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California Independent System Operator
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NextEra Energy Resources Comments on the Flexible Resource Adequacy Criteria and Must Offer Obligation ("FRAC MOO") – Phase 2 Draft Flexible Capacity Framework

NextEra Energy Resources, LLC ("NextEra") appreciates the opportunity to submit comments on the CAISO's FRAC MOO – Phase 2 Draft Flexible Capacity Framework. NextEra supports the CAISO's efforts to address concerns that the current flexible Resource Adequacy ("RA") product fails to address gaps between the ISO's markets and operational needs and offers the following comments for the CAISO's consideration.

Flexible RA is Fundamentally Different from Generic RA and should be Measured Separately

NextEra supports the position that generic (*i.e.*, system and local) RA and flexible RA are different products with different purposes. Generic RA is essentially designed as an insurance policy to meet peak electricity demand. Flexible RA on the other hand, is designed to ramp up or down during the hours of "flexible need," defined by the CPUC as "the quantity of economically dispatched resources needed by the CAISO to manage grid reliability during the greatest three-hour continuous ramp in each month." [1]

By definition, severe ramping (which flexible RA is meant to address) occurs at times other than "peak."

Despite the differences between generic and flexible RA, current rules require flexible RA resources to qualify as generic RA. Consequently, the market is missing potential opportunities to capitalize on resources with flexible RA characteristics available from storage and other technologies when the costs or timing of the network upgrades required for Full Capacity Deliverability Status ("FCDS") prove uneconomic relative to the value of the RA product. In short, the California market could more expeditiously and cost-effectively migrate to a more flexible system if resources capable of meeting the CAISO operational standards are allowed the option of providing a standalone flexible capacity product rather than requiring a coupled flexible and generic RA product.

For these reasons NextEra recommends that a given resource's Effective Flexible Capacity ("EFC") for flexible RA purposes is determined separately from its Net Qualifying Capacity ("NQC") for generic RA purposes.

A Generic RA Deliverability Study is Not Appropriate for Determining the Deliverability of EFC Capacity for Storage

[1] See CPUC Decision 13-06-024 at 2
http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M070/K423/70423172.PDF

Current rules for generic RA require storage resources to be studied similar to other resources (*e.g.*, fossil), assuming "worst case" peak conditions. As part of this study, resources are essentially subjected to a "system stress-test." NextEra supports the position that this is not the right standard for measuring a resource's operational capability and ability to quickly respond to system conditions. As previously mentioned, severe ramping and peak conditions should not routinely occur concurrently (*i.e.*, the system ramp is likely to correlate with solar production). For these reasons deliverability of EFC capacity for storage should be studied using assumptions that take into account 1) the specific grid conditions at the time of the expected ramp up/down (*e.g.*, a "worst-ramps" stress-test at different times of the day/week/year, etc.), and 2) the specific operating characteristics of storage resources (*e.g.*, dispatch flexibility, services, response time, ramping time, hours of sustained output, etc.).

Decoupling of flexible RA from generic RA will allow flexible resources to reach the market faster and more cost effectively by allowing resources to still provide flexible RA operational benefits while making the economic decision to forego potentially high cost network upgrades associated with FCDS. There may be circumstances where the cost of network upgrades are justified by the value of the generic RA product but the CAISO should allow energy-only resources to provide flexible RA, with a must offer obligation to CAISO markets, to increase CAISO access to these flexible attributes while maximizing existing transmission infrastructure and reducing transmission costs. This approach also has the benefit of reducing cost pressure on the Transmission Access Charge. For these reasons, resources that can meet the flexible capacity criteria should not be required to undergo a Full Capacity Deliverability study.

Flexible Capacity should be Counted for Both Load Increases and Load Curtailments Attributable to Storage Resources

NextEra supports a construct that credits storage resources with EFC for the full range of both pumping/charging and generation modes, thereby capturing the full potential contribution of these resources toward flexible RA capacity. The characteristics of the two sides of the storage equation are in essence no different from conventional supply and demand side resources, which would each be eligible to receive full EFC credit. There is no reason to discriminate against storage in this regard.

Conclusion

NextEra appreciates the opportunity to comment on the CAISO's proposal.

Sincerely,

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