BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Refinements to and Further Development of the Commission's Resource Adequacy Requirements Program.	Rulemaking R.05-12-013 (December 15, 2005)

COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR ON STAFF RECOMMENDATIONS ON CAPACITY MARKET STRUCTURE

Pursuant to the California Pubic Utility Commission ("Commission" or "CPUC"), Assigned Administrative Law Judge's Ruling Regarding Availability of Staff Report, Revising the Schedule for Phase 2/Track 2, and Dismissing Motion to Revise Comment Schedule, dated January 18, 2008, the California Independent System Operator Corporation ("CAISO") submits the following comments:

I. INTRODUCTION

The CAISO commends the Energy Division for the time and effort it has taken to evaluate and propose long-term elements for the Commission's Resource Adequacy ("RA") program. The Staff Report, as the product of that effort, reflects a multi-faceted and thoughtful analysis of the power market and the need for a long-term RA framework to create an environment that will attract market-based investment in new supply infrastructure by generation and demand response in order to sustain reliable electricity service throughout California.

The CAISO appreciates the opportunity it has had during this phase of the RA proceeding to work collaboratively with Energy Division staff in contributing a section of

the Staff Report regarding Centralized Capacity Market ("CCM") design options, as well as in conducting joint workshops and stakeholder meetings to promote discussion and obtain broad input from all interested parties.[1] In this collaborative role, the CAISO's participation has focused primarily on providing technical information, analysis and recommendations on the subject of a CCM.[2] As noted in the Staff Report, the CAISO has not had any deliberative role in the collaboration.[3]

The purpose of the instant comments is to provide the CAISO's perspective on the optimal framework to ensure long-term supply adequacy, including the CAISO's substantive positions and recommendations for the Commission's consideration as it deliberates the adoption of a long-term RA program. The next section provides a high-level summary of the CAISO's recommendations to the Commission and the rationale for those recommendations. Subsequent sections provide specific comments on the Staff recommendations, as well as additional detail on the CAISO recommendations.

II. SUMMARY OF CAISO RECOMMENDATIONS

The CAISO's overarching goal is the development of a long-term RA program that will facilitate open and efficient competition to produce the optimal, cost-effective mix of infrastructure investments sufficient to meet end-use demand at stable and reasonable prices and provide for the operating requirements of the CAISO Balancing Authority Area. The CAISO believes that the long-term RA framework should (1) permit

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[1] Joint workshops and stakeholder meetings or conference calls were held on March 6, July 23, August 13, August 27, September 19, September 27, and October 19, 2007.

[2] Please see the CAISO's comments filed on November 27, 2007 and the CAISO Comments in Response to "Opinion on Long Term Resource Adequacy under MRTU" Issued by the Market Surveillance Committee ("MSC"), November 5, 2007, which is attached to these comments as Attachment A.

[3] Staff Report, p. 46.

meaningful competition among generation (including new entry), demand response (including energy efficiency) and transmission projects to solve reliability concerns, and (2) enable these options to be compared using transparent market-based mechanisms so that investors will come forward with high-quality offers and the most cost-effective alternatives can be selected. Most importantly, the CAISO believes that a transparent, competitive, market-based framework for long-term RA can be structured in a manner that is fully compatible with the Commission's regulation of procurement by its jurisdictional load-serving entities ("LSEs") and which supports the state's environmental policy goals.

The CAISO recommends that, in developing a long-term RA framework as characterized above, the Commission establish an annual or biennial, multi-year forward assessment of RA capacity needs, to be performed as a collaborative effort by the CPUC, California Energy Commission ("CEC") and CAISO. This assessment would serve both to inform bilateral procurement by LSEs and establish the demand in a CCM structure. As such, the assessment would need to address capacity needs at the system-wide level and in local capacity areas, as well as the generator performance characteristics needed to support reliable grid operation. The last aspect becomes especially significant as the composition of the supply fleet evolves in future years, *inter alia,* to incorporate more intermittent renewable supply resources. Thus, an important aspect of this collaborative assessment will be to consider expected shifts in the supply fleet in response to environmental policies and regulation.

The CAISO further recommends that the Commission adopt a CCM, including a primary auction to be conducted approximately four years prior to each delivery year

followed by periodic reconfiguration auctions leading up to each delivery year. A four-year forward CCM takes the next crucial step from a forward assessment of needs to a forward binding commitment of specific supply and demand resources to serve the expected demand and reserve needs of the CAISO Balancing Authority Area. As such, it would provide an explicit platform for evaluating potential transmission upgrade projects as alternatives to investing in new supply and demand response resources, a particularly important consideration for meeting demand in constrained local areas. Further, this approach would more effectively support a robust planning process, ensure that reliability issues are addressed (and capacity procured) in an appropriate timeframe to meet future reliability needs, and allow new resources and projects to compete with existing resources. Moreover, with adequate pre-qualification requirements for proposed new investment projects, a four-year forward CCM will ensure that capacity is secured in time to meet future reliability needs and will provide a transparent forward price signal. This is consistent with the need to preserve system reliability in the longer term and cost-effectively meet the need for new infrastructure. Stated differently, a forward CCM will provide appropriate signals to investors when new infrastructure and resources are needed with sufficient lead time to allow that infrastructure to be built before reliability is compromised.

Although some parties may argue that a forward binding commitment of RA resources could be achieved through four-year forward showings by LSEs of their bilateral procurement without needing a CCM, the CAISO believes that the comparative advantages of a CCM in this regard are compelling. As discussed in greater detail *infra,* the advantages of a CCM arise from the transparency of the CCM clearing prices at the

system and local levels, the integration of a natural backstop procurement mechanism through the reconfiguration auctions, and the simplicity of clearing the CCM to meet the aggregate needs of all LSEs without needing to allocate exact RA requirements and costs to each individual LSE until the actual delivery month. Moreover, a CCM approach can more effectively build upon and complement (and be complemented by) the features of the CAISO's comprehensive market redesign structure which will go into commercial operation later this year under the Market Redesign and Technology Upgrade ("MRTU") project. The CAISO also emphasizes that a CCM structure can be fully compatible with extensive bilateral procurement by LSEs under the regulatory oversight of the Commission or applicable local regulatory authority.

Finally, the CAISO recommends that the Commission make the key threshold decisions at this time necessary to establish a long-term RA framework based on a multi-year forward comprehensive assessment of resource needs and a multi-year forward CCM, but refrain from specifying many of the details of the CCM design. A definitive Commission decision in favor of a multi-year forward CCM is needed at this time to promote a commercial environment that will attract market-based investment in new supply infrastructure, including both generation and demand response (as well as new transmission development). The CAISO submits that it would be premature to specify many of the details of the CCM design including, for example, many of the details proposed in Staff Recommendation 1. The CAISO bases this last caveat on the following observations. First, none of the proposals currently on the table, neither those reflected in the Staff Report nor those submitted by parties to the proceeding, is complete enough or has all the details worked out enough to be adopted in total. Thus,

adoption of a detailed CCM design decision would require the Commission to mix and match parts of different proposals, fill many gaps, and decide many “detail” issues which have not yet been fully fleshed-out. Second, many of the detailed elements of a CCM can be specified in alternative ways that have not been sufficiently compared and contrasted, and therefore are not ripe for decision. Further analysis and deliberation with stakeholders is necessary to evaluate alternative approaches on key issues, such as whether a Peak Energy Rent deduction is the best way to provide an energy hedge for LSEs. Third, many CCM design details that seem logical and appealing in their own right should not be decided separate and apart from a comprehensive CCM design process, in which all the details can be evaluated in a comprehensive and integrated manner to ensure that the details fit together to form an internally consistent CCM design. The CAISO therefore urges the Commission to make the necessary threshold decisions to initiate the comprehensive CCM design process, and then allow the CCM design details to be worked out through that process.

In summary, the CAISO offers the following observation on the decision facing the Commission at this time. The CAISO believes that the key decision to be made is whether to (1) adopt the fundamentals of a long-term RA framework that will induce market-driven investment by (a) utilizing transparent pricing mechanisms to signal when, where and what kind of new investment is needed, and (b) allowing economic competition to determine the most cost-effective generation, demand response and transmission investments among the alternatives offered (including new and existing resources), or (2) retain a framework that relies mostly on attracting generation and demand-side investment through non-transparent, utility-centered bilateral

arrangements and traditional utility procurement programs. Although it is possible for either approach to work if designed and implemented well, the CAISO believes that the market-based approach will yield greater benefits for several reasons. First, it is important to recall that a primary reason for undertaking electric restructuring more than a decade ago was to shift the principal means of obtaining new infrastructure investment from a regulated utility structure in which risks are predominantly borne by ratepayers, to a market structure in which risks are borne by investors. The shortcomings of California's initial electric restructuring program and the experience of the crisis may have hampered the realization of this objective, but they do not negate its validity and potential value for consumers and suppliers. Second, the CAISO and the customers and market participants who rely on the CAISO Balancing Authority Area are nearing the end of a huge multi-year project to create new CAISO spot markets, which will generate accurate locational energy prices and will use these to provide both short-term operating incentives and long-term economic signals to guide infrastructure investment. The CAISO believes that the Commission's long-term RA framework should build upon the transparency and efficiency of these new spot markets, by establishing a structure that allows spot market incentives and price signals to be linked to investment decisions through a rigorous and transparent competitive process for assessing generation, demand and transmission alternatives.

III. COMMENTS ON STAFF REPORT

A. CAISO Goals

As reflected in the Staff Report, the CAISO believes that a long-term RA framework must align with the CAISO's core functions of providing a reliable transmission grid, non-discriminatory access to transmission service and efficient spot markets, and must support the provision of electric service to CAISO control area consumers at the desired level of service reliability and at stable and reasonable prices.[4] Further, any such framework must incent the development of new supply and transmission infrastructure that will be needed in the long-term to serve load and maintain reliable system operations. The CAISO's comments and recommendations herein are intended to promote the development of a long-term RA framework that attains these goals.

Implicit in the goals stated above are both long-term and short-term objectives, specifically, to induce timely and efficient investment in new supply infrastructure, while also ensuring sufficient and dependable availability of supply capacity on a day-to-day basis for reliable operation of the transmission system.[5] We confirm our belief that these design objectives can be accomplished by developing a long-term RA framework with the following attributes:

1. The framework should provide for regular (yearly or at least every two years) multi-year forward assessments of capacity needs that contain sufficient information to guide RA procurement. Such assessments are needed irrespective of whether procurement is completely bilateral or conducted through a centralized process. They should include quantitative estimates of system-wide and local area needs and generator performance attributes (e.g.,

[4] Staff Report, p. 22.
[5] Id. at 23.

dispatchability, ramping, quick-start capability), and should be coordinated with transmission planning. The CAISO expects that it would collaborate with the CPUC and CEC in formulating such assessments.

2. The framework should provide for a multi-year forward review or "showing" of the capacity that is actually committed to serve CAISO control area needs for the target delivery year. The absence of a demonstration of actual capacity commitments would add unnecessary uncertainty to decision-making processes, both private and by central authorities, on the timing and optimal characteristics of investments in new infrastructure.

3. The framework should enable demand response and imports to participate and compete effectively with internal generating resources to provide RA capacity.

4. The framework should provide for effective coordination with the transmission planning process, including the capability for transmission upgrades to compete economically with new generating resources in meeting the needs of constrained areas of the grid.

5. The framework should provide well-defined criteria and mechanisms for supplementary RA procurement to "backstop" any shortfalls resulting from the primary (bilateral or central) RA procurement mechanisms. The criteria and mechanisms should be specified for different possible time frames in advance of the delivery period when backstop action might be needed and appropriate.

6. The framework should allow for effective market power mitigation, particularly with respect to capacity needed in constrained local areas of the grid where the threat of new entry may not be sufficiently feasible to ensure competitive prices.

7. The framework should be compatible with effective energy-hedging strategies by LSEs.[6]

[6] Id. at 23.

The matter of coordination with the transmission planning process (item 4 above) requires some further elaboration. In the CAISO's recommendations, as included in the Staff Report, the CAISO discussed the importance of creating a level playing field through the long-term RA framework whereby specific transmission upgrade projects could compete transparently against new supply resources (including demand response) to meet the needs of consumers and support reliable grid operations, particularly in constrained areas. In the Staff Report, the CAISO described one potential scenario whereby such competition could occur, provided the assessment is conducted sufficiently forward of the delivery period and the new investment projects – both supply and transmission – are sufficiently well specified and "pre-qualified" prior to the assessment. The CAISO believes that a long-term RA framework that enables this type of assessment and comparison of alternative infrastructure investments will best meet the long-term needs of electricity customers by inducing high-quality, market-based investment proposals and providing a transparent mechanism for selecting the most cost-effective alternatives. Moreover, this type of approach to long-term RA will allow the benefits of the CAISO's new spot market structure being implemented under the MRTU project – which emphasizes the formation of accurate, transparent locational energy prices in every settlement period that reflect the value of energy delivered to each point in the CAISO grid – to be more fully achieved. The Commission will see that this theme, because of its importance, pervades the CAISO's comments and recommendations in this filing.

