

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 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 request was submitted no more than seven days and no less than four days prior to the start date of the outage, and it otherwise meets the requirements in Section 9.3.1.3.3.1(c)(2), the CAISO Outage Coordination Office~~

~~may approve the request as a Forced Outage. A Forced Outage approved under this Section will not be subject to the standard capacity product provisions in Section 40.9.~~

(54) 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) ~~or a Forced Outage approved under Section 9.3.1.3.3.1(c)(4)~~ 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~~ RAAIM 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 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 request is submitted no more than seven days and no less than four days prior to the start date of the outage, and it otherwise meets the requirements in Section 9.3.1.3.3.2(c)(2), the CAISO Outage Coordination Office may approve the request as a Forced Outage. A Forced Outage approved under this Section will not be subject to the standard capacity product provisions in Section 40.9.~~
- (64) 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 Outage

- (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.
 - (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 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 Forced Outage if it determines that (i) the request otherwise 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. A Forced Outage approved under this Section will not be subject to the standard capacity product provisions in Section 40.9.~~

(43) 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.

(54) 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 ~~standard capacity product~~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 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 ~~but it and~~ will ~~not~~ be subject to the ~~standard capacity product~~ RAAIM 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

Comment [A1]: Will the approved outage cause RAAIM penalty? Or that since the assessment hours do not overlap with the time period of approved forced outage, they will not result in a penalty?? Sounds like there is a change here by deleting "not"

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 ~~standard capacity product~~RAAIM provisions in Section 40.9.

- (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~~RAAIM provisions in Section 40.9.

* * *

40. Resource Adequacy Demonstration For All SCs In The CAISO BAA

* * *

40.1.1 ~~Election Of Load Serving Entity Status~~[Not Used]

~~On an annual basis, in the manner and schedule set forth in the Business Practice Manual, the Scheduling Coordinator for a Load Serving Entity, not exempt under Section 40.1, shall inform the CAISO whether each such LSE elects to be either: (i) a Reserve Sharing LSE or (ii) a Modified Reserve Sharing LSE. A Scheduling Coordinator for a Load following MSS is not required to make an election under this Section. Scheduling Coordinators for Load following MSSs are subject solely to Sections 40.2.4, 40.3, and with respect to their Local Capacity Area Resources identified in accordance with Section 40.2.4, Section 40.9.~~

~~The CAISO may confirm with the CPUC, Local Regulatory Authority, or federal agency, as applicable, the accuracy of the election by the Scheduling Coordinator for any LSE under its respective jurisdiction, or, in the absence of any election by the Scheduling Coordinator, the desired election for any LSE under its jurisdiction. The determination of the CPUC, Local Regulatory Authority, or federal agency will be deemed binding by the CAISO on the Scheduling Coordinator and the LSE. If the Scheduling Coordinator and CPUC, Local Regulatory Authority,~~

~~or federal agency, as appropriate, fail to make the election on behalf of an LSE in accordance with the Business Practice Manual, the LSE shall be deemed a Reserve Sharing LSE.~~

40.2 Information Requirements For Resource Adequacy Programs

40.2.1 ~~Reserve Sharing LSEs~~ Load Serving Entities

40.2.1.1 Requirements for CPUC Load Serving Entities ~~Electing Reserve Sharing LSE Status~~

- (a) The Scheduling Coordinator for a CPUC Load Serving Entity ~~electing Reserve Sharing LSE status~~ must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, except that the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no less than 45 days in advance of the first day of the month covered by the plan, as provided in Section 40.2.1.1(e).
- (b) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1(b) shall apply.
- (c) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity, then the provisions of Section 40.8 shall apply.
- (d) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Demand Forecast requirements, then the provisions of Section 40.2.2.3 shall apply.
- (e) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Resource Adequacy Plan requirements, or where there is a requirement to submit monthly

Resource Adequacy Plans but the submission date is less than 45 days in advance of the first day of the month covered by the plan, then Section 40.2.2.4 shall apply.

- (f) Notwithstanding Section 40.2.1.1(a) and (e), for the resource adequacy month of January 2013, the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no later than November 20, 2012, which is 42 days in advance of the first day of the month.

40.2.2 Non-CPUC ~~LSEs Electing Reserve Sharing LSE Status~~ Load Serving

Entities

40.2.2.1 Reserve Margin

- (a) The Scheduling Coordinator for a Non-CPUC Load Serving Entity ~~electing Reserve Sharing LSE status~~ must provide the CAISO with the Reserve Margin(s) adopted by the appropriate Local Regulatory Authority or federal agency for use in the annual Resource Adequacy Plan and monthly Resource Adequacy Plans listed as a percentage of the Demand Forecasts developed in accordance with Section 40.2.2.3.
- (b) For the Scheduling Coordinator for a Non-CPUC Load Serving Entity for which the appropriate Local Regulatory Authority or federal agency has not established a Reserve Margin(s) or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) ~~that has elected Reserve Sharing LSE status~~, the Reserve Margin for each month shall be no less than fifteen percent (15%) of the LSE's peak hourly Demand for the applicable month, as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3.

40.2.2.2 Qualifying Capacity Criteria

The Scheduling Coordinator for a Non-CPUC Load Serving Entity ~~electing Reserve Sharing LSE status~~ must provide the CAISO with a description of the criteria adopted by the Local Regulatory Authority or federal agency for determining qualifying resource types and the Qualifying Capacity from such resources and any modifications thereto as they are implemented from time to time.

The ~~Reserve Sharing~~ LSE may elect to utilize the criteria set forth in Section 40.8.

40.2.2.3 Demand Forecasts

~~If the California Energy Commission does not produce a coincident peak Demand Forecast for a Load Serving Entity, The the~~ Scheduling Coordinator for ~~a Non-CPUC Load Serving Entity or CPUC~~ Load Serving Entity ~~subject to Section 40.2.1.1(b) electing Reserve Sharing LSE status~~ must provide ~~annual and monthly Demand Forecasts~~ the information requested by the CAISO on the schedule and in the reporting format(s) set forth in the Business Practice Manual. ~~The annual and monthly Demand Forecasts shall utilize the annual and monthly coincident peak Demand determinations provided by the California Energy Commission for such Load Serving Entity, which will be calculated from the Demand Forecast information submitted to the California Energy Commission by each Reserve Sharing LSE; or (ii) if the California Energy Commission does not produce coincident peak Demand Forecasts for the Load Serving Entity, the annual and monthly coincident peak Demand Forecasts produced by the CAISO for such Load Serving Entity in accordance with its Business Practice Manual. Scheduling Coordinators must provide data and information, as may be requested by the CAISO, necessary to develop or support the Demand Forecasts required by this Section.~~

40.2.2.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) ~~electing Reserve Sharing LSE status~~ must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity, as follows:

- (a) Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity as

described in Section 40.3.

- (b) Each monthly Resource Adequacy Plan or the same information as required to be included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual. The monthly Resource Adequacy Plan must identify all resources, including Local Capacity Area Resources, the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving Entity as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3 and applicable Reserve Margin. Resource Adequacy Plans must utilize the Net Qualifying Capacity requirements of Section 40.4.
- (c) The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.
- (d) In order to ensure that the CAISO's outage replacement determination remains accurate, the Scheduling Coordinator for the Load Serving Entity that submits a revision to its monthly Resource Adequacy Plan to correct an error must include in the revision a MW amount of Resource Adequacy Capacity for each day of month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.
- (e) In order to ensure that the amount of Resource Adequacy Capacity required to be included in the Load Serving Entity's Resource Adequacy Plan is

operationally available to the CAISO throughout the resource adequacy month, the Load Serving Entity that submits the monthly Resource Adequacy Plan is subject to the replacement requirement in Section 9.3.1.3.1.

~~(f) Notwithstanding Section 40.2.2.4(b), for the resource adequacy month of January 2013, the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.2.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the Load Serving Entity may submit at any time from 42 days through 11 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct an error in the plan.~~

~~(f) Notwithstanding Section 40.2.2.4(b), for each monthly Resource Adequacy Plan, the Load Serving Entity's local Resource Adequacy Capacity requirement in each TAC Area shall not exceed its system Resource Adequacy Capacity requirement in the same TAC Area, calculated as the forecasted peak demand and reserve margin for that month.~~

40.2.3 ~~Modified Reserve Sharing LSEs~~[Not Used]

~~40.2.3.1 Reserve Margin~~

~~(a) The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide the CAISO with the Reserve Margin(s) adopted by the CPUC, Local Regulatory Authority, or federal agency, as appropriate, for use in the annual Resource Adequacy Plan and monthly Resource Adequacy Plans listed as a percentage of the Demand Forecasts developed in accordance with Section 40.2.3.3.~~

~~(b) For the Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status for which the CPUC, Local~~

~~Regulatory Authority, or federal agency, as appropriate, has not established a Reserve Margin, the Reserve Margin shall be no less than fifteen percent (15%) of the applicable month's peak hour Demand of the Load Serving Entity, as determined by the Demand Forecasts developed in accordance with Section 40.2.3.3.~~

~~40.2.3.2 — Qualifying Capacity~~

~~The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide the CAISO with a description of the criteria for determining qualifying resource types and the Qualifying Capacity from such resources and any modifications thereto as they are implemented from time to time. The Modified Reserve Sharing LSE may elect to utilize the criteria set forth in Section 40.8.~~

~~40.2.3.3 — Demand Forecasts~~

- ~~(a) — The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide annual and monthly Demand Forecasts on the schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual and monthly Demand Forecasts shall utilize the annual and monthly coincident peak Demand determinations provided by the California Energy Commission for such Load Serving Entity, which will be calculated from Demand Forecast data submitted to the California Energy Commission by each Modified Reserve Sharing LSE; or (ii) if the California Energy Commission does not produce coincident peak Demand Forecasts for the Load Serving Entity, the annual and monthly coincident peak Demand Forecasts produced by the CAISO for such Load Serving Entity in accordance with its Business Practice Manual. Scheduling Coordinators must provide data and information, as may be requested by the CAISO, to develop or support the Demand Forecast required by this Section 40.2.3.3(b).~~

~~(b) — The Scheduling Coordinator for a Load-Serving Entity electing Modified Reserve Sharing LSE status must submit, on the schedule and in the reporting format set forth in the Business Practice Manual, hourly Demand Forecasts for each Trading Hour of the next Trading Day for each Modified Reserve Sharing LSE represented. The Scheduling Coordinator for a Load-Serving Entity electing Modified Reserve Sharing LSE status must provide data or supporting information, as requested by the CAISO, for the Demand Forecasts required by this Section 40.2.3.3(b) for each Modified Reserve Sharing LSE served by the Scheduling Coordinator and a description of the criteria upon which the Demand Forecast was developed, and any modifications thereto as they are implemented from time to time.~~

