JOINT COMMENTS OF
THE CALIFORNIA WIND ENERGY ASSOCIATION and,
THE LARGE-SCALE SOLAR ASSOCIATION
ON CAISO RENEWABLES INTEGRATION MARKET & PRODUCT REVIEW
March 11th, 2011

The California Wind Energy Association (CalWEA) and the Large-scale Solar Association (LSA) hereby submit these comments on the recent document, ***Revised Straw Proposal on Reforms to Energy Market and PIRP Rules and Procedures - Renewable Integration: Market and Product Review, Phase 1*** (Proposal), and the February 24th stakeholder meeting to discuss it.

The Proposal contains two recommendations:

- ***Decremental energy bid floor:*** The Proposal would reduce the current -$30/MWh floor price to -$300/MWh, instead of the previous proposed phase-in to -$2,500 that would make it symmetric with the bid-price cap. The Proposal contends that this should be a sufficient level to cover loss of PPA payments and PTCs for decremental energy.

- ***Participating Intermittent Resource Program (PIRP):*** The Proposal would eliminate PIRP, including the monthly netting of imbalances from forward schedules, for all new Variable Energy Resources (VERs). This is the same proposal as the prior version, and does not reflect any stakeholder input.

  However, the Proposal would significantly restrict the "grandfathering" provision compared to the prior version. That earlier provision would have allowed plants with "signed contracts" (including those not yet built) to stay in the program for the life of the contract.

  Instead, the Proposal would now limit grandfathering to plants in PIRP at the time of a FERC order accepting the change, and phase out PIRP completely even for those plants after five years. In other words, the grandfathering proposal would no longer cover: (1) existing PIRP plants, for the life of their PPAs beyond five years; or (2) any other plants with PPAs that assume or depend on PIRP availability, including those not yet built.

Overview of comments on decremental energy bid-price floor: We generally support the CAISO's proposal regarding the decremental bid-price floor. However, the CAISO should consider a lower floor – to about -$500 – in order to account for:

- ***The multipliers in Investor-Owned Utility (IOU) pro forma PPAs.*** For example, a $120 PPA with the standard SCE PPA peak multiplier of over 3 would require a price close to that level to make up for the loss of PPA payments from decremental energy bids.
- ***The other factors listed below***, which were cited by stakeholders before in this process:
- ***Take-or-pay or minimum-take gas or other fuel contracts;***
- ***Opportunity costs for hydro facilities spilling water instead of generating energy***, or for other Use-Limited Resources (ULRs);
- ***Minimum production guarantees or delivery obligations*** in PPAs;
- ***Loss of related industrial production*** for CHP units; and
- ***Incremental wear-and-tear*** from additional unit cycling.

The CAISO should continue to work with stakeholders to identify other reasons that are or could discourage decremental energy bids. We also support the proposal, suggested by stakeholders at the February 24th meeting, to consider further reductions if the CAISO market clears at the new bid-price floor. There is no obvious reason that the floor price should not mirror the ceiling price eventually, especially with the Bid-Cost Recovery changes that the CAISO is also contemplating.

Overview of comments on PIRP elimination: We continue to object to the CAISO's process and substance with respect to the PIRP element. Specifically:

- ***The process:*** At the February 24th meeting, the CAISO did not appear to be interested in solutions that would address its stated concerns about PIRP, including PIRP changes that could facilitate economic bids by Variable Energy Resources (VERs) while preserving the program for the suppliers, buyers, and situations where it is needed. Instead, the CAISO was apparently set on complete elimination of the program from the start of this effort.

  The CAISO has failed to address the numerous suggestions and other points in our comments, simply stating at the meeting that they "wouldn't work" and were inconsistent with "our decision to eliminate PIRP." There was no indication, in the Proposal or the CAISO response to questions at the meeting, that the CAISO had either read our comments or considered them seriously.

  This lack of regard for substantive stakeholder input is inconsistent with the CAISO's usual process, where it typically responds to each point raised by stakeholders (e.g., through matrices or responses in the next proposal version). We are deeply disappointed that the CAISO has disregarded its own practice in this instance.

  This situation resembles the CAISO's prior attempts to increase interconnection requirements for VER resources, where CAISO did not adequately consider stakeholders' logical and factual arguments. FERC rejected most of the CAISO proposals because they were not justified by the CAISO's specific concerns or supported by reasoned analysis; it is reasonable to expect that the outcome of the current CAISO proposals to eliminate PIRP might be similar.

