specified RA Replacement Capacity, the CAISO will determine whether Load Serving Entities are required to replace any capacity remaining in their monthly



California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Resource Adequacy Plans that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month. The CAISO will make the replacement determination as follows:

- (a) For each day of the month, the CAISO will calculate the System Total Available RA Capacity provided in the Resource Adequacy Plans and compare that MW amount to the CAISO system RA Reliability Margin.
- (b) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans exceeds the CAISO system RA Reliability Margin, the CAISO may determine that no further replacement is required.
- (c) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans is less than the CAISO system RA Reliability Margin, the CAISO may require replacement of the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, as provided in Sections 9.3.1.3.2.3 and 9.3.1.3.2.4. When replacement is required, the Scheduling Coordinator for each Load Serving Entity that did not include in its Resource Adequacy Plan available Resource Adequacy Capacity for the day in a MW amount equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for that Load Serving Entity will be required to provide the RA Replacement Capacity.
- (d) When replacement is required under Section 9.3.1.3.2.3(c), the CAISO will consider whether the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage requires replacement in the reverse order of the dates on which the outage requests were received. The Resource Adequacy Capacity subject to the most recently requested Approved Maintenance Outages will require replacement before the Resource Adequacy Capacity subject to Approved Maintenance Outages that were requested on earlier dates. Any request for a change to an Approved Maintenance Outage that extends the

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

scheduled duration of the outage or increases the MW amount of capacity on outage will be treated as a new outage request.

- (e) Beginning with the date of the most recent request to take an Approved Maintenance Outage during the month, the CAISO will either replace the unavailable Resource Adequacy Capacity with Non-Specified RA Replacement Capacity under Section 9.3.1.3.2.4 or will require the Scheduling Coordinator for the Load Serving Entity to replace the unavailable Resource Adequacy Capacity under Section 9.3.1.3.2.5. The CAISO will continue this replacement process in reverse order of the dates on which the requests to take the Approved Maintenance Outages were received until sufficient unavailable Resource Adequacy Capacity has been replaced each day to meet the criteria set forth in Section 9.3.1.3.2.3(b).

**9.3.1.3.2.4 Replacement By Non-Specified RA Replacement Capacity**

For each day of the month where the CAISO determines under Section 9.3.1.3.2.3 that replacement is required of Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, the CAISO may replace the unavailable capacity with Non-Specified RA Replacement Capacity as follows:

- (a) The CAISO will identify each Load Serving Entity that did not include in its monthly Resource Adequacy Plan available Resource Adequacy Capacity for each day in a MW amount equal to or greater than its applicable forecasted monthly Demand Reserve Margin, and will verify whether each such Load Serving Entity provided a list of Non-Specified RA Replacement Capacity with its plan.
- (b) To the extent that a Load Serving Entity provided a list of Non-Specified Replacement Capacity, the CAISO during the replacement process set forth in Section 9.3.1.3.2.3 will select capacity, in its discretion, from the list and use the selected capacity as RA Replacement Capacity to automatically replace unavailable Resource Adequacy Capacity included in that Load Serving Entity's

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Resource Adequacy Plan for each day where the CAISO determines that replacement is required.

- (c) The CAISO will verify whether the Non-Specified RA Replacement Capacity on each list is available during the replacement period and replace the unavailable capacity in the Resource Adequacy Plan with available Non-Specified RA Replacement Capacity. The CAISO will not accept Non-Specified RA Replacement Capacity that is unavailable during the replacement period.
- (d) The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and the Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity that the Non-Specified RA Replacement Capacity has been selected as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity must verify their agreement to provide the Non-Specified RA Replacement Capacity.
- (e) For the duration of the period that the Non-Specified RA Capacity is providing RA Replacement Capacity, it shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the standard capacity product provisions in Section 40.9 for the MW amount and duration of the replacement period, which includes the full day of the start date and the full day of the end date of the outage.

**9.3.1.3.2.5 Unreplaced Capacity In An RA Plan**

Following replacement by Non-Specified Capacity, for each day of the month where the criteria set forth in Section 9.3.1.3.2.3(b) is not met, and where the Load Serving Entity either did not provide Non-Specified RA Replacement Capacity, or the Non-Specified RA Replacement Capacity it provided was already selected by the CAISO, was insufficient, or was unavailable during the replacement period, the Scheduling Coordinator for the Load Serving Entity will have a replacement requirement. The CAISO will notify the Scheduling Coordinator for the Load Serving

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Entity of the replacement requirement and will identify the MW amount of capacity remaining in its Resource Adequacy Plan that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage on that day and that it is required to replace. The CAISO will treat the unreplaced capacity as an outage replacement requirement pursuant to Section 40.7(b). If the Scheduling Coordinator for the Load Serving Entity does not provide sufficient operationally available RA Replacement Capacity to meet the replacement requirement identified by the CAISO, and the resource does not reschedule or cancel the outage after its Supply Plan is submitted, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43.

**9.3.1.3.3 Replacement Requirement for RA Resources**

To the extent that a resource is committed to provide Resource Adequacy Capacity during a month, the Scheduling Coordinator for the resource may request an RA Maintenance Outage With Replacement, RA Maintenance Outage Without Replacement, Off Peak Opportunity RA Maintenance Outage, or Short-Notice Opportunity RA Outage, or may request to reschedule an Approved Maintenance Outage, for that Resource Adequacy Capacity in accordance with the provisions of this Section. The timelines set forth in this Section for submitting an Outage request and classifying the outage as a Maintenance Outage or a Forced Outage exclude the day that the request is submitted and the day that the outage is scheduled to commence.

**9.3.1.3.3.1 RA Maintenance Outage With Replacement**

(a) **Replacement Option.** The Scheduling Coordinator of a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a planned Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage With Replacement during that month.

