BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Promote Policy and Program Coordination and Integration in Electric Utility Resource Planning	)	R.04-04-003

RESPONSE OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR TO ADMININSTRATIVE LAW JUDGE'S RULING REQUESTING ADDITIONAL COMMENTS ON RESOURCE ADEQUACY ISSUES

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Dated: July 22, 2004

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The California Independent System Operator ("CAISO") respectfully submits these comments in response to the Administrative Law Judge's Ruling Requesting Additional Comments on Resource Adequacy Issues mailed on July 8, 2004 ("ALJ Ruling") in this proceeding.

I. Introduction and Summary

The ALJ Ruling expressly requests comments on the following resource adequacy issues:

- Whether to accelerate the phase-in of the full planning reserve margin from January 1, 2008 to June 1, 2006.
- How the year-round 15-17% reserve requirement and the seasonal 90% forward contracting requirement interact, including (1) when to fill-in the remaining 10% for reserves procured for the summer months, and (2) when load serving entities ("LSEs") must demonstrate the full 15-17% in the non-summer months. In particular, comments should address whether LSEs should be required to procure and demonstrate the remaining 10% of their

summer resource adequacy requirement and their full non-summer reserve margin one month ahead.

- Whether future Commission approved contracts intended to comply with resource adequacy requirements should include terms and conditions requiring that resources secured to meet the LSE's resource adequacy requirement be available to LSEs to schedule in the day-ahead time frame.

The CAISO has consistently emphasized that a well-designed resource adequacy requirement can provide an effective platform for future investment in California's electric infrastructure, support reliable system operations, and ultimately mitigate the effect of market power in wholesale electricity markets by encouraging long-term contracts. The ALJ Ruling reflects the Commission's laudable goal of seeking to realize these benefits as soon as practicable by accelerating the phase-in date of the planning reserve margin. The CAISO strongly supports expediting the phase-in of a resource adequacy obligation and believes that requiring LSEs to fully meet the 15-17% planning reserve margin by June 1, 2006 is achievable. In this regard, the CAISO is aware of two related concerns to acceleration, neither of which poses a legitimate barrier to fulfillment of a June 1, 2006 implementation date.

First, LSEs advocate a longer phase-in period to prevent those entities from being placed at a competitive disadvantage vis-à-vis suppliers. The CAISO has repeatedly countered this concern by pointing to the LSEs' assertions that there currently exists a surplus of available capacity resources throughout the region. Such market conditions favor LSE procurement at this time and support a shorter phase-in period by mitigating the ability of suppliers to exercise market power.

The CAISO recognizes that the existence of an aggregate surplus does not resolve all issues. The Commission has committed to imposing a local capacity requirement as an element of the overall resource adequacy obligation.[1] Surplus capacity in the aggregate may not protect LSEs from the exercise of market power in procuring within transmission constrained "load pockets." The CAISO believes this concern can be addressed by a combination of protections, which can be applied during a transition period, including using Reliability-Must-Run ("RMR") units (consistent with applicable RMR criteria) or RMR-like contracts (for local area needs that do not fall under the RMR criteria) to meet LSEs local capacity requirements during a transition period to reduce the incremental amount of capacity that must be procured. In addition, it would be appropriate to permit limited exemptions from capacity obligations during a transition period should LSEs demonstrate that they were unable to secure reasonably priced deals through bilateral negotiations due to the exercise of market power. Moreover, a clear and robust local capacity requirement will boost the CAISO's ability to obtain meaningful local market power mitigation mechanisms from the Federal Energy Regulatory Commission ("FERC").[2]

Second, the imposition of a locational capacity requirement adds to the administration relating to implementation of the overall resource adequacy obligation. All resources procured to meet local capacity requirements contribute to satisfying the full 15-17% planning reserve margin. Yet, the rules associated with procuring local capacity must be known prior to LSEs contracting for resources to prevent overprocurement. The CAISO recognizes its role in

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[1] See, *Interim Order,* D.04-01-050 (Jan. 26, 2004), mimeo. at p. 129; *Assigned Commissioner's Ruling and Scoping Memo,* R.04-04-003 (June 4, 2004) ("Scoping Memo"), mimeo. at Attachment A p. 9; *Interim Order Regarding Electric Reliability Issues,* R.04-04-003 (July 8, 2004) ("Reliability Order"), mimeo. at p. 14.
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[2] See, *Comments of the California Independent System Operator Corporation on the Proposed Decision of Judge Walwyn and the Alternate Proposed Decision of Commissioner Peevey Both Mailed on November 18, 2003,* R.01-10-024 (Dec. 8, 2003), at p. 24.

defining load pockets and the capacity requirements within such pockets and the need to do so in a diligent and timely manner. Simply put, the CAISO believes that all steps necessary to implement a local capacity requirement can be accomplished to meet a June 1, 2006 phase-in date.

