Calpine Comments on the Reliability Services Issue Paper

Submitted by	Company	Date Submitted
Matt Barmack barmackm@calpine.com 925-557-2267	Calpine Corp.	February 18, 2014

Calpine appreciates the opportunity to comment on the Reliability Services issue paper. Calpine's comments focus on market-based replacements for CPM.

As a threshold issue, the CAISO should decide whether it wants or needs to develop all of the potential markets contemplated in the issue paper. The issue paper envisions markets that are both voluntary and mandatory, with different degrees of forwardness, and for different delivery terms. Developing such markets would entail significant time and resources.

To the extent that the CAISO decides to develop markets, Calpine encourages the CAISO to focus on month- and year-ahead markets to both cure deficiencies in month- and year-ahead procurement and fulfill some fraction of normal LSE capacity procurement requirements. Such markets should borrow from existing designs to the extent possible. Markets for outage replacement, exceptional dispatch, and extraordinary event procurement would be qualitatively different or may not be feasible. (The need for risk-of-retirement backstop procurement may be obviated by the development of explicit multi-year forward procurement requirements in this initiative and R.14-02-001.)

Calpine believes that three features of capacity markets would be important:

First, the markets should utilize demand curves. Demand curves in capacity markets reflect the tradeoff between the reliability benefits of additional capacity and its price and are used in lieu of specific numeric procurement targets, e.g., a 15% planning reserve margin. When capacity is abundant and prices are low, a demand curve will lead to additional procurement of capacity beyond what is required to satisfy a specific numeric procurement target. Conversely, when capacity is scarce and prices are high, a demand curve will result in aggregate procurement of capacity below specific numeric procurement targets. Demand curves ensure that prices reflect supply and demand fundamentals and yield just and reasonable prices. In addition, demand curves dampen price volatility and mitigate market power. For these reasons, two of the three Eastern capacity markets, New York and PJM, utilize demand curves and the third, New England, is in the process of implementing them.

Demand curves could be particularly important in California in light of the oversupply of most types of capacity. Additional procurement of capacity above specific numeric procurement targets, could secure additional reliability at reasonable prices while assuring the continued

viability of more resources (and potentially obviate the need for forward backstop mechanisms such as FLRR).

Second, the markets should include buyer side market power mitigation measures such as minimum offer price rules (MOPRs). MOPRs require new resources to be offered into capacity markets at levels that reasonably reflect their costs. In the absence of MOPRs, it may be economic for load serving entities to exercise market power by procuring new capacity outside of the markets in order to depress prices in the markets. Calpine understands concerns in California about the application of MOPRs to preferred resources that might limit such resources from clearing markets and counting towards resource adequacy requirements. Consequently, to avoid the potential that a market might undermine policy preferences for preferred resources, Calpine recommends that MOPRs only apply to new gas-fired generation.

Third, some level of participation in the markets should be mandatory. Absent some level of mandatory participation, the benefits of demand curves and MOPRs would be limited, e.g., a MOPR could not be applied to a resource that is not offered into the markets. Calpine recommends that LSEs be required to fulfill some minimal fractions of their capacity procurement obligations through the markets.[1] In addition, as indicated above, Calpine recommends that all new gas-fired generation be offered into the market and subject to MOPR.

In addition to the general proposal above, Calpine provides the following responses to the specific questions raised in the issue paper:

- Given the interaction between the annual and multi-year market mechanism, should these be developed in conjunction or as completely separate mechanisms?

To the extent that the CAISO develops market mechanisms, they should be as similar as possible for annual and multi-year procurement, analogous to the relationship between the Base Residual Auctions (BRAs), the three year-forward capacity markets in PJM, and the reconfiguration auctions that occur between the BRAs and the associated delivery years, i.e., markets that account for changes in loads and resources and provide opportunities for some suppliers to buy out of their obligations and effectively replace their own capacity with cheaper capacity from the market.

- What interactions between the annual and multi-year market mechanism should the ISO consider when designing the mechanisms?

The focus on multi-year forward market mechanisms may be premature in light of the fact that they have been deferred until Phase 2. Nevertheless, the CAISO may want to consider some of the following questions:

(1) How often should forward markets for the same delivery period occur? For example, should markets occur annually beginning with a three-year forward market?

[1] Some level of mandatory participation was a feature of CPUC Energy Division's Modified Centralized Market proposal. (See ftp://ftp.cpuc.ca.gov/puc/hottopics/1energy/r0512013MarketStructure.PDF.)

(2) Should the CAISO operate multi-year forward markets for individual delivery months as opposed to entire delivery years?

(3) Should the CAISO operate multi-year forward markets for all capacity products, i.e., system, local, and flexible, or only sub-set of the products?

- What are market power concerns specific to an annual auction?

Generally, market power might be exercised in a market to the extent that a buyer or seller has the opportunity to influence price through its behavior. For example, a buyer may be able to lower prices by attempting to fulfill less than its full demand through a market, perhaps by buying limited amounts of supply outside of the market at prices higher than it would pay in the market. Conversely, a seller might attempt to raise prices in the market by withholding its supply from the market, either by refusing to sell or by offering at high prices. It is easier to exercise market power when supply and demand are both relatively inelastic as might be the case in a capacity market without a demand curve and/or in which the amount of available supply is close to the amount of supply that is required. In addition, supply is generally less elastic closer to the delivery period than further ahead of the delivery period, when suppliers may have more options, such as the option to add incremental capacity or operating characteristics to existing resources, potentially construct new resources, or enroll new customers in demand response programs.

