

165 FERC ¶ 61,116  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;  
Cheryl A. LaFleur and Richard Glick.

California Independent System  
Operator Corporation

Docket No. ER18-2366-000

ORDER ACCEPTING PROPOSED TARIFF AMENDMENTS

(Issued November 14, 2018)

1. On August 31, 2018, the California Independent System Operator Corporation (CAISO) filed, pursuant to section 205 of the Federal Power Act (FPA),<sup>1</sup> proposed amendments to its Open Access Transmission Tariff (tariff) related to its provision of reliability coordinator (RC) service in the Western Interconnection. Specifically, CAISO proposes new and revised tariff provisions, including: (1) new tariff section 19 containing the provisions specific to RC service; (2) a *pro forma* RC service agreement to be entered into by RC customers receiving RC service from CAISO; and (3) a rate schedule to implement the RC service charge. In this order, we accept CAISO's proposed revisions to implement RC service, with the revisions related to the RC service agreement and tariff provisions necessary to onboard RC customers<sup>2</sup> to become effective on November 15, 2018, and with the revisions related to the RC rate schedule<sup>3</sup> to become effective on July 1, 2019, as requested.

---

<sup>1</sup> 16 U.S.C. § 824d (2012).

<sup>2</sup> CAISO states that sections 19.1 to 19.5 and 19.8 to 19.16, and the revisions to Appendix A and Appendix B are necessary to support customers' execution of the RC service agreement and their participation in the onboarding process leading up to CAISO becoming the RC of record.

<sup>3</sup> CAISO states that sections 11.20.9, 14.7, 19.6, 19.7, and Appendix F contain the rate and settlement provisions necessary for CAISO to collect the costs of providing RC service.

## I. Background

2. The North American Electric Reliability Corporation (NERC) is the Electric Reliability Organization certified by the Commission under FPA section 215<sup>4</sup> to develop and enforce reliability standards for the bulk power system. NERC delegates compliance monitoring and enforcement activities to seven regional entities, including the Western Electricity Coordinating Council (WECC), which is the regional entity that ensures compliance with reliability standards for the entire Western Interconnection. Various other entities in the NERC functional model are required to comply with the Commission-approved reliability standards. In the NERC functional model, the RC is the entity that has the highest level of authority responsible for the reliable operation of the bulk electric system.<sup>5</sup> The RC has the wide area view of the bulk electric system and the operating tools, processes, and procedures necessary to administer its authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations through instructions issued to participating balancing authorities and transmission operators.

3. Pursuant to its Rules of Procedure, NERC certifies RCs to ensure that an RC applicant has the tools, training, and procedures to perform its role and comply with applicable reliability standards.<sup>6</sup> RCs conduct real-time monitoring of the bulk power system consistent with applicable reliability standards developed by NERC and approved by the Commission. RCs are responsible for continuously assessing reliability and coordinating emergency operations among the operating entities, including balancing authorities and transmission operators, within the region and across regional boundaries. Two RCs currently exist in the Western Interconnection: (1) Peak Reliability, which is the RC for most of the Western Interconnection, and (2) Alberta Electric System Operator, which provides RC services in parts of Canada. On January 2, 2018, CAISO notified Peak Reliability that it would cease taking RC service from Peak Reliability after September 2, 2019. CAISO intends to be certified by NERC and WECC as an RC and plans to become the RC of record for all transmission operators within its balancing

---

<sup>4</sup> 16 U.S.C. § 824o (2012).

<sup>5</sup> See FERC, *Reliability Primer 65* (2016), <https://www.ferc.gov/legal/staff-reports/2016/reliability-primer.pdf> (identifying the 12 types of entities that register and are responsible for compliance with one or more of the reliability standards).

<sup>6</sup> See NERC, Rules of Procedure § 500 (July 19, 2018), [https://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC\\_ROP\\_Effective\\_20180719.pdf](https://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC_ROP_Effective_20180719.pdf) (discussing organization registration and certification).

authority on July 1, 2019. CAISO will also begin offering RC service throughout the Western Interconnection starting in September 2019.

## II. CAISO's Filing

4. In the instant filing, CAISO proposes tariff provisions related to its impending provision of RC service.<sup>7</sup> CAISO states that it plans to provide RC service, pursuant to NERC reliability standards, to transmission operators within its balancing authority area and to other balancing authorities in the Western Interconnection, including transmission operators within those balancing authority areas.<sup>8</sup> CAISO represents that the proposal is the result of an extensive stakeholder effort and will provide an opportunity for customers to obtain NERC-mandated RC service at a reasonable cost.<sup>9</sup>

5. CAISO, as the RC, will perform the specific tasks and functions applicable to an RC pursuant to the NERC reliability standards. These tasks and functions include providing outage coordination services; performing operations planning analysis; conducting real-time assessments; monitoring and wide area situational awareness; administering a system operating limit methodology; approving system restoration plans and facilitating system restoration drills; and issuing operating instructions to RC customers with respect to monitored facilities. Under the proposal, RC customers agree to exchange data, operating plans and procedures, studies, and reports with CAISO; follow CAISO's RC operating instructions with respect to monitored transmission facilities; and provide CAISO with information that it may reasonably request in relation to major incidents.<sup>10</sup>

---

<sup>7</sup> CAISO proposes the following additions to its tariff: section 19 containing the provisions specific to RC service; section 7 in Appendix F setting forth the rate for RC service; and the *pro forma* RC service agreement in Appendix B. CAISO also proposes to revise existing sections 11.20.9 and 14.7 to account for CAISO's provision of RC service and add new definitions to Appendix A.

<sup>8</sup> CAISO notes that participation in the Western Energy Imbalance Market (EIM) does not require customers to receive RC services from CAISO.

<sup>9</sup> CAISO Transmittal at 2-3.

<sup>10</sup> *Id.* at 9-10; Cal. Indep. Sys. Operator Corp., CAISO eTariff, Reliability Coordinator, Roles and Responsibilities (0.0.0), § 19.5 (CAISO Tariff).

