

**BEFORE
THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to)	
Integrate Procurement Policies and)	
Consider Long-Term Procurement)	R. 06-02-013
Plans)	
_____)	

**POST-WORKSHOP OPENING COMMENTS OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR**

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Dated: April 7, 2006

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Pursuant to Rule 14.5 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), and the Order Instituting Rulemaking (“OIR”) issued in this proceeding on February 16, 2006 (modified at the March 14, 2006 workshop), the California Independent System Operator (“CAISO”) hereby submits post-workshop opening comments regarding the upcoming review of energy procurement plans for 2007-2016.

A. INTRODUCTION.

In the February 16, 2006 OIR, the Commission designated this proceeding as the umbrella proceeding for a host of procurement-related policy issues being investigated in other dockets, as well as providing a forum to integrate the Commission’s efforts regarding these related items. Specifically, the Commission has included the following dockets as part of this forum to integrate procurement policies and related programs:

- Community Choice Aggregation (R.03-10-003)
- Demand Response program plans (A.05-06-006 *et al.*)
- Critical Peak Pricing (A.05-01-016 *et al.*)
- Distributed Generation (R.04-03-017 and its successor)
- Energy Efficiency (R.01-08-028 and its successor)
- Avoided Cost and Qualifying Facility (QF) Pricing (R.04-04-025)

- Renewable Portfolio Standards (R.04-04-026 and its successor)
- Transmission OII, 1.00-11-001; and Renewable Energy Transmission (I.05-i09-005)
- Confidentiality (R.05-06-040)
- Resource Adequacy Requirements (R.05-12-013)

For the first phase of this proceeding, the Commission stated its intention to review whether additional policies are needed to incent new generation and long-term contracts in California. Pursuant to the OIR, the Commission would issue a decision on these additional policy issues by June 15, 2006. In the second phase, the Commission will review the long-term procurement plans (“LTPPs”) submitted by the Investor-Owned Utilities (“IOUs”), for the 2007-2016 planning period, as part of the biennial review process established in accordance with AB57, D.04-01-050 and D.04-12-048. It is anticipated that the IOUs will file these plans in the summer of 2006, following preliminary workshops to be held in the spring of 2006.

On February 23, 2006, ALJ Brown issued a ruling setting dates for both the prehearing conference and the workshop. Interested parties were asked to submit proposals on March 2, 2006, considering the following questions:

1. Is there a need for the State to adopt additional policies to support the development of new generation and long-term contracts in California?
2. Is there a need for the Commission to act on the proposal urgently?
3. Why is the existing regulatory authority insufficient to ensure that contracting for new generation occurs?
4. How will ratepayers be affected by adoption or rejection of the policies proposed?
5. How much new generation would the new policies apply to?
6. How does the proposal apply to the need determinations made by the Commission for Pacific Gas & Electric Company and Southern California Edison Company in Ordering Paragraphs (OP) 4 and 5 in D.04-12-048?
7. How will the proposal affect the Commission’s ability to consider capacity markets in R.05-12-013?

At the March 14, 2006 workshop, various parties presented their proposals, and the California Energy Commission (“CEC”) provided both procurement policy recommendations based on its 2005 Integrated Energy Policy Report (“IEPR”), and forecasts for the summer of 2006 and for the period 2006-2010. The CAISO provided an overview of the policy issues and operational considerations that the CAISO urges the Commission to consider in formulating directives for the IOUs in developing their upcoming long-term procurement plans. These policy issues and operational considerations, which will be discussed in detail below, are based on what the CAISO calls the “Three Rs of Resource Adequacy:” 1) the “Right Mix of Resources”; 2) resources that are “in the Right Location”; and 3) “the Right Amount” of resources.

On March 29, 2006, ALJ Carol A. Brown issued an “Administrative Law Judge Ruling Amending Comment Schedule and Setting Comment Outline” amending the originally scheduled comment and reply comment dates, and establishing an outline for the comments. The CAISO appreciates this opportunity to identify and discuss the various tools that can be used effectively to assess the need for new generation and long-term procurement. Given the CAISO’s unique role as the day-to-day operator of the transmission grid operator and in recognition of the CAISO’s responsibility for maintaining grid reliability, these comments will be focused solely on two areas of the outline, namely Section III. “Comments on Needs Determination Issues”, and Section VI., “Other Comments” .

B. CAISO OPENING COMMENTS.

The CAISO’s comments are organized according to the outline provided in the ALJ’s March 29, 2006 ruling. The topics in the outline, and the CAISO’s comments, as

applicable, are provided below. As noted above, the CAISO has not commented on every topic in the outline.

I. Comments on Joint Proposal by Southern California Edison Company, Pacific Gas and Electric Company, NRG Energy, Inc., AES Corporation and The Utility Reform Network.

- A. Arguments for/against proposal.
- B. Any suggestions to modify proposal?
- C. Scope of proposal.
 - 1. Should it cover new Power Purchase Agreements? New utility ownership facilities?
 - 2. Term of proposed mechanism – length of commitment or for set term?
- D. Legal concerns with proposal.
- E. “Other” concerns.

The CAISO is not submitting comments on this topic.

