UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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

MOTION TO INTERVENE AND PROTEST OF THE DEPARTMENT OF MARKET MONITORING OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

Pursuant to Rules 211, 212, and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("FERC" or "Commission"), 18 C.F.R. §§ 385.211, 385.212, 385.214, the Department of Market Monitoring (DMM), acting in its capacity as the Independent Market Monitor for the California Independent System Operator Corporation ("CAISO"), submits this motion to intervene and protest in the above captioned proceeding for the reasons discussed herein. DMM respectfully requests that the Commission deny the CAISO's request for a waiver of certain market power mitigation provisions of the CAISO tariff in connection with Powerex's participation in the CAISO's western energy imbalance market (EIM). The CAISO has not met the criteria required for the Commission to grant CAISO the requested waiver. 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. CAISO seeks to justify the proposed changes by citing scheduling and mitigation issues that are not unique to Powerex and apply to other resources as well. And CAISO has not demonstrated that the changes will not have any undesirable consequences.

I. COMMENTS

The changes in market power mitigation sought under the waiver should be subject to a stakeholder process.

The changes in the CAISO's market power mitigation procedures sought under the proposed waiver were briefly discussed with DMM several weeks prior to the CAISO's April 10 waiver petition. In its filing, the CAISO characterizes these changes as "straightforward" and assures the Commission that "the waiver will have no undesirable consequences."[1] However, DMM was surprised by the CAISO's waiver request and had repeatedly recommended that any such changes should be subjected to the normal process for stakeholder review and regulatory approval.

Regardless of how straightforward the proposed changes to market power mitigation procedures may be in the eyes of the CAISO, DMM believes stakeholders should be afforded the opportunity to become informed and ask questions on proposals prior to being required to support or oppose such changes. DMM believes the CAISO's proposed action to address this issue may in fact benefit from additional review and input from stakeholders. While stakeholder input can sometimes be hindered by the relative complexity of the CAISO's market power mitigation procedures, such review and input often provides insights and identifies issues that may warrant consideration of changes or alternative approaches. DMM itself finds this review and discussion very valuable when developing DMM's own

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[1] California Independent System Operator Corporation, Docket No. ER18-1339, *Petition for Limited Tariff Waiver and Request for Expedited Consideration*, April 10, 2018, Transmittal Letter, pp. 21-22. https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14883525.

position on such issues. DMM understands that after filing for this waiver, the CAISO has held non-public discussions with selected individual stakeholders and groups to explain and presumably garner support for the waiver. However, this is no substitute for the CAISO's normal public stakeholder and regulatory approval process.

The CAISO's justification for this filing relies on an unsupported claim that the current CAISO tariff does not allow Powerex to establish negotiated default energy bids that effectively "reflect the opportunity costs associated with the use of an external multi-facility hydro system with long term multi-year storage capability."[2] In fact, such opportunity costs can and should be incorporated in default energy bids developed under the negotiated option in the current CAISO tariff (39.7.1.3). DMM continues to encourage Powerex and the CAISO to avail themselves of this existing option in the CAISO tariff and the regular stakeholder process to address the issue described in the CAISO's filing.

DMM also disagrees with the CAISO's assertion that the requested waiver is required or justified by any "unique facts and circumstances of Powerex's participation as a Canadian EIM entity."[3] The two specific issues involving "flow reversal" and default energy bids cited by the CAISO to justify the waiver are clearly applicable to many if not all EIM participants and resources in the real-time market.

Finally, based on the limited description in the CAISO filing, if the proposed changes were applied to scheduling and mitigation of Powerex's resources, DMM believes it is possible this could in fact have what might be considered by some parties a detrimental impact on one or more other participants. If the changes

[2] CAISO Transmittal Letter, p. 11.
[3] CAISO Transmittal Letter, p. 17.

described in the filing were extended to all participants, this could also undermine overall market efficiency and market power mitigation in the EIM. Such issues and potential impacts merit thorough discussion through the CAISO's normal public stakeholder and approval process.

