153 FERC ¶ 61,002
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;
Philip D. Moeller, Cheryl A. LaFleur,
Tony Clark, and Colette D. Honorable.

California Independent System Operator Corporation — Docket No. ER15-1825-000

ORDER CONDITIONALLY ACCEPTING TARIFF REVISIONS

(Issued October 1, 2015)

1. On May 29, 2015, the California Independent System Operator Corporation (CAISO) submitted a tariff amendment to implement Phase 1A of its two-phase reliability services initiative, which is intended to enhance CAISO's resource adequacy rules and processes to meet the needs of an increasingly dynamic grid. In this order, the Commission conditionally accepts the proposed revisions, subject to further compliance, to become effective March 1, 2016, as requested, with the exception of the proposed revisions to tariff sections 40.2.4, 40.10.5.1(a), and 40.10.5.1.1, which we conditionally accept effective January 10, 2016, as requested.

I. Background

2. The California Public Utilities Commission's (CPUC) resource adequacy program governs the procurement of capacity to ensure safe and reliable operation of the CAISO grid. Under the resource adequacy program, there are three types of resource adequacy capacity: local, system (collectively, generic capacity), and flexible. The system capacity component is calculated based on the load serving entities' system peak load plus a 15 percent planning reserve margin. The local component is based on CAISO's local capacity technical analysis. Flexible capacity refers to resources that can ramp up and down quickly and start and shut down potentially multiple times per day in order to manage variability. The CPUC also establishes the qualifying capacity of each resource, which is the amount of a resource's capacity that can count towards satisfying a load serving entity's resource adequacy requirement.[1]

[1] For example, while a wind generator may have a nameplate capacity of 100 MW, the CPUC may determine that its qualifying capacity is only 30 MW based on its performance during the peak.

3. Under the CAISO tariff, scheduling coordinators for resource adequacy resources are required to provide monthly and annual resource adequacy plans to CAISO.[2] Further, the CAISO tariff imposes must-offer obligations on resource adequacy resources to ensure that resource adequacy capacity is made available to the CAISO markets.[3] Generic resource adequacy capacity can satisfy its must-offer obligation through economic bids or self-schedules. Flexible resource adequacy capacity must be made available through economic bids.[4]

4. CAISO currently utilizes the standard capacity product, an availability incentive program to ensure that resource adequacy capacity is available to CAISO. Under the standard capacity product, CAISO computes a monthly, system-wide availability standard based on the percentage of system-wide resources on outage, and assesses incentive payments and non-availability charges for resources whose availability falls significantly above or below the availability target for that month. The standard capacity product does not consider whether resource adequacy resources are fulfilling their must-offer obligations, but only whether they are on a forced outage, and, if on outage, whether they have procured acceptable replacement capacity.[5]

5. In the initial iteration of the standard capacity product, CAISO requested an exemption for resources, such as variable energy resources, whose qualifying capacity was determined by historical output. In the order accepting CAISO's standard capacity proposal,[6] the Commission found CAISO's requested exemption to be just and reasonable and necessary under the circumstances at that time:

> Under the existing CPUC market rules, resources whose qualifying capacity is determined by historical output are penalized for poor performance through a reduction of their qualifying capacity. Therefore, it would be a harsh result to apply the [standard capacity product] availability standards, which are designed to penalize poor performance, to resources already subject to qualifying capacity adjustments. We find that doing so

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[2] CAISO Tariff, § 40.2.2.4.

[3] *Id.*, § 40.6.

[4] *Id.*, § 40.10.6.

[5] *Id.*, § 40.9.

[6] *Cal. Indep. Sys. Operator Corp.*, 127 FERC ¶ 61,298 (2009) (SCP I Order).

> could potentially result in penalizing such resources twice for the same outage or de-rate.[7]

6. However, the Commission stressed that its finding relied on the fact that issues regarding qualifying capacity were being addressed by CAISO and the CPUC and the exemption was therefore temporary. The Commission urged CAISO to work toward eliminating the exemption in a timely manner.[8]

7. In a revision of the standard capacity product program, CAISO proposed, and the Commission accepted, an end to this exemption because the CPUC changed its methodology for assessing qualifying capacity to no longer discount capacity for historical performance.[9] The Commission stated that, "with the possibility for double penalties now eliminated, it is now just and reasonable to end the exemption … for [resource adequacy] resources with qualifying capacity determined by historical data."[10]

8. In June 2015, the CPUC adopted for the 2016 resource adequacy compliance year a change to its assessment of qualifying capacity that once again discounts the qualifying capacity of variable and combined heat and power resources based on historical performance.[11]

9. CAISO states that it, along with its stakeholders, determined in the reliability services initiative that the standard capacity product is not creating sufficient incentives for resource adequacy capacity to be available for service and that an enhanced mechanism is necessary.[12]

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[7] *Id.* P 44.

[8] *Id.*

[9] *Cal. Indep. Sys. Operator Corp.*, 132 FERC ¶ 61,148 (2010).

[10] *Id.* P 18.

[11] *Cal. Pub. Utils. Comm'n*, Decision 15-06-063, Rulemaking 14-10-010 (June 30, 2015). *See also* CAISO July 7 Answer at 32-33.

[12] CAISO Transmittal at 9.

II. CAISO Filing

10. In its filing, CAISO proposes to: (1) revise its resource adequacy rules and processes and (2) add a new resource adequacy availability incentive mechanism (RAAIM) that will replace the existing standard capacity product.[13]

A. Resource Adequacy Rules and Processes

11. CAISO proposes to modify the tariff criteria for determining the default qualifying capacity of proxy demand resources, distributed generation resources, and non-generator resources. As to proxy demand resources, CAISO proposes to bring its own tariff criteria in line with the CPUC rules, which specify that all demand response resources must be available for dispatch no fewer than 24 hours per month, be capable of being dispatched on three consecutive days, and be able to respond for a minimum of four hours per day. For distributed generator resources, CAISO proposes new, system-wide criteria that do not require a local regulatory authority to develop criteria on its own in order for distributed generation to serve as a resource adequacy resource. CAISO proposes to require non-generator resources to perform similarly to thermal generation, i.e., be a participating generator or a system unit to qualify as resource adequacy capacity.[14]

12. CAISO proposes to revise the must-offer obligations for proxy demand resources, distributed generation resources, and non-generator resources. CAISO proposes new tariff provisions to define the requirements for proxy demand resources[15] that provide resource adequacy capacity to participate in the day-ahead residual unit commitment process. CAISO also proposes new tariff provisions to establish day-ahead and real-time must-offer obligations for use-limited distributed generation and non-generator resources, which do not exist under the current tariff.[16]

13. CAISO explains that certain resources now defined as "use-limited resources" may not meet the new definition of "use-limited capacity" that CAISO is proposing in a related docket.[17] As a result, CAISO proposes tariff revisions to permit resources that

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[13] *Id.* at 1.

[14] *Id.* at 14.

[15] A proxy demand resource is a load or aggregation of loads that satisfies applicable tariff requirements and is capable of measurably and verifiably providing demand response services. CAISO Tariff, Appendix A, Definitions.

[16] CAISO Transmittal at 20.