- Should the ISO consider a market mechanism design that can optimize bids and offers for less than a month? What time period should the ISO consider evaluating in a market mechanism?

Calpine has no view about whether a market for delivery terms of less than a month, presumably primarily for outage replacement, would be useful. Such a market would be qualitatively different and potentially more complex than the types of markets that could be used for procurement to fulfill month- and year-ahead procurement requirements as well as month- and year-ahead backstop procurement.

- What could the ISO do to reduce market participant transaction costs related to outage replacement?

A market to trade individual days of capacity might reduce transaction costs for outage replacement. It is unclear how such a market could be structured. Would resources be offered for specific days? Would the outage replacement market occur *after* the monthly backstop market? If not, how would the market(s) determine which specific resources are used for individual days of replacement as opposed to backstop for the entire month?

If Calpine's proposal above for a market that utilizes a demand curve were implemented, presumably any resources procured for entire months in excess of the resources required to meet specific numeric reliability targets could be used for replacement and some portion of their cost could be allocated to the SC of any resource requiring replacement.

- Given the ability of the ISO to optimize total backstop procurement through a market mechanism, should the ISO consider changing the RA processes surrounding the cure period length of time?

Calpine has no view at this time with respect to how a market mechanism to facilitate outage replacement might affect the timing of monthly RA showings and associated cure periods.

- What are market power concerns specific to a monthly auction? How do these concerns change if the ISO uses a market mechanism for a shorter-time frame to account for outages?

See the discussion of market power issues related to an annual auction above. Market power could be more severe in monthly auctions than in annual auctions because supply is less elastic closer to the delivery period. On the other hand, given how RA capacity procurement requirements vary across months, there is generally abundant supply for certain months of certain types of RA capacity, e.g., system RA for non-summer months. In months with more than sufficient supply to satisfy demand, supplier market power would be less problematic.

The ability to transact easily for individual days of capacity might effectively increase supply and hence alleviate market power concerns. For example, because there is no easy way to transact for individual days of capacity, some PPAs essentially require replacement for an entire month of any resource that is scheduled out within a month regardless of the duration of the outage. These contractual requirements, that are more extreme than what is required by CAISO rules, may encourage suppliers or LSEs with more than sufficient capacity for compliance to hold capacity in reserve that otherwise might be offered to other entities for their RA compliance.

- Should the ISO consider shortening the length of time allowed in the market mechanism?

No. A full month's designation and compensation to fulfill a need of less than a full month is appropriate in light of the fact that operating resources entails some costs that are quasi-fixed and may not be reduced significantly to the extent that a designation is for less than a full month, e.g., the cost of additional staffing for a plant.

- What should the ISO take into consideration when issuing a CPM designation for an event that requires an immediate designation?

Calpine requests clarification of this question. Does the question pertain to considerations related to immediate designations other than the reliability criteria on which such designations are based?

- How should the annual and monthly backstop capacity price relate to the backstop price for an unsystematic event?

It might be reasonable to link payments for backstop procurement to address unsystematic events to recent monthly or annual backstop capacity prices to the extent that such prices reflect compensation for capacity with similar attributes, e.g., location and operating characteristics. For example, it would not necessarily be reasonable to link compensation for an exceptional dispatch designation for a resource in a very precise location to a monthly or annual price for capacity in a broader geographic area.

- What are market power concerns specific to an unsystematic market mechanism?

It is sometimes the case that only a limited number of resources can address an unsystematic event that requires backstop procurement. When potential supply consists of only one or a few resources, supply-side market power could be problematic. In addition, given the limited lead times and idiosyncratic delivery terms of backstop procurement for unsystematic events, it probably would be impractical for the CAISO to use market mechanisms for such procurement. Consequently, the CAISO should continue to rely on administrative mechanisms for such procurement and perhaps link the pricing to contemporaneous annual or monthly market prices to the extent that such prices reflect compensation for capacity with similar locational and other attributes to the resource that is designated due to an unsystematic event.

- There are currently 6 events that can occur for the ISO to use their CPM backstop authority. How should a market mechanism vary across events? How should these mechanisms and their prices interact?

As discussed above, Calpine believes that the CAISO should run month-ahead and year-ahead auctions to cure deficiencies in month- and year-ahead procurement as well as to fulfill some fraction of normal LSE capacity procurement requirements. These auctions will yield prices that might form the basis for compensation for some of the other types of CPM procurement, such as Exceptional Dispatch and Significant Event, to the extent that such prices reflect compensation for capacity with similar locational and other attributes to resources that are designated for unsystematic events.

- Are there benefits to a voluntary market mechanism where both buyers and suppliers could provide bids?

Calpine does not support a separate voluntary market mechanism in addition to a mandatory backstop market mechanism. Instead, as described above, Calpine recommends that the CAISO combine backstop procurement with procurement to meet at least a minimum fraction of LSE capacity procurement. In addition, LSEs could rely on the market for additional procurement beyond the required minimum to the extent that they prefer the market to other means of acquiring capacity, such as bilateral contracting.

- It is useful to consider a voluntary market mechanism within a monthly market mechanism?

See previous answer.

- Could the use of a voluntary market mechanism in addition to a mandatory market mechanism mitigate any market power concerns?

Calpine sees no benefit to a separate voluntary mechanism in mitigating market power.