

**CALIFORNIA ISO**  
**RENEWABLE INTEGRATION MARKET VISION AND ROADMAP**  
**October 11, 2011**

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**COMMENTS OF THE STAFF OF THE**  
**CALIFORNIA PUBLIC UTILITIES COMMISSION**

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**October 21, 2011**

The Staff of the California Public Utilities Commission (“CPUC Staff”) appreciate this opportunity to comment on the California Independent System Operator’s (“CAISO”) October 11, 2011 updated Renewable Integration Market Vision and Roadmap (“Market Vision”). The CPUC Staff support the CAISO’s decision to take a more evolutionary approach in the revised vision and roadmap, and offer the following comments on the renewable integration initiative following the October 18, 2011 Stakeholder Conference Call.

**1. The CAISO Must Maintain a “Big-Picture” Perspective as It Pursues Renewable Integration Reforms in Separate Stakeholder Processes.**

The CPUC Staff support the strategy of pursuing complex reforms in individual stakeholder processes, but caution that it is essential to have an integrated vision of how the different reforms will interact and collectively achieve overall goals. The CAISO must maintain a big-picture perspective of how all ongoing reforms under the renewable integration umbrella will collectively address system flexibility, reliability and economic efficiency goals. Such assessment must be based on sufficiently explicit, transparent, and realistic characterization of the future electric system conditions (or range of conditions), that the CAISO and stakeholders are planning for. Realistically, this will consider relevant past experience as well as experiences in other ISO, Regional Transmission Operators, or balancing authorities, but must rely substantially on forward-looking modeling and analyses. It is also critical to monitor and assess the impacts of market reforms already being deployed or planned for deployment (e.g., reduced bid floor, changes to the Participating Intermittent Resources Program (“PIRP”), flexi-ramp constraint, contingency reserve usage, dynamic transfers into California, possibility of west-wide balancing and scheduling

changes). The different stakeholder processes and their milestones should also be logistically coordinated in a manner that permits effective and thoughtful stakeholder participation. The CPUC Staff also request that the CAISO clarify if it plans to have separate stakeholder processes for other mid-term initiatives besides intertie pricing/settlement, a flexi-ramp product and forward procurement of flexibility.

**2. The CPUC Staff Opposes the CAISO’s Proposal to Expand Its Capacity Procurement Activities Beyond the Current CPM Tariff Absent Both a Showing Of Need and Reconsideration of Timing.**

Compared with previously presented timelines and priorities, the latest Market Vision accelerates the timing and increases the priority for considering a mechanism for forward procurement of flexible capacity. The CPUC Staff is concerned that the roadmap sets an unrealistically aggressive schedule to implement a proposal that that was previously only envisioned as a long-term reform for implementation in the 2015-2020 time frame. More importantly, the CAISO’s attempt to further expand the Capacity Procurement Mechanism (“CPM”) is untimely and unnecessary because there has been no demonstration that a new expansion of CAISO backstop authority is needed at all, and not by 2013.

The FERC has directed that the CAISO shall look in the first instance to local regulatory authorities for the procurement of long-term resources, and the CAISO has not claimed or presented data establishing any threats to reliability within the next two to four years. The CPM tariff is designed to provide for up to one-year capacity payments to resources at-risk of retirement, which was justified in part by the need to integrate renewable resources, but the CAISO’s Board of Governors and the FERC authorized this expansion of potential CAISO long-term procurement with the caveat that CAISO use this authority on a *very limited*, last-resort basis.

A comprehensive review of resource needs for integration of renewable resources is already being undertaken in the CPUC’s Resource Adequacy (“RA”) and Long Term Procurement Planning (“LTPP”) proceedings, and the CPUC has previously demonstrated its willingness to respond to legitimate CAISO operational needs within a reasonable timeframe. For example, the CPUC has:

- 1) implemented local capacity procurement requirements based directly upon CAISO reliability needs studies,

- 2) implemented the Path 26 counting constraint, which makes sure that sufficient resources are located in both Northern and Southern California,
- 3) implemented import capacity limitations and allocations, which prevent overreliance upon external resources that may not be deliverable within California, and
- 4) approved contracts supporting the construction almost 4,000 mw of new highly flexible natural gas generators.

These examples demonstrate that the CPUC, through the RA and LTPP, is capable of addressing legitimate operational needs the CAISO identifies as being required to accommodate California's policies and preferences for renewable resources. Similarly, implementing multi-year and/or capability-specific capacity requirements is well within the capabilities of the LTPP and RA programs. Even without any such requirements, in-state generators are required to notify both the CPUC and the CAISO regarding intended retirement, which must be authorized by the CPUC. This allows the CPUC time to direct the investor owned utilities to pursue long-term contracting opportunities for any units that the CAISO believes are necessary to maintain grid reliability.

