

California Independent System Operator
Renewables Integration Market and Product Review Phase 2

**Comments of the California Wind Energy Association
on the July 6, 2011 Day-Of Market Initial Straw Proposal**

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Introduction

The California Wind Energy Association appreciates the opportunity to comment on the California Independent System Operator's (CAISO) straw proposal, released on July 6, 2011, to make certain important changes to its Day-Of markets. The proposal is part of the CAISO's efforts to develop new market products to better integrate increasing amounts of variable renewable energy resources (VERs) on its system, including wind resources. This straw proposal follows the CAISO's "Issue Paper on Phase 2 Market Product Review" (Phase 2 MPR Issue Paper) released earlier this year. CalWEA submitted comments on the Phase 2 MPR Issue Paper on April 29, 2011.

The CAISO Day-Of Market (DOM) initial straw proposal document combines a number of "Guiding Principles" that the CAISO proposes to follow in its overall market reform efforts with a preliminary, yet deeply specific, proposal to reform its Real-Time Market (RTM).

Comments on Guiding Principles

CalWEA appreciates the potential benefits of a clear statement of a program's goals and principles, which is what the CAISO appears to seek with its six "guiding principles." Ultimately, of course, any market reform proposal must be acceptable to the FERC, be consistent with the CAISO tariff, and make sense for market participants. There also will be occasions when it may not be possible to follow these principles religiously. For example, at the last stakeholder meeting the CAISO indicated that variable resources will be allowed to submit sub-hourly (5 or 15 minute) schedule updates to be used in the CAISO's proposed DOM. The CAISO also indicated that, due to concerns with system performance, it did not intend to allow conventional generators to submit sub-hourly schedule updates – a very reasonable position as

conventional resources can, by and large, control their output. While some of the stakeholders pointed to one of the CAISO's guiding principles -- "The ISO market accommodates new resource types based on their performance capabilities, without preference for specific technologies"—to argue that limiting sub-hourly scheduling to variable generators provides a preference to them, that same principle can also be used to support the CAISO's position: the CAISO is simply recognizing the different performance capabilities of variable generators. Thus, an unambiguous application of these principles will not be possible in all cases.

A central theme of the guiding principles is that all types of generation should be treated the same in the CAISO's markets. While this is an important and reasonable goal toward which to work, it is not one that will be achieved overnight, nor is this a principle that can be followed in all circumstances. The mix of generation resources on the CAISO grid is diverse and becoming more diverse – different technologies have substantially different operating constraints, output profiles, costs, contractual frameworks, and operating experience – and the CAISO's markets and rules need to be tailored to recognize these realities. At the end of the day, these principles should be guiding and not prescriptive, and each specific regulatory action should be addressed on its individual merits first and foremost, and not based on whether it strictly conforms to the principles, which may themselves be ambiguous.

Comments on Day-Of Market

CalWEA originally proposed the concept of a Day-Of Market (DOM) in these proceedings with the goal of allowing resource schedules (hourly or sub-hourly) to be finalized within a few hours of the real-time, as opposed to as part of the Day-Ahead Market (DAM). In our proposal, DOM would run 4 to 6 times on the day of operation, either as a complement to or as a replacement for the DAM, and the real-time market (RTM) would continue to operate more or less as-is.

The centerpiece of the CAISO's straw proposal is not a DOM as CalWEA has proposed, but instead a major change to the functioning of the CAISO's RTM. The CAISO proposes to enhance the RTM in conjunction with the elimination of the hour-ahead scheduling process. The CAISO believes that such a step would be consistent with the FERC's proposal to move to 15-minute scheduling, as well as with initiatives and experiments already underway to schedule power on major interties in increments of less than an hour. The CAISO notes that 15-minute scheduling would allow the more accurate scheduling of VERs, including wind.

CalWEA would characterize the CAISO's proposal as simply a revision to its RTM. As such, it might be more appropriate to call it the RRTM (Revised Real-Time Market) rather than DOM. As proposed by the CAISO, DOM (or more appropriately, RRTM) has numerous features that are mainly refinements to the features of the CAISO's current RTM. There are three new features of DOM that are of critical importance to CalWEA. These features are:

1. **More Granular Resource Scheduling Closer to Real-Time:** DOM would allow for the bidding and scheduling of all resources on a 5- to 15-minute basis up to 30 minutes

before the real-time hour. DOM also would allow variable resources to offer updated schedules every 5 to 15 minutes during the operating hour. All real-time imbalance charges are to be calculated based on the DOM schedules.

