

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**California Independent System) Docket No. ER19-951-000
Operator Corporation)**

**MOTION FOR LEAVE TO FILE ANSWER AND ANSWER OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION TO
COMMENTS AND PROTESTS**

The California Independent System Operator Corporation (CAISO)¹ submits this motion for leave to file answer and answer to comments and protests filed in this proceeding.² The CAISO's January 31, 2019, filing (January 31 Tariff Amendment) proposes to add additional details regarding the commitment cost enhancements phase 3 (CCE3) tariff changes that the Commission has accepted³ and to fill in gaps that arise at the intersection between CCE3 and the CAISO's reliability services initiative. The January 31 Tariff Amendment also refiles part of the original CCE3 tariff amendment regarding generator design capabilities registered in the CAISO's Master File.

Two parties – Pacific Gas and Electric Company (PG&E) and NRG Power Marketing LLC (NRG) – filed substantive responses to the January 31 Tariff Amendment. PG&E does not protest the filing but submitted comments that raise concerns with three areas of the proposed tariff amendment. NRG filed a

¹ Capitalized terms not otherwise defined herein have the meanings set forth in appendix A to the CAISO tariff.

² The following entities filed motions to intervene in the proceeding: California Department of Water Resources State Water Project; Cities of Anaheim, Azusa, Banning, Colton, Pasadena and Riverside, California; City of Santa Clara, California; Modesto Irrigation District; Northern California Power Agency; NRG Power Marketing LLC; Pacific Gas and Electric Company; and Southern California Edison Company.

³ The CAISO filed its CCE3 tariff changes on March 23, 2018, in Docket No. ER18-1169. *Cal. Indep. Sys. Operator Corp.*, 163 FERC ¶ 61,211 (2018).

limited protest opposing the CAISO's proposal to refile the generator design capabilities tariff language.

PG&E's critical comments and NRG's protest are unfounded. The Commission should approve the January 31 Tariff Amendment as filed with an April 1, 2019, effective date. This will enable the CAISO to implement the new CCE3 methodology without any of the existing ambiguities the January 31 Tariff Amendment seeks to remedy.

I. Motion for Leave to File Answer

Under Rules 212 and 213 of the Commission's Rules of Practice and Procedure,⁴ the CAISO respectfully requests waiver of Rule 213(a)(2)⁵ to permit it to answer certain issues in the protests filed in this proceeding. Good cause for the waiver exists because this limited answer will aid the Commission in understanding the issues in this proceeding, inform the Commission in the decision-making process, and help to ensure a complete and accurate record in this proceeding.⁶

II. Answer

A. The CAISO's Terminology Clarifications on Resource Adequacy Exemptions for Renewable Resources Maintain Existing Treatment and Comply Fully with Order No. 764

Under the CAISO tariff, resources providing resource adequacy capacity generally are subject to both: (a) automatic bids generated by the CAISO when

⁴ 18 C.F.R. §§ 385.212, 385.213.

⁵ 18 C.F.R. § 385.213(a)(2).

⁶ See, e.g., *Equitrans, L.P.*, 134 FERC ¶ 61,250 at P 6 (2011); *Cal. Indep. Sys. Operator Corp.*, 132 FERC ¶ 61,023 at P 16 (2010); *Xcel Energy Servs., Inc.*, 124 FERC ¶ 61,011 at P 20 (2008).

they fail to meet their bidding obligations; and (b) charges under RAAIM⁷ for failing to meet resource adequacy commitments because, e.g., the resource is on outage. Certain resource types, including some resources that produce electricity from renewable sources, are exempt from bid generation and RAAIM under CAISO tariff sections 40.6.8 and 40.9.2, respectively.

As explained in the January 31 Tariff Amendment, the CAISO tariff has three primary defined terms for renewable resources.⁸ A given resource's treatment under the tariff can depend on the category into which the resource falls. The following describes the relationship among the three terms:

- *A Variable Energy Resource* under the CAISO tariff has the same meaning as it does under Commission Order No. 764 – it is a “device for the production of electricity that is characterized by an Energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.”⁹
- An *Eligible Intermittent Resource* is a variable energy resource with a participating generator agreement (or similar agreement) with the CAISO.
- A *Participating Intermittent Resource* is an eligible intermittent resource whose output the CAISO can forecast under the CAISO's technical standards published in Appendix Q of the tariff.

