



processes and scheduling coordinators' abilities to recover their costs. PG&E also fails to explain why storage resources are entitled to receive bid cost recovery payments in providing ancillary services or why those payments should be based on resources' default energy bids. The Commission should disregard PG&E's protest and approve the CAISO's tariff revisions as just and reasonable.

**I. Answer**

**A. PG&E's alternative proposal is outside of the Commission's scope of review. The CAISO will consider alternative proposals in its stakeholder initiative.**

Nowhere in its protest does PG&E claim the CAISO's proposed tariff revisions are unjust, unreasonable, or unduly discriminatory. PG&E merely offers that its alternative proposal is "more reasonable."<sup>2</sup> Commission precedent is clear that under Section 205 of the Federal Power Act, "the Commission limits its evaluation of a utility's proposed tariff revisions to an inquiry into 'whether the rates proposed by a utility are reasonable—and not to extend to determining whether a proposed rate schedule is more or less reasonable to alternative rate designs.'"<sup>3</sup> As such, "there is no need to consider in any detail the alternative plans proposed by" PG&E.<sup>4</sup> Even if the Commission could consider PG&E's alternative proposal, the Commission cannot require the CAISO to use it. PG&E's proposal is not a minor deviation from what the

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<sup>2</sup> PG&E Protest at 6.

<sup>3</sup> *California Independent System Operator Corp.*, 141 FERC ¶ 61,135 at P 44 n. 43 (quoting *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984)).

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

CAISO proposed, but a new rate design.<sup>5</sup> Under *NRG Power Marketing, LLC v. FERC*, the Commission cannot require such changes on compliance.<sup>6</sup>

The Commission should approve the CAISO's proposed tariff revisions as just and reasonable to prevent energy storage resources from receiving excessively high bid cost recovery payments from the CAISO's proposed effective date of September 20, 2022. Without this approval, ratepayers will continue to face unwarranted costs. The CAISO is conducting a stakeholder initiative currently to examine whether alternative solutions are more prudent to address these unwarranted payments. The CAISO's stakeholder initiative is the correct forum to evaluate and identify whether other solutions may be deemed "more reasonable" than the CAISO's.

**B. PG&E mischaracterizes the CAISO's optimization.**

PG&E argues that the CAISO's optimization does not account for energy lost or gained by a storage resource providing regulation.<sup>7</sup> According to PG&E, this means, "a storage resource's regulation awards do not consider the [state of charge] impact of delivering those awards, which in turn compromises the ability of the resource to provide regulation."<sup>8</sup> This is inaccurate. If the CAISO optimization did not consider a storage resource's state of charge and ancillary service schedules, the CAISO would not have the Ancillary Service State of Charge Constraint, which predicts when energy

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<sup>5</sup> Nor could the CAISO implement PG&E's alternative proposal retroactive to September 20, 2022 technologically.

<sup>6</sup> 862 F.3d 108, 115 (2017) (*NRG*); *Western Resources, Inc. v. FERC*, 9 F.3d 1568, 1578 (D.C. Cir. 1993); *PJM Interconnection LLC*, 169 FERC ¶ 61,237 at P 8 (2019).

<sup>7</sup> PG&E Protest at 5.

<sup>8</sup> *Id.*

storage resources likely will have insufficient headroom to provide the regulation energy likely needed in the next interval.<sup>9</sup> The Ancillary Service State of Charge Constraint is necessary because a resource's state of charge in a given real-time interval may differ from forecasts. This issue is inherent to two-day markets. The day-ahead market must make some prediction on the next day's conditions—including state of charge and potential regulation energy—and the real-time market exists to square the predictions with the reality. Although the CAISO plans to explore optimization solutions to help align the two markets, the optimization issues PG&E describes are immaterial to whether storage resources should receive bid cost recovery payments in addition to energy payments when they have an insufficient state of charge to meet the ancillary service schedules they bid to provide.

PG&E also argues it is “not in general possible” for a scheduling coordinator to maintain its state of charge to avoid the Ancillary Service State of Charge Constraint because regulation schedules are “unpredictable.”<sup>10</sup> The CAISO disagrees. If PG&E's statement were true, every storage resource providing regulation would trigger the Ancillary Service State of Charge Constraint. This is not the case. Storage resources provide regulation frequently, but do not always trigger the Ancillary Service State of Charge Constraint. Scheduling coordinators for energy storage resources control how much of their capacity they want to make available to provide regulation and over what duration. The probability of triggering the Ancillary Service State of Charge Constraint

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<sup>9</sup> As the CAISO explained in its Transmittal Letter, the CAISO's software enforces the Ancillary Service State of Charge Constraint to ensure those storage resources that have elected to provide ancillary services have a sufficient state of charge to actually provide them in real-time for at least 30 minutes.

