

**Comments of the California Wind Energy Association on
Fourth Revised Straw Proposal**

September 7th, 2011

The California Wind Energy Association (CalWEA) appreciates the opportunity to submit these comments on the following:

- **“Fourth Revised Straw Proposal on Reforms to Energy Market”** (“Proposal”), the latest CAISO prior proposals in the Renewables Integration - Market & Product Review, Phase 1 (RI-MPR1) initiative; and
- The August 29th stakeholder meeting to discuss the Proposal.

The Proposal would:

- (1) **Lower the CAISO decremental-energy bid-price floor** from the current -\$30/MWh, to -\$150 in the first year and -\$300/MWh in the second year.
- (2) **Modify the Participating Intermittent Resources Program (PIRP)**, to do the following:
 - (a) Change the allocation of the “PIRP shortfall” – the difference between the amount that PIRP plants would have paid in imbalance energy charges and the amount that they pay after the PIRP “netting” mechanism is applied, from a more market-wide allocation to a plant-specific methodology;
 - (b) Retain the program into the future, as long as an LSE is willing to absorb the PIRP shortfall applicable to a particular plant; and
 - (c) Extend program eligibility to resources importing into the CAISO BAA under Dynamic Transfer provisions – imports where CAISO provides intra-schedule balancing service.
- (3) **Revise the Bid-Cost Recovery (BCR) methodology** (largely applicable to fossil-fueled plants) to separate cost recovery in Day Ahead and Real-Time markets, to avoid disincentives to offering real-time economic bids with the lower decremental energy bid-price floor.

CalWEA is gratified that the CAISO has reconsidered its earlier proposals to eliminate PIRP or limit future entry into the program. The new CAISO proposals appear to recognize that: (1) no need has been demonstrated for large quantities of additional decremental bids through 2020; and (2) the small amount of need that has been demonstrated can be readily addressed through physical and economic curtailment provisions in power purchase agreements (PPAs).

As indicated below, CalWEA continues to support the decremental-energy pricing and BCR proposals as well. However, we have several concerns about the details of the CAISO’s PIRP-related proposals, which are summarized in the table below. The remainder of these comments focuses on those concerns – both our support of the CAISO’s overall PIRP retention proposals and suggests improvements for their implementation – and they also cover an additional issue not addressed in the Proposal.

PROPOSAL ELEMENT	CalWEA POSITION
Lower decremental-energy bid-price floor	Support Proposal
PIRP proposals	
Cost allocation party	Oppose proposed “default” allocation to generators; neutral position on allocating “shortfall” costs to LSEs, if a broad-based allocation method is not used
Cost-allocation method for PIRP “shortfall”	Oppose CAISO allocation based on plant-specific shortfall – CAISO should retain prior proposal to allocate shortfalls proportional to energy scheduled in PIRP
Continue PIRP into the future	Agree generally, but CAISO should not condition plant participation on LSE agreement to absorb shortfall
Expand eligibility to Dynamic Transfer resources	Support Proposal
Modify BCR provisions to encourage economic bids	Support Proposal
PIRP suspension when RT prices are negative	Support this additional provision not in the Proposal

Allocation of PIRP revenue shortfalls

The current allocation method apportions the “shortfall” – the difference between charges to PIRP plants after application of the netting and what the charges would have been without it – based on “Net Negative Uninstructed Deviations” (NNUD), i.e., to real-time (RT) generation below schedule and RT load above schedule.

Prior Proposal: The prior Proposal would have revised this broad market allocation method to allocate the shortfall amount to the Load-Serving Entities (LSEs) that buy from plants whose output was scheduled under PIRP each month. The allocation would be proportional to the MWhs scheduled in PIRP that month from each plant.

From the prior meeting discussion, the CAISO based this proposal on the assumption that LSEs buying from these plants are the ultimate main beneficiaries when the plant output is scheduled under PIRP, because either:

- **They are responsible for imbalance costs** (e.g., as the Scheduling Coordinator for the plant, so they benefit directly from the netting mechanism. If these LSEs don’t want to bear a share of the PIRP shortfall, they simply needn’t schedule plant output into PIRP.
- **Their contract terms reflect PIRP benefits if the seller is bearing the imbalance costs**, i.e., the risk mitigation from the netting mechanism allowed the seller to finance construction on reasonable terms and offer a better price (without adders for potentially high imbalance costs).

Current Proposal: The written Proposal appeared to maintain the prior construct and add some implementation details, like: (1) clarification that the LSE’s SC would be the actual entity billed for the LSE’s shortfall allocation; and (2) establishment of a “certification” process to identify the responsible LSE to the CAISO for each PIRP plant, presumably to ensure that the LSE-based allocation was billed to the correct SC.