The January 31 Tariff Amendment proposes clarifying terminology to reflect how the bid generation and RAAIM exemptions currently apply. Section

⁷ RAAIM as defined in Appendix A to the CAISO tariff: “Resource Adequacy Availability Incentive Mechanism.”

⁸ January 31 Tariff Amendment, at 16. The January 31 Tariff Amendment does not propose any changes to the definition of these terms

⁹ See *Integration of Variable Energy Resources*, Order No. 764, FERC Stats. & Regs. ¶ 31,331, at P 210 (Order No. 764), *order on reh'g and clarification*, Order No. 764-A, 141 FERC ¶ 61,232 (2012), *order on clarification and reh'g*, Order No. 764-B, 144 FERC ¶ 61,222 (2013); *Cal. Indep. Sys. Operator Corp.*, 146 FERC ¶ 61,205, at P 17 (2014); CAISO tariff, Appendix A, “Variable Energy Resource.”

40.6.8(e) of the CAISO tariff uses the variable energy resource term to refer to the bid generation exemption. The January 31 Tariff Amendment proposes instead to use the eligible intermittent resource term. Similarly, section 40.9.2(b)(1) uses the variable energy resource term to describe the RAAIM exemption. The January 31 Tariff Amendment proposes instead to exempt participating intermittent resources and “Eligible Intermittent Resources in the process of qualifying to become a Participating Intermittent Resource.”¹⁰

PG&E objects to these changes in terminology, arguing they represent arbitrary and undue discrimination against types of variable energy resources, notably run-of-river hydro, whose output the CAISO does not forecast.¹¹ Instead of accepting the proposed revisions in sections 40.6.8 and 40.9.2, PG&E asks the Commission to order the CAISO to develop forecasting methodologies for run-of-river hydro.¹²

The CAISO’s terminology clarifications: maintain existing application of the bidding and RAAIM exemptions for wind and solar resources; follow established CAISO policy; and remain squarely within Order No. 764. PG&E’s request to order the CAISO to forecast the production of run-of-river hydro resources is outside the scope of the existing CAISO tariff amendments. Any further discussion about developing new forecasting methodologies for resources that

¹⁰ January 31 Tariff Amendment, at 16.

¹¹ PG&E also claims that the CAISO tariff stakeholder process leading to this filing did not provide sufficient time for stakeholder feedback and that the CAISO failed to consider PG&E’s positions. When the CAISO submitted the January 31 Tariff Amendment it was fully aware of PG&E’s perspective on these issues. The CAISO’s disagreement with PG&E on this matter is not the result of indifference or inattention to stakeholder opinion. See PG&E’s comments at 3-4.

¹² PG&E comments at 3 & 6.

are not solar or wind are a separate issue from the January 31 Tariff Amendment and should be pursued on their own timeframe.

The proposed bid generation updates in section 40.6.8 have no practical impact because the variable energy resource and eligible intermittent resource terms are essentially interchangeable. Every variable energy resource providing resource adequacy capacity to the CAISO will have executed some form of a participating generator agreement with the CAISO. The CAISO does not foresee that any resources currently exempt from bid generation would be subject to bid generation if this update were approved. The CAISO proposes this change solely to use a specific term in place of a more generic term.

The January 31 Tariff Amendment similarly seeks to maintain the status quo for the RAIM exemption in section 40.9.2. To date, the CAISO has limited application of the RAIM exemption in section 40.9.2(b)(1) to wind and solar resources because those are the only resource types it has chosen to treat as variable energy resources under Order No. 764 and are the only resources using renewable sources of energy for which the CAISO has approved forecasting methodologies. The current use of the variable energy resource term in the RAIM exemption provision has fostered confusion because it creates the impression that any resource that argues it meets the CAISO tariff Appendix A definition of a variable energy resource will be exempt from RAIM.