~~40.2.3.4 — Annual and Monthly Resource Adequacy Plans~~

~~The Scheduling Coordinator for a Load-Serving Entity electing Modified Reserve Sharing LSE status must provide annual and monthly Resource Adequacy Plans, for each Modified Reserve Sharing LSE served by the Scheduling Coordinator, as follows:~~

- ~~(a) — Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Modified Reserve Sharing LSE as described in Section 40.3.~~
- ~~(b) — Each monthly Resource Adequacy Plan or the same information as required to be included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual. The monthly Resource Adequacy Plan must identify the resources the Modified Reserve Sharing LSE~~

~~will rely upon to satisfy its forecasted monthly Demand and Reserve Margin as set forth in Section 40.2.3.1, for the relevant reporting period and must utilize the Net Qualifying Capacity requirements of Section 40.4.~~

- ~~(c) — The Scheduling Coordinator for the Load Serving Entity may submit, at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.~~
- ~~(d) — In order to ensure that the CAISO's outage replacement determination remains accurate, the Scheduling Coordinator for the Load Serving Entity that submits a revision to its monthly Resource Adequacy Plan to correct an error must include in the revision a MW amount of Resource Adequacy Capacity for each day of month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.~~
- ~~(e) — In order to ensure that the Resource Adequacy Capacity required to be included in the Load Serving Entity's monthly Resource Adequacy Plan is operationally available to the CAISO throughout the resource adequacy month, the Load Serving Entity that submits the monthly Resource Adequacy Plan is subject to the replacement requirement in Section 9.3.1.3.1.~~
- ~~(f) — Notwithstanding Section 40.2.3.4(b), for the resource adequacy month of January 2013, the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.3.4(c), for the resource adequacy month of January 2013, the Scheduling~~

~~Coordinator for the Load Serving Entity may submit at any time from 42 days through 11 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct an error in the plan.~~

40.2.4 Load-Following MSS

- (1) **Annual RA Plan.** A Scheduling Coordinator for a Load-following MSS must provide an annual Resource Adequacy Plan that sets forth, at a minimum, the Local Capacity Area Resources, if any, procured by the Load-following MSS as described in Section 40.3. The annual Resource Adequacy Plan shall utilize the annual coincident peak Demand determination provided by the California Energy Commission for such Load-following MSS using Demand Forecast data submitted to the California Energy Commission by the Load-following MSS, or, if the California Energy Commission does not produce coincident peak Demand Forecasts for the Load-following MSS, the annual coincident peak Demand Forecast produced by the CAISO for such Load-following MSS in accordance with its Business Practice Manual using Demand Forecast data submitted to the CAISO by the Load-following MSS. ~~The Local Capacity Area Resources identified by the annual Resource Adequacy Plan submitted by the Load following MSS shall be subject to the Availability Standards, Non-Availability Charge, and Availability Incentive Payment specified in Section 40.9.~~
- (2) **Monthly RA Plan and Supply Plan.** The Scheduling Coordinator for a Load-following MSS must submit a monthly RA Plan and Supply Plan on the schedule set forth in the Business Practice Manual.

* * *

40.4.7 Submission Of Supply Plans

40.4.7.1 Schedule for Submission of Supply Plans

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with annual and monthly Supply Plans, as follows:

- (a) The annual Supply Plan shall be submitted to the CAISO on the schedule set forth in the Business Practice Manual and shall verify their agreement to provide

Resource Adequacy Capacity during the next Resource Adequacy Compliance Year.

- (b) The monthly Supply Plans or the same information as required to be included in the monthly Supply Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual, and shall verify their agreement to provide Resource Adequacy Capacity during that resource adequacy month.
- (c) The Scheduling Coordinator for the Resource Adequacy Resource may submit, at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Supply Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Supply Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource Adequacy Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.
- (d) The monthly Supply Plan may indicate the willingness of the resource to offer capacity for procurement as **backstop capacity under the Capacity Procurement Mechanism** pursuant to Section 43, and provide the identity of the resource, the available capacity amount, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual.

~~(e) — Notwithstanding Section 40.4.7.1(b), for the resource adequacy month of January 2013, the monthly Supply Plans or the same information as required to be included in the monthly Supply Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.2.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the resource~~

~~adequacy resource may submit at any time from 42 days through 11 days in advance of the relevant month, a revision to its monthly Supply Plan to correct an error in the plan.~~

~~* * *~~

40.5 ~~Requirements Applying To Modified Reserve Sharing LSEs Only~~[Not Used]

40.5.1 ~~Day Ahead Scheduling And Bidding Requirements~~

- ~~(1) Scheduling Coordinators on behalf of Modified Reserve Sharing LSEs serving Load within the CAISO Balancing Authority Area for whom they submit Demand Bids shall submit into the IFM Bids or Self Schedules for Demand equal to one hundred (100) percent and for Supply equal to one hundred and fifteen (115) percent of the hourly Demand Forecasts for each Modified Reserve Sharing LSE it represents for each Trading Hour for the next Trading Day. Subject to Section 40.5.5, the resources included in a Self Schedule or a Bid in each Trading Hour to satisfy one hundred and fifteen (115) percent of the Modified Reserve Sharing LSE's hourly Demand Forecasts will be deemed Resource Adequacy Resources and (a) shall be comprised of those resources listed in the Modified Reserve Sharing LSE's monthly Resource Adequacy Plan and (b) shall include all Local Capacity Area Resources listed in the Modified Reserve Sharing LSE's annual Resource Adequacy Plan, if any, except to the extent the Local Capacity Area Resources, if any, are unavailable due to any Outages or reductions in capacity reported to the CAISO in accordance with this CAISO Tariff.~~
- ~~(i) Local Capacity Area Resources physically capable of operating must submit: (a) Economic Bids for Energy and/or Self Schedules for all their Resource Adequacy Capacity and (b) Economic Bids for Ancillary Services and/or a Submission to Self Provide Ancillary Services for all of their Resource~~

~~Adequacy Capacity that is certified to provide Ancillary Services. For Local Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self Provide Ancillary Services, the resource must submit Economic Bids for each Ancillary Service for which the resource is certified. For Resource Adequacy Capacity subject to this requirement for which no Economic Energy Bid or Self Schedule has been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8. For Resource Adequacy Capacity subject to this requirement for which no Economic Bids for Ancillary Services or Submissions to Self Provide Ancillary Services have been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8 for each Ancillary Service the resource is certified to provide. However, to the extent the Generating Unit providing Local Capacity Area Resource capacity constitutes a Use Limited Resource under Section 40.6.4, the provisions of Section 40.6.4 will apply.~~

- ~~(ii) Resource Adequacy Resource must participate in the RUC to the extent that the resource has available Resource Adequacy Capacity that was offered into the IFM and is not reflected in an IFM Schedule. Resource Adequacy Capacity participating in RUC will be optimized using zero dollar (\$0/MW-hour) RUC Availability Bid.~~
- ~~(iii) Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.~~
- ~~(iv) Through the IFM co-optimization process, the CAISO will utilize available Local Capacity Area Resource Adequacy Capacity to~~

~~provide Energy or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services. In so doing the IFM will honor submitted Energy Self Schedules of the Local Capacity Area Resource Adequacy Capacity of the Modified Reserve Sharing LSE unless the CAISO is unable to satisfy one hundred (100) percent of the Ancillary Services requirements. In such cases the CAISO may curtail all or a portion of a submitted Energy Self Schedule to allow Ancillary Service-certified Local Capacity Area Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. If the IFM reduces the Energy Self Schedule of Resource Adequacy Capacity to provide an Ancillary Service, the Ancillary Service Marginal Price for that Ancillary Service will be calculated in accordance with Section 27.1.2 using the Ancillary Service Bids submitted by the Scheduling Coordinator for the Resource Adequacy Resource or inserted by the CAISO pursuant to this Section 40.5.1, and using the resource's Generated Energy Bid to determine the Resource Adequacy Resource's opportunity cost of Energy. If the Scheduling Coordinator for the Modified Reserve Sharing LSE's Resource Adequacy Resource believes that the opportunity cost of Energy based on the Resource Adequacy Resource's Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling~~

~~Coordinator may submit evidence justifying the increased amount to the CAISO and to the FERC no later than seven (7) days after the end of the month in which the submitted Energy Self-Schedule was reduced by the CAISO to provide an Ancillary Service. The CAISO will treat such information as confidential and will apply the procedures in Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall pay the higher opportunity costs after those amounts have been approved by FERC.~~

- ~~(2) Resource Adequacy Resources of Modified Reserve Sharing LSEs that do not clear in the IFM or are not committed in RUC shall have no further offer requirements in the RTM, except under System Emergencies as provided in this CAISO Tariff.~~
- ~~(3) Resource Adequacy Resources committed by the CAISO must maintain that commitment through Real Time. In the event of a Forced Outage on a Resource Adequacy Resource committed in the Day Ahead Market to provide Energy, the Scheduling Coordinator for the Modified Reserve Sharing LSE will have up to the next RTM bidding opportunity, plus one hour, to replace the lesser of: (i) the committed resource suffering the Forced Outage, (ii) the quantity of Energy committed in the Day Ahead Market, or (iii) one hundred and seven (107) percent of the hourly forecast Demand.~~

~~40.5.2 Demand Forecast Accuracy~~

~~On a monthly basis, the CAISO will review Meter Data to evaluate the accuracy or quality of the hourly Day Ahead Demand Forecasts submitted by the Scheduling Coordinator on behalf of Modified Reserve Sharing LSEs. If the CAISO determines, based on its review, that one or more Demand Forecasts materially under-forecasts the Demand of the Modified Reserve Sharing LSEs for whom the Scheduling Coordinator schedules, after accounting for weather adjustments, the~~

~~CAISO will notify the Scheduling Coordinator of the deficiency and will cooperate with the Scheduling Coordinator and Modified Reserve Sharing LSE(s) to revise its Demand Forecast protocols or criteria. If the material deficiency affects ten (10) hourly Demand Forecasts over a minimum of two (2) non-consecutive Business Days within a month, the CAISO may: (i) inform State of California authorities including, but not necessarily limited to, the California Legislature, and identify the Modified Reserve Sharing LSE(s) represented by the Scheduling Coordinator and (ii) assign to the Scheduling Coordinator responsibility for all tier 1 RUC charges as specified in Section 11.8.6.5 to address the uncertainty caused by the Scheduling Coordinator's deficient hourly Demand Forecasts until the deficiency is addressed.~~

