UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	**)** **)**	**Docket No. ER20-732-000**

MOTION FOR LEAVE TO REPLY AND REPLY OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

The California Independent System Operator Corporation ("CAISO") respectfully submits its reply to the late response filed by the Western Power Trading Forum ("WPTF") in the above-identified docket, in which the CAISO proposes to enhance its deliverability assessment methodologies.[1] WPTF's response to the CAISO's answer continues to mischaracterize the CAISO's proposal, and still provides no evidence, precedent, or support for its arguments. The Commission should disregard WPTF's response.

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[1] The CAISO submits this answer pursuant to Rules 212 and 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. §§ 385.212, 385.213. Under Rules 212 and 213 of the Commission's Rules of Practice and Procedure, the CAISO respectfully requests waiver of Rule 213(a)(2), 18 C.F.R. § 385.213(a)(2), to permit it to reply to the late response filed by WPTF in the proceeding. Although the Commission should reject WPTF's late response, good cause exists to grant the CAISO's request for waiver so the CAISO can clarify the record, provide additional information to assist the Commission in the decision-making process, and help to ensure a complete and accurate record in the case. *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).

Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A to the CAISO tariff.

I. Answer

A. All CAISO interconnection customers can receive Off-Peak Deliverability Status, and all CAISO market participants can fully participate in the CAISO markets.

WPTF asserts "it is discriminatory, unjust, and unreasonable for the CAISO to establish a paradigm" where some resources "will not have equal access to a bidding feature of the CAISO's energy market, self-scheduling."[2] This is incorrect. All resources will have access to the same bidding features, but they may make different elections in the interconnection process based on their needs.[3] WPTF mistakes a level playing field for equal results, and offers no support for its claim that the CAISO's proposal is unduly discriminatory.

The CAISO's proposal enhances the CAISO's interconnection process by giving interconnection customers more choices to develop their projects, market their projects, and recoup investment through the capacity and energy markets. Recognizing that different generation technologies have different levels of maximum output at different times, the Commission already approved the CAISO's on-peak and off-peak deliverability assessments as essential pieces of the interconnection process.[4] These iterative assessments account for the fact that wind and solar resources produce less energy during peak hours, unlike other technologies with relatively constant maximum outputs. Ignoring these differences for a one-size-fits-all approach would result in assigning either undersized or oversized network upgrades to relieve all potential

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[2] WPTF Response at 2.

[3] This describes the CAISO's proposal for new interconnection requests. The CAISO described its grandfathering of online generators and interconnection customers already in queue in its transmittal letter at 30-32.

[4] *California Independent System Operator Corp.*, 124 FERC ¶ 61,292 at P 108 (2008).

constraints during all hours, even where doing so is unnecessary and costly to ratepayers.

The CAISO conducted a stakeholder process to revise its inputs to the on-peak deliverability assessment, required to account for a demand peak later in the day. During this stakeholder process, developers agreed that the on-peak deliverability assessment should use the later demand peak, but expressed concern that a later peak would mean solar and wind resources would need fewer and smaller delivery network upgrades, which could lead to higher curtailment levels in off-peak hours. Curtailing low-cost or free energy is unfavorable for ratepayers and developers.

As such, the CAISO proposed to provide a new option for interconnection customers to request Off-Peak Deliverability Status ("OPDS"), which indicates that the generator can provide its energy to load during off-peak conditions without excessive curtailment due to transmission constraints. Interconnection customers with relatively constant maximum outputs—gas-fired, nuclear, biogas, energy storage, etc.—would automatically receive Off-Peak Deliverability Status and the ability to self-schedule if they site their projects where they do not face transmission constraints, or finance upgrades to relieve constraints identified in the on-peak deliverability assessment.[5] These technologies do not require an off-peak assessment because the same upgrades would be identified. Wind and solar resources require the separate off-peak deliverability assessment because they produce more energy off-peak than on-peak.

[5] *I.e.,* by requesting Full or Partial Capacity Deliverability Status. *See* CAISO Transmittal Letter at 24-27.

To be deliverable off-peak, wind and solar interconnection customers therefore require a different set of network upgrades to relieve off-peak constraints.