[17] *Cal. Indep. Sys. Operator Corp.*, 152 FERC ¶ 61,185 (2015).

may not meet the proposed definition of "use-limited capacity" to continue to be treated the same under the proposed tariff sections as they are currently treated under the existing "use-limited resources" provisions.

14. CAISO states that it has identified a gap in its resource adequacy tariff provisions regarding the allocation of flexible capacity needs to a load-following metered subsystem that is a load serving entity. CAISO explains that it does not currently allocate a share of total system flexible capacity needs to load-following metered subsystem load serving entities. Further, CAISO states that load following metered subsystems are required to balance load and generation resources in their portfolio, and thus are not currently required to submit monthly and annual resource adequacy plans. Thus, CAISO proposes tariff revisions that will permit it to allocate flexible capacity needs and ensure that load-following metered subsystem load serving entities identify any variable energy resources outside their resource portfolios they intend to rely on. CAISO proposed to require load-following metered subsystem load serving entities include in their resource adequacy plans additional flexible resource adequacy capacity equal to the megawatt amount of flexible resource adequacy capacity shown for the variable energy resources not included in the resource portfolio for that month. CAISO asserts that this approach will ensure that each load-following metered subsystem will fully cover its allocable share of flexible capacity need without leaning on the system.[18]

B. Resource Adequacy Availability Incentive Mechanism

15. CAISO proposes to replace the existing, outage-based standard capacity product with the RAAIM, which is a bid-based availability incentive mechanism. Like the standard capacity product, the RAAIM is intended to create incentives, through the assessment of incentive payments or non-availability charges, for resource adequacy resources to be available for service. CAISO emphasizes that, like the standard capacity product, the RAAIM is not a "pay-for-performance" program like those in PJM Interconnection, L.L.C or ISO New England, Inc. that are intended to incentivize compliance with dispatch instructions. Rather, CAISO explains, the RAAIM is a mechanism to incent resource adequacy resources to comply with their must-offer obligations.[19]

[18] CAISO Transmittal at 24-28. In light of these revisions, CAISO also proposes tariff revisions to allow load-following metered subsystems to be eligible for bid cost recovery. *Id.* at 28.

[19] *Id.* at 29.

16. CAISO states that the RAAIM includes a number of enhancements to remedy identified deficiencies in the standard capacity product. Specifically, rather than gauging a resource's availability based solely on whether it was on a forced outage, CAISO will now measure availability based on compliance with the applicable must-offer obligation, the obligation for resource adequacy capacity to bid into CAISO's markets. Under the current must-offer obligations, resources providing flexible resource adequacy capacity are obliged to submit economic bids, while resources providing system and local capacity may either economically bid or provide a price taking "self-schedule" bid. CAISO argues that the current forced outage standard for availability is a too-narrow measurement of performance, because it only counts a resource as unavailable to the extent that it is on a forced outage, irrespective of whether the resource's capacity is actually made available to the CAISO markets. CAISO argues that it needs to ensure that there are sufficient economic bids in the market to operate it efficiently, and must ensure that resources are performing up to their capabilities.[20]

17. In addition, CAISO proposes revisions under the RAAIM to extend the availability incentives to flexible resource adequacy capacity, which is not covered by the standard capacity product. Under the RAAIM, CAISO proposes to assess the availability of flexible resource adequacy capacity based on the resource's fulfillment of the flexible resource adequacy capacity must-offer obligation, which requires the submission of economic bids (as opposed to price-taking "self-schedule" bids). If the resource does not submit economic bids for its flexible capacity, it is counted as unavailable and the resource could be subject to non-availability charges, as discussed below.[21]

18. CAISO also proposes to exempt a narrower set of resources under the RAAIM than were exempt under the standard capacity product. CAISO proposes, however, to create exemptions for four categories of resources, including variable energy resources and combined heat and power resources, whose qualifying capacity will be determined by the CPUC based on their historical performance. Accordingly, CAISO is seeking an exemption similar to the one granted in its initial standard capacity product order. CAISO states that, without this exemption, imposing non-availability charges in addition to a reduction in a resource's qualifying capacity would represent a double penalty.[22] CAISO clarifies, however, that the proposed exemption applies only to the extent that such resources are providing system or local, but not flexible, resource adequacy capacity; all resource providing flexible resource adequacy capacity have an obligation to submit economic bids for that capacity and CAISO proposes to assess availability

[20] *Id.* at 35.

[21] *Id.* at 34-35.

[22] *Id.* at 76-77.

accordingly. However, CAISO notes that if a variable energy resource's forecast is less than its designated flexible capacity, the resource is only required to submit economic bids up to the forecast MW. Thus, variable energy resources will not be counted as unavailable to the extent environmental conditions prevent them from providing the full amount of their qualifying capacity.[23]

19. Further, CAISO proposes to replace the month-by-month calculation of the availability incentive standard percentage with a fixed availability percentage of 96.5 percent that includes a "dead-band" of two percent above and below the target percentage.[24] CAISO states that the 96.5 percent standard is consistent with the average availability of resources over the past four years (96.4 percent). CAISO also notes that the lower bound of the dead-band reflects the average availability it needs to operate the grid reliably. Resources within the tolerance band will neither be paid nor charged under the RAAIM. Resources that achieve between 98.5-100 percent availability would receive an incentive availability payment, while resources that fail to achieve 94.5 percent availability would be assessed a non-availability charge. Because this mechanism is based on whether a resource fulfills its must-offer obligation, which is determined by the MW quantity shown on a resource adequacy plan, a resource can never achieve higher than 100 percent availability even if it submits bids for capacity above and beyond its resource adequacy capacity. Like the existing standard capacity product mechanism, revenues from non-availability charges will be used to fund the incentive payments.[25]

20. CAISO argues that, by using a fixed availability percentage, incentives will better reflect market conditions. CAISO notes that under the current availability calculation, availability percentages can be extremely high, such that the upper bound has exceeded 100 percent, thereby making it impossible for resources to receive an availability incentive payment and eliminating economic incentives for achieving high availability.[26]

21. CAISO also proposes tariff revisions to address situations where a resource has overlapping categories of resource adequacy capacity. CAISO explains that under its resource adequacy rules a MW of capacity can be designated on a load serving entity's resource adequacy plan as both system and flexible capacity, creating the potential for

[23] *Id.* at 77.

[24] *Id.* at 60. In other words, if a resource is more than 98.5 percent available, it will earn an incentive payment and if it is less than 94.5 percent available, it will be subject to a non-availability charge.

[25] *Id.* at 68.

