

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**California Independent System) Docket No. ER18-1339-000
Operator Corporation)**

**ANSWER OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR
CORPORATION TO COMMENTS AND PROTEST**

The California Independent System Operator Corporation (CAISO)¹ answers the comments and protest filed in the above-captioned proceeding² in response to the CAISO's April 10, 2018 petition for limited tariff waiver and request for expedited consideration (April 10 Petition).³ In the April 10 Petition, the CAISO requests that the Commission issue an expedited order granting limited waiver of three provisions in sections 34.1.5.2 and 34.1.5.4 of the CAISO tariff to avoid unintended consequences to Powerex in connection with its voluntary participation in the CAISO's western energy imbalance market (EIM).

¹ Capitalized terms not otherwise defined herein have the meanings set forth in appendix A to the CAISO tariff.

² The following entities filed motions to intervene in the proceeding: the Balancing Authority of Northern California; California Public Utilities Commission; Cities of Santa Clara, California and Redding, California and the MS-R Public Power Agency; City of Seattle, by and through its City Light Department; Department of Market Monitoring (DMM) of the CAISO; Idaho Power Company; Modesto Irrigation District; NV Energy, Inc.; Pacific Gas and Electric Company (PG&E); Portland General Electric Company; Powerex Corp. (Powerex); Puget Sound Energy, Inc.; and Southern California Edison Company. In addition, PG&E and Powerex filed comments, and DMM filed a protest.

³ The CAISO files 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. The CAISO requests waiver of Rule 213(a)(2), 18 C.F.R. § 385.213(a)(2), to permit it to answer the protest filed in the proceeding. Good cause for this waiver exists here because the answer will aid the Commission in understanding the issues in the proceeding, 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).

Powerex states that it “strongly supports” the April 10 Petition.⁴ No intervenor raises any objection to the waiver the CAISO actually requests in the April 10 Petition. DMM argues that the CAISO “has not met the criteria required for the Commission to grant CAISO the requested waiver”⁵ and cautions that the requested waiver could have adverse consequences, but does not articulate any such consequences. PG&E “does not weigh in on the substance of whether a waiver is needed or if the current bid mitigation rules are appropriate,” but PG&E expresses concern about the CAISO’s “description of Powerex’s use of transmission rights in order to impact market outcomes.” This concern is outside the scope of this proceeding.⁶

For the reasons set forth in the April 10 Petition and in this answer, the Commission should find that the waiver petition satisfies the Commission’s tariff waiver criteria and that DMM’s and PG&E’s arguments are without merit.

I. Background and Executive Summary

The April 10 Petition explained that Powerex is uniquely situated as the first and only Canadian entity participating in the EIM.⁷ The CAISO and Powerex discovered during parallel operations held prior to full implementation that the market frequently mitigated the Powerex aggregated resource and caused flows to reverse. In the scenarios that cause concern, the CAISO dispatches the Powerex resource to export at a mitigated bid price -- when it has identified

⁴ Powerex at 4.

⁵ DMM at 1.

⁶ PG&E at 3.

⁷ April 10 Petition at 4-9.

market power in the import direction and the implications of that market power are limited to the British Columbia Hydro & Power Authority (BC Hydro) balancing authority area, which is outside of the EIM and the Commission's jurisdiction.

The CAISO applies its market power mitigation procedures to Powerex as it does to all other market participants except that it applies the procedures to Powerex's aggregated participating resource as opposed to individual resources, which it does for all other participants. When the CAISO applies its market power mitigation to Powerex's aggregated participating resource and identifies potential market power in the import direction (*i.e.*, northbound EIM transfers from the United States into the BC Hydro balancing authority area), even though the CAISO does not identify potential market power in the export direction (*i.e.*, southbound EIM transfers from the BC Hydro balancing authority area into the United States), the mitigation of the import results in the mitigation of the exports. This phenomenon was immediately apparent for Powerex because the CAISO models its resources as an aggregated resource and because of the frequency with which the aggregated participating resource was mitigated in parallel operations.⁸ Therefore, the CAISO informed the Commission that:

Although CAISO and Powerex have agreed to a default energy bid for use on an interim basis, Powerex remains concerned of the impacts the use of the interim default energy bid may have on its participation in the EIM based on its observations when mitigation was applied during parallel operations. The CAISO understands that Powerex expects it will materially reduce its participation in the EIM during certain hours, or on certain days, when it anticipates

⁸ Although the CAISO understands that this could happen to other types of resources, it is not aware of any specific cases and no other EIM entity has reported such an outcome.

mitigation will result in the uneconomic dispatch of its aggregate participating resource. This remedial action is likely to persist until the default energy bid is resolved and will result in a lower overall initial participation level than Powerex had originally expected. Powerex anticipates addressing this final implementation issue in conjunction with an upcoming CAISO stakeholder process commencing in the second quarter of 2018.⁹

To mitigate the impact of this condition, Powerex has had to restrict transfers into the EIM to protect itself against the unintended consequence of bid mitigation, which limits the benefits that can accrue to the EIM from Powerex's participation.¹⁰ The CAISO has developed an interim solution to avoid this situation, reducing the frequency with which Powerex must restrict its exports into the EIM. The CAISO created this solution with DMM's input prior to filing the April 10 Petition. The CAISO did not stakeholder the request for a waiver or the interim solution because the issue requires immediate attention. Moreover, the procedure benefits the whole EIM by allowing for greater transfers in more intervals and does not have any unintended market consequences. However, as is customary when the CAISO takes immediate action seeking tariff waivers, the CAISO has already started, and will continue, to work with all stakeholders to come to a more permanent solution to the problem.

