

resource (“ESDER”) stakeholder initiative is for the CAISO’s policies to keep pace with these technological advancements. The CAISO’s filing in this proceeding—the fourth set of tariff revisions from the ESDER initiative—reflected that goal.

The CAISO recognizes that policies designed for new technologies and new products require constant monitoring and refinement. Demand response and storage are relatively new resources, but the ESDER initiative demonstrates that the CAISO has been committed to monitoring them, analyzing their performance, and refining their rules consistently.² The Commission has no reason to expect that trend will suddenly stop with these products.

As described below, SCE and PG&E both raise concerns with the CAISO’s proposals. But their concerns speak to the nascency of electric vehicles and behind-the-meter energy storage; not the justness and reasonableness of the CAISO’s proposals. Neither utility offers any evidence that the CAISO’s proposals are not just and reasonable, and both generally agree the CAISO’s proposals are just and reasonable. These are new participation models for new technologies. The CAISO remains committed to monitoring these resources and its policies to ensure a fair and level playing field for all resources, new and old. If any refinement is warranted, the CAISO will address it. But the Commission should approve the tariff revisions proposed in this proceeding as just and reasonable. They represent the collective experience and analysis of the CAISO and its stakeholders, and will allow electric vehicle charging

² As detailed in the CAISO’s transmittal letter, every § 205 filing from the CAISO’s ESDER initiative has included demand response and storage enhancements.

stations and behind-the-meter energy storage to access the wholesale markets under just and reasonable rules that will capture their unique benefits.

A. PG&E’s comments regarding its ability to accommodate EVSE are not relevant to this proceeding and misunderstand the CAISO’s proposal.

PG&E states it cannot implement the retail billing components of the CAISO’s proposal until the California Public Utilities Commission (“CPUC”) “develops safety, accuracy, and reliability standards for submetering, reforms Rule 24, and provides clarity on the cost-effectiveness and cost-allocation of submetering as a technology and service for customers.”³ PG&E then explains the CPUC reforms it would seek to take full advantage of the CAISO’s proposal.

It is not clear whether PG&E’s comments are directed to this Commission regarding the CAISO’s proposal or to the CPUC regarding Rule 24. PG&E, in fact, expressly states that FERC should approve the CAISO’s filing.⁴ But PG&E’s comments regarding two potential conflicts between the CAISO’s proposal and the CPUC’s Rule 24 misunderstand the CAISO’s proposal. First, PG&E states that “an EVSE would not be able to participate as a sub-metered demand response resource if the premise was already participating in a demand response program under a different [demand response provider (‘DRP’)].” The CAISO will not speak to Rule 24, but clarifies here that its proposal would not allow for EVSE to participate for a different demand response provider than its host load in the first place. As the CAISO explained in its transmittal letter:

³ PG&E Comments at p. 3.

⁴ With one proposed modification to the PDR-LSR model, discussed below.

Where proxy demand resources elect to separate their EVSE performance from the onsite host load, they will continue to operate under a single resource ID as a single proxy demand resource, but the EVSE and the onsite load will have separate customer load baselines and separate demand response energy measurements. The EVSE and the onsite load will bid and meet CAISO schedules together as a single resource, but the CAISO will settle them separately based on each load's respective baseline.⁵

Because there is still only one resource, there is only one demand response provider.

The CAISO's proposal merely allows the demand response provider to measure the EVSE performance separately from onsite load, but the EVSE does not participate separately for bidding or scheduling.

Second, PG&E states that under CPUC Rule 24, an EVSE "can only participate as a sub-metered demand response resource if the premise elected to not participate as a demand response resource."⁶ This is not a "conflict" either. The CAISO's proposal expressly allows for such a use case. The CAISO stated in its transmittal letter that "[n]othing requires the demand response provider to include onsite load in the proxy demand resource," and "[a] proxy demand resource can consist entirely of one or more EVSE with no onsite load."⁷ As such, the CAISO's proposal accommodates any potential gaps in local regulatory authority rules.

The CAISO recognizes that cooperative federalism benefits energy market participants and their regulators. The CAISO looks forward to continue working with PG&E, the CPUC, and stakeholders to close any necessary gaps with CPUC rules regarding demand response, EVSE, and sub-metering. But those gaps are not relevant to the justness and reasonableness of the CAISO's proposals in this proceeding.

⁵ CAISO transmittal letter at p. 6 (citing proposed Section 4.13.4.6 of the CAISO tariff).

⁶ PG&E Comments at p. 5.

⁷ CAISO transmittal letter at p. 6 (citing proposed Section 4.13.4.6 of the CAISO tariff).

B. Contrary to SCE’s assertions, requiring the CAISO to report on EVSE performance is unwarranted.

SCE states “the Commission should approve this filing, but require the CAISO to monitor the use of sub-metering for EVs and compare the curtailment to the load drop at the master meter to ensure that the curtailment of load has a real and meaningful impact on the transmission system.”⁸ SCE explains that [s]hould the CAISO dispatch the sub-metered EVSE and expect a load drop,” “an EV resource could discontinue charging through the sub-meter, and quickly switch to charging directly through the master meter.”⁹ According to SCE, the CAISO would not get the response it expected, but “the resource would still get paid as if it provided the demand response.”¹⁰ Based on this hypothetical, SCE asks the “Commission require the CAISO to monitor and report data demonstrating that the load curtailments metered by the sub-meter were not offset by increases in the master-meter load.”¹¹

SCE’s hypothetical is flawed for a few reasons. First, as the CAISO explains above and in its transmittal letter, the CAISO would not “dispatch the sub-metered EVSE” as SCE alleges. The EVSE and host load are a single resource at all times. Neither receives its own dispatch schedule. The EVSE methodology merely allows the demand response provider to capture the EVSE response and the host load response

⁸ SCE Comments at p. 3.

