



designed to be flexible and allow robust participation as the CAISO, developers, utility distribution companies (“UDCs”), load-serving entities, and regulators gain experience. While recognizing stakeholders’ desire to see growth in multiple-use case development, the CAISO believes that trying to address every hypothetical multiple-use application a dual retail/wholesale DER may encounter through Order No. 2222 compliance will not provide clarity, but will instead create undue constraints and confusion. As retail programs begin to allow for multiple use applications and parties gain experience with actual dual service, the CAISO can enumerate permissible and prohibited practices in its business practice manuals and tariff. Local regulatory authorities can do the same. But trying to do so now for every hypothetical, no matter how unlikely, will not yield results anticipated by parties, and it is outside of Order No. 2222 compliance. The Commission should approve the CAISO’s proposed compliance with Order No. 2222, as clarified in this Answer.

#### **I. Resource Adequacy Eligibility**

In its compliance filing, the CAISO recognized that resource adequacy eligibility incentivizes resources in the CAISO footprint to participate as stand-alone wholesale resources or demand response resources.<sup>3</sup> California regulatory authorities, most notably the California Public Utilities Commission (“CPUC”), have not adopted qualifying capacity counting rules for DERAs to provide resource adequacy capacity, which leaves

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<sup>3</sup> This assumes they are wholesale resources. As the CAISO explained in its compliance filing, in California small DERs largely favor net energy metering programs that compensate their exports at a retail rate.

developers without the revenue streams from retail tariffs, capacity contracts, or power purchase agreements.

In their joint comments, Advanced Energy Economy (“AEE”) and the Sustainable FERC Project<sup>4</sup> recognize “the fact that the RA program is under the CPUC’s authority,”<sup>5</sup> but nevertheless fault the CAISO for not taking actions that would “lower barriers to the ability of technically capable DERs to provide resource adequacy services.”<sup>6</sup> First, AEE asks the Commission to direct the CAISO to reevaluate its definition of Deliverability for behind-the-meter storage resources, “which are required to go through the same process that large front of the meter resources do,” according to AEE.<sup>7</sup> Second, AEE asks the Commission to direct the CAISO “to set a qualifying capacity value for behind the meter DERs and hybrid resources.”<sup>8</sup> AEE describes this value as essential for such resources to provide resource adequacy, but AEE does not describe its relevance to DERAs or Order No. 2222. Third, AEE asks the Commission to direct the CAISO “to develop must offer obligations and technical requirements for behind-the-meter storage and hybrid resources participating under the DERP model.”<sup>9</sup> AEE then urges the Commission “to encourage CAISO to work with the CPUC to add the DERP model as an eligible market participation model for providing RA.”<sup>10</sup>

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<sup>4</sup> For concision, this Answer will refer to the joint comments as AEE.

<sup>5</sup> AEE Comments at 11.

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

<sup>7</sup> *Id.* at 12.

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

<sup>9</sup> *Id.* at 12-13.

<sup>10</sup> *Id.* at 13.

The CAISO appreciates and understands the economic challenges DERAs face when they are ineligible to provide resource adequacy. The CAISO has worked diligently with, and will continue to work with, the CPUC and local regulatory authorities, which are aware of this issue. Resource adequacy is an essential tool for reliability. The CAISO should not preempt the CPUC and local regulatory authorities by establishing eligibility for resources the CPUC has yet to find capable of delivering energy to load centers during peak conditions. Nor does Order No. 2222 require the CAISO to do so. The CAISO will continue to work with the CPUC and local regulatory authorities on whether DERAs can provide resource adequacy capacity in the relevant state proceedings. This is slated as a near-term activity for local regulatory authorities like the CPUC. For example, on August 26, 2021, the CPUC held its Distributed Energy Resources Action Plan 2.0 workshop in which it outlined that it plans to review, “rules and tariffs to address barriers and resolve questions of whether, and if so, how exporting BTM DERs can more effectively participate in wholesale markets and qualify for Resource Adequacy (RA).”<sup>11</sup> AEE’s other suggestions regarding deliverability, qualifying capacities, and must-offer obligations warrant CAISO consideration, but they are plainly outside the scope of Order No. 2222. The Commission should disregard them here.

