Written comments with CAISO reply
Submitted after the
November 3 Stakeholder Meeting regarding the
2010 Local Capacity Requirement (LCR)
Criteria and Methodology and the
2010 LCR Manual

Comments of Southern California Edison Company on CAISO Draft 2010 Local Capacity Reliability Requirements Study Manual

In accordance with the California Independent System Operator's ("CAISO's") request, Southern California Edison Company ("SCE") hereby submits its comments on the October 2008 draft version of the CAISO Manual for the 2010 Local Capacity Area Technical Study ("2010 LCR Manual"), following the presentation made by the CAISO at the 2010 Local Capacity Technical Study Criteria, Methodology and Assumptions Stakeholder Meeting held on November 3, 2008.

1. Introduction

SCE appreciates the efforts made by the CAISO to provide SCE and other interested parties the opportunity to discuss the 2010 LCR Manual in a stakeholder forum and provide written comments in connection with the development of the 2010 LCR Manual. SCE also appreciates the continuing efforts of the CAISO to improve the consistency and transparency of the LCR study process. The purpose of SCE's comments is to further improve the consistency and transparency of the 2010 LCR process and methodology and SCE therefore requests that the CAISO address the following issues raised either in the 2010 LCR Manual or in the stakeholder meeting presentation.

2. The CAISO's Schedule for Base Cases

In its stakeholder meeting presentation, the CAISO provided a calendar for the 2010 LCR study process, which stated that January 1, 2009 is the deadline for receiving base cases from the Participating Transmission Owners ("PTOs") and that the CAISO will publish the base cases on January 15, 2009, with comments due by January 22, 2009.

As SCE explained at the November 3 stakeholder meeting, it will make its best efforts to comply with the CAISO's schedule. However, the upcoming holiday season, including the New Year's Day holiday on January 1, causes SCE to be concerned about its ability to meet these deadlines.

In addition to the approaching holiday season, SCE's ability to provide its base cases to the CAISO is contingent upon receiving the load forecast from the California Energy Commission ("CEC"). Thus, despite SCE's best efforts, we may be unable to meet the January 1, 2009 deadline due to unanticipated delays in load forecast development. Therefore, SCE requests that the deadline for the CAISO to receive base cases from the PTOs be extended from January 1, 2009 to the week of January 5th.

As SCE also explained at the November 3 stakeholder meeting, publishing the base cases on January 15, with comments due by January 22, will not provide stakeholders with adequate time to review and comment upon the base cases. Because January 19 is a federal holiday (Martin Luther King, Jr. Day), under the current schedule stakeholders effectively have only four business days in which to review and comment upon the base cases. To further complicate matters, in previous years there have been unforeseen delays in uploading the base cases to the CAISO's secure website. Given these concerns, SCE requests that the base case review period be extended from one week to two weeks.

CAISO response: Moving the deadline for submission of all base cases to the week of January 5th 2009 will put the CAISO at high risk of not meeting the January 15, 2009 date for the publication of base cases on the web site, and possibly moving the entire schedule back by the same amount of time. With good cause, and in case by case

basis, the CAISO may accept a small delay in PTO base case submittal date. Please use the existing CEC forecast and the latest base cases series when building the LCR base cases. The CAISO acknowledges that there is a chance CEC will come up with a "revised load forecast" fairly soon. If this happens before December 31, 2008 then the PTOs will be asked to incorporate the new load forecast in the base cases, if it arrives between January 1 and January 15 then the CAISO will incorporate in the base cases already received from PTOs. The process does not contemplate a change in load forecast after January 15.

In general the extension or change in any timeline should result in a change (delay) of the entire process; otherwise other parts of the process need to shrink down. In an effort to get the entire process done on-time, the CAISO study time will get reduced by the same amount as the extension given to market participants to review base cases. For 2010 the CAISO will extend the base cases comments period until the end of the day January 26, 2009.