[26] *Id.* at 33.

overlapping assessments of availability. In cases where a resource has overlapping types of resource adequacy capacity (e.g., local, system, and flexible), CAISO proposes to perform a single assessment of availability and hold the overlapping portion of the resource's capacity to the highest must-offer obligation of the various types of resource adequacy capacity committed.[27] For example, if a resource has both flexible and system capacity during a given assessment hour, CAISO assesses availability based on whether the resource submits economic bids, up to the MW level that was designated as flexible capacity.[28]

22. CAISO argues that any alternative to the single availability assessment would be undesirable and overly complex. CAISO asserts that assessing overlapping system and flexible resource adequacy capacity separately could result in situations where the resource fails to meet its flexible capacity obligations, but earns an availability incentive payment for its system capacity, thereby decreasing incentives for resource adequacy resources to submit economic bids. Thus, CAISO argues that assessing overlapping generic and flexible resource adequacy capacity separately would undervalue flexible capacity and undermine the availability incentive mechanism for flexibility. Moreover, CAISO asserts that separately assessing the availability of overlapping system and flexible capacity would be overly punitive for resources on forced outage. For example, if a resource was shown as both flexible and system resource adequacy capacity and went on an outage, CAISO would be required to double-penalize the same MW of capacity – once for the system capacity that was unavailable and once for the flexible capacity that was unavailable.[29]

23. Similarly, for resources providing different levels of flexible capacity CAISO proposes to assess availability based on the must-offer obligation for the highest quality of flexible capacity category designated.[30] For example, if a resource contracts to provide 40 MW of flexible resource adequacy capacity, 20 of which is designated as base ramping capacity and 20 of which as peak ramping capacity, the entire 40 MW will be assessed based on the must-offer obligation associated with base ramping capacity

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[27] *Id.* at 48.

[28] *Id.*

[29] *Id.* at 70.

[30] Flexible capacity categories include: (1) base ramping resources, which must bid from 5:00 a.m. to 10:00 p.m. seven days a week; (2) peak resources, which must bid for a five-hour seasonally adjusted period each day; and (3) super-peak resources, which must bid for a five-hour seasonally adjusted period each weekday, excluding holidays. CAISO Tariff, § 40.6.1(a).

because base ramping is the "premium" flexible capacity product. CAISO argues that this treatment is justified because it creates incentives for resources that can provide flexible capacity to sell that capacity in the highest quality category that the resource is capable of providing. CAISO also argues that any system assessing the availability of flexible capacity in multiple categories would be extremely complex.[31]

24. CAISO proposes to assess non-availability charges at a price equal to 60 percent of the capacity procurement mechanism (CPM) offer cap. CAISO justifies its proposed non-availability charge as striking a balance between a price that is high enough to incent good performance and discourage bad performance, while also not being so high as to disrupt the resource adequacy market. CAISO states that the price represents a high average of 2012 resource adequacy capacity prices.[32]

C. Effective Dates and Request for Waiver

25. CAISO requests an effective date of March 1, 2016 for the majority of the proposed tariff revisions, and an effective date of January 10, 2016 for the proposed revisions to tariff sections 40.2.4, 40.10.5.1(a), and 40.10.5.1.1. CAISO requests waiver of section 35.3 of the Commission's regulations, 18 C.F.R. § 35.3 (2015), to allow the proposed revisions to take effect more than 120 days after the submission of this filing. CAISO states that good cause exists to grant this waiver because of the substantial systems and process changes that will be necessary to implement the proposed revisions. CAISO also explains that market participants will need an appropriate amount of time to design, develop, implement and test these systems and processes.[33]

III. Notice and Responsive Pleadings

26. Notice of CAISO's filing was published in the *Federal Register*, 80 Fed. Reg. 32,553 (2015), with interventions and protests due on or before June 19, 2015. Timely motions to intervene were filed by Alliance for Retail Energy Markets, Pacific Gas & Electric Company, Powerex Corp., California Municipal Utilities Association, Modesto

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[31] CAISO Transmittal at 41-42.

[32] *Id.* at 63. In an order issued concurrently with this one, the Commission approved a competitive solicitation process to replace CAISO's existing CPM process, whereby resources receiving CPM designations will be paid as bid, up to an offer cap of $6.31 per kW-month. *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,001 (2015). This results in a non-availability charge of $3.79 per kW-month.

[33] CAISO Transmittal at 87.

Irrigation District, Golden State Water Company, and Cogeneration Association of California and Energy Producers and Users Coalition. Timely motions to intervene and comments were filed by Southern California Edison Company (SoCal Edison), Cities of Anaheim, Azusa, Banning, Colton, Pasadena and Riverside, California (Six Cities), and the California Department of Water Resources (SWP). Timely motions to intervene and protests were filed by City of Santa Clara (d/b/a Silicon Valley Power) (SVP), Northern California Power Agency (NCPA), NRG Companies (NRG),[34] and San Diego Gas & Electric Company (SDG&E). CAISO, NCPA, and SVP filed answers. CAISO filed an answer to NCPA's and SVP's answers.

IV. Discussion

A. Procedural Issues

27. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2015), the timely, unopposed motions to intervene serve to make the entities that filed them parties to the proceeding.

28. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2015), prohibits an answer to a protest and/or answer unless otherwise ordered by the decisional authority. We will accept the answers of CAISO, NCPA, and SVP because they have provided information that assisted us in our decision-making process.

B. Substantive Issues

29. We will conditionally accept CAISO's proposed tariff revisions, subject to a compliance filing, to become effective March 1, 2016, as requested, with the exception of the proposed revisions to tariff sections 40.2.4, 40.10.5.1(a), and 40.10.5.1.1, which we conditionally accept effective January 10, 2016, as requested. We find that CAISO has largely supported the tariff revisions as a just and reasonable set of measures that should facilitate greater participation by all types of resource adequacy resources in CAISO's market and ensure that CAISO has access to the capacity it needs to reliably operate the grid. Specifically, we find that replacing the standard capacity product with the RAAIM will enhance the incentives for resource adequacy resources to fulfill their must-offer obligations, thereby improving CAISO's ability to efficiently and reliably operate the grid. The Commission finds CAISO's use of the must-offer obligation as the measure of availability is superior to its use of the forced outage metric under its current tariff provisions. As CAISO notes, the resource's offer of its capacity into the market is a more

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[34] For purposes of this filing, NRG Companies are NRG Power Marketing, LLC and GenOn Energy Management, LLC.

robust measure of compliance with its obligations as a resource adequacy resource, ensuring that a resource is not only running, but complying with its obligation to provide capacity to CAISO's markets. Moreover, the must-offer obligation standard allows CAISO to assess the adherence of flexible resources to their economic bidding requirement, which it is unable to do under the existing standard capacity product mechanism. The economic bidding requirement is important because CAISO depends on the flexibility afforded to it by economic bidding to efficiently dispatch the resources it needs to reliably operate the grid. For these reasons, we conditionally accept CAISO's filing.

30. We next turn to the issues raised by protestors.

1. Load-Following Metered Subsystems

a. Comments

31. NCPA states that CAISO's proposed section 40.10.5.1.1(2) is ambiguous and could be interpreted to require a load following metered subsystems to procure twice as much resource adequacy capacity as CAISO actually needs. NCPA suggests minor alterations to section 40.10.5.1.1(2) that would preserve CAISO's intent without the risk that the tariff could inadvertently be used to require a load following metered subsystem to procure twice as much flexible capacity than is actually needed, and requests the Commission to direct CAISO to clarify the tariff language accordingly.[35]

32. NCPA asserts that CAISO's proposed deletion of section 40.1.1 imposes new and unexplained restrictions on how load following metered subsystems procure resource adequacy capacity. NCPA comments that the current tariff language appropriately reflects the unique characteristics of load following metered subsystems, as section 40.1.1 includes a statement that expressly limits the applicability of specific resource adequacy provisions to load following metered subsystems. NCPA asserts that CAISO has not explained why it has proposed to delete the indicated languages from its tariff, and contends that this deletion would be unjust and unreasonable because doing so would render previously inapplicable tariff requirements suddenly, and without explanation, applicable. Thus, NCPA requests that the Commission direct CAISO to reinstate the language from section 40.1.1, with appropriate modifications.[36] SVP states that it

[35] NCPA Comments at 5.