2. **New Ancillary Service Called RTIS:** DOM would introduce a new one-minute Ancillary Service (A/S) called Real Time Imbalance Service (RTIS). The RTIS market is intended to ensure that the CAISO controls sufficient generation resources with proper characteristics for real-time operation.
3. **Possible New Cost Allocation for RTIS:** The CAISO suggests that it might allocate the cost of procuring this new A/S (whether the as-bid cost or the marginal capacity price plus energy and mileage costs) to generators. This would represent a substantial change compared to how all other ancillary service costs are allocated (i.e. to load).

In the following, we offer some comments on these three new features of the CAISO DOM proposal.

More Granular Resource Scheduling Closer to Real-Time: CAISO's DOM proposal allows for 5- to 15-minute scheduling of all resources (including load), up to 30 minutes prior to the operating hour. This would allow variable resources to update their schedules every 5 to 15 minutes. We also understand that the real-time imbalances for all resources will be measured based on DOM schedules.

CalWEA strongly supports this component of the CAISO DOM proposal as it can go a long way in reducing the imbalance cost risks associated with variable resources. CalWEA recognizes that the CAISO has proposed to eliminate the PIRP program in the near future, a proposal that CalWEA opposes in the near-term. In the long-run, it is the successful implementation of a scheduling process closer to real-time, plus demonstrated improvement in forecasting the output of variable resources, that would allow PIRP to be eliminated without causing substantial harm to variable generators. (Whether the elimination of PIRP is warranted based on claims of cost-shifting or a need for variable resources to respond to price signals in order to efficiently integrate renewables is another matter.)

However, it is critical for the CAISO to identify the price at which such imbalance cost calculations will be performed. The CAISO mentioned at the stakeholder meeting that it had not fully thought through such details of their proposal. CalWEA looks forward to further details of the DOM pricing mechanism. CalWEA reminds the CAISO that, unless the price used to settle real-time imbalances is a separate price from the DO clearing price and reflects the cost of dealing with real-time imbalances, then all of the benefits of scheduling resources close to real-time may be lost, as resources will continue to be exposed to the difference between day-ahead schedules and real-time generation.

CalWEA also suggests that the capability to update resource schedules intra-hourly should be extended to load resources as well.

New Ancillary Service Called RTIS: CalWEA agrees with the CAISO that the Real-Time Imbalance Service (RTIS) can help with the integration (reliability) needs of the CAISO-controlled grid. CalWEA also agrees with the CAISO that RTIS should reduce the need for procuring regulation and, potentially, some load following services. We also believe that, given that the performance requirements for resources offering RTIS are less stringent than those of resources used for regulation services, RTIS should reduce the overall cost of system operation for the CAISO-controlled grid. However, the CAISO and ratepayers also should reasonably expect that the cost of procuring RTIS resources will be more than the cost of load following services.

Our major concern with the introduction of the RTIS is whether CAISO unnecessarily will shift its load following requirement into the RTIS market, thus triggering new and unnecessary capacity costs. Today, the load following requirement naturally is met through the operation of the RTM using mainly Resource Adequacy (RA) resources, effectively at no new capacity cost to the ratepayer. Although the CAISO states that the principal intent of RTIS is to create two types of regulation service, CalWEA is concerned that the RTIS proposal could shift a portion of the load following function to the new market, thus raising overall costs for load following services.

Based on the discussion at the July 11, 2011 stakeholder meeting, we are not convinced that sufficient thinking has gone into the DOM design to ensure that RTIS procurement would mainly reduce the regulation service requirements, as opposed to load following services that today can be freely and/or inexpensively procured. As a result, RTIS could result in an unnecessary increase in integration costs.

New Cost Allocation for RTIS: Based on the CAISO's guiding principles and its presentation at the stakeholder meeting, CalWEA is concerned that the CAISO intends to allocate the costs of this new ancillary service mainly to variable resources. This outcome is not only in contrast to the well-established practice in the utility industry that ancillary services are allocated to demand, but also ignores the fact that the main goal of this effort should be to minimize the overall cost procuring ancillary services. Allocating the costs of this one ancillary service predominantly to VERs, while all other ancillary service costs are allocated to load, would be inconsistent with CAISO's guiding principle of being "technology agnostic."

Furthermore, CalWEA is concerned that the CAISO intends to focus much of its attention going forward in deciding whether it should design and run a 5-minute or a 15-minute DOM. Instead, we would like to ask the CAISO to focus its effort on addressing the more fundamental issues that we have raised in these comments, as they transcend in importance the more detailed features of the CAISO DOM proposal such as its time interval.

Finally, CalWEA asks the CAISO to clarify when it intends to address the many other issues raised in the Phase 2 MPR Issue Paper.