The interim solution consists of an automated process by which, pursuant to Powerex's instructions, the CAISO will limit Powerex's EIM transfers by restricting (*i.e.*, freezing) net exports and flexible ramping up capacity sourced

⁹ CAISO Informational Readiness Certification for Powerex's Participation in the EIM, Docket No. ER15-861-000, at 4-5 (Mar. 2, 2018).

¹⁰ April 10 Petition at 9-12.

from the BC Hydro balancing authority area only during intervals in which this condition occurs, as well as limiting mitigation of Powerex's resource to the market interval in which the mitigation of that resource is triggered.¹¹

The CAISO seeks a limited tariff waiver of three provisions in tariff sections 34.1.5.2 and 34.1.5.4 to ensure that the interim solution operates as intended, but does not require waiver in order to implement the interim solution itself. Solely with regard to Powerex's aggregated participating resource operating under the unique Canadian EIM entity arrangements, the CAISO will waive the tariff provisions for the fifteen minute market (FMM) and real-time dispatch (RTD) processes of its real-time market requiring that: (1) if a bid is mitigated in the market power mitigation process for the first FMM interval in a trading hour, the mitigated bid will be used for all market applications for that first FMM interval; and (2) if a bid is mitigated in one FMM or RTD interval, the bid mitigation will automatically continue into subsequent intervals.¹² The April 10 Petition satisfies the Commission's requirements for granting a tariff waiver.¹³

DMM and PG&E largely raise issues that are beyond the scope of this proceeding. Although DMM has raised some issues that are related to topics discussed in the April 10 Petition, they have not shown that the waiver petition fails to meet the Commission's requirements. DMM erroneously conflates the

¹¹ April 10 Petition at 13-17.

¹² *Id.* at 8-9, 17-18.

¹³ *Id.* at 18-22. The Commission grants requests for tariff waivers where (1) the applicant acted in good faith; (2) the waiver was of limited scope; (3) the waiver addressed a concrete problem; and (4) the waiver did not have undesirable consequences, such as harming third parties. *Id.* at 20 (citing Commission precedent).

purpose of the April 10 Petition with issues not addressed in the waiver petition regarding Powerex's negotiated default energy bid, which the CAISO is considering as part of the upcoming EIM offer rules stakeholder process. Contrary to DMM's arguments, awaiting the outcome of that stakeholder process, which is addressing different issues, cannot and should not be a substitute for granting the April 10 Petition now.

DMM argues that the CAISO seeks to justify the waiver in part on the grounds that applying the current tariff provisions to Powerex would be contrary to the intent of Powerex's EIM Implementation Agreement. This argument likewise conflates two different points of discussion in the April 10 Petition. DMM is also incorrect that granting the waiver petition would be inconsistent with the provisions in Powerex's EIM Implementation Agreement regarding the local market power mitigation framework to be applied. Granting the tariff waiver will actually be consistent with that framework.

DMM contends that the April 10 Petition provides no justification for why Powerex being a Canadian EIM entity would warrant only Powerex being subject to the interim solution. Although this argument is beyond the scope of the waiver petition, more fundamentally it fails to recognize that Powerex's situation *is* unique and that it would be inappropriate to apply the interim solution to other market participants that are not in Powerex's situation. The waiver requested in the April 10 Petition is rightfully confined to Powerex, as the first and only EIM entity participating in the EIM under the aggregated participating resource model, and where, as a foreign entity, there may be circumstances under which there

are no market power implications that extend into any of the EIM areas. Further, DMM's argument that the interim procedure may extend to other participants runs contrary to its claims that the procedure may have unintended consequences.

DMM raises the specter that applying the interim solution and tariff waiver only to Powerex may have undesirable consequences for other market participants. But DMM does not identify any such undesirable consequences in its pleading. The CAISO developed the interim solution with DMM's input and made modifications to it to address their input. At that time, DMM had not identified issues with the interim solution but recommended that the CAISO pursue the change through a stakeholder process and tariff amendment.

The CAISO carefully evaluated its tariff provisions and its agreements with Powerex and considered the time it would take to consider broader rule changes that could apply to other market participants. The CAISO concluded that a temporary waiver limited to Powerex's participation in the EIM was the best and most expeditious option. A waiver does not prevent the CAISO from pursuing broader tariff rule changes if necessary. However, without a waiver, the EIM would be forced to forgo the full benefits of the Powerex transfers during the process in which the CAISO pursues potential tariff changes.

PG&E acknowledges that its comments are beyond the scope of this proceeding but nevertheless raises two concerns about the background discussion in the April 10 Petition on Powerex's voluntary reductions in EIM transfer capability. PG&E's concerns are without merit because Powerex makes

its unused capacity available in accordance with the CAISO tariff and business practice manual, as well as the Powerex Canadian EIM Entity Agreement.

II. Answer

A. DMM Appears to Misunderstand the Purpose of the April 10 Petition and Raises Issues That Are Beyond the Scope of the Petition

DMM argues that the CAISO and Powerex “already have the authority and ability to eliminate the CAISO’s stated rationale for the waiver by incorporating the opportunity costs associated with releasing water from an external multi-facility hydro system with long-term storage in Powerex’s default energy bids under the negotiated option of the CAISO tariff.”¹⁴ DMM asserts, “[t]he changes in market power mitigation sought under the waiver should be subject to a stakeholder process.”¹⁵ DMM also contends that the April 10 Petition “is based on Powerex’s unsupported claim that its default energy bid is lower than its actual opportunity cost.”¹⁶ DMM states that Powerex should renegotiate its existing negotiated default energy bid in order to “address the issues described in” the April 10 Petition.¹⁷

DMM appears to misunderstand the purpose of the April 10 Petition and raises issues that are beyond the scope of the petition. The sole purpose of the petition is to obtain “waiver of three tariff provisions [in sections 34.1.5.2 and 34.1.5.4] as they apply to Powerex in order to ensure that the interim solution

¹⁴ DMM at 1 (internal quotation marks omitted).