With respect to how the year-round 15-17% reserve requirement and the seasonal 90% forward contracting requirement interact, the CAISO strongly supports the proposal for LSEs to procure and demonstrate the remaining 10% of their summer resource adequacy requirement and their full non-summer reserve margin one month ahead. The CAISO's position rests on several considerations; the first and foremost concern is that LSE reliance on day-ahead or real-time markets to firm up capacity, even in the context of excess supply availability, is problematic to system reliability, and undermines the very essence of a resource adequacy obligation, *i.e*. to ensure that sufficient capacity exists and is committed to serving California load. The fact that supplies may be available in the forward markets does not ensure that such resources will be available to California when California needs them and, therefore, waiting until the last minute creates the risk that resources will not be available to meet load or may be available only at very high prices. Second, a requirement to procure adequate capacity on a month-ahead basis would not limit or preclude LSEs from optimizing their energy purchases through spot markets. As such, LSEs can still benefit from low priced energy that is available closer to real time without risking capacity insufficiency or unduly high prices. Third, a month ahead requirement allows for (1) an orderly and timely process of identification by LSEs of the specific capacity resources they will rely on to meet their load, (2) communication of this information to the CAISO and the Commission, and (3) a timely opportunity to identify and rectify any deliverability or other concerns.

Finally, the CAISO commends the Commission and the ALJ Ruling for recognizing that the value and effectiveness of a resource adequacy obligation hinges on the existence of a well-understood hand-off between the LSEs' procurement activities in the forward markets and the CAISO's activities in the day-ahead and real-time periods. Indeed, the procurement of adequate capacity in the forward market is essential to reliability, yet, that capacity will be of little use to load if it is not available to the system operator when needed. Accordingly, the CAISO strongly concurs with the ALJ Ruling that the Commission's resource adequacy obligation and the CAISO's market redesign "must work together." To achieve this necessary coordination, the CAISO recommends that the Commission require all resource adequacy contracts between LSEs and suppliers include a provision for making the capacity procured under the contract available to the CAISO, such that if the capacity is not included in a forward schedule submitted by the LSE in the day-ahead timeframe, the capacity must make itself available for commitment through either the CAISO's integrated forward market ("IFM") or residual unit commitment ("RUC"). Reliance on a bilateral contractual provision serves the purpose of creating a binding obligation on the supplier and is consistent with the policy of the State and the CAISO Governing Board to allow the Commission to develop and implement the elements of the resource adequacy obligation. This binding obligation must come about through a Commission-imposed resource adequacy requirement because the FERC has rejected the CAISO's proposal for a Day-Ahead Must Offer Obligation on suppliers (on the grounds that such a requirement is properly a resource adequacy matter).

II. The Planning Reserve Margin Should Be Fully Phased-In By June 2006

In D.04-01-050, the Commission adopted a 15-17% planning reserve level to be phased in by no later than January 1, 2008.[3] The ALJ Ruling references Governor Schwarzenegger's opinion that the phase-in date for resource adequacy of 2008 is "too slow" and President Peevey's concurrence that the phase-in "needs to be accelerated to ensure system reliability." The Governor and President Peevey are correct. All LSEs should be required to acquire a reserve margin of no less than 10-12% in 2005 and fully satisfy the planning reserve margin by June 2006, subject to certain protections against market power for local capacity requirements. Three factors support the CAISO's conclusion. First, aggregate supply conditions currently are favorable to LSEs, and this will allow acceleration of the phase-in schedule by dampening the threat of the exercise of market power by suppliers. Second, as discussed further below, the accelerated phase-in schedule accommodates the imposition of a locational capacity requirement so long as LSEs can seek relief by demonstrating an inability to procure local capacity on a competitive basis. Third, a full resource adequacy obligation should precede implementation of the CAISO's final phase of its market redesign.

However, the CAISO does not equate full phase-in with compliance with all reporting requirements. LSE compliance with the initial year-ahead showing may not be feasible by May 2005 for June 2006 given the likely schedule for determining all threshold questions concerning resource counting and deliverability. Thus, the CAISO recommends that the first year-ahead showing be scheduled for April 2006 for the 2007 summer season.

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[3] *Interim Order,* D.04-01-050 (Jan. 26, 2004).

A. Market Conditions Favor An Accelerated Phase-In

The CAISO has taken a very pragmatic stance on phase-in during this proceeding. Prior to issuance of D.04-01-050, the CAISO supported the Alternate Proposed Decision of President Peevey, which proposed to direct the utilities to meet the reserve requirement no later than the beginning of 2005.[4] In so doing, the CAISO acknowledged that arguments supporting a longer phase-in period rested on the concern that LSEs would be at a competitive disadvantage if required to ramp up too quickly from their current resource position to the full planning reserve margin. The CAISO argued at that time that the threat of the exercise of market power by suppliers was mitigated by the current availability of excess resources. Moreover, the existence of the California Department of Water Resources ("DWR") contracts, which cover approximately 70% of the utilities' net short load requirement, limits the utilities' exposure to potential market power given current resource conditions.