II. Comments on proposals to “stay the course,” and let existing policies work.

- A. Benefits to regulatory certainty – would it encourage investment community to build new generation?
- B. Problems resulting from “going backwards” toward more utility integration.
- C. Arguments for/against status quo.
- D. “Other” concerns with maintaining status quo.

The CAISO is not submitting comments on this topic.

III. Comments on Need Determination issues.

A. Background and Overview of the CAISO Position with Respect to Resource Adequacy.

In testimony presented during the first round of LTPP review in 2005 in Docket 04-03-003, the CAISO explained that an important policy objective of a resource adequacy program should be to support reliable system operations. As the day-to-day operator of the transmission grid, the CAISO’s ability to maintain grid reliability and serve load in real time is dependent upon having resources available to it in real time and

which meet any locational requirements. CAISO witnesses, Phil Pettingill and Robert Sparks, testified that the resources being procured must also be deliverable, and that the procurement plans under review at that time provided little or no information regarding the location of resources in future procurement scenarios and the adequacy of resources in particular load pockets. The Commission agreed with the CAISO, stating:

... We expect that the CAISO will work closely with the Commission to establish the local capacity procurement requirements based on deliverability of resources into load pockets and transmission constrained areas of the grid and to work with the CEC to provide guidance for LSEs in the 2005 IEPR proceeding.

... We recognize the importance of the CAISO in helping us to establish the criteria so that the Commission can apply them to the utilities' planning practices. The CAISO's core expertise in the area of transmission planning and grid operations is critical to inform the Commission's procurement decisions. This approach will assure that the long-term resource procurement meets the CAISO short-term grid requirements. It will also assure that the resources that the utilities procure pursuant to their resource adequacy requirements meet the CAISO operational needs.¹

With these comments, the CAISO intends to build upon the foundation laid in the previous proceeding by providing the Commission with a framework of resource "needs" criteria that can be used in evaluating this round of procurement plans from the perspective of network planning and grid reliability. It is important to remember that electric reliability is achieved through an active coordination of transmission grid operations, infrastructure adequacy, procurement, distribution system operations, and appropriate policy oversight. This requires a partnership-between the Commission, the CEC, the CAISO and the LSEs—as well as clearly defined roles and responsibilities for each. To that end, the CAISO has set forth, in Section C. below, factors that the Commission should apply to the CEC forecast to incorporate its own judgment regarding

¹ (D.04-12-048, December 20, 2004, pp. 97-98)

the optimal amount of resources to be included in the long-term forecast. These factors, along with other considerations, are described below as the “Three Rs of Resource Adequacy”. However, before turning to these factors, the CAISO will first address an important policy determination that must be made by the Commission -- the level of service reliability that procurement decisions should seek to achieve.

B. The Overarching Policy Determination To Be Made By the Commission.

The CAISO is charged with ensuring open access to, as well as efficient and reliable operation of, California’s largest integrated electric transmission grid and control area, while adhering to established planning and operating reserve criteria.

Measurements of reliability at the transmission grid level include transmission system security and adequacy, system frequency levels, voltage levels, and the amount of operating reserves. These measures are combined with other reliability measures such as generation adequacy and average minutes of customer interruption, which are the responsibility of LSEs and Utility Distribution Companies. Determining the societal and economic policies related to serving customer load is the responsibility of regulatory agencies and elected bodies, as applicable, in partnership with the LSEs and other expert entities, such as the CAISO.

In the event that resources are inadequate (which includes resources that are not adequately deliverable), the CAISO is faced with only one option -- to order the curtailment of load in amounts necessary to maintain transmission grid security. Stated differently, maintaining reliable operation of the electric transmission grid does not necessarily equate to serving all customer demand all the time, nor does it equate to reliability at any price. Reasonableness in service reliability takes into account policy

decisions regarding what level of security or risk is appropriate and considers the corresponding costs of securing resources, as well as the costs associated with service interruptions. Those policy decisions necessarily must establish the proper incentives to promote comprehensive resource adequacy over the long term.

The CAISO will operate the transmission grid securely by maintaining proper frequency, voltage and reserve levels. Ultimately, and especially in real-time operations, the continuously- required balance of electric supply and demand (including operating reserves) can be met by providing generation, or, if available generation is insufficient, by curtailing demand. The percentage of total customer demand that is served, and more specifically *which* customer demand is served, is wholly dependent on adoption of a comprehensive approach to resource procurement -- one which ensures that resources are adequate both in terms of both total quantity and deliverability. Thus, although the CAISO is charged with the responsibility of maintaining the integrity of the transmission grid, such network integrity can be operationally achieved, in some cases,² through load shedding techniques that may not be acceptable as a public policy matter. This public policy consideration leads to an operational aspect that must be considered and resolved as part of the Commission's evaluations of the LSEs' long-term resource procurement plans, specifically, the level to which resources procured pursuant to the LTPPs are to enable the CAISO to maintain service reliability.