¹⁵ *Id.* at 2.

¹⁶ *Id.* at 4.

¹⁷ *Id.* at 4-6. DMM makes similar arguments at pages 13-14 of its protest.

that restricts Powerex's activity in the EIM can be used as sparingly as possible."¹⁸ The CAISO requested waiver of those three tariff provisions because they generally require the CAISO to apply market power mitigation for the remaining horizon of the applicable trading hour, and therefore the restriction imposed by the market power mitigation on Powerex's southbound EIM transfers would apply in those remaining intervals of the applicable hour as well. This means that the limitation on Powerex's southbound EIM transfers would continue to apply during those subsequent intervals whether or not market power mitigation would independently trigger in those intervals. It is possible that in the subsequent intervals, when tested, the Powerex resource would not trigger market power mitigation; in such intervals, limiting (*i.e.*, freezing) the export would be unnecessary and it may be economically efficient for Powerex and the EIM to export. In those subsequent intervals, binding transmission constraints may also have implications that extend to other EIM balancing authority areas. As discussed in the April 10 Petition, the CAISO should apply market power mitigation and not freeze Powerex's southbound EIM exports in the latter circumstance.¹⁹

DMM conflates this purpose of the April 10 Petition with discussion in the waiver petition about Powerex's belief that its existing negotiated default energy bid does not allow Powerex to adequately recover its resource's opportunity costs. The CAISO noted Powerex's concerns about its existing negotiated

¹⁸ April 10 Petition at 17.

¹⁹ *Id.* at 18. See also *id.* at 13-17 (discussing specifics of the interim solution).

default energy bid, and the planned EIM offer rules stakeholder process to address the default energy bid issue for hydro resources, in the informational certification of Powerex's readiness to participate in the EIM that the CAISO submitted in a separate proceeding on March 2, 2018.²⁰ The CAISO went on to explain that "[u]ntil the default energy bid issue . . . can be resolved in conjunction with the EIM offer rules stakeholder initiative, the CAISO will implement" the interim solution.²¹

However, the adequacy of Powerex's default energy bid is not the subject of the requested waiver and is not the reason for freezing Powerex's exports in the circumstances described in the April 10 Petition. The issue in the April 10 Petition is instead whether the mitigation rules that require the CAISO to carry through mitigation for the rest of hour can be relaxed for Powerex without consequence. As the CAISO explained in the April 10 Petition, doing so benefits the EIM because it allows for more transfers with Powerex than are possible today, and is without adverse consequence because the tariff rules mitigate for intertemporal constraints and the Powerex resource has none. The default energy bid issue, on the other hand, exists anytime Powerex is subject to market power mitigation, not just when Powerex is subject to the flow reversal situation that the interim solution is intended to address.²² As Powerex explains in its

²⁰ See *id.* at 9-12.

²¹ *Id.* at 13.

²² DMM points out that the hypothetical examples provided in the April 10 Petition to illustrate how the interim solution will work are based on default energy bids of \$3 and \$4 per megawatt. DMM states that these hypothetical examples are not representative of the default energy bids actually being used for Powerex. DMM at 4. The CAISO does not contend that they are representative – the CAISO provided them only to illustrate how the interim solution will work

comments, “an alternative DEB [default energy bid] option will not necessarily prevent the ‘flow reversal’ issue described above from occurring in all intervals” but such an alternative option “will ensure that Powerex, and others with energy-limited hydro resources, are not forced to make uneconomic sales in intervals in which market mitigation is applied, by ensuring the availability of a mitigated bid option that provides such participants with the flexibility needed to recover their opportunity costs.”²³ The Commission should disregard DMM’s arguments to the extent they concern the default energy bid issue, which is beyond the scope of this proceeding.²⁴

The CAISO came to understand Powerex’s concerns about its existing negotiated default energy bid based on communications with DMM and Powerex. DMM negotiates default energy bids on behalf of the CAISO with market participants. It was the CAISO’s understanding based on DMM’s communications to the CAISO months prior to parallel operations that DMM’s past practices would prevent DMM from being able to accommodate Powerex’s request. This was months before the CAISO and Powerex observed the

under different hypothetical cases. Section 20.2 of the CAISO tariff requires the CAISO to treat individual bids from scheduling coordinators, including Powerex’s actual negotiated default energy bid, as confidential.

²³ Powerex at 9-10.

²⁴ See, e.g., *Midcontinent Indep. Sys. Operator, Inc.*, 160 FERC ¶ 61,059, at P 25 n.52 (2017) (“We dismiss as beyond the scope of this proceeding Protestors’ arguments”); *Northeast Utilities Serv. Co. and NSTAR Elec. Co.*, 127 FERC ¶ 61,179, at P 81 (2009) (“We agree with Petitioners that the issues raised by Indicated NE Generators and NRG concerning the adequacy of the existing forward capacity rules are beyond the scope of this proceeding.”); *Sw. Power Pool, Inc.*, 90 FERC ¶ 61,078, at 61,274 (2000) (“We will also deny Lafayette and OMPA’s alternative request to revoke Cleco’s market-based rate authority. SPP’s filing does not concern Cleco’s market-based rates. Therefore, Lafayette and OMPA’s request is beyond the scope of this proceeding.”).

frequency with which the market mitigated the Powerex resource in parallel operations and the reversal of flows. The CAISO, in its oversight role, attempted to understand both Powerex's and DMM's positions in the negotiation. The CAISO looked at both sides of the issue and concluded that, based on DMM's explanation of why the current approaches for determining a default energy bid do not sufficiently address Powerex's concerns, it was best to consider starting a stakeholder process to address the issue on a broader scale. In Powerex's opinion, "[n]one of the existing three DEB [default energy bid] options available under the CAISO tariff provide Powerex the ability to achieve a DEB that provides sufficient flexibility to reflect the complex and dynamic nature of the opportunity costs applicable to Powerex's aggregated participating resource."²⁵ The appropriate forum for addressing an issue that apparently cannot be resolved under the current default energy bid rules is the EIM offer rules stakeholder process,²⁶ and then the appropriate forum will be the Commission if the stakeholder process cannot resolve the issue.

