



Resource Adequacy Enhancements – Straw Proposal Part 1

Submitted by	Organization	Date Submitted
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1. Rules for Import RA

Calpine supports the direction of the Straw Proposal, which in general, creates more-restrictive qualification requirements for Resource Adequacy capacity imported into the CAISO at the external ties. Particularly, given the general tightening of capacity reserves in the West there will be increasing competition for reliable, flexible resources both inside the CAISO boundaries and in other parts of the interconnected grid. In the sections below we highlight the drivers and natural consequences of more restrictive eligibility criteria that must be addressed as we move forward to implementation of these enhancements.

a.) Drivers to the Need for More Restrictive Criteria

Since its inception, the CAISO has been blessed with a relative abundance of available resources beyond its BAA borders. Regions outside the CAISO – or even BAAs embedded within the CAISO – have offered ready-access to excess supplies to meet its peak-period or flexibility needs. The CAISO’s very successful Energy Imbalance Market has facilitated the transfer of thousands of gigawatt-hours of this excess energy in real time. The CAISO has routinely depended upon net imports (as much as 10,000 MW) to meet a large part of its peak demand.

However, the ownership and control landscape is changing and what was once excess capacity, committed to no particular party, is being bought by, or contracted to local non-ISO utilities. For example, Table 1 below, shows that over 4,500 MW of generation capacity in the desert Southwest that was built on an uncontracted, “merchant” basis is now under the control of local Arizona utilities. NVE, SRP and APS are currently seeking to contract with much of the remaining merchant capacity in the Southwest. Those entities will of course prioritize the use of capacity they buy and control to meet their own peaking and flexibility needs instead of the growing and pressing needs of California.

The combination of higher flexibility needs and fewer resources raises the negative consequences of ambiguity in capacity counting -- or worse yet, double-counting -- of external resources. The CAISO’s unalterable obligations to serve load are and will continue to be challenged without clear and restrictive dedication of resources. Just as with Eastern RTOs, the

CAISO needs to consider eligibility criteria that clearly and conclusively allow the dispatch of external resources for the benefit of CAISO loads.

TABLE 1 “Merchant” Capacity Now Dedicated to AZ IOUs

Plant Name (Developer)	Merchant Capacity Circa 2010	AZ IOU Control Circa 2020	Merchant Capacity Circa 2019
Gila River (Panda)	2200	2200 (1650 SRP, 550 TEP)	0
Arlington Valley (Duke)	565	565 (APS)	0
Griffith (PPL/Duke)	570	570 (Unnamed AZ IOU)	0
Mesquite (Sempra)	1250	1250 (625 SRP, 625 SWPPR)	0
TOTAL	4585		0

b.) Specification of Native BAA for an Import Resource

The CAISO appropriately highlights the need for resource-specific dedication as a means of avoiding double-counting. We agree that the risk of double counting is quite simply, that the resource (which otherwise might be used for native load service, or sales to premium markets outside the CAISO) is not available to the CAISO when needed most. As such, we do not understand the CAISO’s proposal to merely identify the native, or source BAA for the resource seeking an import RA contract. Undeniably, the source BAA (an entity independent of asset ownership or use) will have no obligation to bid, schedule, or most important, provide capacity when the ISO requires it for load service. Identifying the source BAA (e.g., BPA, or APS, or NVE) does not establish delivery obligations or to avoid the possibility of double-counting.

With an identical double-counting concern in mind, other RTOs (e.g., PJM) have established eligibility criteria very similar to those which the ISO calls a “book end”. Not only must a PJM import capacity resource denounce any association with the source BAA (“delist” in their jargon), they must have firm transmission capacity to the PJM intertie, they must define the operating characteristics of the resource and provide telemetry from the resource before they can participate in PJM capacity markets. Calpine sees

no significant regional differences between East and West that would support a departure from the way external resources should qualify for CAISO capacity (RA) markets.

c.) Bidding Rules and MOO

The CAISO proposes a set of bidding rules that in combination and with a resource-specific designation, would effectively foreclose use of the resource for any purpose other than serving CAISO load – a concept to which Calpine is not opposed. The CAISO would require continuous bidding (adding a RT MOO, even if not awarded in IFM or RUC) and would require bidding and dispatch through the fifteen minute market. These proposals place import resources and internal resources on a very similar playing field, but do raise matters that must be considered carefully.

First, exposure to dispatch in fifteen-minute markets places an entirely new burden on external resources. In essence and by extension, the ISO suggests that all external resources be scheduled with dynamic functionality. However, dynamic transfer capability is limited at the interties.

Absent dynamic functionality, fifteen- minute scheduling could expose resources to infeasible dispatch. In a very simple example, if the characteristics of the resource are unknown, the CAISO optimization could dispatch a resource in a manner which violates ramp-rates, transition “forbidden” regions or other physical factors. This risk is magnified if the ISO eliminates HASP (hourly block) awards and/or eliminates the option of bidding a minimum block of hours of operation. The CAISO could consider the obligatory use of Resource-Specific, System Resource designations to avoid these infeasibilities. However, certain modeling enhancements would be necessary (e.g., to allow multi-stage generation modeling of imports).