6. CAISO states that it will also offer certain optional supplemental services to RC customers, which will be separate from the RC tasks and functions required by NERC. CAISO explains that its supplemental services will initially include, but will not be limited to, hosted advanced network applications and physical security reviews.<sup>11</sup>

7. CAISO states that, while its proposed tariff revisions contain general language as to the obligations of CAISO and RC customers, RC service is governed by NERC reliability standards. According to CAISO, the standards and related requirements for providing RC services are subject to change and, because of this, most of the modifications and additions proposed in the instant filing relate to how it will determine and allocate costs for RC service.<sup>12</sup> CAISO states that it will establish an RC oversight committee and related public charter to provide RC customer input and guidance to CAISO management on various issues relating to the RC function, including operational issues and overarching RC policies and procedures.<sup>13</sup>

8. CAISO states that it will work with each RC customer to establish the service date and onboarding process. CAISO states that prior to the initial service date, it will engage each RC customer in functional and system integration testing, shadow operations, and other activities in order to confirm that the RC customer is able to meet the readiness criteria set forth in the relevant Business Practice Manual. CAISO explains that no later than 30 days prior to the RC service date, CAISO and the RC customer will exchange a readiness statement to indicate that they are prepared to move forward with a change in the RC service provider on the service date.<sup>14</sup> CAISO states that it is targeting a service date of July 1, 2019 for the first group of RC customers, which will at a minimum consist of the transmission operators in the CAISO balancing authority area and may also include a few entities external to the CAISO balancing authority area. CAISO states that it will integrate additional RC customers outside of its balancing authority area beginning September 1, 2019, with the majority of external RC customers expressing a preference

---

<sup>11</sup> CAISO Transmittal at 9-10; CAISO Tariff, Reliability Coordinator, Supplemental Services (0.0.0), §§ 19.3-19.4.

<sup>12</sup> CAISO Transmittal at 3.

<sup>13</sup> *Id.* at 26; CAISO Tariff, Reliability Coordinator, Reliability Coordinator Oversight (0.0.0), § 19.11.

<sup>14</sup> CAISO Transmittal at 8-9; CAISO Tariff, Reliability Coordinator, Access to RC Services (1.0.0), §§ 19.2(b)(7)-(9).

for November 1, 2019. CAISO notes that thereafter it will target April 1 of each year as the service date for subsequent customers.<sup>15</sup>

9. CAISO requests that the Commission make its proposed tariff amendment effective in two parts. CAISO requests a November 15, 2018 effective date for the tariff provisions that are necessary to support customers' execution of the RC service agreement and their participation in the onboarding process.<sup>16</sup> CAISO requests a July 1, 2019 effective date for the tariff provisions related to charges and settlement for RC service.<sup>17</sup> CAISO states that the later effective date will allow it to continue to settle the RC charges that it currently receives from Peak Reliability up until CAISO becomes the RC provider of record.<sup>18</sup>

10. CAISO requests a waiver of the Commission notice requirements to allow the tariff revisions to go into effect July 1, 2019, more than 120 days after the submittal of its filing. CAISO states that good cause exists to grant the waiver because the requested effective date will provide CAISO and RC customers with the necessary certainty to implement RC service as proposed, while also allowing CAISO to continue to settle RC charges with Peak Reliability up until CAISO becomes the RC provider.<sup>19</sup>

**A. Reliability Coordinator Service Agreement**

11. CAISO states that all balancing authorities, and transmission operators within those balancing authorities, that take RC service from CAISO will be required to execute an RC service agreement. CAISO notes that the service agreement primarily consists of references to the new tariff provisions for RC service set forth in the instant filing. CAISO represents that a tariff-based approach is consistent with how CAISO provides all of its services to customers, and is consistent with how other regional

---

<sup>15</sup> CAISO Transmittal at 28; CAISO Tariff, Reliability Coordinator, Access to RC Services (1.0.0), §§ 19.2(b)(4), 19.2(b)(6).

<sup>16</sup> These tariff provisions include sections 19.1 to 19.5, sections 19.8 to 19.16, the Appendix A definitions, and the *pro forma* RC service agreement in Appendix B.

<sup>17</sup> These tariff provisions include sections 19.6 and 19.7, revised sections 11.20.9 and 14.7, and the RC rate schedule in Appendix F.

<sup>18</sup> CAISO Transmittal at 29.

<sup>19</sup> *Id.* at 30.

transmission organizations and independent system operators provide RC service to their RC customers.<sup>20</sup>

12. CAISO states that all transmission operators within the CAISO balancing authority area will be expected to execute the RC service agreement by the end of 2018.<sup>21</sup> CAISO further states that balancing authorities and transmission operators outside of CAISO who wish to participate in the onboarding on or after September 1, 2019, must initiate the service agreement execution process with CAISO by November 2018 and execute the service agreement no later than December 31, 2018. CAISO represents that this timeline will facilitate the exchange of information that will be used in the set-up process and preparation for integration testing. In addition, CAISO states that the executed service agreements will define the scope of the CAISO RC service area, which is essential for the NERC/WECC certification process and determination of the seams with other RC service areas.<sup>22</sup>

13. CAISO states that the service agreement establishes the type of RC customer—balancing authority, transmission operator, or both—and will obligate CAISO to provide RC service and the RC customer to pay the RC charges set forth in the applicable provisions of the CAISO tariff. CAISO proposes that each RC customer list, in the service agreement, the transmission operators and transmission owners that it represents. It explains that this requirement will ensure that all transmission owners are accounted for in each of the balancing authorities taking RC service from CAISO. CAISO represents that the service agreement also includes common general contractual terms appropriate for the provision of RC services, as well as specific provisions for federal entities.<sup>23</sup>

---

<sup>20</sup> *Id.* at 7-8; CAISO Tariff, Reliability Coordinator, Access to RC Services (1.0.0), § 19.2(b)(1)-(3), app. B.22 Reliability Coordinator Services Agreement (0.0.0).

<sup>21</sup> CAISO states that transmission operators, including those within the CAISO balancing authority area, must execute an RC service agreement because transmission operators have specific obligations to provide data to CAISO and will need to follow procedures not applicable to balancing authorities. CAISO notes that transmission operators will settle charges for RC service either directly with CAISO or with their balancing authority. CAISO Transmittal at 26-27.