The CAISO's filing is based on Powerex's unsupported claim that its default energy bid is lower than its actual opportunity cost.

The CAISO's justification for this filing relies on an unsupported claim by Powerex that its default energy bid is systematically lower than Powerex's opportunity costs. As stated in the CAISO filing:

> The CAISO further understands this 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 (i.e., the opportunity costs associated with releasing water from an external multi-facility hydro system with long-term storage). Powerex has informed the CAISO that this situation would result in the inefficient use of its available residual hydroelectric capability[4]

The hypothetical examples provided in the CAISO filing are based on default energy bids of $3/MW and $4/MW.[5] These examples are not representative of the default energy bids actually being used for Powerex. DMM welcomes a review of the default energy bids that have been requested, discussed and implemented for Powerex's resources by the Commission and stakeholders.

Under the CAISO tariff, Powerex can propose a default energy bid based on its opportunity costs under the negotiated default energy bid option. Such proposals are then submitted to a process of review and negotiation by the CAISO and the participant. Within the CAISO, DMM has responsibility for reviewing, verifying and calculating negotiated default energy bids. However, the CAISO's Market Quality

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[4] CAISO Transmittal Letter, pp. 10-11.
[5] CAISO Transmittal Letter, Attachment A- Example.

and Renewable Integration division has the option to participate in this process and has final authority over acceptance and implementation of all default energy bids. If Powerex believes this 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 methodology with the Commission. DMM specifically pointed out these provisions to both the CAISO and Powerex in the months prior to Powerex's entry into the EIM in April 2018.

DMM 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. These models incorporate forward price curves, along with inputs representing resources' energy limits over different future time frames (e.g. daily, weekly, monthly, seasonally, etc.). To utilize any type of opportunity cost model, participants need to develop and provide an estimate of their projected amount of available energy over different future time frames (e.g. daily, weekly, monthly, seasonally, etc.). Participants can also propose to use any special methodologies or calculations which they may utilize themselves to estimate opportunity costs for their hydro systems over longer term periods, which may then be subject to review and verification.

As noted in the CAISO's filing, Powerex indicates that its opportunity costs represent a "multi-facility hydro system with long term multi-year storage capability."[6] While such hydro systems may warrant special modeling approaches, the

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[6] CAISO Transmittal Letter, p. 11.

opportunity costs associated with hydro systems with long-term storage should not vary dramatically from day to day. These longer term opportunity costs would be driven by price curves and available energy over a relatively longer term period (e.g. monthly, seasonally, yearly, etc.). Such opportunity costs can and should be incorporated in default energy bids developed under the negotiated option in the current CAISO tariff. DMM continues to encourage Powerex and the CAISO to avail themselves of this option in the CAISO tariff to address the issues described in the CAISO's filing.

The CAISO indicates that changes made under the waiver will be replaced by changes that allow Powerex and other participants to have higher default energy bids.

The CAISO indicates that the requested waiver will remain in place for up to 18 months and will be replaced by changes developed by the CAISO as part of an EIM offer rules stakeholder initiative scheduled to begin in the second quarter of 2018. The CAISO has provided minimal information on this planned stakeholder process beyond the fact that it will address an "EIM Default Energy Bid Option" and "EIM DEB applicability to hydro" in an upcoming technical workshop.[7] However, this highlights that the CAISO views this issue as stemming from a problem with the CAISO's existing tariff provisions regarding default energy bids, and that the CAISO plans on addressing this issue by allowing Powerex and other participants to submit higher default energy bids. 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.

[7] 2018 Policy Initiatives Roadmap, Market and Infrastructure Policy, January 12, 2018, slide 11. http://www.caiso.com/Documents/2018FinalPolicyInitiativesRoadmap.pdf

As part of this stakeholder process, DMM welcomes any review of the default energy bids that have been requested, discussed and implemented for Powerex's resources. Again, however, DMM believes that the CAISO's existing tariff provisions allow sufficient flexibility to allow default energy bids to reflect demonstrated opportunity costs associated with a "multi-facility hydro system with long term multi-year storage capability." DMM continues to encourage Powerex and CAISO to avail themselves of this option in the CAISO tariff to address the issue described in the CAISO's filing – before seeking to change CAISO market rules.