However, it became clear in the meeting discussion that the Proposal actually was significantly different from the prior version, in two key areas: (1) the parties that would bear the shortfall; and (2) the method to allocate the shortfall to those parties.

- **Parties that would bear the shortfall:** The Proposal makes the LSE identification certification voluntary, and also ties the LSE shortfall allocation to the certification. Thus, by certifying itself as the buyer for a plant, the LSE would apparently also be agreeing to take the plant’s share of the PIRP shortfall.

So, when the Proposal states that the shortfall would be allocated to the LSE, the CAISO was apparently assuming that LSEs would voluntarily agree to do this through the certification process, and it did not consider the commercial implications if they do not agree. The CAISO said at the meeting that, if no LSE voluntarily certifies for a PIRP plant, the CAISO will allocate the shortfall cost-share to the SC of the generator. In other words, the “default” allocation was not to the LSE SC at all, but to the generator SC.

- **Allocation method:** The allocation method in the Third Revised Straw Proposal would have allocated a proportional share of the total PIRP shortfall amount for all plants to each specific plant based on the amount scheduled in PIRP for that plant in that month. The total amount to be allocated would be the net outcome of some plants producing above schedule in some hours and some plants producing below schedule in those or other hours. In other words, the output forecasts might be high for some plants or hours and low for others, but those inaccuracies would likely largely cancel each other out over time, assuming overall unbiased forecasts.

Instead, the current Proposal would calculate and allocate PIRP shortfalls on a plant-specific basis, i.e., based on the shortfall amount for each generator. Thus, the generator SC, which already pays the post-PIRP netting imbalance charges (or the LSE SC, if the LSE agrees (see above)), would receive an allocation of the total PIRP-related shortfall equal to the actual shortfall for its specific plant, not a volume-based proportional allocation of the net total amount.

Stated another way, assume that the 10-minute market imbalance charges equal “**A**” and the PIRP plant payment reduction from the netting mechanism equals “**B**.” The current netting mechanism charges the SC for the generator the quantity (**A-B**), and the remainder of A is allocated per the NNUD method.

The Proposal would effectively allocate to the generator SC (or the LSE SC, if the LSE agrees) an additional quantity equal to **B**, i.e., the total imbalance charges for the plant would be (**A-B+B**). In other words, the imbalance charges for the plant would be equal to **A**, the amount that would be due if there were no PIRP netting mechanism.

The CAISO said that this allocation method could “increase transparency” and “give LSEs information about shortfalls that they could use in future resource contracting (assuming, as noted above, that the LSE would be absorbing the shortfall).”

CalWEA comments

- **Parties that would bear the shortfall:** Before addressing the merits of the CAISO’s latest proposal, CalWEA wishes to address the position stated by several parties (and occasionally by the CAISO) that the PIRP “shortfall” constitutes a “subsidy” to Variable Energy Resources (VERs). PIRP is actually an after-the-fact fix for a CAISO market flaw – an inflexible design that assumes that all resources operate like gas-fired plants, i.e., can schedule accurately over an hour before real time operation and then can control their output on a 5- or 10-minute basis throughout real time – reasonable assumptions for gas plants but not for load or VERs.

Measures under consideration in RI-MPR2 and elsewhere that would move hourly scheduling closer to real time should help fix these flaws and reduce the need for PIRP. However, until such fixes are implemented and their effectiveness is validated, we continue to believe that a broad-based allocation for PIRP shortfalls is justified, just like the allocation of costs for BCR and other market-correction tools.

While CalWEA believes that there is substantial justification for a broader-based allocation of the PIRP shortfall to the market (similar to BCR costs), we have no objection to the CAISO's proposed allocation of PIRP shortfalls to LSEs – i.e., the CAISO's prior proposal. As noted above, there is at least some justification for this proposal, since LSEs benefit from PIRP risk-mitigation benefits regardless of which entity is scheduling for VERs they are buying from. However, the Proposal:

- **Uses an allocation method which eliminates one of the most important PIRP risk-mitigation measures** – basing the overall PIRP shortfall that must be allocated on the net imbalance across all PIRP resource, similar to the netting impact that the loads enjoy by allowing their imbalance to be netted across a wide geography;

Effectively imposes a default allocation to the generator by assuming that LSEs would voluntarily agree to absorb these costs; As discussed at the meeting, the second issue would be moot if the LSE buyer is also the generator's SC, as is the case for most recent contracts with large Investor-Owned Utilities (IOUs). Even then, there could be some risk to the generator, depending on pass-through or re-opener provisions in the Power-Purchase Agreement (PPA).