The CAISO held a workshop on April 30, 2018 to consider whether it needed a new stakeholder initiative to address issues that Powerex and other stakeholders have raised regarding limitations of the negotiated default energy

²⁵ Powerex at 7-8.

²⁶ DMM explains that it "can implement a wide range of methodologies for calculating default energy bids that may be proposed by participants, as well as opportunity cost models DMM has already developed for calculating opportunity costs for hydro and other energy limited resources." DMM at 5. The CAISO encourages DMM's active participation in the stakeholder process to provide its perspectives.

bid option.²⁷ The DMM participated in this workshop as did numerous market participants and interested parties. After a very informative and active discussion, the CAISO concluded that there appears to be a gap between the current default energy bid methodologies and the needs expressed by market participants. The CAISO will review written comments submitted by market participants and will consider the appropriate course of action.

The Commission should grant the April 10 Petition regardless of the outcome of the EIM offer rules stakeholder process. As the CAISO explained, the waiver is temporary, intended to remain in effect only for a period of up to 18 months, *i.e.*, until November 9, 2019. The CAISO will work to resolve the default energy bid issue in the stakeholder process in the intervening time. If the stakeholder process provides Powerex a method for addressing the issue observed in its participation in the EIM, there is no need for the tariff waiver, which would apply only to Powerex, to remain in effect.²⁸ Although Powerex is the only market participant under the generic non-generator resource model, the CAISO recognizes that there may be other entities affected by market power mitigation in the same manner and it may be further necessary to consider how market power mitigation may affect such similarly situated entities. The CAISO will continue to explore these possibilities and consider whether it will need to

²⁷ Materials related to the workshop are available on the CAISO website at <http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx>.

²⁸ April 10 Petition at 3, 20-21.

make tariff rule changes to apply the exception sought in the April 10 Petition to other parties.

Nevertheless, awaiting the outcome of the stakeholder process is not an adequate *substitute* for granting the April 10 Petition now, as DMM suggests. The CAISO submitted the petition for a temporary waiver because prompt action is necessary to prevent the adverse consequences described in the waiver petition. In cases such as this, the CAISO is not required to first conduct a stakeholder process, much less a thorough and extensive stakeholder process of the type the CAISO normally undertakes in considering broad rule changes.²⁹

DMM notes that the CAISO “provides no reason to believe that this stakeholder process will result in anything the CAISO could not implement immediately under the negotiated default energy bid option.”³⁰ The CAISO agrees this may be so, but it also may not. If this turns out to be the case, the CAISO will not need to make any changes to the CAISO tariff but can instead incorporate the result of the stakeholder process into its default energy bid methodologies to be used going forward. This does not obviate, however, the need for a stakeholder process to ensure that the issues presented by Powerex and other market participants receive a full hearing. This is especially apparent after the April 30 workshop in which it was very clear that there may be a gap between the current methodologies used by DMM to negotiate default energy

²⁹ The CAISO considered filing an emergency tariff amendment to address the issues to be discussed in the EIM offer rules stakeholder process but concluded that it was premature to propose any permanent tariff changes for Commission acceptance, particularly given that granting the April 10 Petition will provide relief to Powerex until the stakeholder process concludes.

³⁰ DMM at 6.

bids, and the type of flexibility some market participants feel they need to address issues related to certain types of resources such as Powerex's large-scale fast hydroelectric resource as well as the interaction of these issues with sales opportunities outside the EIM.

DMM states that after the CAISO filed the April 10 Petition, the CAISO held non-public discussions with certain individual stakeholders and groups regarding the waiver petition, which DMM asserts is no substitute for the CAISO's normal public stakeholder and regulatory approval process.³¹ The CAISO agrees, and has never intended such discussions to be such a substitute. Rather, after the CAISO was contacted by the stakeholders that DMM refers, to ask questions about the waiver petition, the CAISO held discussions regarding those questions. All stakeholders were free to submit any comments they wished in this proceeding. Further, while not noted by DMM, the CAISO discussed the April 10 Petition at the public Market Performance and Planning Forum meeting held on April 19.³² In other words, the CAISO has addressed the waiver petition publicly with interested stakeholders and has not declined to speak with any participants.

DMM suggests that if Powerex believes DMM's existing negotiation process does not result in approval of a default energy bid that accurately reflects its opportunity costs, Powerex can and should file an alternative proposed

³¹ *Id.* at 3.

³² See slides 22-28 of the PowerPoint presentation that was delivered at the meeting, available at <http://www.caiso.com/Documents/Agenda-Presentation-MarketPerformance-PlanningForum-Apr192018.pdf>.

methodology with the Commission. DMM further states that DMM specifically pointed out these options to both the CAISO and Powerex in the months prior to Powerex's entry into the EIM in April 2018.³³ Although Powerex could have pursued such an option, it is irrelevant to whether the Commission should grant the April 10 Petition, as it is unrelated to whether the market power mitigation rules can be relaxed without consequence.