The CAISO has also previously noted that, under the long-term procurement activities directed by the CPUC, California is currently in a state of excess capacity leading to low market prices for both capacity and energy. The RA program has succeeded at providing a reliable flow of resources to the CAISO in order to obviate the need for long-term procurement by the CAISO, maintaining extremely reliable electric supply even during the extreme conditions of the 2006 Heat Storm. As a result, Reliability Must-Run contracting by the CAISO has virtually ended, as intended by both the CAISO and the CPUC.

The CPUC Staff understand that these conditions of excess capacity are not likely to last. The impending retirement of thousands of megawatts of Once Through Cooled units and severing of ties to generation that does not comport with California's environmentally-related procurement goals (e.g., coal-fired plants outside of California) will reduce total capacity and thus raise capacity prices. Nevertheless, the CAISO has not shown that expanding the CAISO's administrative backstop procurement is necessary or preferable to market solutions that the CAISO can undertake pursuant to its authority under the Federal Power Act. For example, CAISO has proposed discussion of new ancillary services products to meet operating flexibility requirements within its own markets. It is not clear that these efforts will fail to provide sufficient additional income streams that the CAISO believes are necessary to support the economic viability

of thermal resources that may be needed to help integrate intermittent renewable resources. The CPUC generally supports such efforts to develop market-based solutions rather than administrative mechanisms, including solutions that consider and provide opportunity for *new* sources of flexibility going forward.

Finally, even setting aside the need for close coordination with the CPUC on this issue, pursuing *two separate* CAISO processes and reforms in this area would be overly burdensome and unnecessary for the CAISO and for its stakeholders. Many demanding, related developments are already scheduled between now and the proposed CAISO Board presentation date of spring 2012 for Phase 1. For this additional reason the CAISO Staff recommend not pursuing a separate Phase 1 “interim” mechanism to expand the CPM.

In sum, the CPUC Staff oppose the CAISO’s proposed schedule for pursuing flexible capacity procurement reforms and specifically oppose implementing the “interim” mechanism in 2013. The CPUC Staff caution the CAISO to work with the CPUC on a reasonable time frame to develop a jurisdictionally-appropriate approach to ensuring the viability, and if necessary the forward procurement, of resources that may be needed in the long-term to provide the most cost-effective non-generic, flexible capacity consistent with the state’s energy goals.

**3. CAISO Development of a Flexi-Ramp Product Must Consider Sufficient Analysis and Experiences from the Flexi-Ramp Constraint and Clarify and Vet what “Tools” will be Used to Determine Constraint and Product Needs.**

It is premature to commit to a particular Flexi-Ramp Product (“FRP”) and implementation date until stakeholders and market participants have reporting and careful assessment of results from implementation of the Flexi-Ramp Constraint (“FRC”) scheduled for December, 2011. Information on the circumstances and costs of deploying the FRC, as well as the impacts on commitment and dispatch, are essential inputs to a consideration of the need, design and deployment of a FRP. The CPUC Staff therefore recommend delaying board approval of the product until at least 6 months of data from the implementation of the FRC can be objectively evaluated by the CAISO and stakeholders for performance and efficacy.

For both the FRC and the proposed FRP, the structure, inputs, outputs, and market application of the “tool(s)” proposed for calculating flexi-ramp requirements should be explained and discussed with stakeholders. Further, developing a *downward* product that is likely to have considerably extended time and scope of deployment relative to downward *regulation* represents a

new challenge requiring careful consideration of both need and design, consulting with stakeholders.

Finally, the effort to develop an FRP should consider the cost versus benefits of such product taking into account the expected flexibility benefits from *other* measures that are already in progress. These include, at a minimum, the planned decrease to the energy bid-floor, efficacy of the initial FRC, enhanced contingent/non-contingent operating reserve management, and PIRP modifications.

**4. More Time is Needed to Complete the Intertie Pricing and Settlement Stakeholder Process.**

The timeline presented on October 18 for the Intertie Pricing and Settlement reforms initiative provides a target date for CAISO Board approval of March 2012. This does not appear to be realistic. Intertie pricing and settlement is a complex and far-reaching issue that cannot be fully or optimally resolved without further considering additional alternatives as well as the potential impact of complementary market reforms outside of the CAISO area. The CPUC Staff note that stakeholders have expressed some dissatisfaction with the two approaches suggested so far, within the present CAISO initiative. The proposed work group approach to this issue could be beneficial, but it will take some time to appropriately constitute a sufficiently representative work group and to develop ground rules and objectives for that work group. Thus, CPUC Staff recommend that the timeline for Board consideration for this initiative may best be pushed back at least several months beyond spring 2012.