(b) **Request.** A request for an RA Maintenance Outage With Replacement must (i) be submitted to the CAISO Outage Coordination Office no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start of the outage,(ii) provide RA Replacement Capacity in an amount no less than the Resource Adequacy Capacity designated for the resource for the duration of the

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

scheduled outage, and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

- (1) The CAISO Outage Coordination Office will consider requests for an RA Maintenance Outage With Replacement in the order the requests are received.
- (2) The CAISO Outage Coordination Office may approve the request for an RA Maintenance Outage With Replacement if it determines that (i) the request meets the requirements in Section 9.3.1.3.3.1(b) and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.
- (3) If the request was submitted no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage, and it meets the requirements in Section 9.3.1.3.3.1(c)(2) the CAISO Outage Coordination Office may approve the request as an RA Maintenance Outage With Replacement,
- (4) If the CAISO Outage Coordination Office denies the request for failing to meet the requirements in Section 9.3.1.3.3.1(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request a different schedule for the RA Maintenance Outage With Replacement or may request that the CAISO Outage Coordination Office accommodate the outage without RA Replacement Capacity at another time.

- (d) **Resource Adequacy Obligation.** The RA Replacement Capacity for an RA Maintenance Outage With Replacement approved under Section 9.3.1.3.3.1(c)(3) shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAIM provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

**9.3.1.3.3.2 RA Maintenance Outage Without Replacement**

- (a) **Option for No Replacement.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage Without Replacement, without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.
- (b) **Request.** A request for an RA Maintenance Outage Without Replacement must (i) be submitted to the CAISO Outage Coordination Office no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date of the outage, and (ii) otherwise comply with the requirements of Section 9.
- (c) **Approval.**
- (1) The CAISO Outage Coordination Office will consider requests received for an RA Maintenance Outage Without Replacement in the order the requests were received.
  - (2) The CAISO Outage Coordination Office may approve a request for an RA Maintenance Outage Without Replacement if it determines that (i) the request meets the requirements in Section 9.3.1.3.3.2(b), (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid, and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The analysis of system conditions and the overall outage schedule will include Approved Maintenance Outage requests that were received before and after the request for an RA Maintenance Outage Without Replacement.
  - (3) The CAISO Outage Coordination Office will not approve a request for an RA Maintenance Outage Without Replacement earlier than seven days before the

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

first day of the resource adequacy month, and may hold the request as pending until system conditions are sufficiently known for the CAISO to determine whether the outage meets the requirements in Section 9.3.1.3.3.2(c)(2).

- (4) If the CAISO Outage Coordination Office denies a request for an RA Maintenance Outage Without Replacement for failing to meet the requirements in Section 9.3.1.3.3.2(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO Outage Coordination Office accommodate the outage at another time.

**9.3.1.3.3.3 Off-Peak Opportunity RA Maintenance Outages**

- (a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.
- (b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must (i) be submitted to the CAISO Outage Coordination Office no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage, (ii) schedule the outage to begin during off-peak hours (as specified in the Business Practice Manual) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manual) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday and (iii) otherwise comply with the requirements set forth in Section 9.
- (c) **Approval.**
- (1) The CAISO Outage Coordination Office will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

- (2) If the request was submitted no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage, the CAISO Outage Coordination Office may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that (i) the request meets the requirements set forth in Section 9.3.1.3.3.3(b) and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.
- (3) If the CAISO Outage Coordination Office denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.3.3(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO Outage Coordination Office accommodate the outage at another time.
- (4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

**9.3.1.3.3.4 Short-Notice Opportunity RA Outage**

- (a) **Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide RA Replacement Capacity or RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage or de-rate.
- (b) A Short-Notice Opportunity RA Outage shall not exceed five days in length. The request for a Short-Notice Opportunity RA Outage must (i) be submitted no more than seven days prior to the requested start date for the outage, (ii) provide the CAISO Outage



California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Coordination Office adequate time to analyze the request before the outage begins, (iii) be submitted before the outage has commenced as a Forced Outage, and (iv) otherwise comply with the requirements of Section 9.

(c) **Approval.**

- (1) The CAISO Outage Coordination Office will consider Short-Notice Opportunity RA Outages in the order the requests are received.
- (2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO Outage Coordination Office may approve the request as a Short Notice Opportunity RA Outage if it determines that (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.3.4(b), (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid, and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will be subject to the RAIM provisions in Section 40.9.
- (3) If the request was submitted three days or less prior to the start date of the outage, the CAISO Outage Coordination Office may approve the request as a Forced Outage if it determines that (i) the outage and request meet the requirements set forth in Section 9.3.1.3.3.4(b), (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid, (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period, and (iv) the repairs are necessary to maintain system or resource reliability and require immediate attention to prevent equipment damage or failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage but it will not be subject to the RAIM provisions in Section 40.9.

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

- (4) To the extent that an approved Short-Notice Opportunity RA Outage is not completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the standard capacity product provisions in Section 40.9.

**9.3.1.3.4 Replacement Requirement Information**

In order to make information available to Market Participants pertinent to the replacement requirement provisions in Section 9.3.1.3, the CAISO will:

- (a) Annually post on the CAISO Website a calendar of the timeline of due dates for each month of the following resource adequacy compliance year; and
- (b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity and Non-Designated RA Capacity that may be needed or available as RA Replacement Capacity in the bilateral market. Use of the bulletin board is voluntary and limited to use for informational purposes only.

**9.3.2 Requirement For Approval**

An Operator or Scheduling Coordinator shall not take: (i) facilities that comprise the CAISO Controlled Grid or (ii) Generating Units of Participating Generators out of service for the purposes of planned maintenance or for new construction or other work except as approved by the CAISO Outage Coordination Office; except that final approval may not be required for a Transmission Maintenance Outage as provided in Section 9.3.9.1. The information relating to each Maintenance Outage submitted by a Participating Generator in accordance with Section 9.3.5 or by a Participating TO in accordance with Section 9.3.5 constitutes a request for a long-range Maintenance Outage and is not considered an Approved Maintenance Outage until the CAISO has notified the Participating Generator of such approval pursuant to Section 9.3.6 or the Participating TO pursuant to Section 9.3.6.