3. Application of Planning Criteria

As a general matter, SCE respectfully requests that the CAISO work with the PTOs and the investor-owned utilities ("IOUs") prior to publishing any preliminary 2010 LCR study results that incorporate new criteria, apply more stringent contingencies, or impose new sub-area requirements. This collaboration will allow greater stakeholder participation in the development and the possible implementation of mitigation measures, such as special protection schemes ("SPS"). To the extent possible, SCE requests an opportunity to consider any new criteria and develop alternative operational solutions (such as SPS) to mitigate local constraints before the draft 2010 study is released to all

stakeholders for review and comments. By providing this opportunity and improving the transparency and clarity of the LCR study process, SCE will be able to validate the results of the LCR study and work with the CAISO to develop and implement timely and effective solutions to resolve concerns identified by the LCR study.

CAISO response: This phase of the stakeholder process is designed to discuss and make clear the full set of assumptions, criteria and methodology (including contingencies) that the CAISO will use in the LCR analysis. Therefore, the CAISO encourages all PTOs to participate in the open dialog to fully inform themselves of the potential additions they may not be familiar with; in order to conduct their own LCR studies. Given the very tight timeframe for the annual LCR study, all stakeholders including PTOs, will have three weeks to propose any new operating solutions and/or SPS after the CAISO publishes draft results on March 2, 2009. This approach ensures the broadest participation of stakeholders in a transparent manner.

Finally, at the November 3 stakeholder meeting, Mr. Catalin Micsa of the CAISO provided a useful explanation of how the CAISO differentiates between local, zonal and system needs. Such differentiation between local, zonal and system needs has a direct economic impact upon SCE's procurement plan for meeting its LCR requirements. Thus, SCE requests the CAISO update the 2010 LCR Manual to reflect this explanation and clearly describe how the CAISO differentiates between local, zonal and system needs. SCE appreciates the CAISO's consideration with respect to these concerns.

CAISO response: Suggestion included in the 2010 Manual (page 16) under a new heading: Contingencies.

4. Conclusion

SCE appreciates the efforts of the CAISO to improve the LCR study process and the opportunity to provide comments on the draft 2010 LCR Manual. SCE requests that the CAISO modify the draft 2010 LCR Manual in the manner described above when preparing the final 2010 LCR Manual. SCE is ready and willing to provide any assistance or additional information the CAISO may need to implement these changes.

BAMx Comments on CAISO

2010 LCR Study Criteria, Methodology and Assumptions

The following are comments submitted on behalf of BAMx[1] on the CAISO Draft Manual for the 2010 Local Capacity Area Technical Study document dated October 2008, and on the presentation and discussions conducted by the CAISO on the 2010 Local Capacity Technical Study Criteria, Methodology and Assumptions in the November 3, 2008, stakeholder meeting.

Comments on 2010 LCR (Local Capacity Requirements) Presentation

1. Slide 17 indicates that future PTO transmission plans will need to recognize MORC in order to propose transmission projects which would reduce LCR. Please expand on this statement. Are you proposing to include MORC in the reliability standards for determining transmission needs – why or why not?

CAISO response: This reference relates to the consideration and treatment of Path Ratings which have to be protected in MORC (Minimum Operations Reliability Criteria). At stakeholder request specific language may be introduced into the CAISO Grid Planning Standards regarding the treatment of Path ratings; there is no need to introduce the entire MORC in the planning standards.

2. Please provide a concrete example (numbers from a past study) of slide 22, how a deliverable import into the ISO control area affects a local LCR requirement.

CAISO response: This slide is not intended to single out imports versus generation. Rather, it is indicating that imports are treated similarly to generation resources as

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

they are both located outside a local area. They may both be utilized by ISO operators in the "readjustment" timeframe (between the first and second contingency) in a C3 (N-1-1) condition.

3. Definition of Load Pockets (slides 27-30). The slides appear to describe the relative advantages/disadvantages of fixed versus non fixed boundaries. That subject needs to be tied to a time frame. How long should it be fixed for? Over the long term, you must allow for a changing of boundaries as the transmission changes.