Nevertheless, there is no reason to subject Powerex to the flow reversal issue observed during parallel operations while such a process ensues. Further, it is possible that a Commission process might take at least as long as the stakeholder process the CAISO has put in place. The CAISO understands that the issues Powerex has presented are not the typical kind of issues DMM has dealt with in past negotiations of default energy bids. Although DMM has dealt with hydroelectric resources before, there is no other participant in the EIM with an aggregated hydroelectric resource that is wholly situated outside the United States, offering residual capacity in the EIM that reported similar flow reversal issues. The CAISO is also concerned that submitting an alternative proposed default energy bid methodology to the Commission would not resolve the issue the CAISO is trying to address in the April 10 Petition. No matter what the default energy bid is, Powerex should not be forced to make uneconomic sales in cases where there are no market power concerns for the EIM. Independent from the flow reversal issue, the CAISO continues to believe that despite the best efforts of both parties, there may be a gap in the CAISO's default energy bid

³³ DMM at 5.

options that needs to be addressed. Were the Commission presented with this issue, it is very possible that the Commission would instruct the CAISO to commence a stakeholder process to address the issue – which the CAISO has already done.

B. DMM’s Concerns Regarding the EIM Implementation Agreement Are Beyond the Scope of This Proceeding and Without Merit

DMM argues that the CAISO “seeks to justify the proposed waiver in part on the grounds that applying [the] current tariff provisions to Powerex would be contrary to the principles or intent of Powerex’s [EIM] implementation agreement.”³⁴ Again, this argument conflates two different points of discussion in the April 10 Petition. The CAISO discussed the intent of the Powerex EIM Implementation Agreement *only as it relates to the interim solution and the upcoming EIM offer rules stakeholder process, but never as a justification for seeking waiver.*³⁵ The petition pages DMM cites address only the justification for the waiver, and do not mention any of the Powerex agreements.³⁶

DMM also cites what it calls “key text” from the Powerex EIM Implementation Agreement that the CAISO declined to quote in the April 10 Petition: “Any local market power mitigation framework to be applied will be consistent with the CAISO tariff [and] will mitigate potential market power concerns during constrained periods to the satisfaction of the DMM and FERC . .

³⁴ *Id.* at 7 (internal quotation marks omitted).

³⁵ See April 10 Petition at 1, 10-13, 17.

³⁶ DMM at 7 n.8; April 10 Petition at 18-19.

. .³⁷ There was, of course, no reason for CAISO to quote that language in the April 10 Petition because it added nothing that was relevant to, or warranted mention in, the April 10 Petition. It is completely unsurprising that the EIM Implementation Agreement includes language requiring any local market power mitigation framework to be applied consistent with the tariff. All market participants – including participants in the EIM – are generally subject to that framework. As explained in the April 10 Petition, “[t]he real-time local market power mitigation provisions apply to the EIM with some EIM-specific modifications as described in the tariff.”³⁸ Nothing in the EIM Implementation Agreement, however, prohibits the CAISO from seeking limited waiver of those generally applicable tariff provisions if justified when consistent application of the market power mitigation framework results in unintended consequences such as forces sales at mitigated bids in cases where there is no market power.

Nor is anything in the April 10 Petition inconsistent with the provision in the EIM Implementation Agreement stating that the local market power mitigation framework will mitigate potential market power concerns during constrained periods to the satisfaction of DMM and the Commission. DMM’s contention is not that the existing framework is unsatisfactory. Rather, DMM contends that the Commission should not grant limited waiver of certain tariff provisions that are part of that existing framework.

³⁷ DMM at 8 (quoting section 14(g) of EIM Implementation Agreement) (emphasis omitted).

³⁸ April 10 Petition at 7 n.14.

For the reasons explained in the April 10 Petition, granting limited tariff waiver will actually be consistent with the market power mitigation framework. The waiver will have no adverse effect on the CAISO's ability to mitigate the potential exercise of market power by the Powerex resource. The purpose of the three tariff provisions for which the CAISO requests waiver is to mitigate the exercise of intertemporal market power based on a resource's ramping constraints from one interval to another. The waiver will not undermine that purpose. The Powerex resource does not have ramping constraints across intervals. Thus, it is not possible for the Powerex resource to exercise intertemporal market power, and the Powerex resource is available to the EIM without regard to these constraints. The CAISO will conduct the market power mitigation run in each interval to ensure that, if there is market power in that interval, the CAISO appropriately mitigates the resource.

As a result, waiving the quoted provisions with regard to Powerex's participation in the EIM will have no unintended consequences and will not undermine the CAISO's market power mitigation process.³⁹ Granting the waiver will allow EIM transfers into the EIM area during those intervals when either (1) Powerex has no ability to exercise market power in the applicable interval(s) and restricting exports in the subsequent interval(s) would be economically inefficient and would harm the EIM as a whole; or (2) Powerex has potential ability to exercise market power in the EIM Area, but the CAISO's freezing of exports in subsequent intervals would prevent appropriate application of local market power

³⁹ *Id.* at 19.

mitigation and potentially necessary sales at potentially mitigated prices into the EIM area.⁴⁰ Thus, DMM is incorrect in asserting that the language in the Powerex EIM Implementation Agreement is in any way inconsistent with the April 10 Petition.

C. DMM’s Argument That the Interim Solution Should Apply to Entities Other than Powerex Is Erroneous and Beyond the Scope of This Proceeding

DMM argues that the April 10 Petition “provides no justification . . . for why Powerex being a Canadian EIM entity would warrant these special automated restrictions,” *i.e.*, would warrant only Powerex being subject to the interim solution.⁴¹ DMM asserts that the CAISO mistakenly claims Powerex’s situation is unique in two respects; according to DMM, other entities are in the same situation as Powerex.⁴²

The Commission should reject DMM’s arguments. First, this proceeding solely concerns whether granting the April 10 Petition is justified as to the Powerex resource, not the merits of the interim solution or whether other resources should also be subject to the interim solution. As the April 10 Petition explained, “[t]he CAISO does not require tariff changes or waiver of existing tariff provisions to implement the interim [solution], because the tariff provides sufficient flexibility to incorporate these measures in the business practice manuals.”⁴³ Therefore, the Commission should reject DMM’s arguments

⁴⁰ *Id.* at 21.