B. Staff's "Metrics for Analysis"

The February 4, 2008 "Administrative Law Judge's Ruling Regarding Comments on Staff Report on Track 2 Issues" requests that parties comment on whether the Staff's proposed metrics are the appropriate ones for the Commission to use to analyze the various proposals. The CAISO believes that the metrics proposed by Staff are appropriate, but is concerned that the linkages between the metrics and the specific Staff recommendations are unclear and that, as a result, the metrics, by themselves, may not provide very useful guidance to the Commission for purposes of evaluating and choosing between the Staff recommendations. Moreover, the Commission's task may not be as simple as choosing between two well-defined recommendations. As discussed in the next two sub-sections, the task is made more complicated because (1) there are numerous gaps in each of the two Staff recommendations (so they cannot simply be put side by side and compared against the metrics without some idea of how the gaps would be filled), and (2) even assuming *arguendo* that the gaps are filled in, the best decision may well be an approach different from both Staff recommendations. To summarize the problem using a cliché – "the devil is in the details." In other words, different proposals may have the potential to meet many or all of the Staff's metrics to some degree, but how well they satisfy these metrics will depend on how the unspecified details of the proposals are ultimately specified. .

For example, consider the metric "Ensures Reliability." The Staff Report simply states that both of its recommendations satisfy this metric. The CAISO might agree that they *could* satisfy this metric, but there is insufficient detail surrounding both options to

make this determination at this time. This is particularly true of Recommendation 2. Without delving into the CAISO's specific comments on Recommendation 2, which are provided below, the CAISO believes that ensuring reliability depends on the existence a fully effective backstop procurement mechanism as an element of the overall RA framework. Unfortunately no such backstop mechanism is specified in connection with Recommendation 2. Perhaps Staff assumes that the CAISO's proposed Interim Capacity Procurement Mechanism ("ICPM") can simply be extended indefinitely, but as discussed below, the ICPM is intended as an *interim* mechanism and the appropriate solution under a longer term Recommendation 2 approach is most likely not as simple as merely extending the ICPM. Thus, in order for the Commission to evaluate Recommendation 2 against the metric "Ensures Reliability," it will either have to make some significant assumptions about how this backstop need will be filled, or direct the parties to come up with an effective proposal in some subsequent proceeding to fill the gap in a manner that fully satisfies the metric, or perhaps provide its own recommended solution based on the record in this proceeding.

In short, the CAISO believes that the Staff's metrics are appropriate metrics, just as the CAISO goals stated in the previous section are also good metrics for assessing alternative approaches. However, one cannot assess how well these metrics have been met until the design process is much further along. If the Commission recommends adoption of a CCM to be developed through a CAISO stakeholder process, then the Staff metrics and the CAISO goals constitute valid and important criteria that can serve as guiding principles for developing a comprehensive CCM design. However, at this point, the proposals before the Commission can only be viewed as potentially satisfying

the metrics depending on how the rest of the process transpires, and the Commission must make a recommendation to set that process in motion in one direction or another.

This leads the CAISO to reemphasize a key point made earlier in these comments. Namely, the CAISO believes that the most important decision before the Commission at this time is whether to provide a long-term RA framework that is designed to induce market-driven investment, based on transparent price signals and economic competition, or one that relies almost totally on regulated utility generation and demand-side investment through bilateral arrangements and traditional utility programs. The CAISO notes that both approaches could work, depending on how the details are worked out, but believes that the market-based approach offers greater benefits to consumers and other market participants, for reasons discussed in these comments.

C. Staff Recommendation 1 – Modified Centralized Market

Overall the CAISO believes that Recommendation 1 reflects a thoughtful integration and balancing of the ideas and proposals on CCM design that were discussed during the CPUC workshops and the CAISO stakeholder process. Recommendation 1 thus provides both an excellent straw proposal for constructively focusing the current rounds of comments on the issues most crucial to this proceeding and, in its high-level structure with some clarifications and modifications suggested below, a workable framework for initiating a more detailed CCM design process once the CPUC has issued its decision in this proceeding.

Although the CAISO agrees with many aspects of the high-level structure of Recommendation 1, there are some specific elements and details which the CAISO

believes require further clarification as to the intent of the CPUC Staff, or are stated without sufficient elaboration to reveal some of the difficult issues that would have to be addressed in implementing them. In addition there are other specifics of Recommendation 1 on which the CAISO recommends that the CPUC defer decision to the subsequent comprehensive CCM design process, because these matters would be better addressed in an integrated fashion with all of the other design details that must be resolved to result in an internally-consistent, well-functioning CCM design.

The remainder of this section provides the CAISO's specific comments on Recommendation 1.

1. Overview of Staff Recommendation 1

There are two elements to the Modified Centralized Market ("MCM") recommendation, the Preliminary Capacity Showing ("PCS") and the Centralized Forward Reliability Market ("CFRM"). These would be performed sequentially on an annual basis, during the period four-to-five years forward of each delivery year. The PCS would be a CPUC regulatory process applicable to its regulated investor owned utilities ("IOUs"). It would occur first and would serve as a demonstration of each IOU's bilateral procurement of RA capacity to meet a specified portion of its forecasted RA Requirements ("RAR"). The CFRM would be a market process operated by the CAISO. It would occur after the PCS and would provide a centralized market through which all LSEs would be able to complete their procurement to meet their RAR fully.

The PCS recommendation would set a hard target at 90 percent of each IOU's forecast load for the IOU to procure RA capacity bilaterally and would stipulate that this capacity opt out of the subsequent CFRM. A hard target in this context means that 90

percent is both a minimum and a maximum quantity that the IOU must demonstrate in the PCS. This does not preclude the IOU from bilaterally procuring much more than 90 percent of its RA. However, as an example below illustrates, the actual maximum on an IOU's bilateral procurement would be five percent of its total RAR, which equals its load forecast plus planning reserve margin ("PRM").

For example, if the PRM is 15 percent and the IOU's load forecast is 10,000 MW at peak, then its total RAR would be 11,500 MW, of which the IOU would be required to demonstrate 9,000 MW of bilateral procurement in the PCS. For the remaining 2,500 MW of its RAR, the IOU would be required to be exposed to the CFRM price for 575 MW (= 5% * 11,500). Thus, the IOU could bilaterally procure up to 10,925 MW, of which 9,000 MW would appear in the PCS and could opt out of the CFRM, and 1,925 MW would appear as self-supply in the CFRM.

The provision for opting out of the CFRM is significant because the Staff recommendation "bifurcates" the RA capacity product by setting up a key difference between the RA capacity that opts out versus the capacity that clears through the CFRM. Under the Staff recommendation, the entire 2,500 MW that clears through the CFRM would be settled for its capacity payments through the CAISO settlement system and would be subject to the Peak Energy Rent ("PER") deduction. In contrast, the 9,000 MW that was demonstrated in the PCS and opted out of the CFRM would be settled completely through the bilateral contract terms between the LSE and the supplier, and may or may not include a PER or other energy hedge provision under those bilateral arrangements.

2. CFRM Provides Appropriate High-level Structure

The CAISO supports Staff's recommended structure of the CFRM, specifically a primary auction conducted approximately four years ahead of each delivery year, followed by a sequence of reconfiguration auctions through which LSEs and suppliers can buy and sell RA capacity to adjust their holdings and meet unforeseen needs. The CAISO believes that the reconfiguration auctions also provide a natural and transparent "backstop" mechanism to compensate for any identified procurement shortfall at the system level or in a Local Capacity Area ("LCA").

3. Provisions to Opt Out of CCM May Negatively Impact Effectiveness of CFRM

The CAISO fully supports an RA procurement process that relies primarily on bilateral arrangements between LSEs and suppliers overseen by the CPUC or, for non-CPUC jurisdictional LSEs, their appropriate regulatory authorities. The CCM proposals discussed during the past year, as well as the CAISO recommendations in the Staff Report, generally started from the concept that such bilateral procurement would be offered into the CCM as "self-supply" by the LSEs. The Staff's PCS recommendation introduces a variation on this idea, namely, the ability/requirement for a specific amount of each IOU's bilaterally procured RA capacity to "opt out" of the CFRM and hence out of the CFRM settlement. Although the CAISO does not necessarily object to the opt-out concept per se, much greater discussion is needed on this element to expose its pros and cons. At a minimum, the CAISO is concerned about (a) the idea of setting a hard target, i.e., both a minimum and a maximum, on the portion of each IOU's RA requirement that must opt out of the CFRM, and specifically how such a hard target

would be applied and enforced, (b) whether the value of 90 percent for such a target would be so high as to undermine the value of the CFRM clearing price as a signal for new investment, and (c) how to manage the potential capacity inadequacy and the associated backstop cost allocation impacts in the event that some of the opt-out RA capacity fails to materialize when the delivery period arrives. These concerns are elaborated below.

4. Ninety Percent PCS Target Lacks Justification and Detail

It is not clear whether the 90 percent PCS target would apply only at the system level, or would apply to each Local Capacity Area ("LCA"). If it is intended to apply only at the system level, then the IOUs could completely ignore their Local Capacity Requirements ("LCR") in meeting the 90 percent target. The CFRM, however, would be designed to clear both system-wide and LCA demand quantities, so the impact on the performance of the CFRM of an opt-out target that applied only at the system level could be very different for different grid areas. For example, the volume of RA capacity that opts out of the CFRM could be very large in a particular LCA, driving the CFRM demand in that LCA to zero or close to zero, thereby eliminating any potential value of a CFRM price to signal a need for investment in that LCA. The CAISO believes that a primary reason to establish a CCM is to provide transparent, competitively driven prices in each LCA that will signal the need for investment and will facilitate efficient competition between generation investment and transmission upgrades into constrained areas of the grid. The potential for the opt-out provision to undermine this objective is therefore a significant concern. Alternatively, if the 90 percent target is intended to apply

in each LCA, then the question of how this requirement will be enforced becomes particularly important (see next item).

Recommendation 1 does not specify how the CPUC would enforce the 90 percent PCS target; specifically, what consequences an IOU would face if it procures less than the target value. (It is understood that if the IOU procures more than the 90 percent target then only the 90 percent target value would be eligible to opt out of the CFRM, and the rest would then be offered into the CFRM as self-supply up to the 5 percent threshold for required exposure to the CFRM price.) In particular, if the 90 percent requirement is applied in each LCA, the penalty the CPUC would impose on the IOU and the terms under which an IOU may be granted a waiver of the 90 percent requirement would be material to the bilateral contracting strategies of both IOUs and suppliers. By raising this issue, the CAISO is not necessarily urging the CPUC to specify all these details in its decision; rather, the CAISO is suggesting that specifying a hard target (simultaneous maximum and minimum) amount of each IOU's opt out of the CFRM may be a problematic way to try to structure the bilateral procurement of its regulated LSEs.

There is no apparent rationale for the 90 percent value of the target. A key unknown at this point is whether the 90 percent value – even if applied to each LCA and at the system level – is so large that all new investment enters the market through bilateral arrangements, and therefore new entry never or rarely sets prices in the CFRM. In other words, too high a level of the PCS target has the potential to undermine the value of the CFRM price as a signal for new investment in any given LCA and even at the system level. Note also that the ex post PER deduction proposed by Staff as a

feature of the CFRM payment – combined with the absence of such a deduction on the payment to capacity that the LSEs opt out of the CFRM – will also likely provide a strong incentive for suppliers of new capacity to seek bilateral arrangements to avoid participation in the CFRM. The PER deduction is discussed further below. Finally, the CAISO notes that if IOUs are permitted to opt out of the CFRM for 90 percent of their load forecast, then for reasons of non-discrimination all LSEs would be allowed to opt out to the same degree, thus exacerbating any concern about undermining the value of the CFRM clearing price as an incentive for new investment.

5. Five Percent Required IOU Exposure to CFRM Price Needs Clarification and May Be Insufficient

As with the 90 percent opt-out target, it is not clear whether the 5 percent required exposure of each IOU to the CFRM clearing price would apply only at the system level, or would apply to each LCA. If it is applied on an average basis, i.e., averaged across the system-wide and all LCA auctions, then the CFRM prices could be systematically driven down in capacity-tight areas to undermine the value of the locational capacity price signals. Alternatively, even if the 5 percent is applied to the system level and to each LCA auction, the 5 percent value appears arbitrary, and may not be sufficient to prevent IOU monopsony power from systematically driving the CFRM price to near zero by IOUs acquiring all needed new generation bilaterally within the 110 percent upper limit on bilateral procurement (i.e., all but the top 5 percent of the 115 percent load forecast plus planning reserve margin RA requirement).