The CAISO also expressed its concern that by allowing an extended phase-in period, the current resource balance favorable to LSEs would degrade. Indeed, the CAISO has cited its Five Year Assessment (2004-2008) that shows a supply shortage could occur by 2008 under base case conditions.[5] The CAISO further believes that a slow phase-in of the resource adequacy obligation could, in fact, exacerbate any potential supply shortage. A planning reserve procurement requirement of only 8%, for instance, does not provide a strong incentive to preserve the availability of California's older generating plants. The uncertainty and brevity of the need for additional (short-term) reserve procurement could easily result in the retirement/mothball of these older generating plants, which could declare their unavailability

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[4] See, e.g., *Comments of the California Independent System Operator Corporation on the Proposed Decision of Judge Walwyn and the Alternate Proposed Decision of Commissioner Peevey Both Mailed on November 18, 2003,* R.01-10-024 (Dec. 8, 2003).

with little-to-no notice to the ISO and the market. Similarly, a smaller, slower linear phase-in of the planning reserve level does not properly encourage continued interest in new generation projects - already many such projects have been delayed or cancelled.

In general, older generating units operate less often, are less efficient and are more costly to operate to produce energy. As a result, in the last two years, over 3,000 MW of generating capacity was retired or mothballed due to economic decisions by the generator owners. In addition, the CAISO has formally received notification of an additional 1,000 MW more capacity to be retired by the end of 2004 if these generating owners are not able to obtain a contract for next year. The California Energy Commission ("CEC") equally recognizes the potential for additional resource retirements. The CEC is analyzing the risk associated with potential future retirements through the Aging Power Plant study under Commissioners Geesman and Boyd. After publication of D.04-01-050, the CAISO reluctantly endorsed a linear phase-in to achieve the full planning reserve margin by 2008.[6] However, given that the CPUC is re-considering the appropriate date for full phase-in of the reserve requirement, the CAISO again supports an accelerated phase-in given the willingness of the Governor and President Peevey to reconsider the phase-in schedule adopted in D.04-01-050. As indicated in the Department of Market Analysis' 2003 Annual Report on Market Issues and Performance (*see* Figure E.8), reserve margins have been increasing since 2001, and the reserve margin during the annual peak load hour in 2003 was 22.8 percent. The threat of suppliers exercising market power as a result of a ramped up phase-in of the planning reserve margin is nothing more than speculation at this time. In any event, if there is concrete evidence of suppliers exercising market power, LSEs

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[5] See, http://www.caiso.com/docs/09003a6080/28/5b/09003a6080285b79.pdf.

[6] *Opening Comments of the California Independent System Operator Corporation on the Resource Adequacy Workshops,* R.01-10-024 (March 4, 2004).

should be allowed to request from the Commission a deferral of the phase-in schedule. The CAISO believes that any marginal threat of market power is outweighed by the benefits of the accelerated phase-in option to promote the financing required to continue keeping the existing aging power plants in service (in-the short-term), to entice continued and new generation construction, and to ensure that available supplies are locked-in to serve California load when needed. The accelerated phase-in creates a smoother bridge to replace older inefficient generation with newer less expensive generation, while buying time to implement other resource adequacy measures (such as targeted energy conservation programs). Given that loads in California appear to be growing and generation additions are slowing, it is imperative that available capacity be "locked-up" as soon as practicable to serve California load and a framework be established to promote the development of new generation.

B. Locational Capacity Requirements Are Compatible With An Accelerated Phase-In

The CAISO applauds the Commission's commitment to imposing a locational capacity requirement as an integral component of the LSEs resource adequacy obligation. In D.04-01-050, the Commission explicitly directed "the utilities to include a local reliability component in their next procurement plan."[7] Consistent with this directive, the Assigned Commissioner's Ruling and Scoping Memo regarding long-term procurement plans stated, "[f]inally, assume that in addition to a general service area-wide requirement, LSEs must satisfy a resource adequacy requirement for any load pockets in their service areas."[8] More recently, the Commission rejected the use of Reliability-Must-Run contracts as the solution for certain local reliability concerns currently being confronted by the CAISO in SP 15. In so doing, the Commission,

[7] D.04-01-050, mimeo. at p. 129.

citing the Scoping Memo, reinforced the Commission's "intention to address local resource adequacy and deliverability."[9]

The inclusion of a local capacity requirement admittedly adds to the intricacy of the resource adequacy obligation. However, a local capacity requirement does not preclude an early phase-in of the full planning reserve requirement. If the 15-17% reserve requirement is deemed not to include resources procured for local reliability needs, then clearly the adoption of a local capacity requirement does not impact compliance with an accelerated procurement of capacity for aggregate system load. In contrast, if the 15-17% encompasses capacity resources procured in load pockets, then the procurement parameters, *i.e.*, definition of load pockets, procurement targets, must be defined prior to compliance with the full planning reserve margin. If locational procurement requirements and an estimate of minimum quantities are not considered comprehensively with LSEs' other aggregate capacity procurement activities, the possibility of overprocurement or ineffective procurement exists. The CAISO recognizes its role in defining load pockets and the capacity requirements within such pockets to avoid such inefficient results. The CAISO, therefore, is committed to working with stakeholders and this Commission to establish appropriate rules in a timely manner for implementing local capacity requirements that can be coordinated with the procurement for aggregate system needs. Simply put, the CAISO believes that all steps necessary to implement a local capacity requirement can be accomplished to meet a June 1, 2006 phase-in date.