The Commission appropriately recognized the need for resource planning greater than 100 percent of the forecast load in order to account for unforeseen

² Under well-established reliability standards adopted by the NERC/WECC that the CAISO is under a statutory obligation to implement, load shedding is generally an unacceptable solution to the loss of a single transmission element.

contingencies and reserves. Currently, the Commission has established a 115-117 percent requirement in the year-ahead/month ahead timeframe. Experience may demonstrate that this amount and time frame should be adjusted based, *inter alia*, on unit retirements,³ forced outage rates, new resources, changes in load growth, etc. Such emerging changes should be addressed through updates to the LTPPs with as little time lag as is reasonable. Thus, the CAISO recommends that the Commission periodically conduct a cost/reliability analysis projected over the expected term of LTPPs to reaffirm or adjust the level of resource “insurance” that is in the best interests of California consumers as the state’s resource supply and demand projections evolve over time.⁴

Once the Commission promulgates its policy regarding the level of service reliability that will, in effect, establish the standard, the CAISO can then provide the information needed by the Commission and the LSEs so that procurement can meet that standard. This information will include deliverability, local requirements and qualifying capacity determinations.

C. The “Three Rs” of Resource Adequacy.

The reliable operation of the electric grid must not be addressed only from a Control-Area-wide, peak-time perspective. It must also address transmission-constrained areas and must take into account the ability to respond to changing conditions and/or errors in forecast. Accordingly, policies for resource adequacy, including for long-term procurement, must take into account not only the amount of resources that are needed, but also locational and operational considerations. As noted above, the CAISO proposes

³ Increasing the year-ahead procurement level may not be the most effective action to address unit retirements-- it may be more effective to increase the horizon for the procurement process from one-year to several-years,

⁴ It is important to note that some of these items are still under development in the RA proceeding (05-02-013). Consequently, the level of specificity will evolve over time.

that for this discussion parties think of three of the elements that are crucial to reliable operation of the transmission grid: Resource Adequacy = Right Mix of Resources, (in) Right Location, (in) Right Amount.

The CAISO's comments in this section are organized along these lines to provide a simple way to parse these important public policy and operational considerations.

i. Right Mix of Resources.

a) The CPUC should require its jurisdictional utilities to acquire a reasonable amount of short-start resources within their service territory. Based on experience for the control area the overall mix of available short start units at peak should remain in the range of 3000 to 4000 MW, at a minimum.

Requiring a mix of short-start resources in a LSE's portfolio, especially in local areas, is desirable from both an economic and an operational perspective because it will permit a prompt response to missed forecasts and the unexpected loss of generation or transmission resources. The LCR study (discussed below) includes exact descriptions of the existing local reliability areas. Short-start capacity typically includes pumped storage and conventional hydro units, combustion turbines, many load-response (i.e., load-reduction) program resources, and internal combustion units that can start up and be at full load in less than 30 minutes. These units provide greater operating flexibility in daily operations and in emergency situations than base-load generators, which are available at all times to serve load, or generators that are available to serve intermediate load levels. In daily operations, quick-start resources can help replenish the capacity lost due to the sudden and unexpected loss of a generating unit or transmission facility. Under severe peak-load conditions, quick-start units can also help avoid the need to implement involuntary load shedding by providing either energy or operating reserves.

The amount of available short-start generation necessary in local areas should be approximately equal to the amount needed to protect against the most severe contingency. Short-start units can be started quickly and can return to acceptable operating limits following a single contingency and without having to interrupt firm load. Short start units also provide an efficient mechanism to protect against load forecast errors and can be used as regulation for intermittent resources such as wind turbines. Based on the CAISO's experience for the control area, there should be 3000 to 4000 MW of short start resources with availability factors of at least 90% and run-time limits of no less than 1000-2000 hours per year, at full output. Southern California has a greater need for short start units than the northern part of the State. The aforementioned range of available short-start resources is intended to accommodate response to single largest contingency loss events, higher than forecasted loads, short start unit unavailability and growing intermittent resource mix. As the number of intermittent resources in the resource mix grows, this target should be revisited. It should be noted that the system presently has in excess of 10,000MW in dependable capacity short start units. However, much of this capacity is used to serve load under normal circumstances. The 3000 to 4000MW of short-start units identified above is needed to respond to events above and beyond the average base forecast. That said, as additional wind and other intermittent technologies are added to the resource mix and short start units retire, short start units should be procured as appropriate.

The CAISO is working with the Commission on a 2007 Location Capacity Requirements (LCR) study (discussed below). The results of this study can be used to

fine-tune this proposed range of short-start resource requirements and to arrive at a methodology for determining targets for each local area.

b) As the Commission authorizes the procurement of additional renewable resources, the Commission must ensure that such procurement is “matched” with the procurement of other complementary technologies that will allow for reliable grid operations.

The CAISO supports the State’s public policy to add more renewable resources, such as wind, solar, or stream flow facilities. However, the variability in the output of renewable resources must be taken into account when adopting procurement policies. In particular, policies should address this concern through corollary procurement of generating technologies that complement the unique operating characteristics of some renewable resources. For example, fast-ramping regulating units, such as pump storage, storage technologies and combustion turbines can complement wind technologies.

c) Long-term procurement plans must include the regulating and ramping capabilities necessary to support the rate of change of energy consumption in the CAISO control area.