<sup>22</sup> *Id.* at 28-29.

<sup>23</sup> *Id.* at 27; CAISO Tariff, app. B.22 Reliability Coordinator Services Agreement (0.0.0).

14. CAISO states that the initial term of the service agreement will be 18 months. It explains that, thereafter, the service agreement will renew annually for consecutive one-year terms until terminated by the RC customer or CAISO pursuant to the terms of the service agreement. CAISO proposes that a customer may terminate its agreement with CAISO, without penalty, by giving no less than 12 months' written notice to CAISO after completion of the initial term, provided that the notice aligns with the annual entry and exit window for customers. CAISO states that it anticipates having one window per year, in April, for entering and existing customers. It represents that a fixed window will allow for adequate preparation and an appropriate WECC recertification process, and recognizes the seasonal challenges of winter and summer months.<sup>24</sup>

**B. Reliability Coordinator Service Rates and Charges**

15. CAISO states that it will recover the costs of providing RC service to RC customers through an RC service charge. CAISO states that it will leverage its existing rate design model and activity-based costing system to determine the amount it will charge for RC service. According to CAISO, this is the same model it uses to determine the grid management charges and the EIM administrative fees.<sup>25</sup>

16. CAISO explains that it will develop an annual RC funding requirement to calculate and assess the costs associated with providing RC service. CAISO proposes to calculate the funding requirement as the product of CAISO's overall annual revenue requirement multiplied by the percentage of costs attributable to providing RC service (the RC percentage). CAISO states that, going forward, the RC percentage will be updated regularly as part of the triennial cost of service study (that the CAISO performs as part of its grid management charges calculation process) where it will analyze the hours and resources tracked against the RC-related activity based costing task codes. However, because the next triennial study is due to be performed in 2020, CAISO explains that it has developed two initial RC percentages to use in the interim. CAISO explains that it will use an RC percentage of two percent from July 1, 2019 to September 1, 2019, a time period in which CAISO expects to be offering RC services to transmission operators within its own balancing authority area, as well as a few external entities that CAISO anticipates will be ready to begin taking RC services. Beginning September 1, 2019, which is the earliest date that CAISO expects to begin providing RC services to additional entities outside of its balancing authority area, the RC percentage

---

<sup>24</sup> CAISO Transmittal at 27; CAISO Tariff, app. B.22 Reliability Coordinator Services Agreement (0.0.0), art. III.

<sup>25</sup> CAISO Transmittal at 11.

will increase to nine percent.<sup>26</sup> CAISO explains that it determined these initial RC percentages by performing a modified interim cost of service study to estimate the direct and indirect time and expense necessary for CAISO to perform the RC services and functions.<sup>27</sup>

17. To recover the RC funding requirement, CAISO proposes to calculate an RC services rate (RC Rate) annually, effective January 1 of each year. The RC Rate will be equal to the annual RC funding requirement, less any known minimum RC service charge for the applicable year,<sup>28</sup> divided by the sum of (1) the annual net energy for load (NEL), in megawatt-hours (MWh), of all balancing authorities with load and transmission operators,<sup>29</sup> and (2) the annual net generation (NG), in MWh, for all generators connected to generation-only balancing authorities and transmission operators that will take service for the applicable year.<sup>30</sup> CAISO will then multiply either the RC customer's NEL (for entities with load) or NG (for generation-only balancing authorities) by the RC Rate to

---

<sup>26</sup> *Id.* at 12; CAISO Tariff, app. F Rate Schedules (21.0.0), Schedule 7 Reliability Services Charge. CAISO estimates this amount to be \$18,455,000. *See* CAISO Filing, Attachment F, Reliability Coordinator Rate Design, Terms and Conditions Draft Final Proposal at 25.

<sup>27</sup> CAISO Transmittal at 11-12.

<sup>28</sup> CAISO proposes a \$5,000 annual charge for RC customers with no net energy for load and no net generation, or whose RC service charge for the year works out to be less than \$5,000. CAISO states that, even if an RC customer has no load or generation, it will still require constant, although minimal, administrative attention. *Id.* at 16; CAISO Tariff, app. F Rate Schedules (21.0.0), Schedule 7 Reliability Services Charge.

<sup>29</sup> NEL is a NERC-defined term that refers to balancing authority area generation (less station use), plus energy received from other balancing authority areas, less energy delivered to balancing authority areas through interchange. It includes balancing authority area losses but excludes energy required for storage at energy storage facilities. NEL is a way to estimate load in the absence of specific access to metered load data. CAISO Tariff, app. A Definitions, Net Energy for Load (0.0.0).

<sup>30</sup> NG refers to the net power available from a generating facility to be fed into the power system at the high side of the generating facility transformer. NG is equal to gross generation minus the generator's internal power usage. CAISO states that this term is similar to NEL in that it is the net energy from a generation-only balancing authority that is available to serve load. CAISO Tariff, app. A Definitions, Net Generation (0.0.0).

calculate the amount for which CAISO will invoice the RC customer.<sup>31</sup> CAISO states that it is requiring each RC customer to submit its total annual NEL or NG for the previous year to CAISO on an annual basis.<sup>32</sup> It states that Peak Reliability currently uses NEL as the billing determinant for assessing the costs of its RC services.

18. CAISO proposes to continue to settle and invoice RC-related charges to entities within the CAISO balancing authority area based on the existing procedures set forth in its tariff with some minor modifications. In particular, for entities within the CAISO balancing authority area, it will determine the RC services charge by multiplying the RC Rate by the entity's share of the total NERC/WECC metered demand for the CAISO balancing authority area. CAISO notes that the definition of NEL will equal NERC/WECC metered demand for the CAISO balancing authority area.<sup>33</sup>

19. CAISO notes that, because Peak Reliability uses NEL as the billing determinant, it currently charges generation-only balancing authorities a *de minimis* annual charge, equal to the lower of \$10,000 or 0.015 percent of the final funding amount. CAISO states that it considered a flat rate in setting its RC charges. However, CAISO concluded that it is appropriate to allocate RC costs to generation-only balancing authorities volumetrically based on NG.<sup>34</sup> According to CAISO, generation-only balancing authorities rely on the bulk electric system to deliver all the energy that they generate, and RCs are responsible for overseeing the reliable operation of the system. In addition, CAISO states that the physical limitations of the bulk electric system are defined by equipment capabilities across balancing authorities, and the energy produced by generation affects these limits. Therefore, CAISO states, NG is an effective and reasonable measure of a generation-only

---

<sup>31</sup> CAISO Transmittal 14-15; CAISO Tariff, app. F Rate Schedules (21.0.0), Schedule 7 Reliability Services Charge.

