

162 FERC ¶ 61,278
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Kevin J. McIntyre, Chairman;
Cheryl A. LaFleur, Neil Chatterjee,
Robert F. Powelson, and Richard Glick.

California Independent System Operator Corporation Docket No. ER18-728-000

ORDER ACCEPTING TARIFF AMENDMENTS

(Issued March 29, 2018)

1. On January 29, 2018, California Independent System Operator Corporation (CAISO) filed, pursuant to section 205 of the Federal Power Act (FPA),¹ a proposed amendment to modify the methodology used to evaluate the availability of resource adequacy resources and to calculate the resulting charges and payments under its Resource Adequacy Availability Incentive Mechanism (RAAIM). In this order the Commission accepts CAISO's proposed tariff amendments, effective April 1, 2018, as requested.

I. Background

2. Since 2006, CAISO and the local regulatory authorities within its balancing authority area have jointly administered the resource adequacy program. Under the resource adequacy program, there are three types of resource adequacy capacity: local, system (collectively, generic capacity), and flexible. The resource adequacy program requires that load serving entities procure sufficient system capacity to meet their forecasted load plus a reserve margin, as established by their local regulatory authority. In addition, load serving entities are required to procure local area capacity² and flexible resource adequacy capacity, as determined by CAISO and adopted by their local regulatory authorities. The local component is based on the minimum capacity needed in identified transmission constrained load pockets as determined in CAISO's local capacity

¹ 16 U.S.C. § 824d (2012).

² Local area capacity is capacity which is capable of contributing toward capacity requirements in a transmission-constrained area and is also located within that area.

technical analysis. Flexible capacity refers to resources that can ramp up and down quickly and can start and shut down potentially multiple times per day in order to manage variability.³

3. The CAISO tariff requires scheduling coordinators for resource adequacy resources to provide monthly and annual resource adequacy plans to CAISO. The CAISO tariff also imposes must-offer obligations on resource adequacy resources to ensure that resource adequacy capacity is made available to the CAISO markets. Generic resource adequacy capacity can satisfy must-offer obligations through economic bids or self-schedules. Flexible resource adequacy capacity must be made available through economic bids to satisfy must-offer obligations.⁴

4. CAISO states that the RAIM is a bid-based mechanism to incent resources providing resource adequacy capacity to meet their must-offer obligations and to provide substitute capacity if these resources go on forced outage. CAISO states that, through its settlements process, CAISO conducts an availability assessment under which it assesses charges (non-availability charges) and makes payments (availability incentive payments) to “resources providing resource adequacy capacity, based on the average of their availability over each calendar month.”⁵ CAISO explains that the RAIM evaluates availability based on the extent to which resource adequacy resources meet their must-offer obligations in each availability assessment hour. The RAIM evaluates whether the capacity offered is: (1) system and/or local resource adequacy capacity (collectively, generic RA capacity); (2) flexible resource adequacy capacity (flexible RA capacity); or (3) overlapping resource adequacy capacity (overlapping RA capacity), i.e., megawatts of capacity counted as both generic and flexible RA capacity.⁶

5. The RAIM availability assessment hours differ for generic RA capacity and the three categories of flexible RA capacity. For generic RA capacity, availability assessment hours are a pre-defined set of five consecutive hours that apply to each weekday, with the exception of federal holidays. The five assessment hours correspond to the operating period in which high demand conditions typically occur, and are

³ As discussed further below, CAISO tariff sections 40.9.3 and 40.10.3 establish three categories of flexible RA capacity.

⁴ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,002, at P 3 (2015) (Phase 1A Order). The Commission approved RAIM as part of its approval of the CAISO’s Phase 1A reliability services initiative tariff amendment filing.

⁵ CAISO Transmittal at 2.

⁶ *Id.*

established by CAISO prior to each resource adequacy year. Flexible RA capacity has different availability assessment hours depending on the category of flexible capacity. For category 1 (base) flexible RA capacity, the availability assessment hours are 17 consecutive hours from 5:00am through 10:00pm that apply every day, including weekends and holidays. For category 2 (peak) flexible RA capacity, the availability assessment hours are five consecutive hours that are determined by CAISO on a seasonal basis. For category 3 (super-peak) flexible RA capacity, the availability assessment hours are five consecutive hours that apply to each weekday, with the exception of federal holidays. For overlapping RA capacity, where a resource provides both generic and flexible RA capacity and has an overlapping obligation in a given hour, CAISO assesses availability based on the type of capacity with the more restrictive must-offer obligation.⁷