~~40.5.3 Requirement To Make Resources Available In System Emergency~~

~~Scheduling Coordinators for Modified Reserve Sharing LSEs that are MSS Operators shall make resources available to the CAISO during a System Emergency in accordance with the provisions of their Metered Subsystem Agreement. Scheduling Coordinators for all other Modified Reserve Sharing LSEs shall make available to the CAISO upon a warning or emergency notice of an actual or imminent System Emergency all resources that have not submitted a Self-Schedule or Economic Bid in the IFM that were listed in the Modified Reserve Sharing LSE's monthly Resource Adequacy Plan that are physically capable of operating without violation of any applicable law.~~

~~40.5.4 Consequence Of Failure To Meet Scheduling Obligation~~

- ~~(1) If the Scheduling Coordinator for the Modified Reserve Sharing LSE fails to submit a Self-Schedule or submit Bids equal to 115% of its hourly Demand Forecasts for each Trading Hour for the next Trading Day in the IFM and RUC, the Scheduling Coordinator will be charged a capacity surcharge of three times the price of the relevant Day-Ahead Hourly LAP LMP in the amount of the shortfall. To the extent the Scheduling Coordinator for the Modified Reserve Sharing LSE schedules imports on one or more Scheduling Points in an aggregate megawatt amount greater than its aggregate import deliverability~~

~~allocation under Section 40.4.6.2, the quantity of megawatts in excess of its import deliverability allocation will not count toward satisfying the Modified Reserve Sharing LSE's scheduling obligation, unless it clears the Day Ahead Market.~~

- ~~(2) — If the Scheduling Coordinator for the Modified Reserve Sharing LSE cannot fulfill its obligations under Section 40.5.1(3), the Scheduling Coordinator for the Modified Reserve Sharing LSE will be charged a capacity surcharge of two times the average of the six (6) Settlement Interval LAP prices for the hour in the amount of the shortfall. Energy scheduled in the RTM will not not against, or be used as a credit to correct, any failure to fulfill the Day Ahead IFM hourly scheduling and RUC obligation in Section 40.5.1(1).~~
- ~~(3) — Any Energy surcharge received by the CAISO pursuant to this Section 40.5.4 shall be allocated to Scheduling Coordinators representing other Load Serving Entities in proportion to each such Scheduling Coordinator's Measured Demand during the relevant Trading Hour(s) to the aggregate CAISO Measured Demand during the relevant Trading Hour(s).~~

~~40.5.5 — Substitution Of Resources~~

~~Subject to the provisions of this Section 40.5, the Scheduling Coordinator for a Modified Reserve Sharing LSE may substitute for its Resource Adequacy Resources listed in its monthly Resource Adequacy Plan provided:~~

- ~~(1) — Substitutions must occur no later than the close of the IFM; and~~
- ~~(2) — Resources eligible for substitution are either imports or capacity from non Resource Adequacy Resources or Resource Adequacy Resources with additional available capacity defined as Not Qualifying Capacity in excess of previously sold Resource Adequacy Capacity; however a Local Capacity Area Resource may be substituted only with capacity~~

~~from non-Resource Adequacy Resources located in the same Local Capacity Area.~~

40.6 Requirements For SCs And Resources For ~~Reserve Sharing~~ LSEs

This Section 40.6 does not apply to Resource Adequacy Resources of Load following MSSs ~~and those entities that participate in the Modified Reserve Sharing LSE program under Section 40.5.~~

Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity listed in the Scheduling Coordinator's monthly Supply Plans under Section 40.4.7 available to the CAISO each hour of each day of the reporting month in accordance with this Section 40.6 and Section 9.3.1.3.

40.6.1 Day-Ahead Availability

Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity, ~~except for that subject to Section 40.6.4,~~ available Day-Ahead to the CAISO, except as provided in Section 40.6.1(2) for extremely long-start units, Section 40.6.1.1 for specific resource types, and Section 40.6.4 for Use-Limited Resources, as follows:

- (1) Resource Adequacy Resources physically capable of operating must submit: (a) Economic Bids for Energy and/or Self-Schedules for all their Resource Adequacy Capacity and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services in the IFM for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services. For Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids for each Ancillary Service for which the resource is certified. For Resource Adequacy Capacity subject to this requirement for which no Economic Energy Bid or Self-Schedule has been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8. For Resource Adequacy Capacity subject to this requirement for which no Economic Bids for Ancillary Services or Submissions to Self-

Provide Ancillary Services have been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8 for each Ancillary Service the resource is certified to provide.

- (2) Resource Adequacy Resources that are Extremely Long-Start Resources must make themselves available to the CAISO by complying with the Extremely Long-Start Commitment Process under Section 31.7 or otherwise committing the ELS Resource upon instruction from the CAISO, if physically capable. Once the ELS Resource is committed by the CAISO, it is subject to the provisions of this Section 40.6.1 regarding Day-Ahead Availability and Section 40.6.2 regarding Real-Time Availability for the Trading Days for which it was committed.
- (3) Resource Adequacy Resources must be available except for limitations specified in the Master File, legal or regulatory prohibitions or as otherwise required by this CAISO Tariff or by Good Utility Practice.
- (4) Through the IFM co-optimization process, the CAISO will utilize available Resource Adequacy Capacity to provide Energy or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services. In so doing, the IFM will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy one hundred percent (100%) of the Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self-Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. If the IFM reduces the Energy Self-Schedule of Resource Adequacy

Capacity to provide an Ancillary Service, the Ancillary Service Marginal Price for that Ancillary Service will be calculated in accordance with Section 27.1.2 using the Ancillary Service Bids submitted by the Scheduling Coordinator for the Resource Adequacy Resource or inserted by the CAISO pursuant to this Section 40.6.1, and using the resource's Generated Energy Bid to determine the Resource Adequacy Resource's opportunity cost of Energy. If the Scheduling Coordinator for the Resource Adequacy Resource believes that the opportunity cost of Energy based on the Resource Adequacy Resource's Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit evidence justifying the increased amount to the CAISO and to the FERC no later than seven (7) days after the end of the month in which the submitted Energy Self-Schedule was reduced by the CAISO to provide an Ancillary Service. The CAISO will treat such information as confidential and will apply the procedures in Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall pay any higher opportunity costs approved by FERC.

- (5) A Resource Adequacy Resources must participate in the RUC to the extent that the resource has available Resource Adequacy Capacity that is not reflected in an IFM Schedule. Resource Adequacy Capacity participating in RUC will be optimized using a zero dollar (\$0/MW-hour) RUC Availability Bid.
- (6) Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.

40.6.1.1. Day-Ahead Availability -- Specific RA Resource Types

(a) Distributed Generation Facilities

Formatted: Font: Bold

Formatted: Font: Bold

Formatted: Indent: Left: 0"

Formatted: Font: Bold

Formatted: Font: Bold

(1) Distributed Generation Facilities that are not Use-Limited Resources under Section 40.6.4.1 shall comply with the IFM and RUC bidding requirements that apply to the same technology type of a resource connected to the CAISO Controlled Grid.

Formatted: Indent: Left: 0.5"

(2) Distributed Generation Facilities that are Use-Limited Resources under Section 40.6.4.1 shall comply with the applicable IFM and RUC bidding requirements for Use-Limited Resources under Section 40.6.4.3.

Formatted: Not Highlight

(b) Non-Generator Resources

Formatted: Font: Bold

(1) Non-Generator Resources that do not use Regulation Energy Management and are not Use-Limited Resources under Section 40.4.6.1 shall submit –

Formatted: Indent: Left: 0"

Formatted: Indent: Left: 0.5"

(A) Economic Bids or Self-Schedules into the IFM for all RA Capacity for all hours of the month the resource is physically available; and

Formatted: Indent: Left: 1"

(B) \$0/MW RUC Availability Bids for all RA Capacity for all hours of the month the resource is physically available.

(2) Non-Generator Resources using Regulation Energy Management that are not Use-Limited Resources under Section 40.4.6.1 shall submit –

Formatted: Indent: Left: 0.5"

(A) Economic Bids or Self-Schedules into the IFM for all RA Capacity for Regulation for all hours of the month the resource is physically available; and

Formatted: Indent: Left: 1"

(B) \$0/MW RUC Availability Bids for all RA Capacity for all hours of the month the resource is physically available.

Formatted: Font: Bold

(3) Non-Generator Resources that are Use-Limited Resources under Section 40.6.4.1 shall comply with the applicable IFM and RUC bidding requirements for Use-Limited Resources under Section 40.6.4.3.

Formatted: Indent: Left: 0.5"

(c) Extremely Long-Start Resources. Extremely Long-Start Resources that are Resource Adequacy Resources must make themselves available to the CAISO by complying with –

Formatted: No underline, Font color: Black

Formatted: No underline, Font color: Black

- (1) the Extremely Long-Start Commitment Process under Section 31.7 or otherwise committing the ELS Resource upon instruction from the CAISO, if physically capable; and
- (2) the applicable provisions of Section 40.6.1 regarding Day-Ahead Availability for the Trading Days for which it was committed.

Formatted: No underline, Font color: Black

Formatted: No underline, Font color: Black

Formatted: No underline, Font color: Black

Formatted: No underline, Font color: Black

40.6.2 Real-Time Availability

- (a) **General Requirement.** Resource Adequacy Resources that have received an IFM Schedule for Energy or Ancillary Services or a RUC Schedule for all or part of their Resource Adequacy Capacity must remain available to the CAISO through Real-Time for Trading Hours for which they receive an IFM or RUC Schedule, including any Resource Adequacy Capacity of such resources that is not included in an IFM Schedule or RUC Schedule, except for Resource Adequacy Capacity that is subject to Section 40.6.4.
- (b) **Short Start Units or Long Start Units.** Short Start Units or Long Start Units that are Resource Adequacy Resources that do not have an IFM Schedule or a RUC Schedule for any of their Resource Adequacy Capacity for a given Trading Hour may be required to be available to the CAISO through Real-Time as specified in Sections 40.6.3 and 40.6.7. Resource Adequacy Resources with Resource Adequacy Capacity that is required to be available to the CAISO through Real-Time and does not have an IFM Schedule or a RUC Schedule for a given Trading Hour must submit to the RTM for that Trading hour: (a) Energy Bids and Self-Schedules for the full amount of the available Resource Adequacy Capacity, including capacity for which it has submitted Ancillary Services Bids or Submissions to Self-Provide Ancillary Services; and (b) Ancillary Services Bids and Submissions to Self-Provide Ancillary Services for the full amount of the available Ancillary Service-certified Resource Adequacy Capacity and for each Ancillary Service for which the resource is certified, including capacity for which it has submitted Energy Bids and Self-Schedules. The CAISO will insert Generated Bids in accordance with Section 40.6.8 for any Resource Adequacy Capacity subject to the above requirements for which the resource has failed to submit the appropriate bids to the RTM.