**9.3.3 Request Submission and Information**

The Operator or Scheduling Coordinator of facilities that comprise the CAISO Controlled Grid or of a Participating Generator, Participating Intermittent Resource, Generating Unit, System Unit, Physical Scheduling Plant, Proxy Demand Resource, Reliability Demand Response Resource, Non-Generation Resource, Participating Load, or other resource subject to the outage management requirements of Section 9, shall use the ISO's outage management system to --

- (1) Submit all outage requests under Section 9.
- (2) Provide the required information about the outage and work to be performed using the nature of work categories described in the Business Practice Manual.
- (3) For transmission outage requests, additionally provide structured and detailed outage modeling information at the facility level and/or the breaker/switch level. If the work to be performed will require a switch position to change during the outage period, the Operator or Scheduling Coordinator must submit a separate outage request for each configuration.
- (4) For resource outage requests, additionally provide the required information for the resource at the aggregate project or plant level, and also at the individual unit level for a unit de-rate greater than 50 MW, and any limitations on the resource's availability to provide each type of ancillary service for which it is certified.
- (5) Notify the CAISO of temporary changes in physical characteristics specified in the Master File, including the PMax, Minimum Load, and Ramping capability of the unit, due to changes in their actual physical characteristics. Changes in the physical characteristics related to Minimum Load shall only be for temporary increases in Minimum Load due to ambient temperature, outages of mechanical equipment, or environmental regulations.

**9.3.4 Single Point Of Contact**

Requests for approvals and coordination of all Maintenance Outages (consistent with Section 9.3.1) will be through a single point of contact between the CAISO Outage Coordination Office and each Operator. The Operator shall provide in its initial request and specify from time to time the identification of the single point of contact along with primary and alternate means of communication pursuant to the detailed procedures referred to in Section 9.3.6.

**9.3.5 Method Of Communications**

The primary method of communication from an Operator or Scheduling Coordinator to the CAISO with regard to maintenance and Outage planning will be the outage management system as described in the Operating Procedure on the CAISO Website and in the applicable Business Practice Manual. Emergency capabilities, to be used only as a back-up if the primary communication method is unavailable, will include:

- (a) voice;
- (b) fax (last resort); and
- (c) electronic (E-mail, FTP file).

**9.3.5.1 Confirmation**

When fax or electronic communication is utilized in the event the outage management system is unavailable, confirmation from the CAISO must be received by the Operator or Scheduling Coordinator to validate the receipt of the request.

**9.3.5.2 Communication of Approval or Rejection**

The CAISO shall use the outage management system as the primary method of communicating the approval or rejection of an Outage request or approval of a request to change an Approved Maintenance Outage to the relevant Operator or Scheduling Coordinator.

**9.3.5.2.1** Information regarding planned Outages for resources with an Existing QF Contract or an Amended QF Contract shall be provided to the CAISO Outage Coordination Office by the Participating TO or UDC that is a party to the Existing QF Contract or an Amended QF Contract or by a Participating Generator. Information provided will be that obtained by the Participating TO, UDC or a Participating Generator pursuant to the terms of Existing QF Contract or an

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Amended QF Contract or as requested by the CAISO. Scheduling and approvals of Maintenance Outages for resources with an Existing QF Contract or an Amended QF Contract shall continue to be coordinated as detailed in the applicable contract with the Participating TO or UDC, provided the owner of the Regulatory Must-Take Generation resource has not executed a Participating Generator Agreement or Net Scheduled PGA. If the owner of a resource has executed a Participating Generator Agreement or Net Scheduled PGA, it shall comply with Section 9.3.5 and other provisions applicable to Participating Generators.

**9.3.6 Maintenance Outage Planning**

Each Operator or Scheduling Coordinator shall, by not later than October 15 each year, provide the CAISO with a proposed schedule of all Maintenance Outages it wishes to undertake in the following year. The proposed schedule shall include all of the Operator's transmission facilities that comprise the CAISO Controlled Grid and Generating Units subject to a Participating Generator Agreement, Net Scheduled PGA, or Pseudo-Tie Participating Generator Agreement (including its Reliability Must-Run Units). In the case of a Participating TO's transmission facilities, that proposed schedule shall be developed in consultation with the UDCs interconnected with that Participating TO's system and shall take account of each UDC's planned maintenance requirements. The nature of the information to be provided and the detailed Maintenance Outage planning procedure shall be established by the CAISO. This information shall include:

The following information is required for each Generating Unit of a Participating Generator:

- (a) the Generating Unit name and Location Code;
- (b) the MW capacity unavailable;
- (c) the scheduled start and finish date for each Outage; and
- (d) where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.

The following information is required for each transmission facility:

- (a) the identification of the facility and location;

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

- (b) the nature of the proposed Maintenance Outage;
- (c) the preferred start and finish date for each Maintenance Outage; and
- (d) where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.

Either the CAISO, pursuant to Section 9.3.7, or an Operator or Scheduling Coordinator, subject to Section 9.3.6.11, may at any time request a change to an Approved Maintenance Outage. An Operator or Scheduling Coordinator may, as provided in Section 9.3.6.3, schedule with the CAISO Outage Coordination Office a Maintenance Outage on its system, subject to the conditions of Sections 9.3.6.4.1, 9.3.6.8, and 9.3.6.9.

**9.3.6.1 Quarterly Updates**

**9.3.6.1.1** Each Participating Generator will provide the CAISO with quarterly updates of its long-range Outage schedule referred to in Section 9.3.6 for Generating Units and System Units by the close of business on the fifteenth (15th) day of each January, April, and July. These updates must identify known changes to any previously planned Generating Unit Outages and any additional Outages anticipated over the next twelve (12) months from the time of this report. In this report, each Participating Generator must include all known planned Outages for the following twelve (12) months.

**9.3.6.1.2** Each Participating TO will provide the CAISO with quarterly updates of the data provided under Section 9.3.6 by close of business on the fifteenth (15th) day of each January, April, and July. These updates must identify known changes to any previously planned CAISO Controlled Grid facility Maintenance Outages and any additional Outages anticipated over the next twelve (12) months from the time of the report. As part of this update, each Participating TO must include all known Maintenance Outages for the following twelve (12) months.

**9.3.6.2 90 Day Look Ahead**

In addition to changes made at quarterly Outage submittals, each Participating Generator shall notify the CAISO in writing of any known changes to a Generating Unit or System Unit Outage scheduled to occur within the next ninety (90) days and may submit changes to its planned

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Maintenance Outage schedule at any time. Participating Generators must obtain the approval of the CAISO Outage Coordination Office in accordance with Section 9. Such approval may be withheld only for reasons of System Reliability or security.