6. Through the RAIM, CAISO uses a single availability assessment to measure each resource's availability performance during the pre-determined assessment hours and then calculates a resource-specific monthly availability percentage. If a resource falls below 94.5 percent of its must-offer obligation regarding the three types of capacity, it pays a non-availability charge for the month; if the resource exceeds 98.5 percent (up to a ceiling of 100 percent) of its must-offer obligation, it is eligible for an availability incentive payment for the month; and if the resource meets between 94.5 and 98.5 percent of its must-offer obligation, it neither receives an availability incentive payment nor pays a non-availability charge for the month.⁸

II. CAISO's Filing

7. CAISO states that shortly after the start of binding RAIM settlements, some market participants raised questions about the validity of their non-availability charges and availability incentive payments.⁹ CAISO explains that, after additional examination, it realized that the approved RAIM methodology was over-weighting flexible RA capacity and devaluing generic RA capacity in a manner that skewed the results of the

⁷ *Id.* at 3-4.

⁸ The greater the deviation above or below those percentage levels, the larger the availability incentive payment or non-availability charge, respectively, will be. The assessment of non-availability charges fund the availability incentive payments entirely.

⁹ Although the RAIM went into effect on November 1, 2016, for five months thereafter (i.e., until April 1, 2017), CAISO calculated non-availability charges and availability incentive payments for advisory purposes only. During that period, CAISO published the calculated charges and payments but did not include them on financial settlement invoices.

RAAIM assessment and produced financial settlement outcomes that were inconsistent with the overarching goals of the RAAIM and the reliability services initiative. CAISO states that it further realized that this suboptimal measurement approach degraded resource adequacy resources' incentives to meet their generic RA capacity offer obligations and to provide substitute capacity.¹⁰

8. CAISO asserts that the existing methodology has two interrelated problems that result in imprecise measurement of resource adequacy capacity availability. CAISO states that the methodology: (1) weights all hours with a must-offer obligation equally in assessing availability even though different categories of resource adequacy capacity are assessed over a different number of hours; and (2) assesses availability in megawatt-hours (MWh) even though resource adequacy is a capacity product measured in megawatts (MW).

9. According to CAISO, treating all hours equally has the unintended consequence of placing far greater weight on one MW of flexible RA capacity than is placed on one MW of generic RA capacity in the availability calculation when all of the hours are summed together over the month. This is because one MW of flexible capacity must be available for 17 hours to meet its must-offer obligation while one MW of generic capacity only needs to be available for five hours to meet its must-offer obligation. In other words, because there are more hours of flexible RA capacity obligations, one MW of flexible RA capacity will have a larger effect on the availability calculation than one MW of generic RA capacity. CAISO explains that this places substantially more weight on a day with flexible RA capacity relative to a day with only generic RA capacity, which dilutes a resource's incentive to make its capacity available to the CAISO during peak load hours. CAISO asserts that, by over-weighting the performance of flexible RA capacity, the approved formula essentially discounts the performance of system capacity during peak weekday periods, i.e., periods when capacity is most critical to maintaining system reliability.¹¹

10. CAISO states that the second issue, related to the first, is that the existing availability assessment is essentially a function of the number of hours or MWhs, not MWs. CAISO explains that the resource-specific monthly average availability percentage calculated under the existing RAAIM methodology scales the MWs available to capture the relative availability of capacity (i.e., the percentage available) rather than the absolute availability of capacity (i.e., the MWs available). Specifically, the current

¹⁰ CAISO Transmittal at 5.

¹¹ CAISO Transmittal at 6-7; CAISO Resource Adequacy Availability Incentive Mechanism Modification: Draft Final Proposal (Draft Final Proposal) at 7-8.

calculation scales the availability requirement and the resource's performance based on the average MW with a must-offer obligation in a given availability assessment hour. CAISO states that this is significant because resource adequacy is a capacity product measured in terms of MWs, not MWhs.¹²

11. CAISO explains that its current methodology assesses a monthly penalty by using a series of hourly assessments to scale capacity. Specifically, the current calculation scales the availability requirement and the resource's performance based on the average MW with a must-offer obligation in a given availability assessment hour. CAISO states that this scaling issue creates the potential for a resource to "shrink" its MW value and penalty by increasing the hours within the assessment. CAISO states that the current methodology creates an incentive to simply designate one MW of flexible capacity, which can significantly reduce exposure to availability charges and reduce the incentive for resources to follow their must-offer obligations and provide substitute capacity during outages.¹³