In the CAISO's Order No. 764 compliance process it intended to use the term within the same context the Commission used the term in that order. In that order the Commission clarified that it found it necessary to define the variable

energy resource term to identify in the *pro forma* Large Generator Interconnection Agreement those resource that are required to provide the transmission provider the data it needs to develop power production forecasting.¹³ The Commission did not limit the definition to solar and wind resources but instead left it to the transmission provider to determine whether their individual systems necessitate power production forecasting for other types of renewable resources. The Commission explicitly declined

to establish minimum reporting requirements for non-wind and non-solar [variable energy resources] and [left it] to the public utility transmission providers and [variable energy resources] to negotiate what data are necessary for developing and deploying power production forecasting for these resources, taking into account the size and configuration of the [variable energy resource], its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area.¹⁴

No such negotiated agreements have been established with run-of river hydro resources. The Commission further provided that if the parties are unable to reach such agreements, the “transmission provider may submit a filing requesting the data and demonstrating how it will be used for power production forecasting pursuant to section 205 of the FPA.”¹⁵ The CAISO has not proposed any such requirements. Therefore, under both under Order No. 764 and the CAISO tariff, the CAISO cannot treat run-of-river hydro like a variable energy resource.

¹³ Order No. 764 at PP 210 and 212.

¹⁴ *Id.* at P 213.

¹⁵ *Id.* at n.228.

The January 31 Tariff Amendment explained the critical link between the RAAIM exemption and the forecasts. Once the CAISO generates a forecast for a resource approximately eight to nine minutes before a market interval, the resource will show as 100 percent available for purposes of RAAIM as long as it meets that forecast. Resource adequacy resources that perform above 98.5 percent are eligible for RAAIM incentive payments. One of the CAISO's concerns under the initial RAAIM design was that including these forecasted resources under RAAIM would reward them unduly and leave fewer funds available in the incentive payment pool to reward resource adequacy resources whose measured availability under RAAIM is more at risk. Viewed this way, the RAAIM exemption in 40.9.2(b)(1) does not exclude variable energy resources for their protection but instead maintains equity for thermal and hydro resources providing resource adequacy capacity. If the CAISO does not forecast for a type of variable energy resource, then that equity concern is removed. The existing tariff references to the generic variable energy resource term was a drafting error inconsistent with the basic policies underlying RAAIM. The January 31 Tariff Amendment merely seeks to correct that error by making it clear that the exemption is meant to apply only to resources whose output the CAISO forecasts and those that are in the process of working with the CAISO to establish a resource-specific forecast.

PG&E's more general concern about the CAISO not having a forecast methodology for run-of-river hydro does not merit delaying approval of these clarifications. The CAISO does not oppose discussing that issue but is

concerned that it cannot be addressed as readily as PG&E suggests. Forecasting run-of-river hydro poses different, and more complex, technical challenges than those posed by forecasting solar and wind resources. The CAISO and its current vendors do not currently hold the expertise to meet these challenges. Assuming the CAISO were to overcome that constraint, it still would need to ensure that the forecasts for these other resource types can be utilized within the CAISO market structure and market processes. Moreover, as indicated by the Commission in Order No. 764, the CAISO would have to submit those requirements in a tariff amendment under Section 205 of the Federal Power Act.¹⁶ The scope of these changes merits a dedicated stakeholder process to ensure adequate consideration so that the CAISO can develop just and reasonable and not unduly discriminatory requirements to propose to the Commission.

To ensure that a potential stakeholder process is considered relative to other desired policy initiatives, the CAISO suggests that PG&E submit this matter for inclusion in the CAISO's 2020 Policy Roadmap process.¹⁷ As part of that process, the CAISO posted its 2020 Draft Policy Initiatives Catalog on March 1, 2019, with comments requested by March 20, 2019. The Commission should not allow PG&E to circumvent the CAISO's robust policy planning initiative process, in which the CAISO is able to prioritize with all stakeholders the initiatives it adopts each year.

¹⁶ *Id.*

¹⁷ Information on the Policy Roadmap process is available at: <http://www.aiso.com/informed/Pages/StakeholderProcesses/AnnualPolicyInitiativesRoadmapProcess.aspx>.