**9.3.6.3 Timeframe for Scheduling Generation and Transmission Outages**

**9.3.6.3.1 Resource Maintenance Outages**

- (a) The Scheduling Coordinator for a Participating Generator, Participating Intermittent Resource, Generating Unit, System Unit, Physical Scheduling Plant, Proxy Demand Resource, Reliability Demand Response Resource, Non-Generation Resource, Participating Load, or other resource subject to the outage management requirements of Section 9, shall submit a request for a Maintenance Outage or a request to change an Approved Maintenance Outage to the CAISO Outage Coordination Office no less than eight days prior to the start date for the Outage, subject to the provisions of Sections 9.3.6.4.1, 9.3.6.8, and 9.3.6.9. The timeline for submitting the required advance notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence.
- (b) The requirement in Section 9.3.6.3.1(a) does not preclude submission of a request for a Forced Outage under Section 9.3.10.3 where immediate corrective action is needed because equipment has failed in service, is in danger of imminent failure, or is urgently needed to protect personnel.
- (c) A request for a Maintenance Outage that is submitted seven days or less prior to the start date for the Outage shall be classified as a Forced Outage.
- (d) A request to change an Approved Maintenance Outage that is submitted seven days or less prior to the start date for the Outage, if approved, will remain classified as a Maintenance Outage. If the request is not approved, the Scheduling Coordinator for the resource may submit a request for a new Forced Outage for the schedule change.

**9.3.6.3.2 Transmission Maintenance Outages**

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

An Operator or Scheduling Coordinator shall submit a request for a Maintenance Outage or a request to change an Approved Maintenance Outage for transmission facilities on its system in advance of the start date for the Outage, as follows:

1. An Operator or Scheduling Coordinator may, upon thirty (30) days notice in advance of the first day of the month the Outage is proposed to be scheduled (or within the notice period in the Operating Procedures posted on the CAISO Website), schedule with the CAISO Outage Coordination Office a CRR Transmission Maintenance Outage for transmission facilities on its system, subject to the conditions of Sections 9.3.6.4.1, 9.3.6.8, 9.3.6.9, and 36.4.3.
2. An Operator or Scheduling Coordinator shall submit a request for a Planned Transmission Maintenance Outage or a request to change an Approved Maintenance Outage to the CAISO Outage Coordination Office no less than eight days prior to the start date for the Outage, subject to the provisions of Sections 9.3.6.3.2, 9.3.6.4.1, 9.3.6.8, and 9.3.6.9. The timeline for submitting the required advance notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence. This requirement does not preclude submission of a request for a forced outage under Section 9.3.10.3 where immediate corrective action is needed because equipment has failed in service, is in danger of imminent failure, or is urgently needed to protect personnel.
3. If an Operator or Scheduling Coordinator submits a request for a Planned Transmission Maintenance Outage or a request to change an Approved Maintenance Outage seven days or less prior to the start date for the Outage, the CAISO Outage Coordination Office may, at its discretion, reject the request as untimely, or approve the request as an Unplanned Transmission Maintenance Outage provided that the CAISO Outage Coordination Office has adequate time to analyze the request before the Outage begins and the analysis determines that (i) the Outage is necessary for reliability, (ii) system conditions and the overall Outage schedule provide an opportunity to take the facilities out of service



California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid and without disrupting efficient market operations, and (iii) the Outage has not already commenced as a Forced Outage. The CAISO Outage Coordination Office will consider Unplanned Transmission Maintenance Outages in the order the requests are received.

**9.3.6.4 Changes to Maintenance Outages**

A Participating TO may submit changes to its Maintenance Outage information at any time, provided, however, that if the Participating TO cancels an Approved Maintenance Outage after 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence and the CAISO determines that the change was not required to preserve System Reliability, the CAISO may disregard the availability of the affected facilities in determining the availability of transmission capacity in the Day-Ahead Market. The CAISO will, however, notify Market Participants and reflect the availability of transmission capacity in the Real-Time Market as promptly as practicable.

**9.3.6.4.1** The CAISO Outage Coordination Office shall evaluate whether the requested Maintenance Outage or change to an Approved Maintenance Outage is likely to have a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity. The CAISO may request additional information or seek clarification from Participating Generators or Participating TOs of the information submitted in relation to a planned Generating Unit and System Unit Outage or a transmission Maintenance Outage. This information may be used to assist the CAISO in prioritizing conflicting requests for Outages.

**9.3.6.5 CAISO Analysis of Generating Unit Outage Plans**

**9.3.6.5.1 [NOT USED]**

**9.3.6.6 Withdrawal or Modification of Request**

The Operator of a Participating Generator or a Participating TO's Operator may withdraw a request at any time prior to actual commencement of the Outage. The Operator of a Participating Generator or Participating TO's Operator may modify a request at any time prior to receipt of any

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

acceptance or rejection notice from the CAISO Outage Coordination Office or pursuant to Sections 9.3.8.1, 9.3.8.2 and 9.3.8.3, but the CAISO Outage Coordination Office shall have the right to reject such modified request for reasons of System Reliability, system security or market impact, because of the complexity of the modifications proposed, or due to insufficient time to assess the impact of such modifications.

**9.3.6.7** Each Participating Generator or Participating TO which has scheduled a Maintenance Outage pursuant to Section 9.3.4 must schedule and receive approval of the Outage from the CAISO Outage Coordination Office prior to initiating the Approved Maintenance Outage. The CAISO Outage Coordination Office will review the Maintenance Outages to determine if any one or a combination of Maintenance Outage requests relating to CAISO Controlled Grid facilities, Generating Units or System Units may cause the CAISO to violate the Applicable Reliability Criteria. This review will take consideration of factors including, but not limited to, the following:

- (a) forecast peak Demand conditions;
- (b) other Maintenance Outages, previously Approved Maintenance Outages, and anticipated Generating Unit Outages;
- (c) potential to cause Congestion;
- (d) impacts on the transfer capability of Interconnections; and
- (e) impacts on the market.

**9.3.6.8** The CAISO Outage Coordination Office shall acknowledge receipt of each request to confirm or approve a Maintenance Outage for a Generating Unit, System Unit, or Physical Scheduling Plant. Where the CAISO Outage Coordination Office reasonably determines that the requested Maintenance Outage or the requested change to an Approved Maintenance Outage, when evaluated together with existing Approved Maintenance Outages, is not likely to have a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid, the CAISO shall authorize the Maintenance Outage or change to the Approved Maintenance Outage, and shall so notify the requesting Operator and other entities who may be directly affected.

