

Submitted By	Company	Date Submitted
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NRG supports several aspects of the CAISO's proposal, namely:

- The desire to leverage existing market functionality to the greatest extent possible. NRG hopes that, by so doing, the CAISO will be able to eliminate the current HASP settlement and restore intertie convergence bidding as quickly as possible.
- The intent to use existing market timelines (e.g., for submitting bids) as much as possible.
- The intent to treat internal and intertie resources the same, and to not provide scheduling, settlement or any other preference to external supply.

Block-hour intertie schedules. In general, NRG supports the CAISO proposal that, in order to obtain a block-hour schedule, an intertie supplier has to self-schedule the desired amount across four 15-minute intervals, and, as a result, would be a price-taker for that amount in the four 15-minute intervals. This proposal helps level the playing field for intertie and internal resources by eliminating the preferential block-hour and perpetually problematic HASP settlement for intertie suppliers.

The one drawback to this proposal is that increasing the number of self-schedules may adversely impact the CAISO's ability to adjust intertie resources to address congestion. Having the ability to adjust all intertie schedules on a 15-minute basis would provide the CAISO with the greatest flexibility. However, NRG does not have a feel for how requiring intertie suppliers that want block-hour schedules to provide self-schedules compares to the current intra-hour dispatch flexibility (or lack thereof) that comes from block-hour intertie schedules. NRG would appreciate if the CAISO could indicate (1) how much intra-hour dispatch flexibility is currently available from block-hour interties, and (2) how the CAISO expects its proposal to require self-schedules for those parties that want to maintain block-hour schedules will affect that flexibility.

Hourly intertie transmission reservations and 15-minute energy awards. NRG is intrigued by the CAISO's proposal to provide both full-hour transmission certainty and 15-minute energy flexibility for intertie resources. This critical aspect of the CAISO's proposal, which market participants are working to fully understand, warrants much more discussion. That discussion would benefit from detailed examples and scenarios developed by the CAISO and shared with market participants.

Eliminating PIRP. The CAISO proposes to allow Variable Energy Resources (VERs) the opportunity to submit forecasts of 15-minute output 37.5 minutes prior to the relevant 15-minute interval. More specifically, the CAISO proposes to require VERS to submit a minimum two-hour rolling forecast with 15-minute granularity, with the 15-minute interval forecast for the binding interval submitted 37.5 minutes prior to the binding interval. The CAISO also intends to offer VERS the opportunity to submit a rolling two-hour forecast with five-minute granularity, and will use the average of the three five-minute forecasts to determine the 15-minute forecast against which the 15-minute imbalance for the binding

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15-minute interval will be determined. The CAISO offers that because these closer-to-real-time forecasts should be more accurate than the current hourly PIRP forecasts, which are developed 90 minutes prior to the hour, the need to net imbalance energy across a month is reduced, and the PIRP program can be eliminated.

NRG requests that the CAISO provide data indicating how much 15-minute forecasts submitted 37.5 minutes prior to the relevant interval will reduce imbalances relative to hourly forecasts submitted 90 minutes prior to the hour. The validity of this critical assumption – on which the future of the PIRP program hinges - should be rigorously demonstrated through actual data before it is allowed to be put into effect. Such analytics are appropriate given that the CAISO is proposing to change two key variables – the length of the forecast/balancing interval and the amount of time before the interval that the forecast is submitted.

Five-minute settlements. NRG is still evaluating the impact that moving from ten-minute settlements to five-minute settlements would have on its market systems.

Flexible Ramping Down. On page 16 of the CAISO’s proposal, the CAISO observes: “On an hourly basis, variable energy resources that wish to participate in the flexible ramping down product will provide the energy bid that will be used to reduce the 5-minute energy schedule from the 15-minute self-schedule, the resources ramp rate, and **FRD bid price.**” (emphasis added) Given that the CAISO is proposing to eliminate the real-time bid to provide Flexible Ramping Up, it is not clear why the CAISO appears to be proposing to retain the FRD bid. To be clear, NRG does not support eliminating the FRU bid in real-time, but perceives a conflict between FRU and FRD and requests the CAISO clarify its position.

Initial Questions

- Does the CAISO intend to liquidate hourly DA virtual bids against a simple average of the relevant 15-minute prices?
- Will the CAISO issue dispatch instructions to internal generators that reflect their 15-minute market awards separate from the dispatch instructions that reflect their five-minute market awards?
- The CAISO has indicated it will settle differences in DA load schedules at the weighted average LMP of the 15-minute and five-minute RTD prices (Straw Proposal at 14). When RTD forecast demand equals hourly metered demand, the proposed settlement is revenue neutral. If RTD forecast demand does not equal metered demand, there will be an offset. How does the CAISO propose to allocate that offset?