The biggest risk would be to generators that act as or must hire their own SCs – i.e., those that are responsible for covering imbalance charges (a common arrangement in earlier VER contracts, and in some even today). Pricing in these existing PPAs likely assumed continuation of some form of PIRP, and a combination of LSE refusal to accept the shortfall amount (potentially excluding the plant from PIRP participation) and the proposed plant-specific nature of the cost allocation (see below) would impose great risks (and, potentially, great costs) on those generators.

Furthermore, the Proposal changes from the prior version would effectively give LSEs buying from these projects veto power over the projects' participation in PIRP, even where the LSE is not scheduling for the project and/or the plant is obligated under the PPA to cover imbalance costs. As noted above, LSEs buying from such projects still benefit from the projects' participation in PIRP, so default allocation of the shortfall to LSEs would be fair in this circumstance.

Thus, we urge the CAISO to return to its prior position in the ***Third Revised Straw Proposal*** and allocate PIRP shortfalls to LSEs buying PIRP-scheduled generation, without optionality on the part of the LSE. The proposed LSE certification would then be simply a means to implement this proposal, with LSEs required to identify PIRP-participating plants with which they have contracts.

At a minimum, if the CAISO does not implement this suggestion:

- For projects with executed PPAs, the shortfall should still be allocated to LSEs, since those agreements were developed under the assumption that some form of PIRP would be available; and
 - For future contracts, VERs should still be allowed to participate in PIRP if the LSE does not give its consent but the generator agrees to take the shortfall instead.
- ***Allocation method:*** There seemed to be broad agreement at the meeting that the proposed allocation method would remove most or all of the PIRP benefits by effectively charging for 10-minute imbalances for each plant – extensively reducing the PIRP risk-mitigation impact.

Moreover, the shortfall amount for each plant is directly related to the accuracy of the hourly PIRP forecasts for that plant, which must be submitted as the schedule for the plant in order to qualify for PIRP netting for that hour. The forecast is produced by a CAISO vendor, not the scheduling entity for the project, and (assuming that the plant is complying with all data-provision requirements under the tariff) there is nothing that the plant, its buyer, or its scheduler can do to impact that forecast.

The “transparency” benefit of providing information that will also be retained using the prior allocation method since the resource using the PIRP more extensively will pay a larger share of the overall PIRP shortfall. Thus, CalWEA strongly recommends that the CAISO retain that earlier proposal.

Future of PIRP

Prior Proposal: The ***Third Revised Straw Proposal*** would have allowed PIRP plants with executed PPAs as of a certain date (e.g., the date the CAISO filed the implementing tariff amendments, or the date when FERC approved them) to keep PIRP for the life of the contract. However, plants with PPAs executed after that date would not be eligible for PIRP, including those planning to serve CAISO-area loads as imports subject to Dynamic Transfer arrangements.

Current Proposal: The Proposal would do the following:

- **Continue the program, at least for now.** The CAISO said that it had reconsidered the need for immediate action, in light of the connection between the need for PIRP and its plans for the RI-MPR2 initiative under development. RI-MPR2 may provide additional tools for managing VER imbalances, like schedule submission closer to or during real time, which could reduce or eliminate the need for PIRP netting.

However, participation by a new plant in PIRP would be conditional on having an LSE certify itself as the buyer of the plant output, which (under this proposal) means that the LSE must agree to bear the plant’s share of any PIRP revenue shortfall (see above).

The CAISO would continue to prohibit economic bids in PIRP at this time, partly because of software complexities involved in that modification. However, it might reconsider that issue later, in RI-MPR2 or elsewhere.

- **Explicitly provide for Dynamically Transferred (DT) resource eligibility to participate in PIRP.** This issue has been in limbo since the CAISO excluded it from the scope of the recent DT stakeholder process, and the CAISO was unwilling to address it in the RI-MPR1 initiative previously because it was proposing to eliminate PIRP in the future or altogether, making the issue essentially moot. However, the Proposal addresses this issue in light of the proposed continuation of PIRP, allowing DT resources to participate if they meet the program requirements.

CalWEA position

- **Continuation of PIRP:** CalWEA strongly supports the CAISO’s decision to continue PIRP, pending implementation of CAISO market reforms that would provide scheduling and balancing provisions more suitable for operation of a system with a higher degree of VER penetration, which could obviate the need for risk-reduction benefits of PIRP. As stated in our prior comments:

- **CAISO studies of 33% RPS scenarios do not demonstrate a need (near-term or otherwise) for large quantities of additional decremental bids**, beyond those expected from full implementation of new MSG functionality and new resource capabilities (fossil, demand-side, and storage resources).