Equally important, given that other resource adequacy parameters, including deliverablity and resource counting conventions, have not been determined sufficiently in advance to allow

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8 Scoping Memo, mimeo. at Attachment A p. 9.

9 Reliability Order, mimeo. at p. 14.

LSEs the option to build or contract for new capacity in transmission constrained areas to meet the June 2006 phase-in date, the threat of local market power must be addressed.[10] Surplus capacity in the aggregate may not protect LSEs from the exercise of market power in procuring within transmission constrained "load pockets." The Commission has emphasized "utilities are responsible for procuring the resources to meet their customers' needs, including local needs."[11] Nevertheless, the Commission recognizes that "RMR contracts will remain available as, at a minimum, a backstop mechanism to mitigate local market power in the future."[12] The CAISO believes that, depending on the specific circumstances, RMR or RMR-like contracts can provide an appropriate "backstop" during the transition period.

However, given existing RMR criteria, existing RMR units may not fully account for all local capacity resources that must be procured to satisfy future LSE local capacity requirements. To the extent an LSE obligation in its service territory exceeds such RMR resources, the LSE should be required to seek to secure such additional capacity through a bilateral transaction. In order to combat potential market power, the LSE should have the ability to demonstrate that the capacity was not competitively offered and therefore be exempt from compliance for that aspect of its capacity obligation.

Moreover, the FERC has linked the existence of a resource adequacy obligation with local market power mitigation mechanisms, recognizing that under such a regime, a supplier's recovery of fixed costs should be through capacity payments, not spot market energy prices. *San*

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[10] It is generally understood that the ability of a supplier to exercise market power diminishes to the extent the delivery obligation moves out farther in time and, in particular, in the 2-3 year time frame. The reason is that a purchaser of power 2 to 3 years out always has the option of constructing its own facility, rather than procure from existing resources.

[11] Reliability Order, mimeo. at p. 14.

[12] *Id.*

Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services into Markets Operated by the California Independent System Operator and the California Power Exchange, 95 FERC ¶ 61,115 at 61,364 (2001). At the November 6, 2003 California Technical Conference On Wholesale Power Market Design, FERC also strongly intimated that the market power mitigation measures approved for the CAISO would depend on the strength of the Commission's resource adequacy measures. Thus, it appears that the more effective a resource adequacy requirement the Commission approves, the more likely it is that FERC will approve stronger market power mitigation measures, and vice versa. The existence of effective local market power mitigation should facilitate the ability of LSEs to negotiate acceptable long-term bilateral agreements with suppliers.

C. Resource Adequacy Should Be Fully Phased-In Prior to Implementation of the Final Phase of the CAISO's Market Redesign

As noted in the ALJ Ruling, the FERC rejected the CAISO's proposal for a day-ahead must-offer requirement.[13] In so doing, the FERC noted that "if the CAISO determines that the resource adequacy requirements placed upon LSEs at the time its [market redesign] proposal goes into effect are insufficient to meet its operational needs, the CAISO should revise its proposal to incorporate a so-called flexible offer obligation on an interim basis" until the CPUC's resource adequacy program is fully phased in.[14] The "flexible offer" obligation allows suppliers subject to the must offer obligation the flexibility to choose to offer their capacity in either the day-ahead or real-time markets.

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[13] *Order on Further Development of the California ISO's Market Redesign and Establishing Hearing Procedures,* 107 FERC ¶ 61,274, mimeo. at p. 10("June 17 Order").

[14] *Id.*

While the June 17 Order resolved many of the problems identified by the CAISO with regard to the flexible offer obligation (*see* June 17 Order at PP 28-30), the CAISO continues to believe that the flexible offer obligation is inferior to a well functioning resource adequacy requirement as further in greater detail *infra* in Section IV. If the Commission's resource adequacy obligation is not fully implemented by the effective date of the CAISO's market redesign proposal in February 2007, the CAISO may be compelled to seek FERC approval of the flexible offer obligation to ensure reliable system operation during the summer of 2007. This clearly would not be optimal. Rather, a more efficient implementation of the CAISO's market redesign would permit the CAISO to experience approximately eight months of the fully implemented resource adequacy obligation to determine whether a potentially costly and time consuming conversion to the flexible offer is necessary to ensure that the CAISO can meet its operational needs. Accordingly, the CAISO believes that in view of the regulatory options available to the CAISO, a more rational implementation sequence would involve full phase-in of the resource adequacy requirement prior to implementation of the CAISO's final market redesign phase.