(c) **Self-Schedules.** The CAISO will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy one hundred (100) percent of its Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements, as long as such curtailment does not lead to a real-time shortfall in energy supply. If the CAISO reduces a submitted Real-Time Energy Self-Schedule for Resource Adequacy Capacity when that capacity is needed to meet an Ancillary Services requirement, the Ancillary Service Marginal Price for that capacity will be calculated in accordance with Sections 27.1.2 and 40.6.1.

(d) **Distributed Generation Facilities**

- (1) Distributed Generation Facilities that are not Use-Limited Resources under Section 40.6.4.1 shall comply with the RTM bidding requirements that apply to the same technology type of resource connected to the CAISO Controlled Grid.
- (2) Distributed Generation Facilities that are Use-Limited Resources under Section 40.6.4.1 shall comply with the applicable IFM and RUC bidding requirements for Use-Limited Resources under Section 40.6.4.3.

(e) **Non-Generator Resources**

- (1) Non-Generator Resources that do not use Regulation Energy Management and are not Use-Limited Resources under Section 40.4.6.1 shall submit –
 - (A) Economic Bids or Self-Schedules into the RTM for any remaining RA Capacity scheduled in IFM or RUC; and
 - (B) Economic Bids or Self-Schedules into the RTM for all RA Capacity not scheduled in IFM.
- (2) Non-Generator Resources using Regulation Energy Management that are not Use-Limited Resources under Section 40.4.6.1 shall submit –
 - (A) Economic Bids or Self-Schedules into the RTM for any remaining RA Capacity from resource scheduled in IFM or RUC; and

Formatted: Font: Bold, Not Highlight

Formatted: Indent: Left: 0.5"

Formatted: Indent: Left: 1"

Formatted: Font: Bold

Formatted: Indent: Left: 0.5"

Formatted: Indent: Left: 1"

(B) Economic Bids or Self-Schedules into the RTM for all RA Capacity not scheduled in IFM.

(3) Non-Generator Resources that are Use-Limited Resources under Section 40.6.4.1 shall comply the applicable RTM bidding requirements for Use-Limited Resources under Section 40.6.4.3.

(f) Extremely Long-Start Resources. Once an Extremely Long Start Resource providing Resource Adequacy Capacity is committed by the CAISO, it shall comply with the applicable provisions of Section 40.6.2 regarding Real-Time Availability for the Trading Days for which it was committed.

Formatted: Indent: Left: 0", Hanging: 0.5"

40.6.4.3.2 Hydro, RDRR, and Non-Dispatchable Use-Limited Resources

Hydroelectric Generating Units, Pumping Load, and Non-Dispatchable Use-Limited Resources, but not Reliability Demand Response Resources, shall submit Self-Schedules or Bids in the Day-Ahead Market for their expected available Energy or their expected as-available Energy, as applicable, in the Day-Ahead Market and RTM. Such resources shall also revise their Self-Schedules or submit additional Bids in RTM based on the most current information available regarding Expected Energy deliveries. Hydroelectric Generating Units, Pumping Load, Reliability Demand Response Resources, ~~and~~ Non-Dispatchable Use-Limited Resources, Resource Adequacy Resources providing Regulatory Must-Take Capacity are not required to submit RUC Availability Bids for that capacity, but any such bids they do submit must be \$0/MW RUC Availability Bids. ~~will not be subject to commitment in the RUC process.~~ The CAISO will retain discretion as to whether a particular resource should be considered a Non-Dispatchable Use-Limited Resource, and this decision will be made in accordance with the provisions of Section 40.6.4.1.

Comment [A2]: Participating Load (PL) which is a Pumping Load functions on a model that allows only non-spin ancillary service in the DAM and RTM energy bid for the DAM A/S non-spin award. This language does not fit in case of a PL. One sentence should be added: "Participating Load that is a Pumping Load shall submit Non-Spin Ancillary Service bids or self-provision in the Day-Ahead Market and energy bid in the RTM for the DAM A/S award capacity." This proposed language aligns with the current participating load model and the participating load agreement between CDWR and the CAISO.

Comment [A3]: What is the difference between these two phrases ("expected available energy" and "expected as-available energy"? What do they mean?)

40.6.4.3.3 Availability of Use-Limited Resources During System Emergencies

All Use-Limited Resources remain subject to Section 7.7.2.3 regarding System Emergencies to the extent the Use-Limited Resource is owned or controlled by a Participating Generator.

40.6.4.3.4 Availability of Intermittent Resources

Any Eligible Intermittent Resource that provides Resource Adequacy Capacity may, but is not required to, submit Bids in the Day-Ahead Market.

40.6.4.3.5 Proxy Demand Resources

- (a) Short Start and Medium Start Proxy Demand Resources that provide Resource Adequacy Capacity shall submit \$0/MW RUC Availability Bids for all of their Resource Adequacy Capacity for all hours of the month the resource is physically available; however, any RUC schedule for these resources will not be binding.
- (b) Long Start Proxy Demand Resources are not required to submit Bids or Self Schedules in the RUC for their RA Capacity.

Formatted: Indent: Left: 0", Hanging: 0.5"

Formatted: Strikethrough

Formatted: Not Highlight

Formatted: Not Highlight

40.6.8 Use Of Generated Bids

- (a) Day-Ahead Market. Prior to completion of the Day-Ahead Market, the CAISO will determine if Resource Adequacy Capacity subject to the requirements of Sections 40.5.1 or 40.6.1 and for which the CAISO has not received notification of an Outage has not been reflected in a Bid and will insert a Generated Bid for such capacity into the CAISO Day-Ahead Market.
- (b) Real-Time Market. Prior to running the Real-Time Market, the CAISO will determine if Resource Adequacy Capacity subject to the requirements of Section 40.6.2 and for which the CAISO has not received notification of an Outage has not been reflected in a Bid and will insert a Generated Bid for such capacity into the Real-Time Market.
- (c) Partial Bids for RA Capacity. If a Scheduling Coordinator for an RA Resource submits a partial bid for the resource's RA Capacity, the CAISO will insert a Generated Bid only for the remaining RA Capacity. In addition, the CAISO will determine if all dispatchable Resource Adequacy Capacity from Short Start Units, not otherwise selected in the IFM or RUC, is reflected in a Bid into the Real-Time Market and will insert a Generated Bid for any remaining dispatchable Resource Adequacy Capacity for which the CAISO has not received notification of an Outage.
- (d) Calculation of Generated Bids. As provided in the Business Practice Manuals, a

Generated Bid for Energy will be calculated and will include: (i) a greenhouse gas cost adder for a resource registered with the California Air Resources Board as having a greenhouse gas compliance obligation; and (ii) a volumetric Grid Management Charge adder that consists of: (i) the Market Services Charge; (ii) the System Operations Charge; and (iii) the Bid Segment Fee divided by the MW in the Bid segment. A Generated Bid for Ancillary Services will equal zero dollars (\$0/MW-hour).

(e) **Exemptions.** Notwithstanding any of the provisions of Section 40.6.8, ~~set forth above,~~ the CAISO will not insert any Bid in the Day-Ahead Market or Real-Time Market required under this Section 40 for ~~a Resource Adequacy Resource that is~~ Capacity of a Use-Limited Resource, Non-Generator Resource, Variable Energy Resource, resource providing Regulatory Must-Take Generation, or non-Resource Specific System Resource, unless the resource submits an Energy Bid and fails to submit an Ancillary Service Bid.

Formatted: Font: Bold

* * *

~~40.6.8.1.6 Subset of Hours Contracts~~

~~The CAISO will submit Generated Bids for non-Resource-Specific System Resources that provide Resource Adequacy Capacity subject to a Subset of Hours Contract during only those hours in which the resource is contractually obligated to make the Resource Adequacy Capacity available and the CAISO has not received either notification of an Outage or a Bid for such capacity. If the Scheduling Coordinator for the non-Resource-Specific System Resource submits a Bid for part of the Resource Adequacy Capacity subject to a Subset of Hours Contract for any hour the resource is contractually obligated to provide the Resource Adequacy Capacity, the CAISO will insert a Generated Bid only for the remaining Resource Adequacy Capacity. Non-Resource-Specific System Resources that provide Resource Adequacy Capacity subject to a Subset of Hours Contract must meet the technical interface specifications and submit contractual information as required by a Business Practice Manual.~~

40.6.9 ~~Grandfathered~~ Firm Liquidated Damages Contracts Requirements

Resource Adequacy Capacity represented by a Firm Liquidated Damages Contract and relied upon by a Scheduling Coordinator in a monthly or annual Resource Adequacy Plan shall be submitted as a Self-Schedule or Bid in the Day-Ahead IFM to the extent such scheduling right exists under the Firm Liquidated Damages Contract.

* * *

40.7 Compliance

The CAISO will evaluate Resource Adequacy Plans and Supply Plans as follows:

- (a) The CAISO will evaluate whether each annual and monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates Resource Adequacy Capacity sufficient to satisfy the Load Serving Entity's (i) allocated responsibility for Local Capacity Area Resources under Section 40.3.2 and (ii) applicable Demand and Reserve Margin requirements. If the CAISO determines that a Resource Adequacy Plan does not demonstrate Local Capacity Area Resources sufficient to meet its allocated responsibility under Section 40.3.2, compliance with applicable Demand and Reserve Margin requirements, or compliance with any other resource adequacy requirement in this Section 40 or adopted by the CPUC, Local Regulatory Authority, or federal agency, as applicable, the CAISO will notify the relevant Scheduling Coordinator, CPUC, Local Regulatory Authority, or federal agency with jurisdiction over the relevant Load Serving Entity, or in the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), the relevant Scheduling Coordinators, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons the CAISO believes a deficiency exists. If the deficiency relates to the demonstration of Local Capacity Area Resources in a Load Serving Entity's annual Resource Adequacy Plan, and the CAISO does not provide a written

notice of resolution of the deficiency as set forth in the Business Practice Manual, the Scheduling Coordinator for the Load Serving Entity may demonstrate that the identified deficiency is cured by submitting a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year. For all other identified deficiencies, at least ten (10) days prior the effective month of the relevant Resource Adequacy Plan, the Scheduling Coordinator for the Load Serving Entity shall (i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan or (ii) advise the CAISO that the CPUC, Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.