⁹ SCE Comments at p. 4.

¹⁰ *Id.*

¹¹ *Id.*

separately.¹² But those responses are still summed so the demand response provider is only compensated for the net response.

Second, it is somewhat fantastical to imagine electric vehicles racing back and forth to charge and discharge at different meters to game demand response. Although possible, it is unlikely such a scheme would yield any net result for the demand response provider, and would come at the costly expense of degrading the electric vehicle's battery through full charge and discharge cycles.¹³

Third, as a utility distribution company, load-serving entity, demand response provider, and scheduling coordinator, SCE itself is well situated to monitor demand response providers for gaming. As the Commission is well aware, the CAISO actively works with its Department of Market Monitoring and the Commission's Office of Enforcement to monitor demand response providers, ensure they comply with the CAISO tariff, and protect the markets against manipulation. The CAISO has every intention of doing so for EVSE as well. But SCE's hypothetical is implausible, does not square with the CAISO's actual proposal, and has no evidentiary basis. There is no cause for imposing any special reporting requirement at this time.

C. PG&E's suggested buffer period for PDR-LSRs is flawed and without evidentiary basis.

PG&E supports the CAISO's load-shift methodology, but argues that the Commission should impose a two-hour buffer period before and after event windows¹⁴

¹² The CAISO also notes that electric vehicles themselves cannot register as proxy demand resources. The CAISO's proposal applies to the EVSE used to charge electric vehicles.

¹³ See, e.g., National Renewable Energy Laboratory, "Battery Lifespan," available at <https://www.nrel.gov/transportation/battery-lifespan.html>.

¹⁴ I.e., dispatches or outages.

when establishing baselines for these resources. PG&E states that doing so will reduce bias and account for storage resources' need to charge. Unfortunately, PG&E never raised this issue during the lengthy ESDER stakeholder process when the CAISO could have explained the flaws in PG&E's reasoning and why a buffer period is inappropriate for behind-the-meter energy storage.

First, PG&E's portrayal of storage is overly simplistic. PG&E states that storage is "inherently energy neutral," so that if a storage resource discharges, it must have charged before. This is obviously correct, but PG&E offers no basis to conclude that the storage resource would have charged in the two hours *immediately* before and after discharging. To the contrary, the CAISO and stakeholders have observed that storage resources primarily charge based on the time of day because storage can take advantage of excess energy from solar installations. In other words, they do not charge immediately just because they recently discharged some energy.

Second, PG&E acknowledges that proxy demand resources using the load-shift methodology receive dispatches and are settled in 15-minute or 5-minute intervals. But PG&E offers no explanation why *five minutes* of discharging would bias the surrounding *four hours* so they should be excluded from a baseline calculation. Baselines are supposed to represent typical use. But baselines are unlikely to represent typical use if the scheduling coordinator has to exclude huge portions of the day for any event. PG&E's suggested modification would introduce bias to the baseline calculations; not reduce it.

The CAISO only has established buffer periods where research and analysis have demonstrated a specific need for them. The most prominent example is for air

conditioner cycling programs and other temperature-dependent resources. For a group of air conditioners to curtail their typical demand, they must stop cooling their buildings when dispatched. This obviously would raise the temperatures in the buildings. The CAISO, the Commission, and stakeholders have all observed that to avoid unwanted temperatures, air conditioner cycling programs will pre-cool the buildings before dispatch, then immediately resume cooling the buildings following dispatch. Because pre-cooling and post-cooling are not typical use, but a result of being dispatched, the CAISO tariff establishes a buffer period around dispatch.¹⁵ For behind-the-meter energy storage resources using the load-shift methodology, PG&E has offered no evidence, data, or explanation why these resources would respond similar to air conditioner cycling programs. PG&E merely offers a hypothetical that presupposes the resources' behavior is atypical without any basis.

The CAISO and its stakeholders have found no basis to conclude that behind-the-meter energy storage resources will behave like other proxy demand resources. Storage resources are far more dynamic than typical loads, and can respond to dispatch quickly and without long adjustment periods. For this reason the CAISO expressly elected not to use a buffer period, and prohibited resources using the load-shift methodology from electing to be dispatched in longer hourly blocks.¹⁶ In any event, establishing the load-shift methodology will allow the CAISO and its Department of

¹⁵ The CAISO also notes that unlike load-shift resources, proxy demand resources using the ten-in-ten methodology have the option and frequently elect to be dispatched in hourly intervals because they do not have the capability to respond quickly. As such, their dispatches generally far exceed the 5- or 15-minute intervals load-shift resources will use. See Section 4.13.3 of the CAISO tariff; *California Independent System Operator Corp.*, Letter Order Accepting Tariff Revisions, ER19-2733-000 (Nov. 6, 2019).

¹⁶ See CAISO transmittal letter at p. 9 n. 37; p. 10 n. 49.

Market Monitoring to observe how behind-the-meter energy storage resources charge and discharge, both normally and responding to CAISO dispatches. If a need to refine the methodology arises, the CAISO can address it. But PG&E has offered no evidence such material modification to the CAISO's proposal is warranted now.

Moreover, 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.'"¹⁷ As such, "there is no need to consider in any detail the alternative plans proposed by" PG&E.¹⁸

¹⁷ *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)).

¹⁸ *Id.*

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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Dated: August 21, 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 21st day of August, 2020.

/s/ Martha Sedgley

Martha Sedgley