



March 16, 2016

Submitted to CAISO at initiativecomments@CAISO.com by Joseph Eberhardt, Director, Hydropower - West

RE: Comments on CAISO Regional Resource Adequacy initiative Straw Proposal

EDF-Renewable Energy (EDF-RE) hereby submits these comments on the CAISO's Straw Proposal (Proposal) for its Regional Resource Adequacy (RA) initiative. EDF-RE is developing the 400 MW Swan Lake North pumped-storage hydro project (Project), approximately 11 miles northeast of Klamath Falls, Oregon. The Project would interconnect with PacifiCorp (PC) at Malin and is expected to be operational around 2023.

EDF-RE appreciates the opportunity to comment on the Proposal. The Proposal outlines the CAISO's initial ideas for an RA framework that would apply to a "regional ISO" (RISO), if and when one or more currently separate large out-of-state operating entities join the CAISO as Participating Transmission Owners (PTOs) or "sub-regions." Among other things, the Proposal proposes adoption of a RISO Planning Reserve Margin and common RA resource-counting and reporting rules.

EDF-RE supports the comments of the American Wind Energy Association (AWEA) about the need for a comprehensive and holistic approach to regional market design, and the key principles for a regional RA framework set forth in AWEA's comments. This document contains EDF-RE's additional comments on the Proposal.

EDF-RE's comments address two elements in the Proposal framework: (1) Uniform RA counting rules applicable to pumped -storage hydro projects; and (2) treatment of RISO internal transfer capability constraints. EDF-RE's recommendations are summarized below and explained further in the remainder of this document.

Recommendations

- **RA counting rules:** The CAISO should extend the current CPUC-adopted methodology for storage facilities generally to set RA values for such resources.
- **Internal transfer capability constraints:** In addition to identifying major internal constraints and considering establishment of RA counting limits for them, the CAISO should commit to evaluating potential upgrades to relieve these constraints in the first integrated Transmission Planning Process (TPP) after a new PTO joins the CAISO.

RA counting rules

The CPUC spent a considerable amount of time and effort developing its current storage counting rules, through an open and thorough process that was only completed recently. The adopted methodology is reasonable, and the many entities developing storage facilities in the current CAISO area are depending on its continuation in their contract arrangements.

It is unlikely that the CAISO will have sufficient time before the June Board meeting (where it plans to request adoption of a regional RA framework), or even by year-end (when it plans to complete draft tariff language), for a comparable examination of this issue. Moreover, there are only a few storage facilities on the system, and even fewer pumped-storage hydro facilities.

It would be a better use of scarce CAISO and stakeholder resources to focus development of new RA counting rules on the much more numerous solar and wind resources – an area that is likely to be much more controversial – and to retain the storage RA rules as is.

Internal transfer capability constraints

The Proposal provides for identification of “major internal transfer constraints” in the RISO TPP, drawing an analogy to the Path 26 transmission constraint between northern and southern California. On an annual basis, the CAISO would then apply the current Path 26 Counting Constraint approach to these constraints, on an annual basis.

Each year, this methodology determines the Path 26 transfer capability in each direction (considering appropriate netting of pre-existing RA contracts). The CAISO then allocates RA counting rights proportionally to LSEs in the direction they would need (S-N to LSEs north of the constraint, N-S to LSEs south of the constraint).

Aside from these major regional constraints, based on discussion at stakeholder meetings, the Proposal would likely also extend the concept of Local Capacity Areas (LCAs) – identification of transmission-constrained “load pockets” in Local Capacity Technical Studies (LCTSs) – to the new sub-regions. As the CAISO does for LCAs in the current CAISO area, each year the RISO would establish and allocate RA Local Capacity Requirements (LCRs) for the new LCAs, which would require LSEs with loads in those areas to acquire or contract with resources located there for RA services.

Generally speaking, there is little point in formation of a larger, west-wide RISO if the different sub-regions and local areas must be largely operated as separate “islands” due to severe transmission constraints between them. In addition to limiting operational efficiencies from consolidation, such constraints could greatly limit ratepayer benefits from greater access to RA resources throughout the RISO.

EDF-RE’s recommendation for this process would address that issue directly. When the RISO first identifies such internal transfer constraints in a TPP study cycle (in the TPP itself or in an LCTS), it should automatically incorporate in that study cycle an examination of the economics of potential transmission upgrades to relieve those constraints, through Economic Planning Studies. This would be in addition to the regular Economic Planning Studies that stakeholders can request through the TPP process. These studies should consider explicitly improvement of LSE access to high-value RA Resources throughout the new RISO area.

Such upgrades have the potential to promote true regional integration by not only allowing LSEs more RA procurement choices from other areas and sub-regions, but providing operational efficiencies and savings as well. As such, they are properly considered in the TPP.

For example, it is clear that the current ~400 MW of transfer capability at Malin has limited benefits from PC participation in the Energy Imbalance Market (EIM) and would likely do so on an even larger scale if PC joins the CAISO. Relieving that constraint would provide operational benefits in both forward and real-time markets as well as RA contracting; all these benefits should be evaluated in the first RISO TPP after the combination.

After that initial broader examination in the TPP of potential mitigation measures for these identified sub-regional and local transmission constraints, the RISO can incorporate analysis of economic upgrades for these constraints in its regular Economic Planning Study process. However, the CAISO should also consider revising that process to have the RISO consider more than just the top five congested interfaces, in light of the greater regional footprint and potential additional economic-upgrade opportunities.