For example, the August 18th, 2011 memo to the Board from CAISO VP of Market and Infrastructure Development Keith Casey about renewables integration – posted at <http://www.caiso.com/Documents/110825BriefingonRenewableIntegration-Memo.pdf> – indicates a need for up to 800 MW of downward flexibility under the CAISO “High Load” scenario by 2020, and less (or none) under four CPUC scenarios studied. (VERs can generally only provide downward flexibility, due to their inability to generate in the absence of their fuel source.)

This 800 MW is a very small amount of additional downward flexibility compared to the 15,800-19,100 MW of VERs under the different scenarios considered. Moreover, even the High Load scenario shows the need for such large amounts of downward flexibility only for about 11 hours a year. (See Appendix for a visual representation of this analysis.)

- **Power-Purchase Agreements (PPAs) executed by the large Investor-Owned Utilities will likely provide VER curtailment capability that is more than sufficient** to meet the CAISO’s needs for downward flexibility, if that need is not met by other resources.

PPAs have always provided for physical curtailment when ordered by the CAISO, and the CAISO has such curtailment rights under the tariff (and through the PGA that all generators have to sign) to maintain reliability regardless of their inclusion in any PPAs, contrary to statements to the contrary in the Proposal and elsewhere. In addition, the pro forma contracts recently approved by the CPUC in D. 11-04-030 (at 13-20) for all three large IOUs include economic curtailment rights (i.e., ability for the IOU schedulers to offer economic bids in their RPS contracts) .

Based the estimated amount of renewable resources needed to comply with the 33% RPS requirement and the pro forma contract provisions adopted by the CPUC in 2010, the IOUs will have at least 5,000 MW of renewable energy capacity under contracts specifically providing the buyer with substantial rights to economically curtail deliveries . These curtailment rights – likely to be implemented through economic bids to the CAISO – are exercisable for many times the small number of hours that CAISO studies show additional flexibility to be needed. (This is also shown in the figures in the appendix.)

CalWEA is not saying that PIRP must continue forever. However, in light of the lack of immediate need for action, it is certainly reasonable to continue the program at least until market reforms provide the shorter-term and more-flexible scheduling and balancing options that are already planned for consideration in the future, e.g., in RI-MPR2.

- **Dynamic Transfer eligibility.** The rationale for this Proposal provision is not addressed extensively in the written document, and it was not much discussed at the stakeholder meeting. However, CalWEA agrees that expansion of the program to include these resources is fair, because DT resources (and/or their SCs, depending on the DT type chosen) must:
 - Must comply with CAISO tariff operational, data-provision, and other requirements;
 - Will likely serve CAISO-area loads; and
 - Will use CAISO imbalance markets.

Generally speaking, unless there is some valid reason to exclude these resources from PIRP when other resources are allowed to participate, they should be eligible. The rationale for inclusion is especially strong for Pseudo Tie resources, which will be part of the CAISO BAA.

Additional issue – PIRP suspension when RT prices are negative

At the stakeholder meeting, SMUD raised the issue (which was also included in the last round of CalWEA/LSA written comments) of suspending the PIRP netting mechanism when the weighted-average LMP during the hour is negative. That would give PIRP participants an incentive during those periods to reduce their usage where they are able.

PIRP resources are now paid their HASP self-scheduled MWs times the weighted-average hourly LMP. Real-time deviations from that schedule (for any reason) are addressed under the PIRP monthly netting treatment.

Negative real time prices are a signal to generators to reduce their generation into the grid, and VERs could also respond in that manner. However, this is what would happen if a PIRP generator reduces its production in real time and PIRP netting is not suspended:

- ***The HASP self-schedule would be settled at the hourly weighted-average (negative) LMP***, i.e., the generator (as noted above) would owe a payment to the CAISO despite the output reduction; and
- ***The deviation from the HASP schedule would go through the monthly PIRP netting, and the generator would likely be charged instead***, at the monthly weighted-average (probably positive) RT price. In other words, without the proposed change, these generators would not benefit from any reductions below schedule to benefit the system, because the PIRP netting mechanism would keep those RT output reductions from translating into payments to the generators.

However, SMUD pointed out that, unlike economic-bid functionality, PIRP suspension when prices are negative would not require a change to real-time market software. Instead, this modification would only require a settlements change, since the generator reduction would be made in response to the RT price signal and without a CAISO Dispatch Instruction.

The CAISO should provide the strong incentive to reduce output when real-time prices are negative by implementing stakeholder suggestions to suspend PIRP under these conditions.

APPENDIX
Downward Flexibility Needed by the CAISO in 2020 vs.
Estimated VER PPA Capacity with Curtailment Provisions

