

**Comments of the California Wind Energy Association on the
CAISO Variable Energy Resource Program Proposal
March 28th, 2011**

The California Wind Energy Association (CalWEA) hereby submits these comments on the recent CAISO proposal to establish a new program for Variable Energy Resources (VERs), the Variable Energy Resources Program (VERP).

VERP would replace the current Participating Intermittent Resources Program (PIRP). It would:

- Continue the current PIRP exemption from the Day Ahead (DA) Must-Offer Obligation (MOO) for VERs counted for Resource Adequacy Requirements (RARs);
- Allow VERs to submit decremental economic bids up to 75 minutes before real time (T-75), consistent with the Hour Ahead Scheduling Process (HASP), in contrast to the current PIRP program, which does not allow any economic bids;
- Provide a plant-specific output forecast at T-45 for the next hour from the CAISO Forecast Service Provider (FSP), in addition to the T-105 forecast now provided under PIRP;
- Allow VERs to submit a “Reference Schedule” at T-30 for the next hour, which would be settled financially with the CAISO at the simple average of the 5-minute Locational Marginal Prices (LMPs) during the hour;
- Settle financially for deviations from the Reference Schedule in each 5-minute interval at the 5-minute LMP. However, deviations would be measured from the CAISO-instructed operating level instead, if the VER had submitted economic bids and the CAISO dispatched the plant pursuant to those bids in that interval.

Overview of comments: CalWEA appreciate the efforts of CAISO Management and staff in reconsidering their earlier proposals and offering the proposed VERP alternative. We believe that the proposal reflects a sincere desire on the part of the CAISO to compromise, and to respond to CalWEA’s concerns.

CalWEA is still assessing the VERP proposal. It is clear, however, that VERP would not be as favorable to Variable Energy Resources (VERs) as PIRP, because it would provide far greater exposure to volatile real-time prices. However, VERP is far better than the CAISO’s prior RI-MPR proposals, which would leave VERs with no scheduling options to mitigate that exposure.

That said, we have many remaining concerns. Given those concerns, and the CAISO’s lack of response to proposals to modify PIRP to achieve the CAISO’s objectives that were offered by CalWEA and the Large-scale Solar Association (LSA), we cannot support VERP as proposed. Our conclusions and recommendations are summarized below and explained further in the remainder of this document.

- **Lack of need for drastic action:** The CAISO has still not demonstrated that there is a need for additional flexibility from VERs that would justify the costs and risks that PIRP elimination, or its replacement by VERP, would impose on VERs. The CAISO will certainly not need infinite flexibility from all VERs, and it is not clear (from the study data released so far) that it will need a lot of flexibility from many or any of them.

Moreover, as we have noted before, the IOUs (which will schedule the vast majority of VER output in the future) have already moved to incorporate scheduling and bidding flexibility into their contracts with VERs, presumably because they intend to use that flexibility in the market.

PIRP is designed to be a risk-management tool, not (as the CAISO continues to refer to it) a “subsidy” program. As with other accommodations for generator operating characteristics (e.g., Bid Cost Recovery for ramping energy and HASP pricing for hourly imports), the CAISO has determined that it is more economically efficient to mitigate some supplier risks directly than for those suppliers to monetize those risks in their contracts or bids.

If there is a net cost shift from PIRP to other market participants, despite the many design features to prevent that, the CAISO should determine the nature of that problem and address it, instead of taking more disruptive actions like eliminating the program.

- **Revised PIRP vs. VERP:** The CAISO has not demonstrated that VERP would be superior to the modified version of PIRP that we have recommended (see below) in eliciting economic bids from VERs. Before replacing PIRP with an entirely new program that will impose much greater risks on VERs and implementation costs on the CAISO (along with what will undoubtedly be the unintended consequences from any new program), the CAISO should:
 - Fairly evaluate our earlier proposals to modify PIRP to enable and incent economic bids; and
 - Explain why it believes that PIRP elimination and/or replacement with VERP would yield significantly more economic bids than a modified PIRP program.
- **Existing PIRP program:** The CAISO should retain PIRP; as a no-regrets action, regardless of its decision on VERP, the CAISO should modify PIRP to allow economic bids, with the instructed-energy response to the resulting Dispatch Instructions settled at real-time prices. Other deviations should continue to be netted across the month and billed/paid at the weighted-average real-time price.
- **The VERP proposal, and other options:** If the CAISO nevertheless decides to proceed with VERP, that proposal would be more acceptable if the CAISO would allow increased scheduling flexibility through the following changes:
 - Allow submission of more granular Reference Schedules – e.g., twelve 5-minute schedules or four 15-minute schedules – to accommodate expected ramps up or down during the day;
 - Allow inter-hour schedule adjustments, e.g., every 15 minutes, coordinated with the CAISO 15-minute unit commitment algorithm; and
 - Exempt VERs from Uninstructed Deviation Penalties (UDP) – the same as the exemption now applicable to PIRs – should those penalties ever be activated.