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<sup>11</sup> California Public Utilities Commission, “Distributed Energy Resources Action Plan Aligning Vision and Action” July 23, 2021. Pg. 15. <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/distributed-energy-resources-action-plan/draft-der-action-plan-20-public.pdf>.

## II. Telemetry

Order No. 2222 does not establish specific metering and telemetry requirements for DERAs, and instead “provide[s] the RTOs/ISOs with flexibility to establish the necessary metering and telemetry requirements for distributed energy resource aggregations.”<sup>12</sup> The Order thus requires each RTO/ISO to explain in its compliance filing why such requirements are just and reasonable and do not pose an unnecessary and undue barrier to individual DERs joining a DERA.<sup>13</sup> The CAISO explained in its compliance filing that, “[s]imilar to other supply resources, the CAISO only requires relatively larger capacity to provide real-time telemetry—at the aggregate level—to the CAISO’s energy management system.”<sup>14</sup> Specifically, any DERA providing ancillary services and any DERA 10 MW or greater must provide direct telemetry consistent with the CAISO’s telemetry standards for supply resources.<sup>15</sup> The CAISO was very clear that its telemetry requirements would apply to the aggregation only, and not the individual DERs.<sup>16</sup>

CPower argues the CAISO has created an undue barrier by requiring DERAs greater than 10 MW to provide telemetry at the aggregate level.<sup>17</sup> According to CPower, this requirement would mean the aggregator must have telemetry on every DER within the DERA. CPower suggests that DERAs themselves should not require

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<sup>12</sup> Order No. 2222 at P 263.

<sup>13</sup> *Id.*

<sup>14</sup> Compliance Filing at 22.

<sup>15</sup> *Id.* (citing Section 7.6.1 of the CAISO tariff).

<sup>16</sup> *Id.* (“Again, the DERP would provide direct telemetry for the aggregate resource. At this time, the CAISO does *not* require each DER to provide direct telemetry”).

<sup>17</sup> CPower Protest at 3 *et seq.*

telemetry based on their size, but that the CAISO should impose telemetry requirements on the individual DERs within the DERA where they are 1 MW or greater. Similarly, AEE argues the CAISO failed to explain why DERAs providing ancillary services should have to provide telemetry.

The CAISO's paramount responsibility is reliability, and telemetry is essential for any grid operator to ensure reliability. Without telemetry, the CAISO would have no real-time visibility of the availability or response that supply resources such as DERAs provide. DERAs' energy or load levels, response to CAISO dispatches, and online status as a supply resource would be indiscernible to the CAISO. This becomes increasingly problematic as DERAs become larger and begin to become a greater percentage of resources electing to provide ancillary services. Providing regulation, for example, requires a constant telemetry signal to maintain system frequency.

CPower argues that "it would not be possible for an aggregator to provide aggregate telemetry that CAISO would require without telemetering every DER in the aggregation, regardless of size,"<sup>18</sup> and that telemetry is an undue barrier to DERA participation. This effectively is an argument against imposing any telemetry requirements for DERAs, which was designed specifically to accommodate smaller DERs that could only meet minimum size requirements in aggregation. CPower's suggestion to instead impose telemetry on individual DERs over 1 MW would lead to contradictory results. Very large DERAs could avoid any telemetry requirements by simply excluding any DER over 1 MW. The CAISO and UDC would then face

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<sup>18</sup> *Id.* at 4.

significant energy flows from the DERA with no real-time visibility, jeopardizing the reliability of the distribution and transmission grids.

By contrast, the CAISO's proposal ensures reliability and does not grant DERAs any undue preference. A DERA would be subject to the same telemetry requirements as any supply resource. The CAISO's proposal also afford DERAs flexibility without risking reliability. A 10 MW DERA could simply bifurcate into two DERAs of 5 MW each, or 10 DERAs of 1 MW each, and so forth. This ensures DERAs are on a level playing field with other resources, and it ensures the capacity of each resource would not threaten reliability because the CAISO would optimize each smaller DERA, thereby mitigating the impact a large DERA could create. The CAISO also notes that its telemetry requirements are flexible, allowing for several different technologies and approaches.<sup>19</sup> DERAs' telemetry requirements are the same as demand response providers, and demand response providers have not identified telemetry requirements as a barrier to entry.<sup>20</sup> CPower essentially is seeking unduly preferential treatment for DERAs.