**9.3.6.9** Where, in the reasonable opinion of the CAISO Outage Coordination Office, the requested Maintenance Outage or requested change to an Approved Maintenance Outage is

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

likely to have a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid, the CAISO Outage Coordination Office may reject the requested Maintenance Outage or requested change to Approved Maintenance Outage. If in the CAISO's determination, any of the Maintenance Outages would cause the CAISO to violate the Applicable Reliability Criteria, the CAISO will notify the relevant Operator, and the Operator will then revise the proposed Maintenance Outage and inform the CAISO of the proposed changes. The CAISO Outage Coordination Office shall, in a rejection notice, identify the CAISO's reliability, security and market concerns which prompt the rejection and suggest possible remedies or schedule revisions which might mitigate any such concerns. The CAISO Outage Coordination Office may provide each Operator in writing with any suggested amendments to those Maintenance Outage requests rejected by the CAISO Outage Coordination Office. Any such suggested amendments will be considered as a CAISO maintenance request and will be approved in accordance with the process set forth in Section 9.3.7. The determination of the CAISO Outage Coordination Office shall be final and binding on the Operator. If, within fourteen (14) days of having made its determination, the Operator requests the CAISO Outage Coordination Office to provide reasons for its determination, it shall do so as soon as is reasonably practicable. The CAISO will give reasons for informational purposes only and without affecting in any way the finality or validity of the determination.

**9.3.6.10 Failure to Meet Requirements**

Any request to consider maintenance that does not meet the notification requirements contained in Sections 9.3.8.2 and 9.3.8.3 will be rejected without further consideration, unless Section 9.3.10 applies.

**9.3.6.11 Cancellation of Approved Maintenance Outage**

In the event an Operator of facilities forming part of the CAISO Controlled Grid cancels an Approved Maintenance Outage after 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence and the CAISO determines that the change was not required to preserve System Reliability, the CAISO may disregard the availability of the affected facilities in determining the availability of transmission capacity in the Day-Ahead Market, provided, however,

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

that the CAISO will, as promptly as practicable, notify Market Participants and reflect the availability of the affected facilities in determining the availability of transmission capacity in the Real-Time Market.

**9.3.7 Maintenance Outage Requests By The CAISO**

The CAISO Outage Coordination Office may at any time request a Maintenance Outage or a change to an Approved Maintenance Outage from an Operator if, in the opinion of the CAISO Outage Coordination Office, the requested Maintenance Outage or change is required to secure the efficient use and reliable operation of the CAISO Controlled Grid. In addition, the CAISO Outage Coordination Office may, by providing notice no later than 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence, direct the Operator to cancel an Approved Maintenance Outage, when necessary to preserve or maintain System Reliability or, with respect to Reliability Must-Run Units or facilities that form part of the CAISO Controlled Grid, to avoid unduly significant market impacts that would arise if the Outage were to proceed as scheduled. The Operator, acting in accordance with Good Utility Practice, shall comply with the CAISO's direction and the provisions of Sections 9.3.7.1 and 9.3.7.2 shall apply. The CAISO shall give notice of any such direction to Market Participants prior to the deadline for submission of Day-Ahead Market Bids for the day on which the Outage was to have commenced. For purposes of this section and Section 9.3.3, an "unduly significant market impact" means an unplanned event or circumstance (e.g., unseasonable weather, a Forced Outage of a facility, or other occurrence) that adversely affects the competitive nature and efficient workings of the CAISO Markets, and is of such severity that a prudent Operator would not have scheduled a Maintenance Outage of its facility if the unplanned event or circumstance could have been anticipated.

**9.3.7.1** The Operator may: (1) refuse the request; (2) agree to the request; or (3) agree to the request subject to specific conditions. The Operator, acting in accordance with Good Utility Practice, shall make every effort to comply with requests by the CAISO Outage Coordination Office. In the event that the Operator refuses the CAISO's request, it shall provide to the CAISO Outage Coordination Office written justification for its position within seventy-two (72) hours.

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

**9.3.7.2** In response the CAISO Outage Coordination Office may: (1) overrule any refusal of a Maintenance Outage or a change to an Approved Maintenance Outage by an Operator, in which case the CAISO Outage Coordination Office determination shall be final; (2) accept any changes or conditions proposed by the Operator, in which case the Maintenance Outage request or the request to change an Approved Maintenance Outage shall be deemed to be amended accordingly; or (3) reject the change or condition, in which case the CAISO Outage Coordination Office and the Operator shall determine if acceptable alternative conditions or changes can be agreed. If the Operator and the CAISO Outage Coordination Office cannot agree on acceptable alternative conditions or changes to the CAISO Outage Coordination Office's request for a Maintenance Outage or change to an Approved Maintenance Outage, the CAISO Outage Coordination Office determination shall be final. If the Operator and the CAISO Outage Coordination Office cannot agree on acceptable alternative conditions or changes to the CAISO Outage Coordination Office's request for a Maintenance Outage or change to an Approved Maintenance Outage, the CAISO may notify the FERC of the dispute and take any other steps that are within its authority to maintain the reliability of the CAISO Controlled Grid.

**9.3.7.3** The CAISO will compensate the applicable Participating TO or Participating Generator for any direct and verifiable costs that such Participating TO or Participating Generator incurs as a result of the CAISO's cancellation of an Approved Maintenance Outage pursuant to this Section 9.3.7. For purposes of this section, direct costs include verifiable labor and equipment rental costs that have been incurred by the applicable Participating TO or Participating Generator solely as a result of the CAISO's cancellation of the Approved Maintenance Outage. Each Participating TO or Participating Generator must make a reasonable effort to avoid incurring any such direct costs through such measures as, but not limited to, the prompt cancellation of all contractual arrangements with third parties related to the Approved Maintenance Outage.

**9.3.7.4** The amount used to compensate each applicable Participating TO and Participating Generator, as described in Section 9.3.7.3, shall be charged to the Scheduling Coordinators in proportion to their metered Demand (including exports) during the Settlement Period(s) of the originally scheduled Outage.