6. Bifurcation of the RA Capacity Product May Be Problematic

The 90 percent opt-out requirement means that the opt-out RA capacity will not clear through the CFRM even as self-supply nor get settled for its capacity payment through the CAISO's CFRM settlement process. As a result the RA capacity product is bifurcated in the sense that not all megawatts of RA capacity will be consistent with a single standardized capacity product definition. Recommendation 1 seems to suggest that incorporating supplier compliance with the RA Must Offer Obligations ("RA-MOO") per the CAISO Tariff into the bilateral contracts for this opt-out capacity will be adequate to ensure a capacity product that is sufficiently standardized from the perspective of performance obligations and incentives and enforcement mechanisms.[7] There are some reasons why this may not be adequate, however.

Because a central element of the product bifurcation is the assessment of the PER deduction on the capacity that clears the CFRM, this provision will undermine the value of the CFRM clearing price as a transparent reference price for bilateral contracting. In particular, the RA capacity that clears the CFRM should be a more costly product than capacity that opts out because the CFRM capacity must contain an energy hedge in the form of the PER deduction. There would be no way to transparently price the value of this energy hedge component of the RA capacity product, to enable parties who wish to contract bilaterally for a less costly product to utilize the CFRM clearing

[7] Recommendation 1 does recognize a potential product compatibility problem if the IOU wants to offer some of the opt-out capacity into a reconfiguration auction, but the CAISO does not believe this is a significant problem. Because the capacity was already procured by the IOU through a bilateral arrangement, the IOU rather than the capacity supplier would be the party to any CFRM settlement that resulted from its offer of the opt-out capacity into the reconfiguration auction, and would simply

price as a transparent reference price to inform their contract negotiations. This difficulty is exacerbated by the fact that, under Recommendation 1, the value of the PER deduction (and hence the net CFRM capacity payment) can only be forecasted and will not be known with certainty until after each delivery month.

It will be problematic to deal with instances where capacity committed under the opt-out provision fails to become available in the delivery period. For example, if an IOU procures new generation under the 90 percent rule, how would the new generator's construction milestones be monitored, how would backstop capacity be procured in the event the generator's commercial operation date becomes unachievable, and how would the costs of such backstop procurement be allocated?

7. PER Deduction May Have Serious Negative Impacts on the CFRM

The CAISO believes that a decision to incorporate a PER deduction mechanism into the CFRM settlement structure is premature at this time. There is no question that hedging of energy prices by LSEs is appropriate and important, but it is not at all clear that the PER deduction is the best way to accomplish such hedging, and in fact there are some good reasons to think that it may not be the best approach. Because the significance of this issue was recognized during the CAISO stakeholder process last fall, the CAISO requested and received a round of written stakeholder comments that focused on it. As we noted in the recommendations we provided for inclusion in the Staff Report, the CAISO concluded that the matter of PER deduction should not be decided apart from the comprehensive capacity market design process. At a minimum,

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manage on the one hand its bilateral settlement with the supplier of the capacity and on the other hand its settlement with the CAISO for its CFRM transactions.

the CAISO notes some important reasons to doubt that the PER deduction is a good idea.

The fact that the capacity payment will be uncertain and will only be known on a month-by-month basis as actual delivery of the capacity occurs, added to the fact that the factors contributing to the monthly price variation are beyond the control of the capacity supplier, will increase the risk of new investment and will at best result in a risk premium being added to capacity offer prices. A less optimistic scenario is that the PER deduction will create a strong incentive for investors to avoid the CFRM entirely, so that all new generation investment occurs through bilateral contracts with the IOUs and the value of creating the CFRM is minimal.

Given that a large proportion of RA capacity procurement will occur through bilateral transactions anyway, the LSEs and their regulators will have complete flexibility to determine the optimal forms and quantities of energy hedge through their regulated procurement processes.

The complexities and controversies to be addressed in designing an acceptable PER calculation method should not be minimized. Among the major issues are the determination of the reference unit, the selection of appropriate fuel prices (locational and temporal aspects), allowance for emissions permit costs, and any special provisions that will be argued for in applying these cost components for a gas-thermal unit to other types of capacity. Although the CAISO is not known to shy away from dealing with controversial issues, we believe that the benefits of dealing with those issues should outweigh the costs, and in this instance that may not be true.

8. Inclusion of a Price Floor Should Not Be Dismissed

The CAISO is also concerned about the absence of a price floor in the Staff's recommendation on the CFRM, especially given the reasons noted above why new generation may rarely or never set CFRM prices. The CAISO agrees with the CPUC Staff that it is important to include a list/de-list mechanism as an element of the CFRM, but given the Staff's emphasis on designing the list/de-list mechanism to prevent economic withholding, the CAISO is concerned that this mechanism may not be adequate to ensure that CFRM prices reflect the economics of RA procurement realistically. The CAISO notes the recently published results of the ISO New England Forward Capacity Market ("FCM") auction for the 2010-2011 delivery period, in which over 32,000 MW of capacity were procured and the market price was driven down to the price floor with excess capacity still remaining (ISO-NE press release dated February 6, 2008). The CAISO believes that the matter of a price floor should be addressed fully in a comprehensive capacity market design process and not decided by the CPUC at this time.

D. Staff Recommendation 2 – Modifications to Existing RA Program

The CAISO does not support Recommendation 2, primarily because the enhancements to the RA framework that are needed at this time cannot be achieved simply through minor adjustments to the existing RA rules and procedures. As a result, the simple, appealing concept of minimizing any changes to the current RA program is not, in the CAISO's view, a viable way to address the need for a more forward-looking process that provides a competitive framework for long-term investment decisions in

generation, transmission and demand response and long-term energy contracting.[8] The specific RA enhancements the CAISO believes are needed and recommends to the CPUC to adopt at this time are summarized in the next section. In the present section, the CAISO describes its specific concerns with Staff's Recommendation 2.

1. Inadequacy of Current One-Year Forward Time Horizon for RA Showings

The CAISO believes that a key threshold decision for the CPUC to make at this time is to extend the time horizon for demonstrating the commitment of RA capacity to a multi-year forward structure. Such a structure will allow transparent, economic competition between existing resources and new market-based investment to provide specified quantities of capacity at the system level and for each local capacity area. Such a structure can also encompass decisions to repower or retire existing generation and to invest in new demand response capability, and can be linked explicitly to decisions whether to upgrade transmission into constrained areas of the grid.

Recommendation 2 does not take a position on the matter of the time horizon; it proposes neither to retain the current one-year forward horizon nor to extend it further forward. This seems to suggest that the CPUC could adopt Recommendation 2's "minor adjustments" approach and then simply augment the current RA framework by adopting a multi-year forward showing. The CAISO does not believe this approach is workable. More precisely, as discussed in the next sub-section, adopting a multi-year forward showing process for LSEs would not be a minor adjustment to the current RA framework, but would raise a host of difficult issues that could be addressed more

[8] The issues raised in this section are also discussed in Attachment 1, which is the CAISO's November 27, 2007 Comments in Response to the November 5 "Opinion on Long-Term Resource Adequacy under MRTU" by the MSC.

simply and efficiently by adopting a CCM. In fact, a primary reason why the CAISO favors a CCM is because a CCM is the most effective and efficient way to organize a multi-year forward process for committing RA capacity to serve the CAISO control area.

2. Difficulty of Implementing a Multi-Year Forward RA Showing Under a Purely Bilateral RA Framework

A central fixture of today's purely bilateral RA framework is the specification of RA requirements for each LSE, at the system level and for each LCA, in advance of the required showing. Under the current RA time horizon the uncertainty associated with such specification may be tolerable, but the magnitude of the uncertainty will vastly increase if LSE requirements must be specified four to five years ahead of the delivery year. In contrast, under a CCM structure there is no need to specify individual LSE requirements at the time the CCM auction is conducted. This does not, of course, preclude the CPUC specifying and enforcing procurement and showing requirements for its regulated LSEs, so a CCM would not infringe on this prerogative of the CPUC. What the CCM does provide, however, is the simplification of being able to determine capacity needs at the system and local levels for all LSEs collectively and to procure in a transparent manner the difference between those collective LSE requirements and the total RA capacity self-provided by LSEs to the CCM, without having to assign that difference to a bilateral procurement shortfall of any particular LSEs until the CCM settlement is conducted at the time of delivery.

3. Failure to Address Significant Issues Related to CAISO Backstop Procurement

Although Recommendation 2 makes reference to a CAISO backstop procurement mechanism, it is silent on what exactly that mechanism is. The CAISO

points out that the recently filed Interim Capacity Procurement Mechanism ("ICPM") is intended as an "interim" backstop mechanism, and that an indefinite extension of the current RA framework would require a reopening of the issues debated in the recent ICPM stakeholder process. Recommendation 2 does not offer suggestions on how to structure a CAISO backstop procedure that would be more permanent than ICPM, nor does it acknowledge that all of the controversies that emerged in the ICPM discussion would need to be reopened. For example, Recommendation 2 leaves unresolved the key issue of how the CAISO determines the backstop price to pay for additional capacity to compensate for LSEs that are deficient in their annual RA showing. The recently-filed ICPM proposal uses an administratively determined uniform price based on the higher of $41/kw-year or the actual going forward costs of the designated resource plus a 10 percent adder (subject to approval by the Federal Energy Regulatory Commission ("FERC") of the resource's filed costs). The CAISO anticipates, however, that market participants will challenge this proposal and hence the final FERC-approved backstop pricing rule is not known at this time. In the lengthy CAISO stakeholder process conducted during much of 2007 to determine this interim backstop price, RA market participants, including both buyers and sellers, repeatedly noted that the current transparent backstop price -- under the existing backstop mechanism known as the Reliability Capacity Services Tariff ("RCST") -- has a substantial effect on bilateral contracting in the forward RA market, due to the lack of price transparency in that market and because the backstop price is the known deficiency charge (in addition, potentially, to CPUC penalties for jurisdictional LSEs). The CPUC Staff recommendation to establish a bulletin board will help improve price transparency, but

will not fully resolve the matter of the effect of the backstop price on the forward RA capacity market.

Ideally, under a long-term RA framework, a more permanent backstop procurement mechanism would enable backstop capacity for an LSE deficiency to be procured through a market-based method, perhaps facilitated by a centralized capacity auction occurring prior to the showing year. This would constitute another significant benefit and simplification under a CCM structure that includes a sequence of reconfiguration auctions as is contained in Staff Recommendation 1. Uniform administrative pricing of backstop capacity, such as that contained in the current ICPM proposal, will not provide long-term investment price signals and will not incent new generation, nor is it intended to do so for ICPM, because the ICPM has been designed as an interim mechanism, to be replaced in the future by a more permanent backstop capacity procurement mechanism that can complement the long-term RA framework. In the ICPM stakeholder process, the CAISO considered, but then dropped, an idea to establish a sloped demand curve (capped at cost of new entry and defined separately for each local area and for system procurement) to determine a locational proxy price for backstop capacity.[9] One reason why this idea was dropped was to allow the CPUC's long-term RA proceeding to set directions for long-term forward capacity pricing before the CAISO backstop created new forward market price signals and incentives.[10] If the CPUC decides not to modify the current RA framework to create transparent multi-

[9] Note that the CAISO did not propose a demand curve pricing mechanism for backstop procurement that would be undertaken in response to operational needs during real-time (i.e., due to "Significant Events" that cause the CAISO to revise its requirements). LSEs are not considered to be RA deficient in that instance.

year forward capacity prices, the CAISO backstop mechanism will become, with renewed vigor, the focal point of efforts to create transparent capacity prices.

Thus, backstop procurement for an LSE deficiency is a complicated issue, and one with significant implications for the bilateral RA market. If Recommendation 2 is adopted, this issue needs to have increased prominence in the market design and may result in the development of another type of modified centralized market, one in which there is an auction for backstop capacity under specific rules prior to the delivery year and which becomes the primary mechanism for generating transparent capacity prices. Alternatively, if a framework like Recommendation 1 is adopted, then it is likely that the issue of backstopping for an LSE deficiency can largely be resolved in the context of the reconfiguration auctions of the CCM.

E. Comments on Related Matters

This section provides CAISO comments on several related matters that were discussed in the course of the CPUC workshops and CAISO stakeholder process.