Contrary to CPower's comments, the CAISO has worked extensively with developers to prepare for complying with Order No. 2222, including surveying stakeholders on the barriers DERAs may face to participate in the wholesale markets. As the CAISO explained in its compliance filing, nearly every participant listed (1) net energy metering incentives outweighing wholesale market revenue opportunities,

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<sup>19</sup> See, e.g., CAISO, "Expanding Metering and Telemetry Options Revised Technical Straw Proposal" at 22 *et seq.* (illustrating data concentrator options), *available at* <http://www.aiso.com/Documents/RevisedTechnicalStrawProposal-ExpandingMeteringandTelemetryOptions.pdf>.

<sup>20</sup> See Section 12 of the CAISO's Business Practice Manual for Direct Telemetry.

(2) and resource adequacy ineligibility preventing their ability to secure capacity payments as the foremost reasons for lack of participation under the DERA model. Few respondents pointed to any obstacle with the CAISO tariff or its market rules. To the contrary, respondents noted that it is easier and more cost-efficient to participate in the wholesale markets as stand-alone resources or in aggregation as demand response resources. Respondents did not cite telemetry requirements as a barrier to DERA participation. Likewise, when the CAISO established its DERA model in 2016, no party protested its telemetry requirements or argued they would be an undue barrier to entry. Telemetry is essential to reliability, and nothing in Order No. 2222 suggests that DERAs should gain undue preference over other supply resources and be permitted to avoid telemetry requirements.

### **III. 24/7 Requirements**

Order No. 2222 requires RTO/ISOs to allow DERs that participate in one or more retail programs to participate in its wholesale markets, provided there are measures tailored to avoid double-counting.<sup>21</sup> AEE argues that “the requirement that participating DERs be settled at wholesale prices for charging and discharging every hour, 24 hours a day, seven days per week” does not comply with Order No. 2222’s requirement.<sup>22</sup> According to AEE, this “around-the-clock settlement” essentially means that DERs “must commit to solely participating in the CAISO markets.”<sup>23</sup> AEE states that CAISO

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<sup>21</sup> Order No. 2222 at P 160.

<sup>22</sup> AEE Comments at 6.

<sup>23</sup> *Id.*

prevents DERAs from using “other tools to hold themselves out of the wholesale market so that they can be available to participate in one or more retail program.”<sup>24</sup>

AEE’s arguments are conclusory, inaccurate, and beyond the scope of Order No. 2222. They do not seek a level playing field, but undue preference for DERAs. Presumably, had the Commission intended to rewrite wholesale market settlements rules, it would have done so expressly, not through a simple statement requiring RTO/ISOs to allow DERs to participate in retail programs.

Allowing DERAs to be settled only when they want would be unduly discriminatory. Nearly any supply resource—new or old—could profit inappropriately from using their wholesale meter only at the opportune times. Setting aside DERAs entirely, AEE suggests the CAISO should provide *storage resources* “the option to bill a storage device at the LMP for charging energy that directly preceeds [sic] a discharge made at the direction of CAISO after it clears in the market.”<sup>25</sup> Then, according to AEE, “all other energy would be settled and billed at retail.”<sup>26</sup> This suggestion is irrelevant to the CAISO’s compliance with Order No. 2222. Clearly it would be profitable for any resource to participate in the wholesale markets only when its dynamic prices are high, and rely on a static retail rate in other hours. However, settlement is merely the result of the CAISO’s market optimization that balances load and supply, ensuring reliability for the entire system. The requirement for 24-hour settlement ensures resources cannot game the optimization and price formation simply to maximize their profits. DERAs are

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<sup>24</sup> *Id.* at 7.

<sup>25</sup> AEE Comments at 7-8.

<sup>26</sup> *Id.*

not unique in their potential to participate in retail markets. Stand-alone DERs could just as easily participate in retail programs. If the Commission intended for DERAs to be settled unlike any other supply resource—even though they are similarly situated to other supply resources—the Commission could have made that finding explicit in Order No. 2222. It did not. As a result, AEE’s suggestions go beyond Order No. 2222 and seek to grant DERAs undue preference.