CAISO response: The CAISO will evaluate the situation after any new major transmission and/or generation project that could potentially change the boundary. These studies are usually presented in the Long-Term LCR studies posted on the CAISO web site. Changing the boundary will be done only in case by case bases if needed after stakeholder input.

4. Please expand on slide 32. How and when are the new "manual" operational adjustments discussed and SPS schemes transmitted to stakeholders? What do the second two bullet items have to do with transparency?

CAISO response: Deadline to propose new operating solutions and/or SPS is March 24, 2009 (see slide 40). Any accepted, validated and implemented operating solutions and/or SPS are presented to the stakeholders in the final draft report April 7, 2009 as well as the Stakeholder meeting on April 14, 2009. Second bullet was introduced in order to give stakeholder the confidence that the CAISO will follow through and implement these new operating procedures in real-time operations.

5. Please clarify what you mean by "units under long term contract turned on first." Classify what, if any generation, is on in the base case before long term contracts are turned on. Define long term contracts. Indicate in which order the units under long term contracts will be brought on line.

CAISO response: Please read the 2010 LCR Manual pages 8-9 and 16-20.

6. Calendar – Are the base cases from the PTO's the same base cases the PTO's use for their grid expansion plans. If not, how do they differ?

CAISO response: The LCR base cases will be published on the CAISO web site. They are the latest available (at the time when they are build) base cases from the same base cases series as the base cases used for the CAISO grid expansion plan. There can be differences because they are 6-9 months apart; the latest information should be used regarding system configuration and/or project on-line dates, load forecast etc.

Comments/Questions on Draft Manual Technical Study, October 2008 Version

7. Page 8 indicates: "Regulatory must take and similarly situated units like QF/Nuclear/State/Federal resources shall be modeled on line at Net Qualifying Capacity (NQC) or historical output values (if NQC not available….)." Please explain/list State and Federal resources. Please also explain why there are no risks that they would not be available during 2010.

CAISO response: State and Federal resources are those owned by these governments. They have or are already being paid by ratepayers and have an assured revenue stream therefore it is unlikely they will be mothballed or not be made available in the CAISO markets.

8. Page 9 indicates: Units owned or under long term contracts with LSE's shall be modeled on line at NQC or historical output values (if NQC not available) for purposes of the 2010 LCR Study." "These units have an assumed revenue stream and therefore are assumed to make their capacity available." Having an assumed revenue stream does not appear to be proper criteria for saying there are risks involved. We assume these units would be available for dispatch by the ISO based upon their contract with the LSE. Clarify when they would be modeled on line. The words infer they are on line in the "base case." We assume based upon five above that they are not really in the base case but turned on first to relieve an overload and are part of what cumulated to determine the total needed to relieve the criteria violations. Clarify what the LCR need for a load area is if you need 5000MW to serve a 10,000MW load. We assume LSE's need to acquire 50% of their in area load independent of the number of MW's already under long term contract? The need would be 50% of load whether 2000 MW or 6000 MW was currently under long term contract? Please provide clarification for us.

CAISO response: Please read the 2010 LCR Manual pages 16-20. It explains the order in which the resources are turned on when arriving at the conclusion (in your case) that 5,000 MW are needed for LCR need (regardless of how many units are currently under long-term contract or other type of contract).

9. The page 9 section on "Maintaining Deliverability …." Needs to be re-written and better explained.

CAISO response: Suggestion included see page 9 in the 2010 LCR Manual. In the future please propose specific language that you would like introduced.

10. Page 9 and 10 indicates that the area definition is subject to change only if new major transmission and/or generation projects significantly change the local area constraints." What else would change the local area constraints? Is this section indicating the local areas for 2010 will be the same as those for 2009 even in the presence of a major transmission line coming on line in 2010 which would otherwise change the boundaries?

