

**CALIFORNIA ISO**  
**FLEXIBLE RAMPING PRODUCT**  
**COST ALLOCATION STRAW PROPOSAL**

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**COMMENTS OF THE STAFF OF THE CALIFORNIA PUBLIC UTILITIES  
COMMISSION**

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**March 29, 2012**

The Staff of the California Public Utilities Commission (“CPUC Staff”) welcomes this opportunity to comment on the California Independent System Operator’s (“CAISO”) March 15, 2012 “*Flexible Ramping Product Cost Allocation Straw Proposal*” (“FRP Cost Allocation Straw Proposal”)

***1. Cost Allocation Should Follow the Finalization of the Design of the Flexible Ramping Product.***

The proposed Flexible Ramping Product (FRP) market design has evolved over the course of a stakeholder process and appears to be nearing completion. Nevertheless, several aspects of that design still require clarification, as indicated in the CPUC Staff’s and other stakeholders’ recent comments. Questions remain about the methodology and data that will be used to calculate day ahead and real time FRP procurement amounts. This methodology and data should have a direct relationship to the methodology and data that are ultimately used to calculate deviations upon which cost allocation will be based. The CAISO must also clarify how self-provision of FRP would be technically implemented and accommodated, as this should be considered when evaluating cost allocation methods. While the present discussion of cost allocation for FRP is timely and constructive, the cost allocation discussion and methodology must be fully informed by—not decided ahead of—the final FRP design.

Further, the CAISO has not yet finalized the Cost Allocation Guiding Principles, and it is premature for the CAISO to finalize the FRP cost allocation before the CAISO has finalized and applied (more explicitly) the guiding principles to the FRP cost allocation proposal. The CPUC Staff have remaining concerns regarding omission of an

important Policy Alignment principle among the guiding principles, as well as other concerns having bearing on how guiding principles would inform FRP cost allocation.<sup>1</sup> Furthermore, the CAISO has not explained how the FRP cost allocation proposal conforms to the draft principles even in their present form.

**2. *The Method for Aggregating and Netting Deviations to Allocate Flexible Ramping Product Costs Should Treat Load and Resources Equally.***

Under the FRP Cost Allocation Straw Proposal the monthly costs for procuring FRP up (and, separately, FRP down) would be allocated to four categories of market participation: load, internal resources, exports, and imports. Costs would be allocated based on the monthly sum of gross upward (and separately, downward) deviations across all intervals in the month. Calculation of deviations would use proposed methodologies that differ among the four categories, but that apparently are intended to be as comparable as possible given limitations in available data such as due to metering differences.

The CPUC Staff preliminarily support the basic proposed method for calculating deviations as a reasonable initial approach, although it would be more consistent with the principle of cost causation to give more weight (and thus allocate more costs) to deviations that correlate positively with (1) overall system deviations and (2) high FRP procurement costs. Cost allocation refinements of this nature may be worth pursuing at a later time, after the CAISO has the benefit of actual market experience deploying FRP. However, the proposed approach of summing interval-specific deviations over an entire month, without weighting, appears to provide a reasonable metric for the initial allocation of monthly FRP costs to market participants.

The CPUC Staff does not agree, however, with the significant variation among proposed approaches for aggregating (netting) deviations for loads compared to resources within each interval. The CAISO market consists of many different market participants (loads, resources, exports and imports) and within any one category (e.g., loads or resources) the deviations in any interval are far from perfectly correlated, so that upward

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<sup>1</sup> See Comments of the Staff of the California Public Utilities Commission on the CAISO's Cost Allocation Guiding Principles Draft Final Proposal (March 29, 2012).

deviations will typically be partly offset by downward deviations or vice versa. Under the FRP Cost Allocation Straw Proposal, monthly costs for FRP up (and similarly FRP down) would be allocated to market participants based on interval-specific deviations summed over all intervals in each month, but the interval-specific deviations would be calculated very differently for different categories of market participants, as follows:

- for load, the FRP up cost allocation would be based on the aggregate (net) upward deviation of load for each interval, i.e., netting deviations across *all* system load combined;
- for resources, the FRP up cost allocation would be based on downward deviations calculated *separately* for each individual resource in each interval, i.e., *not* netting across multiple resources;
- for exports and imports, the FRP up cost allocation would be based on aggregate upward (exports) or downward (imports) deviation netted across all imports and (separately) exports for *each scheduling coordinator* (“SC”).