<sup>32</sup> CAISO Transmittal at 20-21; CAISO Tariff, Reliability Coordinator, Provisions of Settlement Data by RC Customers (0.0.0), § 19.6.

<sup>33</sup> CAISO Transmittal at 15-16; CAISO Tariff, CAISO Settlements and Billing, Reliability Coordinator Services Charge (1.0.0), § 11.20.9.1, app. F Rate Schedules (21.0.0), Schedule 7 Reliability Services Charge.

<sup>34</sup> CAISO also argues that Peak Reliability's rate has no bearing on the justness and reasonableness of CAISO's proposed rate, considering that Peak Reliability never filed its rate for Commission review and there is no public record of any process employed by Peak Reliability to determine the allocation for generation-only balancing authorities.

balancing authority's contribution to potential reliability issues requiring RC monitoring and response.<sup>35</sup>

20. In addition, CAISO states that its proposed RC service rate for generation-only balancing authorities is just and reasonable because the rate treats all balancing authorities similarly, is consistent with cost causation principles, and recognizes the benefits generation-only balancing authorities receive from RC services. CAISO acknowledges that each balancing authority, regardless of whether it has load, will inherently have differences, but contends that it would be difficult and costly for CAISO to precisely account for all of these differences in its rate design. CAISO also notes that all balancing authorities, whether traditional or generation-only, require RC service, and argues that the RC service that it will provide fulfills that obligation for generation-only balancing authorities just as it does for traditional balancing authorities. CAISO states that NG and NEL represent reasonable proxies for a balancing authority's relative contribution to the costs incurred by CAISO, and CAISO's proposed rate would appropriately charge balancing authorities for RC service on a volumetric basis (i.e., balancing authorities with less generation or load will pay less for RC service).<sup>36</sup>

### **C. Supplemental Services Charges**

21. CAISO states that the charges for supplemental services will be separate from the RC service charge, and will be based on the direct costs CAISO incurred to provide the service. CAISO estimates that hosted advance network application service customers will incur a one-time charge of \$35,000 to \$70,000, depending upon the number of RC customers that elect to take the service. CAISO further states that it will also recover a \$45,000 annual fee per customer to cover software license fees and CAISO support. CAISO states that the charges for physical security reviews, and any similar supplemental services that CAISO elects to offer, will be established as the actual cost incurred by CAISO.<sup>37</sup> CAISO states that it will publish actual charges for supplemental services in the relevant Business Practice Manual to allow for charges to be adjusted based on CAISO's costs.<sup>38</sup>

---

<sup>35</sup> CAISO Transmittal at 17-18.

<sup>36</sup> *Id.* at 18-19.

<sup>37</sup> CAISO notes that it will require customers that elect to take the physical security review service to provide a \$50,000 deposit. *Id.* at 24.

<sup>38</sup> *Id.* at 19-20; CAISO Tariff, Reliability Coordinator, Supplemental Services – HANA Services Charge (0.0.0), Supplement Services – Physical Security Review Charge (0.0.0), §§ 19.8, 19.9.

### **III. Notice and Responsive Pleadings**

22. Notice of CAISO's filing was published in the *Federal Register*, 83 Fed. Reg. 45,425 (2018), with interventions and protests due on or before September 21, 2018.

23. Timely motions to intervene were filed by NV Energy, Inc., PacifiCorp, Modesto Irrigation District, Idaho Power Company, City of Santa Clara, California, Southern California Edison Company, NRG Power Marketing LLC, the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California, Western Area Power Administration, Snohomish County Public Utility District No. 1, Powerex Corp., Western Power Trading Forum, Imperial Irrigation District, Northern California Power Agency, American Wind Energy Association, and the California Department of Water Resources State Water Project. Timely motions to intervene and comments or protests were filed by Calpine Corporation (Calpine), Avangrid Renewables, LLC (Avangrid), Griffith Energy LLC (Griffith), Los Angeles Department of Water and Power (LADWP), NaturEner USA, LLC (NaturEner), Salt River Project Agricultural Improvement and Power District (Salt River Project), Arlington Valley, LLC (Arlington Valley), Capital Power Corporation (Capital Power), Natural Resources Defense Council (NRDC), Balancing Area of Northern California (BANC), Arizona Public Service Company (APS), Portland General Electric Company (Portland General), Gridforce Energy Management, LLC (Gridforce), Bonneville Power Administration (Bonneville), and Western Interconnection Regional Advisory Board (WIRAB). On September 26, 2018, City Attorney's Office - San Francisco (San Francisco) filed a motion to intervene out-of-time.

24. On October 9, 2018, CAISO filed an answer to the comments and protests. On October 25, 2018, Avangrid filed an answer to CAISO's answer. On October 26, 2018, Gridforce and NaturEner separately filed answers to CAISO's answer, and Avangrid filed an errata to clarify a statement in its October 25 answer.

#### **A. Protests and Comments**

25. Many commenters support CAISO's proposed tariff amendments.<sup>39</sup> In addition, APS requests that CAISO clarify the use of the term Default Megawatt (MW) in the proposed tariff provisions to ensure that RC customers have a clear understanding of the inputs to the CAISO RC invoicing process.<sup>40</sup> APS also requests that CAISO clarify

---

<sup>39</sup> Bonneville Comments at 2-3; LADWP Comments at 3; NRDC Comments at 2; BANC Comments at 4; APS Comments at 3; Salt River Project Comments at 4; Portland General Comments at 3; WIRAB Comments at 5.