1. Performance Incentives for RA Capacity

In its contribution to the Staff Report, the CAISO recommended the use of in-period financial adjustments to the capacity payment to provide effective performance incentives for RA capacity, rather than relying entirely on adjustments to a resource's Net Qualifying Capacity in future periods (see Proposition 9, p. 82). In-period financial adjustments tie a supplier's capacity payment for each delivery month to its availability and performance within the same month, thus creating more effective incentives for the

[10] The CAISO also concluded that this approach presented design and implementation difficulties, as well as the need to address controversial pricing issues, which realistically could not be resolved in the time-frame available before MRTU implementation.

supplier to comply fully with its RA must-offer obligations. The CAISO still supports this approach, but does not see a need for the CPUC to decide this matter prior to initiating a comprehensive CCM design process. The effectiveness of such mechanisms will depend on numerous settlement details that would be best addressed within a comprehensive CCM design stakeholder process.

2. Use of the Cost of New Entry

The CAISO continues to support the use of the Cost of New Entry ("CONE") as the reference point for establishing demand in the CCM (see Proposition 10, p. 82). The comprehensive CCM design process would be the appropriate venue to work out the details of this, such as which entity has the responsibility for formulating the CONE estimates, the frequency of revising the estimates, and the use of revised CONE estimates versus previous CCM clearing prices for setting the demand curve or any applicable price floors or ceilings in reconfiguration auctions or in primary auctions beyond the first year of operation of the CCM.

3. Vertical Demand Curve, Price Floors and Price Ceilings in the CCM

The CAISO continues to support the use of a vertical (rather than sloped) demand curve in the CCM, as stated in Proposition 12, p. 84 of the Staff Report.[11] As the CAISO stated in connection with Proposition 12, there will be a need for a price ceiling in conjunction with this fixed demand approach and perhaps a price floor. The potential need for a price floor should not be dismissed particularly in light of the

[11] The procurement time frame of the CCM is the primary reason why this recommendation differs from the interim backstop procurement design proposal discussed above, in which a sloped demand curve was considered. In the ICPM backstop time-frame a vertical demand curve would create price volatility and uncertainty (regardless of the market clearing or price-setting method) whereas in the

concerns expressed above that the Recommendation 1 CFRM design may lead to a situation where new investment rarely if ever sets the CCM price. The structure and levels of price ceilings and floors should be addressed with stakeholders in the context of the comprehensive CCM design process.

4. CAISO Backstop Procurement Mechanism

The discussion of the CAISO backstop in the Staff Report (see propositions 14-18, pp. 85-87) is still applicable in light of the Staff recommendations. The CAISO notes in particular that under Recommendation 1, the reconfiguration auctions could be structured on a time line that satisfies the need for what we called “long-term” and “short-term” backstop requirements in the Staff Report, thereby providing a fully transparent backstop mechanism within the CCM structure, and requiring a supplemental CAISO mechanism only for very short-term operational needs. Under Recommendation 2, however, the role of the CAISO backstop mechanism would assume far greater significance and will require substantial stakeholder process to work out several likely controversial details, particularly issues of pricing and designation criteria. .

5. Settlement and Cost Allocation for a CCM

The CAISO reiterates the position it stated in the Staff Report on this topic (see Proposition 19, p. 87), that monthly settlement after each delivery month is an effective and administratively efficient way to settle the CCM, because is allows for payment to suppliers based on actual delivery and charges to LSEs based on actual load.

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multi-year forward time-frame it would not. Ultimately, the design of a CCM and the backstop mechanism must be aligned to ensure market efficiency.

6. Requirement to Participate in the CCM or Formally De-List

The details of the participation requirement on internal supply resources and the formal de-listing process should be addressed within the comprehensive CCM design process (see Proposition 20, p. 87)

7. Coordination of Multi-Year Forward Capacity Procurement with Transmission Planning

In the Staff Report, the CAISO suggested a simple conceptual model of how the CCM could enable economic competition between new generation investment versus a transmission upgrade to relieve a constrained load pocket (pp. 88-89). The CAISO hopes that the CPUC will affirm the importance of facilitating such competition regardless of which direction it takes in its long-term RA framework decision. The CAISO, in recommending a CCM, expects to explore this topic fully in the context of the CCM design process, as well as in other venues where innovative approaches to transmission planning are discussed.

8. Market Power Mitigation

In the Staff Report, the CAISO described its concerns about supplier market power and outlined potential mitigation approaches (see pp. 89-90). The CCM design process would be the optimal venue for developing the details of mitigation procedures, assuming a CCM approach were to be pursued. . Under Recommendation 2, however, supplier market power would be less transparent and hence less amenable to mitigation via standard approaches used in centralized markets. Instead, mitigation would play out as it does today in the form of waivers and waiver triggers on LSEs' local capacity requirements and penalties applied to LSEs for procurement shortfalls, both of which

then become entangled with the pricing mechanism adopted for the backstop procurement process.

9. The Standardized RA Capacity Product

The proposal by Calpine, and others, that was recently filed with the CPUC reflects a salient aspect of capacity product standardization that has received much attention in parallel to the current proceeding. The CAISO appreciates the substantial collaborative effort numerous parties have put into developing the Calpine proposal, which would augment the CAISO's existing RA-MOO Tariff sections with provisions to standardize supplier compliance and performance incentives through CAISO enforcement procedures. The CAISO is committed to conducting a stakeholder process through which the matters raised in the Calpine proposal can be prioritized among other market enhancements which the CAISO has been tracking through its Market Initiatives Roadmap. Depending on the outcome of that prioritization, the CAISO would then undertake a further stakeholder process to assess the Calpine proposal and develop Tariff modifications and new business processes as appropriate. The CAISO emphasizes that resolution of the issues raised and formal adoption of provisions like those contained in the Calpine proposal are not necessary before embarking on the design and development of a CCM and the other elements of the long-term RA framework to be decided in this proceeding.

10. Rules for Counting RA Capacity of Different Resource Types

It has been noted at various times in the RA proceedings that there can be systematic differences between the amount of capacity of certain types of resources that is counted towards meeting RA requirements versus the extent to which the

counted RA capacity is in fact fully available to provide energy or reserves during all the hours when it is most needed. In particular, concerns have been expressed regarding demand response programs administered by LSEs that are only able to be called upon after the CAISO has declared a staged emergency, hydro resources that typically are not subject to the RA-MOO provisions, and intermittent resources such as wind that may not be dependable for their full RA capacity during peak load hours. The CAISO mentions these concerns here only to remind the CPUC and the other parties that the matter of counting RA capacity should be given continued attention in the appropriate proceedings to try to achieve greater consistency between the quantities of acceptable RA capacity and the ability of that capacity to perform under peak load conditions.

IV. CAISO RECOMMENDATION

The recommendations offered by the CAISO in this section are consistent with but go beyond the scope of the CAISO recommendations that were included in the Staff Report (pp. 77-90). For the Staff Report, the CAISO limited the scope of its recommendations to answering the question, “If the CPUC adopts a CCM, how should the CCM be designed?” In the present comments the CAISO addresses the more basic question of whether a CCM is needed, and recommends that the CPUC decide in this proceeding to adopt a CCM for several reasons that are discussed below. The CAISO believes a CCM is needed because it offers the most effective and efficient way to achieve a multi-year forward commitment of capacity to serve the load and operating needs of the CAISO control area, with robust competition among new market-based investments, existing generation, demand response, and transmission upgrades. The CCM envisioned by the CAISO would be fully compatible with extensive bilateral

procurement by LSEs in conjunction with the CPUC or their appropriate regulatory authority, and would provide a natural backstop procurement mechanism integrated into the CCM framework via the reconfiguration auctions. Both the bilateral RA procurement by LSEs and the CCM would be based on a common, standard RA capacity product definition to be refined as needed in the CCM design process using today's RA product as a starting point, and which may or may not incorporate an energy hedge element as well as more detailed specification of supplier performance requirements.

In addition to recommending adoption of a CCM, these CAISO comments emphasize another central theme, which is to urge the CPUC to make several key threshold decisions to initiate the process of designing and developing the CCM, but to narrow the scope of its decision to defer action on certain aspects of CCM design that the CAISO believes would be best addressed in the context of the comprehensive CCM design process rather than decided up front. The main reasons for the CPUC to defer action on the items identified in this category are that (1) the alternatives have not yet had sufficient analytical assessment and stakeholder discussion to be ripe for decision, and (2) the best approach on each of these items should not be decided in isolation from the complete long-term RA framework and CCM design, which ultimately must function as an integrated whole system. A salient example of an item that should be deferred for further assessment is the question of whether and how to incorporate an energy hedge into the standard RA capacity product.

The CAISO recommends that the CPUC adopt the following points in its decision.

A. Establish an Annual or Biennial Long Term Assessment of Capacity Needs

The Commission should establish an annual or biennial assessment of needs to be performed jointly by the CEC, CPUC and CAISO. The collaborative assessment would serve as the basis of capacity demand both to inform bilateral procurement by LSEs and to establish demand in primary and reconfiguration auctions of a CCM described below. If the assessment is biennial rather than annual, each assessment would establish the capacity demand for two consecutive primary CCM auctions. The exact timing of this activity should be determined in conjunction with the CCM design process.

Ideally the assessment should cover a longer time horizon than the primary CCM auctions for which it will be used. For example, the needs assessment would be performed during 2012 to provide the basis to establish demand in the primary CCM auction to be conducted during 2013 for the delivery year 2017. This assessment would actually take the form of a series of annual capacity needs estimates covering, for example, the years 2013 to 2022, rather than simply an assessment for 2017. This type of “rolling” time horizon approach would provide a much more stable and useful basis for infrastructure planning, investment and long-term contracting. Such an approach could also account for projected impacts of environmental initiatives, western regional developments, and other state and federal policies.

The assessment would include a total CAISO system-wide capacity assessment based on system load forecast and planning reserve margin, plus Local Capacity Requirements for specified Local Capacity Areas based on engineering studies, plus

estimates of specify types of capacity needs related to the expected shifts in the resource mix. The assessment should consider how procurement would be affected by the Renewable Portfolio Standard and other environmental policy initiatives and assess needed amounts of capacity capable of providing regulating reserve and quick start-up, based on integrating the estimated share of non-dispatchable intermittent resources in the resource mix into grid operations while maintaining applicable reliability standards.

B. Establish a Centralized Capacity Market

The Commission should adopt a CCM to be operated by the CAISO, which would be designed through a CAISO-conducted stakeholder process and filed with FERC to become part of the CAISO Tariff. The CCM would include a primary auction to be conducted annually, approximately four years prior to each delivery year, plus a series of reconfiguration auctions to be conducted periodically between the time of the primary auction and the delivery year. The exact timing of these CCM auctions would be determined through the CCM design process.

The timing of the sequence of reconfiguration auctions would provide for backstop procurement, to meet potential changes to capacity needs, resource availability or system conditions that arise as the delivery year gets closer. CCM auctions would clear RA capacity at the CAISO system-wide level and within specified Local Capacity Areas.

LSEs would be allowed to procure RA capacity through bilateral arrangements and offer this capacity into the CCM as self-supply. On the topic of allowing bilaterally procured RA capacity to opt completely out of the CCM up to some predetermined level, as proposed in Recommendation 1, the CAISO urges extreme caution. Provisions that would allow LSEs to opt out of the CCM settlement and associated cost allocation

provisions based on a multi-year forward forecast can be problematic. The two primary potential dangers the CAISO is concerned about are the potential to undermine the value of the CCM system and LCA clearing prices as signals for new investment, and the potential for LSEs who opt out of the CCM based on their load forecasts to avoid their appropriate share of costs of capacity procurement in the reconfiguration auctions as system conditions or LSE load responsibilities change. The CAISO therefore urges the CPUC to defer a decision on the opt-out provisions to the comprehensive CCM design process, with a focus on addressing the potential adverse impacts of such provisions and, if those can be mitigated, determining an allowable opt-out level that will not undermine the value of the transparent CCM price as an incentive for new investment.

Similarly, the CPUC should not adopt the Staff recommendation to incorporate an ex post PER deduction into the CCM settlement. As discussed earlier in these comments, the CAISO is concerned about (i) the potential adverse impacts on CCM participation and price signals of incorporating the PER deduction in the CCM settlement while allowing opt-out RA capacity to avoid the PER deduction, and (ii) whether the PER in any form is the best way to incorporate energy hedging into LSE RA procurement. The CAISO believes that the issue of any appropriate energy hedge mechanism as an element of the long-term RA framework, including a PER deduction and other potential approaches, should be discussed further in the CCM design process. The CAISO emphasizes that if a CCM is developed which does not incorporate an ex post PER deduction, this would not in any way preclude the

Commission from adopting energy hedging requirements for its regulated LSEs to be addressed through their bilateral procurement activities.