12. CAISO proposes to resolve the issues identified above by making three modifications to the RAIM calculation. First, CAISO proposes to calculate availability as a MW value each day, and for each product, instead of MW by hour. CAISO states that instead of treating each MW of each hour equally as is done currently, it will modify its methodology to treat each MW equally in its availability assessment. Second, CAISO proposes to calculate a resource's average monthly availability percentage using separately calculated availability assessments for (1) generic RA capacity and (2) flexible RA capacity.¹⁴ Third, CAISO proposes to eliminate the scaling issue by calculating RAIM non-availability charges and availability incentive payments based on the number of days in a month that the resource has an obligation to provide generic RA and/or flexible RA, relative to the total number of possible availability assessment days in the month for each resource adequacy capacity type.¹⁵ CAISO states that, since the new RAIM methodology will calculate availability separately for generic and flexible RA capacity, the most reasonable solution is to calculate generic and flexible RA capacity

¹² CAISO Transmittal at 7.

¹³ Draft Final Proposal at 15.

¹⁴ Availability in an hour that includes both types of capacity will continue to be accounted for as flexible RA capacity.

¹⁵ CAISO provided several hypothetical examples showing how it will apply the new RAIM methodology in its Draft Final Proposal at 12-30.

incentives separately, based on the number of days over which a product could be provided.¹⁶

13. CAISO asserts that its proposal improves the existing RAAIM methodology by ensuring that flexible RA capacity is no longer disproportionately weighted in the availability calculation and by removing the need to spread MWs across hours to determine the average availability across a month. Additionally, CAISO states that the proposed amendments reflect that resource adequacy involves the provision of capacity (i.e., MWs) and therefore can be a daily product but not an hourly product. CAISO states that under the separate availability assessments, flexible RA capacity will no longer be given greater weight in the availability calculation and will not affect the incentive to provide generic RA capacity. Thus, CAISO explains, these changes will recognize the importance and value of each type of capacity. The changes will also (1) ensure that capacity is neither over-valued nor devalued; (2) allow a resource's capacity to be considered for availability according to the correct magnitude based upon the resource's showing; and (3) ensure that generic and flexible MWs receive the correct weight in the availability calculation.¹⁷

14. CAISO states that the revised methodology will scale the non-availability charges and availability incentive payments separately based on the number of days the resource was available as generic RA capacity and as flexible RA capacity, relative to how many days it could have been available as those separate types of capacity. CAISO explains that this will eliminate opportunities for a resource providing a significant quantity of generic RA capacity to reduce its RAAIM penalty exposure by providing a minimal quantity of category 1 flexible RA capacity. CAISO states that these modifications should incentivize resources to procure substitute capacity for generic RA capacity outages during peak periods.

15. CAISO adds that it does not propose to change the RAAIM formula's current use of a single availability assessment for generic and flexible RA capacity during periods where the two types of capacity overlap, i.e., where a single MW of capacity is both flexible RA capacity and generic RA capacity during the same hour. CAISO explains that under its Commission-approved approach, RAAIM non-availability charges are based on the overlapping RA capacity that has the highest must-offer obligation. Thus, if a resource has 100 MW of generic capacity and 50 MW of that capacity is also flexible capacity, CAISO would assess the availability of that resource based on it providing

¹⁶ CAISO Transmittal at 10-11.

¹⁷ CAISO Transmittal at 12; Draft Final Proposal at 13.

50 MW of generic capacity and 50 MW of flexible capacity. CAISO states that this ensures that a MW of overlapping RA capacity is only counted once.¹⁸

16. Additionally, CAISO states that there is no basis in this proceeding to change from a single non-availability penalty price for all products, as is reflected in the existing RAAIM methodology, to a methodology where each resource adequacy product has its own RAAIM penalty price. CAISO argues that establishing separate prices is not practicable. CAISO states that load-serving entities procure the resource adequacy products pursuant to bilateral contracts outside of the CAISO markets. As a result, CAISO states, it does not have sufficient information regarding the prices of flexible RA capacity, and thus, is unable to develop a separate price for such product that would be supported by substantial evidence.¹⁹