III. A Year Around Monthly Reporting Requirement Demonstrating 100% Procurement of the Full Planning Reserve Margin Should Be Imposed Beginning in April 2006

The ALJ Ruling asks whether LSEs should be required to procure and demonstrate the remaining 10% of their summer resource adequacy requirement and their full non-summer reserve margin one month ahead. The CAISO answers this question with an emphatic yes. It is extremely important that LSEs procure sufficient capacity to meet 100% of their projected peak load, plus the applicable planning reserve, in the month-ahead time frame. Such a requirement precludes LSEs from placing reliable and reasonably priced service to load at risk by waiting

until the last minute to procure the resources needed to serve load.[15] The CAISO has previously emphasized, and emphasizes again here, that procuring 100% of the capacity obligation on a month ahead basis is not the same as purchasing energy to cover the peak load a month ahead. The CAISO does not propose that LSEs purchase 100% (or, for that matter, any specified percentage) of their energy needs by the month ahead.[16] In fact, a primary benefit of a liquid spot market for energy is that it provides entities with an opportunity to take advantage of less expensive energy supplies that become available and to swap out their more expensive resources. Buying capacity is significantly cheaper than buying energy and should not impose an undue financial burden on the LSEs and on consumers.[17]

California witnessed first hand in 2000-2001 what happens when capacity is not locked-up in advance, and utilities must rely on last minute, expensive purchases to serve load. California must seek to avoid a reoccurrence of such events by requiring that 100 percent of capacity requirements be procured a month in advance. Waiting until the day ahead or real time frames for firming up capacity, even in the context of excess supplies available in the market, can be problematic. The fact that there are supplies available in the forward market does not

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[15] It is well chronicled that significant contributing factors to the energy crisis in 2000-2001 included over-reliance on spot market purchases and a lack of long-term contracts. A 17% reserve requirement, as well as a requirement that LSEs procure100% of their capacity requirements by the month-ahead, will promote adequate forward procurement of capacity, ensure that sufficient, competitively-priced resources are available in real time, and encourage the development of needed infrastructure in California.

[16] Adequate capacity (*i.e.*, peak load plus 17%) can be lined up a month ahead through a mix of energy purchase contracts, ancillary services purchases, and availability contracts.[16] Under an availability contract, the buyer pays a small sum to the seller to be in the market, but the supplier can bid its energy at any price (subject bid caps and market power mitigation measures such as AMP). The abundance of supply would then put downward pressure on spot market prices.

[17] For example, Spin capacity prices in the ISO market during 2002 and 2003 were $4.70 and $6.77, respectively, and Non-Spin prices were $2.14 and $4.39, respectively. On the other hand, energy prices in 2002 and 2003 averaged $52.60/MWh and 68.53/MWh.[17] *See* www.oasis.caiso.com. Certainly, the amounts paid out to reserve capacity will not amount to anywhere near the billions of dollars California was forced to spend on over-priced spot market energy during the crisis.

ensure that these will be made available to California. California LSEs are only one of many potential purchasers who could be vying for the "excess capacity." This is particularly true given that demand in the remainder of the West is growing at a rapid pace, particularly in the Southwestern states. This demand will be competing with California demand for limited supply resources more and more in the future. An obligation to meet capacity requirements by the month-ahead will ensure that resources are committed to serve California load.[18]

A month ahead requirement for both summer and non-summer months allows for an orderly and timely process of identification by the utilities of the resources they will rely on to meet their load, communication of this information to the CAISO and the Commission, and an opportunity before the fact to identify any deliverability or other concerns. If a LSE was short on resources, there would still be time to take more measured actions to procure capacity, rather than rely on resources only potentially available in the day ahead/real-time timeframes. Because all necessary commitments would be made at least a month ahead of time, the risk that either the utilities or the CAISO will be scrambling to obtain power under adverse conditions at the last minute will be significantly reduced.

Moreover, the requirement that LSEs purchase 100% of their capacity needs in the month ahead time frame does not limit the ability of LSEs to use short-term (*i.e.*, less than one year) capacity purchases. Thus, the utilities will not lose any flexibility in procuring resources for their customers when market conditions are optimal.[19] Moreover, a requirement to procure adequate capacity on a month ahead basis does not in any way preclude LSEs from purchasing cheap

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[18] Waiting until the last minute to procure resources creates the risk that at the last minute resources may not be available or may be available only at a very high price. Further, even fairly high levels of excess capacity can quickly evaporate in adverse conditions, such as dry hydro conditions or a West-wide heat wave.

