

## Comments of NextEra Energy Resources on CAISO PRR1526

NextEra Energy Resources, LLC (NEER) supports CAISO's efforts to enhance the participation of co-located resources as part of the Energy Storage Enhancements Track 2 initiative. NEER anticipates that the proposed Charging Constraint functionality will be a useful tool for owners of co-located storage resources, like NEER, that cannot charge from the grid for tax reasons. However, NEER believes that the proposed treatment of regulation awards for co-located resources in the revisions to the Market Operations Business Practice Manual (BPM) under PRR1526 is not entirely consistent with CAISO's pending FERC filing in Docket No. ER23-2537-000. We respectfully request that CAISO clarify its intent and revise the proposal to ensure consistency. NEER also urges the CAISO to reexamine the current solar must-follow flag in Market Operations BPM § 2.1.22, which employs differing treatment of setpoint deviations when a storage resource carries a regulation award versus a spin/non-spin award and applies broadly to all ancillary service awards to co-located storage resources.

### ***Inconsistencies between proposed Tariff and BPM***

In the transmittal accompanying its pending FERC proposal, CAISO states, "Charging Constraints will not apply in operating intervals where the storage resources receive an award to provide regulation. Where the storage resource bids to provide energy with a charging constraint and its [sic] bids to provide regulation, and the optimization gives it a regulation award, the regulation award will obviate the charging Constraint."<sup>1</sup> This language provides that co-located storage resources that use the proposed Charging Constraint functionality will be eligible to receive regulation awards and that said awards will override the constraints. Proposed Tariff § 30.5.6.3 similarly states that "Charging Constraints will not apply in Operating Intervals where the storage resources receive an Ancillary Service Award to provide Regulation." NEER believes this is reasonable given CAISO's explanation that it "depends on storage resources' following their regulation awards for reliability, and requiring the optimization to balance the storage resources' real-time regulation signal—based on the frequency of the grid at that moment—against the output of the co-located intermittent resources would be too complex and risk reliability."<sup>2</sup>

However, the proposed revisions to Market Operations BPM § 2.1.21.1 state, "During hours where the stand-alone or sub-Aggregate Capability Constraint (ACC) constraint withdrawal limit equals zero, any battery (LES Unit Type) resources subject to the ACC constraint will not receive Regulation Up or Regulation Down awards in either the Day-Ahead or Real-Time markets."<sup>3</sup> In other words, the proposed BPM language appears to preclude co-located storage resources from receiving regulation awards when using the Charging Constraints, whereas the pending Tariff language and accompanying transmittal merely provide that regulation awards will

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<sup>1</sup> Transmittal at 6.

<sup>2</sup> Transmittal at 6.

<sup>3</sup> NEER interprets the phrase "During hours where the stand-alone or sub-ACC constraint withdrawal limit equals zero" as referring to hours in which the resource has included Charging Constraints in its bid.

override any Charging Constraints submitted by such resources. Confusingly, the proposed BPM language also appears to contradict itself by subsequently aligning with the proposed Tariff language when it states, “if there are Regulation awards from the Day Ahead market, the withdrawal limit will be ignored, and the prevailing Master File or Operator Limits enforced.” It is unclear under what circumstances there would be “regulation awards from the Day Ahead market” if such awards would never be issued in the first place per BPM § 2.1.21.1. If the purpose of this sentence is to address instances where the resource owner only submits Charging Constraints in the real-time markets (and not in the day-ahead market), we request that CAISO accordingly revise the sentence for avoidance of doubt.

NEER raises this issue because the treatment of regulation awards for co-located storage resources that cannot charge from the grid has important ramifications for market participation. For example, storage resources that are certified to provide regulation and that also provide resource adequacy (RA) are subject to must-offer obligations that require these resources to offer their full certified regulation capability into the market during applicable RA assessment hours. If CAISO’s intent is for co-located storage resources to never receive regulation awards when using the Charging Constraints, owners of new co-located storage resources with planned RA obligations would effectively have two options: (1) use the Charging Constraints and sacrifice the ability to provide regulation (and therefore likely forgo the associated certification process for providing regulation); or (2) not use the Charging Constraints, undergo the certification process for providing regulation, and manage the risk of grid charging through bidding behavior. In addition, if CAISO intends for such storage resources to never receive regulation awards when using the Charging Constraints, this would also raise the question of whether existing co-located storage resources using the Charging Constraints would still be required to submit offers to provide a service that CAISO’s market engine would never clear them to provide (and whether such a requirement would meaningfully contribute to RA program objectives) or whether such resources would alternatively be expected to de-certify themselves for providing regulation. Accordingly, NEER respectfully submits that CAISO should either revise the proposed BPM language for consistency with the pending FERC filing or amend the FERC filing for consistency with the proposed BPM language.

### ***Solar must-follow flag***

Market Operations BPM § 2.1.22 currently provides that when a storage resource is co-located with a solar resource behind a standalone ACC or sub-ACC and receives an ancillary service award, the solar resource must follow its Dispatch Operating Target (DOT). This “must-follow flag” effectively results in the curtailment of surplus solar generation in real-time, even if the combined output of the two co-located resources does not cause the ACC to be violated.

CAISO in its FERC filing states that the current Tariff § 34.13.3 “prohibits deviations where the resource has received any ancillary service award. *The CAISO has struck that provision because it is now overly broad, and now limited to regulation awards.*”<sup>4</sup> In NEER’s view, CAISO

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<sup>4</sup> Transmittal at 7 n. 26 (emphasis added).

appropriately recognizes that operating reserves and regulation are not similarly situated in terms of how they are affected by deviations in co-located resource output. For example, under CAISO's proposal, a storage resource that carries a spin award and uses the Charging Constraints would be allowed to deviate from a charging instruction (i.e., to charge less) if the co-located solar resource under-generates relative to its real-time DOT in order to avoid charging from the grid. This is reasonable because the deviations on the charging side during a given operating interval do not meaningfully affect the storage resource's ability to deliver on its spin award if deployed in that same interval. By contrast, if the storage resource was instead carrying a regulation award, the resource's ability to help maintain system frequency could be inhibited by the frequency effects stemming from its unexpected charging behavior.

NEER believes this logic similarly has implications for the current solar must-follow flag. Specifically, it is unclear, in light of the explanation in CAISO's pending filing, why a solar resource should be curtailed when its co-located storage resource receives a spin/non-spin award. Upward deviations in solar output relative to its DOT are analogous to deviations on the charging side of a storage resource: while they affect frequency and thus may interfere with a storage resource's regulation awards, neither impacts the storage resource's ability to provide spin/non-spin because those products are deployed as energy and are not frequency-sensitive. Therefore, NEER respectfully requests that CAISO consider narrowing the solar must-follow flag to only apply when the co-located storage resource carries a regulation award.