C. Do Not Modify the RA Capacity Product Definition in This Decision

The CAISO fully recognizes the need for a standard RA Capacity Product definition to support the overall consistency of the product, the tradability of the product among LSEs and suppliers, and the performance requirements of supplied RA capacity. The CAISO does not believe, however, that the current proceeding is the appropriate venue to make decisions regarding changes to the current RA product definition as embodied in the principle of supplier compliance with the RA-MOO specified in the CAISO Tariff. More to the point, the CAISO does not believe that any changes to the current RA product are needed at this time in order to begin constructing a long-term RA framework based on a CCM.

The CAISO has already recognized the need for one specific enhancement to the RA-MOO provisions in its Tariff. In conjunction with the CAISO's compliance with FERC's order to implement scarcity reserve pricing within 12 months after start-up of the MRTU markets, the CAISO believes it is important to require RA capacity to be available for optimization to provide either energy or Ancillary Services ("AS")(to the extent the capacity is certified for AS) in the day-ahead market. The CAISO therefore intends to submit this "RA Must Offer AS Obligation" to FERC as part of its design proposal on scarcity pricing later this year.[12]

[12] It is important to clarify that an RA Must-Offer AS Obligation would apply to RA capacity only to the extent that such capacity is CAISO-certified to be capable of providing AS. The new obligation is not intended to impose any specific procurement requirements on LSEs to procure RA capacity that is capable of providing AS. As discussed infra, and also in the CAISO Recommendations section of the Staff Report, the CAISO believes that its AS markets and related spot market rules such as scarcity pricing should and will be adequate to induce investment in needed AS-capable capacity.

The CAISO acknowledges the need for due consideration of the Calpine proposal to modify the CAISO's existing RA-MOO Tariff sections, as noted earlier in these comments. The CAISO reiterates here that action on the issues raised in the Calpine proposal are not necessary before embarking on the design and development of a CCM.

The question of whether and how to incorporate an energy hedge into required LSE procurement of RA capacity, whether through the standard RA capacity product definition or some other means, should be more thoroughly assessed before any decision is made, starting with a review of the objectives of such a measure and a review of alternative ways to accomplish those objectives. Incorporating a PER deduction into either the standard capacity product definition, or asymmetrically only into the settlement of capacity cleared through the CCM, is just one possible approach to energy hedging by LSEs and could be considered, but the CAISO believes it is premature at this time to settle on the PER deduction as the best way to incorporate an energy hedge into RA procurement via the standard capacity product, much less to bifurcate the capacity product by incorporating the PER deduction only into the CCM settlement.

The CAISO recommends against incorporating additional characteristics into RA capacity requirements to be transacted through the CCM auctions, such as environmental attributes or specific performance capabilities of different resource types. Incorporating these needs into the CCM RA capacity procurement would interfere with the objective of clearing the system-wide and LCA CCM auctions based on a standard capacity product, and would risk fragmenting these markets to a level of product

granularity that makes it very difficult to have competitive supply conditions. Regarding state policy objectives, the CAISO believes it would be more effective for the CPUC and local regulatory authorities to incorporate these in their oversight of bilateral procurement by their regulated LSEs. With regard to generator performance capabilities, the CAISO believes that its AS markets – with consideration to be given to potential modifications to current AS product specifications – can be relied upon to induce sufficient investment in resources with the performance capabilities needed to operate the grid reliably.

V. CONCLUSION

For the foregoing reasons, the CAISO respectfully requests that the Commission adopt the CAISO's positions and recommendations in this matter, and establish a long-term RA framework and CCM consistent with the discussion in these comments.

Respectfully submitted,

/s/Beth Ann Burns
Beth Ann Burns
Senior Counsel
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
151 Blue Ravine Road
Folsom California 95630
Tel. (916) 351-4400
Fax. (916) 608-7296
Email: bburns@caiso.com

CAISO Comments in Response to "Opinion on Long Term Resource Adequacy under MRTU" Issued by the Market Surveillance Committee, November 5, 2007

The current proceeding of the California Public Utilities Commission (CPUC) on Long Term Resource Adequacy (LT-RA) is considering, among other things, whether to adopt a central capacity market (CCM) as a central element of its LT-RA framework, and if so, what should be the main design features of a CCM. Underlying these questions is the recognition that enhancements to the current one-year-ahead RA framework are needed to better ensure the commitment of sufficient supply capacity – including investment in new generating plants, demand response, and imports – to meet the expected demand of the CPUC's jurisdictional load serving entities (LSEs) cost-effectively and support the reliable operation of the CAISO transmission system. As discussed further below, enhancements to the current RA structure are driven largely by the need for a more forward assessment of capacity committed to the CAISO control area to allow effective planning for reliability needs, particularly as the composition of supply resources is changing to incorporate more demand response and renewable resources. In addition, the RA framework needs to provide transparent capacity prices and stable rules and procedures in order to create an environment attractive to market-based investment.

The opinion offered by the Market Surveillance Committee (MSC) of the CAISO argues that only some refinements to the current RA framework are warranted, and urges the CPUC not to adopt a CCM nor make any substantial changes to the RA framework at this time. The MSC argues that substantial changes to the current RA framework are not appropriate at this time because of uncertainties regarding the future (a) performance of the CAISO's redesigned MRTU market structure, (b) performance of the new capacity market designs being implemented by the eastern ISOs, and (c) structure of Direct Access (i.e., retail competition) in California. In support of its "wait and see" recommendation the MSC asserts that existing state policies with respect to energy efficiency and renewable portfolio standards will elicit sufficient new generation and demand response investment to meet load growth through 2020, thereby obviating the need for any additional new market-based investment that might be stimulated by a CCM. In summary, the MSC states that "a far more prudent and cost-effective course of action at this point is to refine the current RA paradigm to correct known flaws rather than completely overhaul it, while preserving the option of a full redesign at a later date."

The CAISO appreciates the involvement of MSC members in the CAISO stakeholder process to address CCM design issues, as well as the MSC's October 1 all-day meeting held at the CPUC devoted entirely to LT-RA, and the helpful insights and recommendations expressed in its November 5 formal opinion on LT-RA matters. It is important to recognize that the MSC is fully independent of CAISO management and advises the CAISO Board of Governors and, in the course of doing so, offers the benefits of its expertise to policy makers and the stakeholder community. As such the MSC's views do not reflect and need not align with the views of CAISO management. Moreover, the present LT-RA proceeding is somewhat unusual in that both CAISO management and the MSC are providing recommendations to the CPUC to be considered in its upcoming decision on the design of a LT-RA framework. The CAISO believes it is important, therefore, to clarify certain areas where its views are not in agreement with the MSC's November 5 opinion, which is the purpose of the present CAISO comments.

The CAISO believes that the CPUC should not postpone making key decisions on the design of the LT-RA framework with the idea of keeping such decisions open for a major redesign at a later time. Rather, significant enhancements to the current RA framework are needed and should be addressed within the current CPUC proceeding. The CAISO's views are further elaborated in the following key points.

1. Market participants and investors need greater certainty about the Long Term Resource Adequacy framework.

Market participants and potential investors need greater clarity and certainty regarding the LT-RA framework sooner rather than later in order to provide a stable environment to attract market-based investment in the power sector. A major reason for electricity restructuring has been to attract market-based investment rather than continuing to rely mainly on rate-based investment by the regulated utilities. Market-based investment benefits electricity consumers by allocating investment risk more broadly and efficiently across industry participants rather than allocating it entirely to ratepayers. For market-based investment to grow and succeed in California, however, it will require resolution of the remaining industry structure and policy issues that have been open and under debate since the 2000-1 crisis, in a manner that supports markets through transparent pricing and competitive procurement mechanisms. Rather than postponing the resolution of the remaining issues, the CPUC should address the key decisions needed to define a LT-RA program that can provide, in combination with the CAISO's comprehensive MRTU market redesign, a stable electricity market structure and an attractive environment for market-based investment.

2. Resource Adequacy capacity should be committed and identified several years ahead of the delivery year.

The CAISO believes that today's RA framework should be enhanced by establishing a multi-year forward (MYF) process for identifying resources that are actually committed to serve the CAISO control area and assessing their sufficiency relative to a MYF assessment of capacity needs developed by the state agencies and the CAISO. Such a process will allow transparent, open competition between existing resources and new market-based investment to provide specified quantities of capacity at the system level and for each local capacity area. This process can also encompass decisions to repower or retire existing generation and to invest in new demand response capability, and can even be linked explicitly to decisions whether to upgrade transmission into constrained areas of the grid. The MSC states that they could be supportive of a more forward RA compliance process than exists today, but only after a demonstration that firms are not sufficiently contracting on their own. The CAISO does not believe that conditioning the LT-RA design on such a demonstration is practical or desirable because (a) by the time such a demonstration were made it would likely be too late to take any remedial action that could include competition from new entry, and (b) a significant effort would be needed just to specify criteria for such a demonstration and for any subsequent decision to establish a MYF compliance process. The CAISO therefore believes this element of LT-RA should be addressed in the current proceeding.

3. A central capacity market can eliminate the need to enforce individual LSE RA requirements in a multi-year forward RA framework.

Although a MYF process to identify committed capacity does not necessarily require a CCM, there are some advantages to adopting a CCM in conjunction with the MYF process. Under a MYF requirement to demonstrate actual capacity commitments, there is clearly much more uncertainty about each LSE's system and local capacity requirements for the delivery year than under today's one-year forward requirement. The possibility of expanded direct access load migration further increases the uncertainty, which may make MYF showings particularly burdensome for smaller LSEs and an impediment to the success of direct access. From the perspective of overall supply sufficiency, however, what is important is that the total system and local requirements are met, irrespective of each LSE's share of those requirements. The process can therefore be made less burdensome on LSEs and administratively simpler if it is structured to ensure sufficient capacity procurement in the aggregate (for the system and for each local area) without imposing exact quantity requirements on each LSE several years in advance of the delivery period. The CAISO believes that a CCM could be an efficient and transparent way to accomplish this objective. Under such a system, the LSEs would still have the opportunity to engage in bilateral procurement in accordance with the rules and procedures established by the CPUC or their local regulatory authorities, and to self-supply such capacity into the CCM thereby managing their exposure to CCM prices, but each LSE's ultimate obligation would need to be determined only in the period when the capacity is actually delivered.

4. A central capacity market with reconfiguration auctions simplifies backstop procurement and capacity trading by LSEs.

Another benefit of a CCM in conjunction with MYF commitments of capacity is that the CCM effectively and automatically fills the role of a "backstop" mechanism for procuring additional capacity to meet any shortfall in LSE procurement. Because the CCM's procurement targets are set to meet the total system and local requirements for all LSEs in the aggregate, it will procure the difference between those requirements and the total LSE self-supply quantities, and will do so without having to assess the sufficiency of each LSE's capacity procurement. Additionally, any LSEs that have bilaterally procured more system or local capacity than they expect to need for the delivery period may offer their excess capacity into the CCM. Finally, by holding a series of "reconfiguration" markets between the primary CCM and the delivery period it will be possible for individual LSEs, for suppliers, and for the CAISO on behalf of the system as a whole to adjust the quantities of committed capacity to reflect new information on the actual requirements for the delivery period.

5. The RA Must Offer Obligation provides an effective basis for standardizing the RA capacity product and should be retained for all RA capacity.

The CAISO recognizes and affirms the need to develop further details of the specification of the standard capacity product, and in this regard strongly recommends against any dilution of the RA Must Offer Obligation (RA-MOO). There are several reasons for this position. First, although the RA-MOO does present some challenges due to the fact that different types of capacity have different availability characteristics, at present there is no basis other than the RA-MOO on which to standardize the capacity product. Since the RA framework was first implemented, the standard service that RA capacity provides in exchange for the RA capacity payments it receives is its compliance with the RA-MOO provisions of the CAISO tariff. While it may be possible to develop an alternative basis for the standard RA product, that would not be a minor fix but would involve a substantial rework of the RA framework. Second, the fact that different types of capacity have different performance characteristics does not undermine the value of the RA-MOO. Provided that the RA-MOO tariff provisions and the rules for counting qualifying capacity are realistically based on each resource type's actual characteristics, it is possible to utilize the RA-MOO-based structure to achieve the target level of reliability. In particular, it is possible to define qualifying rules for RA imports to obtain RA-MOO performance that is equivalent to that of internal resources. Third, retaining the RA-MOO as the basis of the RA product definition is not incompatible with the MSC's suggestion to identify new ancillary services that may be needed to support grid reliability as the nature of the system resource mix evolves. The CAISO has already acknowledged that this effort will be undertaken after the start-up of the MRTU markets. With this approach, the additional performance value provided by AS-capable resources can be compensated directly through the AS markets.