[19] Up to the month-ahead deadline, LSEs would have substantial flexibility as to when to make their capacity purchases, and as to the length of time of any commitments they make.

energy that is available after the month ahead. As envisioned by the CAISO, LSEs are only required to procure 100% of their capacity needs by the month ahead, they are not being required to purchase 100% of their energy needs in the month ahead. Thus, to the extent that, after the month ahead, the utilities can find energy that is cheaper than the energy they have a right to purchase under their capacity contracts, they are in no way prejudiced or financially harmed by procuring such energy. As such, LSEs would continue to have the ability to optimize their energy requirements through spot purchases (*i.e.*, purchases in the day ahead and hour-ahead markets).

In fact, the existence of a month ahead capacity obligation should create downward pressures and stability on energy prices in the short-term markets. With a reserve requirement of 15-17% in place, suppliers with capacity contracts will essentially be required to make available to the utilities 117% of the utilities' energy needs, but the utilities will only need to purchase 100% of their energy requirements.[20] Basic laws of supply and demand indicate that there should be downward pressures on prices under such conditions, *i.e.*, where supply exceeds demand. Another way of looking at this situation is that capacity contracts may have a stated price at which the utilities can purchase energy under the contract. To the extent 100% of the utilities' capacity requirements are covered via capacity contracts, the utilities will not purchase energy at prices above those specified in the capacity contracts; they will only purchase energy at prices below the prices in the capacity contracts. This necessarily places downward pressures on energy prices; otherwise, competing suppliers will be unable to make any sales.

The CAISO believes that the monthly forward contracting and reporting requirement should not be limited to the summer months as is the year ahead contracting and reporting

requirement, but rather should apply throughout the year. Limiting a monthly obligation to the summer peak season would not provide sufficient "insurance" to California consumers. While it may be assumed that adequate resources would be available for the remaining non-peak months of the year, there is no assurance of this outcome because resources would not be locked up by California LSEs. Ignoring non-peak months is inadequate and could unnecessarily expose consumers to high spot market prices and potential curtailments. Blackouts can occur, and have occurred, during the off-peak winter months. Further, price spikes regularly can occur during the shoulder months, especially when there are "heat waves," low hydro levels, and/or significant quantities of capacity are on scheduled outages.

The CAISO urges the Commission to adopt a monthly reliability obligation whereby LSEs are required to show that they have procured sufficient capacity to meet 100% of their projected peak load plus the applicable planning reserve. This approach is reasonable. On the one hand, it does not unduly limit the ability of LSEs to use short-term capacity purchases, and it allows LSEs to procure resources for their customers when market conditions are optimal. On the other hand, it precludes the LSEs from placing reliable cost-effective service to load at risk by waiting until the last minute to procure the resources needed to serve their customers' load.

IV. The Commission's Resource Adequacy Obligation Should Include a Requirement That Resources Be Made Available to the CAISO in the Day-Ahead Time Frame

The ALJ Ruling correctly understands that unless the Commission explicitly addresses the issue of coordination and an efficient hand-off of resources to the CAISO, the value of the Commission's resource adequacy obligation will not be fully realized. Grid reliability and the CAISO's optimization of energy and ancillary services procurement rely on resources being

[20] The planning reserve establishes a margin over and above operating reserves to cover peak load

brought to the CAISO on a day-ahead basis to be scheduled to support real-time operations. Accordingly, a well-designed resource adequacy requirement must include two primary components to ensure adequate coordination with the CAISO: (1) an obligation that LSE procured capacity resources must be available to the CAISO through its day-ahead and real-time markets and scheduling processes when such resources are not otherwise scheduled in the day ahead market, and (2) a compliance/enforcement mechanism to ensure that LSEs comply with their procurement obligations.

A. Resources Must Be Available to the CAISO When Needed to Balance Supply with Load and Maintain Reliable Grid Operations

Resource adequacy is a necessary and critical prerequisite to the successful long-term stability of California's electricity sector. This is especially true given FERC's recent guidance that it is looking to the Commission's resource adequacy requirement to displace the existing must-offer mechanism.[21] In fact, FERC acknowledged that a workable resource adequacy obligation encompasses the obligation to participate in the CAISO's markets: "A resource adequacy product, with a capacity payment, would compensate for taking away this choice *and would obligate sellers to participate in the market*, satisfying the CAISO's and Commission's objectives."[22] Therefore, the CAISO recommends that the Commission establish an obligation on LSEs to make the resources they procure under the Commission established procurement rules available to the CAISO in the day-ahead market time frame.

Under the CAISO's market redesign proposal, if scheduling coordinators fail, in the aggregate, to schedule sufficient resources to serve CAISO-forecasted load, the CAISO would

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uncertainties and other contingencies.

[21] *Order on Further Development of the California ISO's Market Redesign and Establishing Hearing Procedures,* 107 FERC ¶ 61,274, mimeo. at p. 10.