However, we see no reason why VERP should be the only option considered, besides the current PIRP program. There are a variety of variables that should be examined, along with the tradeoffs between them, and we support an extension of the current stakeholder process to allow careful consideration of those additional alternatives.

- **Grandfathering provisions:** If the CAISO nevertheless decides to proceed with VERP and/or otherwise eliminate PIRP, the CAISO – consistent with its grandfathering proposals in other areas (e.g., RA Standard Capacity Product II) – should provide grandfathering for:
 - All operating generators as of the date of FERC approval, including QFs transitioning into commercial PPA/PGA arrangements;

- Generators with signed PPAs as of the date of FERC approval, for the duration of the contract; and
- Smaller generators ($\leq 20\text{MW}$), which are less likely to be able to manage real-time operating risks in the manner required by PIRP elimination or its replacement by VERP.

Need for drastic action: The CAISO has yet to release the 33% RPS studies that could provide some basis for determining the nature and extent of any need for increased VER flexibility in the future. This lack of factual support was a primary reason for FERC's recent rejection of most CAISO proposals to revise VER interconnection standards, and the CAISO is likely to be no more successful with an equally unsupported proposal to significantly change VER settlement practices.

As noted above, the IOUs, which purchase (and, in the future, will schedule) the overwhelming majority of output from VERs, are already implementing contractual provisions designed to facilitate price responsiveness from VERs. As a CPUC Proposed Decision on the IOUs' 2011 RPS procurement plans states:

We determine that it is reasonable for IOU pro forma contracts to include provisions for economic curtailment. We do this because MRTU significantly changes the way generation resources are scheduled, dispatched and potentially located. RPS contracts must reasonably reflect the CAISO's new economic approach. Failure to do so could undermine the ability of MRTU to optimally use price signals for those economic purposes.

Revised VERP vs. PIRP: Like VERP, our proposed PIRP modifications would allow real-time decremental energy bids and settle real-time deviations from schedule pursuant to CAISO dispatch of those bids at real-time prices, just like VERP; thus, the ability to offer bids, and the financial incentives to do so, would be the same under both a revised PIRP and VERP.

The only difference between VERP and a revised PIRP is that other deviations, mainly due to the unpredictable nature of VER production, would continue to be netted across the month and billed/paid at the weighted-average real-time price under our proposal. As was the case when PIRP was established, this is a reasonable accommodation to the unique operating characteristics of VERs and (as noted above) is a risk-mitigation tool, not a "subsidy."

PIRP changes: Our earlier comments recommended a voluntary framework that would settle instructed deviations from the HASP PIRP submittal at 5-minute LMPs but continue to net other deviations over the month.

We do not understand why the CAISO would not want to provide that economic signal, and encourage decremental bids from PIRP resources, regardless of its decisions on VERP and/or PIRP grandfathering. More generally, these changes could, by themselves, provide the voluntary decremental bids that the CAISO is seeking, without the need for an entirely new program.

We have seen no indication that the CAISO has seriously analyzed this proposal. We request again that the CAISO perform such an analysis and explain why it does not believe that changes to allow economic bids, and the additional incentives to do so, would not provide the additional VER flexibility it needs.