The CAISO also notes that AEE’s claims are inaccurate. The CAISO’s heterogeneous DERA model allows the Distributed Curtailment Resources within a DERA to be settled only when providing demand response services; not “around-the-clock.” If an aggregator faced one of AEE’s hypothetical retail programs that allowed retail participation if the DERs were not settled in the CAISO’s wholesale markets 24/7, the aggregator could elect to use the heterogeneous DERA model.

Moreover, AEE does not explain why CAISO settlement rules force DERs to commit solely to wholesale markets. AEE further fails to cite any example or otherwise explain how CAISO settlement impedes retail participation, nor does AEE specify a retail program or tariff that requires temporary wholesale participation. As such, the Commission should disregard AEE’s conclusory arguments as speculative and unsupported. Order No. 2222’s simple admonition to allow retail participation is not a specific finding under FPA section 206 that RTO/ISOs’ settlement rules are unjust and unreasonable and should be revised, and as such, AEE’s arguments are out of scope.

#### **IV. Demand Response**

AEE argues that Order No. 2222 “explicitly includes demand response resources within the definition of DERs that must be permitted to participation in wholesale

markets through aggregation,” and that, as a result, “CAISO needed to consider whether its existing and proposed participation models fully accommodate the participation of all aggregations of demand response resources.”<sup>27</sup> AEE then argues requiring access to customer meter data is a “high friction” process that “presents a significant barrier for dispatchable residential demand response.”<sup>28</sup> The Commission should disregard these arguments as inaccurate and irrelevant to the CAISO’s compliance with Order No. 2222.

Allowing demand response resources to participate in DERAs was a clear and significant portion of the CAISO’s compliance filing.<sup>29</sup> The CAISO does not discriminate against any resource from providing demand response, and it has implemented more flexible demand response models and baseline methodologies for performance measurement for demand response than any other market operator. Resources capable of curtailing demand may participate in a heterogeneous DERA or a demand response aggregation. The CAISO has over 2,000 MW of demand response consisting of nearly one thousand demand response aggregations participating in its markets today, and each aggregation consists of numerous retail participants. That every such participant provided its service account and meter data belies AEE’s unsupported allegations of “high friction.” AEE likewise fails to explain how the CAISO could register and account for demand response participants—let alone how the CAISO could comply

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<sup>27</sup> AEE Comments at 9 (citing Order No. 2222 at P 114).

<sup>28</sup> *Id.* “Customers are subjected to requirements to provide utility service account numbers that are not readily available, or go through a cumbersome registration process that has little relevance to their ability or willingness to participate in a demand response aggregation.”

<sup>29</sup> CAISO Compliance Filing at 9 *et seq.*

with Order No. 2222’s double counting and coordination requirements—without knowing where the resources are located.

AEE’s arguments regarding meter data likewise are inaccurate. Demand response resources are scheduling coordinator metered entities.<sup>30</sup> The CAISO does not poll their meters or perform any validation, estimation, or editing. The scheduling coordinator merely provides the CAISO with the final meter data for settlement. Moreover, the CAISO tariff expressly allows demand response providers to submit “a statistical sampling of Energy usage data, in cases where interval metering is not available for the entire population of underlying service accounts.”<sup>31</sup> To the extent DERPs experience “friction” accessing customer meter data, it may occur between the DERP and the UDC or load-serving entity, but not as a result of CAISO requirements.

Accordingly, the Commission should disregard AEE’s arguments as inaccurate and unrelated to Order No. 2222. The CAISO only requires the minimum information necessary for retail customers to register in DERAs or demand response aggregations, consistent with Commission precedent and good utility practice.

## **V. Double Counting**

Order No. 2222 allows RTOs/ISOs to limit the participation of resources in RTO/ISO markets through a DERA receiving compensation for the same services as part of a retail program.<sup>32</sup> To this end, the CAISO proposed a simple tariff provision stating that a DERA “may not receive compensation from retail programs for capacity,

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<sup>30</sup> “Scheduling Coordinator Metered Entity,” Appendix A to the CAISO tariff.

<sup>31</sup> Section 10.1.7 of the CAISO tariff.

<sup>32</sup> Order No. 2222 at P 159.