**5. The CAISO Should Continue to Assess Potential Benefits of More Frequent Availability Updates to Wind and Solar Schedules and Should Clarify the Basis for its Decision to Table this Reform.**

The improved and more timely use of wind and solar forecasting is a very important and promising part of the overall “toolkit” of solutions for integrating variable energy resources; this has been widely recognized and is supported within various CAISO initiatives. However, the CAISO now states that it would be unproductive or infeasible within the present CAISO market framework to implement generator (such as wind or solar) availability updates, including use of forecasts within a sub-hour timeframe. The CAISO should further explain this determination. It is particularly important that stakeholders understand the extent to which the CAISO’s conclusion

is driven by limitations in scheduling, commitment and settlement processes west-wide, as opposed to within the CAISO market. The CAISO should also explain what changes internal to the CAISO balancing authority area or west-wide would be necessary to make use of more frequent availability updates (forecasts). Furthermore, any assessment of other flexibility measures should explicitly consider if and how more frequent availability updates would improve the efficacy, reduce the need, or reduce the costs of implementing such other flexibility measures (such as an FRP). This assessment should be shared with stakeholders.

**6. The CAISO Should Assess the Impact on Other Flexibility Needs and Measures of Proposed Reforms in Use of Contingency Reserves.**

CPUC Staff understand that the CAISO proposes to implement reforms regarding contingency status for resources providing contingency reserves, such that a greater amount of contingency reserves could become available for non-contingency situations. The resulting impact on *remaining* system flexibility needs and capabilities should be taken into account when assessing needs and cost allocation for various measures such as flexi-ramp, both operationally and on a forward basis.

**7. The CAISO Should Assess Potential Value of Decremental Bidding in PIRP when Evaluating Whether or How to Pursue this (Currently Tabled) Reform.**

It appears, and needs to be clarified, that allowing decremental bidding from generators scheduling under the PIRP will be postponed due to implementation complexities. It is unclear how much value this would provide to PIRP resources above value already provided by the ability to opt out of PIRP provisions on an hourly basis. It is also unclear how much generation would remain in the PIRP under recently proposed changes that would make PIRP resources (or their Scheduling Coordinators and Load-Serving Entities) incur the same overall imbalance costs that they would incur if not in PIRP. Clarification of these issues might in turn clarify the importance and urgency of allowing decremental bidding by PIRP resources.

**8. The CAISO Should Further Explain the Basis for its Pursuit of 72-hour Residual Unit Commitment.**

A number of stakeholders have expressed concerns or at least a need for additional information regarding proposed extension of Residual Unit Commitment process to a 72-hour horizon. The CAISO should explain how opportunity will be provided for stakeholders to obtain additional information and provide additional input on this measure. Since this measure is stated

to be aimed at providing more effective utilization of extremely long start units, the CAISO should clearly and quantitatively explain what are the expectations and uncertainties regarding the overall amount of such resources and their projected role in meeting future flexibility needs, looking out two, five and more years, particularly as related to anticipated wind/solar penetration timelines. This should include the likelihood and timeline for retirement and replacement (by faster starting resources) of extremely long start units.

**9. Application of the Cost Causation and Technology Agnosticism Principles should not be Oversimplified.**

First, the CPUC Staff agree with the CAISO that the guiding principle of cost causation and allocation can be viewed (and we would add, constructively) from multiple perspectives, and that that “cost causation often means different things to different stakeholders, making application of the principle a challenge”.<sup>1</sup> The CPUC Staff are concerned, however, that by addressing “market and product costs and incentives holistically and comprehensively”<sup>2</sup> the CAISO may prematurely pursue a broad, overarching approach to cost causation and allocation. To be remotely feasible in a practical timeframe, such an approach would likely give inadequate attention to the circumstances of *individual* flexibility mechanisms, and could become unproductively contentious and generalized.

On the other hand, the CPUC Staff *would* agree with approaching cost causation holistically, if that is helpfully interpreted to mean taking in account:

- a. the full circumstances surrounding the *particular* service/cost being considered, including what entities could and would respond to a cost allocation signal to best achieve the desired economic or reliability results, and
- b. the context of the wider range of flexibility needs and costs that might ultimately be allocated to the market participants.

Trying to develop a single broad, overarching approach to cost allocation to apply all market or flexibility measures would be unmanageable.

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<sup>1</sup> See Market Vision and Roadmap, p.10.

<sup>2</sup> *Id.*

Second, the CPUC Staff appreciate and, in a general sense, support the principle of “technology agnosticism” stated in the Market Vision, but again emphasize that like cost causation, technology agnosticism must be viewed in the context of the particular issue at hand. For example, while not explicitly favoring particular technologies, an existing market design or product definition may disadvantage certain technologies in a manner that could be constructively changed, and whether the original design or the change constitutes “agnosticism” can be a matter of perspective. Some “discriminatory” measures may be desirable on a temporary and limited basis to test opportunities for promising technologies, and furthermore, California’s loading order and energy policies do favor certain kinds of supply and demand measures as well as certain environmental values, and the practical consequences of this are not technology neutral.

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