17. CAISO also proposes several minor amendments to clarify the existing RAAIM tariff language. First, the existing tariff language states that, if a resource is committed to provide both generic RA capacity and flexible RA capacity in a month but does not provide both for the full month, CAISO will prorate those amounts of capacity for the month.²⁰ CAISO proposes to further clarify this proration provision by replacing the phrase “does not” with “is not committed to.” CAISO states that this modification will clarify that the trigger for proration is not the failure to provide committed RA capacity but is rather the resource’s commitment to provide one type of capacity during one part the month and another type of capacity for other parts of the month. Second, CAISO proposes to delete outdated tariff language regarding the initial RAAIM advisory period, which expired April 1, 2017.²¹

18. Finally, CAISO proposes to implement a new RAAIM advisory period beginning on April 1, 2018 (i.e., the proposed effective date of the tariff amendments in this filing), and ending on May 30, 2018. During this two-month advisory period, as was the case with the advisory period that expired April 1, 2017, CAISO will calculate and publish non-availability charges and availability incentive payments on settlement statements, but will not include those charges on financial settlement invoices.²²

¹⁸ CAISO Transmittal at 16.

¹⁹ *Id.* at 14.

²⁰ CAISO Tariff section 40.9.4(c).

²¹ CAISO Transmittal at 12.

²² *Id.* at 12-13.

III. Notice of Filing and Responsive Pleadings

19. Notice of CAISO's filing was published in the Federal Register, 83 Fed. Reg. 5092 (2018) with interventions and protests due on or before February 20, 2018. NRG Power Marketing and GenOn Energy Management, LLC, the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside California, Northern California Power Agency, the City of Santa Clara, California, Pacific Gas and Electric Company, and San Diego Gas & Electric Company filed timely motions to intervene. Motions to intervene and protests were filed by Public Citizen, Inc. (Public Citizen) and Southern California Edison Company (SoCal Edison). The CAISO Department of Market Monitoring (DMM) filed a motion to intervene and comments. On February 28, 2018, CAISO filed a motion for leave to answer and answer of the protests and comment.

A. Protests and Comments

20. SoCal Edison opposes CAISO's retention of a single penalty assessment for overlapping generic and flexible capacity. SoCal Edison characterizes the RAIM method to calculate resource availability as the "worse of" method and states that the "worse of"-based penalty mechanism would be applied to both generic and flexible capacity even when one of those services is fully provided.²³ According to SoCal Edison, this process would result in a perverse incentive because if a resource is penalized for not providing one service and that penalty is applied to both services, notwithstanding the fact that the second service was indeed provided, then in future time periods, resources would not have any incentive to provide the second service. SoCal Edison states that, in this example, the resource should be credited for providing the second service and not be penalized.²⁴

21. SoCal Edison also disagrees with CAISO's assertion that there is no basis to change the existing single availability price. SoCal Edison argues that, due to lower energy prices in general, the single penalty mechanism may further undermine the ability of resources to recover their fixed costs and provide necessary long-term resource adequacy. Therefore, according to SoCal Edison, it is necessary to split the existing penalty mechanism by attributing non-performance penalties to generic and flexible capacity separately, thereby allowing resources the ability to recover their fixed costs in accordance with the service provided.²⁵

²³ SoCal Edison Comments at 2.

²⁴ *Id.* at 2-3.

²⁵ *Id.* at 3-5.

22. Public Citizen comments that CAISO provides no details on exactly what the financial impact of these calculation errors have had on the electric rates paid by California consumers. Public Citizen asserts that, if the existing CAISO filed rate is producing errors that result in unjust and unreasonable rates, then the Commission should initiate a proceeding under section 206 of the FPA²⁶ to investigate and document the problematic outcomes of the existing filed rate and establish a refund effective date. Public Citizen states that consumers that pay the CAISO filed rate through their monthly electric utility bills have a right under the FPA to a hearing to determine whether or not the underpayment of non-performance penalties by certain, unidentified market participants has impacted their electric rates, and, if such a hearing determines they were overcharged, then they are entitled to a refund.²⁷

23. The DMM comments that, given the importance of ensuring that capacity procured under the resource adequacy program is actually available, it supports the modifications as an improvement over the current RAIM approach. However, the DMM recommends that CAISO closely monitor the impact and effectiveness of the new RAIM approach as it is implemented, and be prepared to modify or enhance the methodology as needed.²⁸

B. Answer

24. CAISO states that SoCal Edison's argument that CAISO's approach penalizes capacity that simultaneously has both a generic and flexible RA capacity obligation has already been addressed by the Commission. CAISO notes that the Commission approved this approach based on a finding that alternative approaches might not create sufficient incentives to submit a flexible bid.²⁹ CAISO also states that any approach where a resource receives "partial credit" for fulfilling one of its overlapping capacity obligations requires establishing a relative value for generic capacity compared to flexible capacity.³⁰ CAISO states that this amounts to establishing separate penalty prices for generic and flexible RA capacity and is not feasible. CAISO notes that SoCal Edison argues that changes in the capacity market have made it necessary to have different prices for generic

²⁶ 16 U.S.C. § 824e (2012).