[36] *Id.* at 5-6.

concurs with the arguments, proposed tariff revisions, and requests for relief submitted by NCPA, and urges the Commission to adopt them.[37]

b. Answers

33. CAISO agrees with NCPA and SVP's request to clarify section 40.10.5.1.1(2) of its tariff to require the metered subsystem to increase its flexible resource adequacy capacity for all variable energy resources shown in its annual plan, regardless of whether those resources were designated to be in the metered subsystem resource portfolio.[38]

34. CAISO asserts that NCPA and SVP's request that the Commission direct it to specify the applicability of the revised resource adequacy tariff provisions to load-following metered subsystems in place of CAISO's proposed deletion of a provision in existing tariff section 40.1.1 is unnecessary. CAISO states that the revised tariff provisions already specify their applicability to load-following metered subsystems. Thus, CAISO argues that any further changes in that regard would be duplicative and unnecessary.[39]

35. NCPA and SVP maintain that the limiting language in section 40.1.1 is necessary because otherwise, all provisions in section 40 would be applicable to load following metered subsystems. NCPA proposes tariff language for section 40.2.4 to resolve this issue.[40]

36. NCPA and SVP also assert that CAISO appears to agree with their requested clarification of section 40.10.5.1.1(2) regarding the counting of variable energy resources in a load-following metered subsystem's resource portfolio, but notes that CAISO's suggested clarification inverts NCPA and SVP's request such that CAISO's proposed language would ensure, rather than prevent, double counting. NCPA and SVP again request that CAISO clarify this section to unambiguously prevent the double counting of variable energy resources.[41]

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[37] SVP Protest at 4.

[38] CAISO July 7 Answer at 36.

[39] *Id.* at 35.

[40] NCPA Answer at 4.

[41] *Id.* at 6.

37. In response, CAISO states that, upon further consideration, it agrees with NCPA and SVP on the need for clarification of sections 40.1.1 and 40.10.5.1.1(2). CAISO states that it will submit the necessary clarifying language on compliance and will consult with NCPA, SVP, and other interested stakeholders before resubmitting the language.[42]

c. Commission Determination

38. We agree with SVP and NCPA on the need for clarification of CAISO's tariff with regard to proposed tariff sections 40.10.5.1.1(2) and 40.1.1. Indeed, in its August 6 answer CAISO acknowledges the need for clarification and proposes to consult with SVP and NCPA on revisions. Consistent with CAISO's answer, we direct CAISO to submit a compliance filing 30 days from the date of this order that contains the necessary revisions. The revised tariff provisions must clearly delineate which resource adequacy provisions apply to load-following metered subsystems, and ensure that load-following metered subsystems' flexible capacity requirement is not unnecessarily augmented by the double-counting of variable energy resources included in their resource portfolios.

2. Fixed Availability Standard

a. Comments

39. NRG argues that CAISO's proposal to apply a fixed availability standard is unjust and unreasonable. First, NRG states that the proposed availability metrics have no basis in fact, as opposed to the current standard capacity product availability standards, which are determined from historical availability data.[43]

40. NRG objects that CAISO is conflating "performance" with "availability" in an attempt to justify its proposed 96.5 percent annual standard. NRG contends that the submission of economic bids is a distinct issue from whether resources comply with dispatch instructions. NRG notes that if every resource complied with its bidding obligation, but failed to comply with its dispatch instructions, operational havoc would ensue. NRG further states that the switch to an annual availability standard increases financial risks to generators as resources may face significantly increased financial penalties.[44]

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[42] CAISO August 6 Answer at 1.

[43] NRG Protest at 9-10.

[44] *Id.* at 11-12.

41. NRG also argues that CAISO has given no justification for its 96.5 percent availability percentage. NRG asserts that CAISO has offered no statistical or operational analysis that demonstrates why a 96.5 percent availability target is the just and reasonable value. NRG asserts that CAISO's proposed annual standard is likely too stringent because it exceeds the average recorded availability percentage of 95.97 percent for May to September since the standard capacity product was implemented.[45]

b. <u>CAISO Answer</u>

42. CAISO contends that its proposal for a fixed availability incentive is just and reasonable. CAISO states that a fixed availability percentage will better encourage high performance by awarding incentive payments to high performing resources in high availability months, by better reflecting monthly market conditions, and motivating resources to make their capacity available when it is most needed. CAISO argues that NRG's arguments constitute an attempt to avoid charges for poor performance.[46]

43. CAISO states that its proposed 96.5 percent annual availability standard is grounded in principles consistent with reliable grid operation such as maintaining sufficient resources to address peak load, maintain adequate reserves, account for forecast error and outages, and respond to contingency events. For example, CAISO notes that it must procure seven percent of peak load for reserves, and with a 15 percent reserve margin it must have at minimum 93 percent of resource adequacy capacity available. CAISO states that its proposal allows for the minimum proposal and a safety margin to account for forecast errors and outages.[47] CAISO also reiterates that 96.5 percent is virtually the same as the 96.4 percent average of calculated historic availability. CAISO states that a floating availability percentage allows poor performing resources to avoid penalties because other resources also performed poorly.[48] For example, to the extent the availability percentage is based on the month-to-month performance of generation, a large number of poor performing resources will pull the availability percentage down, allowing below-average performers to escape penalties entirely and reducing the amount of MWs subject to a non-availability charge for poor performing generation.

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[45] *Id.* at 9-10, 12-14.

[46] CAISO July 7 Answer at 18.

[47] *Id.* at 20-21.

[48] *Id.* at 22.

c. Commission Determination

44. The Commission accepts CAISO's proposal to replace the existing methodology for calculating the non-availability charge and availability incentive payment, which uses a rolling monthly availability standard, with a fixed 96.5 percent standard and a four percent dead-band. We agree that a fixed standard will remedy some of the unintended consequences that CAISO's changing monthly standard produced. For example, as CAISO notes, the threshold for receiving an incentive payment in some months under the current standard capacity product can sometimes exceed 100 percent if availability has historically been high during that month. Under those circumstances, it becomes impossible for resources to earn incentive payments even if they make all of their resource adequacy capacity available, thereby rendering the incentive meaningless. Similarly, in other months, due to low historic availability, resources can earn incentive payments even when they perform poorly.

45. In contrast, CAISO's proposal to use a fixed 96.5 percent availability target, with the four percent dead-band, preserves appropriate incentives regardless of fluctuating monthly historical availability, and therefore should better meet CAISO's operational needs. Additionally, under CAISO's proposal, availability payments will also properly reflect changing conditions. In months where a larger percent of resources fail to achieve 94.5 percent availability, which signals a heightened need for resource adequacy resources to make their capacity available to CAISO's markets, those resources that meet or exceed 98.5 percent availability will earn higher availability incentive payments due to the larger number of resources subject to non-availability charges.