Energy, or other services it provides the CAISO Markets.” In other words, if a DER within a DERA already receives wholesale compensation for a service, it may not receive retail compensation from the CAISO for the same service. This ensures ratepayers do not pay twice (and at a high premium) for the same service.

Both AEE and CPower criticize the CAISO’s proposed tariff language on double counting as overly broad.<sup>33</sup> CPower, for example, states that “[w]hile there is limited experience in CAISO . . . experience in other RTO/ISO markets demonstrates that some load serving entities and utilities seek, sometimes quite aggressively, to block or impede aggregator participation in wholesale markets.”<sup>34</sup> AEE likewise argues, “[t]he proposal does not detail exactly what is meant by ‘capacity, Energy, or other services.’” Both commenters, imagining the worst, then provide hypotheticals that create constraints the CAISO’s tariff is designed to avoid.

The CAISO takes this opportunity to clarify that it has no incentive to prohibit DERs from participating in the DERA model. The CAISO itself created the original DERA model precisely to enable DERs to participate in the wholesale markets. The CAISO proposed a general provision on double counting for two specific reasons: (1) to allow DERs as much flexibility as possible to provide multiple services to both wholesale and retail markets, and (2) because it would be premature to offer a prescriptive list of specific double-counting scenarios. Multiple-use applications, like DERAs, are a nascent area where no party has any significant experience. Instead of trying to prejudge several hypothetical double-counting scenarios, the CAISO proposed a

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<sup>33</sup> AEE Comments at 15; CPower Comments at 7.

<sup>34</sup> CPower Comments at 7.

simple, benign rule prohibiting receiving compensation for the same service twice. The CAISO's provision would not exclude DERAs from providing complementary services. As retail programs allow for multiple use applications, and the CAISO, UDCs, and developers gain experience with actual double-counting scenarios, the CAISO can enumerate permissible and prohibited practices in its business practice manuals and tariff. Local regulatory authorities can do the same. But trying to do so now would only cause confusion, not clarity. There simply are insufficient actual examples for the CAISO to enumerate, so any attempt to do so would fail to predict future real-world applications.

The CAISO's general rule provides DERs complete flexibility to provide multiple services if they do not receive compensation for the same service from both retail and wholesale markets. The CAISO's proposed rule allows for service differentiation, time-of-use differentiation, and capacity differentiation. If a DER could provide energy to retail programs some times of the day or some days of the month, or some months of the year, and provide energy through its DERA other times, the CAISO would have no reason to exclude it for double-counting concerns. Likewise, a DERA could provide some of its capacity to retail programs and some to the CAISO. It could also provide services to retail programs the CAISO does not offer, like distribution deferral or standby microgrid services. Nothing in the CAISO's proposed tariff provisions prevents this. So long as ratepayers are not paying for something they would already receive through a retail program, any DER can provide service to the wholesale markets through a DERA.

CPower and AEE also misunderstand the ability of the UDC to prohibit DERs from entry due to double-counting issues. Even before Order No. 2222, the CAISO

tariff did not give UDCs a unilateral right to exclude a DER from a DERA. UDCs only can “raise concerns” in writing, which the DERP can address.<sup>35</sup> Should any dispute remain, the local regulatory authority arbitrates, deciding for all parties whether ratepayers are paying twice for the same service. As such, there is no possibility of unilateral exclusion by the UDC.

Although the CAISO’s tariff is just and reasonable and complies with Order No. 2222, the CAISO understands that developers are apprehensive about their ability to provide multiple services. As retail programs begin to allow for multiple use applications, the CAISO, UDCs, and developers will gain experience with actual double-counting scenarios, and the CAISO can then update its tariff and business practice manuals to clarify how its rules will apply. Nevertheless, should the Commission believe any specific clarification is warranted, it can clarify double-counting rules in its order on the CAISO’s compliance, and the CAISO can amend its tariff. Like AEE and CPower, the CAISO does not believe double-counting concerns should impede DERs from joining DERAs and participating in the wholesale markets.