- (b) The CAISO will evaluate whether each monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates operationally available Resource Adequacy Capacity, excluding capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month, that is equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. For each day of the month where the CAISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, if a monthly Resource Adequacy Plan (i) includes capacity scheduled to take an Approved Maintenance Outage on that day that has not been replaced pursuant to Sections 9.3.1.3.1, or 9.3.1.3.2, and (ii) does not demonstrate operationally available Resource Adequacy Capacity equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin, the CAISO will require outage replacement and will provide notice of the outage replacement requirement to the Local Regulatory Authority, the Scheduling Coordinator for the Load Serving Entity, and the Scheduling Coordinator for the Resource Adequacy Resource scheduled to take the Approved Maintenance Outage. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include

the reasons why the CAISO believes an outage replacement requirement exists. At least eleven (11) days prior to the resource adequacy month, the Scheduling Coordinator for either the Load Serving Entity or the Resource Adequacy Resource may demonstrate that the identified outage replacement requirement is cured by submitting to the CAISO a revision or update to the monthly Resource Adequacy Plan or Supply Plan, as applicable. If neither the Scheduling Coordinator for the Load Serving Entity nor the Scheduling Coordinator for the Resource Adequacy Resource timely advises the CAISO that the identified outage replacement requirement is cured, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43.

(c) In evaluating each monthly Resource Adequacy Plan, the CAISO will cap the Load Serving Entity's local Resource Adequacy Capacity requirement in each TAC area at its system Resource Adequacy Capacity requirement in the same TAC area, calculated as the forecasted peak demand and reserve margin for that month.

~~(ed)~~ In the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), if resolved, the relevant Scheduling Coordinator(s) must provide the CAISO with revised Resource Adequacy Plan(s) or Supply Plans, as applicable, at least ten (10) days prior to the effective month. If the CAISO is not advised that the deficiency or mismatch is resolved at least ten (10) days prior to the effective month, the CAISO will use the information contained in the Supply Plan to set the obligations of Resource Adequacy Resources under this Section 40 and/or to assign any costs incurred under this Section 40 and Section 43.

40.7.1 Other Compliance Issues

Scheduling Coordinators representing Generating Units, System Units or System Resources supplying Resource Adequacy Capacity that fail to provide the CAISO with an annual or monthly Supply Plan, as applicable, as set forth in Section 40.7, shall be subject to Section 37.6.1.

Further, Scheduling Coordinators representing Generating Units, System Units or System Resources supplying Resource Adequacy Capacity that fail to provide the CAISO with information required for the CAISO to determine Net Qualifying Capacity shall not be eligible for inclusion in the Net Qualifying Capacity annual report under Section 40.4.2 for the next Resource Adequacy Compliance Year and shall be subject to any applicable Sanctions under Section 37.6.1.

40.7.2 Penalties For Non-Compliance

The failure of a Resource Adequacy Resource or Resource Adequacy Capacity to be available to the CAISO in accordance with the requirements of this Section 40 or Section 9.3.1.3, and the failure to operate a Resource Adequacy Resource by placing it online or in a manner consistent with a submitted Bid or Generated Bid shall be subject to the applicable Sanctions set forth in Section 37.2.4. However, any failure of the Resource Adequacy Resource to satisfy any obligations prescribed under this Section 40 or Section 9.3.1.3 during a Resource Adequacy Compliance Year for which Resource Adequacy Capacity has been committed to a Load Serving Entity shall not limit in any way, except as otherwise established under Section 40.4.5 or requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable, the ability of the Load Serving Entity to whom the Resource Adequacy Capacity has been committed to use such Resource Adequacy Capacity for purposes of satisfying the resource adequacy requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable. In addition, ~~an Reserve Sharing~~ LSE shall not be subject to any sanctions, penalties, or other compensatory obligations under this Section 40 on account of a Resource Adequacy Resource's satisfaction or failure to satisfy its obligations under this Section 40 or Section 9.3.1.3.

* * *

40.8.1.13 Proxy Demand Resources

A Proxy Demand Resource must have the ability to (i) be dispatched for at least twenty-four hours per month, (ii) be dispatched for at least three consecutive days, and (iii) respond for at least four hours per dispatch in order to qualify as Resource Adequacy Capacity. The Qualifying Capacity of a Proxy Demand Resource, for each month, will be based on the resource's average

monthly historic demand reduction performance during that same month during the Availability Assessment Hours, as described in Section 40.9.3, using a three-year rolling average. For a Proxy Demand Resource with fewer than three years of performance history, for all months for which there is no historic data, the CAISO will utilize a monthly megawatt value as certified and reported to the CAISO by the Demand Response Provider; otherwise, where available, the CAISO will use the average of historic demand reduction performance data available, by month, for a Proxy Demand Resource. ~~Proxy Demand Resources must be available at least four (4) hours per month in which they are eligible to provide RA Capacity and must be dispatchable for a minimum of thirty (30) minutes per event within each of those months.~~

40.8.1.14 Reliability Demand Response Resources

The Net Qualifying Capacity of a Reliability Demand Response Resource, for each month, will be based on the resource's average monthly historic demand reduction performance during that same month during the Availability Assessment Hours, as described in Section 40.9.3, using a three-year rolling average. For a Reliability Demand Response Resource with fewer than three years of performance history, for all months for which there is no historic data, the CAISO will use a monthly megawatt value as certified and reported to the CAISO by the Demand Response Provider; otherwise, where available, the CAISO will use the average of historic demand reduction performance data available, by month, for a Reliability Demand Response Resource.

40.8.1.15 Distributed Generation Facilities

- (a) Distributed Generation Facilities that meet the applicable requirements in Section 4.6 qualify as Resource Adequacy Capacity.
- (b) The CAISO will determine the Net Qualifying Capacity of each Distributed Generation Facility for each Resource Adequacy Compliance Year consistent with similar resource classifications connected to the transmission system, as provided in Section 40.4.6.1.
- (c) The Scheduling Coordinator for individual Distributed Generation Facilities, with the same resource type and PMax values less than 0.5 MW, that seek to operate as a combined Distributed Generation Facility, must submit a request to CAISO that the initial Net

Formatted: Font color: Red

Formatted: Indent: Left: 0", Hanging: 0.5", Don't keep with next

Formatted: Font: Not Bold

Formatted: Normal, Indent: Left: 0", Hanging: 0.5", Line spacing: Double

Qualifying Capacity be determined and approved as a combined Distributed Generation Facility.

40.8.1.16 Non-Generator Resources

- (a) Non-Generator Resources must be either Participating Generators or System Units to qualify as Resource Adequacy Capacity.
- (b) The CAISO will determine the Net Qualifying Capacity of each Non-Generator Resource based on the CAISO testing of the resource's sustained output over a four-hour period; however, the Net Qualifying Capacity shall not exceed the resource's maximum instantaneous discharge capability.

40.9. ~~Standard Capacity Product~~ [ALL PROVISIONS DELETED] RA Availability Incentive Mechanism

40.9.1 Transition To RAAIM

The CAISO uses RAAIM to determine the availability of resources providing local and/or system Resource Adequacy Capacity and Flexible RA Capacity during the Availability Assessment Hours each month and then assesses the resultant Availability Incentive Payments and Non-Availability Charges through the CAISO's settlements process; except that, for an advisory period of two calendar months following the effective date of RAAIM, the CAISO will calculate and publish the Availability Incentive Payments and Non-Availability Charges on settlement statements but will not include those payments and charges on invoices for financial settlement.

40.9.2 Exemptions

- (a) **Resources Exempt from RAAIM.** The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 --
 - (1) Resources with a PMax less than 1.0 MW;
 - (2) Non-specified resources that provide Resource Adequacy Capacity under contracts for Energy delivered within the CAISO Balancing Authority Area;
 - (3) Participating Load that is also Pumping Load; and

Formatted: Indent: Left: 0", Hanging: 0.5", Don't keep with next

(4) RMR Units.

(b) Resources Exempt from RAIM – Local/System

(1) The entire capacity of a resource in any of the following categories is exempt from the RAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity –

(A) Variable Energy Resources; and

(B) Combined Heat and Power Resources.

(2) A resource with a Load-following MSS as its Scheduling Coordinator is exempt from the RAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity, to the extent that the resource's capacity is designated as Resource Adequacy Capacity on that Load-following MSS's monthly Supply Plan.

(3) Resources with Existing QF Contracts or Amended QF Contracts that are Resource Adequacy Resources are exempt from the RAIM provisions in Section 40.9 applicable to local and system capacity --

(A) if the QF resource previously provided Resource Adequacy Capacity pursuant to an Existing QF Contract that was executed prior to the August 22, 2010 and remained in effect pursuant to California Public Utilities Commission Decision 07-09-040 that extended the term of expiring contracts until such time as the new contracts resulting from that decision are available; or

(B) until the QF Resource's Existing QF Contract or Amended QF Contract terminates or if requested by the Scheduling Coordinator for the resource, whichever is earlier.

(c) Resources Exempt from RAIM – Flexible Capacity. The entire capacity of Use-Limited Resources in a combination under Section 40.10.3.2(b), 40.10.3.3(b) or 40.10.3.4(b) is exempt from the RAIM provisions in Section 40.9 applicable to Flexible RA Capacity.