The CAISO’s current proposal will thus overstate the responsibility (and hence allocation of FRP up costs and similarly FRP down costs) for generation relative to load as a result of the different approaches to netting deviations as summarized above.

To summarize, the CAISO’s proposal to *not* net upward and downward generation deviations in each interval, while netting deviations across all load, will overstate the responsibility of generation for FRP requirements compared to load. Further, FRP procurement amounts would actually be based on the calculated 95% percentile range of expected *system deviations* (at the 5-minute level, relative to 15-minute forecasts), where the statistically expected system deviations inherently reflect netting across all market participants. Thus, the proposed method for calculating an individual market participant’s deviation will not only result in over-allocation of FRP costs to generation relative to load, but is also inconsistent with the cost causation principle.<sup>2</sup>

A methodology that would be both more equitable and better aligned with the cost causation principle would be to calculate the aggregate (netted) deviations across all load

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<sup>2</sup> The level of netting for imports and exports appears to be intermediate between that proposed for generation versus load, i.e., netting across all import schedules and all export schedules, for any one SC.

and separately across all generation, in order to assign aggregate load and aggregate generation responsibilities for FRP up procurement (and similarly for FRP down). Then, the resulting allocation of FRP up costs to all generation combined would be allocated to *individual* generators based on their respective individual gross downward deviations (as the sum of an individual generator's downward deviations across all intervals for which the generator deviated downward). The aggregate load share of FRP up costs could be allocated among loads as currently proposed, based on load ratio shares for that month, based on the current lack of a general method to identify deviations for individual loads. A similar approach could be used for allocating FRP *down* costs.

Finally, to complement the above recommended approach based on initially aggregating (netting) generation and load deviations, imports and exports could be treated in three possible ways.

- (1) Export deviations could be aggregated (netted) with load deviations and import deviations could be aggregated with generation deviations;
- (2) Imports and exports could be treated as separate categories for deviation aggregation (netting), thus giving four initial categories for netting (loads, internal generation, imports, exports), with the FRP costs thus initially assigned to aggregate imports and aggregate exports subsequently being disaggregated among SCs based on those SCs' monthly aggregate gross (up or down) import and export deviations; or
- (3) Gross (not netting) import and export deviations could be calculated for individual SCs from the outset (not netting with other SCs).

The CPUC Staff recommends that the CAISO adopt the second approach for import and exports, because it is most consistent with the recommended treatment of deviations for load and internal generation.

### ***3. The CAISO Should Clarify How “Actual” Versus “Forecast” Load and Supply are Quantified to Calculate Deviations.***

It is important for stakeholders to understand how monthly summed deviations would be calculated to allocate FRP costs, which also supports understanding of how the FRP cost allocation methodology relates to the method and data used to calculate FRP procurement requirements in the first place. Under the cost causation principle there should be a clear relationship between the drivers of procurement decisions and cost

allocation methods. Specifically, the proposal needs more clarity because for purposes of cost allocation the “forecast” is apparently quantified on a 15-minute basis while the “actual” is (apparently) quantified on a 10-minute settlement interval, not a 5-minute basis. Two key points that should be clarified in the next proposal are:

- Will the “forecasts” against which deviations are calculated be based on 15 minute energy quantities as directly forecast (e.g., 15-minute RTPD load forecasts, 15-minute updates of 2-hour schedules containing 15-minute energy interval forecasts provided by variable generators) or else as derived from hourly schedules and ramps considering CAISO-instructed deviations, for other generators?
- Will “actual” energy output and consumption used to calculate deviations from forecasts- be based on metered 10-minute settlement intervals, i.e., not on 5-minute measurements of load or generation?

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