46. The Commission disagrees with NRG that the availability standard has no basis in fact. As CAISO explains, the lower bound of the availability percentage dead-band is also calibrated to what CAISO needs to operate the grid reliably. This need for a fixed amount of reserves to operate the grid reliably does not change from month to month, so it is appropriate that CAISO's fixed availability percentage, based on what it needs to operate the grid reliably, is uniformly fixed at this level as well. NRG's assertion that the availability of resources has consistently drifted to lower levels in the summer months actually serves as support for CAISO's proposal to use a fixed annual availability target, which will provide heightened incentives during times when resource adequacy capacity is most critically needed, as discussed above. Moreover, CAISO's proposal to switch to a fixed availability percentage is grounded in the average historical availability under the standard capacity product program and therefore has a solid basis in data.

47. NRG argues that CAISO should be incenting compliance with dispatch instructions rather than with the must-offer obligation. The Commission disagrees with NRG's assessment. CAISO dispatches its system based in part on bids for supply. In order to be able to effectively and efficiently dispatch its system, that supply must be visible to CAISO. Therefore it is appropriate that the resources CAISO's market

participants have contracted to ensure resource adequacy have their performance measured based on their compliance with the must-offer requirement.

3. Level of Non-Availability Charge

a. Comments

48. PG&E contends that the non-availability charge is too low and supports a non-availability charge equal to the capacity procurement mechanism offer cap.[49] PG&E states that it does not believe the price is high enough to sufficiently incentivize resources to procure substitute capacity if the cost of replacement capacity is high because the non-availability charge is merely the high average of resource adequacy prices.[50] NRG supports the proposed non-availability charge and argues that the current non-availability charge of $5.90 per kW-month creates disincentives for parties to transact for system resource adequacy capacity, which NRG reports is currently in the range of $1 - $2 per kW-month.[51]

b. CAISO Answer

49. CAISO states that it has expressed willingness to re-examine the level of the non-availability charge after a year and submit an informational filing to the Commission that examines the reasonableness of the price. However, CAISO states that the Commission should accept its proposal over PG&E's alternative of $6.31 per kW month. CAISO argues that its proposal represents a balance between incenting performance and ensuring that the non-availability charge does not disrupt the resource adequacy market. CAISO also states that PG&E ignores that the requirements under the proposed RAAIM are more stringent than under the current standard capacity product, and so a lower non-availability charge may be appropriate. CAISO also notes that it will have the opportunity to regularly reassess this rate since it will consider adjustments to the capacity procurement mechanism soft offer cap every four years.[52]

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[49] As noted above, the CPM soft offer cap is set at $6.31 per kW-month. *See supra* n.32.

[50] PG&E Comments at 7.

[51] NRG Protest at 16.

[52] *See Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,001 (2015).

c. Commission Determination

50. The Commission finds that the non-availability charge, which is a high-average of resource adequacy capacity prices, reflects an appropriate balance of two competing goals: that the non-availability charge be high enough to incent good performance, but not be so high as to disrupt the resource adequacy market or unduly penalize those receiving resource adequacy payments. PG&E argues that the price is too low because resource adequacy is important, but they ignore CAISO's balancing concern.

51. As the non-availability charge increases, the risk to generation contracting for resource adequacy also increases along with the price for contracting for resource adequacy. CAISO's current non-availability charge has been high enough to incent relatively high availability percentages under the current standard capacity product system. So there does not appear to be a justification for raising then non-availability charge even further, as PG&E proposes. This would needlessly increase costs to customers. Moreover, CAISO's proposal imposes more stringent requirements on generators: they must bid to be available rather than simply not be on a forced outage, and the availability percentage is fixed rather than moving with the whole generation fleet's availability levels. So, a somewhat lower non-availability charge appears to be appropriate to balance the risk to generators.

52. That said, CAISO offered in its answer to review and report on the impacts and reasonableness of the proposed RAAIM non-availability charge. The Commission finds that it would be useful to review the effectiveness of the new level of non-availability charge and any potential impact on resource adequacy contracting. We will therefore require CAISO to submit an informational report that analyzes these issues 12 months following implementation of the non-availability charge.[53]

4. Single Availability Assessment and Overlapping Capacity

a. Comments

53. SoCal Edison asserts that the RAAIM proposal has significant flaws and should not be adopted at this time. SoCal Edison urges the Commission not to accept CAISO's proposal for the RAAIM, and give stakeholders the opportunity to more carefully consider other options that may work better. SoCal Edison argues that CAISO's proposal to use a single availability assessment for overlapping generic and flexible resource adequacy capacity effectively values flexible capacity higher than system and local

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[53] The report will be for informational purposes only and will not be noticed for comment or subject to Commission order.

capacity, and at times even defines system and local capacity as having no value to the system.[54]

54. SoCal Edison asserts that CAISO's proposal values flexible capacity higher than system and local capacity by ignoring the system and local capacity must-offer obligation during hours where the two obligations overlap. According to SoCal Edison, under this proposal, if a generator has sold both flexible and system and local capacity to the system, it will be penalized the full non-availability charge if it cannot fulfill the flexible must-offer obligation. SoCal Edison contends that there are circumstances that may cause a generator to lose the ability to provide flexibility without limiting its ability to provide system and local capacity, which still provides value to the CAISO system. Despite this, SoCal Edison argues that the CAISO proposal will assess a non-availability charge to the generator regardless of whether system and local capacity is provided through self-schedules, effectively rendering the value of system and local capacity to nothing.[55]

55. SoCal Edison and SDG&E object to CAISO's proposal to assess resources with different types of flexible capacity based on the highest flexible capacity must-offer obligation. SoCal Edison asserts that in addition to being in direct conflict with the compensation the generator received, the proposal could artificially lower the flexibility supply on the system by restricting generators that can provide different types of flexible capacity. SoCal Edison states that if a generator wishes to avoid having CAISO deem all of its capacity to be offered as the higher-quality product, the generator with multiple types of flexible capacity will either have to sell all of its capacity at the lower quality bucket, or only sell the higher-quality flexible capacity and withhold the lower-quality flexibility capacity from the system.[56]

56. SDG&E contends the availability of a flexible resource adequacy resource should not be assessed using the must-offer obligation for the highest quality of flexible capacity category designated. SDG&E argues that if a resource's commitment is spread over multiple categories in order to minimize costs or meet contractual obligations, then CAISO should not be allowed to override the specific must-offer obligations for which the resource was committed.[57]

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[54] SoCal Edison Comments at 3.

[55] *Id.* at 2.

[56] *Id.* at 3.

[57] SDG&E Protest at 10.

57. SoCal Edison suggests several alternatives to the single availability percentage, such as including two separate non-availability charges for flexible and generic capacity, linking a resource's ability to sell resource adequacy capacity to historical availability, or the implementation of an event-triggered scarcity availability incentive price. SoCal Edison notes that it is not recommending any of these options, but merely presents these alternatives as record evidence that the RAAIM must be further considered.[58] SDG&E asserts that CAISO should determine availability based on the distinct must-offer obligation for the different categories of flexible resource adequacy capacity for each resource.[59]

b. CAISO Answer

58. CAISO states that its proposal to assess availability of overlapping MWs of different types of capacity based on the highest must-offer obligation is reasonable. CAISO states that it has thoroughly considered and rejected the alternatives suggested by SoCal Edison in a thorough stakeholder process.[60] Further, CAISO states that the merits of alternative proposals do not render its RAAIM unjust and unreasonable.[61]

59. With regard to its proposal to assess availability of flexible capacity based on the highest quality of flexible capacity for resources with multiple flexible capacity obligations, CAISO clarifies that, only to the extent a resource sells multiple categories of flexible capacity on the same day will CAISO assess the availability of the resource based on the highest category. CAISO emphasizes that the purpose of the flexible capacity categories is to provide different resources with the opportunity to provide flexible capacity, not to allow resources with the ability to provide capacity to provide a lower quality of capacity.[62] CAISO argues that the approach described by SDG&E would be extremely complicated, non-transparent, and provide little additional benefit.[63]

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[58] SoCal Edison Comments at 4-6.