40.9.2.1 Acquired Resources.

- (a) **Exemption.** The entire capacity of an Acquired Resource is exempt from the RAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity if the resource provides Resource Adequacy Capacity under a resource-specific power supply contract that --
- (1) was exempt from the Standard Capacity Product as of the RAIM effective date, and continues to meet the requirements for that exemption, under the provisions contained in Appendix XX;
 - (2) includes a penalty for nonperformance; and
 - (3) does not contain a provision that allows the contract to be modified for regulatory changes.
- (b) **Request.** To request annual renewal of the exemption, the Scheduling Coordinator for the Acquired Resource must --
- (1) for Resource Adequacy Compliance Year 2016, submit an affidavit to the CAISO, by either the Scheduling Coordinator or resource owner, demonstrating that the Acquired Resource meets the eligibility criteria in Section 40.9.2.1(a), in accordance with the process and schedule in Business Practice Manual; and
 - (2) for each Resource Adequacy Compliance Year thereafter until the contract terminates, submit confirmation to the CAISO that the information in the affidavit is still accurate and the Acquired Resource continues to meet the eligibility criteria in Section 40.9.2.1(a), in accordance with the process and schedule in Business Practice Manual.
- (c) **Approval.** The CAISO shall review the information submitted and --
- (1) approve a request that contains the information required by Sections 40.9.2.1(a) and (b) demonstrates the resource meets the eligibility criteria in Section 40.9.2.1(a);
 - (2) advise the Scheduling Coordinator for the resource that the request does not contain all of the information required by Sections 40.9.2.1(a) and (b), and allow

the opportunity for the Scheduling Coordinator to submit the additional required information, in accordance with the process and schedule in the Business Practice Manual; or

(3) deny the request and permanently terminate the exemption if --

(A) the Scheduling Coordinator for the resource does not submit, or does not timely submit, a request under Section 40.9.2.1(b)(1) or (2) as applicable;

(B) the Scheduling Coordinator for the resource does not submit, or does not timely submit, additional information required to complete the request under with Section 40.9.2(c)(2); or

(C) the CAISO determines the resource does not meet the eligibility criteria in Section 40.9.2.1(a).

(d) **Notice of Termination.** The Scheduling Coordinator for an Acquired Resource must notify the CAISO within 10 days if the contract terminates or no longer meets the eligibility criteria in Section 40.9.2.1(a).

40.9.3 Availability Assessment

40.9.3.1 Local and System RA Capacity Availability

(a) Availability Assessment Hours

(1) Prior to the start of each Resource Adequacy Compliance Year, the CAISO shall establish and publish in the Business Practice Manual the Availability Assessment Hours applicable for resources providing local and/or system Resource Adequacy Capacity for each month of that year.

(2) The Availability Assessment Hours shall be a pre-defined set of five consecutive hours for each month that --

(A) correspond to the operating periods when high demand conditions typically occur and when the availability of Resource Adequacy Capacity is most critical to maintaining system reliability;

- (B) vary by season as necessary so that the coincident peak load hour typically falls within the five-hour range each day during the month, based on historical actual load data; and
- (C) apply to each Trading Day that is a weekday and a non-federal holiday.

(b) **Must Offer Availability Assessment.** The CAISO shall determine the extent to which each resource providing local and/or system Resource Adequacy Capacity made that capacity available to the CAISO in each Availability Assessment Hour of the day by comparing --

- (1) the MWs of local and/or system Resource Adequacy Capacity for which the Scheduling Coordinator for the resource submitted Economic Bids or Self-Schedules in the Day-Ahead Market and the Real-Time Market; and
- (2) the MWs of local and/or system Resource Adequacy Capacity for which the Scheduling Coordinator for the resource was required to submit Economic Bids or Self-Schedules in the CAISO Markets under the must offer requirements applicable under Section 40.6.

40.9.3.2 Flexible RA Capacity Availability

(a) **Availability Assessment Hours.** The Availability Assessment Hours for a Flexible RA Resource shall be the same period as the must-offer obligation for the Flexible Capacity Category that is designated on the Resource Flexible RA Capacity Plan for that month, as set forth in Section 40.10.6.

(b) **Must Offer Availability Assessment.** The CAISO shall determine the extent to which each Flexible RA Resource made that capacity available in each Availability Assessment Hour of the day by comparing --

- (A) the MWs of Flexible RA Capacity for which the Scheduling Coordinator for the resource submitted Economic Bids in the Day-Ahead Market and the Real-Time Market; and
- (B) the MWs of Flexible RA Capacity for which the Scheduling Coordinator for the resource was required to submit Economic Bids in the CAISO

Markets under the must offer requirements applicable under Section 40.10.6.

- (c) **Flexible Capacity Category.** If a Flexible RA Resource is designated to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the CAISO will assess the availability of the resource using the must-offer obligation for the highest quality of Flexible Capacity Category designated.
- (d) **Start-Up Less Than 90 Minutes.** For resources with a start-up time less than 90 minutes, the CAISO will use the resource's MWs of capacity from zero to PMax to assess the availability of the designated Flexible RA Capacity; provided that the Scheduling Coordinator for the resource does not submit Self-Schedules for the capacity from zero to PMin or for any portion of the capacity under the must-offer obligation for Energy. If the Scheduling Coordinator for the resource submits a Self-Schedule, the CAISO will deduct the MW value of PMin from the calculation of the resource's Flexible RA Capacity availability.
- (e) **Start-Up Greater Than 90 Minutes.** For resources with a start-up time greater than 90 minutes, the CAISO will use the resource's MWs of capacity between PMin and PMax in the availability assessment and validate whether the Scheduling Coordinator for the resource submitted Economic Bids for all MWs designated on the Resource RA Flexible Capacity Plan.
- (f) **Variable Energy Resources**
- (1) **Flexible RA Capacity Equal to EFC.** If the Flexible RA Capacity designated on the monthly Resource Flexible RA Capacity Plan is equal to the resource's EFC value, the CAISO assesses the availability of the designated Flexible RA Capacity based on the Economic Bids for Flexible RA Capacity the Scheduling Coordinator for the resource submitted up to the MWs in the VER forecast applicable under Section 4.8.2.
- (2) **Flexible RA Capacity Less Than EFC.** If the Flexible RA Capacity designated in the monthly Resource Flexible RA Capacity Plan is less than the EFC value for

the resource, the CAISO assesses availability using the ratio of the amount shown on the monthly plan to the relevant EFC, and applies that ratio to the MWs of Economic Bids submitted for the Flexible RA Capacity.

(3) VER Forecast Less Than Flexible RA Capacity. If the MWs in the VER forecast are less than the MWs of Flexible RA Capacity designated in the monthly Resource Flexible RA Capacity Plan, and the Economic Bids are greater than or equal to the forecast amount, the resource is 100 percent available up to the forecast amount.

(4) VER Forecast Greater Than Flexible RA Capacity. If the MWs in the VER forecast are greater than the MWs of Flexible RA Capacity designated in the monthly Resource Flexible RA Capacity Plan, the Scheduling Coordinator for the resource must submit Economic Bids equal to the forecast amount. If the Scheduling Coordinator for the resource submits Economic Bids for MWs above the forecast, or the resource generates above the forecast, the CAISO limits availability calculated to the forecast amount.

(5) No Day-Ahead Market Obligation. For VERs that do not have an obligation to submit Economic Bids into the Day-Ahead Market, the CAISO bases the availability assessment of the Flexible RA Capacity only on the resource's Economic Bids in the Real-Time Market.

40.9.3.3 Availability for Overlapping Local/System and Flexible RA Capacity

(a) Overlap Determination. The availability assessment for overlapping RA commitments shall apply to those hours in which a resource was subject to the must-offer obligations for local and/or system Resource Adequacy Capacity and Flexible RA Capacity in any Availability Assessment Hour and for any portion of the same capacity.

(b) Must Offer Availability Assessment. The CAISO shall determine the extent to which each resource with overlapping RA commitments made that capacity available to the CAISO in each overlapping Availability Assessment Hour of the day by comparing --

- (1) the MWs of local and/or system Resource Adequacy Capacity and Flexible RA Capacity for which the Scheduling Coordinator for the resource submitted Economic Bids in the Day-Ahead Market and the Real-Time Market; and
- (2) the MWs of local and/or system Resource Adequacy Capacity and Flexible RA Capacity for which the Scheduling Coordinator for the resource was required to submit Economic Bids in the CAISO Markets, under the must offer requirements in Sections 40.6 and 40.10.6.
- (c) **Calculation.** The CAISO's calculation of the Availability Assessment for overlapping RA commitments shall –
- (1) count any portion of the overlapping MW only once; and
- (2) limit the total MWs of capacity at the higher of the Resource Adequacy Capacity commitment or the Flexible RA Capacity commitment.
- 40.9.3.4 Treatment of Maintenance Outages**
- (a) **No Replacement Requirement.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage that does not require RA Replacement Capacity under Section 9.3.1.3.3.
- (b) **Replacement Requirement Provided.** For each Maintenance Outage that a Resource Adequacy Resource requested after submitting its monthly Supply Plan --
- (1) The RAAIM Availability Assessment for the resource excludes the capacity, duration, and must offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource provides RA Replacement Capacity for that outage as required under Section 9.3.1.3.3; and
- (2) The RAAIM Availability Assessment for the replacement resource includes the capacity, duration, and must offer requirement for the RA Replacement Capacity commitment.
- (c) **Replacement Requirement Not Provided.** For each Maintenance Outage that a Resource Adequacy Resource requested after submitted its monthly Supply Plan, the

RAAIM Availability Assessment for the resource includes the capacity, duration, and must offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource does not provide RA Replacement Capacity for the outage as required under Section 9.3.1.3.3.

40.9.3.5 Treatment of Forced Outages

(a) RA Substitute Capacity – Local And System

- (1) The RAAIM Availability Assessment for a Resource Adequacy Resource includes the capacity, duration, and must offer requirement for Resource Adequacy Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.10.3.6.
- (2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must offer requirement for the RA Substitute Capacity.

(b) RA Substitute Capacity – Flexible

- (1) The RAAIM Availability Assessment for a Flexible RA Resource includes the capacity, duration, and must offer requirement for Flexible RA Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for that outage in accordance with Section 40.10.3.6.
- (2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must offer requirement for the RA Substitute Capacity.
- (3) For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement.

- (c) Exclusions from RAAIM.** The RAAIM Availability Assessment excludes the capacity, duration, and must offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control

of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.

40.9.3.6 Substitute Capacity.

(a) Substitution. The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage or de-rate.

(b) Availability.

- (1) RA Substitute Capacity must be operationally available to the CAISO:
- (2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.
- (3) RA Replacement Capacity, RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.
- (4) RA Substitute Capacity shall not qualify to be RA Replacement Capacity, RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.
- (5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.3, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.
- (6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) Timing of Substitution Request

- (1) Day-Ahead Market. Requests for substitution in the Day-Ahead Market must be submitted prior to 8:00 A.M. and approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution in the

Day-Ahead Market submitted at or after 8:00 A.M. and approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.

- (2) **Real-Time Market.** Requests for substitution in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

40.9.3.6.1 Substitution by Single Resource

- (a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on a Forced Outage or de-rate may provide RA Substitute Capacity for that capacity from a single resource.