The CAISO also acknowledged that if interconnection customers elect to finance off-peak network upgrades, other interconnection customers could free-ride off those upgrades or otherwise erode their benefits. The CAISO addressed this issue by restricting the opportunity to self-schedule to those generators with Off-Peak Deliverability Status.[6] If the generator with Off-Peak Deliverability Status self-schedules its energy, it will have curtailment priority over generators economically bidding. This will ensure that if the CAISO must curtail generation, generators facing the same transmission constraints that elected to finance network upgrades have priority over generators that elected not to finance network upgrades. Moreover, the CAISO's proposal incentivizes all generators to submit economic bids.[7]

Contrary to WPTF's assertions, Off-Peak Deliverability Status and access to self-scheduling will be available to all generation technologies, including energy storage. Interconnection customers will only be Economic Only if they site their projects in an area where they face transmission constraints that impair their deliverability, and then

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[6] The CAISO's transmittal letter explains how current generators and interconnection customers will be grandfathered into Off-Peak Deliverability Status. *See* CAISO Transmittal Letter at 30-32.

[7] As the CAISO explained in its transmittal letter, self-scheduling resources already have a curtailment priority over economic bids. Because all generators currently can self-schedule, generators facing frequent transmission constraints are incentivized to always self-schedule to avoid the curtailment that would result if they economically bid against a generator self-scheduling behind the same constraint. In other words, in a situation where two generators can self-schedule behind a constraint, they both have to self-schedule to avoid disparate curtailment. The CAISO's proposal removes this problem by only allowing the resources that financed the necessary upgrades to self-schedule. OPDS generators would not have to self-schedule against Economic Only generators because they know that the Economic Only generator cannot self-schedule in the first place.

elect not to finance the network upgrades that would relieve those constraints.[8] But even these Economic Only generators can still participate fully in all of the CAISO markets through economic bidding (including down to the bid floor). Self-scheduling only provides tiebreaking priority if the CAISO must curtail generation.

B. WPTF erroneously conflates deliverability status with resource adequacy.

Abandoning its prior arguments, WPTF now argues that output curves, transmission planning, and whether self-scheduling is fundamental are "all irrelevant to WPTF's central point that the CAISO's proposal actively discriminates against storage resources that choose not to or are unable to sell resource adequacy."[9] WPTF is incorrect. The CAISO's proposal does not distinguish between resource adequacy ("RA") resources and non-RA resources, and is not unduly discriminatory.[10]

WPTF erroneously conflates deliverability status with resource adequacy. WPTF repeatedly describes how a storage resource "unable or unwilling to be an RA resource . . . will not be able to fully self-schedule,"[11] and that this is unduly discriminatory. This is misleading. Whether a generator provides resource adequacy does not determine its eligibility to obtain Off-Peak Deliverability status. All interconnection customers,

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8 *See* CAISO Transmittal Letter at 24-27.

9 WPTF Response at 2.

10 In its transmittal letter and answer, the CAISO has carefully explained how generation technology output curves directly impact each generation technology's impact on transmission constraints during peak and off-peak conditions. For this reason, the Commission approved studying generation technologies with off-peak energy sources in the off-peak deliverability assessment as just and reasonable (and not unduly discriminatory) well before this proceeding. *California Independent System Operator Corp.*, 124 FERC ¶ 61,292 at P 108 (2008).

11 WPTF Response at 5.

regardless of whether they provide resource adequacy capacity, can receive Full Capacity Deliverability Status and Off-Peak Deliverability Status, which will enable them to self-schedule. The only requirement to receive Off-Peak Deliverability Status is to site in an unconstrained area or finance the network upgrades that relieve deliverability constraints. Although most California load-serving entities require generators to have on-peak deliverability to be eligible to provide resource adequacy, providing resource adequacy to a load-serving entity is not a requirement to receive Full Capacity Deliverability Status or Off-Peak Deliverability Status.[12]

WPTF states that "one-hour duration storage, for example, does not qualify as RA, and would elect Energy-Only."[13] The CAISO notes that no storage resource is inherently "one-hour duration." A battery's duration only depends on how the owner markets and operates it.[14] In any case, although duration may be relevant to resource adequacy eligibility, it does not impact an interconnection customer's eligibility to request any deliverability status under the CAISO tariff.