- ***The substance:*** The main reasons cited by the CAISO for eliminating PIRP have varied somewhat but seem to be related to: (1) a desire to encourage economic decremental energy bids from VERs; and (2) removal of the PIRP "subsidy."

  On the first issue, as we have pointed out before, there is little logical link between PIRP elimination and additional economic bids from VERs, nor has the CAISO offered any evidence to support such an expectation. In addition, the CAISO has made no effort to determine other actions that would also be needed to accomplish this objective, including addressing the other obstacles we have cited, or other, less drastic, alternatives to accomplish these objectives. In any case, PIRP elimination is not necessary in order to encourage such bids; CAISO itself acknowledged this in its initial offering of options.

  On the matter of the PIRP "subsidy," the CAISO has failed to explain the nature and cause of any such subsidy. If there is a net subsidy, the CAISO should analyze the cause and consider alternatives that could address it, not simply use it as an excuse to eliminate the program.

  Moreover, PIRP was carefully designed specifically to minimize any such cost-shifting to the rest of the market. Any cost-shifting is simply a minor side-effect of a risk-mitigation tool that is similar to those the CAISO uses to accommodate the unique operating characteristics of many supply and demand resources, and demand as well.

By the CAISO's definition, those other tools likely result in "subsidies" that far exceed any resulting from PIRP. It is not clear why the CAISO is pursuing the single-minded and discriminatory elimination of this "subsidy" but is not troubled by those others.

Finally, the CAISO's latest proposal to eliminate "grandfathering" of PIRP for existing contracts after five years is unsupported, and inconsistent with CAISO policy in similar prior situations. The CAISO basically admitted at the meeting that it had conducted no analysis to determine the length of the grandfathering proposal or its impact. Suppliers responsible for imbalances that have relied on this program have no leverage to force their buyers to reopen contracts, or to share or bear this additional cost, and this change will impose exactly the kind of harm on them that PIRP was intended to mitigate.

We address these substantive points further in the remainder of this document.

Promotion of decremental-energy bids from VERs

Need for economic bids from VERs: As we have said before, the CAISO has not provided strong evidence that economic bids from VERs will be either needed or effective in operating the system reliably or supporting market outcomes. This is particularly true in light of the fact that the great majority of non-VER resources that are "economically dispatchable[1]" currently are declining to offer economic bids. It is not logical to expect, therefore, that VERs, which have virtually no variable cost, would offer economic bids.

Therefore, it is not logical to expect thatVERs (which have virtually no variable cost) would offer economic bids. Moreover, their curtailment would deprive society of the positive benefits reflected in the state's "loading order" for supply resources, they should therefore be among the last resources decremented using a straight economic dispatch.

Only about 20% of the supply market is offering economic bids. While that figure can be expected to increase once the current implementation problems with the CAISO's new Multi-Stage Generating Unit (MSGU) functionality are resolved, the CAISO should be focused on increasing economic bids from non-VER resources. We urge the CAISO to continue its efforts – e.g., analysis of current self-scheduling – to ensure that market bids and prices provide for economic dispatch of those resources prior to curtailments of VERs.

Moreover, the evidence that has been offered – e.g., recent CAISO 20% RPS studies indicating that overgeneration conditions might occur during high-hydro, high-wind, light-load conditions – do not consider the likelihood that stronger market-price signals (as CAISO needs for flexibility increase) should encourage submission of economic bids from non-VERs. Newer technologies and tools (e.g.: (1) storage resources; (2) more-flexible import, gas-fired, and VER resources; and (3) controllable demand-side resources) should also provide the CAISO with additional flexibility under those conditions.

Finally, the bilateral market is already moving to provide the operating flexibility that the CAISO may need. For example, newer bilateral contracts between VERs and large buyers contain economic curtailment provisions needed to accommodate decremental-energy market bids, and the CAISO is working in the CPUC process to promote Resource Adequacy (RA) changes that would help support procurement contracts with flexible resources, like consideration of ramping requirements in LSE portfolio procurement.

[1] "Economically dispatchable" resources are those that have variable costs, and the economic impact of their output variation can be directly measured.