<sup>10</sup> PG&E Protest at 6.

increases based on (a) the percentage of the capacity the scheduling coordinator bids to provide regulation; (b) the time of day and time of year; and (c) the number of consecutive hours the scheduling coordinator bids to provide regulation. For example, if a scheduling coordinator bids to provide all of its capacity for regulation over numerous consecutive hours, it could result in triggering the Ancillary Service State of Charge Constraint because the resource no longer has sufficient charging headroom to meet its next schedule. PG&E cannot claim the scheduling coordinator was helpless or that such a result was unavoidable. To the contrary, the scheduling coordinator provided the bids knowing it could cause an inability to meet an ancillary service schedule without some eventual charging or discharging to create headroom.

PG&E also claims that including the opportunity costs of providing ancillary services within its ancillary service bids is “not viable” because predicting the exact amount of regulation energy the storage resource may be scheduled to provide is not possible. This is misleading. Imperfect foreknowledge of market and regulation dispatches is inherent to modern markets, but this does not mean scheduling coordinators lack the ability to account for plausible results based on their own bids. As the Department of Market Monitoring stated in its comments, energy storage scheduling coordinators should “reflect the expected cost of charging and discharging to maintain a regulation award in day-ahead bids to provide regulation service.”<sup>11</sup> The Department of Market Monitoring stated that doing so would be “similar to other costs associated with providing regulation service that may be reflected in market bids for regulation, and

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<sup>11</sup> DMM Comments at 7.

allows the day-ahead market optimization to fully consider costs of each resource awarded regulation.”<sup>12</sup>

**C. PG&E fails to explain why energy storage resources warrant bid cost recovery payment, or why default energy bids should inform bid cost recovery.**

PG&E argues that the CAISO’s proposed tariff modifications would allow the CAISO to dispatch storage resources “without cost-based compensation to the SC for charge or discharge costs.”<sup>13</sup> The CAISO disagrees. When the Ancillary Service State of Charge Constraint compels a storage resource to charge or discharge, the CAISO settles the resulting energy as imbalance energy. The CAISO settles imbalance energy at the locational-marginal price (“LMP”), just like typical charging and discharging. PG&E’s argument conflates the settlement of providing energy or ancillary services with bid cost recovery, but they are distinct issues. Storage resources receive compensation at the market rate for providing energy and ancillary services, regardless of whether they trigger the Ancillary Service State of Charge Constraint. As an express “alternative proposal,” PG&E argues the CAISO should use storage resources’ default energy bids as a basis for bid cost recovery. But PG&E fails to explain why storage resources should receive bid cost recovery in these intervals in the first place. Both the CAISO<sup>14</sup> and the Department of Market Monitoring<sup>15</sup> explained that bid cost recovery is meant to address inter-temporal constraints that cause a resource to be infra-marginal in one

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<sup>12</sup> *Id.*

<sup>13</sup> PG&E Protest at 4.

<sup>14</sup> CAISO Transmittal Letter at pp. 5, 9, 14.

<sup>15</sup> DMM Comments at 5.

interval and supra-marginal in a closely related interval. Storage resources generally do not have the start-up and ramping constraints that lead to those results. PG&E's Protest says nothing to rebut these facts; it simply makes conclusory claims that the CAISO's proposal is "overly broad."<sup>16</sup>

PG&E proposes that the CAISO should replace storage resources' submitted energy bids with their default energy bids in calculating bid cost recovery payments when the Ancillary Service State of Charge Constraint applies. PG&E admits default energy bids are designed for intervals subject to market power mitigation and there may be no market power mitigation in the intervals relevant to this filing.<sup>17</sup> Nevertheless, PG&E maintains this is a more reasonable alternative. Although the Commission should not consider PG&E's alternative solution, that alternative is not a more reasonable option. The CAISO considered this alternative in formulating its proposal but concluded it was inappropriate. As apparent from PG&E's Protest, the benefit to storage resources from using the default energy bid to calculate bid cost recovery is that it increases their likelihood of receiving bid cost recovery payments when the Ancillary Service State of Charge Constraint applies, and perhaps some bid cost recovery is less distasteful to storage resources than no bid cost recovery. But taste is not relevant to market efficiency or whether a rate is just and reasonable. Neither bid cost recovery nor default energy bids were designed to pay storage resources beyond the LMP for energy supplied when they cannot meet ancillary service schedules they bid to provide. PG&E

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<sup>16</sup> PG&E Protest at 7.

<sup>17</sup> *Id.* at 6-7.

offers no argument to the contrary, nor meaningful justification for its alternative proposal. The Commission should disregard PG&E's Protest.

## **II. Conclusion**

For the reasons explained above and in this proceeding, the CAISO respectfully requests that the Commission accept the proposed tariff revisions as filed.

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all of the parties listed on the official service list for the above-referenced proceeding, 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, CA this 20<sup>th</sup> day of October, 2022.

*/s/ Jacqueline Meredith*  
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