(b) Local Capacity Area Resource Substitution

(1) Pre-Qualified Substitution.

- (A) **Annual Process.** The CAISO will annually conduct a process to assess the eligibility of resources to pre-qualify as RA Substitute Capacity for Local Capacity Resource Adequacy Resources.
- (B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy Resource for which it could substitute.
- (C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in accordance with Section 40.9.3.6(c).
- (D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(1)(C) and 40.9.3.6(b).

(2) Non-Pre-Qualified Substitution.

- (A) **Day-Ahead Market.** The Scheduling Coordinator for a Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute a non-pre-qualified resource only in the

Day-Ahead Market.

(B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource must submit a timely substitution request in accordance with Section 40.9.3.6(c), and the alternate resource must be located in the same Local Capacity Area.

(C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(2)(A) and (B), and 40.9.3.6(b).

(c) Non-Local Capacity Area Resource Substitution

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.1(c)(1) and 40.9.3.6(b).

(d) NRS-RA Resource

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for an NRS-RA Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c), and the alternate resource must be internal to the CAISO Balancing Area Authority, which does not include a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area.

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.1(d)(1) and 40.9.3.6(b).

(e) Flexible RA Capacity

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable requirements in Sections 40.9.3.6.1(e) and 40.9.3.6(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the Flexible RA Capacity of the resource on outage.

40.9.3.6.2 RA Substitute Capacity From Multiple Resources

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) Local Capacity Area Resource Substitution

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c); however, if at least one of the alternate resources is pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

(2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.2(b)(1) and 40.9.3.6(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity Area as the Resource Adequacy Resource.

(c) Non-Local Capacity Area Resources and NRS-RA Resources

- (1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource or an NRS-RA Resource on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c) and the alternate resources must be located within the CAISO Balancing Authority Area.
- (2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.6.3.2(c)(1) and 40.9.3.6(c).

(d) Flexible RA Capacity

- (1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources be located in the CAISO Balancing Authority Area.
- (2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.6.3.2(d)(1) and 40.9.3.6(c).

- (e) If the request includes an alternate resource providing RA Substitute Capacity for another resource during the same period, that alternate resource must submit a separate request to provide to RA Substitute to multiple resources in accordance with Section _____.

40.9.3.6.3 Multiple Substitution by One Resource

- (a) **Request.** The Scheduling Coordinator for a resource already providing RA Substitute Capacity may request approval to provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on a Forced Outage or de-rate.
- (b) **Approval.** The CAISO will approve the request if the alternate resources are located within the CAISO Balancing Authority Area, meet the requirements in Section 40.9.3.6(c).

40.9.3.6.4 Resource Adequacy Obligation. To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40

applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be released from this obligation and the substitution requirements in Section 40.9 –

- (a) at the end of the approved substitution period; or
- (b) upon request by either the Scheduling Coordinator for the resource on outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in accordance with the process set forth in the Business Practice Manual.

40.9.3.6.5 Treatment of Unbid Capacity. If the Scheduling Coordinator for RA Substitute Capacity does not submit bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO --

- (1) treats the unbid capacity as unavailable for purposes of Section 40.9; and
- (2) reflects that unavailability in the RAIM availability calculation for the Resource Adequacy Resource for which the RA Substitute Capacity is substituting.

40.9.4 Availability Assessment

- (a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on --
 - (1) the availability assessment of the resource's minimum daily availability of local and/or system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping RA commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;
 - (2) including the capacity, duration, and must offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.10.3.6, or the Forced Outage is excluded from RAIM under Section 40.9.3.4;
 - (3) including the capacity, duration, and must offer requirement for any RA Substitute Capacity, RA Replacement Capacity, or CPM Capacity the resource is committed to provide; and
 - (4) excluding the Maintenance Outages specified in Section 40.9.3.5.

- (b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly availability average.
- (c) If the resource is committed to provide local/system RA capacity and Flexible RA Capacity in a month, but does not provide both for the full month, the CAISO prorates the number of days local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

40.9.5 Availability Incentive Standard

- (a) **Percentage.** The Availability Incentive Standard shall be 96.5 percent each month.
- (b) **Availability Range.** The CAISO shall apply the Availability Incentive Standard with a bandwidth of plus and minus two percent, which produces a range with a lower bound of 94.5 percent and an upper bound of 98.5 percent.

40.9.6 Non-Availability Charges And Availability Incentive Payments

- (a) **Non-Availability Charges.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment in accordance with Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is below the lower bound of the monthly Availability Incentive Standard of 94.5 percent will be subject to a Non-Availability Charge for the month.
- (b) **Availability Incentive Payments.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose availability calculation under Section 40.9.4 is above the upper bound of the monthly Availability Incentive Standard of 98.5 percent will be eligible for an Availability Incentive Payment for the month.
- (c) **No Payment or Charge.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is equal to or between the lower bound of 94.5 percent and the upper

bound of 98.5 percent of the Availability Incentive Standard will not be assessed a Non-Availability Charge nor paid an Availability Incentive Payment.

40.9.6.1 Determination of Non-Availability Charge

(a) Calculation.

(1) **RA Capacity.** The Non-Availability Charge for a Resource Adequacy Resource providing local, system, or Flexible RA Capacity shall be determined by the resource's average monthly RA and Flexible RA MWs multiplied by the difference between the lower bound of the monthly Availability Incentive Standard of 94.5 percent and the resource's monthly availability percentage, and multiplying the product by the RAAIM price.

(2) **CPM Capacity.** The Non-Availability Charge for a Resource Adequacy Resource providing CPM Capacity shall be determined by the resource's average monthly CPM MWs multiplied by the difference between the lower bound of the monthly Availability Incentive Standard of 94.5 percent and the resource's monthly availability percentage, and multiplying the product by the maximum of the resource's CPM price and the RAAIM price.

(b) **RAAIM Price.** The RAAIM price shall be 60 percent of the CPM soft-cap price in Section _____.

40.9.6.2 Determination of Availability Incentive Payment

(a) **Self-Funding.** The Availability Incentive Payment will be funded entirely through the monthly Non-Availability Charges assessed.

(b) **Eligible Capacity.** The capacity of a Resource Adequacy Resource providing local, system or Flexible RA Capacity that is eligible to receive an Availability Incentive Payment shall be the resource's average monthly MWs of capacity that exceed the upper bound of the Availability Standard.

(c) Calculation.

(1) The monthly Availability Incentive Payment rate will equal the total Non-Availability Charges assessed for the month plus any unpaid funds under Section

40.9.6.2(d), divided by the total Resource Adequacy Capacity eligible to receive the Availability Incentive Payment that month.

(2) The Availability Incentive Payment rate shall not exceed three times the Non-Availability Charge rate.

(3) The Availability Incentive Payment the CAISO shall pay to each eligible resource shall equal the product of its eligible capacity and the Availability Incentive Payment rate, except that the CAISO shall prorate the payments if the Non-Availability Charges and unpaid funds under Section 40.9.6.2(d) are less than the full payment amount.

(d) **Unpaid Funds.** Any remaining Non-Availability Charge funds that are not distributed to eligible Resource Adequacy Resources will be added to the funds available for Availability Incentive Payments in the next month and will continue to roll over to the successive month until paid out or December 31, at which time the funds will be distributed to Load Serving Entities based on their load ratio share for the year.

40.9.7 ~~Assessment For NRS-RA Resources [DELETED IN ENTIRETY]~~

40.9.7 Reporting

By July 1 of each year, the CAISO will provide an informational report that will be posted on the CAISO Website and include information on the average actual availability each month of Resource Adequacy Resources, the total amount of Non-Availability Charges assessed and the total amount of Availability Incentive Payments made.

* * *

40.10 Flexible RA Capacity

* * *

40.10.1.2 Required Information From LSEs

(a) **Submission Requirement.** The Scheduling Coordinator for each Load Serving Entity in the CAISO Balancing Authority Area shall submit the information required by this Section, no later than January 15 each year, for use in the CAISO's study to generate minute-by-

minute net-load data that will be used to determine the Maximum Three-Hour Net-Load Ramp for each month.

- (b) **Required Information.** The Scheduling Coordinator for each Load Serving Entity in the CAISO Balancing Authority Area must submit information that --
- (1) covers the calendar year in which the information is submitted and each year in the next five-year period;
 - (2) identifies each wind and solar resource connected to the CAISO Controlled Grid, and distributed wind and solar resources, that is owned, in whole or in part, by the Load Serving Entity, or under contractual commitment to the Load Serving Entity or the Load following MSS Load Serving Entity, for all or a portion of its capacity;
 - (3) indicates the status of the resource as either in service or in development with its expected commercial operation date;
 - (4) for each wind and solar resource, specifies the MWs of installed capacity, renewable energy area location, MWs of flexible capacity owned by or contractually committed to the Load Serving Entity, and other information required by the Business Practice Manual;
 - (5) describes the balancing services, if any, provided by another balancing authority area for a wind or solar resource that is located outside of the CAISO Balancing Authority Area and that is owned by or contractually committed to the Load Serving Entity; and
 - (6) forecasts the MW of installed, behind-the-meter solar capacity in the Load Serving Entity's service area or part of its forecast served load.
- (c) **Confidential Treatment.** The CAISO will treat the resource-specific information provided under Section 40.10.1.2(b) as confidential under Section 20.
- (d) **Aggregated Information.** In addition to the required resource-specific information, the Scheduling Coordinator for each Load Serving Entity in the CAISO Balancing Authority Area shall submit the information required in Section 40.10.1.2(b) on an aggregated

basis, as described in the Business Practice Manual, for inclusion in the Flexible Capacity Needs Assessment that will be posted on the CAISO Website.

* * *

40.10.2.2 Allocation to Load-Following MSS

(a) The CAISO will calculate the allocable share of the Flexible Capacity Need for each Load-following MSS ~~in accordance with the provisions for Local Regulatory Authorities in Section 40.10.2as --~~

Formatted: Indent: Left: 0", Hanging: 0.5"

(1) ~~the Local Regulatory Authority's average percent contribution to the change in wind output, minus the change in solar PV output, minus the change in solar thermal output, during the five highest three-hour net load changes in the month, for resources not included in the Load-following MSS Load Serving Entity's resource portfolio; and~~

Formatted: Indent: Left: 0.5", Hanging: 0.5"

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: Font: 10 pt

(2) ~~plus the lesser of the Load-following MSS Load Serving Entity's contribution to the three-hour net load ramp or 3.5 percent of its forecasted peak load.~~

(3) ~~plus the Load-following MSS Load Serving Entity's allocable share of any forecast adjustment under Section 40.10.1.4.~~

(b) The CAISO will deduct the Flexible Capacity Need allocated to each Load-following MSS from the calculation to determine whether a cumulative deficiency in Flexible RA Capacity exists under Section 43.2.7.

