

PUBLIC UTILITIES COMMISSION

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**CAISO STRAW PROPOSAL – STANDARD RESOURCE ADEQUACY
CAPACITY PRODUCT****CPUC STAFF COMMENTS
November 24, 2008**

The CPUC staff appreciates the CAISO staff's efforts to develop a Standard Capacity Product (SCP) in response to broad stakeholder support. CPUC staff commends the CAISO's proposal to collect and verify generator information for use in a performance metric. We recognize the CAISO staff's substantial efforts in developing the components of a SCP in such a tight time frame.

The CAISO November 11, 2008 Straw Proposal identifies features – specifically, RA tags and generator performance standards/incentives – which can feasibly be implemented in October 2009 for the 2010 RA showing.

In addition to specific comments that are bulleted below, CPUC staff offers extended discussions of four key points: the determination of an availability metric, the nature of a performance penalty, issues regarding demand response, and the existence of a change management process. The stakeholders' broadly stated desire to have a product by the February 2009 FERC tariff filing may require updates to these crucial components of the SCP that reflect market and policy changes stemming from the implementation of MRTU and the CPUC's Resource Adequacy Proceeding.

Determination of an Availability Metric

The SCP Straw Proposal uses a single metric that compares the unit to its own historical performance, and to impose penalties, either financial or as a Net Qualifying Capacity (NQC) derate. While a unit-specific and non-relative interim performance metric may provide some benefits in contracting facilitation, it does not provide the CAISO with the benefits of a more uniform metric. CPUC staff recommends that the CAISO develop relative peer group performance metrics once MRTU is implemented and the CPUC has made a decision regarding long term RA market structure. In the meantime, the CAISO should require generators to submit a full set of GADS data to the CAISO, and begin to evaluate software and personnel requirements in the use of that data. This use of GADS data will allow the CAISO to compare unit performance against national trends, and move the CAISO toward the standard GADS indices that many ISOs use.

Previous approaches discussed during the Oct. 20th and November 14th Stakeholder meetings compare a unit's performance to an industry or class average. CFCMA strongly pushed for a peer group metric that compares units to an industry or class average, and penalizes units that are significantly worse than the average benchmark. This approach would create incentives for underperforming units to improve relative to other units of a similar class or peer group, and facilitate CAISO calculation of reliability by class of generator and coordination with RA metrics in other forums. CPUC staff is concerned that a unit-based metric trends toward stasis rather than increasing reliability for the system and the CAISO.

CPUC staff recognizes a unit specific availability metric may be necessary as an interim step in light of the February 2009 FERC Filing date and the CAISO's acknowledgement of challenges in implementing a non-unit specific data standard for the 2010 Implementation timetable.

CPUC staff acknowledges that the CAISO does not yet collect data or use the software resources it may need to develop a performance metric which is differentiated for hours of demand and different types of resources (i.e. including Use-Limited Resources, Demand Response, and intermittent resources). CPUC staff encourages the CAISO to move in that direction and notes that PJM, MISO, ISO-NE have developed capacity products and performance indices based on the IEEE Std 762-defined EFORD metric, collected in a GADS format.

CPUC staff recommends the CAISO's tariff include language that ties the cost of a unit's capacity to the cost to the system of the unit's lack of reliability.

Nature of Penalty – NQC Derate or Financial Penalty

The Straw Proposal offers some discussion on the rationale between NQC derates and financial penalties and states a preference for a NQC derate over a financially based penalty. CPUC staff believes a more robust discussion of the costs and benefits supports a financial penalty over a NQC derate.

The Straw Proposal supports a preference for an NQC derate with the observation that generators would price the threat of financial penalties into their RA price. CPUC staff does not see the pricing of potential financial penalties into RA prices as a problem. In fact this pricing action internalizes the costs of unreliability into the generator's bids and is therefore desirable. With the cost of unreliability priced into a unit's bid, unreliable units would potentially be priced out of the RA market, thus increasing reliability and decreasing out of market backstop purchases.

Since in an ideal market the price of capacity reflects the cost of capacity, a derated unit's costs would still need to be recovered from capacity prices. Derating an NQC increases a unit's costs of capacity similar to financial penalties. Unfortunately, while the financial penalty primarily affects the unit, a NQC derate directly affects the

whole market by reducing the available capacity. This situation is exacerbated in geographically constrained areas.

The NQC derate mechanism increases the costs to all LSEs including those that did not contract with an unreliable unit by signaling to the whole market that there are less MW of capacity available. Any punitive derate or inefficiencies in the derate process increase the likelihood that the market itself pays a penalty for a single participant's bad behavior. This problem is exacerbated and unavoidable in a single clearing price capacity market.

