

**Mitigation of Reliance on Old Thermal Generation
Including Once-Thru Cooling System
BAMx Comments**

The following are comments on the CAISO's Once-thru Cooling (OTC) Studies submitted on behalf of the members of BAMx¹. These comments are in reference to the CAISO Phase 1 Study Results, presentations made by the CAISO in the May 1, 2008 stakeholder meeting regarding the conduct of studies for Phase 2 and 3, and the revised draft Study Plan, Version 5.0, dated January 2, 2008.

1. Inconsistency: At times, the study objectives discussed are to select the best combination of transmission, generation, demand response, etc. to replace the OTC units. At other places, the objectives are to perform technical studies in accordance with the CPUC RA process to determine an economic solution. Please clarify these seemingly conflicting and inconsistent objectives. (References: Study Plan page 8 regarding scenarios, page 12 regarding new generation, pages 18-19 regarding economic trade-offs; CAISO May 1 presentation Slides 5 & 15.)

2. Set Reasonable Goals: If the end of 2008 is an important date for Phase 2, the CAISO should be realistic on what can be accomplished within this timeframe. It is better to focus your efforts so that results can be presented, rather than a progress report with no results. A narrower scope for Phase 2 that could be presented by the end of 2008 should be the next steps. The CAISO should select a reasonable goal for Phase 2 even if that means deferring parts such as the economic trade-off analysis described. The CAISO should consider further utilization of the Long-Term LCR studies for the OTC evaluations. Transmission solutions could be provided by PTO's to reduce LCR to levels w/o the OTC plants. (References: Study Plan pages 21-22 needs to be revised; CAISO May 1 presentation Slide 27.)

3. Study Year: For the Phase 2 study, concentrate first on the date of 2015, and only use units targeted by the SWRCB, i.e., no new combined-cycle plants. (The 2015 date applies to plants with utilization factors of 20% or less, and the 2018 date applies to those plants with utilization factor greater than 20% per the State Water Resource Control Board (SWRCB) proposed OTC policy².) This would make the new studies more consistent with the existing LT GBA studies. (Reference: CAISO May 1 presentation, Slide 17.)

4. LT GBA Studies: Presentation of GBA results should focus on results concerning what needs to be done w/o the OTC units - not alternative transmission plans. (CAISO presentation Slides 21-22.) The LT GBA report indicated that even with additional

¹ BAMx, the Bay Area Municipal Transmission group, consisting of Alameda Power & Telecom, City of Palo Alto Utilities, and City of Santa Clara, Silicon Valley Power.

² The proposed OTC compliance dates are identified in the SWRCB's [Scoping Document: Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling](#).

reactive compensation, with internal generation at 4,870 MW, the transmission system could only support 9,950 MW of load. The year 2015 load was projected to be 10,428 MW. What do these facts mean about the amount of OTC retirement w/o major additions? How does that compare with LCR results from the Phase 1 report? The CAISO should consider a small update to the LT GBA studies. For instance, if a new rating has been accepted for the Tesla 500/230 kV banks, the new ratings should be accounted for in the studies. This type of adjustment should be considered to align the LT GBA studies with the OTC Phase 2 studies.

5. Economic Assessment: The Study Plan at page 19 and Attachment IV makes reference to the TEAM approach for economic evaluations. Generic assumptions of new generation should now be discussed since the TEAM approach as we understand does not make generation-transmission trade-off analysis. It appears that the CAISO would need third party power plant consultants to help develop appropriate generation mitigation plans and costs assumptions for the scenario analysis contemplated by the CAISO.

6. Phase 1 Results: We have submitted prior comments on the results of the Phase 1 Studies within the time period as originally requested (April 4, 2008) by the CAISO. These comments are attached here again. We appreciate and thank the CAISO for discussing the Phase 1 Study results during the May 1 stakeholder meeting, and request the CAISO provide responses to the attached Phase 1 comments. As indicated in the CAISO May 1 presentation at Slide 27, please include these comments along with the attached comments in your posting of stakeholders comments as well as the CAISO responses to these comments.

We thank the CAISO for conducting the May 1 stakeholder meeting and for inviting a representative from the SWRCB in presenting an overview of their proposed OTC policy implementation plans which provided context to the planned CAISO OTC studies. The BAMx members appreciate the opportunity to provide these comments on the CAISO Phase 1 Study results and plans for the conduct of the Phase 2 & 3 studies.

Attachment:

BAMx Comments on the CAISO OTC Phase 1 Study Results, dated April 4, 2008.