The CAISO's filing suggests that Powerex's participation agreement trumps mitigation procedures in the CAISO tariff.

The CAISO's filing seeks to justify the proposed waiver in part on the grounds that applying current tariff provisions to Powerex would be contrary to the "principles" or "intent" of Powerex's implementation agreement.[8] This suggests that the "principles" or "intent" of Powerex's implementation agreement trump the market power mitigation provisions of the CAISO tariff. Approval of the waiver would thus establish a very dangerous precedent that could undermine the integrity of the CAISO's market power mitigation provisions and other elements of the CAISO tariff.

The CAISO's filing contends that:

> … the application of market power mitigation to Powerex's aggregate resource in some circumstances appeared contrary to governing principles set out in Powerex's Implementation Agreement and to the intent of Powerex's EIM participation agreements. The Implementation Agreement specifies eight principles that form the basis of Powerex's participation in the EIM. One of those principles is that *"[a]ny local market power mitigation framework to be applied will . . . provide Powerex with sufficient flexibility to reflect the opportunity costs associated with the use of an external multi-facility hydro system with long term multi-year storage capability."* [emphasis added]

[8] CAISO Transmittal Letter, pp.18-19.

However, the section of Powerex's Implementation Agreement cited in the CAISO's filing actually reads in full as follows -- with key text in the Implementation Agreement that was omitted in the CAISO's filing highlighted for emphasis:

> (g) Local Market Power Mitigation. Any local market power mitigation framework to be applied *will be consistent with the CAISO tariff, will mitigate potential market power concerns during constrained periods to the satisfaction of the DMM and FERC, and* will provide Powerex with sufficient flexibility to reflect the opportunity costs associated with the use of an external multi-facility hydro system with long term multi-year storage capability.[9]

As highlighted above, the CAISO filing clearly omits key additional language in the Implementation Agreement relevant to this issue. The CAISO's transmittal letter for Powerex's Implementation Agreement also specifically noted that "Powerex's participation in the EIM will be subject to a later Federal Power Act Section 205 filing and the Commission's rulings on that filing" and that "nothing in the Implementation Agreement prejudges or predetermines any outcome."[10] Thus, the general principles in Powerex's Implementation Agreement do not warrant the proposed waiver of any provisions of the CAISO tariff, which already include provisions allowing for the incorporation of opportunity costs in default energy bids used in market power mitigation.

[9] Energy Imbalance Market Implementation Agreement, p. 16. http://www.caiso.com/Documents/Jun9_2017_EIMImplementationAgreement_PowerexCorp_ER17-1796.pdf

[10] CAISO transmittal letter on Implementation Agreement, p.3

The CAISO fails to justify automating the restriction of EIM transfers only for Powerex.

The CAISO proposes to only apply the measure to automate restriction of EIM transfers to Powerex. However, the CAISO fails to justify applying this measure only to Powerex. The CAISO states that it "will apply this measure only to Powerex because of the unique facts and circumstances of Powerex's participation as a Canadian EIM entity under the agreements accepted for filing by the Commission."[11] However, the CAISO provides no further explanation of this statement in the surrounding text. As explained in the section above, the details of the Implementation Agreement itself do not trump the tariff and do not make Powerex unique relative to other EIM entities or resources with respect to market power mitigation procedures. The CAISO provides no justification in its filing for why Powerex being a "Canadian EIM entity" would warrant these special automated restrictions. The only explanation of the "unique facts and circumstances of Powerex's participation as a Canadian EIM entity" that warrant applying the automatic transfer restriction only to Powerex is provided in Section I.B of the CAISO filing. However, both of the issues in this section of its filing that CAISO claims make Powerex unique could be applicable to any resource in the real-time market.