[22] *Id.* [emphasis added]

commit additional resources through the proposed residual unit commitment ("RUC") mechanism. However, absent a requirement to make resources available to the CAISO for possible commitment through the RUC mechanism, the RUC procedure may not have a sufficient pool of resources, and the CAISO may not be able to commit sufficient resources to serve the next-day's forecasted load. Today, the CAISO satisfies this availability requirement through the FERC-established must-offer obligation, in combination with the must-offer waiver process (today's equivalent of the RUC process). As noted above, FERC has rejected extension of the must-offer obligation to the day-ahead timeframe and approved elimination of the existing real-time must offer obligation.

A well-designed resource adequacy requirement should provide for use by the CAISO of the resources procured by LSEs to meet their load. In that regard, to the extent that such resources are not scheduled by LSEs to meet their loads, but become necessary in the day-ahead or real-time periods to balance resources with load, the CAISO could use the resources for such purpose.[23] This could be accomplished by having the Commission require that contracts between utilities and suppliers include a provision for making capacity procured under the contract available to the CAISO.[24] Pursuant to this requirement, capacity that is not included in a forward schedule by the LSE would be required to bid into the CAISO day-ahead IFM and would be available for commitment or dispatch by the CAISO as part of the RUC procedure. However, absent a requirement that the CAISO be permitted to utilize the capacity procured by

[23] The ISO agrees that in designing rules for such use by the ISO, utilities should be allowed to indicate restrictions on energy limited resources.

[24] If there is a consensus for such an approach, some issues could be addressed in the ISO Tariff. Such a Tariff provision would set forth the availability criteria for all resources declared as capacity for an LSE. In any event, there is a critical need for coordination between the CPUC and the ISO on this issue. Once contracts are executed, the opportunity for the ISO to use such contracts could be lost.

LSEs, there will not be any way to ensure that sufficient resources will participate in RUC, thereby potentially rendering the RUC procedure ineffective and exposing consumers to potential real-time supply shortages or high prices.

The other potential result will be that the CAISO will be forced to commit resources in RUC that do not have state resource adequacy contracts. The CAISO will pay those resources a RUC Availability Payment. Given that LSEs will already be making capacity payments to suppliers under their resource adequacy contracts, the result would be an increase in the total amount of capacity payments made to suppliers (and, hence, an increase in costs to consumers). That is not an optimal result. It likely would not be necessary for the CAISO to make these "additional" Availability payments to non-resource adequacy generators if all available capacity procured by LSEs under the Commission's resource adequacy requirement was made available to the CAISO in the day-ahead time frame and for commitment in RUC if needed.

The CAISO also notes that a contractual day-ahead must offer obligation is consistent with the general objectives and the design of the CAISO's market redesign and will provide important operational and market efficiency benefits. The CAISO's inability to consider a full complement of LSE-procured capacity resources in the day-ahead market and in the RUC process could introduce unavoidable market flaws, which could lead to (1) inefficient/inaccurate optimization of unit commitment and scheduling to manage congestion, and (2) insufficient protection from locational and system market power. A day-ahead must offer obligation will provide the CAISO with the means to both *reliably* and *efficiently* commit the resources necessary to serve the next day's load and meet local reliability needs when they are not scheduled by LSEs. Given FERC's actions, such resources can be made available to the CAISO

on a day-ahead basis only pursuant to the rules and obligations established under a resource adequacy requirement.

Under the CAISO's proposed market redesign, all of the CAISO's local reliability needs and market power mitigation will be determined in the day-ahead time frame utilizing a series of day-ahead pre-IFM runs. The pre-IFM runs will be based on the CAISO's load forecast and are used to determine the optimal mix of available supply resources (*i.e.*, the optimal unit commitments) which are used to meet the next day's expected operating requirements, including system load, locational needs, and required reserves. Further, these runs are used to determine the need for RMR dispatch and for market power mitigation at both the system and local levels. The determinations in these runs will be made based on the pool of resources that that the CAISO knows are "available" to the CAISO. Thus, for the day-ahead pre-IFM runs to perform their intended functions successfully, the CAISO needs have access and visibility to the entire pool of resources that is "available" and obligated to serve California load is.

A day-ahead must offer obligation is necessary for the CAISO to commit units on an efficient and optimal basis. Simply stated, the serving load will be accomplished more efficiently if the CAISO, as the system operator, knows in the day-ahead what resources will "be there" as opposed guessing what might be there in real time (or scrambling in real time to line up resources). A day-ahead must offer obligation also is necessary to ensure that all system and local market power mitigation is properly done. In particular, a day-ahead must offer obligation assures that local market power mitigation measures will be applied to the appropriate resources for the appropriate portions of their capacity. Further, the absence of a day-ahead must offer obligation can undermine the effectiveness of local market power mitigation by inadequately mitigating units that have local market power and can set prices in the IFM. In particular, the

pre-IFM runs could use resources that are less effective in mitigating local congestion than other resource that may be available in real-time, but which cannot be scheduled in the day-ahead because they are not subject to a day-ahead must offer obligation.