**BAMx Comments on CAISO's
Old Thermal Generation
Phase 1 Report
(2008-2012 Study Results)**

The CAISO Phase 1 report provides a lot of good information in a short period of time. This is a good start in the further evaluation of reliability of mitigating reliance on old thermal generation including once-through-cooled units. The question of how much, and the right mixture of, energy infrastructure - electric generation and transmission - in order to maintain reliability is a difficult area to assess. BAMx believes the Phase 1 report can mislead the reader by introducing a system performance metric that has not been used for resource planning purposes before and not identifying it as a new evaluation tool. We also believe the stakeholder process leading up to the report was deficient. We further explain those points about the Phase 1 report distributed on March 28, 2008, in the following bullet points:

Approach/Study Methodology

- Resource adequacy and planning reserve margins have historically been considered in many forums here in California. A focal point for the current discussion is the state-wide resource adequacy requirement. The CPUC has been the focal point for that debate. As we understand, the current state policy requires Load Serving Entities to satisfy a 15-17 % amount of planning reserve obligations and to satisfy zonal and local requirements as adopted yearly by the CPUC. That existing policy of course is subject to change as part of the on-going proceedings before the CPUC. The CAISO's Planning Reserve Requirements Study (PRRS)¹ will be an important aspect of that debate. It is unclear if the planning reserve analysis contained in this report is part of that debate. Based upon the above, **we believe the report should clearly point out to the reader whether or not the CAISO operating reserve analysis is or is not a part of the current State accepted methodology for determining inadequate supply of resources to ensure a reliable electric system in California (it appears to BAMx that it is not).**
- Besides pointing out that the discussion on operating reserves and the approach utilized (which was stated to be similar to the annual seasonal/summer assessments performed by the CAISO) is not an accepted tool for resource planning, the CAISO should be clear on why change is needed, what changes does it propose, and how it will attempt to obtain support for any changes. In other words, why is this methodology appropriate in the context of long-term resource and/or transmission planning? That is, why operating reserves requirements, and the probability of not exceeding a 5% and 10% threshold of

¹ The CAISO is undertaking the Planning Reserve Requirements Study (PRRS) to evaluate long-term planning reserve requirements for its Control Area, using the industry-accepted one day in ten years loss of load (LOLE) criterion. The study results will provide the CAISO, the Load Serving Entities (LSEs) within its Control Area, State energy regulatory agencies, regional reliability organization and interested stakeholders with the understanding of its long-term planning reserve requirements based on industry-accepted reliability metrics.

shedding firm load, should be utilized for long-term planning requirements, when planning reserve margins (PRM) of 15% have already been identified by the CPUC as meeting resource adequacy requirements, notwithstanding the probabilistic approach (LOLE) study to PRM being undertaken by the CAISO in the PRRS.

- BAMx believes that this part of the report, although containing important information, does not reflect state policy in terms of the amount of generating capacity needed to provide a reliable system in 2012.

Stakeholder Process:

- While the Phase 1 report is dated February 29, 2008, and was posted on the CAISO web site on March 4, 2008, there was no stakeholder notice, let alone notices to the Study Team of its availability for review until distributed on March 28, 2008.
- No notices were provided to the Study Team, or even included in the January 2, 2008 version of the Study Plan, that an operating reserves assessment and probabilities of inadequate supply - using the Supply Adequacy Model (SAM) summer assessment approach - would be taken. The Study Team, however, was informed that the long-term LCR study would be extended to provide an interim assessment report in Phase 1 by the first quarter of 2008. The CAISO should, at the very least, strive to inform stakeholders of a new study approach, even if the intent is to provide an interim report on the study results.
- Requesting comments within one week of distributing the report, particularly where the report introduces a new approach from traditional resource planning and/or transmission planning methodologies, is not an open, transparent or collaborative approach to assessing future reliability needs. The CAISO should provide additional and sufficient time in order for more robust stakeholder involvement.

Report Clarity and Transparency:

- The Phase 1 report utilized the SAM approach to assess potential impacts of taking existing generation out of service. While the report mentioned that this approach is not new and has been utilized for summer assessments in the past by the CAISO, the approach is new for long-term planning purposes.
- The CAISO should further explain the approach, such as via a stakeholder meeting, as portions of the report are not easily understood.
- The narrative in the report, with references to tables and figures, does not appear to be correctly referenced. For example, on page 14, the following sentences stated:

“The bottom portion of Table 5 shows the results of the Supply Adequacy Model. The 14 to 22 percent range is the range of probability of having to shed firm load under both the WECC and the Conservative cases. While these Cases meet the RA program requirements, the probability of shedding firm load, otherwise known as rolling blackouts, is fairly high.”

However, no indication of these results appears in Table 5. Additionally, on page 15, the following was stated:

“Because the probabilities for Stage-3 Emergencies in Table 5 were high, the study included use of the Supply Adequacy Model to determine the amount of capacity that could be taken off line for the 2012 summer and not exceed a 5 percent and a 10 percent probability of a Stage-3 Emergency.”

Again, Table 5 has no probabilities indicated, but in fact is labeled as a deterministic approach utilizing the planning reserve margin of 15%. The CAISO should carefully review the narratives to assure clear and proper references to the appropriate tables and figures in the report are made.

- Table 7 shows the historic declared emergencies and probabilities of calling emergencies in the future. Please provide an explanation for the derivation of the probabilities for calling emergencies in 2008 and 2012.

BAMx appreciates the opportunity to provide these comments on the CAISO Old Thermal Generation, Phase 1 Report.