²⁷ Public Citizen Comments at 2-3.

²⁸ DMM Comments at 1.

²⁹ Phase 1A Order, 153 FERC ¶ 61,002 at P 63.

³⁰ CAISO Answer at 5.

and flexible capacity. However, CAISO states that SoCal Edison does not explain how these changes have made its existing tariff provisions unjust and unreasonable.³¹

25. In response to Public Citizen, CAISO explains that RAAIM payments and charges shift funds between units providing resource adequacy capacity, so there is no direct ratepayer impact. CAISO states that its filing is based on a recognition that the current rules were not setting the best incentives for resource adequacy capacity and could be exploited in an extreme case, but it did not intend to suggest it is aware that such activity has occurred. Finally, CAISO asserts that Public Citizen's concern over the existing rule does not speak to whether its filing is just and reasonable, and protesting the CAISO filing only exacerbates existing problems by freezing the status quo.³²

26. In response to the DMM's recommendation that CAISO closely monitor the impact and effectiveness of the new RAAIM approach as it is implemented, and that CAISO prepare to modify or enhance the methodology as needed, CAISO answers that it will evaluate the revised RAAIM on an ongoing basis and will consider further refinements, as experience warrants. CAISO states that it will conduct its post-implementation analysis in parallel with any similar independent DMM monitoring of the issue.³³

IV. Discussion

A. Procedural Matters

27. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2017), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

28. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2017), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We accept CAISO's answer because it has provided information that assisted us in our decision-making process.

B. Commission Determination

29. We find that CAISO's proposed amendments are just and reasonable and not unduly discriminatory or preferential and therefore we accept them effective April 1, 2018, as requested. We find that CAISO's proposal will allow for improved accuracy in

³¹ *Id.* at 5-6.

³² *Id.* at 3-4.

³³ *Id.* at 7.

determining RA availability by calculating availability as a MW value instead of MW by hour, calculating monthly availability separately for generic and flexible RA capacity, and scaling non-availability charges and availability incentive payments based on the number of days in a month the resource has an obligation to provide generic RA and/or flexible RA, relative to the total number of possible availability assessment days in the month for each resource adequacy capacity type.

30. We find that CAISO's proposed methodology will improve incentives for resource adequacy resources to meet their must-offer obligations and provide substitute capacity in the event of an outage. The new methodology should therefore help ensure that capacity procured under the resource adequacy program is actually available, and will eliminate opportunities for resources to reduce their exposure to availability charges by adding flexible RA capacity, as resources can no longer rely on the performance of minimal amounts of flexible RA capacity to offset the non-performance of large amounts of generic RA capacity.

31. We do not agree with SoCal Edison that we should require CAISO to split the existing RAIM penalty mechanism by attributing non-performance penalties to generic and flexible capacity separately. While SoCal Edison's suggestion might provide targeted incentives and may support resources' ability to recover costs, it could also potentially create additional complexity or dampen incentives for resources with overlapping capacity to bid economically and provide flexible capacity. Additionally, as CAISO explains, CAISO does not have sufficient information on bilateral resource adequacy capacity contracts to determine appropriate penalty and incentive prices for each product. As discussed above, we find CAISO's proposal in this proceeding to be just and reasonable.

32. Public's Citizen's protest also does not persuade us to reject CAISO's filing or initiate a proceeding under FPA section 206. As an initial matter, Public Citizen does not challenge CAISO's proposed revisions. Rather, Public Citizen argues that if the existing CAISO filed rate is producing errors that result in unjust and unreasonable rates, then the Commission should initiate a section 206 proceeding to investigate and document the problematic outcomes of the existing filed rate on retail ratepayers and establish a refund effective date. As CAISO notes in its answer, RAIM does not have direct effects on retail ratepayers, and the record in this proceeding does not indicate the existing rules have been exploited. We thereby decline Public Citizen's request to initiate a section 206 proceeding, and find Public Citizen's comments expressing its concerns with the existing rate to be outside the scope of this proceeding addressing CAISO's section 205 filing.

The Commission orders:

CAISO's proposed tariff amendments are hereby accepted, effective April 1, 2018, as requested, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.