Ramping capability is the ability to change the output of a generating resource and includes both the rate and the amount of change available. In many scenarios ramping capability is equally as important as contingency reserves. The CAISO regularly experiences energy ramps in the mornings and evenings in excess of 2000 MW per hour (and sometimes in excess of 100 MW per minute). The magnitude of these large ramps is increasing over time as a function of load growth. This ramping capability can be made available to the CAISO either as Ancillary Services (regulation) or as scheduled generation changes to accommodate large changes in scheduled energy at interconnections (making the overall operation of the grid more efficient), as well as large

changes in demand over short periods of time, and especially those non-coincident with hourly schedule changes (providing greater reliability). The existing fleet of resources has been barely able to adequately respond to the larger ramps. Consistent with the discussion in previous sections, technologies such as combustion turbines, pumped storage, storage technologies and combined cycle units support the CAISO's ability to respond to the typical rate of change of energy consumption in the CAISO control area. It is the CAISO's hope that procurement that meets other needs will also cause a needed increase ramping capability, or minimally not cause a net decrease.

d) The previously-established import capacity levels for 2006 should be used as a benchmark for demonstrating the deliverability of imported resources in the LTPPs.

For the upcoming LTPPs, the CAISO recommends that LSEs rely on available deliverability information. The CAISO allocated import capacity to LSEs for 2006 based on historical import/export levels, and this level should be used as a benchmark for demonstrating the deliverability of imported resources in the LTPPs. For imported resource amounts that exceed an LSE's 2006 import allocation on a particular branch group, a transmission project that would increase simultaneous transmission import capacity a commensurate amount during summer peak load conditions should be identified in the procurement plans. The CAISO has attached to these comments a chart that illustrates the 2005 import levels during summer peak (See Attachment 1).

e) Resource plans should identify in-area resources so that the cost of transmission upgrades can be appropriately assessed.

Specific in-area resources should be identified in the procurement plans so that the cost of transmission upgrades needed to ensure deliverability are appropriately factored into the least-cost, best fit analysis. The Tehachapi area is a good example of

generators proposing to locate where significant transmission upgrades are required to ensure that energy and capacity can be delivered to load. In general, existing resources would not have associated transmission upgrade costs, but new resources may have associated transmission upgrade costs to ensure deliverability, and such costs should be taken into account. Transmission upgrade requirements associated with planned new resources should be based on Generation Interconnection Studies approved by the CAISO. In addition, the CAISO is currently performing a Phase II Baseline Deliverability study to determine transmission upgrade requirements needed to ensure the deliverability of new generation in the ISO Interconnection Queue. The results of these studies should be available within next few months and should be considered in the LTPPs.

f) The Commission should carefully examine Net Interchange values in approving long-term procurement requirements.

The CAISO's operating experience indicates that, although the control area interties have more than 14000 MW of import capability, during peak load periods where the Western Grid is stressed, import levels often drop as control areas hold generation for their own internal needs as necessary to keep their portion of the western grid secure. To date, it appears that an appropriate estimate of net import availability for the CAISO control area may be in the range of 9000 MW during peak load periods (See Attachment 1 which is a representation of data from the CAISO Emergency Management System). This level is also more consistent with the allocated capacity on interties. The CAISO would also urge caution against over-reliance on imports because it can compromise grid security if there are not enough in-state resources to back up the import line if lost. System studies need to support maximum appropriate import levels. Dynamic stability

and the single largest contingency (if it is an import) should be studied to ensure there is sufficient capacity and energy locally to back up the import if it is lost. For example, until more resources are built in Southern California, the CAISO would not recommend significantly increasing the dependence on imports without further study.

ii. In the Right Location

a) The Commission should use the results of the CAISO LCR study for 2007 to determine the minimum amount of resources that need to be procured within load pockets or locally constrained areas.

At least in the short-term, the location of new resources is important (for example, the southern portion of the state currently needs more resources than does the north, and the south is more reliant on imports than the north). The procurement of resources must take into consideration the deliverability of energy to end-use customers, and an appropriate amount of contingency-based reserves. Consistent with the Commission's expectations in its D.04-12-048 proceeding, the CAISO is in the process of developing a 2007 local capacity requirements ("LCR study") that will be presented in Docket No. 05-12-013 on April 21, 2006. The results of the LCR study will provide the Commission with useful information that it can use in this long-term procurement proceeding.

The LTPPs that are submitted by the jurisdictional utilities should contain specific detailed information demonstrating (1) how LCR in each local area will be met; (2) that imports will be deliverable; and, (3) that internal generation will be deliverable. Going forward, the CAISO transmission planning process will include additional information that will facilitate the incorporation of these specific details into the plans. However, for the upcoming LTPPs, the CAISO recommends that LSEs rely on available deliverability

information to the extent possible and supplement this information, as needed, with their own analysis.

The LTPPs should assume that all load growth in the local area between 2007 and the procurement horizon must be met by the procurement of available existing or new local resources or resources accessible through transmission expansion projects, and the LTPPs should provide sufficient details about these local resources and transmission expansion projects, as described in section c. below.

b) The Commission should facilitate the re-powering of existing facilities that are located on existing infrastructure rights-of-way to both insure a more efficient generation fleet and also to address policy goals regarding global climate change.

