

## **EAGLE CREST ENERGY COMMENTS ON CAISO FRAC-MOO2 REVISED DRAFT FRAMEWORK**

Eagle Crest Energy (ECE) appreciates this opportunity to comment on the CAISO's April 27<sup>th</sup> document, *Flexible Resource Adequacy Criteria and Must Offer Obligation, Phase 2 – Second Revised Flexible Capacity Framework* (Proposal).

ECE is developing the 1,400 MW Eagle Mountain Pumped Storage Project in Riverside County, California. The Project – which can provide 22,000 MWh of energy storage capacity, with minimal environmental impacts – could become a major Flexible Capacity resource for the CAISO system under a well-designed Flexible Resource Adequacy (FlexRA) program.

Like the earlier versions, the Proposal couples FlexRA changes with reforms to the CAISO Flexible Ramping Project (FRP), focusing on the three CAISO market timeframes: Integrated Forward Market (IFM), Fifteen Minute Market (FMM), and (5-minute) Real Time Dispatch (RTD). It retains the decoupling of Resource Adequacy (RA) Net Qualifying Capacity (NQC) and FlexRA Effective Flexible Capacity (EFC) that ECE advocated in earlier comments, with details for an EFC deliverability study to be developed in a separate stakeholder process.

The Proposal also adopts an ECE proposal to allow storage projects with very short transition times between charge and discharge modes to count as EFC for the full operating range of both – i.e., those with transition times of 15 minutes or less. However, that new EFC methodology would only be applicable for the Day Ahead (DA) reserve product, and ECE's comments here are limited to that issue.

The Proposal would limit storage EFCs to “instantaneous output” for the Real Time (RT) products (Fifteen Minute Market (FMM) and Real-Time Dispatch (RTD)). This limitation is different from both: (1) The proposed DA storage EFC methodology described above; and (2) the proposed RT methodology applicable to other non-VER resources (which would have EFCs based on their 5- and 15-minute ramping capability, respectively).

In justifying the difference between the DA and RT storage EFC methodologies, the Proposal says that, “Although the full range of charge and discharge can be used when addressing predictable ramping needs...it is not clear that the same can be said when trying to address more uncertain needs.” This explanation is not very informative, but perhaps the CAISO is concerned that transition times could limit the 5- and 15-minute dispatchability range for storage resources.

However, that concern does not apply to fast-transition resources like Eagle Mountain. For example, the plant can be designed with the capability to transition from full pumping to full generation in less than 15 minutes, including transition time between those two modes; thus, it should receive an FMM EFC equal to the full operating range of 2,800 MW.

The RT flexibility value to CAISO is equal to the ramping capability that the CAISO can count on from the resource. Thus, it seems fair and reasonable to establish RT storage EFCs using the same methodology as for other non-VER resources, i.e., based on their ramping capability in the respective 5- or 15-minute intervals, including any transition times individual storage resources may have between charge and discharge modes (or vice versa).

So, for example, a fast storage resource with a very short transition time and can span the whole range in a 15-minute interval and/or a 5-minute interval should have an EFC that includes that entire operating range (both charge and discharge). A slower storage resource, or one with a longer transition time, may only be able to move a portion of that range in a RT interval, and thus should have an EFC that reflects those limitations.

Thus, there is no reason to use a different methodology for storage than for other non-VERs, and the CAISO should revise its proposal in this area accordingly.