<sup>40</sup> APS Comments at 3-4 (citing the proposed CAISO Tariff section 19.6(c) and the *pro forma* RC service agreement in Appendix B).

whether the proposed CAISO tariff section 19.16 applies to RC customers located outside of the CAISO balancing authority area. APS explains that the proposed tariff provision could create confusion as to whether external RC customers would be subject to instructions from CAISO that are initiated to comply with California environmental requirements.<sup>41</sup> NRDC recommends that the Commission direct WIRAB to provide ongoing review and advice regarding the competency and performance of all RC providers in the Western Interconnection, including CAISO. NRDC also states that the Commission should ensure that CAISO, and any other RC in the Western Interconnection, take several actions, such as employing certain system modeling and monitoring tools, to fulfill the necessary functions of the RC and respond to changing grid conditions in the Western Interconnection.<sup>42</sup> WIRAB identifies three key principles that any RC operating in the Western Interconnection should support or provide for in its governance documents: (1) transparent decision-making by the RC; (2) independent decision-making by the RC; and (3) meaningful input and advice from WIRAB. WIRAB states that it has been working with CAISO in an effort to incorporate these principles into the CAISO RC oversight committee charter.<sup>43</sup>

26. Several entities protest CAISO's proposed volumetric charge assessed to generation-only balance authorities based on NG, as opposed to imposing a minimum charge or using NEL. In general, protestors' arguments fall into four major categories: (1) CAISO's proposal deviates from FPA section 215 and Order No. 672;<sup>44</sup> (2) CAISO's proposal results in end-users paying twice for RC service; (3) CAISO's proposal is inconsistent with cost causation principles; and (4) CAISO's proposal is unduly discriminatory. First, protestors argue that CAISO's proposal is unjust and unreasonable because it deviates from FPA section 215 and Commission precedent in Order No. 672, which protestors assert establishes NEL as the appropriate methodology for determining the allocation of reliability-associated costs.<sup>45</sup>

---

<sup>41</sup> *Id.* at 4-5.

<sup>42</sup> NRDC Comments at 3-4.

<sup>43</sup> WIRAB Comments at 2.

<sup>44</sup> *Rules Concerning Certification of the Electric Reliability Organization and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 213 (2006), *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>45</sup> Arlington Valley Protest at 3; Avangrid Protest at 6; Capital Power Protest at 4; Griffith Protest at 3; NaturEner Protest at 4-5.

27. Second, protestors argue that an NG methodology is unjust and unreasonable because it double charges end-users for reliability services for energy generated from a generation-only balancing authority, contrary to Order No. 672 and general ratemaking principles.<sup>46</sup> In effect, protestors argue that CAISO will assess a transaction that is sourced from a generation-only balancing authority reliability costs both for its exports from a generation-only balancing authority and its imports to a traditional balancing authority. Calpine, for example, states that adopting only the NEL approach would be appropriate because it would count each kilowatt-hour of electric energy only once, and thus, represents the fairest and most efficient method of allocating costs among end-users and minimizes the possibility of double-counting.<sup>47</sup>

28. Third, protestors also argue that an NG methodology violates cost causation principles because generation-only balancing authorities require less RC service compared to balancing authorities with load, and thus, generation-only balancing authorities are being allocated costs far in excess of the costs that they are causing to be incurred.<sup>48</sup> For example, Gridforce states that, with regard to generation-only balancing authorities, there is no load to monitor, the frequency bias is a fixed value that changes approximately once per year, and generation production data are communicated through area control error parameters and do not necessitate additional data monitoring. Gridforce also emphasizes that RCs do not need to monitor and manage system operating limits exceedance conditions and interconnection reliability operating limits, which generation-only balancing authorities lack.<sup>49</sup> Protestors also contend that CAISO has done no analysis of the relative levels of oversight costs associated with balancing authority areas with or without load.

29. Finally, along similar lines, protestors generally allege that CAISO's proposed use of NG as a billing determinant for generation-only balancing authorities is unduly

---

<sup>46</sup> Arlington Valley Protest at 4-5; Avangrid Protest at 9; Calpine Protest at 5-6; Capital Power Protest at 5; Gridforce Protest at 12-13; Griffith Protest at 4-5; NaturEner Protest at 8.

<sup>47</sup> Calpine Protest at 6 (citing Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 213; *N. Am. Elec. Reliability Corp.*, 116 FERC ¶ 61,062, at P 167 (2006), *order on reh'g & compliance*, 117 FERC ¶ 61,126 (2006), *aff'd sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009)).

<sup>48</sup> Arlington Valley Protest at 2, 4; Avangrid Protest at 10-11; Calpine Protest at 4-5; Capital Power Protest at 4; Gridforce Protest at 5-9; Griffith Protest at 2, 4; NaturEner Protest at 9-10.

<sup>49</sup> Gridforce Protest at 7-8.

discriminatory.<sup>50</sup> For example, Avangrid alleges that having charges based on two different constructs, NEL and NG, is not similar treatment. NaturEner argues that there are material differences in RC oversight of generation-only as opposed to traditional balancing authorities that warrant a different allocation than that proposed. NaturEner and Calpine allege that generators located in generation-only balancing authorities will have to pay RC charges based on all exported energy to other balancing authorities, but competitive generators located in a traditional balancing authority with load would not be assessed charges directly for exported energy. Calpine estimates that this could result in an annual assessment between \$100,000 and \$200,000 for one of its resources.<sup>51</sup>

30. In addition to these arguments, certain protestors allege other flaws in CAISO's proposal. Avangrid asserts that, following Peak Reliability's closure, CAISO will effectively be the only option for RC service in WECC, making balancing authorities captive customers to CAISO. Avangrid states that CAISO is obligated to provide just and reasonable rates to captive customers and asserts that CAISO's proposal fails in that regard.<sup>52</sup> Calpine argues that CAISO's failure to define "generation-only balancing authority" is patently unreasonable and may lead to situations where a single MW of load in a generation-only balancing authority would be enough to make that generation-only balancing authority eligible to be billed on an NEL basis instead of an NG basis.<sup>53</sup>

## **B. Answers**

31. In its answer, CAISO contends that, while the Commission adopted a proposal to allocate NERC administrative costs based on NEL in Order No. 672, such costs are not RC costs, and NERC does not perform an RC function. CAISO also states that the Commission was careful to note in Order No. 672 that, even in the context of allocating

---

<sup>50</sup> Arlington Valley Protest at 2-5; Avangrid Protest at 9-12; Calpine Protest at 7-8; Capital Power Protest at 3-5; Gridforce Protest at 9-14; Griffith Protest at 2-5; NaturEner Protest at 4-10.