## **VI. Load-serving Entity Coordination**

As discussed above, AEE erroneously faults the CAISO for allowing UDCs to exclude DERs from DERAs due to double-counting concerns. Nevertheless, AEE also faults the CAISO for *not* involving other parties like community choice aggregators in the DERA review process. The CAISO agrees that community choice aggregators and other types of load-serving entities may have information relevant to the DERA

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<sup>35</sup> Section 4.17.4 of the CAISO tariff.

registration process. The CAISO already involves both UDCs and load-serving entities in its demand response registration process and should include them in the DERA registration process. Accordingly, the Commission should require the CAISO to include “and Load Serving Entity” after each reference to Utility Distribution Company in the second paragraph of Section 4.17.4 of the CAISO tariff. This will allow Load Serving Entities to raise any concern listed in that section and otherwise inform the registration process to ensure a safe, reliable, and market-efficient system.

## **VII. Net Energy Metering**

Section 4.17.3(d) of the existing CAISO tariff prevents a DER from participating in a DERA where the DER already participates in a retail net energy metering program that does not expressly permit wholesale market participation. As the CAISO explained in 2016, under California’s current net energy metering program, a resource already receives benefits from netting its excess energy against subsequent electricity bills (at a retail rate); therefore, there is no energy available to offer into the CAISO markets because excess energy is banked for later withdrawal.<sup>36</sup> This tariff provision also follows Commission precedent finding exports to the transmission grid under a net energy metering program do not constitute a sale for resale of electricity under the Federal Power Act because these customers are, on a net basis, consumers.<sup>37</sup>

AEE criticizes the CAISO for not revising Section 4.17.3(d) because, according to AEE, it would prevent “the majority of DERs in CAISO” from participating in DERAs and

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<sup>36</sup> *California Independent System Operator Corp.*, 155 FERC ¶ 61,229 at P 6 (2016).

<sup>37</sup> *Id.* (citing *Sun Edison LLC*, 129 FERC ¶ 61,146 (2009) *reh’g granted*, 131 FERC ¶ 61,213 (2010); *MidAmerican Energy Co.*, 94 FERC ¶ 61,340 (2001)).

providing ancillary services.<sup>38</sup> AEE argues the provision is unnecessary “to avoid double counting, because retail net energy metering programs do not provide and are not compensated for wholesale ancillary services.”<sup>39</sup> AEE then provides examples of how DERs could provide regulation or operating reserves potentially without receiving credit from a net energy metering program.

The CAISO agrees that DERAs can provide ancillary services, and its proposed compliance reflects that fact. Any DERA that can meet the CAISO’s ancillary certification requirements is eligible to provide ancillary services. AEE fails to provide evidence the CAISO’s tariff provisions are a barrier to DERAs’ ability to provide ancillary services. The CAISO’s tariff provision is not specific to energy or ancillary services. It prohibits net energy metering customers from wholesale market participation for the reasons stated above. The CAISO’s tariff provision is not merely a check against ratepayers’ paying twice for the same energy, it also reflects that California net energy metering tariffs do not allow wholesale market participation, and that the Commission has expressly ruled net energy metering customers are not Commission-jurisdictional. In any case, the CAISO’s tariff plainly would allow net energy metering customers to provide energy or ancillary services where allowed by the retail tariff. AEE’s arguments are speculative and the Commission should disregard them.

CPower also argues Section 4.17.3(d) is inappropriate but for different reasons than AEE. CPower argues the provision acts as an “opt-in,” and would be prohibited by Order No. 2222. These arguments are inaccurate. Section 4.17.3(d) is neither an opt-

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<sup>38</sup> AEE Comments at 18.

<sup>39</sup> *Id.*

in nor an opt-out, but a reflection that DERs providing energy in net energy metering programs do not have energy to provide the wholesale markets because they already receive retail compensation for that energy. The rule simply clarifies that net energy metering participation constitutes double counting unless the retail authority has allowed for some level of differentiation between the markets. CPower and AEE's arguments against the net energy metering provision highlight the issues in trying to provide prescriptive rules on double counting scenarios in the tariff. Developers want every possible exception to double-counting enumerated in the tariff, but none of the applications. The Commission should disregard such arguments. Section 4.17.3(d) is a useful clarification on the clearest and most prominent double counting scenario that actually exists today. At the same time, it allows retail authorities to enable net energy metering participants should the opportunity arise.