In summary, a contractual day-ahead must offer obligation is important for a number of reasons. First, it will serve as a means to ensure that LSEs' resources are locked-up and available to serve CAISO load when and if necessary. Second, it will serve as a means to ensure that resources are made available in a manner that accords with the CAISO's scheduling and commitment requirements. It would be of little value to make available to the CAISO resources that are unable to operate within the CAISO's market rules. Third, it will enhance the CAISO's ability to operate the grid reliably by moving unit commitment and dispatch out of real-time and into the day-ahead time frame. Fourth, it will ensure that resources procured by LSEs are utilized by the CAISO for meeting operational requirements and the costs for such resources are not increased because the CAISO commits resources that are not part of the LSEs' resource portfolios. Finally, it will ensure that units are properly mitigated for purposes of local market power.

B. The Commission Should Impose a Compliance and Enforcement Mechanism

A contractual obligation to bring resources to the CAISO as part of the resource adequacy requirement will be meaningful only to the extent LSEs actually enter into such contracts. As such, a secondary requirement of a resource adequacy framework should be the institution of consequences for a failure to meet the resource adequacy obligations. LSEs that fail to procure sufficient capacity in compliance with Commission established resource adequacy milestones should be held accountable in a manner that will adequately deter recurrence of such performance. The CAISO supports the adoption by the Commission of explicit

penalties/sanctions for LSEs that fail to meet their resource adequacy obligations. Proper incentives are necessary to motivate compliance with the resource adequacy requirement. The CAISO believes that LSEs that fail to procure sufficient capacity should be subject to financial penalties and be designated for first curtailment in the event of a resource deficiency.

Consistent with the CAISO's advocacy of two reporting periods (year ahead and month ahead), the CAISO proposes that the Commission establish penalties for the inadequate procurement of capacity by the LSEs at these reporting intervals. The Commission should establish an *ex-ante* penalty for the entities that do not meet the year-ahead or monthly obligations. Although the workshops did not address penalties and further discussion on this point is necessary, one possibility for consideration is a capacity deficiency charge based on the cost of a new peaker. This type of penalty has been employed by NEPOOL for many years.

It should also be noted that the imposition of a monthly requirement that LSEs procure 100% of their peak load requirements and reserve margin may mitigate the need for imposing penalties for LSE over-reliance on the spot market. This is true in two different scenarios. First, the CAISO believes any reliance on the spot market for "capacity," in contrast to energy, is wholly incompatible with the objective of a resource adequacy obligation, *i.e.*, to ensure resources will be available to meet load. As noted earlier, LSEs should procure 100% of their capacity requirements by the month ahead time frame, and, if an obligation exists to make those resources available to the CAISO, the LSEs can serve *any portion* of their load from the spot energy market without penalty. Second, D.04-01-050 creates some ambiguity by placing a "soft" cap on LSE purchases in the spot market of 5%. If this provisions is interpreted to mean that LSEs can rely on the spot market for 5% of their capacity needs, a month ahead procurement requirement would compel LSEs to forward procure approximately 95% of their capacity or

justify its greater reliance on spot market purchases. As a consequence, the monthly reporting requirement would necessarily limit excessive spot market procurement because LSEs will either have complied with the 5% limit or justified exceeding this limit as a result of an ex ante review of the monthly reporting requirement.[25]

The CAISO believes it is appropriate and necessary for LSEs to face the consequences of their failure to procure adequate resources in the forward market. The penalty scheme must be sufficient, however, to discourage LSEs from taking the risk that supplies will be readily available in the spot market. Further, a sufficient penalty also will operate to discourage LSEs from "leaning" on other LSEs without having to pay any cost for doing so and thereby imposing an inappropriate form of cross-subsidization.

V. Conclusion

Based on the foregoing arguments, the CAISO respectfully requests that the Commission include in its final order on resource adequacy issues, the following:

1. Full phase-in of the planning reserve margin by June 1, 2006, although the initial yearly reporting requirement may be deferred until April 1, 2006 for the 2007 summer peak season.
2. A requirement that LSEs must to procure and demonstrate the remaining 10% of their summer resource adequacy requirement and their full non-summer reserve margin one month ahead.
3. A requirement specifying that contracts will be deemed qualifying capacity for resource adequacy purposes only if such contracts include an

[25] This is not intended to imply that the CAISO believes a surcharge on real-time purchases will never be necessary. In fact, the CAISO continues to believe the notion of a surcharge on real-time purchases should be considered by the Commission to prevent potential gaming situations and will, without question, be essential should a 100% month ahead reporting requirement not be adopted.

express obligation that the capacity be made available to the CAISO in the day-ahead time frame either through a submitted schedule or through participation in the CAISO's IFM and RUC processes.

Respectfully Submitted:

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July 22, 2004

CERTIFICATE OF SERVICE

I hereby certify that I have served, by electronic mail, a copy of the foregoing Response of The California Independent System Operator to Administrative Law Judge's Ruling Requesting Additional Comments On Resource Adequacy Issues to each party in Docket No. R.04-04-003.

Executed on July 22, 2004, at Folsom, California.

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