The first of the two issues that the CAISO claims make Powerex unique is the application of mitigation to "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.[12] The CAISO contends that "the resulting reversal of the

[11] CAISO Transmittal Letter, p. 17.
[12] CAISO Transmittal Letter, p. 10.

flows at the mitigated price 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."[13] However, 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. It is clearly not unique to Powerex's EIM participating resource.

This has been a feature of market power mitigation design since May 2013.[14] When any resource's non-competitive constraint congestion component is greater than zero in the market power mitigation run, the resource's entire bid curve is subject to mitigation. Whether or not the resource's schedule in the market power mitigation run is above or below the resource's day-ahead or base schedule does not play any role in determining if the resource's bid curve is subject to mitigation. As a result, in the binding real-time market run, any resource can be dispatched to a level that exceeds its day-ahead market or base schedule using a mitigated bid that is below the market bid submitted by the resource's scheduling coordinator. This has occurred on a regular basis since this policy was implemented by the CAISO in 2013. This was not an "unintended consequence" of market power mitigation that "CAISO and Powerex identified" during parallel operations.[15] Instead, this is a common outcome of the market power mitigation design that could occur for any resource since May 2013.

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[13] CAISO Transmittal Letter, p. 10.

[14] See CAISO's website on the stakeholder initiative that supported ER13-967 at: http://www.caiso.com/informed/Pages/StakeholderProcesses/CompletedClosedStakeholderInitiatives/LocalMarketPowerMitigationEnhancements.aspx.

[15] CAISO Transmittal Letter, p. 1.

The second of the two issues that CAISO claims are "unique facts and circumstances" relating to Powerex is that the aforementioned "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".[16] As explained above, under the CAISO tariff, all participants can propose a default energy bid based on its opportunity costs under the negotiated default energy bid option. Powerex and the CAISO can utilize existing tariff provisions to develop a negotiated default energy bid that better reflects its opportunity costs if Powerex feels its current default energy bids do not fully reflect its costs. Therefore, Powerex's participating resource is not in a unique situation relative to other resources that warrants special automated restrictions on its dispatch after the market power mitigation run.

The CAISO argues that automating the transfer restriction for Powerex does not require a tariff change or waiver because "by instructing the CAISO to limit transfers pursuant to the automated methodology described above, Powerex will be merely invoking its right under section 29.17(f)(2) to determine the EIM transfer limit made available for use in the real-time market."[17] If CAISO automates the transfer restriction in the way described in the transmittal letter, Powerex will be 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. Every other EIM entity will be limited to determining its EIM transfer limits prior to the start of each binding FMM market run. The CAISO is proposing to implement a special feature that will

[16] CAISO Transmittal Letter, p. 10.
[17] CAISO Transmittal Letter, p. 16.

allow Powerex to change its transfer limits later than every other EIM entity. The CAISO has not provided a reasonable explanation for what makes Powerex unique.

The CAISO has not proposed to apply the automated restriction of real-time dispatch to all resources. However, doing so could severely hinder the efficiency of the CAISO's real-time market dispatch. The CAISO's real-time market is designed to allow participant submitted market bids to set prices when local market power has not been detected. When local market power has been detected, a resource's entire bid curve is subject to mitigation. This allows the entire quantity offered into the real-time market by a resource with market power to contribute to meeting power demand. If any resource with market power was allowed to restrict its output to its day-ahead or base schedule when it was determined to have market power, this could restrict the supply of power at competitive prices in CAISO's real-time markets and have significant detrimental impacts on the overall efficiency of real-time market dispatch. At a minimum, any such change in CAISO market power mitigation rules should be thoroughly discussed by all stakeholders and subject to the normal process of review and approval. .

The CAISO's proposed changes could have undesirable consequences.