In geographically constrained areas a derate of NQC could create a situation where a LCR area could not meet reliability requirements based on a derate when in fact there may be sufficient generation in the area.

While NQC derates are based on previous performance, generators are only affected by an outage today in future contracting periods. Thus there is limited incentive to repair the plant in a timely way. While minimizing outages would reduce the extent of the generator's NQC derate in the following year, the effects are less timely and acute than the threat of a financial penalty, and may be mitigated against by demand side growth or factors.

Additionally, CPUC staff is concerned that the NQC derate mechanism could potentially affect the use of NQC as an input to capacity and reliability studies depending on if and how the derate would be backed out for PRM and LCR studies for example.

The SCP Straw Proposal indicates a need to develop a framework to assess financial penalties. CPUC staff suggests that there are several options that could serve as a foundation for financial penalties. An LMP-based financial penalty has many efficiencies that could support its use. In particular, the LMP would likely be high where capacity prices are high and low where capacity prices are low. This demand sensitive penalty is appealing because constrained areas are assumed to have a higher cost to restore reliability. The ICPM price of \$41/kw-year could be used as an alternative to an LMP-based financial penalty. CPUC staff does not believe the CAISO would need to know the terms of LSEs' contracts to implement either of these mechanisms.

Regardless of which financial penalty is used, CPUC staff acknowledges that a financial penalty should consider a metric that determines if a unit would be called based upon the energy market clearing price.

CPUC staff highlights that some of the concerns raised by the CAISO's SCP Straw Proposal regarding financial penalties may exaggerate the severity of some risks. Regarding the levying of penalties, the CAISO already clears energy payments via their markets, and would be able to deduct potential penalties from the energy payments to a generator; CPUC staff does not see the need for additional credit posting.

Demand Response

CPUC staff supports, in concept, the inclusion of demand response (DR) as a capacity resource under the SCP paradigm. DR will likely play a more significant role in meeting each IOU's Resource Adequacy requirement due to the deployment of advanced meters over the next 4-5 years, and the Commission's directive to the IOUs to implement default dynamic pricing for large customers within the next 2-3 years. CPUC Staff supports the policy position that DR be included as a resource under the SCP so that it would be subject to RA performance standards, just as generation-side resources will be. Otherwise, there is less incentive for operators of DR resources to perform, which leads to greater costs for the system as a whole. However, more details are necessary with respect to an availability standard for DR resources and should be a key focus of the CAISO going forward.

The SCP Straw Proposal recognizes that DR is a unique resource that may require a different approach than that proposed for supply resources¹. CPUC Staff agrees. Using the outage and maintenance hours approach to determine resource availability does not fit for DR for obvious reasons. As an alternative, the SCP Straw Proposal suggests that DR providers submit actual data to the CAISO on their performance. CPUC staff agrees that receipt of actual data is important, but the details of how such data is presented and evaluated are critical to determining how the resource performed.

Specifically, DR resources are providing reductions in load as opposed to additional supply. How that reduction in load is measured and quantified is the key to determining whether it performed adequately. Inherent in the analysis is the determination of an appropriate baseline by which to measure the reduction that has been claimed. There are multiple baselines methodologies, each with their own pros and cons. The CPUC has long been interested in quantifying DR MWs from IOU programs to better forecast and evaluate such programs, and recently adopted a set of load impact protocols for those purposes (D.08-04-050)². The IOUs are in the process of implementing these protocols for the 2008 summer ex-post results, as well as determining ex-ante forecasts for both the short and long-term.

The CAISO SCP Straw Proposal is silent as to how it will be measuring load reductions from DR resources, and is also silent as to whether the CPUC's load impact protocols could be a useful resource in this regard. CPUC staff encourages CAISO to review the DR load impact protocols to determine if such protocols can be relied upon, in whole or in part, in developing its method of establishing an availability standard for DR resources under SCP. Unless there is a compelling reason for different approaches, the CPUC and CAISO should work collaboratively in determining how DR resources perform so as to avoid relying on two different load measurement methods which result in different databases.

¹ Pg. 23 of the CAISO Straw Proposal for the Standard Resource Adequacy Capacity Product, Nov. 11, 2008.

² http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/81972.htm

CPUC staff also notes that DR resources can be unique among themselves as the arrangements and details for load reduction will vary by IOU program or aggregator. Many programs provide capacity payments to end-use customers for anticipated reductions, while other programs rely on pricing signals (for example high energy prices at peak hours) to get customers to reduce their demand. When a DR program is ‘triggered’ also varies, as some programs have more restrictive conditions (for example a Stage 1 or 2 alert by the CAISO) than others. Considering these differences among DR resources, further analysis by the CAISO may be necessary to develop appropriate availability standards that vary by the type of DR that is being provided.