**9.3.8 CAISO Notice Required Re Maintenance Outages**

The CAISO Outage Coordination Office shall provide notice to the Operator of the approval or disapproval of any requested Maintenance Outage. Additionally, the CAISO Outage Coordination Office shall notify any Connected Entity that may in the reasonable opinion of the CAISO Outage Coordination Office be directly affected by an Approved Maintenance Outage. The content of and procedures for such notice shall be established by the CAISO

**9.3.8.1 Data Required**

The Scheduling Coordinator for a Generating Unit owned or controlled by a Participating Generator shall submit to the CAISO pursuant to Sections 9.3.4 and 9.3.5.2.1 its request to confirm the schedule of a planned Maintenance Outage or to change the schedule of a planned Maintenance Outage. Such request must be made to the CAISO Outage Coordination Office by no less than eight days prior to the starting date of the proposed Outage (or as specified on the CAISO Website). Likewise, all Operators or Scheduling Coordinators for transmission facilities shall submit a formal request to confirm or change an Approved Maintenance Outage with respect to any CAISO Controlled Grid facility to the CAISO Outage Coordination Office in accordance with Sections 9.3.6.3.2, 9.3.8.2 and 9.3.8.3. The timeline for submitting the required advance notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence.

Such schedule confirmation request shall specify the following:

- (a) the Generating Unit or System Unit name and Location Code, or the identification of the transmission system element(s) to be maintained including location;
- (b) the nature of work to be performed;
- (c) the date and time the Outage is to begin;
- (d) the date and time the Outage is to be completed;
- (e) the time required to terminate the Outage and restore the Generating Unit to normal capacity or the transmission system to normal operation;

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

- (f) identification of primary and alternate telephone numbers for the Operator's single point of contact; and
- (g) in the case of a request for a change to an Approved Maintenance Outage, the date and time of the original Approved Maintenance Outage.

**9.3.8.2 Eight-Day Prior Notification**

Any request by a Participating Generator to confirm or change an Approved Maintenance Outage must be submitted no less than eight days prior to the starting date of the Approved Maintenance Outage (or as posted on the CAISO Website). The timeline for submitting the required advance notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence. Any request by an Operator or Scheduling Coordinator of transmission facilities to confirm or change an Approved Maintenance Outage seven (7) days or less in advance of the start date for the Outage is subject to Section 9.3.6.3.2.

**9.3.8.3 [Not Used]**

**9.3.8.4 Priority of Outage Requests**

Outage requests which are listed in the long-range maintenance schedules submitted to and approved by the CAISO will be given a priority in the scheduling and approval of Outage requests over those which have not been listed.

**9.3.8.5 Delay**

Failure to submit a request for an Outage by the proper time may mean a delay in approval from the CAISO or may cause that Outage to be designated as a Forced Outage based on the nearness of the request to the requested Outage date. The CAISO Outage Coordination Office may delay its approval of a Maintenance Outage or an Approved Maintenance Outage schedule if sufficient or complete information is not received by the CAISO Outage Coordination Office within the time frames provided in Sections 9.3.8.2 and 9.3.8.3.

**9.3.9 Final Approval, Delay And Withholding**

On the day on which an Approved Maintenance Outage is scheduled to commence, the Operator or Scheduling Coordinator shall contact the CAISO Control Center for final approval of the Maintenance Outage, except as provided in Section 9.3.9.1. No Maintenance Outage shall

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

commence without such final approval (including the time of release, in hours and minutes) being obtained from the CAISO Control Center whose decision shall be final. The CAISO Outage Coordination Office may delay its approval of a scheduled Maintenance Outage for a Participating Generator if sufficient or complete information is not received by the CAISO Outage Coordination Office within the time frames set forth in Section 9.3.8.1. The CAISO Control Center shall have the authority to withhold a Final Approval for an Approved Maintenance Outage for reasons of System Reliability, security or system status of the CAISO Controlled Grid or market impact. The CAISO Control Center shall immediately notify the relevant Operator or Scheduling Coordinator of its intention to withhold the Final Approval. The Generator Maintenance Outage or CAISO Controlled Grid facility Maintenance Outage will then be rescheduled pursuant to this CAISO Tariff.

**9.3.9.1 Transmission Maintenance Outage Final Approval**

As part of the approval process, the CAISO will determine whether an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid will require Final Approval on the start date before the outage begins or may be initiated and completed without Final Approval. The determination will be based on the outage types identified in the Business Practice Manual and the expected impact of the outage on system conditions and the risk to system reliability. The CAISO will provide its determination to the Operator or Scheduling Coordinator of the transmission facilities through the outage management system.

- (1) If Final Approval is required, the Operator or Scheduling Coordinator shall comply with the requirements in Section 9.3.9. The Final Approval may be requested and received through the outage management system.
- (2) If Final Approval is not required, the Operator or Scheduling Coordinator may commence the outage as scheduled on the start date and conclude the outage as scheduled on the end date, and report those actions through the outage management system. If the outage does not commence or conclude as scheduled, the Operator or Scheduling Coordinator must request approval to change an Approved Maintenance Outage.



**9.3.10 Forced Outages**

**9.3.10.1** Coordination of all Forced Outages (consistent with Sections 9.3.4 and 9.3.5.2.1) will be through the single point of contact between the Operator and the CAISO Control Center.

**9.3.10.2** Each Participating TO shall report any change or potential change in equipment status of the Participating TO's transmission assets turned over to the control of the CAISO or in equipment that affects transmission assets turned over to the control of the CAISO immediately upon discovery to the CAISO (this will include line and station equipment, line protection, Remedial Action Schemes and communication problems, etc.). Each Participating TO shall also keep the CAISO immediately informed upon discovery as to any change or potential change in the Participating TO's transmission system that could affect the reliability of the CAISO Controlled Grid. This would include, but is not limited to, adverse weather conditions, fires, bomb threats, system failures, etc. To the extent possible, the CAISO shall reflect all transmission Outages in the Integrated Forward Market and Real-Time Market.