CAISO response: See response to question 3 above. Please read the 2010-2012 Long-Term LCR study report already posted on the CAISO web site and the 2011-2013 Long-Term LCR study report to be posted shortly. There are two proposed changes that do not impact any load and/or existing resources for Fresno and Big Creek/ Ventura mostly because of new generation and/or transmission project additions. Another change is contemplated for San Diego area and it will not impact any load but it will impact existing generation.

11. There should be an introductory paragraph under "Studies by performance level" to introduce what follows. The material that follows does not make it clear how various SPS and operating solutions are accounted for in the studies.

CAISO response: Please propose language to be added. All existing and/or known SPS and operating solutions will be used. Language also added to the 2010 LCR Manual under "Contingencies" in page 16.

12. All information and data that is known now should be listed in this document. This may consist of things like existing SPS schemes, operating procedures, local area boundaries if known before the studies are completed.

CAISO response: The CAISO does not post a list with all existing SPS schemes and operating procedure because some of them are market sensitive. Local area boundaries are included in the previous year's study and any changes if applicable are represented in the Long-Term LCR studies (public on the CAISO web site).

Thank you for considering our comments and requests for clarifications. We look forward to your responses.

Comments form PG&E on the CAISO Draft Manual

2010 Local Capacity Area Technical Study

PG&E provides these comments in response to the 'CAISO 2010 Local Capacity Technical Study – Draft Manual'. We appreciate the efforts made by CAISO and the opportunity to make comments. We also appreciate the presentation made by Catalin Micsa on November 3, 2008.

Comments

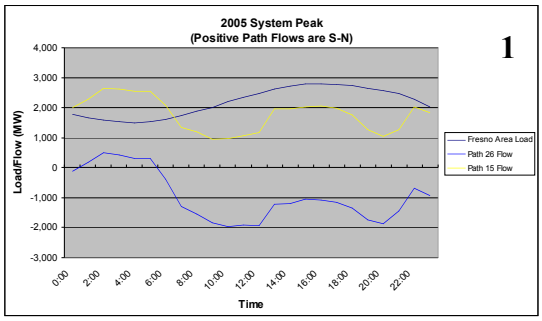
1. In the Draft Manual presented at the meeting, the CAISO has indicated that the Path 15 Flow will be kept constant at 1275 MW North to South (N-S) for the purpose of the 2010 Fresno Area LCR Studies. PG&E believes that this is a very unrealistic assumption to make and that it will unreasonably increase the LCR for the Fresno Area.

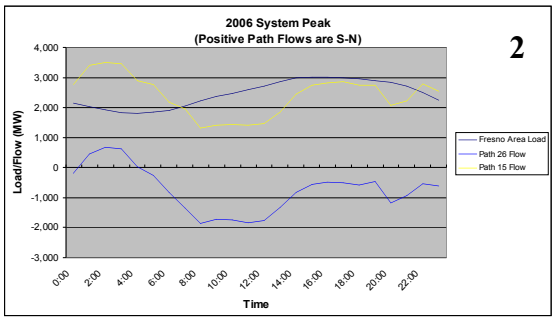
   PG&E has analyzed Path 15 real-time data, which revealed that, for the past four years, the Path 15 flow has not been in the N-S direction during the Fresno area peak demand days. Typically, the Fresno area load peaks on the same days when the overall PG&E system peaks. Charts 1 – 4 below present the actual Fresno area load on the days the PG&E system peaked for the years 2005 to 2008. The charts show that on Fresno (and System) peak loading days, flows on Path 15 can be well over 2000 MW in the south to north direction (S-N). In addition, the charts indicate that

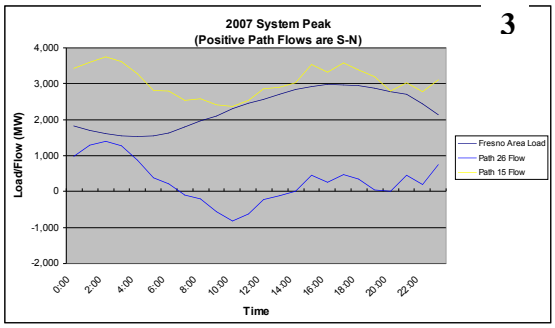
during these periods of high loading conditions, the N-S flow on Path 26 also decreases in relation to the Path 15 flow.