Formatted: Indent: Left: 0", Hanging: 0.5"

(c) ~~If the Load-following MSS Load Serving Entity's contribution to the three-hour net load ramp is less than its contribution to the 3.5 percent of expected peak load, the CAISO does not reallocate that difference to other LRAs to determine whether a cumulative deficiency in Flexible RA Capacity exists under Section 43.2.7.~~

* * *

40.10.4.1 Effective Flexible Capacity Calculation

(a) **Flexible Resources.** The CAISO will calculate the Effective Flexible Capacity value of a resource, for use (i) if a Local Regulatory Authority has not established criteria for calculating the Effective Flexible Capacity value for eligible resource types, and (ii) for

determining if a cumulative deficiency exists under Sections 43.2.7(a) and (b), as follows, except as provided in Sections 40.10.4.1 (b) through (f) --

- (1) If the Start-Up Time of the resource is greater than 90 minutes, the Effective Flexible Capacity value shall be the weighted average ramp rate of the resource calculated from PMin to Net Qualifying Capacity multiplied by 180 minutes. The Effective Flexible Capacity shall not exceed the difference between the PMin and PMax of the resource.
 - (2) If the Start-Up Time of the resource is less than or equal to 90 minutes, the Effective Flexible Capacity value shall be the weighted average ramp rate of the resource calculated from zero to Net Qualifying Capacity multiplied by 180 minutes. The Effective Flexible Capacity shall not exceed the Net Qualifying Capacity of the resource.
- (b) **Hydroelectric Generating Unit.** The Effective Flexible Capacity of a hydroelectric generating unit will be the amount of capacity from which the resource can produce Energy consistently for 6 hours based upon the resource's physical storage capacity, which shall not exceed its Net Qualifying Capacity.
- (c) **Proxy Demand ~~Response~~-Resource.** The Effective Flexible Capacity of a Proxy Demand ~~Response~~-Resource will be based on the resource's actual MWs of load modification in response to a dispatch by the CAISO during a test event. In determining the Effective Flexible Capacity of a Proxy Demand ~~Response~~-Resource, the CAISO will --
 - (1) conduct the test at a random time during the flexible capacity must-offer obligation period for the resource;
 - (2) use the applicable baseline load data, as described in the CAISO Tariff or Business Practice Manual, to measure the load modification ~~for~~ the Proxy Demand ~~Response~~-Resource being tested; and
 - (3) pay the resource's bid price for the testing period.
- (d) **Energy Storage Resource.** The Effective Flexible Capacity value for an energy storage resource will be determined as follows --

- (1) for an energy storage resource that provides Flexible RA Capacity but not Regulation Energy Management, the Effective Flexible Capacity value will be the MW output range the resource can provide over three hours of charge/discharge while constantly ramping.
- (2) for an energy storage resource that provides Flexible RA Capacity and Regulation Energy Management, the Effective Flexible Capacity value will be the resource's 15-minute energy output capability.
- (e) **Multi-Stage Generating Resource.** The Effective Flexible Capacity value for a Multi-Stage Generating Resource will be calculated using the longest Start-Up Time of the resource's configuration that has the lowest PMin.
- (f) **Combined Heat and Power Resource.** The Effective Flexible Capacity value of a Combined Heat and Power Resource will be the lesser of (i) the resource's Net Qualifying Capacity, or (ii) the MW difference between the resource's maximum output and the minimum of either its operating level or its capability over three hours.

* * *

40.10.5 Flexible RA Capacity Plans

40.10.5.1 LSE Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly LSE Flexible RA Capacity Plans for each Load Serving Entity it represents; ~~except that an annual plan for 2015 is not required. A Load-Following MSS is not required to submit annual or monthly LSE Flexible RA Capacity Plans.~~
- (b) **Annual Plan.** Each annual LSE Flexible RA Capacity Plan must –
 - (1) demonstrate that the Load Serving Entity has procured for each month at least 90 percent of the annual Flexible RA Capacity requirement determined by the CAISO; or the amount of Flexible RA Capacity required by the Load Serving Entity's Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) identify the resources the Load Serving Entity intends to rely on to provide the

Flexible RA Capacity, but need not identify the flexible resource adequacy categories; and

- (3) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (c) **Monthly Plan.** The monthly LSE Flexible RA Capacity Plan must --
 - (1) demonstrate that the Load Serving Entity procured 100 percent of the total monthly Flexible RA Capacity requirement determined by the CAISO; or the monthly amount of Flexible RA Capacity required by the Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) demonstrate that the Load Serving Entity met the total monthly requirement determined by the CAISO within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category; or only if the Local Regulatory Authority has established its own flexible capacity requirement, show that the Load Serving Entity has met the total monthly requirement determined by the Local Regulatory Authority within the minimum or maximum quantity for each Flexible Capacity Category required by the Local Regulatory Authority, if applicable;
 - (3) identify all resources the Load Serving Entity will rely on to provide the Flexible RA Capacity and for each resource specify the Flexible Capacity Category in which the Flexible RA Capacity will be provided; and
 - (4) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 11 days in advance of the first day of the month covered by the plan, a revision to its monthly LSE Flexible RA Capacity Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly LSE

Flexible RA Capacity Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

40.10.5.1.1 Load-Following MSS

- (1) Each Load-following MSS Load Serving Entity for which the CAISO has calculated an allocable share of the Flexible Capacity Need under Section 40.10.2.2 must submit annual and monthly LSE Flexible RA Capacity Plans pursuant to this Section 40.10.5.1.
- (2) If a Load-following MSS submits a monthly LSE Flexible RA Capacity Plan identifying variable energy resources it will rely on to provide Flexible RA Capacity that were not included in its MSS resource portfolio, the Load-following MSS must include additional Flexible RA Capacity in its plan equal to the MW amount of Flexible RA Capacity shown for the variable energy resources not included in the MSS resource portfolio for that month.

* * *

11.8.2.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the Energy ~~bid costs and revenues for affected by~~ IFM Bid Cost Recovery is settled at the MSS level ~~not Energy where the MSS Supply exceeds the MSS Demand within the MSS. The IFM Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level.~~ The IFM Bid Cost as described in Section 11.8.2.1 above and IFM Market Revenue as provided in Section 11.8.2.2 above, of each MSS will be, respectively, the total of the IFM Bid Costs and IFM Market Revenues ~~efover~~ all BCR Eligible Resources within the MSS where each BCR Eligible Resource's IFM Market Revenues for its Energy shall be calculated as described in Section 11.2.3.2 at the relevant IFM MSS price. The IFM Bid Cost Shortfalls and Surpluses for Energy and AS are first calculated separately for the MSS for each Trading Hour of the Trading Day with qualified Start-Up Cost and qualified Minimum Load Cost included in the IFM Bid Cost Shortfalls and Surpluses for Energy calculation.

Formatted: Indent: Left: 0", First line: 0"

~~The IFM Bid Cost Shortfall or Surplus of Energy in each Trading Hour is then pro-rated by the MSS's ratio of the net positive MSS Generation Schedule to the gross MSS Generation Schedule of that Trading Hour. If the MSS CAISO Demand is in excess of the MSS Generation in a given Trading Hour in the Day Ahead Schedule, the CAISO will set the pro-rating ratio for that Trading Hour to zero.~~ The MSS's overall IFM Bid Cost Shortfall or Surplus is then calculated as the algebraic sum of the prorated IFM Bid Cost Shortfall or Surplus for Energy and the IFM Bid Cost Shortfall or Surplus for AS for each Trading Hour

11.8.4.3.2 MSS Elected Net Settlement

For MSS entities that have elected net Settlement regardless of other MSS optional elections (i.e., Load following or not, or RUC opt-in or out), unlike non-MSS resources, the RUC and RTM Bid Cost Shortfall or Surplus is treated at the MSS level and not at the resource specific level, and is calculated as the RUC and RTM Bid Cost Shortfall or Surplus of all BCR Eligible Resources within the MSS. In calculating the Energy RTM Market Revenue for all the resources within the MSS as provided in Section 11.8.4.2, the CAISO will use the Real-Time Settlement Interval MSS Price. The RUC and RTM Bid Cost Shortfall and Surplus for Energy, RUC Availability and Ancillary Services are first calculated separately for the MSS for each Settlement Interval of the Trading Day, with qualified Start-Up Cost, qualified Minimum Load Cost and qualified Multi-Stage Generator transition cost included into the RUC and RTM Bid Cost Shortfalls and Surpluses of Energy calculation. ~~The RUC and RTM Bid Cost Shortfall or Surplus for Energy for each Settlement Interval is pro-rated by the ratio of the net positive metered Generation to the gross metered Generation of the MSS for that interval. If the MSS metered CAISO Demand is in excess of the MSS Generation in a given Settlement Interval, the CAISO will set the pro-rating ratio for that Settlement Interval to zero. The MSS's overall RUC and RTM Bid Cost Shortfall or Surplus is then calculated as the algebraic sum of the RUC and RTM Bid Cost Shortfall or Surplus for Energy and the RUC and RTM Bid Cost Shortfall or Surplus for AS for each Settlement Interval.~~

* * *

APPENDIX A
MASTER DEFINITIONS

* * *

Formatted: Centered, Line spacing: Double

Acquired Resource

A resource providing Resource Adequacy Capacity under a resource specific power supply contract that was exempt from the provisions of the Standard Capacity Product at the time RAAIM become effective.

Formatted: Line spacing: Double

* * *

Formatted: Centered, Line spacing: Double

Flexible RA Resource

A resource designated to provide Flexible RA Capacity.

Formatted: Line spacing: Double

* * *

Formatted: Centered, Line spacing: Double

RAAIM

Resource Adequacy Availability Incentive Mechanism

Formatted: Line spacing: Double

* * *

Formatted: Centered, Line spacing: Double

RA Substitute Capacity

Capacity that substitutes for a Resource Adequacy Resource that is on a Forced Outage or de-rate ~~as provided in Section 40.9.4.2.4.~~

Formatted: Line spacing: Double

Formatted: Font: 10 pt, Not Bold