Additionally, the continuous MOO forecloses all local market sales opportunities. The lost opportunity value of selling into premium local markets would have to be compensated in some manner (either in energy or RA prices) in order for resources to dedicate their capacity to the CAISO. One can look from California to either the east or the north to quickly see that the summer premium in the Southwest, or the winter premium in the Northwest can be significant.

One advantage of moving to a resource-specific eligibility requirement is that the CAISO could consider market power mitigation mechanisms for imports. Today, given that the CAISO has no basis to create a default energy bids for non-specific imports, it could reconsider mitigation if, based on modified¹ market power screens, the import is pivotal. The CAISO could create reasonable opportunity-cost-based default bids including the local-

¹ Of course, the interties are all deemed to be competitive in today’s market power mitigation formulation. With resource specific imports, consideration could be given to possible forms of pivotal suppliers tests at the interties.

market lost opportunity (as is currently proposed for hydro resources in the DA Enhancements initiative.)

2. RAIM Enhancements & Outage Rules

a. Holistic Outage Reform.

Calpine supports a holistic review of the Outage Management and Availability mechanisms. As suggested in the Straw Proposal, the current process with its availability penalties and replacement obligations may be creating significant and undesirable unintended consequences. For example, the proposal highlights that the current design imposes availability penalties on all capacity that is “shown” and can result in demonstrations of the only the absolute minimum amount of capacity needed for the reliability target. Excess owned or contracted capacity may not be shown to the CAISO in order to avoid exposure to availability penalties or to have a reserve of replacement capacity. This withheld capacity can create shortages and price spikes.

Calpine understands and supports the CAISO’s objective to ensure that the right resources are available to serve load. While the Straw Proposal addresses many topics individually, it does not present a comprehensive proposal, but reserves the right to present a proposal in the next draft. Calpine suggests that the initial comprehensive proposal be built on the principles that are embedded in the working draft. We have attempted to capture those principles below, but in any regard, the next proposal should explicitly define the principles that it seeks to coordinate and resolve.

- Encourage parties to submit planned outages early
- Allow for low-transaction cost replacement capacity
- Design replacement options for short periods (days) or extended periods (weeks)
- Set RA eligibility based on historic performance
- Measure and reward of charge historic performance during reliability events
- Eliminate incentives for withholding “excess” capacity
- Ensure economic bids are submitted rather than inflexible self-schedule

Calpine offers the following reactions to some of the specific proposals in the current draft.

b. Interaction of Outages and RA sales.

The draft offers two “bookend” options for managing outages and RA. One bookend would prohibit a resource from providing RA for any month in which the resource has requested a planned outage. Take a simple example of a resource planning a two-day insulator wash. The resource coordinates with the CAISO well in advance of the outage and performs the work over a low-demand weekend. Reliability is not threatened, but the resource would be prohibited from selling RA for the whole month? In addition, eliminating all RA sales during spring and fall

outage seasons could create significant shortages in RA – driving scarcity when loads or conditions would not otherwise suggest it.

Calpine will respond to the other “bookend” solution when the ISO presents a more detailed proposal that better distinguishes the new proposal from current practice.

c. Using Forced Outages to Prospectively Affect NQC.

Calpine does not specifically object to performance measures that could ultimately affect the future NQC available for sale as RA capacity. In fact, these mechanisms are effectively deployed in Eastern markets. Our support is of course conditioned on appropriate selection of triggers (see below) and uniform treatment of all technologies. As such, we concur with the Straw Proposal visitation of and potential revision to the resource exemptions allowed in Section 40 of the tariff.

d. Addition of Performance Metrics

Calpine does not necessarily object to the creation of performance incentives that are also enforced upon some form of reliability threat replacing in its entirety, the current RAIM mechanism and its Availability Assessment Hours. However, using a “dispatch-to-meter” performance places significant weight on the precision of dispatch operating targets (DOT). Calpine would be very interested in analysis of the data the CAISO has collected which apparently suggests that resources are not following DOTs. In particular, Calpine believes that the CAISO should share resource-type data that supports the need for incentives as specific as “dispatch-to-meter” performance.

Finally, since including new NQC-reduction and performance penalties further complicates (rather than simplifying) outage management, the CAISO should articulate the nexus and complementary connections between proposed modifications to RAIM, performance incentives, outage management and NQC reductions.

e. Performance Triggers

The Proposal includes a substantial list of events that could trigger the application of performance incentives. Without knowing – with some specificity – the performance problems that the CAISO is trying to solve, it is difficult for us to state any specific preferences. That said, Calpine would generally prefer triggers that are beyond the discretionary control of CAISO Operators, and triggers that represent an undeniable reliability need for resources. As such, Calpine would support triggers related to load levels and system emergencies, but not to discretionary measures such as Exceptional Dispatches or Restricted Maintenance declarations.

3. Local Capacity Assessments with Availability-Limited Resources

Please refer to our prior comments.

4. Meeting Local Capacity Needs with Slow Demand Response

Please refer to our prior comments.

Additional comments

Thanks.