As such, interconnection customers can become Economic Only through their own elections to *not* finance upgrades that relieve local transmission constraints. This

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[12] First, any interconnection customer in an unconstrained area will be deemed deliverable merely by requesting deliverability status. This is not uncommon. Second, there are no requirements to receive Off-Peak Deliverability Status other than financing the upgrades that relieve local transmission constraints. Third, interconnection customers requesting Full Capacity Deliverability Status can receive deliverability capacity allocations for area constraints without being resource adequacy resources, or by financing any required upgrades on a merchant basis. *See* Sections 8.9.2 and 7.2 of Appendix DD to the CAISO tariff. The CAISO explained the TP Deliverability allocation process in its transmittal letter at 17-20.

[13] WPTF Response at 4.

[14] Moreover, a "one-hour" duration battery would be eligible to provide resource adequacy up to 25 percent of its maximum capacity under most California local regulatory authority requirements, which seek four hours of energy.

is not unduly discriminatory.[15] To the contrary, doing otherwise would result in unduly preferential treatment. The CAISO has not hidden, shied away from, or obfuscated this fact. Instead the CAISO has offered examples and cited precedent demonstrating how coupling customers' decisions whether to finance network upgrades with energy market rights is both common and consistent with organized markets, especially in those that offer firm and point-to-point transmission service.[16] WPTF mistakes a level playing field for equal results, and offers no support for its claim that the CAISO's proposal is unduly discriminatory.

C. The CAISO's proposal treats energy storage similar to all similarly-situated generation technologies.

WPTF claims the CAISO "is proposing energy-only storage have a participation model that is limited compared to all other resources."[17] WPTF's claim is misplaced. All energy storage resources will have the opportunity to receive Off-Peak Deliverability Status and be able to self-schedule at all times just like other generation technologies. Similar to all other technologies, energy storage interconnection customers will be Economic Only if they site their projects in an area where they face transmission constraints that impair their deliverability, and then elect not to finance the network upgrades that would relieve those constraints. WPTF's argument is circular: An Energy Only and Economic Only storage resource would not be able to self-schedule at all times because it voluntarily elected to be Energy Only and Economic Only.

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15 *See, e.g., Southern California Edison Co*., 164 FERC ¶ 61,130 at P 39 (2018).

16 *See* Transmittal Letter at 37-38.

17 WPTF Response at 6.

Interconnection customers can make this choice because they face local transmission constraints but do not wish to finance network upgrades to relieve them. Likewise, energy storage resources that want to self-schedule at all times can site their projects where they do not face deliverability constraints, or they can elect to finance the network upgrades that relieve them.

Although its protest argued that "the quantity today is not relevant,"[18] WPTF's response doubles back and "notes there is nearly 450 MW of energy-only storage battery resources currently in the CAISO queue."[19] This figure is misleading in several ways. First, this figure is inaccurate. There actually is 684 MW of Energy Only energy storage currently in queue.[20] Second, the CAISO's interconnection queue shows *current* status, and those statuses will change following the results of the CAISO's Transmission Plan ("TP") Deliverability allocation cycle. Nearly all of the Energy Only energy storage in queue has requested a TP Deliverability allocation, meaning that many (if not most) energy storage interconnection customers will go from Energy Only to Full Capacity Deliverability Status. Third, it is misleading to highlight the quantity of Energy Only storage in queue without putting it in context. There is currently 37,784 MW of energy storage in queue with Full Capacity Deliverability Status or Partial Capacity Deliverability Status.[21] Even using current figures, only 1.8 percent of energy storage in queue is Energy Only, and 98.2 percent has sought deliverability. These

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18 WPTF Protest at 9.

19 WPTF Response at 6.

20 https://rimspub.caiso.com/rims5/logon.do. (The CAISO does not know where the 450 MW comes from. Additional Energy Only storage has not been added to the queue recently.)