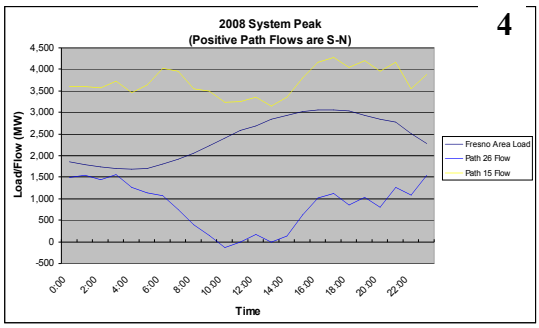
Additional data analysis indicates that N-S flow on Path 15 can occur during the summer time. However, this happens on non-peak days when the Fresno load demand is about 25% lower than the actual peak demand for that year. Chart 5 presents an example of the Fresno load demand and Path 15 flows for the month of July 2008. The chart shows a couple of days during this month when the Path 15 flow was in the N-S (~500 MW) direction but it also shows that the Path 15 flow will generally increase in the S-N direction as the Fresno area demand increases during the summer peak periods. PG&E would like to note that high N-S flow on Path 15 during summer peak periods, as proposed in the LCR Manual, is only possible when most of the generation south of the Fresno area is offline (on occasion this could include Diablo Canyon).

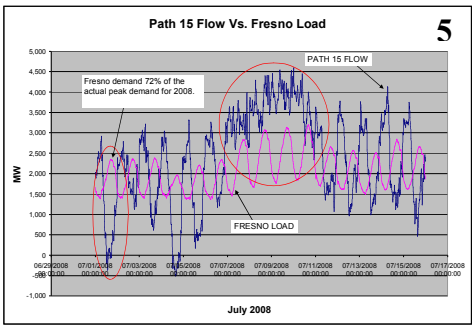
PG&E understands that the local capacity requirements study is inclined towards determining the local areas capacity needs under worst case scenarios. However, based on the real-time data, it is unrealistic to assume that the Path 15 flow will be 1275 MW in the N-S direction during Fresno area peak loading conditions. For the above reasons, PG&E recommends a range of -250 to 250 MW N-S flow on the Path 15 be acceptable for the purpose of the Fresno Area LCR studies. Assigning a range for the Path 15 will more accurately reflect the LCR needs of the local Fresno Area and it will also eliminate the need for adjusting the Path 15 flow after different steps in performing the local capacity technical study.











CAISO response: The CAISO coordinated the current Path 15 flow at Fresno Peak assumption with PG&E transmission planning before enforcement. The CAISO is willing to change this assumption if new evidence is made available to supersede the previous conclusion. First the data shown in here represents System Peak which may or may not coincide with the Fresno Peak. Please provide plots for all Fresno loads above 90% of the Fresno Peak vs. Path 15 flow for the last four years (not just the peak day and not compared to the system peak but rather Fresno peak load). Second the data submitted does not justify PG&E's proposed range of -250 to +250 MW N-S Path 15 flow but

rather a 4500 MW S-N flow. The Path 15 flow at the time of Fresno peak needs to be chosen in a manner that will allow the CAISO to manage Fresno constraints without market impact on Path 15. At this time the CAISO does not have enough new evidence to change the previously agreed upon assumption.

2. During the November 3rd stakeholder meeting, CAISO mentioned that the 1275 MW N-S flow for the Path 15 was chosen because it is the maximum N-S rating for this path. PG&E would like to note that, the flow on Path 15 N-S is allowed to be in the range of 2000 MW to 3265 MW when the Midway generation is off-line.