[59] SDG&E Protest at 10.

[60] CAISO July 7 Answer at 10.

[61] *Id.* at 14.

[62] *Id.* at 8.

[63] *Id.*

c. **Commission Determination**

60. The Commission agrees with CAISO that using a single availability assessment is preferable to alternative methodologies involving multiple assessments. We find that using a single availability assessment dramatically reduces complexity, creates more robust incentives, and encourages resource adequacy resources to submit economic bids into the CAISO markets.

61. As CAISO notes, its proposal to assess the availability of overlapping MW of local, system, and flexible resource adequacy capacity based on the highest must-offer obligation is necessary in light of its proposal to use a single availability assessment. CAISO has multiple must-offer obligations for its various categories of capacity. This affords flexibility to resources seeking to provide resource adequacy capacity, while also allowing CAISO to procure the resources it needs to reliably operate the grid. The only alternatives to CAISO's simplification are for CAISO to assess the multiple obligations separately through multiple availability percentages or create a wholly new additive assessment. We believe the complexity of these alternatives would undermine the benefits of CAISO's proposal.

62. Moreover, these alternatives would have their own disadvantages. A multiple availability assessment would dampen the incentive to be fully available by allowing both penalties and incentive payments to a single resource in certain months. Additive availability assessments, where a resource would, for example, get a marginal payment for meeting the flexible capacity requirement would either under-value flexible capacity through a relatively small marginal payment, or over-penalize resources on forced outages by imposing two penalties (e.g., for flexible and system capacity) for a single outage.

63. Commenters note that one consequence of CAISO's simplification for overlapping capacity is that in cases where flexible capacity MWs overlap with local and system capacity MWs, the overlapping capacity will be counted as fully unavailable even though it may provide local or system capacity through a self-schedule for those MWs. However, we believe a more significant risk than the potential for overlapping capacity to be withheld is that a resource would not have sufficient incentives to submit economic bids for its flexible capacity. We find that while there is and likely will continue to be some economic benefit in self-scheduling resources that are required to submit economic bids, such resources are not likely to have an economic incentive to withhold capacity because they have already incurred some non-availability charge for being unable to bid economically. The economic incentive to self-schedule at certain times has been described by NRG in its comments, while no such incentive exists to withhold energy that cannot, for whatever reason, be economically bid. Moreover, CAISO already inserts

bids for most resource adequacy resources that simply fail to insert any bid and are not on a forced outage.[64]

64. CAISO's proposal creates appropriate incentives for resources with flexible capacity resources to bid economically, without resorting to a double-penalty structure that would over-penalize resources on outages or reward resources that fail to satisfy their flexible resource adequacy capacity must-offer obligation. Accordingly, we find that CAISO's proposal constitutes a just and reasonable approach.

65. Similarly, we accept CAISO's proposal to assess resources with multiple levels of flexible capacity on a single day based on the most stringent must-offer obligation. We are not persuaded by commenters' claims that CAISO's proposed approach defeats the purpose of creating three distinct categories of flexible resource adequacy capacity with different must-offer obligations. CAISO's proposal still enables resources not capable of providing base ramping flexible resource adequacy capacity to provide peak or super peak ramping capacity, which both entail less onerous must-offer obligations. As such, the availability of these resources will be assessed based on those less stringent obligations. Further, for those resources capable of providing the "premium" flexible ramping capacity, we find that CAISO's proposal to assess availability based on the highest quality flexible capacity provides appropriate incentives to economically bid the most flexible type of capacity into CAISO's markets.

66. We note that CAISO clarified in its answer that "only to the extent a resource sells two categories of flexible capacity on the same day would CAISO assess the resource based on the highest flexible capacity category."[65] However, based on our review, the applicable tariff language does not reflect this concept. Thus, we direct CAISO to submit a compliance filing within 30 days of the date of this order that clarifies this limitation.

5. Exemption for Variable Energy Resources and Combined Heat and Power Resources

a. Comments

67. SDG&E argues that variable energy and combined heat and power resources should not be exempt from the RAAIM when providing local and system resource adequacy capacity. SDG&E argues that such an exemption would reduce the amount of resource adequacy capacity made available to the CAISO markets, and will result in

[64] CAISO Tariff § 40.6.8.

[65] CAISO July 7 Answer at 7.

CAISO's having to utilize its backstop capacity to ensure grid reliability, leading to higher costs for SDG&E's customers.[66]

68. SDG&E also points to a new methodology currently being considered by the CPUC to calculate the qualifying capacity of wind and solar resources based on their effective load carrying capability, rather than using historical outage data.[67] According to SDG&E, once the new methodology is implemented CAISO's double penalty rationale for the exemption will no longer apply. SDG&E also questions CAISO's double-penalty rationale because CAISO does not propose an exemption from the RAAIM for variable energy and combined heat and power resources providing flexible resource adequacy capacity, even though the potential for double penalties is present in that case so long as qualifying capacity is based on historical outage data.[68]

69. SDG&E also refutes CAISO's assertion that an exemption for combined heat and power resources is justified because of complicated relationships with host facilities. SDG&E argues that combined heat and power resources have must-offer obligations just like other resources, and exempting them could lead to an increased risk of CAISO's using its backstop capacity due to a lack of incentives to provide CAISO with adequate substitute capacity.[69]

70. As an alternative approach that would make the exemption unnecessary, SDG&E suggests that monthly availability could be calculated based on the actual generation, divided by the total day-ahead forecast net of curtailments, and states that this could not only capture the availability of the resource, but also account for its intermittency.[70]

b. CAISO Answer

71. CAISO defends its exemption of variable and combined heat and power resources. CAISO reiterates that the proposed exemptions reflect the reality that the MW amount these types of resources will be able to sell as resource adequacy capacity from year to

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[66] SDG&E Protest at 5-6.

[67] *Id.* at 6. SDG&E states that the ELCC is a percentage that expresses how well a resource is able to meet reliability conditions and reduce expected reliability problems or outage events. *Id.*

[68] *Id.* at 7.

[69] *Id.* at 9.

[70] SDG&E Protest at 8.

year is dependent on the resource's average historical output. CAISO notes that while at some point in the future the CPUC metric for calculating qualifying capacity will be modified, the historical output methodology will be in effect through at least the 2017 compliance year. Thus, CAISO argues that exemption is necessary through at least 2017 to prevent these resources from being exposed to double penalties. CAISO also asserts, with regard to its proposal to limit the exemption to the case where these resources are providing generic capacity, that the RAAIM must apply to flexible resource adequacy capacity or no mechanism would be in place to incent compliance with the flexible capacity must-offer obligations.[71]

c. <u>Commission Determination</u>

72. We accept CAISO's proposal to exempt from the RAAIM variable energy and combined heat and power resources that are providing generic capacity. The method adopted by the CPUC for 2016 already penalizes these resources for outages by discounting their qualifying capacity based on historical forced outage and de-rate data. Because generic capacity can satisfy its must-offer obligation by self-scheduling, the most likely cause of non-availability will be outages. Thus, as we found in the SCP I Order,[72] assessing non-availability charges to resources whose qualifying capacity is based on historical performance would have the effect of penalizing a resource twice for the same outage. As such, the Commission finds that it is just and reasonable at this time to exempt these resources from the RAAIM, given that the CPUC continues to use a qualifying capacity methodology for these types of resources that takes into account historical performance.