DMM believes the proposed changes may indeed have some undesirable consequences from the perspective of other participants and the overall market that merit additional review and discussions by stakeholders. Applying the automated incremental dispatch restriction and tariff waivers only to Powerex provides Powerex with a new market feature that is only available to a single entity. Other market participants should be afforded the time and opportunity to identify and discuss any impact that this may create.

One scenario that other stakeholders should consider is intervals 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.

Meanwhile, as discussed in a prior section of these comments, if these automated scheduling and mitigation changes were instead applied to all participants, the overall impact on overall market efficiency and market power mitigation should be thoroughly examined and discussed with stakeholders.

CAISO also seeks to justify the waiver as a means of mitigating the detrimental impacts of the CAISO's automated restrictions on transfers from Powerex.

Ironically, the CAISO also seeks to justify waiving the tariff provisions relating to market power mitigation on the grounds that it is needed to mitigate the potential detrimental impacts of the automated restrictions on transfers from Powerex which the CAISO plans to implement. The CAISO argues that the tariff waivers of market power mitigation procedures are needed because if CAISO automates the restriction of Powerex's transfers, these transfers would be overly restricted, thereby decreasing

EIM efficiency in the absence of the tariff waivers.[18] The CAISO itself acknowledges that the changes in mitigation effectuated by the waiver can be made uncecessary by simply establishing default energy bids for Powerex that reflect opportunity costs associated with a "multi-facility hydro system with long term multi-year storage capability." Again, Powerex and the CAISO have the ability and authority to establish negotiated default energy bids that reflect these opportunity cost under the CAISO's existing tariff provisions, which would obviate the CAISO's rationale for the waiver.

II. MOTION TO INTERVENE

DMM respectfully requests that the Commission afford due consideration to this protest and motion to intervene, and afford DMM full rights as a party to this proceeding. The mission of DMM – like that of all Independent Market Monitors – is as follows:

> To provide independent oversight and analysis of the CAISO Markets for the protection of consumers and Market Participants by the identification and reporting of market design flaws, potential market rule violations, and market power abuses.[19]

The CAISO tariff states that "DMM shall review existing and proposed market rules, tariff provisions, and market design elements and recommend proposed rule and tariff changes to the CAISO, the CAISO Governing Board, FERC staff, the

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[18] CAISO Transmittal Letter, pp.18-19.

[19] CAISO Tariff Appendix P, Section 1.2. http://www.caiso.com/Documents/AppendixP_CAISODepartmentOfMarketMonitoring_asof_Apr1_2017.pdf.

See also FERC Order 719, at p. 188, where the functions of a Market Monitor include: "evaluating existing and proposed market rules, tariff provisions and market design elements, and recommending proposed rule and tariff changes not only to the RTO or ISO, but also to the Commission's Office of Energy Market Regulation staff and to other interested entities […]." https://www.ferc.gov/whats-new/comm-meet/2008/101608/E-1.pdf

California Public Utilities Commission, Market Participants, and other interested entities."[20] As this proceeding involves proposed tariff provisions which are inefficient and detrimentally affect the ISO's markets, it implicates matters within DMM's purview.

III. COMMUNICATIONS

All service of pleadings and documents and all communications regarding this proceeding should be addressed to the following:[21]

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IV. CONCLUSION

In sum, the CAISO has not met the criteria required for the Commission to grant the requested waiver. 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. CAISO seeks to justify the proposed changes by citing scheduling and mitigation issues that are not unique to Powerex and apply

[20] CAISO Tariff Appendix P, Section 5.1.

[21] 18.C.F.R. § 385.203(b)(3).

to other resources as well. And CAISO has not demonstrated that the changes will not have any undesirable consequences.

The Department of Market Monitoring respectfully requests that the Commission afford due consideration to these comments as it evaluates the proposed tariff waiver before it.

Respectfully submitted,

/s/ Eric Hildebrandt

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Dated: April 25, 2018

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service lists in the above-referenced proceedings, 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, California this 25th day of April, 2018.

/s/ Grace Clark
Grace Clark