⁴¹ DMM at 9 (internal quotation marks omitted).

⁴² *Id.* at 9-12.

⁴³ April 10 Petition at 15-16.

because they are beyond the scope of this proceeding. If DMM wishes to challenge the interim solution, it can do so either in the business practice manual change management process or by filing a complaint with the Commission pursuant to Section 206 of the Federal Power Act.

Further, the contention that Powerex's situation is not unique is erroneous. The fact that BC Hydro and Powerex are Canadian entities is a critical difference between them and EIM market participants in the United States. When the flow reversal issue that gave rise to the interim solution occurs, the implications of any possible market power are limited to the BC Hydro balancing authority area, which does not constitute part of the EIM area and is not subject to Commission jurisdiction.⁴⁴ In contrast, for the EIM balancing authority areas in the United States that constitute the EIM area and are subject to Commission jurisdiction, there may be market power issues to consider when the flow reversal issue arises. Although it is possible for flows to reverse in the EIM area, it is unclear that limiting exports would have no unintended consequences for the EIM area. Therefore, the CAISO does not agree with DMM that the interim solution, freezing of exports, and tariff waiver could be applied to the EIM balancing authority areas that constitute the EIM area in the same manner they are applied to Powerex without further investigation.

The first of the two reasons for Powerex's uniqueness that DMM questions is the explanation in the April 10 Petition of "the application of mitigation to

⁴⁴ See *id.* at 5 & n.6, 8 & n.16, 9-10. BC Hydro does not participate in or undertake any commercial activities in the EIM. *Id.* at 5 n.6.

'Powerex's offers to sell and purchase energy' when Powerex's energy schedules in the market power mitigation optimization are below Powerex's base schedules," which the CAISO explained results in "reversal of the flows at the mitigated price [that] is problematic because the Powerex aggregated participating resource is forced to sell at a mitigated bid price even though there were no market power concerns present."⁴⁵ DMM argues that "this is a standard feature of the CAISO's market power mitigation design that can occur for any resource in the CAISO or EIM real-time markets" and thus it is "not unique to Powerex's EIM participating resource."⁴⁶ DMM is incorrect. For all EIM market participants other than Powerex, there may be market power implications that the CAISO would have to consider carefully before applying the interim solution to them. The CAISO has not had time to consider these matters. But more importantly, limiting exports in those areas as it would for Powerex is not without consequence because for other EIM entities the market power mitigation for flows into their sub-regions, even when isolated, may be of greater consequences because they use EIM pricing to settle energy under their tariffs, as approved by the Commission. For this reason the CAISO does not propose to apply the interim solution, or the tariff waiver that will ensure that the interim solution can be used as sparingly as possible, to any EIM market participant besides Powerex. The CAISO does not contend that Powerex's offers to sell and purchase energy are unique in being subject to mitigation when Powerex's

⁴⁵ DMM at 9-10 (quoting April 10 Petition at 10).

⁴⁶ *Id.* at 10.

energy schedules in the market power mitigation optimization are below Powerex's base schedules. However, the market power implications discussed above *are* unique to Powerex.

Similarly, the CAISO does not dispute DMM's description of the features of the market power mitigation design, including its description of the market power mitigation run and the binding real-time market run.⁴⁷ The CAISO described those same features in the April 10 Petition.⁴⁸ But DMM fails to recognize that their implications are different for Powerex, which is the only CAISO market participant (whether in the EIM or not) that uses an aggregated participating resource under the CAISO's non-generator model. This means it is the only resource that may be mitigated when it is in demand mode (*i.e.*, mitigation may trigger when flows are northbound and constrained into the BC Hydro balancing authority area). When the Powerex resource is mitigated in this manner, it is also the only EIM participating resource today that has its entire bid set (above the competitive LMP) replaced with the mitigated bid in both the demand and supply portions of the bid curve. This results in the Powerex resource being forced to sell at the mitigated bid. Nor is it just a matter of Powerex being forced to sell more or less power. In Powerex's unique case, parallel operations and subsequent experience showed that the market power mitigation run does not identify market power in the southbound flows, mitigate the resource, and then force Powerex to sell at the mitigated price. Rather, the

⁴⁷ See DMM at 10.

⁴⁸ April 10 Petition at 6-9.

market power mitigation run identifies market power in the northbound direction, into the BC Hydro balancing authority area that is outside the Commission's jurisdiction and is not subject to the CAISO's market power mitigation process. This issue is compounded because there is no market power identified in the southbound direction, but nevertheless the Powerex resource is forced to sell at an uneconomic price that will be just and reasonable only if there is identified market power in the southbound flows. To the best of the CAISO's knowledge, no other resource faces such an issue, and if such an issue was detected for another resource it would be similarly addressed promptly.

The second reason for the uniqueness of Powerex's situation that DMM questions is the explanation in the April 10 Petition that the flow reversal issue is "particularly problematic for Powerex because Powerex has indicated that its default energy bid is not sufficiently flexible to accurately reflect Powerex's opportunity costs."⁴⁹ DMM argues that "all participants can propose a default energy bid based on its opportunity costs under the negotiated default energy bid option" and thus that "Powerex's participating resource is not in a unique situation relative to other resources that warrants automated restrictions on its dispatch after the market power mitigation run."⁵⁰ DMM is also incorrect as to this second reason. As explained above, Powerex's concerns about its negotiated default energy bid were not the reason for the April 10 Petition, but Powerex faces unique issues regarding its negotiated default energy bid that will

⁴⁹ DMM at 11 (quoting April 10 Petition at 10).