21 *Id*.

figures support the CAISO and developers' belief that the vast majority of energy storage (and all generators) will seek deliverability. Fourth, historically less than ten percent of the CAISO's interconnection customers have achieved commercial operation. An interconnection request is an initial step in project development, and the vast majority of interconnection customers withdraw. As such, the CAISO and developers expect very few, if any, generators or energy storage resources will be Energy Only and Economic Only. To the extent there are any, the low number will allow the CAISO, the Commission, and stakeholders to monitor the efficacy of the CAISO's proposal in its early stages. If further enhancements are warranted, the CAISO can address them in a subsequent filing.

WPTF also states, "Nowhere in its long response does the CAISO rebut the fact that energy-only storage will not be able to self-schedule freely in real-time."[22] This is an overstatement. The CAISO has expressly discussed all Energy Only resources' ability to self-schedule in real-time up to their day-ahead award.[23] WPTF later acknowledges this proposal, but argues it is insufficient.[24] WPTF argues: "Self-scheduling is needed to meet the day-ahead schedule and it is needed to maximize response to real-time conditions."[25] WPTF states that "price spikes in both the low and high direction are more likely to happen in real-time and a use case for energy-only storage may well be to only bid into the real-time to both take advantage of the better

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22 WPTF Response at 3.

23 CAISO Transmittal Letter at 29 (citing Proposed Sections 30.5.2.2.1 and 30.5.6.1 of the CAISO tariff); CAISO Answer at 14.

24 WPTF Response at 7.

25 *Id*.

real-time price arbitrage and better meet real-time flexibility needs."[26] Nowhere does WPTF explain how self-scheduling enables or is required for "full participation" in the CAISO markets. Put differently, WPTF fails to explain why economically bidding in the CAISO markets is a hurdle to participation. WPTF admits that "a use case for energy-only storage may well be to only *bid* into the real-time. . . ."[27] All resources can bid down to the bid floor of negative $150/MWh and up to the bid cap of $1,000/MWh.[28] As the CAISO has explained, the only (and intended) benefit self-scheduling provides is priority in the event of curtailment.[29] Economic Only generators will still be able to fully participate in the CAISO markets. Even this late in the proceeding, WPTF continues to provide no support, data, or Commission precedent to support its claim that self-scheduling is somehow essential, especially where the generator has voluntarily elected to forego the network upgrades to make its energy deliverable in all hours.

D. WPTF mischaracterizes support for the CAISO's proposal.

WPTF states it does not agree "that support solely from renewable developers qualifies as broad support from an industry-wide perspective."[30] This argument is inaccurate (and irrelevant to whether the CAISO's proposal is just and reasonable under the Federal Power Act). Nearly all of the developers that have commented in this proceeding have active stand-alone energy storage projects, hybrid generation/storage

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26 *Id*.

27 *Id*. (emphasis added).

28 Sections 39.6.1.1 and 39.6.1.4 of the CAISO tariff.

29 *See* CAISO Transmittal Letter at 36-37.

30 WPTF Response at 8.

projects, or both. In its answer to WPTF's protest, LS Power expressly noted that it has twice the capacity of energy storage resources in operation, under construction, or in development than solar resources.[31]

II. WPTF's late response is unwarranted, reiterates prior arguments, and deprives other parties the opportunity to respond

Recognizing that "Rules 212 and 213 of the Commission's Rules of Practice and Procedure generally do not permit answers to answers to protests or similar pleadings," WPTF seeks waiver of these rules.[32] The Commission should reject this request. The CAISO's original transmittal letter purposely identified and rebutted WPTF's various arguments so WPTF could respond to the CAISO's arguments in its original protest. WPTF ignored this opportunity, and instead protested a straw man of the CAISO's proposal.[33] Now, WPTF seeks to respond again, 19 days beyond the deadline for protests. The Commission should not reprieve WPTF of a situation WPTF put itself in. WPTF is not raising arguments it was unable to raise in its protest and is not providing any new or relevant evidence or support.

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31 LS Power Answer at 1 n 1.

32 WPTF Response at 1.

33 WPTF itself admits its protest provides a "simplified description of [the CAISO's] very complex proposal." *Id*. at 2.

III. 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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Dated: February 14, 2020

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 14th day of February, 2020.

/s/ Martha Sedgley

Martha Sedgley