**9.3.10.3** The following requirements apply to the advance reporting to the CAISO of anticipated and actual Forced Outages:

- (a) Any Operator, upon identification of a situation likely to result in a Forced Outage within the next twenty-four (24) hours unless immediate corrective action is taken, where such action requires the removing from service or reducing the maximum output capability of a Generating Unit or a Resource-Specific System Resource by ten (10) MW or more from the value most recently recorded in the CAISO's outage management system pursuant to Section 9, or removing a transmission facility from service, shall communicate directly with the CAISO Control Center.
- (b) Notwithstanding Section 9.3.10.3(a), and unless otherwise exempted pursuant to the terms of a Business Practice Manual, the Operator of an Eligible Intermittent Resource with a PMax of greater than ten (10) MW for its entire generating facility, upon identification of a situation likely to result in a Forced Outage within the next twenty-four (24) hours unless immediate corrective action is taken,

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

where such action requires the removing from service or reducing the maximum output capability of the Eligible Intermittent Resource generating facility by one (1) MW or more from the value most recently recorded in the CAISO's outage management system pursuant to Section 9, shall communicate directly with the CAISO Control Center. The failure of the Operator of the Eligible Intermittent Resource to report a Forced Outage between one (1) MW and ten (10) MW in accordance with this Section 9.3.10.3(b) shall be subject only to the provisions of Section 37.4.1.2(a) and (b)(1) of Section 37.4.1.2.

All notifications of Forced Outages shall be communicated to the CAISO Control Center with as much notice as possible in order that the necessary security analysis and CAISO Controlled Grid assessments may be performed. If prior notice of a Forced Outage cannot be given, the Operator shall notify the CAISO of the Forced Outage within thirty (30) minutes after it occurs. Any Operator, upon identification of a situation likely to result in a Forced Outage but of a nature not requiring a removal from service until some time more than twenty-four (24) hours in the future will be subject to the provisions of Section 9 with respect to any necessary Outage except the requirements imposing time limits for notification will be waived and the request will be expedited by the CAISO provided notice is given as soon as possible.

**9.3.10.3.1** The following requirements apply if prior notice of a Forced Outage cannot be given to the CAISO:

- (a) The Operator of a Generating Unit or a Resource-Specific System Resource is required to notify the CAISO within sixty (60) minutes after discovering any change in the maximum output capability of at least ten (10) MW or five percent (5%) of the value registered in the Master File, whichever is greater, from the value registered in the CAISO's outage management system pursuant to Section 9 that lasts for fifteen (15) minutes or longer.
- (b) Notwithstanding Section 9.3.10.3.1(a), and unless otherwise exempted pursuant to the terms of a Business Practice Manual, the Operator of an Eligible Intermittent Resource with a PMax of greater than ten (10) MW for its entire

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

generating facility is required to notify the CAISO within sixty (60) minutes after discovering any change in the maximum output capability of the generating facility of at least one (1) MW from the value registered in the CAISO's outage management system pursuant to Section 9 that lasts for fifteen (15) minutes or longer. The failure of the Operator of the Eligible Intermittent Resource to report a Forced Outage between one (1) MW and ten (10) MW in accordance with this Section 9.3.10.3.1(b) shall be subject only to the provisions of Section 37.4.1.2(a) and (b)(1) of Section 37.4.1.2.

**9.3.10.4** The CAISO Control Center shall coordinate any operational changes necessary to accommodate a Forced Outage and Market Participants shall comply with the CAISO's instructions given for that purpose.

**9.3.10.5** All Forced Outages shall be communicated by the CAISO Control Center to Operators likely to be affected by the Outage using the same procedures adopted for Maintenance Outage coordination procedures.

**9.3.10.6 Review of Forced Outages.** With respect to Forced Outages of Generating Units that result in a reduction in maximum output capability that lasts fifteen (15) minutes or longer of 40 MW or more below the value registered in the Master File and ten (10) percent of the value registered in the Master File, Operators, and where applicable, Eligible Customers, Scheduling Coordinators, UDCs and MSS Operators promptly shall provide information requested by the CAISO to enable the CAISO to review the changes made to the maximum output capability or Forced Outages submitted by the Operator or Scheduling Coordinator and to prepare reports on Forced Outages. If the CAISO determines that any Forced Outage may have been the result of gaming or other questionable behavior by the Operator, the CAISO shall submit a report describing the basis for its determination to the FERC. The CAISO shall consider the following factors when evaluating the Forced Outage to determine if the Forced Outage was the result of gaming or other questionable behavior by the Operator: 1) if the Forced Outage coincided with certain market conditions such that the Forced Outage may have influenced market prices or the cost of payments associated with Exceptional Dispatches; 2) if the Forced Outage coincided with

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

a change in the Bids submitted for any units or resources controlled by the Operator or the Operator's Scheduling Coordinator; 3) if the CAISO had recently rejected a request for an Outage for, or to Shut-Down, the Generating Unit experiencing the Forced Outage; 4) if the timing or content of the notice of the Forced Outage provided to the CAISO was inconsistent with subsequent reports of or the actual cause of the Outage; 5) if the Forced Outage or the duration of the Forced Outage was inconsistent with the history or past performance of that Generating Unit or similar Generating Units; 6) if the Forced Outage created or exacerbated Congestion; 7) if the Forced Outage was extended with little or no notice; 8) if the Operator had other alternatives to resolve the problems leading to the Forced Outage; 9) if the Operator took reasonable action to minimize the duration of the Forced Outage; or 10) if the Operator failed to provide any information or access to the generating facility requested by the CAISO within a reasonable time.

**9.3.10.6.1 Outage Reporting By NRS-RA Resources**

The Scheduling Coordinator for a non-Resource-Specific System Resource that provides Resource Adequacy Capacity shall report to the CAISO through the outage management system any Forced Outage of a Generating Unit or Forced Outage or Constraint of transmission facilities external to the CAISO Balancing Authority Area that directly results in the inability of the resource to deliver all or a portion of the Resource Adequacy Capacity identified in the resource's Supply Plan to the CAISO Balancing Authority Area. The Scheduling Coordinator for a non-Resource-Specific System Resource that provides Resource Adequacy Capacity is required to provide to the CAISO notice of the Forced Outage or Constraint within sixty (60) minutes after becoming aware of the circumstance. The Scheduling Coordinator for a non-Resource-Specific System Resource that provides Resource Adequacy Capacity shall promptly provide information requested by the CAISO to enable the CAISO to review the Forced Outage or Constraint and its impact on the ability of the resource to deliver Resource Adequacy Capacity to the CAISO Balancing Authority Area.