⁵⁰ *Id.* at 11.

be addressed in the EIM offer rules stakeholder process.⁵¹

DMM also argues that the interim solution will make Powerex “the only EIM entity that will be able to limit its EIM transfer limits in the middle of the FMM or RTD optimization runs that determine binding market schedules,” instead of limiting them at the start of the optimization runs like other market participants.⁵² Although it is true that the transfers will be limited after the market power mitigation pass has run, Powerex will instruct the CAISO that it intends to limit its EIM exports *prior* to the FMM or RTD optimization run and will not be able to do so only after it has detected that they were mitigated. This will be reflected in the business practice manual.⁵³ The CAISO does not propose to allow other market participants to limit their exports in the same manner because, as explained above, Powerex is uniquely situated and the implications of market power mitigation in the northbound direction do not apply equally to other market participants. Nevertheless, the implementation of the interim solution itself is not the subject of the waiver petition, and therefore DMM's arguments about whether or not it should be limited to Powerex are beyond the scope of this proceeding.

DMM asserts that the CAISO has not proposed to apply the interim solution to all resources but that “doing so could severely hinder the efficiency of the CAISO’s real-time market dispatch.”⁵⁴ Again, DMM's assertion concerns the

⁵¹ See *supra* section II.A of this answer.

⁵² DMM at 11.

⁵³ April 10 Petition at 15-16. As the CAISO explained, if the Commission were to find (contrary to the CAISO's belief) that tariff waiver is necessary to implement the interim solution, the CAISO also requested waiver of the relevant tariff language in that event. *Id.* at 19 n.29.

⁵⁴ DMM at 12.

interim solution, not the proposed tariff waiver, and is far outside the scope of this proceeding specific to Powerex's participation in the EIM. Before the CAISO were to apply anything like the interim solution to all market participants, it would have to consider the implications carefully and would only do so with stakeholder input through its normal stakeholder process.

D. DMM Does Not Identify Any Actual Undesirable Consequence of the Interim Solution and Tariff Waiver

DMM argues that applying the interim solution and tariff waiver only to Powerex may have undesirable consequences for other market participants, and further argues other market participants should be afforded greater time to identify and discuss the issues. Despite DMM's concern, no market participant raised such concerns to the Commission, and DMM does not identify any such consequences. DMM states that other stakeholders should consider the single scenario:

... in which one or more other EIM areas was separated by congestion from the CAISO and the rest of the EIM along with Powerex. In such intervals, when Powerex's net exports would be automatically restricted, Powerex would be prevented from providing power to other EIM BAAs in the constrained area. Resources in other EIM BAAs within the constrained area could then be dispatched based on mitigated bids to provide power to Powerex. At minimum, such scenarios should be thoroughly examined and discussed with stakeholders.⁵⁵

The CAISO did consider this scenario and in the April 10 Petition stated that:

If, on the other hand, the local market power mitigation pass results in mitigation of the Powerex aggregate participating resource when the sum of supply resources is dispatched or scheduled at or above their EIM base schedule (*i.e.*, with a zero or a positive schedule deviation), the CAISO will not restrict the net EIM transfer in the north-to-south direction across the

⁵⁵ *Id.* at 12-13.

British Columbia-United States border in subsequent market runs, other than to apply the relevant scheduling limits. This will ensure that when local market power mitigation is triggered for flows into the CAISO or other EIM balancing authority areas, the CAISO will not limit the exports. In these cases, the implications of the market power tests are relevant for other EIM balancing authority areas and the CAISO and Powerex agree that those flows should not be restricted and should be mitigated if they occur.

The scenario DMM cautions against is one where “one or more other EIM areas was separated by congestion from the CAISO and the rest of the EIM along with Powerex.”⁵⁶ This is a scenario where the implications of market power mitigation extend beyond the BC Hydro area. As noted in the April 10 Petition, in such cases the CAISO will not restrict the EIM transfers in the north-to-south direction precisely because of the concerns DMM raises.⁵⁷

DMM notes that although the Powerex exports would be restricted resources “[r]esources in other EIM BAAs within the constrained area could then be dispatched based on mitigated bids to provide power to Powerex.”⁵⁸ Whether resources in other areas can be dispatched based on mitigated bids to provide power to Powerex depends, however, on how their bids stack against the aggregated participating resource’s bids, and does not depend on whether the exports are restricted. If resources in other EIM areas are more economic than the aggregated participating resource’s bids, restricting exports will not prevent that outcome because imports into the BC Hydro area are not restricted, other than by the applicable scheduling limits.

⁵⁶ *Id.* at 13.

⁵⁷ See April 10 Petition at 13-15.

⁵⁸ DMM at 13.

In any event, the concerns that DMM raises are unfounded. For the reasons explained above, it is appropriate to apply the interim solution and tariff waiver only to Powerex and to do so promptly.⁵⁹ Load in the BC Hydro balancing authority area is not subject to the CAISO's locational marginal pricing. There is no reason to believe that any undesirable consequences would result to market participants or load in other balancing authority areas as a result of the waiver.

E. PG&E's Concerns Are Beyond the Scope of This Proceeding and Groundless

PG&E expressly provides no opinion on whether tariff waiver is needed or if the CAISO's current market power mitigation rules are appropriate. Nevertheless, PG&E raises two concerns about the background discussion in the April 10 Petition. First, PG&E asserts that it is not appropriate for an EIM market participant to mitigate the impact of market outcomes by restricting transfers and availability of transmission. Second, PG&E states that, while it understands the voluntary nature of the EIM, as a general principle unused transmission capacity should be made available to the RTD.⁶⁰

PG&E acknowledges that its comments are beyond the scope of this proceeding, and for that reason alone the Commission need not consider them. PG&E also has no reasonable grounds for raising its two concerns. As to the first concern, a fundamental feature of the EIM design is that each EIM entity has the ability to set how much transmission capacity it makes available for EIM transfers to the market on a voluntary basis. Nor is there any evidence that

⁵⁹ See *supra* section II.C of this answer.