<u>Barriers to economic bids from VERs:</u> The CAISO admitted at the February 24th meeting that it had not actually analyzed whether eliminating PIRP would promote submission of decremental energy bids from VERs. Our comments have, in fact, raised serious doubts that this would be the result, without additional market changes; as we have suggested before, the CAISO should take a more comprehensive look at barriers to economic bids by VERs before instituting a change that may not have any impact on adding economic bids.

We have offered several reasons in our comments why elimination of PIRP alone will not result in additional economic bids from VERs, including these:

- ***<u>The extreme uncertainty in forecasting VER output in the CAISO Day Ahead Market (DAM), up to 38 hours in advance.</u>*** DA schedules can form the basis from which decremental energy bids can be offered, but lack of PIRP protection for such schedules discourages their submission, and eliminating PIRP entirely will not change this basic fact.

- ***<u>The uncertainty in forecasting VER output in the Hour Ahead Scheduling Proces (HASP), up to 135 minutes in advance</u>*** (schedule/bid submission 75 minutes in advance, for the 60-minute operating hour). For example, if a resource has a schedule at 100 MW and offers a decremental energy bid of 60 MW, and then is operating at only 50 MW, the resource could be financially responsible for failure to fully respond to the CAISO Dispatch Instruction.

  Instead, if the CAISO wants to encourage economic bids from VERs, it must monitor the actual output from those resources and ensure that infeasible Dispatch Instructions are not issued. Altenatively, it must provide that VERs not be held financially responsible, to the extent that their noncompliance with such instructions are caused by lower-than-scheduled operating levels and not caused by physical resource outages.

  This problem would be less acute if the CAISO were to move to a system that: (1) reduced the time in advance for submitting real-time schedules/bids; and/or (2) reduced the duration of that schedule. The recent FERC NOPR on VER scheduling clearly contemplates these kind of changes, and the CAISO should consider them apart from any PIRP changes. We have made this broader suggestion before, and it would be helpful if the CAISO would actually consider it.

- ***<u>The PIRP prohibition against economic-bid submission:</u>*** The most obvious reason why PIRP "discourages" economic bids is that it actually prohibits them explicitly. The CAISO should not prohibit PIRP resources from submitting economic bids and then cite lack of such bids as a reason to eliminate PIRP. The CAISO should simply remove this prohibition.

  As we have said before, the CAISO can modify the PIRP program to allow and encourage economic bids, without out eliminating the program by making changes that would:

  - **Distinguish instructed deviations from forward schedules (pursuant to CAISO Dispatch Instructions based on the bids) from uninstructed deviations**, <u>which it must do anyway</u> to accommodate any economic bids from VERs, even without any PIRP program;

  - **Subject the instructed deviations to CAISO market prices**, thus giving VERs the same incentives to submit and comply with such bids as other resources; and

  - **Continue to apply the PIRP netting treatment to the uninstructed deviations.**

Using this approach, allowing bids under existing PIRP rules should not be significantly more complicated than without PIRP, from a settlements perspective. The CAISO has yet to explain why this "won't work," despite our numerous questions about that conclusion.

Elimination of the PIRP "subsidy"

There was much discussion at the February 24th meeting about the PIRP "subsidy." PIRP was, in fact, carefully designed to minimize or eliminate any subsidy from the rest of the market.

The plant-specific PIRP forecasts should be unbiased (i.e., deviations from those forecasts should roughly net to zero over time). The CAISO should analyze whether any systemic revenue shortfall might be caused by: (1) some bias in the forecast; and/or (2) market-price patterns (current and those expected in the future). Once the source of thje issue is understood, the CAISO and stakeholders can consider whether some adjustments to the PIRP algorithms might be warranted. Despite our continued urging, the CAISO has failed to undertake any such analysis.

However, this entire discussion about "subsidies" misses the main point. PIRP was designed to mitigate risk, not to provide subsidies to VERs. In that respect, it is the same kind of tool as these other accommodations that the CAISO makes for other resources with physical or other limitations:

- ***Bid-Cost Recovery (BCR) for MSGUs and other conventional generators:*** These generators are guaranteed recovery of their energy costs, regardless of their run times or ramping limitations, through uplift charges to the rest of the market.
- ***Hourly dispatch/pricing for imports:*** Most import imbalance-energy resources can currently only be dispatched on an hourly basis and receive a special hour-ahead clearing price, which exceeds the real-time price at least some of the time. Others can be dispatched only once an hour. These resources cannot otherwise be turned down in real time, even when the energy is not needed, and they are not subject to real-time prices for any unneeded energy – the market bears those balancing costs.