Re-powering existing power plants that are located on water, gas and electric connections makes great sense because it utilizes the existing non-electric infrastructure while increasing electric generating capacity. This is especially true if more efficient, smaller footprint, less polluting technologies can use the same gas transmission service, which itself may otherwise emerge as a potential limiting factor. Additionally, combined-cycle plants can be designed to include short start capabilities for a portion of the generation, as well as providing efficiencies that should make the plants competitive.

Re-powering includes any number of options that take advantage of existing thermal power plant locations. These would range from utilizing some of the existing equipment, to complete replacement of existing facilities at the location with modern, efficient technologies. However, a major evolving concern is the ability for the existing natural gas transmission system to provide natural gas to more areas to fuel new power plants. One way to get around this, while also adding new, cleaner power, is to re-power existing inefficient plants. For example, an old inefficient power plant designed to

deliver 1000 MW and using the gas fuel available at that location at a 15,000 heat rate can be re-powered with new equipment to provide 2000 MW using technology at a 7500 heat rate using approximately the same amount of gas. These existing locations are also important because, in most cases, the operation of the transmission system is made more reliable by increased generation at those locations. Replacing older, less-efficient technology with newer, cleaner, more efficient and operationally flexible technology, which ultimately produces more electric energy, should be encouraged through this LTPP process.

c. Procurement Plans must include sufficient details not only as to how power will be obtained, but where the power will come from.

Any resources included in the long-term procurement plans must be deliverable. Furthermore, in order to provide even a rough demonstration of deliverability, the plans must contain specific information regarding the amount and location of the resources that LSEs plan to procure. The LCR study described above includes exact descriptions of the existing local reliability areas. These local reliability areas should be used as a reference for specifying resource locations to meet local reliability needs. The Commission needs to be very specific in its LTPP requirements and order the LSEs to demonstrate not just that "they will get power" but "HOW" they will get power and from "WHERE".

iii. In the Right Amount

a) The CEC long-range load forecast is an appropriate benchmark for purposes of long-range planning.

The CEC load forecast is a long-range forecast that should be used as a "baseline" and for planning purposes as a key data point. The CAISO generally takes a shorter-term look at the future based on its operational needs. Nonetheless, the CAISO and CEC load

forecasts are fairly close overall, both on average and in the long run. Thus the CEC load forecast is an appropriate benchmark for purposes of long-range planning. However, it should be noted that such forecasts utilize average conditions as a base. That typically means 50% of the time actual load will be lower, and 50% of the time load will be higher. The CAISO believes that, when setting procurement policy, the Commission needs to consider above- average conditions. When examining plans for more near term ranges, the CAISO operational considerations and historical data discussed below should be factored into the adequacy assessment of resource plans. The Commission should take the CAISO input presented in these comments and use it in conjunction with the CEC load forecast, as well as other tools at its disposal to judge the soundness of the LTPPs. Again, the CAISO notes that the grid can be operated under several different levels of reliability. It is a matter of state policy to determine what level to plan for or, stated differently, how much “insurance” to buy. These decisions should be made based on a cost/benefit analysis.

b) The Commission should utilize a higher outage rate than the level currently included in the CEC’s long-range forecast..

Based on a review of historical generation outage data, the CAISO recommends that the outage rate be raised to 4000 MW from 2255 MW (see Attachment 2 generated from the 8 a.m. CAISO Shift Manager’s daily report). 4000 MW represents approximately 7% of the installed capacity. Many generating units in California are very old, and are complex machines that require adequate maintenance. The CAISO believes that 7% is not an unreasonable amount under these circumstances. Furthermore, a 7% figure would: (1) help balance the number of generation outages over the course of the year; (2) provide a factor to account for a machine breaking during peak; and (3) provide

a factor for a machine that has broken and/or de-rated and is in the process of being repaired.

c) The Commission should add to the CEC resource forecast some percentage of the system's installed capacity as a factor to compensate for the expected retirement of existing facilities.

The Commission should consider the retirements of existing facilities in analyzing installed capacity and system/location needs. Currently, the CEC has not come to a conclusion as regarding the appropriate level of resource retirements to reflect in its loads and resources assessment. Typically, announcements of retirements occur within a year or two of the planned retirement. This time frame is inadequate to establish replacement strategies because the development of new generation typically takes several years. An historical look at retirements would indicate that approximately 1200 MW retired before summer 2002, 2200 MW retired before summer 2003, 180 MW before summer 2004, 450 MW in 2005 and 1795 MW before summer 2006. The CAISO recommends that the Commission go beyond the current practice of only using known retirements in the assessment, and include a factor each year into the future to account for expected retirements. In other words, some percentage of the system's installed capacity (possibly statistically based, or a percent of installed capacity or likelihood of market viability) should be included in each year of a forecast as a factor to compensate for the retirement of existing facilities. This factor might also include an analysis of the demographics and geographics of the existing installed capacity.

d) The Commission should incorporate into its use of the CEC forecast a factor to compensate for pending or future environmental limitations that are increasingly affecting the availability of resources.