<sup>51</sup> Calpine Protest at 7.

<sup>52</sup> Avangrid Protest at 11.

<sup>53</sup> Calpine Protest at 6-7. *See also* NaturEner Protest at 6-7 (arguing that a single MW of load can convert a generation-only balancing authority to a traditional balancing authority, eligible to be billed based on NEL); Gridforce Protest at 11-12 (arguing the same).

NERC charges, alternative proposals could be just and reasonable.<sup>54</sup> Thus, according to CAISO, Order No. 672 does not serve as relevant precedent regarding how RC costs should be allocated.<sup>55</sup>

32. CAISO states that protestors' arguments that the proposal will double charge end-users, and is therefore inconsistent with Order No. 672, is a red herring. CAISO explains that it is seeking to allocate RC costs to entities that specifically cause the costs to be incurred and benefit from the service. CAISO states that, unlike the allocation of NERC administrative costs, allocating RC costs to end-users is neither statutorily required nor relevant here because CAISO is providing RC service to balancing authorities and transmission operators, not end-users. CAISO further states that the fact that its proposal includes a transaction as an export from a generation-only balancing authority and an import to a traditional balancing authority does not result in an impermissible or unjustified double charge. CAISO states, for example, that it is not double counting if a generator pays a wheel out charge to deliver its energy from one balancing authority to another, and the load-serving entity in the other balancing authority incurs a transmission charge for the delivery of such energy within the second balancing authority—according to CAISO, it simply reflects that two separate entities received separate services for the same MWh quantity of energy.<sup>56</sup>

33. CAISO contends that its proposal is not unduly discriminatory because it is based on a substantive distinction between the balancing authorities, either with or without load. Generation-only balancing authorities are in business solely to engage in the export of generation. CAISO states that the NG figure establishes a reasonable means for estimating generation-only balancing authorities' actual use of the RC function, as well as the extent of their benefit from the service.<sup>57</sup> CAISO further states that, in contrast, a traditional balancing authority has both generation and load, and measuring the NEL used by the balancing authority to serve its load provides a reasonable measure for estimating its actual use of the RC function and the benefits it accrues. CAISO also argues that protestors' suggestion that a generation-only balancing authority could add a single MW

---

<sup>54</sup> CAISO Answer at 13 (citing Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 213).

<sup>55</sup> *Id.* at 13-14.

<sup>56</sup> *Id.* at 14-15.

<sup>57</sup> *Id.* at 20-21.

of load to change their RC charge is highly speculative and unlikely to occur given that shouldering load-serving obligations is a major undertaking.<sup>58</sup>

34. In response to arguments that the NG methodology violates cost causation principles, CAISO argues that its proposal treats all balancing authorities on a comparable basis by establishing comparable billing determinants that CAISO can use in its rate formula (i.e., NG and NEL).<sup>59</sup> CAISO states that, if it were to charge based only on NEL, costs would inappropriately shift from generation-only balancing authorities to traditional balancing authorities. According to CAISO, such an allocation would ignore that generation-only balancing authorities are receiving and benefiting from RC services separate and apart from the services provided to traditional balancing authorities.<sup>60</sup> CAISO explains that, in contrast, using NG and NEL as it proposes will reasonably allocate total costs among all balancing authorities. It disputes the contention that generation-only balancing authorities require minimal RC service and points to a table developed during the stakeholder process illustrating that generation-only balancing authorities require CAISO to perform 11 of the 13 core RC services. CAISO argues that the fact that generation-only balancing authorities may require a smaller percentage of services does not support them paying a fixed rate.<sup>61</sup>

35. CAISO also argues that suggestions that it should undertake a separate, detailed analysis of the costs of providing RC service to generation-only balancing authorities are without merit. According to CAISO, there are significant differences even within traditional balancing authorities and generation-only balancing authorities. For example, generation-only balancing authorities vary in size and complexity, and traditional balancing authorities have varying numbers of remedial action schemes, qualified paths, and RC seams. CAISO states that conducting and regularly updating individual studies in order to charge each balancing authority a different rate based on each balancing authority's unique characteristics would lead to frequent changes in billing costs, which was a point of concern in the stakeholder process.<sup>62</sup>

36. Finally, CAISO contends that protestors' estimates regarding how much generation-only balancing authorities would pay per year are not based on actual data and

---

<sup>58</sup> *Id.* at 20.

<sup>59</sup> *Id.* at 4.

<sup>60</sup> *Id.* at 15-16.

<sup>61</sup> *Id.* at 6-8.

<sup>62</sup> *Id.* at 9-11.

use rates higher than those employed in the stakeholder process. For example, CAISO states that Calpine uses \$0.05/MWh in its example calculation, while CAISO estimated \$0.038/MWh for purposes of the stakeholder discussion.<sup>63</sup>

37. In response to APS's requests for clarification, CAISO states that the terms of the RC service agreement require the RC customer to provide an initial MWh amount when the agreement is executed. CAISO explains that it will use that default amount to calculate the initial NEL or NG totals during the RC customer's first year of RC service. After this initial year, CAISO will use the process set forth in CAISO tariff section 19.6(c) to determine the required billing data if the RC customer fails to submit its billing data to CAISO. CAISO states that it does not believe any clarifying tariff changes are necessary and plans to coordinate with APS and other RC customers to ensure they understand how CAISO will implement these tariff provisions. CAISO also clarifies that its proposed tariff section 19.16 does not require RC customers to comply with California state regulations and is not applicable to RC customers.<sup>64</sup>

38. Regarding NRDC's and WIRAB's request that the Commission consider addressing regional oversight and governance issues, CAISO states that it plans to continue to work collaboratively with all potential RC customers, but believes these comments fall outside the scope of the instant proceeding.<sup>65</sup>

39. In response to CAISO's answer, Avangrid states that CAISO has not demonstrated good cause for the Commission to accept CAISO's answer and requests that the Commission reject it.<sup>66</sup> Avangrid restates its claim that CAISO has not met its burden to justify using NG as an alternative to Commission-approved NEL as a cost allocation metric for RC services, and that CAISO has not provided analysis to support the claim that the proposed cost allocation follows cost causation.<sup>67</sup> Avangrid states that under

---

<sup>63</sup> The \$0.038/MWh rate assumes that CAISO provides RC service to a significant portion of the Western Interconnection. Using CAISO's estimated rate, Calpine's generator would pay \$143,304 per year.