These suppliers could increase their bid prices to cover price risks for ramping and/or other unneeded real-time energy, and/or try to get their buyers to absorb this risk. Generally, however, the CAISO considers these and other policy accommodations to the operating or commercial limitations of these market participants to be reasonable. Like PIRP, these accommodations may result in subsidies to the resources involved, but that is not their purpose; their purpose is to mitigate the risks involved in market participation for resources that could not be otherwise mitigated.

The CAISO market also has many explicit subsidies. For example, loads are settled at prices averaged over large geographic areas; though this pricing might become more granular over time, some form of geographic averaging will probably persist. This means that loads in lower-cost areas are "subsidizing" those in higher-cost areas.

In conclusion, it is not clear why the CAISO has chosen to single out PIRP for elimination when it is not addressing other market mechanisms with similar outcomes, and why other resources should be exempt from the "cost-causation" argument. The CAISO has simply not justified its focus on eliminating risk mitigation only for VERs.

Retention of PIRP for those that need it

Despite our numerous comments in this area, the CAISO has failed to address the many situations we have cited where PIRP continues to be needed, even if one accepts the argument that resources scheduled by the large Load-Service Entities (LSEs) do not need it. Those situations include, among others:

- ***Sellers to smaller LSEs:*** All LSEs do not have the same ability to absorb the forecast uncertainty associated with VERs as a large utility. Smaller buyers – e.g., smaller munis and Community Choice Aggregators (CCAs) – have been reluctant to take imbalance risks, since they do not have the large, diverse portfolios and regulatory protections of the large IOUs, and they are pushing in PPA negotiations for suppliers to take those risks. We fear that larger buyers will again start to do the same.

- ***Resources external to the CAISO BAA, e.g, Dynamic Transfer of VERs into the CAISO area:*** Contract structures for Dynamically Transferred resources are not yet clear. Many import contracts currently provide delivery at the intertie; delivery for DT resources could be either at the plant bus like internal resources (i.e., with the buyer taking imbalance risk) or at the intertie (i.e., with the seller taking imbalance risk). The CAISO risks damaging the ability of developers to finance these plants, and depriving the CAISO area of these potentially economic resources, if they are subject to real-time prices without any liability limit.

- ***Existing contracts that rely on PIRP:*** The CAISO implemented PIRP in 2003 to facilitate development of VERs specifically. Before thatno VER resources were developed in the CAISO area from the CAISO's establishment to that point (except for two wind plants, where the California Department of Water Resources (CDWR) was willing to absorb the balancing costs).

  The early contracts for resources developed soon after PIRP adoption generally had the sellers bearing imbalance costs, as the large LSEs would not agree to bear those risks. Those sellers were able to finance their plants precisely because the availability of PIRP mitigated the otherwise virtually unlimited imbalance risk.

  Those contracts are still in effect. Providing grandfathering for only five years will still leave a significant amount of time under those contracts, without the risk mitigation provided by PIRP. The subject suppliers have absolutely no leverage or ability to re-open those contracts, or to force their buyers to share or bear the additional risks and potential costs.

  The CAISO admitted at the stakeholder meeting that it had performed no analysis to support the five-year limit. Moreover, the proposed grandfathering limitation is inconsistent with the CAISO's approach for the RA Standard Capacity Product (SCP) II, where it grandfathered contracts executed before FERC approval of that program, for the entire life of those contracts. The CAISO has provided no justification for limiting the grandfathering for this much more significant program to only five years.

- ***Qualifying Facility (QF) contracts:*** Contracts for QF generation projects, where the buyers currently take the imbalance risks, have been undergoing significant revision over the last several years. As those contracts expire, some may be converted to more standard PPA forms, in whole or in part.

  Throughout the QF contract-revision process, sellers have been assuming that they would have PIRP as an option if they need it as they enter the markets. The capacity represented by these QFs is relatively small, and the CAISO should accommodate the status changes that they will likely make in the near future by giving them a PIRP option.