B. A One-Month Delay in Availability of Opportunity Cost Adders Could Create a Corresponding One-Month Extension to the Contractual Limitations Transition Period

The centerpiece of the CCE3 initiative is allowing use-limited resources with qualifying use limitations to receive opportunity cost adders in the CAISO markets. The CAISO will allow contractual limitations to serve as the basis of opportunity cost adders for an initial three-year transition period. The January 31 Tariff Amendment proposes that the opportunity cost adders “will not be available until the first day of the month following the effective date of this tariff section.”¹⁸ PG&E argues this amendment essentially is a one-month delay in CCE3 implementation that should come with a corresponding one-month extension to the three-year contractual limitations transition period.¹⁹ The CAISO agrees that this minor requested one-month extension to the term of eligible contract limits reasonably could be seen as a logical result of the one-month delay in availability of opportunity costs. The CAISO further agrees, if so ordered on compliance, to make this minor administrative update to its tariff.

C. The January 31 Tariff Amendment Does Not Alter the Basic Bidding Obligations for Resource Adequacy Resources

The January 31 Tariff Amendment explained that section 40.6.4 needed to be revised in anticipation of the CCE3 tariff provisions becoming effective because its discussion of use-limited resource bidding obligations is obsolete under the CCE3 design. Much of the substance in section 40.6.4, however, must remain to apply to resources that would lose their use-limited resource status

¹⁸ Proposed CAISO tariff section 30.4.1.1.6.1.2.

¹⁹ PG&E comments at 5.

under CCE3 (because they do not have eligible use limits) but still require special resource adequacy bidding obligations (due to other types of limits that justify an exemption from the bid generation rules).

PG&E objects to one element of how the CAISO has carried over these existing provisions. The existing language, which was not updated in the earlier CCE3 amendment, requires use-limited resources to “submit Self-Schedules or Bids in the Day-Ahead Market for their expected available Energy or their expected as-available Energy, as applicable, in the Day-Ahead Market and RTM.” Under the revision this obligation would apply to any “Hydroelectric Generating Unit, Pumping Load, Non-Dispatchable Resource, or Conditionally Available Resource that provides Resource Adequacy Capacity”²⁰ Additionally, the CAISO proposes to add the phrase – “up to the quantity of Resource Adequacy Capacity the resource is providing” – to the end of this sentence. PG&E opposes these changes, arguing they impose significant new obligations and are problematic because some of the covered resource types “do not always have the ability to provide bids or self-schedules up [to] the amount of Resource Adequacy Capacity provided.”²¹

Here PG&E opposes tariff clarifications that actually maintain the status quo; the CAISO is not proposing a new bidding obligation. On the face of the revised tariff language, the obligation to bid “expected available Energy or their expected as-available Energy” no longer would apply to use-limited resources

²⁰ Proposed CAISO tariff section 40.6.4.1.

²¹ PG&E comments at 6.

and instead would apply to the four above-noted resource types. These four resource types, however, are resources that historically have qualified as use-limited resources but no longer will be under the CCE3 changes. The resources that must bid their expected energy under the revised section 40.6.4 are thus resources that already face this obligation under the existing section 40.6.4.

Finally, adding the phrase “up to the quantity of Resource Adequacy Capacity the resource is providing,” is clarifying language that protects the covered resources, rather than burdens them with new requirements. Today, the tariff provision could be read as obligating the covered resources to bid beyond the portion of their capacity shown as resource adequacy capacity. This additional phrase merely clarifies these covered resources, like all other resources providing resource adequacy capacity, do not have a must-offer obligation beyond however much capacity they provide the CAISO as demonstrated through the resource adequacy plan submission processes.

D. The CAISO’s Revisions to the Master File Tariff Provision Provides Market Participants With Needed Guidance

The CAISO’s initial CCE3 proposal in Commission Docket No. ER18-1169 proposed two key changes in the tariff provision governing how generating resources register their operational characteristics in the CAISO Master File:

1. Allow resources to register two sets of values in Master File for several operational characteristics; one set would reflect the resource’s preferred operating parameters and another set would reflect what the CAISO could dispatch the resource under stressed system conditions.
2. Clarify what the values in Master File represent. The CAISO tariff historically has required that the values must “be accurate and actually based on physical characteristics of the resources” The CAISO proposed to require that the information “be an

accurate reflection of the design capabilities of the resource and its constituent equipment when operating at maximum sustainable performance over Minimum Run Time, recognizing that resource performance may degrade over time.”