In conclusion, the CAISO emphasizes the need for the CPUC's current LT-RA proceeding to provide greater certainty and stability than exists today regarding the regulatory framework that will guide long-term investment and contracting to meet California's electricity needs. The CAISO recognizes that these matters are complex and involve the interplay of multiple policy objectives. At the same time, the California framework has been developing at a careful and deliberate pace while functioning with many "interim" measures since the 2000-1 crisis. We have now had several years of experience with the current RA rules, plus several years of lessons learned from the various RA approaches tried by the other ISOs, and are approaching the go-live of the CAISO's six-year market redesign effort based on the best-practices of other successful ISO market designs. The CAISO believes therefore that it is timely for the CPUC to provide its LT-RA vision through its ruling in this proceeding.

CERTIFICATE OF SERVICE

I hereby certify that on February 29, 2008, I served, by electronic mail and United States Mail, a copy of Comments of The California Independent System Operator on Staff Recommendations on Capacity Market Structure on all parties in Docket Number R.05-12-013.

DATED at Folsom, California on February 29, 2008.

/s/ Susan L. Montana

Susan L. Montana

smontana@caiso.com

An Employee of the California Independent System Operator

ANDREW B. BROWN
ELLISON, SCHNEIDER & HARRIS, LLP
SACRAMENTO, CA 95811abb@eslawfirm.com

Andrew Campbell
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214agc@cpuc.ca.gov

ANN HENDRICKSON
COMMERCE ENERGY, INC.
IRVING, TX 75039ahendrickson@commerceenergy.com

ANTHONY J. IVANCOVICH
CALIFORNIA INDEP. SYSTEM OPERATOR CORP
FOLSOM, CA 95630aivancovich@caiso.com

ADAM J. KATZ
MCDERMOTT WILL & EMERY LLP
WASHINGTON, DC 20005ajkatz@mwe.com

AKBAR JAZAYEIRI
SOUTHERN CALIFORNIA EDISON COMPANY
ROSEMEAD, CA 91770akbar.jazayeri@sce.com

G. ALAN COMNES
NRG ENERGY, INC.
CARLSBAD, CA 92008alan.comnes@nrgenergy.com

ALAN COMNES
WEST COAST POWER
PORTLAND, OR 97214alan.comnes@nrgenergy.com

G. ALAN COMNES
NRG ENERGY, INC.
CARLSBAD, CA 92008alan.comnes@nrgenergy.com

ALEXANDER B. MAKLER
CALPINE CORPORATION
PLEASANTON, CA 94588alexm@calpine.com

ARTHUR HAUBENSTOCK
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177ALHJ@pge.com

ANDREW L. HARRIS
PACIFIC GAS & ELECTRIC COMPANY
SAN FRANCISCO, CA 94177alho@pge.com

FRANK ANNUNZIATO
AMERICAN UTILITY NETWORK INC.
ALTA LOMA, CA 91737-2483allwazeready@aol.com

ANNA MCKENNA
CALIFORNIA ISO
FOLSOM, CA 95630amckenna@caiso.com

ANNA MCKENNA
CALIFORNIA ISO
FOLSOM, CA 95630amckenna@caiso.com

AUDRA HARTMANN
DYNEGY, INC.
SACRAMENTO, CA
95814Audra.Hartmann@Dynegy.com

ANDREA WELLER
STRATEGIC ENERGY
BRENTWOOD, CA 94513aweller@sel.com

Bishu Chatterjee
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214bbc@cpuc.ca.gov

BONNIE S. BLAIR
THOMPSON COBURN LLP
WASHINGTON, DC 20006bblair@thompsoncoburn.com

BETH ANN BURNS
CALIFORNIA ISO
FOLSOM, CA 95630bburns@caiso.com

BRIAN T. CRAGG
GOODIN MACBRIDE SQUERI RITCHIE & DAY
SAN FRANCISCO, CA
94111bcragg@goodinmacbride.com

BETH VAUGHAN
CALIFORNIA COGENERATION COUNCIL
CONCORD, CA 94521beth@beth411.com

BILL CHEN
CONSTELLATION NEWENERGY, INC.
SAN FRANCISCO, CA
94105bill.chen@constellation.com

BRIAN K. CHERRY
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177bkc7@pge.com

SCOTT BLAISING
BRAUN & BLAISING, P.C.
SACRAMENTO, CA 95814blaising@braunlegal.com

BARRY F. MCCARTHY
MCCARTHY & BERLIN, LLP
SAN JOSE, CA 95113bmcc@mccarthylaw.com

BOB ANDERSON
APS ENERGY SERVICES CO. INC.
STEWARTVILLE, MN 55976-
8085Bob_Anderson@apses.com

KEVIN BOUDREAUX
CALPINE CORPORATION
HOUSTON, TX 77002boudreauxk@calpine.com

CHARLES A. BRAUN
BRAUN & BLAISING, P.C.
SACRAMENTO, CA 95814braun@braunlegal.com

C. ANTHONY BRAUN
BRAUN & BLAISING P.C.
SACRAMENTO, CA 95814braun@braunlegal.com

BARBARA R. BARKOVICH
BARKOVICH & YAP, INC.
MENDOCINO, CA 95460brbarkovich@earthlink.net

BIANCA BOWMAN
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94105brbc@pge.com

BARRY R. FLYNN
FLYNN RESOURCE CONSULTANTS, INC.
DISCOVERY BAY, CA 94514brflynn@flynnrci.com

BRIAN THEAKER
DYNEGY
SACRAMENTO, CA 95814brian.theaker@dynegy.com

HSI BANG TANG
AZUSA LIGHT, POWER & WATER
AZUSA, CA 91702-9500btang@ci.azusa.ca.us

CLAUDIA GREIF
SAN MATEO, CA 94403c.greif@comcast.net

CATHIE ALLEN
PACIFICORP
PORTLAND, OR
97232californiadockets@pacificorp.com

CARLA PETERMAN
UCEI
BERKELEY, CA 94720carla.peterman@gmail.com

CASE ADMINISTRATION
SOUTHERN CALIFORNIA EDISON COMPANY
ROSEMEAD, CA 91770Case.Admin@sce.com

CARMEN BASKETTE
ENERNOC, INC.
SAN FRANCISCO, CA 94105cbaskette@enernoc.com

CALIFORNIA ENERGY MARKETS
SAN FRANCISCO, CA 94110cem@newsdata.com

CENTRAL FILES
SAN DIEGO GAS AND ELECTRIC COMPANY
SAN DIEGO, CA 92123centralfiles@semprautilities.com

CENTRAL FILES
SAN DIEGO GAS AND ELECTRIC COMPANY
SAN DIEGO, CA 92123-
1530centralfiles@semprautilities.com

Charlyn A. Hook
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214chh@cpuc.ca.gov

CHRISTOPHER A. HILEN
SIERRA PACIFIC POWER COMPANY
RENO, NV 89511chilen@sppc.com

CYNTHIA HINMAN
CALIFORNIA ISO
FOLSOM, CA 95630CHinman@caiso.com

CHRISTOPHER C. O'HARA
NRG ENERGY
PRINCETON, NJ 8540chris.ohara@nrgenergy.com

CONSTANCE PARR LENI
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814Cleni@energy.state.ca.us

CRAIG MARTIN
CALPINE CORPORATION
MURRIETA, CA 92562cmartin@calpine.com

CHARLES MEE
CALIFORNIA DEPARTMENT OF WATER
RESOURCES
SACRAMENTO, CA 95821cmee@water.ca.gov

CATALIN MICSA
CAISO
FOLSOM, CA 95630cmicsa@caiso.com

CAROLYN KEHREIN
ENERGY MANAGEMENT SERVICES
DIXON, CA 95620-4208cmkehrein@ems-ca.com

CRYSTAL NEEDHAM
EDISON MISSION ENERGY
IRVINE, CA 92612-1046cneedham@edisonmission.com

CARL PECHMAN
POWER ECONOMICS
SANTA CRUZ, CA
95060cpechman@powereconomics.com

CURTIS KEBLER
GOLDMAN, SACHS & CO.
LOS ANGELES, CA 90067curtis.kebler@gs.com

COURTNEY WEDDINGTON
COMMERCE ENERGY INC
IRVING, TX 75039cweddington@commerceenergy.com

CYNTHIA A. FONNER
CONSTELLATION ENERGY GROUP INC
CHICAGO, IL
60661Cynthia.A.Fonner@constellation.com

DANIEL A. KING
SEMPRA ENERGY
SAN DIEGO, CA 92101daking@sempra.com

DAN SILVERIA
SURPRISE VALLEY ELECTRIC CORPORATION
ALTURAS, CA 96101dansvec@hdo.net

DAVID LLOYD
NRG ENERGY
CARLSBAD, CA 92008david.lloyd@nrgenergy.com

DAVID BRANCHCOMB
BRANCHCOMB ASSOCIATES, LLC
ORANGEVILLE, CA 95662david@branchcomb.com

DEREK BANDERA
NERGY, INC.
ARLINGTON, VA 22209dbandera@reliant.com

Donald J. Brooks
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214dbr@cpuc.ca.gov

DAN L. CARROLL
DOWNEY BRAND, LLP
SACRAMENTO, CA 95814dcarroll@downeybrand.com

DONALD BROOKHYSER
ALCANTAR & KAHL LLP
PORTLAND, OR 97201deb@a-klaw.com

DEBRA LLOYD
CITY OF PALO ALTO
PALO ALTO, CA 94301debra.lloyd@cityofpaloalto.org

DENNIS M.P. EHLING
KIRKPATRICK & LOCKHART NICHOLSON
GRAHAM
LOS ANGELES, CA 90067dehling@klng.com

DAVID E. MORSE
DAVIS, CA 95616-5934demorse@omsoft.com

DENINIS DE CUIR
DENNIS W. DE CUIR, A LAW CORPORATION
ROSEVILLE, CA 95661dennis@ddecuir.com

DON P. GARBER
SAN DIEGO GAS AND ELECTRIC
SAN DIEGO, CA 92101-3017DGarber@sempra.com

DIANE I. FELLMAN
FPL ENERGY, LLC
SAN FRANCISCO, CA 94102diane_fellman@fpl.com

DIRK A. VAN ULDEN
UNIVERSITY OF CALIFORNIA
OAKLAND, CA 94607dirk.vanulden@ucop.edu

Donna J. Hines
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214djh@cpuc.ca.gov

DAVID X. KOLK
COMPLETE ENERGY SERVICES INC
MURRIETA, CA 92562dkolk@compenergy.com

DAVID MARCUS
BERKELEY, CA 94701dmarcus2@sbcglobal.net

DOUGLAS MCFARLAN
MIDWEST GENERATION EME
CHICAGO, IL 60605dmcfarlan@mwgen.com

DESPINA NIEHAUS
SAN DIEGO GAS AND ELECTRIC COMPANY
SAN DIEGO, CA 92123-
1530dniehaus@semprautilities.com

DANIEL W. DOUGLASS
DOUGLASS & LIDDELL
WOODLAND HILLS, CA
91367douglass@energyattorney.com

DESPINA PAPAPOSTOLOU
SAN DIEGO GAS AND ELECTRIC COMPANY
SAN DIEGO, CA 92123-
1530dpapapostolou@semprautilities.com

DAVID A. SANDINO
CALIFORNIA DEPARTMENT OF WATER
RESOURCES
SACRAMENTO, CA 95814dsandino@water.ca.gov

DEVRA WANG
NATURAL RESOURCES DEFENSE COUNCIL
SAN FRANCISCO, CA 94104dwang@nrdc.org

DAVID WITHROW
CALIFORNIA ISO
FOLSOM, CA 95630dwithrow@caiso.com

DONALD SCHOENBECK
RCS, INC.
VANCOUVER, WA 98660dws@r-c-s-inc.com

ED CHANG
FLYNN RESOURCE CONSULTANTS, INC.
EL DORADO HILLS, CA 95762edchang@flynnrci.com

Elizabeth Dorman
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214edd@cpuc.ca.gov

EDWARD W. O'NEILL
DAVIS WRIGHT TREMAINE LLP
SAN FRANCISCO, CA 94111-6533edwardoneill@dwt.com

E.J. WRIGHT
OCCIDENTAL POWER SERVICES, INC.
HOUSTON, TX 77046ej_wright@oxy.com

EVELYN KAHL
ALCANTAR & KAHL, LLP
SAN FRANCISCO, CA 94104ek@a-klaw.com

Elizabeth Stoltzfus
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214eks@cpuc.ca.gov

ED LUCHA
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177ELL5@pge.com

ELENA MELLO
SIERRA PACIFIC POWER COMPANY
RENO, NV 89520emello@sppc.com

ERIC OLSON
NAVIGANT CONSULTING INC.
RANCHO CORDOVA, CA 95670-6078eolson@navigantconsulting.com

CALIFORNIA ISO
FOLSOM, CA 95630e-recipient@caiso.com

EDWARD V. KURZ
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94105evk1@pge.com

