

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements and Establish Annual Local and Flexible Procurement Obligations for the 2016 and 2017 Compliance Years.

R.14-10-010
(Filed October 16, 2014)

**COMMENTS OF THE WESTERN POWER TRADING FORUM ON THE ASSIGNED
COMMISSIONER AND ADMINISTRATIVE LAW JUDGE'S SCOPING RULING**

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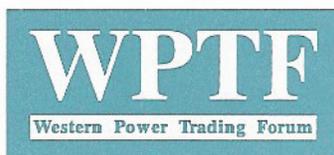


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In accordance with the directives and schedule provided in the September 13, 2016, *Assigned Commissioner and Administrative Law Judge’s Phase 3 Scoping Memo and Ruling* (“Scoping Memo”), the Western Power Trading Forum (“WPTF”)¹ submits this response to issues discussed therein.

I. INTRODUCTION

The Scoping Memo provides that Phase 3 will address the following four primary issues:

- Local and flexible RA requirements for 2018;
- A durable form of Flexible Capacity Requirements (“FCR”)
- Multi-year RA requirements; and
- The Effective Load Carrying Capability (“ELCC”) of wind and solar resources.²

With regard to the FCR topic, the Scoping Memo presents five Guiding Questions and further states that, “For the Study Plans on FCR Topics, we request that parties propose ideas on how to

¹ WPTF is a California non-profit, mutual benefit corporation dedicated to enhancing competition in Western electric markets in order to reduce the cost of electricity to consumers throughout the region while maintaining the current high level of system reliability. WPTF actions are focused on supporting development of competitive electricity markets throughout the region and developing uniform operating rules to facilitate transactions among market participants.

² Scoping Memo, at p. 2.

inform the Commission’s understanding of the guiding and scoping questions above.”³ WPTF responds herein on both of these areas.

II. RESPONSE TO THE FIVE GUIDING QUESTIONS

WPTF offers the following response to the five Guiding Questions concerning FCRs:

A. Have the current FCRs changed the quality or quantity of resources procured by the LSEs to meet RA requirements since the adoption of these requirements for the 2015 RA year?

WPTF believes it to be unlikely that the FCRs have materially changed procurement, given that the incremental cost/value of flexibility is zero. This is due to the fact that there is no ancillary service market product, either for capacity or ancillary services, that provides any kind of meaningful value for flexibility. The lack of any such product(s), coupled with the fact that RA buyers appear to be unwilling to pay any premium for flexible RA capacity over generic RA capacity, suggests that the current FCRs have not materially changed LSE procurement.

B. Have the FCRs changed the overall quantity or quality of resources bidding in to CAISO energy and ancillary services markets (vs. self-scheduling)? Have the FCRs substantially changed the bidding behavior of LSEs and Scheduling Coordinators?

WPTF believes that the implementation of FCRs has served to reduce the amount of self-scheduling that could take place and recommend that it would be valuable to obtain data to confirm whether this is correct. A significant factor in this regard has been the CAISO requirement that the Scheduling Coordinator for a resource must submit an economic bid into the CAISO’s markets, rather than submit a self-schedule, when a resource supplies flexibility capacity. The CAISO has not yet implemented the Resource Adequacy Availability Incentive Mechanism (“RAAIM”), which is intended to create a financial incentive to increase the amount

³ Id, at p. 8.

of flexibility in the RA fleet by assessing resources' availability based on their compliance with the flexible must-offer obligation (resources that have a flex obligation must submit economic bids and cannot self-schedule).⁴ The implementation of FCRs arguably should have changed bidding behavior, but, given that the CAISO felt compelled to move toward the RAAIM structure to further increase flexibility – the FCRs implementation may not have changed bidding behavior as much as the CAISO and Commission had hoped.

C. What are the characteristics of flexibility that are needed now and over the next five years? For example, does the expected increase in variable energy resources, and potential for increased uncertainty and variability in net-load, change the needed characteristics of flexibility in this time? What specific reliability metrics or goals might not be achieved due to inadequate flexibility? Do the current FCRs address the full spectrum of the electricity system's flexible needs now and over the next five years?

WPTF addresses the last question first. No, the current flexibility product does not address the full spectrum of the electricity system's flexible needs, either currently or over the next five years. This is primarily because it is a three-hour product that does not *explicitly* address either ramping needs longer than three hours (e.g., across a summer day) or shorter than three hours (e.g., a one-hour ramping need). The Commission must address the fact that the current three-hour product does not deal with either the maximum net load ramp across summer days or one-hour ramps. As a result, the electricity system's flexibility needs might be met on occasion through LSE flex procurement activities, but any such result will be coincidental rather than planned. Just as a stopped clock is correct twice a day, current FCRs *may*, on occasion, result in meeting the system's full spectrum of flexible needs, but by no means is it accomplished consistently.