This explanation should consider the following factors that would limit VER ability to offer economic bids, and also limit the CAISO's dispatch of any such economic bids:

- **Economics:** As we have stated before, VERs would likely be one of the last resources economically dispatched down, because they effectively have highly negative variable costs: (1) they would lose “green credit” values to buyers with RPS requirements; (2) many have production tax credits that they would lose by producing less; and (3) they have PPAs that pay only when energy is produced, i.e., no fixed capacity payments under those agreements.
- **Physical limitations:** Many VERs may not be able to respond (or respond fully or quickly) to price signals, due to:
 - ***Technology issues***, e.g., limited ability to respond of older technologies, or warranty issues that may arise from the actions needed to comply, which could put more stress (wear and tear) on the equipment; or
 - ***Contractual issues***, e.g., provisions that require a VER to produce all the energy it is capable of generating.

(The economic and physical issues are more acute for older resources, and those with already-executed PPAs – see below.)

- **Current IOU behavior:** The CAISO should provide data on current IOU use of PIRP. If the IOUs (who will be scheduling for the vast majority of CAISO-area VER capacity in the future) are not using PIRP, then:
 - There is little concern that retaining PIRP will adversely impact the submission of economic bids for VERs, even without the revisions we suggest; and
 - There is no reason to expect that the IOUs would be unable (or unwilling) to achieve all of the CAISO’s objectives using the modified PIRP that we have recommended.

VERP changes: If the CAISO nevertheless decides to move forward with VERP, that program would be improved with the addition of the following Reference Schedule submission options, which could both help VERs minimize imbalances and help the CAISO more accurately reflect VER production in its modeling and dispatch:

- **More granular Reference Schedules, for the T-30 submission:** The CAISO should allow more granular Reference Schedules (e.g., twelve 5-minute schedules, or four 15-minute schedules), instead of one fixed value that would be divided by twelve, to better reflect any regular and predictable intra-hour VER ramps up or down.
- **Intra-hour Reference Schedule changes:** Intra-hour Reference Schedule changes – e.g., geared to the CAISO’s 15-minute unit-commitment algorithms – would accommodate both ramps and other unexpected intra-hour events like sun/wind fluctuations.

In addition, the CAISO should extend the current PIR exemption from UDP, should those penalties ever be activated, to VERs. (We note that, according to the information provided by the CAISO earlier, VERs appear to be exempt from such penalties in several eastern ISO markets as well.)

Grandfathering changes

- **Grandfathering qualifications:** The CAISO’s proposal to restrict grandfathering to only resources operating in PIRP at the time of a FERC ruling, and allowing even those resources to remain in the program for only five years, ignores problems that this proposal could cause with:

➤ **New PPAs:** With respect to new contracts with entities other than large IOUs, we are already seeing reluctance of smaller buyers to assume SC duties, despite previously professed willingness to do so, because of concern over imbalance risk. Our members are concerned with the same increased financing risk (and associated costs) for such contracts that led to the PIRP in the first place.

➤ **Already-executed PPAs (whether or not the plants are already operating) where the seller and/or buyer was relying on the availability of a PIRP option:**
In both of these situations, the CAISO proposal could cause serious problems for the seller.

Where the seller is responsible for imbalances directly, the problem is obvious. Most of the older contracts, even with IOUs, place the imbalance risk on the seller. Those contracts, which were actually enabled by the introduction of PIRP in the first place, will be in effect for far longer than five years.

While more recent contracts with the large Investor-Owned Utilities (IOUs) provide for the buyers to take responsibility for imbalances, that is not the universe of contracts. Contracts with other entities may put that risk on the seller, most of whom relied on the availability of a PIRP option to mitigate what financiers, in particular, perceive as huge financial risks.

Even where the buyer is responsible for imbalances, the CAISO proposal could still impose large costs/risks on the seller. Many of those contracts have different types of optional reopeners that could be triggered by significant CAISO market changes, and it is likely that buyers responsible for VER imbalances will seek to reopen those contracts if PIRP protection is no longer available.

Finally, the CAISO has provided no support for its 5-year grandfathering proposal, nor its rationale for deviating from its past grandfathering practices – e.g., for RA SCP II, where grandfathering was correctly provided for the life of executed contracts even though that market change was far less detrimental to VERs than the proposed changes here. The PIRP changes we recommend above, combined with the economic-curtailment provisions of recent large IOU PPAs, would provide the same level of incentives for decremental bids as VERP, and (unlike the VERP) they would do so even for grandfathered resources.