73. Consistent with our approach in the SCP I Order, the Commission encourages CAISO to work with stakeholders to eliminate the exemption if and when a new assessment of qualifying capacity that does not consider historical output is adopted. We will also require an informational report, to be submitted 12 months after implementation of the RAAIM, which evaluates whether the exemption for variable and combined heat and power resources continues to be just and reasonable. The report should also notify the Commission of any plans CAISO has to modify the tariff in response to any new methodology for determining qualifying capacity.[73]

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[71] CAISO July 7 Answer at 32-33.

[72] SCP I Order at P 44.

[73] The report will be for informational purposes only and will not be noticed for comment or subject to Commission order.

74. The Commission finds CAISO's plan to include variable and combined heat and power resources in the availability assessment for flexible resource adequacy resources to be just and reasonable as it necessary to achieve the goals of having distinct flexible resource adequacy capacity. The Commission recognizes, as noted by SDG&E, the potential for "double penalties" in this context because when resources whose qualifying capacity is based on historical performance have outages, their qualifying capacity will be reduced. They will also be incapable of submitting economic bids and therefore will incur non-availability charges based on the same outage. However, the Commission also understands the importance of creating a mechanism to ensure that resources that sell flexible resource adequacy capacity actually provide the benefits of flexibility to CAISO. Thus, extending the limited exemption to flexible resource adequacy capacity may have adverse effects on reliability because without the RAAIM availability standards, flexible resource adequacy resources will have less incentive to submit economic bids because those that fail to do so will face no consequences.

6. Miscellaneous

a. Comments

75. NRG argues that CAISO's RAAIM proposal effectively imposes a prohibition on self-scheduling for resources that provide flexible resource adequacy capacity by counting self-scheduled flexible resource adequacy as unavailable. NRG contends that CAISO has not made a compelling showing that prohibiting self-scheduling is just and reasonable. NRG argues that, contrary to CAISO's position, allowing a resource to self-schedule increases access to unit flexibility because a unit self-scheduling to minimum load effectively makes all of its flexible capacity available, and provides more flexible capacity than an uncommitted unit. Further, NRG argues that self-scheduling places the financial risk on the generator, since when a generator self-schedules it bears the risk that startup and minimum load costs will be recovered through market revenues.[74]

76. NRG also argues that self-scheduling is a critical risk mitigation tool. For example, NRG states that self-scheduling is crucial to managing natural gas risk by allowing them to meet minimum burns when pipelines shorten the balancing period. In addition, NRG points out that generators often self-schedule for environmental testing or other operational reasons, and contends that denying resources the ability to self-schedule would cause generators to incur performance penalties for normal operation. NRG also argues that self-scheduling avoids erratic start-ups of use limited resources, and avoids maintenance cycles related to erratic start-ups, and is essential to the operation of multi-stage generating resources.[75] SoCal Edison asserts that the complexity surrounding the

[74] NRG Protest at 6.

[75] *Id.* at 7.

RAAIM mechanism is a direct consequence of creating different must-offer obligations for different types of capacity. SoCal Edison states that the purpose of creating the different must-offer obligations is to force generation that is deemed flexible to economically bid into the market. SoCal Edison contents that while it is practical for flexible generation to economically bid into the CAISO market, it does not make sense to force economic bids. SoCal Edison asserts that a properly functioning energy market should result in rational generators economically bidding their capacity rather than being price takers with self-scheduling. According to SoCal Edison, generators that are not economically bidding, specifically flexible generation, are doing so because there are inefficiencies in the market that create an incentive to self-schedule, and therefore forcing economic bids will likely cause generation to place bids that effectively act as a self-schedule.

77. SoCal Edison states that the inefficiencies that cause flexible generators to self-schedule must be corrected; however, they are not well understood. To SoCal Edison's knowledge, CAISO has not released any data on the magnitude of the current self-scheduling problem, nor have they released a description of issues that cause this self-scheduling. SoCal Edison urges the Commission to direct CAISO to study the problem and release this information, so the true issues which CAISO states are frustrating economic bids from flexible resources can be appropriately resolved. SoCal Edison requests that the Commission direct CAISO to establish a sunset provision for the must-offer obligations in the tariff. Since the current flexible resource adequacy requirement is an interim requirement, the sunset provision should require that the multiple must-offer obligations expire at the earlier of 1) the interim solution end date; or 2) the durable flexible product implementation date.[76]

78. SDG&E notes that CAISO has proposed to exempt certain "nature-of-work" outages from its proposed RAAIM provisions. SDG&E asserts that lack of fuel due to a system emergency should qualify as one of these nature-of-work categories. SDG&E likens the lack of fuel situation to that of one of the categories currently exempt under CAISO's proposal, the "transmission-induced" outage.[77] SDG&E argues that each of these outages is completely out of the control of the resource operator, and thus the same basis for the exemption exists. SDG&E contends that adding this exemption will not

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[76] SoCal Edison Comments at 6-7.

[77] *See* CAISO Tariff, proposed § 40.9.3.5(c) ("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.").

undermine fuel assurance or incentives for suppliers to provide for fuel assurance because such an exemption would only address fuel shortages that are out of the control of the generator.[78]

79. SWP states that it does not oppose CAISO's proposal, but notes that CAISO appears to have neglected to include agreed-upon language allowing SWP to submit a non-spin ancillary services bid in the day-ahead market for its participating load. SWP states that it contacted CAISO, and CAISO was amenable to including language that allowed SWP to participate in this manner. SWP requests that the Commission accept CAISO's proposal conditioned on the inclusion of this language.[79]

80. NRG objects to CAISO's proposal to replace an existing tariff provision stating that resource adequacy substitutions are allowed "prior to the close of the day-ahead market" with a tariff provision stating that such substitutions are allowed in accordance with the timeline specified in the business practice manual. NRG argues that this timeline is a critical rate, term, or condition of service that should be included in the tariff.[80]

81. NRG also protests CAISO's proposal to treat maintenance outages submitted between four and seven days in advance as a forced outage. NRG argues CAISO has not provided a valid reason for removing this exemption. NRG argues that this proposed change makes a generator financially indifferent to whether it proactively schedules a maintenance outage during periods when CAISO does not need the resource or simply waiting for equipment to break, which could occur during a period of high need.[81]

b. <u>Answers</u>

82. In response to NRG's claim that the RAAIM effectively prohibits self-scheduling, CAISO emphasizes that the RAAIM does not constitute a new prohibition on self-scheduling by resources providing flexible resource adequacy capacity.[82] Rather, CAISO argues that the obligation is in the existing tariff, and that the RAAIM merely provides incentives to comply with the existing flexible capacity must-offer obligation. CAISO

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[78] SDG&E Protest at 11.