VICKI E. FERGUSON
BRAUN & BLAISING P.C.
SACRAMENTO, CA 95814ferguson@braunlegal.com

KAREN TERRANOVA
ALCANTAR & KAHL, LLP
SAN FRANCISCO, CA 94104filings@a-klaw.com

FRED MASON
CITY OF BANNING
BANNING, CA 92220fmason@ci.banning.ca.us

FRED MOBASHERI
ELECTRIC POWER GROUP
PASADENA, CA 91101fmobasheri@aol.com

Farzad Ghazzagh
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214fxg@cpuc.ca.gov

GREG BASS
SEMPRA ENERGY SOLUTIONS
SAN DIEGO, CA 92101-3017gbass@semprasolutions.com

GURCHARAN BAWA
PASADENA WATER AND POWER
PASADENA, CA 91101gbawa@cityofpasadena.net

GREGORY T. BLUE
ENXCO DEVELOPMENT CORP.
SAN RAMON, CA 94583gblue@enxco.com

GARY DESHAZO
CALIFORNIA ISO
FOLSOM, CA 95763-9014gdeshazo@caiso.com

UNIVERSITY OF CALIFORNIA
OAKLAND, CA 94607george.getgen@ucop.edu

GIFFORD JUNG
POWEREX CORPORATION
VANCOUVER, BC V6C 2X8gifford.jung@powerex.com

GRANT A. ROSENBLUM
CALIFORNIA ISO
FOLSOM, CA 95630grosenblum@caiso.com

GRETCHEN SCHOTT
RELIANT ENERGY, INC.
HOUSTON, TX 77002gschott@reliant.com

GRACE LIVINGSTON-NUNLEY
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177GXL2@pge.com

MICHAEL WERNER
CALIFORNIA DEPARTMENT OF WATER RESOURCES
SACRAMENTO, CA 95821hcronin@water.ca.gov

HOLLY B. CRONIN
CALIFORNIA DEPARTMENT OF WATER RESOURCES
SACRAMENTO, CA 95821hcronin@water.ca.gov

IRYNA KWASNY
DEPT. OF WATER RESOURCES-CERS DIVISION
SACRAMENTO, CA 95821ikwasny@water.ca.gov

IRENE K. MOOSEN
CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO, CA 94112irene@igc.org

L. JAN REID
COAST ECONOMIC CONSULTING
SANTA CRUZ, CA 95062janreid@coastecon.com

JEANNE B. ARMSTRONG
GOODIN MACBRIDE SQUERI RITCHIE & DAY LLP
SAN FRANCISCO, CA
94111jarmstrong@goodinmacbride.com

JENNIFER CHAMBERLIN
STRATEGIC ENERGY, LLC
CLYDE, CA 94520jchamberlin@strategicenergy.com

JACQUELINE DEROSA
CUSTOMIZED ENERGY SOLUTIONS
FOLSOM, CA 95630jderosa@ces-ltd.com

JEFFERY D. HARRIS
ELLISON, SCHNEIDER & HARRIS LLP
SACRAMENTO, CA 95814jdh@eslawfirm.com

JEFF LAM
POWEREX CORP
VANCOUVER, BC V6C 2X8jeff.lam@powerex.com

JEFFREY P. GRAY
DAVIS WRIGHT TREMAINE, LLP
SAN FRANCISCO, CA 94111-6533jeffgray@dwt.com

JENINE SCHENK
APS ENERGY SERVICES
PHOENIX, AZ 85004jenine.schenk@apses.com

JESUS ARREDONDO
NRG ENERGY INC.
CARLSBAD, CA 99208jesus.arredondo@nrgenergy.com

JACQUELINE GEORGE
CALIFORNIA DEPARTMENT OF WATER RESOURCES
SACRAMENTO, CA 95821jgeorge@water.ca.gov

JOHN GOODIN
CALIFORNIA ISO
FOLSOM, CA 95630jgoodin@caiso.com

JIM HENDRY
SAN FRANCISCO PUBLIC UTILITIES COMM.
SAN FRANCISCO, CA 94103jhendry@sfwater.org

JAMES MAYHEW
MIRANT CORPORATION
ATLANTA, GA 30338jim.mayhew@mirant.com

JAMES ROSS
REGULATORY & COGENERATION SERVICES, INC.
CHESTERFIELD, MO 63017jimross@r-c-s-inc.com

JEDEDIAH GIBSON
ELLISON SCHNEIDER & HARRIS
SACRAMENTO, CA 95814jjg@eslawfirm.com

KAREN E. BOWEN
WINSTON & STRAWN LLP
SAN FRANCISCO, CA 94111jkarp@winston.com

JOHN W. LESLIE
LUCE, FORWARD, HAMILTON & SCRIPPS, LLP
SAN DIEGO, CA 92130jleslie@luce.com

JANE E. LUCKHARDT
DOWNEY BRAND LLP
SACRAMENTO, CA
95814jluckhardt@downeybrand.com

JAMES MCCLAIN
CALIFORNIA INDEPENDENT SYSTEM OPERATOR C
FOLSOM, CA 95630jmcclain@caiso.com

JAMES MCMAHON
CRA INTERNATIONAL
CAMBRIDGE, MA 2138jmcmahon@crai.com

JENNIFER A. MORRISSEY
CLEARY GOTTLIEB STEEN & HAMILTON LLP
WASHINGTON, DC 20006jmorrissey@cgsh.com

Joe Como
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214joc@cpuc.ca.gov

UNIVERSITY OF CALIFORNIA
OAKLAND, CA 94607john.rolle@ucop.edu

JOHN R. REDDING
ARCTURUS ENERGY CONSULTING
MENDOCINO, CA 95460johnrredding@earthlink.net

JEANNETTE OLKO
COLTON, CA 92324jolko@ci.colton.ca.us

JOY A. WARREN
MODESTO IRRIGATION DISTRICT
MODESTO, CA 95354joyw@mid.org

JOHN PACHECO
CA DEPT. OF WATER RESOURCES
SACRAMENTO, CA 95821jpacheco@water.ca.gov

JANINE L. SCANCARELLI
FOLGER, LEVIN & KAHN, LLP
SAN FRANCISCO, CA 94111jscancarelli@flk.com

JAMES D. SQUERI
GOODIN, MACBRIDE, SQUERI, DAY & LAMPREY
SAN FRANCISCO, CA
94111jsqueri@goodinmacbride.com

JUDY PAU
DAVIS WRIGHT TREMAINE LLP
SAN FRANCISCO, CA 94111-6533judypau@dwt.com

JULIE L. MARTIN
NORTH AMERICA GAS AND POWER
HOUSTON, TX 77079julie.martin@bp.com

JAMES WEIL
AGLET CONSUMER ALLIANCE
COOL, CA 95614jweil@aglet.org

JOSEPH F. WIEDMAN
GOODIN MACBRIDE SQUERI DAY & LAMPREY LLP
SAN FRANCISCO, CA
94111jwiedman@goodinmacbride.com

JIM WOODWARD
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814-5504jwoodwar@energy.state.ca.us

KENNETH E. ABREU
SAN MATEO, CA 94403k.abreu@sbcglobal.net

KEONI ALMEIDA
CALIFORNIA INDEPENDENT SYSTEM OPERATOR
FOLSOM, CA 95630kalmeida@caiso.com

KAREN A. LINDH
LINDH & ASSOCIATES
ANTELOPE, CA 95843karen@klindh.com

KATHRYN WIG
NRG ENERGY, INC.
PRINCETON, NY 8540Kathryn.Wig@nrgenergy.com

KATIE KAPLAN
INTEGRATED ENERGY SOLUTIONS LLC
SACRAMENTO, CA 95835katie@iesolutionsllc.net

Kevin R. Dudney
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214kd1@cpuc.ca.gov

KIRBY DUSEL
NAVIGANT CONSULTING, INC.
RANCHO CORDOVA, CA
95670kdusel@navigantconsulting.com

Kathryn Auriemma
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214kdw@cpuc.ca.gov

KEVIN WOODRUFF
WOODRUFF EXPERT SERVICES, INC.
SACRAMENTO, CA 95814kdw@woodruff-expert-services.com

KEITH MCCREA
SUTHERLAND, ASBILL & BRENNAN
WASHINGTON, DC 20004-2415keith.mccrea@sablaw.com

KENNY SWAIN
NAVIGANT CONSULTING
RANCHO CORDOVA, CA
95670kenneth.swain@navigantconsulting.com

KERRY HATTEVIK
MIRANT CORPORATION
PITTSBURG, CA 94565kerry.hattevik@mirant.com

KATHLEEN ESPOSITO
CRESTED BUTTE CATALYSTS LLC
CRESTED BUTTE, CO 81224kesposito@cbcatalysts.com

KEITH JOHNSON
CALIFORNIA INDEPENDENT SYSTEM OPERATOR
FOLSOM, CA 95630kjohnson@caiso.com

KEVIN J. SIMONSEN
ENERGY MANAGEMENT SERVICES
DURANGO, CO 81301kjsimonsen@ems-ca.com

GREGORY S.G. KLATT
DOUGLASS & LIDDELL
ARCADIA, CA 91007klatt@energyattorney.com

KIMBERLY KIENER
IMPERIAL IRRIGATION DISTRICT
SAN DIEGO, CA 92106kmkiener@cox.net

KIM KIENER
SAN DIEGO, CA 92106kmkiener@fox.net

KARLEEN O'CONNOR
WINSTON & STRAWN LLP
SAN FRANCISCO, CA 94111koconnor@winston.com

AVIS KOWALEWSKI
CALPINE CORPORATION
PLEASANTON, CA 94588kowalewskia@calpine.com

Karen P. Paull
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214kpp@cpuc.ca.gov

Katie Liu
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214kql@cpuc.ca.gov

KRIS G. CHISHOLM
CALIFORNIA ELECTRICITY OVERSIGHT BOARD
SACRAMENTO, CA 95814kris.chisholm@eob.ca.gov

KEN SIMS
SILICON VALLEY POWER
SANTA CLARA, CA
95050ksims@siliconvalleypower.com

KEITH SWITZER
GOLDEN STATE WATER COMPANY
SAN DIMAS, CA 91773-9016kswitzer@gswater.com

KURT DUVALL
CITY OF CORONA
CORONA, CA 92880kurt.duvall@ci.corona.ca.us

Laurence Chaset
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214lau@cpuc.ca.gov

LAURA GENAO
SOUTHERN CALIFORNIA EDISON COMPANY
ROSEMEAD, CA 91770laura.genao@sce.com

LISA A. COTTLE
WINSTON & STRAWN LLP
SAN FRANCISCO, CA 94111lcottle@winston.com

LES PEREIRA
NORTHERN CALIFORNIA POWER AGENCY
ROSEVILLE, CA 95678Les.Pereira@ncpa.com

DONALD C. LIDDELL
DOUGLASS & LIDDELL
SAN DIEGO, CA 92103liddell@energyattorney.com

LINDA Y. SHERIF
CALPINE CORPORATION
PLEASANTON, CA 94588linda.sherif@calpine.com

LISA M. DECKER
CONSTELLATION ENERGY GROUP, INC.
BALTIMORE, MD 21202lisa.decker@constellation.com

LISA WEINZIMER
PLATTS MCGRAW-HILL
SAN FRANCISCO, CA
94118lisa_weinzimer@platts.com

LAWRENCE KOSTRZEWA
EDISON MISSION ENERGY
IRVINE, CA 92612-1046lkostrzewa@edisonmission.com

LORENZO KRISTOV
CALIFORNIA ISO
FOLSOM, CA 95630Lkristov@caiso.com

LYNN MARSHALL
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814lmarshal@energy.state.ca.us

LYNN M. HAUG
ELLISON & SCHNEIDER
SACRAMENTO, CA 95814-3109lmh@eslawfirm.com

LEE TERRY
CALIFORNIA DEPARTMENT OF WATER
RESOURCES
SACRAMENTO, CA 95821lterry@water.ca.gov

LEEANNE UHLER
CITY OF RIVERSIDE
RIVERSIDE, CA 92504luhler@riversideca.gov

LISA G. URICK
SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CA 92101LURick@sempra.com

LANA WONG
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814lwong@energy.state.ca.us

MARCIE MILNER
CORAL ENERGY RESOURCES, L P
SAN DIEGO, CA 92121marcie.milner@shell.com

MARK J. SMITH
FPL ENERGY
ALAMO, CA 94507mark_j_smith@fpl.com

MARY LYNCH
CONSTELLATION ENERGY COMMODITIES GROUP
GOLD RIVER, CA 95670mary.lynch@constellation.com