### **VIII. Demand Response Aggregations**

Order No. 2222 requires that each RTO's/ISO's rules do not prohibit any particular type of DER technology from participating in DERAs.<sup>40</sup> The Order also clarifies that RTO/ISOs must enable demand response resources to participate in DERAs as well.<sup>41</sup> The CAISO thus proposed to implement a heterogeneous DERA model that accommodates demand response resources. CPower argues this proposal is insufficient because the CAISO would not allow a homogeneous DERA consisting *only* of demand response resources.<sup>42</sup> As the CAISO stated in its compliance filing, the

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<sup>40</sup> Order No. 2222 at P 141.

<sup>41</sup> Order No. 2222 at PP 142-5.

<sup>42</sup> CPower Comments at 10.

CAISO does not believe it is necessary or efficient to collapse all of the CAISO's demand response rules into the DERA model. Doing so would delay any implementation significantly and with little apparent gain. Developers have seen little incentive to participate under the DERA model, whereas the CAISO's two demand response models both have capacity in the gigawatts. CPower's arguments that a developer may want to register a demand-response-only DERA in the present to modify it to include others DERs in the future is speculative and unconvincing.<sup>43</sup> Potentially less administrative work for developers does not justify the delay and expense for the CAISO to create a third DERA model. Moreover, allowing DERAs to consist of demand response resources alone would not provide developers any market opportunities they do not already enjoy. Instead, it would allow them to choose among different tariff requirements with no underlying difference in resource characteristics.

More critically, the Commission plainly could have ordered RTO/ISOs to collapse their demand response models into a single DERA model as NYISO did, but Order No. 2222 did not. Instead, it required RTO/ISOs to allow DERs to aggregate with demand response resources as *heterogeneous* aggregations,<sup>44</sup> the plain language of which requires a mix: both energy-injecting DERs and demand response resources. Nowhere in Order No. 2222 does the Commission require RTO/ISOs to create demand-response-only aggregations because every RTO/ISO already established such models before or under Order No. 745. As such, CPower's arguments are outside the scope of Order No. 2222.

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<sup>43</sup> *Id.*

<sup>44</sup> Order No. 2222 at P 142.

## IX. Net Benefits Test Application

Order No. 2222-B clarifies that heterogeneous DERAs providing demand response are subject to the net benefits test to ensure dispatching that resource to curtail demand is cost effective relative to supply. In compliance with Order No. 745, the CAISO applies the market clearing price established by the net benefits test as a bid floor for demand response resources.<sup>45</sup> Consistent with this rule and the CAISO's market optimization, the CAISO proposed to apply the net benefits test to heterogeneous DERAs in the same way.<sup>46</sup> That is, scheduling coordinators for heterogeneous DERAs must bid above the market clearing price established by the net benefits test.

CPower argues that the CAISO's proposal is a barrier to DERAs and does not comply with Order No. 2222.<sup>47</sup> CPower argues the CAISO could create back-end settlement processes to apply the net benefits test to the demand response DERs within a DERA but not the energy-injection DERs. The CAISO agrees that such a settlement scheme could be possible, but doing so is neither required by Order No. 2222 nor prudent. Energy injections and demand response are not simply a question of settlement; the CAISO depends on a DERA's ability to respond to dispatch for both reliability and market efficiency. When a heterogeneous DERA bids into the market, the

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<sup>45</sup> Section 30.6.3 of the CAISO tariff. The CAISO posts the net benefits test results on its website, along with supporting documentation and the threshold Market Clearing Prices that were in effect in the previous twelve (12) months, and any updated supply curve analysis. The CAISO posts the threshold Market Clearing Prices determined for each month on the CAISO website by the fifteenth day of the immediately preceding month. Section 30.6.3.2 of the CAISO tariff.

<sup>46</sup> Proposed Section 30.5.2.6.

<sup>47</sup> CPower Comments at 11 *et seq.*

CAISO has no way of knowing whether its response to dispatch will come in the form of energy or demand response. With only back-end settlement corrections, a heterogeneous DERA could consistently respond to dispatch by providing demand response energy that fails the net benefits test. Although the settlement may be worked out for the DERA, the price formation in the market has long past.