⁴ The RAAIM was originally planned to be implemented in March 2016, but has been delayed until November 2016.

As for what flexibility characteristics are needed, WPTF believes that the CAISO's three defined types of flexibility may need to be revisited in order to determine if we need more granular products. At a minimum, however, flexible resources must have two fundamental characteristics: (1) the ability to change output; and (2) the ability to sustain that changed output, with each of these two characteristics sustained for a defined period of time. The expected increase in variable energy resources and the potential for increased uncertainty and variability will not change these needed characteristics. It will, however, change the amount of flexibility that is required and may well change the duration over which a flexible resource's output must be changed and sustained.

The meaningful growth in storage also needs to be addressed. An analytical re-look at the metrics underlying today's standards is needed in order to (1) measure storage better than is done today; (2) consider how we can use storage on the load side to make it more dynamic; and (3) determine if storage can provide the resources the system needs. A key to a reexamination of the reliability needs, as well as future analyses, will be getting one-minute aggregated data from CAISO. This can be difficult to obtain and the process for obtaining this vital information needs to be restructured to facilitate system analyses.

Further, the Commission needs to consider that while the current FCRs focus on the amount a resource can ramp up over a three-hour period, the rules do not adequately value other characteristics important to flexibility. For example, the on/off cycling ability of a resource is extremely important. On May 15 of this year, a minimum net load less than 12,000 MW occurred, four years in advance of the CAISO's 2020 prediction. Obviously, resources need to be able to increase and sustain output changes, but on/off cycling and other characteristics will become increasingly important. The FCR program needs to be designed to value multiple

characteristics that add value to the electrical system and not simply the ability to increase output and sustain output.

D. What, if any, characteristics of flexibility are not currently supplied appropriately through the FCR program, other procurement programs, or CAISO energy and ancillary services markets?

Although the CAISO has asserted that its one-hour flexibility needs are increasing, flex capacity is currently a three-hour product. Furthermore, ramping needs that extend over longer than a three-hour period are not addressed, either through the current FCR rules or the CAISO energy and ancillary services markets. It would be helpful to see both areas addressed.

It is inherently difficult to link FCRs to precise reliability standards. The trade-off between cost and flexibility and the differing attitudes of LSEs towards renewable curtailment makes one-size-fits-all rules particularly difficult to prescribe and enforce. While additional or different FCRs that are better matched to reliability requirements may be warranted, it is important to note that compliance with current FCRs is already complicated and additional or different FCRs might complicate compliance even further. Relatedly, our collective understanding of FCRs may not be sufficient to establish “durable” FCRs. To the extent that FCRs continue to change, it will be difficult to contract around them. In light of these complications associated with FCRs, the appropriate role of energy and ancillary services markets in encouraging operational flexibility also should be explored. A focus on developing biddable ancillary services that provide the flexibility that the system needs would be a good direction for the Commission to pursue.

In this regard, WPTF endorses the proposal to be made in comments filed today by Calpine Corporation that recommends an analysis of combustion turbines (“CTs”) to (1) examine the extent to which their operation reduces the costs paid by load through both clearing prices

and uplift payments; and (2) assess whether there is a gap between the value provided by CTs and their market compensation.

E. What, if any, contractual, economic, or structural barriers exist that hamper the ability of existing or planned resources capable of providing flexibility from doing so?

Flexible capacity has little incremental capacity value. The only CAISO market product that explicitly values flexibility – the flexible ramping constraint – produces revenues and price signals that could be described as tepid at best. While the system currently has more than enough flexibility – with the possible exception that there is not enough downward flexibility to avoid having to curtail renewables, which is happening more frequently – there is nothing that signals, and provides meaningful compensation for, the need for flexibility. A very real concern is that the FCRs have neither changed RA procurement by LSEs nor provided additional financial incentives for flexible resources. This has increased reliance on resources that may not be capable of satisfying real time operational requirements due the need for commitments well in advance of real time.

Another barrier is the lack of a multi-year forward contracting requirement and centralized capacity market. Suppliers need to be assured that there is financial justification for investing in flexible capacity. While the system may currently be flush with flex capacity, this condition will not last indefinitely. Rather than waiting for a crisis, the Commission needs to plan now how to address the timing interval between the current prompt year RA requirements and long-term LTPP requirements. The Scoping Memo provides that, “in light of the delay in resolving the durable FCR structure, there may be benefits to a coordinated consideration of multi-year RA.”⁵ WPTF concurs and looks forward to participating in this discussion as Phase 3

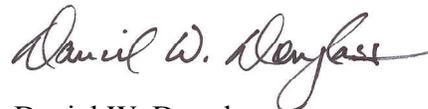
⁵ Scoping Memo, at p. 7.

moves forward, and would add that the Commission should also reconsider its opposition to a centralized capacity market.

III. CONCLUSION

WPTF thanks the Commission for its consideration of the issues discussed herein.

Respectfully submitted,



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