DMM shall identify and notify the Commission's Office of Enforcement staff of instances in which the reporting of the Forced Outage or Constraint may require investigation. DMM is to make a non-public referral to the Commission in all instances where DMM has reason to believe that the

reporting of the Forced Outage or Constraint constitutes a Market Violation other than those Market Violations identified in Section 11.1.13 of Appendix P. While DMM need not be able to prove that a Market Violation has occurred, DMM is to provide sufficient credible information to warrant further investigation by the Commission. Once DMM has obtained sufficient credible information to warrant referral to the Commission, DMM is to immediately refer the matter to the Commission and desist from independent action related to the alleged Market Violation. This does not preclude DMM from continuing to monitor for any repeated instances of the activity by the same or other entities, which would constitute new Market Violations. DMM is to respond to requests from the Commission for any additional information in connection with the alleged Market Violation it has referred.

#### **9.3.10.7 Other Balancing Authority Areas**

The CAISO Outage Coordination Office shall make all reasonable efforts to coordinate Outages involving other Balancing Authority Areas or affecting an Intertie, import or export capability not under the Operational Control of the CAISO to the extent that they may affect the reliability of the CAISO Controlled Grid.

### **9.4 Outage Coordination For New Facilities**

#### **9.4.1 Coordination By CAISO**

The procedure to energize and place in service any new or relocated piece of equipment, connected to the CAISO Controlled Grid, must be set out by the Operator or Connected Entity in a written procedure and coordinated by the CAISO Outage Coordination Office.

#### **9.4.2 Types Of Work Requiring Coordination**

The types of work which the CAISO will coordinate includes any new addition, replacement or modification to the CAISO Controlled Grid, including:

- (a) transmission lines forming part of the CAISO Controlled Grid;
- (b) equipment including circuit breakers, transformers, disconnects, reactive devices, wave traps, forming part of the CAISO Controlled Grid;
- (c) Generating Unit Interconnections; and
- (d) protection and control schemes, including RAS, SCADA, EMS, or AGC.

### **9.4.3 Uncomplicated Work**

When line rearrangements and/or station equipment work is uncomplicated and easily understood, the CAISO Outage Coordination Office may determine that the work can be accomplished using Outages approved in accordance with Section 9.3.6. The CAISO Outage Coordination Office will make this determination in coordination with the respective requesting Operator or Connected Entity.

### **9.4.4 Special Procedures For More Complex Work**

#### **9.4.4.1 Responsibility for Preparation**

In cases to which 9.4.3 does not apply, it is the responsibility of the requesting Operator or Connected Entity to prepare a written procedure to enable the CAISO to approve Outages in a manner that enables the necessary work to proceed. The CAISO Outage Coordination Office must approve the procedure.

#### **9.4.4.2 Information to be Provided to the CAISO**

The written procedure must be received by the CAISO Outage Coordination Office a minimum of four (4) weeks prior to the start of procedure. Adequate drawings will be attached to the procedure to help clarify the work being performed and the Outages that will be required to complete the work must be specified. The procedure shall include all of the information referred to on the CAISO Website.

#### **9.4.4.3 Approval of the Procedure**

Upon receipt of the procedure and drawings referred to in Section 9.4.4.2, the CAISO Outage Coordination Office will review the procedure and notify the Operator or Connected Entity of any required modifications. The CAISO Outage Coordination Office may, at its discretion, require changes to and more detail to be inserted in the procedure. The requesting Operator or Connected Entity will consult with other entities likely to be affected and will revise the procedure, following any necessary or appropriate discussions with the CAISO to reflect the requirements of the CAISO. Following the CAISO approval, an approved copy of the procedure will then be transmitted to the Operator or Connected Entity and the other entities likely to be affected.

#### **9.4.4.4 Changes to Procedure**

California Independent System Operator Corporation  
Fifth Replacement FERC Electric Tariff

Once the procedure is approved by the CAISO Outage Coordination Office any modifications to the procedure will require the requesting Operator or Connected Entity to notify the CAISO Outage Coordination Office with as much lead time as possible of the recommended changes. The modified procedure will then have to be approved by the CAISO Outage Coordination Office in accordance with Section 9.4.4.2 and 9.4.4.3.

**9.4.4.5 Approval of Work Requiring Coordination**

No work can begin pursuant to any approved procedure unless approved by the CAISO Outage Coordination Office.

**9.5 Information About Outages**

**9.5.1 Approved Maintenance Outages**

The CAISO and all Operators shall develop procedures to keep a record of Approved Maintenance Outages as they are implemented and to report the completion of Approved Maintenance Outages. Such records are available for inspection by Operators and Connected Entities at the CAISO Outage Coordination Office. Only those records pertaining to the equipment or facilities owned by the relevant Operator or Connected Entity will be made available for inspection at the CAISO Outage Coordination Office, and such records will only be made available provided notice is given in writing to the CAISO fifteen (15) days in advance of the requested inspection date.

**9.5.2 Publication to Website**

The CAISO shall publish on the CAISO Website a list of all Generating Units that have been reported to the CAISO pursuant to the CAISO Tariff or contract as undergoing Outages, together with the Generating Unit's PMax, the amount of the curtailment, the name of its Scheduling Coordinator, and other non-confidential information about these Generating Units as CAISO determines.

**9.6 Facility Owner**

The facility owner shall remain solely and directly responsible for the performance of all maintenance work, whether on energized or de-energized facilities, including all activities related to providing a safe working environment.

**9.7 Multi-Stage Generating Resources Outages**

Participating Generators of Multi-Stage Generating Resources shall report Outages in accordance with the Outage reporting requirements in Section 9 for the Generating Unit and for each MSG Configuration, as applicable. In addition, to the extent that the responsible Scheduling Coordinator modifies the registered Multi-Stage Generating Resource's characteristics as provided in Section 27.8.3, the Participating Generator for the Multi-Stage Generating Resource shall modify any information or reports previously submitted pursuant to this Section 9 to account for any registered status and characteristic changes as soon as possible after receiving notice from the CAISO acceptance of the registered status or characteristics changes and no later than two (2) business days prior to the date on which the Section 27.8.3 changes are expected to be in effect.