<sup>64</sup> CAISO Answer at 24-26.

<sup>65</sup> *Id.* at 27-28.

<sup>66</sup> Avangrid Answer at 2.

<sup>67</sup> *Id.* at 3-6.

CAISO's proposal, Avangrid's annual charge would be significantly higher than that charged by Peak Reliability.<sup>68</sup>

40. In its response to CAISO's answer, Gridforce requests that the Commission reject that answer, arguing that CAISO has not demonstrated good cause for the Commission to accept CAISO's answer.<sup>69</sup> Gridforce further argues that CAISO has used its answer to bolster its proposal beyond what was included in the original filing. Gridforce contends that CAISO's claim that its cost allocation proposal complies with cost causation principles is unsupported, noting that CAISO has failed to submit a cost causation analysis, and that the proposal thus amounts to ratemaking by assumption.<sup>70</sup> Gridforce also argues that CAISO is attempting to shift the burden of submitting cost causation analyses onto the protesting parties, despite the fact that Commission precedent is clear that jurisdictional service providers proposing rates bear the burden of establishing that their proposed rates are just and reasonable.<sup>71</sup> Gridforce disagrees with CAISO's representation that generation-only balancing authorities will face "relatively modest cost increases" under its proposed rates, arguing that CAISO is again making an assumption without engaging in adequate analysis. Finally, Gridforce asserts that CAISO's cost allocation proposal will harm competition and create barriers to new entry.<sup>72</sup>

41. NaturEner also responds to CAISO's answer, arguing that CAISO has not met its burden to prove that the RC services rate proposal is just and reasonable, and that CAISO should use NEL as the basis for generation-only balancing authority RC services rates. NaturEner claims that CAISO has not performed a satisfactory cost causation analysis to demonstrate the level of RC services required of traditional and generation-only balancing authorities. NaturEner also states that no parties filed objections with the Commission to the Peak Reliability funding structure.<sup>73</sup> NaturEner states that its costs would rise under CAISO's proposed rate compared to the *de minimis* charge imposed by Peak Reliability and suggests that CAISO understates the cost increase in its answer. NaturEner further argues that adding one MW of load would require CAISO to provide additional RC services while reducing the RC services charge, which NaturEner suggests

---

<sup>68</sup> *Id.* at 6-7.

<sup>69</sup> Gridforce Answer at 3.

<sup>70</sup> *Id.* at 2-4.

<sup>71</sup> *Id.* at 5-6.

<sup>72</sup> *Id.* at 6.

<sup>73</sup> NaturEner Answer at 3-5.

proves that the proposed rate is unduly discriminatory and not based on sound cost causation principles.<sup>74</sup>

#### **IV. Commission Determination**

##### **A. Procedural Matters**

42. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2018), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

43. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedures, 18 C.F.R. § 385.214(d) (2018), we grant San Francisco's late-filed motion to intervene given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

44. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2018), prohibits an answer to a protest and/or answer unless otherwise ordered by the decisional authority. We accept the answers filed by CAISO, Avangrid, Gridforce, and NaturEner because they have provided information that assisted us in our decision-making process.

##### **B. Substantive Matters**

45. We find that CAISO's proposed tariff amendments to provide RC service, including new tariff section 19, the *pro forma* RC service agreement, and RC rate schedule, are just and reasonable, and not unduly discriminatory or preferential. We agree with CAISO that NEL and NG represent reasonable proxies for a balancing authority's contribution to the costs incurred by CAISO for providing RC service. We also find that CAISO's proposed rate formula will ensure that RC customers taking service from CAISO pay an appropriate portion of the total costs at a level that is at least roughly commensurate with the benefits they receive. We therefore accept those tariff amendments related to the RC service agreement and the onboarding of RC customers,<sup>75</sup>

---

<sup>74</sup> *Id.* at 6-8.

<sup>75</sup> *Supra* note 2.

effective November 15, 2018, as requested, and those tariff amendments related to the RC rate schedule,<sup>76</sup> effective July 1, 2019, as requested.<sup>77</sup>

46. We disagree with protestors that CAISO's proposal is inconsistent with the FPA or Commission precedent. First, protestors' reliance on FPA section 215 and Order No. 672 to assert that NEL is the only Commission-approved methodology for RC service is inapposite. FPA section 215 provides the Commission with authority to certify an Electric Reliability Organization<sup>78</sup> upon finding that certain criteria are met.<sup>79</sup> Most notably, according to protestors, one of these criteria requires that the certified Electric Reliability Organization have rules that "allocate equitably reasonable dues, fees, and other charges among end users for all activities under this section[.]"<sup>80</sup> In Order No. 672, the Commission promulgated regulations pursuant to FPA section 215<sup>81</sup> and addressed this cost allocation requirement, finding NEL to be a "fair and reasonable method" that would minimize the possibility of double counting.<sup>82</sup> However, Order No. 672 relates to the certification of an Electric Reliability Organization and the recovery of costs associated with the Electric Reliability Organization, not to the recovery of costs associated with an RC. Accordingly, we disagree that either FPA section 215 or Order No. 672 dictates the just and reasonable rate methodology for RC service.

---

<sup>76</sup> *Supra* note 3.

<sup>77</sup> We grant CAISO's request for waiver of the Commission's prior notice filing requirement, 18 C.F.R. § 35.3 (2018), to permit the RC rate schedule to be considered more than 120 days in advance of the requested effective date applicable to the start of CAISO offering RC services. Doing so allows CAISO to continue to receive RC service from Peak Reliability as CAISO transitions to serve as an RC itself, and provides potential RC customers with rate certainty as they decide whether to take RC service from CAISO.