The CAISO recommends that environmental agencies be consulted to obtain a forward-looking view of pending or potential future environmental legislation or existing regulations that might impact the output of generation facilities. Environmental issues must be considered in the procurement decisions. As an example, the CAISO notes that recent concerns regarding Delta Smelt associated with the availability of cooling water may result this summer in a significant decrease in the output of the Pittsburg and Contra Costa generating facilities this summer. Some studies show that these facilities may be subject to a total shut down for a portion of summer 2006, which would result in the loss of approximately 1900 MW of installed capacity. Environmental issues like this one are real and cannot be ignored in determining the true generating capacity available to serve the citizens of California. Experience has shown that the affect of such environmental issues on generation capacity is increasing and not decreasing.

e) The CPUC should consider the availability of procured resources at system peak load to determine the relative effectiveness of procured resources.

The availability of capacity at system peak load of various generating technologies should be considered. For example, thermal units are typically able to provide a greater percentage of their nameplate capability at system peak than wind units. Thermal units can typically provide in excess of 90% of their nameplate capability at peak while wind units typically provide capacity in the range of 5% of nameplate at peak. Future procurement decisions should include a factor that reflects expected capacity available at peak.

IV. Comments on Other Proposals.

The CAISO is not submitting comments on this topic.

V. New proposals.

The CAISO is not submitting comments on this topic.

VI. Other comments.

The CAISO also recommends that the Commission take into consideration the following issues when developing criteria items to be included in the upcoming long-term procurement plans.

a. Gas Transmission and Storage Infrastructure.

The Commission should consider the investments needed in gas transmission and storage infrastructure when making procurement decisions. Consideration of the gas supply infrastructure, particularly the impact of gas costs and infrastructure delivery failures, is important if procurement plans include numerous natural gas combustion turbine units.

b. Network Transmission Planning.

The Commission, CAISO, CEC, and participating transmission owners (“PTOs”) are working on a long-term transmission planning process. This process is inter-related with long-term generation procurement. As part of this transmission planning process, the CAISO is developing a transmission plan that will include key inputs from the CEC regarding resource (generation and demand) scenarios that reflect and are consistent with State energy policy and load forecast information. The CAISO transmission plan will identify transmission projects (and their costs) and will establish a transmission “benchmark” against which other measures—such as locational generation or demand response—can be measured. LSEs can then use that information to develop their long-

term procurement plans. The CAISO will provide information on the transmission planning process as it becomes available.

c. Qualifying Capacity.

The CAISO's role with respect to qualifying capacity considerations was addressed in Sections 4.1 and 5.4 of the Commission's October 27, 2005 Opinion on Resource Adequacy requirements (D.04-12-048). The CAISO intends to continue to work closely with the Commission on this issue in the context of the RA proceeding, and the results of that collaboration can then be integrated into the long-term procurement process.

VII. Are there any issues of material fact that would benefit from evidentiary hearings, if so, please identify the issues and discuss hearing time needed for development of record.

The CAISO is not submitting comments on this topic.

C. CONCLUSION.

The Commission has asked the parties to, *inter alia*, provide input as to whether the state should adopt additional policies to support the development of new generation and long-term contracts. With these Opening Comments, the CAISO has presented policy considerations as well as information that should be included in the long-term procurement plans. The CAISO looks forward to working with the Commission and other parties in the next phase of this proceeding as the procurement plans are evaluated.