CAISO response: Note accepted. Based on previous recorded data, the CAISO believes there is a very high likelihood that the Midway generation is in the 4,000-7,000 MW range at the Fresno Peak. For this range the Path 15 limit is 1275 MW N-S. For lower Midway generation the Path 15 can reach higher flows N-S, however these flows do not apply to Fresno LCR studies (at Fresno Peak).

CONCLUSION

PG&E requests the CAISO staff consider the above comments.

CPUC Staff Comments on the CAISO's 2010 LCR Study

California Public Utilities Commission (CPUC) staff appreciates the opportunity to provide comments in response to CAISO's 2010 Local Capacity Requirement (LCR) Study, discussed at the November 3, 2008 stakeholder meeting.

CPUC staff recognizes the CAISO's significant progress in the LCR study methodology and process. CPUC staff thanks the CAISO for the opportunities to provide input early in the study process. These comments focus on concerns regarding two assumptions discussed at the recent stakeholder meeting: online dates for transmission and generation; and the path 15 flow assumptions which CPUC staff understands to be an important driver of the Fresno LCR.

Online Date Assumptions

Currently, any under-construction system element (generator, transmission) that is forecast to be completed by June 1 of the study year (2010, in this case) is included in the model, thereby impacting the resulting allocated LCR values. Resource online dates are forecast more than a year ahead of the actual compliance period; recent experience demonstrates that errors can, understandably, be made in these projections. Such errors may lead to complications in RA compliance.

During the November 3rd meeting, CPUC staff suggested the approach of only modeling units that were actually operational at the time of the final LCR study, thus greatly reducing the possibility of a modeled unit not being available during the studied period. CAISO staff provided an excellent summary of the pros and cons of this approach, and no stakeholders expressed support for CPUC staff's suggestion. Should

other stakeholders propose an earlier online assumption date (i.e. before June 1, 2010) CPUC staff remains open to this option. However, CPUC staff is persuaded by CAISO staff's arguments in favor of the current June 1, 2010 assumption, and does not advocate a change in this assumption; instead CPUC staff suggests that the CAISO provide maximum possible information to CPUC and other stakeholders during the LCR process as described below.

Based on the current June 1, 2010 date, there is a risk that resources included in the model will not actually be online by the time of the 2010 compliance period. In order to account for this risk, CPUC staff intends to allocate LCR requirements solely on the basis of the 2010 NQC list as of July, 2009. More specifically, CPUC staff envisions the following timeline for LCR allocations for CPUC jurisdictional LSEs:

- May 1, 2009 – Final LCR report is published
- June 18, 2009 – LCR values adopted by final CPUC decision[2]
- July, 2009 – CPUC staff notifies CPUC jurisdictional LSEs of their individual LCR allocations based on the most recent 2010 NQC list. Total LCR allocations will not exceed the total available NQC in each area (i.e. deficiencies will be based on a July, 2009 NQC list for 2010).
- October 31, 2009 – Final year-ahead local RA showing by LSEs

CPUC staff notes that the risk in this approach is that a resource (whether included in the model or not) may come online after the LCR allocations and require additional procurement in order to maintain system reliability. The impacts of this risk are different for generating units and transmission lines. Specifically, in the case of a

[2] Consistent with the October 30, 2008 ALJ ruling in R.08-01-025, available at http://docs.cpuc.ca.gov/efile/RULINGS/92975.pdf

deficient local area where total NQC (and therefore allocated LCR) is less than total LCR, new generating units must be procured in order to meet the LCR needs. CPUC staff believes that this risk is small because most new generators have pre-existing RA contracts. Alternatively, transmission projects may, in some cases, increase the LCR need in certain local areas after LCR allocations. If generators are available to meet this additional LCR need (i.e. the local area is not deficient), they must be procured. This additional procurement should be done by LSEs and not by the CAISO via a backstop mechanism. CPUC staff suggests that the CAISO provide maximum information to the CPUC and other stakeholders to enable the market to avoid CAISO backstop procurement. CPUC staff recognizes that CAISO staff cannot provide unlimited amounts of information and that, therefore, not all of the information suggested below may be feasibly included in the LCR report. CPUC staff appreciates the efforts of the CAISO to provide stakeholders with the maximum feasible amount of information. Suggested additional information that CAISO may provide:

- Deficiencies and LCRs with and without under-construction resources for local areas when possible, prioritizing local areas that have important under-construction resources,
- Narrative description of implications of important modeled elements not meeting anticipated online dates,
- Narrative description of implications of important modeled elements coming online after LCR allocations are made,

- Market notice of system elements coming online that may lead to CAISO backstop if not procured by LSEs. Such notice should allow time for LSEs to procure in order to avoid backstop.

CAISO response: As agreed upon at the November 3 Stakeholder meeting the CAISO will model all approved projects (transmission and generation) with on-line dates before June 1, 2010 as the "main study" – of which compliance will be measured against. The CAISO will try to provide as much information as possible in the LCR Report regarding significant new projects that could impact the LCR needs and by how much, however there is a limited amount of time that the CAISO staff has in order to do the studies as such the CAISO will try to prioritize for a limited amount of project uncertainty. The CAISO back-stop procurement process does allow time for LSEs to procure in order to avoid backstop.

Path 15 Assumptions

During the November 3rd stakeholder meeting, CAISO staff explained that the assumed flow on Path 15 is a key driver of the Fresno LCR, which was also explained in the 2009 LCR report. The proposed methodology assumes a flow on Path 15 of 1275 MW North to South, which has an estimated 300 MW impact on Fresno LCR. CPUC staff is concerned this assumption may be overly conservative. The 2009 LCR report indicates that investigation into the flows on Path 15 at the time of recent Fresno peaks reveals no clear pattern between peak load and Path 15 flow. CAISO staff also stated that no flow in excess of 900 MW has been recorded during recent peak load periods.

CPUC staff suggests that more analysis may be needed to determine the appropriate Path 15 flow. The relevant transmission owners may also be able to contribute useful analysis, and CPUC staff encourages the PTOs to address this point and the CAISO to consider any analysis provided. Although no pattern has yet been found between peak loads and Path 15 flow, perhaps a broader analysis could suggest a correlation. Alternatively, an analysis might suggest an upper bound to Path 15 flows at peak conditions. CPUC staff requests that more detail about this analysis be provided in the 2010 LCR report.

CAISO response: As suggested in the response to PG&E (see page 15-16 above) the CAISO coordinated this Path 15 flow at Fresno Peak assumption with PG&E transmission planning before enforcement. The CAISO is willing to change this assumption if new evidence is made available to supersede the previous conclusion. The Path 15 flow at the time of Fresno peak needs to be chosen in a manner that will allow the CAISO to manage Fresno constraints without market impact on Path 15. At this time the CAISO does not have enough new evidence to change the previously agreed upon assumption. When available, the new data will be presented to the Stakeholders either in the 2010 LCR Report or in a LCR Stakeholder meeting, and the new assumption will be included in the next version of the LCR Manual.

AReM Comments on the CAISO's 2010 LCR Study

AReM supports (1) the CAISO's current approach for including G & T projects in the LCR study that are expected to come on-line by June 1 of the compliance year and (2) would like a commitment, to the extent possible, for a final LCR by no later than July 1 of each year.

CAISO response: (1) As agreed upon at the November 3 Stakeholder meeting the CAISO will model all approved projects (transmission and generation) with on-line dates before June 1, 2010. (2) The final LCR numbers will be published in the Final 2010 LCR Report on May 1, 2009. The LSEs allocations are given out around the middle of July because the new CEC load forecast and load share ratio are due June 30, 2009. Your suggestion (preference) for going forward updates, due to changes in on-line dates for new transmission and generation projects, is not to change the LSEs allocations but rather to deal with these "additional changes" through CAISO's back-stop procurement process. The CAISO will take your suggestion under advisement.