[79] SWP Comments at 5.

[80] NRG Protest at 14-15.

[81] *Id.* at 15-16

[82] CAISO July 7 Answer at 3.

further asserts that if the RAAIM did not assess availability for resources providing flexible resource adequacy capacity based on whether the resources complied with its obligation to submit economic bids, there would be no consequence for resources failing to meet their tariff obligations. CAISO also notes that resources providing flexible capacity are only obliged to economically bid for the capacity designated as flexible, so CAISO's tariff amendment does not prohibit resource providing flexible capacity from self-scheduling entirely. CAISO also refutes NRG's claim that resources will be unable to perform necessary environmental testing because of the must-offer obligation, noting that CAISO allows exemptions for such testing.[83]

83. Similarly, CAISO contends that SoCal Edison's requests for a single must-offer obligation and sunset date for the current flexible resource adequacy capacity must-offer obligations are beyond the scope of this proceeding and constitute a collateral attack on the Commission's order approving the flexible capacity must-offer obligations.[84] CAISO notes that its proposal does nothing to alter the flexible capacity must-offer obligation, and so those arguments are beyond the scope of this proceeding.[85]

84. CAISO agrees with SWP's proposed revision to allow a participating load that is also pumping load to provide resource adequacy capacity by submitting non-spin ancillary service bids in the day-ahead market and requests that the Commission direct CAISO to make the revisions on compliance.[86]

85. CAISO argues that the Commission should reject NRG's proposal to include the substitution timeline in its tariff. CAISO states that timelines are implementation details and are therefore appropriate to include in business practice manuals, and that multiple timelines are already included in the business practice manuals rather than the tariff. For example, CAISO notes that the timeline for resource adequacy substitution is currently in the business practice manual.[87] CAISO further argues that the existing tariff provision is

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[83] CAISO notes 40.9.3.5(c) will provide an exclusion from the RAAIM for a nature of work category relating to an administrative action by the resource owner. This exclusion will encompass resource unavailability due to testing. *See* CAISO July 7 Answer at n.13.

[84] *See Cal. Indep. Sys. Operator Corp.*, 149 FERC ¶ 61,042, at P 30 (2014).

[85] CAISO July 7 Answer at 3.

[86] *Id.* at 35-36.

[87] *Id.* at 15 (citing CAISO Business Practice Manual for Reliability Requirements § 8.7.2).

problematic because it is ambiguous, and that CAISO has encountered problems because of this lack of specificity.[88]

86. With regard to NRG's argument that CAISO should exempt maintenance outages that are submitted between four to seven days in advance from non-availability charges, CAISO claims that this is merely another attempt by NRG to promote weaker availability standards. CAISO states that its proposal incents resources to plan maintenance outages in advance and to procure substitute capacity when they seek outages on relatively short notice. CAISO states that adopting NRG's proposal could jeopardize reliability and would not hold resources accountable for fulfilling their resource adequacy obligations.[89]

c. Commission Determination

87. The Commission is not persuaded by NRG's assertion that flexible capacity should be able to satisfy availability requirements with self-schedules. As CAISO notes, the existing must-offer obligations for resources providing flexible resource adequacy capacity require those resources to bid that capacity economically. Thus, it is appropriate for CAISO to measure availability by a resource's adherence to that standard. Moreover, when flexible capacity self-schedules, much of the benefit that capacity provides to the grid is negated because a lack of economic bids impairs CAISO's ability to efficiently dispatch the resources it needs to reliably operate the grid.

88. The Commission appreciates SoCal Edison's arguments that many factors may cause flexible resources to self-schedule, and that those should be thoroughly studied. The Commission encourages CAISO to work with stakeholders to continue to improve its tariff and address any potential inefficiencies. However, while flexible resources' reasons for self-scheduling may be complex, CAISO needs these resources to bid economically in order for CAISO to fully realize the benefits of a separate category of flexible resource adequacy capacity. We find that by assessing availability incentive payments and non-availability charges as proposed, the RAAIM will provide clear incentives for these resources to bid economically into CAISO's markets.

89. We agree with CAISO that SoCal Edison's concerns about multiple must-offer obligations and request for a sunset date on the flexible capacity must-offer obligation are beyond the scope of this proceeding. The flexible capacity must-offer obligation was previously approved by the Commission, and CAISO does not propose to alter those existing tariff provisions in the instant proceeding.

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[88] *Id.* at n.37.

[89] *Id.* at 34.

90. The Commission will not direct CAISO to include lack of fuel during a system emergency as a "nature of work" exemption, as requested by SDG&E. Such an exemption would diminish incentives for resources to make arrangements for sufficient fuel, as well as loosen standards for resource adequacy availability.

91. CAISO agrees with SWP's proposed clarification to allow a participating load that is also pumping load to provide resource adequacy capacity by submitting non-spin ancillary service bids in the day-ahead market. Therefore the Commission directs CAISO to include this clarification in its compliance filing, to be submitted within 30 days from the date of this order.

92. The Commission agrees with CAISO's proposal to replace an existing tariff provision stating that resource adequacy substitutions are allowed "prior to the close of the day-ahead market" with a tariff provision stating that such substitutions are allowed in accordance with the timeline specified in the business practice manual. The detailed timeline for substitution of resource adequacy capacity is more appropriately classified as an implementation detail. It is analogous to other timelines currently in the business practice manuals such as the election of metered-subsystem status[90] because it does not significantly effect the terms and conditions of service as, for example, the timeline for the billing and settlement process does. Moreover, we agree with CAISO that the existing tariff provision is vague, and that CAISO's modification will clarify the substitution process, which is already contained in greater detail in the business practice manual.

93. The Commission accepts CAISO's proposal to no longer exempt maintenance outages submitted less than seven days in advance from the availability calculations. As CAISO notes, its tariff provides numerous opportunities to avoid non-availability charges through substitution and the timely submittal of maintenance outages. CAISO's proposal is therefore not unduly burdensome. CAISO's proposal also encourages the timely submission of maintenance outages, and encourages the acquisition of adequate substitute capacity.

7. <u>Effective Dates and Request for Waiver</u>

94. We find good cause exists to grant CAISO's request for waiver of the section 35.3 of the Commission's rules to permit the proposed revisions to become effective on January 10, 2016 and March 1, 2016, as requested by CAISO. We find that this waiver is appropriate due to the complexity of the changes being proposed herein, as well as the amount of time that will be necessary for CAISO and market participants to design, develop, implement, and test these systems and processes.

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[90] *See* CAISO Tariff § 4.9.13.

<u>The Commission orders</u>:

(A) CAISO's proposed tariff revisions are hereby conditionally accepted, effective March 1, 2016, as requested, with the exception of the revisions to sections 40.2.4, 40.10.5.1(a), and 40.10.5.1.1, which are hereby conditionally accepted to become effective January 10, 2016, as requested, as discussed in the body of this order.

(B) CAISO is hereby directed to submit a compliance filing, within 30 days of the date of this order, as discussed in the body of this order.

(C) CAISO is hereby directed to submit an informational report, within 12 months of date of implementation of the RAAIM, as discussed in the body of this order.

(D) CAISO is hereby directed to submit an informational report, within 12 months of date of implementation of the non-availability charge, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.