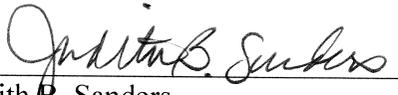
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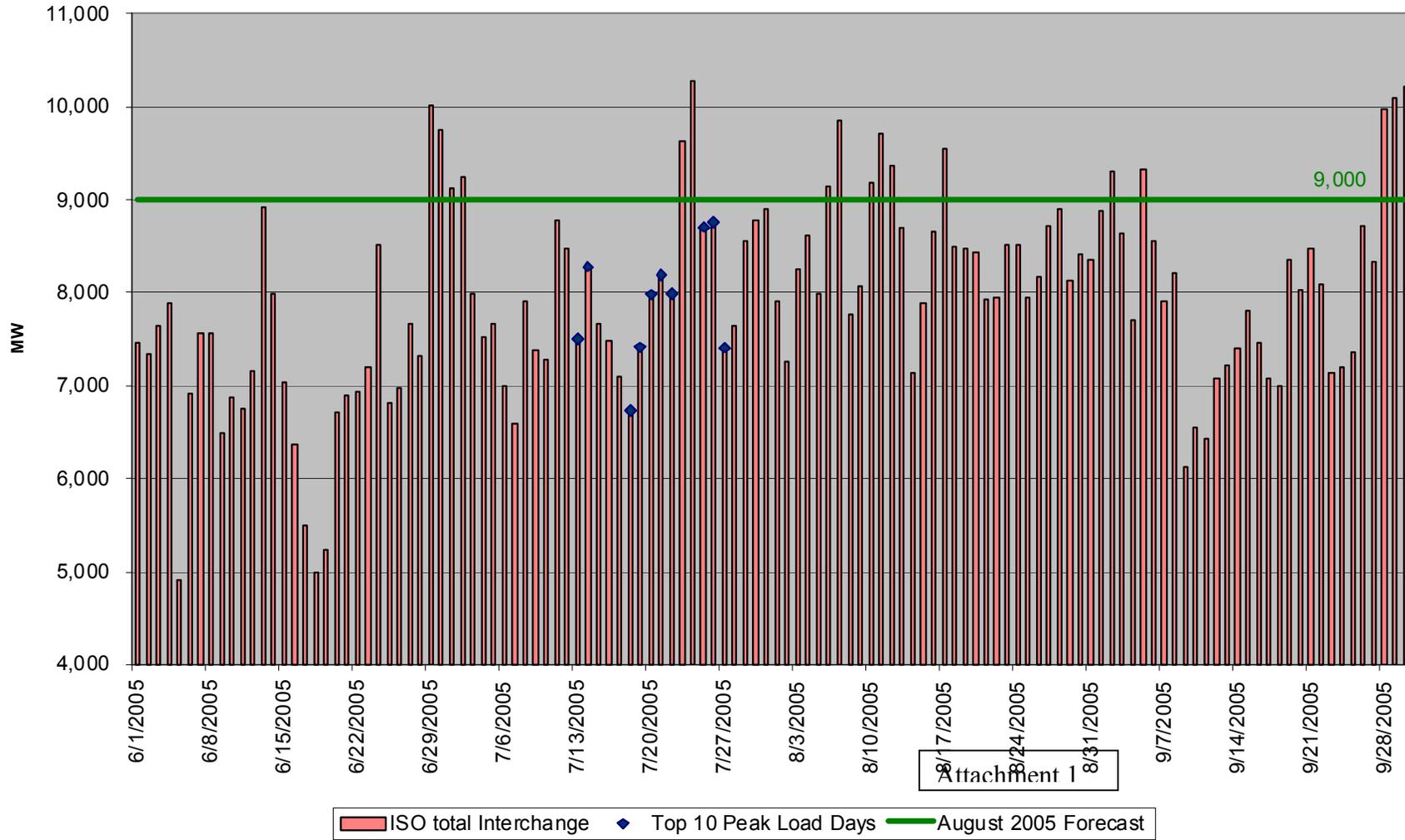
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Respectfully submitted,

By: 
Judith B. Sanders
Regulatory Counsel
California Independent System
Operator

Attachment 1

CAISO Imports Summary (HE1700 Hourly Average)