In sum, CPUC staff believes it is important that the specifics of an availability standard for DR be further developed and vetted by the CAISO.

Change Management Process

As a general point CPUC staff emphasizes that the SCP Straw Proposal has not developed a change management process for the SCP. CPUC Staff point to the lessons learned from the CPUC’s RA program, which has needed multiple changes since its start in June 2006. A well designed and public change management system in place prior to initiation would have facilitated RA program improvements, especially those needed to respond to unanticipated ambiguity in program rules. The Straw Proposal, by limiting discussion of a change management process to the subject of grandfathering, fails to acknowledge that the California market is in fact a dynamic one. In addition, the Straw Proposal could use more detail on the how grandfathering would be applied.

CPUC staff highlights that by raising specific examples that may benefit from a change management process both the process and the substance of the scenarios should be considered. Staff remains concerned that potential revisions to AS markets, review of and change to the RA program by the CPUC, and problems with the cost and reliability associated with an SCP may require unforeseen changes to the SCP by the CAISO.

Bullet Points on Additional Subjects

In addition to the general comments above, CPUC staff appreciates the opportunity to offer these comments on the Straw Proposal and we look forward to continuing to work with CAISO staff and other stakeholders to develop the SCP:

Section 4.2 (p. 13)

The Straw Proposal indicates that all RA Capacity will be represented by tags. CPUC staff supports the language in the SCP Straw Proposal regarding how tags are characterized but emphasizes that any SCP definition should acknowledge that freedom of contracting on or around an SCP tag should be as unfettered as possible.

Section 4.2.2 (p.14)

The SCP Straw Proposal discusses the fundamental need for fungibility; we agree that a tradable SCP is desirable, but note that significant gains can be made in reducing transaction costs without achieving full fungibility. For example, an SCP that has standard performance metrics and penalties reduces variability in contract negotiations and is beneficial. CPUC staff emphasizes that other parts of a contract for capacity could still be non-standard. For this reason, standardization outside the areas of performance and availability penalties may not be needed.

Section 4.2.6 (p.14)

“The duration of the tag extends no longer than the publication of the next NQC list.” CPUC staff supports aligning the duration of the tag with the RA compliance period.

Section 4.2.7 (pp. 14-15)

CPUC staff recommends the issue of a registry be addressed in a later revision to the SCP.

Section 4.2.8 (p. 15)

The SCP Straw Proposal references the CPUC’s RA proceeding. As noted in the Assigned Commissioner's Scoping Memo, the question of including an AS MOO provision in the RA obligations is in scope of Phase 2 of R.08-01-025. As the issue is current before the CPUC the CAISO may make a proposal on this issue in January and see the CPUC staff’s previous comments for additional development of the subject.

Section 5.5 (p.18)

CPUC staff supports a cohesive approach which uses full GADS data, a peer group performance standard, and financial penalties over limited data and NQC. We recommends that the CAISO begin to collect full GADS event data now, rather than the partial summary data as in the proposal, adopt standard GADS reporting to measure performance, and refine other potential uses later.

Other ISOs, such as PJM, MISO, and ISO-NE have all developed capacity products with performance metrics which account for periods of demand and different types of fossil-fuel resources. The CAISO could put a full range of data to a number of uses. The CAISO could standardize performance measures and compare California performance with those of other states and ISOs. A full data set would support a performance standard based on either the peer group class average or individual unit historical performance.

CPUC Staff notes that although GADS does not currently provide indices for certain Use-Limited Resources, a separate NERC GADS database will be available to collect data for wind resources in 2009.

Section 5.5 (p.20)

CPUC Staff recommends that the CAISO adopt the standard GADS reporting to measure performance, and use SLIC to monitor the unit in real time.

The SCP Straw Proposal appears to use SLIC data to convert a unit's derated MW capacity into forced outage hours. Collecting a full set of GADS data makes this conversion unnecessary, as GADS already calculates equivalent forced outage hours.

Section 5.5 (p. 18)

The SCP Straw Proposal's calculation of acceptable outage hours takes the total hours of forced and maintenance hours, combines the totals, and from that computes the average hours of unavailability over the previous 5 years. In calculating a generator's target availability, the CAISO should not aggregate forced outages and scheduled outages into total outages. CPUC staff cautions that granting a combined allowance equal to the sum of forced and maintenance outages inappropriately values the two categories of outages equally. The cost to the system of each outage type is different, and the method described in the Straw Proposal may encourage generators to decrease maintenance outages to avoid outage hours that are included in the performance metric.

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