UNIVERSITY OF CALIFORNIA
OAKLAND, CA 94607matthew.stclair@ucop.edu

BRUCE MCLAUGHLIN
BRAUN & BLAISING, P.C.
SACRAMENTO, CA 95814mclaughlin@braunlegal.com

MICHAEL B. DAY
GOODIN MACBRIDE SQUERI DAY & LAMPREY
LLP
SAN FRANCISCO, CA
94111mday@goodinmacbride.com

MARC D. JOSEPH
ADAMS, BROADWELL, JOSEPH & CARDOZO
SOUTH SAN FRANCISCO, CA
94080mdjoseph@adamsbroadwell.com

MICHEL PETER FLORIO
THE UTILITY REFORM NETWORK (TURN)
SAN FRANCISCO, CA 94102mflorio@turn.org

MELANIE GILLETTE
ENERNOC, INC.
FOLSOM, CA 95630mgillette@enernoc.com

MICHAEL A. BACKSTROM
SOUTHERN CALIFORNIA EDISON COMPANY
ROSEMEAD, CA 91770michael.backstrom@sce.com

MIKE EVANS
CORAL POWER, LLC
SAN DIEGO, CA 92121michael.evans@shell.com

MICHAEL J. GERGEN
LATHAM & WATKINS LLP
WASHINGTON, DC 20004-
1304michael.gergen@lw.com

MIKE JASKE
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814mjaske@energy.state.ca.us

Matthew Deal
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214mjd@cpuc.ca.gov

MICHAEL MAZUR
3 PHASES RENEWABLES, LLC
PLAYA DEL REY, CA 90293-
7835mmazur@3phasesRenewables.com

MARGARET E. MCNAUL
THOMPSON COBURN LLP
WASHINGTON, DC
20006mmcnaul@thompsoncoburn.com

MARC PRYOR
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814mpryor@energy.state.ca.us

MANUEL RAMIREZ
CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO, CA 94103mramirez@sfwater.org

MIKE RINGER
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814mringer@energy.state.ca.us

MRW & ASSOCIATES, INC.
OAKLAND, CA 94612mrw@mrwassoc.com

MICHAEL SHAMES
UTILITY CONSUMERS' ACTION NETWORK
SAN DIEGO, CA 92103mshames@ucan.org

Mark S. Wetzell
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214msw@cpuc.ca.gov

MICHAEL TEN EYCK
CITY OF RANCHO CUCAMONGA
RANCHO CUCAMONGA, CA
91730MTENEYCK@CI.RANCHO-
CUCAMONGA.CA.US

MARIO VILLAR
SIERRA PACIFIC POWER COMPANY
LAS VEGAS, NV 89146mvillar@nevp.com

MICHAEL A. YUFFEE
MCDERMOTT WILL & EMERY LLP
WASHINGTON, DC 20005-3096myuffee@mwe.com

Nancy Ryan
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214ner@cpuc.ca.gov

JESSICA NELSON
PLUMAS-SIERRA RURAL ELECTRIC CO-OP
PORTOLA, CA 96122-2000notice@psrec.coop

NANCY RADER
CALIFORNIA WIND ENERGY ASSOCIATION
BERKELEY, CA 94710nrader@calwea.org

NANCY TRONAAS
CALIFORNIA ENERGY COMMISSION
SACRAMENTO, CA 95814-
5512ntronaas@energy.state.ca.us

SHMUEL S. OREN
UNIVERSITY OF CALIFORNIA AT BERKELEY
BERKELEY, CA 94720-1777oren@ieor.berkeley.edu

PATRICIA GIDEON
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177pcg8@pge.com

MARK L. PERLIS
DICKSTEIN SHAPIRO LLP
WASHINGTON, DC
20006perlism@dicksteinshaprio.com

PHILIP HERRINGTON
EDISON MISSION ENERGY
IRVINE, CA 92612-
1046pherrington@edisonmission.com

PHILIPPE AUCLAIR
WALNUT CREEK, CA 94598philha@astound.net

PHILLIP J. MULLER
SCD ENERGY SOLUTIONS
SAN RAFAEL, CA 94903philm@scdenergy.com

PAMELA J. MILLS
SAN DIEGO GAS & ELECTRIC
SAN DIEGO, CA 92123pmills@semprautilities.com

PHILIP D. PETTINGILL
CALIFORNIA INDEPENDENT SYSTEM OPERATOR
FOLSOM, CA 95630ppettingill@caiso.com

PATRICIA THOMPSON
SUMMIT BLUE CONSULTING
WALNUT CREEK, CA
94597pthompson@summitblue.com

RACHEL MCMAHON
CEERT
SACRAMENTO, CA 95814rachel@ceert.org

JOHN DUTCHER
MOUNTAIN UTILITIES
FAIRFIELD, CA 94534-7875ralf1241a@cs.com

RALPH E. DENNIS
FELLON-MCCORD & ASSOCIATES
LOUISVILLE, KY 40223ralph.dennis@constellation.com

RICHARD H. COUNIHAN
ENERNOC, INC.
SAN FRANCISCO, CA 94105rcounihan@enernoc.com

BOB EMMERT
CALIFORNIA ISO
FOLSOM, CA 95630remmert@caiso.com

RAYMOND HUNG
PG&E
SAN FRANCISCO, CA 94177RHHJ@pge.com

RICK C. NOGER
PRAXAIR PLAINFIELD, INC.
WILMINGTON, DE 19808rick_noger@praxair.com

RONALD MOORE
GOLDEN STATE WATER/BEAR VALLEY ELECTRIC
SAN DIMAS, CA 91773rkmoore@gswater.com

Robert L. Strauss
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214rls@cpuc.ca.gov

Rahmon Momoh
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214rmm@cpuc.ca.gov

RANDY NICHOLSON
SAN DIEGO GAS & ELECTRIC
SAN DIEGO, CA
92123RNicholson@Semprautilities.com

ROGER VANHOY
MSR PUBLIC POWER AGENCY
MODESTO, CA 95352rogerv@mid.org

ROD AOKI
ALCANTAR & KAHL, LLP
SAN FRANCISCO, CA 94104rsa@a-klaw.com

REED V. SCHMIDT
BARTLE WELLS ASSOCIATES
BERKELEY, CA 94703rschmidt@bartlewells.com

ROBIN SMUTNY-JONES
CALIFORNIA ISO
FOLSOM, CA 95630rsmutny-jones@caiso.com

ROBERT STODDARD
CRA INTERNATIONAL
BOSTON, MA 2116RStoddard@crai.com

ROBIN J. WALTHER, PH.D.
PALO ALTO, CA 94305rwalther@pacbell.net

REID A. WINTHROP
PILOT POWER GROUP, INC.
SAN DIEGO, CA 92122rwinthrop@pilotpowergroup.com

RYAN FLYNN
PACIFICORP
PORTLAND, OR 97232ryan.flynn@pacificorp.com

STEPHANIE LA SHAWN
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177S1L7@pge.com

SAEED FARROKHPAY
FEDERAL ENERGY REGULATORY COMMISSION
FOLSOM, CA 95630saeed.farrokhpay@ferc.gov

Aram Shumavon
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214sap@cpuc.ca.gov

SARA O'NEILL
CONSTELLATION NEW ENERGY, INC.
SAN FRANCISCO, CA
94105sara.oneill@constellation.com

C. SUSIE BERLIN
MC CARTHY & BERLIN, LLP
SAN JOSE, CA 95113sberlin@mccarthylaw.com

SCOTT TOMASHEFSKY
NORTHERN CALIFORNIA POWER AGENCY
ROSEVILLE, CA 95678-
6420scott.tomashefsky@ncpa.com

SETH D. HILTON
STOEL RIVES
SAN FRANCISSCO, CA 94104sdhilton@stoel.com

Simon Baker
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214seb@cpuc.ca.gov

SHAUN HALVERSON
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177SEHC@pge.com

STEVE ISSER
GOOD COMPANY ASSOCIATES
AUSTIN, TX 78701sisser@goodcompanyassociates.com

STEPHEN KEEHN
SEMPRA ENERGY COPORATE CENTER
SAN DIEGO, CA 92101-3017skeehn@sempra.com

Sudheer Gokhale
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214skg@cpuc.ca.gov

SEEMA SRINIVASAN
ALCANTAR & KAHL, LLP
SAN FRANCISCO, CA 94104sls@a-klaw.com

SEBASTIEN CSAPO
PG&E PROJECT MGR.
SAN FRANCISCO, CA 94177sscb@pge.com

STEPHEN J. SCIORTINO
CITY OF ANAHEIM
ANAHEIM, CA 92805ssciortino@anaheim.net

STACY AGUAYO
APS ENERGY SERVICES
PHOENIX, AZ 85004stacy.aguayo@apses.com

STEVE KOERNER
EL PASO CORPORATION
COLORADO SPRINGS, CO
80903steve.koerner@elpaso.com

STEVEN HUHMAN
MORGAN STANLEY CAPITAL GROUP INC.
PURCHASE, NY
10577steven.huhman@morganstanley.com

STEVEN S. SCHLEIMER
BARCLAYS BANK, PLC
NEW YORK, NY
10166steven.schleimer@barclayscapital.com

STEVEN KELLY
INDEPENDENT ENERGY PRODUCERS ASSN
SACRAMENTO, CA 95814steven@iepa.com

SUE MARA
RTO ADVISORS, LLC.
REDWOOD CITY, CA 94062sue.mara@rtoadvisors.com

SOUMYA SASTRY
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CA 94177svs6@pge.com

Traci Bone
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214tbo@cpuc.ca.gov

TOM BILL
SEMPRA ENERGY CORPORATE CENTER
SAN DIEGO, CA 92101-3017tbrill@sempra.com

TOM BRILL
SEMPRA ENERGY CORPORATE CENTER
SAN DIEGO, CA 92101-3017tbrill@sempra.com

TRENT CARLSON
RELIANT ENERGY, INC.
HOUSTON, TX 77002tcarlson@reliant.com

THOMAS CORR
SEMPRA GLOBAL
SAN DIEGO, CA 92101-3017tcorr@sempraglobal.com

THOMAS DARTON
PILOT POWER GROUP, INC.
SAN DIEGO, CA 92123tdarton@pilotpowergroup.com

TREVOR DILLARD
SIERRA PACIFIC POWER COMPANY
RENO, NV 89520-0024tdillard@sppc.com

THERESA L. MUELLER
CITY ATTORNEY'S OFFICE
SAN FRANCISCO, CA 94102theresa.mueller@sfgov.org

THOMAS S KIMBALL
MODESTO IRRIGATION DISTRICT
MODESTO, CA 95352-4060tomk@mid.org

TONY ZIMMER
NORTHERN CALIFORNIA POWER AGENCY
ROSEVILLE, CA 95678-6420Tony.Zimmer@ncpa.com

TRACEY DRABANT
BEAR VALLEY ELECTRIC SERVICE
BIG BEAR LAKE, CA 92315-
1547traceydrabant@bves.com

THEODORE ROBERTS
SEMPRA GLOBAL
SAN DIEGO, CA 92101-3017troberts@sempra.com

Melissa Semcer
CALIF PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CA 94102-3214unc@cpuc.ca.gov

VALERIE WINN
PACIFIC GAS & ELECTRIC
SAN FRANCISCO, CA 94105vjw3@pge.com

VIDHYA PRABHAKARAN
GOODIN,MACBRIDE,SQUERI,DAY,LAMPREY
SAN FRANCISCO, CA
94111vprabhakaran@goodinmacbride.com

WAYNE AMER
MOUNTAIN UTILITIES
KIRKWOOD, CA 95646wamer@kirkwood.com

WILLIAM H. BOOTH
LAW OFFICES OF WILLIAM H. BOOTH
MORAGA, CA 94596wbooth@booth-law.com

WAYNE TOMLINSON
RUBY PIPELINE, LLC
COLORADO SPRINGS, CO
80903william.tomlinson@elpaso.com

WILLIAM W. WESTERFIELD, III
ELLISON, SCHNEIDER & HARRIS, LLP
SACRAMENTO, CA 95814www@eslawfirm.com

WILLIAM W. WESTERFIELD III
ELLISON SCHNEIDER & HARRIS, LLP
SACRAMENTO, CA 95814www@eslawfirm.com

JUSTIN C. WYNNE
BRAU & BLAISING, P.C.
SACRAMENTO, CA 95814wynne@braunlegal.com

RANDALL PRESCOTT
BP ENERGY COMPANY
BURLINGTON, MA 1803

MIKE KASABA
QUIET ENERGY
TOPANGA, CA 90290

DAVID J. COYLE
ANZA ELECTRIC COOPERATIVE, INC
ANZA, CA 92539-1909

ROBERT MARSHALL
PLUMAS SIERRA RURAL ELECTRIC COOP.
PORTOLA, CA 96122-2000