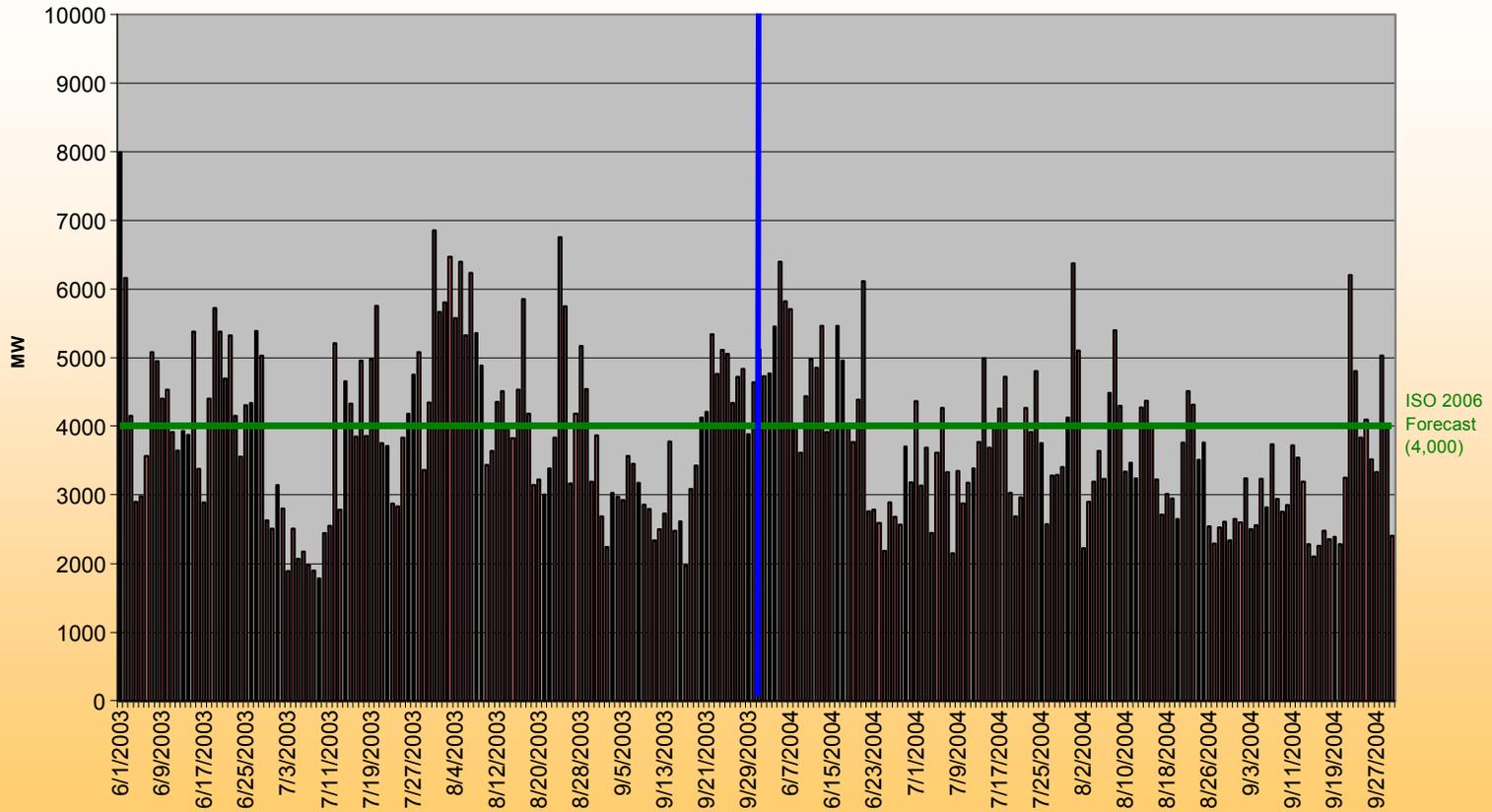


Attachment 2



CAISO Forced + Planned Outages

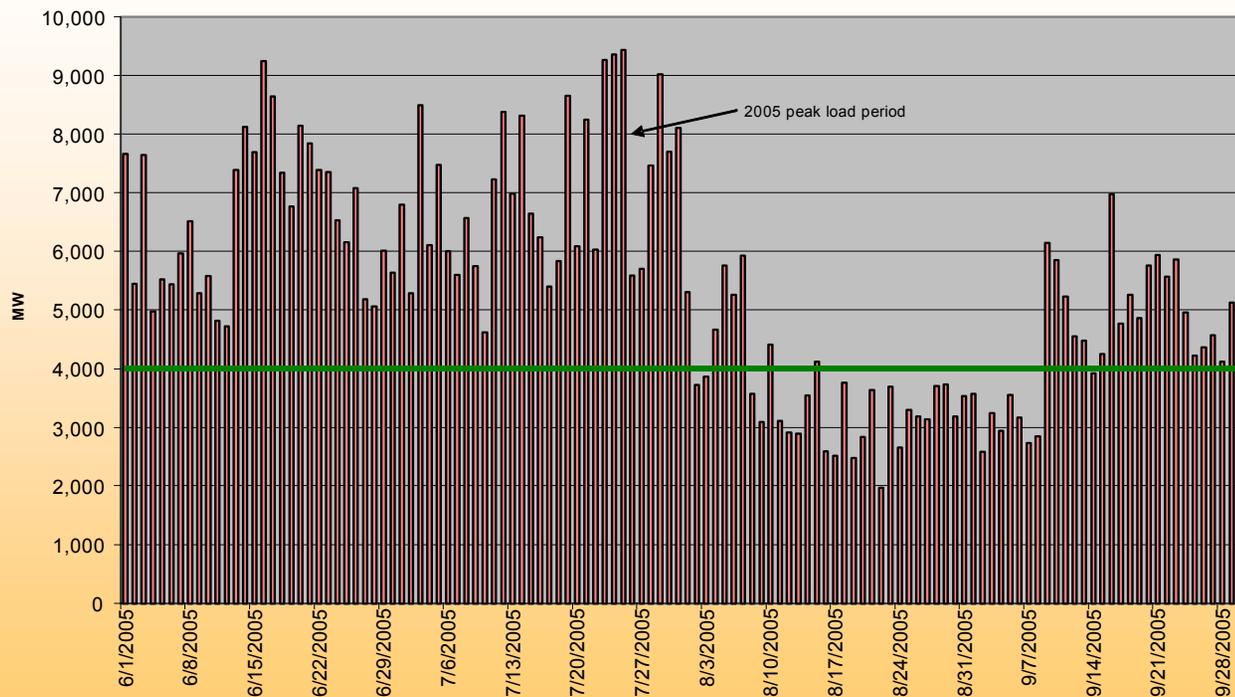
2003 & 2004 Actuals





CAISO Forced + Planned Outages

2005 Actuals



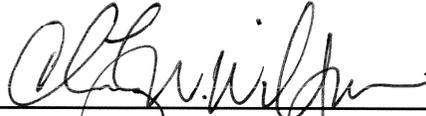
Note:
Variation from
the forecast is
in the range of
4,500 MW.

Approximately
4500MW is
available in
surplus
reserve and
load
management
programs to
help manage
higher outage
rates than
forecasted

CERTIFICATE OF SERVICE

I hereby certify that I have served, by electronic and United States mail, Post-Workshop Opening Comments of The California Independent System Operator in Docket No. R.06-02-013.

Executed on April 7, 2006, at Folsom, California.

A handwritten signature in black ink, appearing to read "Charity N. Wilson", written over a horizontal line.

Charity N. Wilson
An Employee of the California
Independent System Operator

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