The Commission rejected both proposed changes. The first was rejected on substantive grounds and the second because the tariff records for that change were intertwined inextricably with the rejected aspects of the first proposed change. The January 31 Tariff Amendment proposes only this second element of the initial CCE3 filing.

NRG protests the CAISO’s resubmission of the master file clarifications. In NRG’s view the proposed language is ambiguous because it requires submission of a single value that reflects both a resource’s original design parameters and how that resource’s performance has degraded over time.²² Further, NRG submits that even if the provision is read to allow a single value that reflects degraded performance, the tariff language still “does not answer the question as to whether those degraded characteristics should reflect operating the unit to its breaking point under emergency conditions or operating the unit in a manner to promote its long-term viability.”²³ NRG asserts these purportedly unresolved questions were less problematic under the initial CAISO proposal because a resource could be more conservative by registering the original design value irrespective of performance degradation as the value to be used in stressed conditions and register a more realistic value as its preferred parameter.

²² NRG protest, at 4.

²³ *Id.* at 4-5.

Without the opportunity to submit dual entries to Master File, NRG claims that the CAISO's proposed language "becomes a potentially irreconcilable ambiguity for market participants."²⁴

The points NRG raises may have formed constructive feedback during the stakeholder process leading to the January 31 Tariff Amendment and might have assisted the CAISO in making minor incremental drafting improvements to what it proposes. The fact that NRG has pointed out ways the language could be improved in no way establishes that the CAISO's proposed language is irredeemably flawed. The CAISO's proposed language is just and reasonable and provides meaningful direction to market participants.

There is no reasonable way of reading the revision other than to mean that the single value for a parameter should reflect the design capability as that design capability may have degraded over time. If the value simply were meant to be the initial design value without regard to the resource's vintage, then the CAISO's addition of the phrase "recognizing that resource performance may degrade over time" would serve no purpose. Under standard interpretational rules, a statute (or its equivalent, such as a tariff) must be interpreted to give all parts of the text meaning.²⁵ Further, NRG's claim of an ambiguity as to whether the degraded characteristics should reflect operation to a unit's breaking point as compared to operation to promote the unit's long-term viability presents a false

²⁴ *Id.* at 3.

²⁵ *E.g., Hibbs v. Winn*, 542 U.S. 88, 101 (2004) (noting that the "rule against superfluities" requires a statute to be interpreted to give meaning to all provisions and not render any part superfluous); *La. Pub. Serv. Comm'n v. Entergy Services, Inc.*, 157 FERC ¶ 63,018 at P 79 n.145 (2016) (citing *Hibbs*).

choice. Neither applies, nor does the text of the proposed provision suggest either is a choice. The text refers only to “design capabilities.” However those capabilities may have degraded over time is the value to be submitted to Master File.

III. Severability

The January 31 Tariff Amendment noted that it contained three discrete elements that are substantively severable.²⁶ Those three elements are: (1) removing CAISO authority to make intra-monthly changes to a resource’s opportunity cost calculations; (2) all other revisions regarding opportunity costs and resource adequacy; and (3) resource characteristics revisions in CAISO tariff section 4.6.4.

NRG’s limited protest relates exclusively to the third category and can be considered separately from the rest of the January 31 Tariff Amendment. The proposed clarifications on bid generation and RAAIM exemptions fall into the second category (*i.e.*, opportunity cost and resource adequacy changes unrelated to timing of changes in cost calculations). The CAISO now recognizes that the bid generation and RAAIM exemption changes are also severable and not interdependent or interrelated with the rest of the changes proposed in the January 31 Tariff Amendment, and thus form a fourth category of substantively distinct tariff revisions proposed in the January 31 Tariff Amendment.

²⁶ January 31 Tariff Amendment, at 3.

IV. Conclusion

The January 31 Tariff Amendment provides needed clarifications and gap-filling details critical to helping ensure successful implementation of the CCE3 initiative. The Commission should accept these tariff revisions without condition or modification.

Respectfully submitted,

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Dated: March 8, 2019

CERTIFICATE OF SERVICE

I certify that I have served the foregoing document upon the parties listed on the official service list in the captioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California, this 8th day of March, 2019.

/s/ Grace Clark
Grace Clark