In arguing that the net benefits test is a hurdle to DERAs, CPower also exaggerates its effect. As the CAISO explained in its Order No. 2222 compliance filing, resources curtailing demand pursuant to CAISO dispatch generally submit bids among the most expensive. There is no reason to believe DERs providing demand response within a DERA would have economics different from other demand response resources. As the CAISO's Department of Market Monitoring has shown, "proxy demand response capacity was primarily offered into the day-ahead market at bid prices over \$750/MWh and into the real-time market near the \$1,000/MWh bid cap."<sup>48</sup> The net benefits test, on the other hand, frequently establishes a market clearing price of \$0/MWh. In 2021, the market clearing price has ranged from \$16/MWh to \$41/MWh.<sup>49</sup> As such, the CAISO's

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<sup>48</sup> CAISO Department of Market Monitoring, 2018 Annual Report on Market Issues and Performance, p. 42, *available at* <http://www.caiso.com/Documents/2018AnnualReportonMarketIssuesandPerformance.pdf> ("While the total amount of registered capacity and energy bids from demand response increased significantly between 2017 and 2018, the additional proxy demand response capacity was primarily offered into the day-ahead market at bid prices over \$750/MWh and into the real-time market near the \$1,000/MWh bid cap. The incremental bid capacity in 2018 was from both supply plan and non-supply plan resources. The majority of demand response capacity remained concentrated at the top of the resource supply stack and was infrequently dispatched in the day-ahead and real-time markets").

<sup>49</sup> CAISO, Demand Response Net Benefits Test Results, <http://www.caiso.com/Pages/DocumentsByGroup.aspx?GroupID=AA4CD173-9624-4B52-B148-3D3C8EAB375C>.

application of the net benefits test to heterogeneous DERAs does not create any barrier.

The CAISO also notes that reverting to back-end settlement adjustments for the net benefits test would come at significant costs. First, it would delay the CAISO's ability to implement its software enhancements to comply with Order No. 2222.

Settlement software enhancements are among the most complex and generally require substantial lead-times. Second, reverting to back-end settlement adjustments would require each demand response resource to be within the same load-serving territory.

The CAISO explained this issue in 2019 when it converted its settlement adjustments to a bid floor:

the current use of the net benefits test and the default load adjustment results in an obstacle independent of the market economics. Because demand response energy below the market clearing price is assessed to the LSE, the CAISO has required that any end user aggregations comprising a demand response resource be located within the same LSE territory. Without this requirement, the default load adjustment would be too complex to manage: The CAISO could not reasonably determine which end users that comprise a single demand response resource responded to a given dispatch (and to what extent) to allocate costs proportionately to each LSE. Moreover, demand response providers do not produce individual load baselines for each end user at the settlement-interval level, and thus the CAISO would be unable to determine the demand response energy resulting from each end user in each LSE in a single proxy demand resource.<sup>50</sup>

For these reasons, the CAISO changed its application of the net benefits test from a settlement adjustment to a bid floor. The disaggregation of load-serving entities due to the proliferation of community choice aggregators led the CAISO and stakeholders to conclude that the single load-serving entity requirement was becoming an obstacle to

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<sup>50</sup> *California Independent System Operator Corp.* ESDER 3 Tariff Revisions, Docket No. ER19-2733 at 9 (Sep. 3, 2019); *approved via* Letter Order (Nov. 6, 2019).

aggregated demand response. Reverting to a settlement adjustment also would require reverting back to the single load-serving entity requirement. Unlike the bid floor, the single-load serving entity requirement could be a potential barrier to DERAs, especially as California load-serving entities proliferate further. As such, the Commission should disregard CPower's arguments and find the CAISO's proposal consistent with Order No. 2222.

## **X. Conclusion**

For the reasons stated herein, in the CAISO's compliance filing, and in its request for clarification and rehearing, the Commission should approve the CAISO's compliance filing with Order No. 2222.

Respectfully submitted,

**By: /s/ William H. Weaver**

Roger E. Collanton  
General Counsel  
Sidney L. Mannheim  
Assistant General Counsel  
William H. Weaver  
Senior Counsel  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 351-4400  
Fax: (916) 608-7222  
[bweaver@caiso.com](mailto:bweaver@caiso.com)

Counsel for the California Independent  
System Operator Corporation

Dated: September 3, 2021

## 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 3<sup>rd</sup> day of September, 2021.

*/s/ Jacqueline Meredith*

Jacqueline Meredith