⁶⁰ PG&E at 3-4.

Powerex is limiting its transfers to avoid legitimate consequences of market power mitigation. Instead, Powerex has begun to restrict its transmission in order to avoid the unintended consequences of the market power mitigation as discussed in the April 10 Petition and this answer.⁶¹ Today Powerex can only avoid being forced to sell uneconomically due to flow reversal by limiting its transfers regardless of whether market power mitigation will trigger and flow reversal occurs. As Powerex explained in its comments, its preliminary review indicates that its submitted bid and offer curve for the Powerex resource has been replaced with a mitigated bid curve in half of the FMM intervals and two-thirds of the RTD intervals since it began participating in the EIM.⁶² Powerex can only avoid such an outcome by limiting EIM transfers in the intervals when Powerex believes flow reversal may occur, even if it does not actually come to pass. Powerex has agreed that it is preferable to implement the interim solution so that it is no longer forced to sell when flow reversal occurs.

As to the second issue that PG&E raises, PG&E misunderstands how EIM market participants make transmission available in support of transfers within the EIM area. There are two alternative CAISO tariff mechanisms that are available for an EIM entity to make transmission available for EIM transfers, *i.e.*, the transfer limits between balancing authority areas enforced by the CAISO in real-time: (1) the interchange transmission rights mechanism, which is what Powerex has chosen, and (2) the available transfer capability mechanism.⁶³

⁶¹ See *supra* sections II.A and II.C of this answer.

⁶² Powerex at 4.

⁶³ Tariff sections 29.17(f)(2) and 29.17(f)(3), respectively.

An EIM entity, such as Powerex, that has chosen to participate in the EIM using the interchange transmission rights mechanism has no obligation to make all of its unused capacity available to the RTD. Entities choosing that mechanism are not contributing residual available transmission capacity, unlike entities that participate in the EIM through the available transfer capability mechanism. Interchange transmission rights instead represent unused contractual rights held by an entity that desires to make them available for use as EIM transfers. The CAISO tariff and business practice manual for the EIM require the EIM entity only to inform the CAISO of the maximum quantity of rights available for use in the EIM 90 days prior to its EIM implementation date, and thereafter to determine the available real-time limit and communicate that limit to the CAISO prior to the next dispatch interval.⁶⁴ There are no CAISO tariff requirements as to the form of entity that makes the rights available to the EIM entity scheduling coordinator or how the limits are determined, nor any obligation to make all unused interchange transmission rights available for EIM transfers. However, the CAISO does post the amount of transfers in the EIM, which indicates when unused capacity is not made available, and the CAISO generally monitors how EIM market participation impacts market outcomes. Thus, even though Powerex and other market participants subject to the interchange transmission rights mechanism have no obligation to make all of their interchange transmission rights available for EIM

⁶⁴ Tariff sections 29.17(e) and 29.17(f)(2); business practice manual for the EIM at section 7.

transfers, market participants have transparency regarding the unused capacity and the CAISO monitors how it affects the market.

Further, the availability of transmission for EIM transfers is addressed in section 4.1.5 of the Powerex Canadian EIM Entity Agreement.⁶⁵ This provision deems Powerex to be an EIM transmission service provider under the CAISO tariff only with respect to the interchange transmission rights it makes available in the United States, clarifies that Powerex will inform the CAISO of the quantity of interchange transmission rights it will make available prior to each operating hour, and specifically excludes transmission service rights in British Columbia. Also, section 2.1(a) of that agreement makes it clear that Powerex's voluntary participation in the EIM includes the availability of interchange transmission rights it holds on the systems of transmission service providers in the United States. The CAISO discussed these provisions in the transmittal letter for the filing of the Powerex Canadian EIM Entity Agreement.⁶⁶ Thus, all parties to the proceeding on the Powerex Canadian EIM Entity Agreement – which included PG&E – were aware of its terms well before Powerex began participating in the EIM.⁶⁷

⁶⁵ The Commission accepted the Powerex Canadian EIM Entity Agreement for filing pursuant to a letter order issued in Docket Nos. ER18-251-000, *et al.* on February 14, 2018.

⁶⁶ Transmittal letter for filing of Powerex Canadian EIM Entity Agreement (CAISO Rate Schedule No. 99), Docket No. ER18-251-000, at 13-14 (Nov. 3, 2017).

⁶⁷ The CAISO notes that the Commission, in the order issued in the earlier proceeding in which it accepted the EIM Implementation Agreement between the CAISO and Powerex for filing (Docket No. ER17-1796), stated that “stakeholders will have an opportunity to raise concerns regarding CAISO’s proposed framework [for Powerex’s EIM participation] with the Commission at th[e] time” the CAISO submitted the Powerex Canadian EIM Entity Agreement and related agreements. *Cal. Indep. Sys. Operator Corp.*, 160 FERC ¶ 61,058, at P 26 (2017). PG&E, however, chose only to file a motion to intervene in the proceeding on those agreements.

For these reasons, Powerex makes its unused capacity available in accordance with the CAISO tariff and business practice manual, as well as the Powerex Canadian EIM Entity Agreement.

III. Conclusion

For the foregoing reasons, the Commission should grant the April 10 Petition.

Respectfully submitted,

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Dated: May 3, 2018

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, pursuant to the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Washington, DC this 3rd day of May, 2018.

/s/ Daniel Klein
Daniel Klein