<sup>78</sup> 16 U.S.C. § 824o(b).

<sup>79</sup> *Id.* § 824o(c).

<sup>80</sup> *Id.* § 824o(c)(2)(B).

<sup>81</sup> *See* 18 C.F.R. pt. 39 (2018) (rules concerning certification of the Electric Reliability Organization and procedures for the establishment, approval, and enforcement of reliability standards).

<sup>82</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 213.

47. Second, we do not agree with protestors that CAISO's proposed allocation will result in end-users being charged twice for RC service. As CAISO explains, its allocation methodology reflects that two separate RC customers are receiving RC services, and therefore each RC customer is being charged for the RC service that it receives. Accordingly, we conclude that CAISO's proposed allocation methodology will not result in double charging.

48. Further, we are not persuaded by protestors' arguments that CAISO's proposal is inconsistent with cost causation principles. The Commission has said that the principle of cost causation "require[s] that all approved rates reflect to some degree the costs actually caused by the customer who must pay them."<sup>83</sup> The Commission evaluates whether cost allocation is consistent with cost causation by comparing the costs assessed against a party to the burdens imposed or the benefits drawn by that party.<sup>84</sup> In reviewing these decisions, courts "have never required a ratemaking agency to allocate costs with exacting precision."<sup>85</sup> Rather, "it is enough, given the standard of review under the [Administrative Procedure Act], that the cost allocation mechanism not be 'arbitrary or capricious' in light of the burdens imposed or benefits received."<sup>86</sup>

49. In the instant proceeding, no party argues that generation-only balancing authorities do not require RC services or do not benefit from RC services. Rather, protestors assert that CAISO has not justified charging them a rate that they assert will be significantly higher than the rate charged by Peak Reliability. Moreover, protestors argue that the RC services required for generation-only balancing authorities are substantially less burdensome as compared to those of a traditional balancing authority with load. CAISO, however, specifically identifies core services that an RC provides, and explains that traditional balancing authorities and generation-only balancing

---

<sup>83</sup> See, e.g., *Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1368 (D.C. Cir. 2004) (*MISO v. FERC*) (quoting *KN Energy, Inc. v. FERC*, 968 F.2d 1295, 1300 (D.C. Cir. 1992)).

<sup>84</sup> *Id.*

<sup>85</sup> *Id.* at 1369 (citing *Sithe/Independence Power Partners, L.P. v. FERC*, 285 F.3d 1, 5 (D.C. Cir. 2002)). See also *Ill. Commerce Comm'n v. FERC*, 576 F.3d 470, 477 (7th Cir. 2009) (acknowledging that "the Commission does not have to calculate the benefits to the last penny, or for that matter to the last million or ten million or perhaps hundred million dollars[,] but remanding the cost allocation methodology of certain new 500 kV facilities in PJM where the court found that the Commission's decision was not based on substantial evidence).

<sup>86</sup> *MISO v. FERC*, 373 F.3d at 1369.

authorities all use the vast majority of these core services.<sup>87</sup> Furthermore, while generation-only balancing authorities may not use or have system operating limits and interconnection reliability operating limits, the balancing authority's output may have an impact on these limits, and all balancing authorities benefit from the safe and reliable operation of the grid. If balancing authorities did not receive these services, then their ability to export power to load would be directly affected. We therefore find that CAISO provides sufficient evidence to demonstrate that the generation-only balancing authorities will generally benefit from all RC services in a manner that is at least roughly commensurate with the costs that the generation-only balancing authorities will incur under the RC Rate. We conclude that CAISO's proposal ensures that both traditional balancing authorities and generation-only balancing authorities are responsible for paying for the RC services from which they benefit.

50. We similarly dismiss protestors' arguments relating to undue discrimination. Their arguments reflect broad allegations that lack specificity or substantiation, and appear to conflate undue discrimination with cost causation principles and other arguments.<sup>88</sup> We agree with CAISO that billing generation-only balancing authorities based on NG establishes a reasonable means for estimating an RC customer's actual use of RC service as well as their benefit from that service. We further note, as discussed above, that both balancing authorities with and without load receive nearly all the same RC services, and thus, we conclude that charging generation-only balancing authorities a volumetric charge based on the same RC Rate is not unduly discriminatory or preferential.

51. Lastly, we also disagree with Avangrid's argument that generation-only balancing authorities are captive customers. Protestors do not identify any regulatory barriers that would prevent other entities from competing with CAISO in offering RC service, and indeed, Southwest Power Pool, Inc. (SPP) is offering its own RC services in the Western

---

<sup>87</sup> See CAISO Filing, Attachment F, Reliability Coordinator Rate Design, Terms and Conditions: Draft Final Proposal, at 5 (identifying core RC services and the RC customers that require these core RC services). For example, it is undisputed that generation-only balancing authorities generally require outage coordination, next day operations planning analysis, real-time situational awareness, data exchange to support operations planning analysis and real-time assessments, power system network modeling, and unscheduled flow mitigation processes, among other services.

<sup>88</sup> See, e.g., Gridforce Protest at 9-14 (arguing that the filing is unduly discriminatory because it is not consistent with cost causation principles, penalizes generators located in generation-only balancing authorities, results in double charging, and is not based on NEL).

Interconnection.<sup>89</sup> We therefore reject all protests for the reasons discussed above, and accept CAISO's tariff amendments as proposed.

The Commission orders:

CAISO's proposed tariff amendments are hereby accepted for filing, with provisions relating to the RC service agreement and the onboarding of RC customers to become effective November 15, 2018, as requested, and provisions relating to the RC rate schedule to become effective July 1, 2019, as requested, as discussed in the body of this order.

By the Commission. Commissioner McIntyre is not voting on this order.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

---

<sup>89</sup> Protesters acknowledged this possibility in their comments. *See* Calpine Protest at 2; Gridforce Protest at 2; NaturEner Protest at 2 (noting that SPP may offer RC service in the Western Interconnection).