BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations	Rulemaking 11-10-023 (Filed October 20, 2011)

INFORMAL COMMENTS OF CALPINE CORPORATION ON THE TREATMENT OF USE-LIMITED RESOURCES

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Calpine Corporation ("Calpine") provides the following informal comments on the treatment of use-limited resources for purposes of satisfying flexible Resource Adequacy ("RA") capacity procurement obligations.

I. INTRODUCTION

With varying levels of specificity, the California Independent System Operator ("CAISO") and Distributed Energy Consumer Advocates ("DECA") presentations from the October 15, 2013 workshop suggest three different approaches for counting use-limited resources for purposes of satisfying flexible RA capacity requirements. These approaches include:

(1) Partial Counting Approach. The "partial counting approach" would require all flexible RA capacity resources to meet the same energy and availability requirements, and allow use-limited resources to count partially towards flexible RA procurement requirements in a manner that reflects their use limits.[1]

(2) Threshold Energy Approach. The "threshold energy approach" would define a threshold energy/availability requirement associated with the provision of flexible RA capacity, such as the proposed 6-hour requirement for hydroelectric resources.[2]

(3) Bucket Approach. The "bucket approach" would define various buckets of resources with specific operating limitations/characteristics and cap reliance on

[1] CAISO, *Use-Limited Resources and Flexible Capacity*, October 15, 2013, slide 12-13.
[2] CAISO, *Use-Limited Resources and Flexible Capacity*, October 15, 2013, slide 10.

the amount each bucket can be used to fulfill flexible RA capacity procurement requirements.[3]

For the reasons explained below, Calpine supports the partial counting approach and opposes adoption of the other two approaches.

II. DISCUSSION

A. Calpine supports the "Partial Counting Approach" because it accounts for a resource's contribution to reliability requirements on a sliding scale based on its availability

Calpine supports the partial counting approach because it accounts for a resource's contribution to satisfying reliability requirements on a sliding scale based on its availability, without arbitrary cutoffs and/or resource-specific rules or exemptions. By measuring a resource's contribution to satisfying reliability requirements on a sliding scale, the partial counting approach better reflects the resource's incremental contribution to satisfying reliability requirements and creates incentives to increase the availability of resources. By contrast, an approach that arbitrarily caps reliance on resources that are not backed by a specific amount of energy, or that are only available for a certain number of hours in a month, may not fully reflect the contribution of such resources to ensuring reliability.

A relatively easy way to implement the partial counting approach would be through the CAISO's proposed Standard Flexible Capacity Product ("SFCP") mechanism. Under this implementation approach, use-limited resources would count fully towards flexible capacity requirements but would be subject to the same must-offer obligations as non-use-limited resources. In order to avoid availability penalties, Load Serving Entities ("LSEs") could combine different use- and non-use-limited resources to ensure that the must-offer obligation is fully satisfied in every hour. For example, a Demand Response ("DR") program that is only

[3] *See* CAISO, *Use-Limited Resources and Flexible Capacity*, October 15, 2013, slide 11 and DECA, *Flexible Capacity Buckets Redux*, October 15, 2013, slide 13.

available in evening hours could potentially be combined with another program or resource that is available in morning hours to cover the full 17 hours of the must-offer obligation.

To address potential concerns regarding whether and/or how to weight availability during different hours, absent compelling justification for an alternative approach to weightings, Calpine recommends weighting all hours equally. Under this approach, if a resource is available for 100 of the approximately 500 hours in a month covered by the flexible RA must-offer obligation for non-use-limited resources, an LSE would be allowed to count up to 20 percent of the resource's nominal flexible capacity towards its flexible RA capacity procurement requirement. Alternatively, using the SFCP implementation approach, an LSE would be exposed to the same penalty for every hour of the full 17-hour non-use-limited must-offer period in which the use-limited resource was not available and not replaced with an alternative resource.[4] Consequently, the LSE would be encouraged to rely on use-limited resources for compliance only during the hours in which they are actually available.

To address concerns regarding potential constraints on the ability of a resource to satisfy both flexible and generic RA availability requirements,[5] some cross-validation of the commitments associated with both types of sales and a resource's physical characteristics may be necessary. Alternatively, under the SFCP implementation approach, and potentially in combination with existing Standard Capacity Product ("SCP") penalties, constraints on availability to meet both generic and flexible capacity obligations could be managed by making LSEs subject to appropriate combinations of SCP and SFCP penalties in the relevant hours.

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[4] If the Commission were to determine that different hours of the day should be weighted differently, SFCP penalties could be set higher in the more "important" hours.

[5] Specifically, a resource could be counted towards both flexible and generic RA availability requirements when it might not be physically feasible for a resource to satisfy both requirements. For example, a DR program could be available for four hours per day, but it might not be available during both the hours of highest load and the hours of maximum ramping.

B. The "Threshold Energy Requirement Approach" should not be adopted

Calpine does not support the threshold energy requirement approach because Calpine supports uniform performance requirements for all resources. It is unlikely that many use-limited resources will be able to meet the 6-hour standard that has been established for hydroelectric resources. Consequently, the threshold energy requirement approach would likely involve establishing different thresholds for different types of resources. Calpine opposes such non-uniform performance requirements for different resources. If, alternatively, the 6-hour standard is reduced for hydro in order to create a uniform performance requirement, this could significantly weaken performance requirements for flexible RA.

C. The "Bucket Approach" should not be adopted

Calpine does not support the bucket approach because the hard caps on the use of resources in each bucket would be inherently arbitrary and would not reflect the fact that incremental capacity in a particular bucket beyond the capped amount might still contribute to reliability. In addition, as indicated in the DECA presentation, significant modeling would be required to determine appropriate bucket sizes.