

ISO G7 seems to create a lot of controversy. I think that this section should be revised.

Index #	Contingency	'90/10' Forecast	'50/50' Forecast
1	Normal	All elements within Emergency Limits	All elements within Normal Limits
2	1 Gen Unit	All elements within Emergency Limits	All elements within Normal Limits
3	2 Underground Lines	All elements within Emergency Limits	All elements within Emergency Limits
4	1 Overhead Line**	All elements within Emergency Limits	All elements within Emergency Limits
5	1 Transformer	All elements within Emergency Limits	All elements within Emergency Limits
6	1 Underground Line & 1 Gen Unit		All elements within Emergency Limits
7	Two Units		All elements within Emergency Limits
8	1 Overhead Line & 1 Gen Unit		All elements within Emergency Limits
9	1 Gen Unit & 1 Transformer		All elements within Emergency Limits

* 'Reinforcement' indicates the need for a mitigation plan (as defined in 3.1).

'Emergency Limits' is also defined in 3.1.

** For contingency analysis, a synchronous condenser is analyzed the same as a line

I hope this process does not in any way adversely impact the LCR / RA Process for procuring local capacity in SCE & SDG&E Areas. Today, we have significant local generation requirements in both SCE & SDG&E Areas and quite often, it is an uphill task to make the TOs agree to procuring the Local Area capacities recommended by the ISO.

It should be noted that NERC/WECC planning standards do not categorize a line/generator outage as a single contingency (Category B) but consider this correctly as a double-contingency Category C criterion. It was said at the stakeholder meeting that the CAISO Standards were therefore in conflict with the former NERC/WECC Standards. It was said that the line/generator outage correctly as a Category C contingency, vs.what the CAISO standard incorrectly stated as a single contingency Category B.

The ISO and PG&E disagreed. PG&E noted that the NERC/WECC standards were minimum standards, and there's nothing prohibiting additional requirements, so the two standards are not really in conflict. The ISO said the CAISO line/outage standard considers this as a Category B contingency;

moreover, it provides “additional room” on a day-to-day operating basis, e.g., when more than one generating unit is out at any given time.

The CAISO states that while an over-lapping outage of a generator unit and transmission line is defined within NERC Planning Standards as a Category C contingency, the CAISO Grid Planning Standards include that this contingency meet Category B contingency requirements as spelled out within the existing CAISO Grid Planning Standards.

If you are going to include the comment below asserting that "CAISO Planning Standards should fully conform to NERC Reliability Standards", then please also include the comment that FERC allows individual areas to have standards different from NERC Reliability Standards if they are more stringent. Also, nowhere in NERC Reliability Standards Development Procedure is there a requirement that all regional or sub-regional standards must conform to NERC Reliability Standards.

- Establish more consistency between LCR planning criteria and current transmission expansion planning standards [contingencies (Category B vs Category C), load levels, generator outputs (match latest NQC numbers in LCR base cases), modeling of CAISO approved future transmission projects in long-term LCR analysis etc.]. Develop a planning methodology on making generation off-line assumptions in LCR base cases.
- Discuss applicability of high voltage inter-regional tie-line (such as DPV 500 kV line) contingencies for determination of LCR amounts in local area load pockets.
- LCR planning criteria needs to be included and integrated with existing Grid Planning Standards
- Develop a framework under planning standards to identify transmission facility upgrades (long-term & short-term SPS/RAS) for reducing LCR requirements in established load pockets and reduce large procurement needs
- Develop specific reactive power planning guidelines to address voltage stability issues associated with wind integration to CAISO grid.
- Develop induction motor load modeling criteria and assumptions for reactive planning studies and include language in CAISO standards for load composition assumptions in various parts of California.
- Revisit SPS development criteria for tripping or curtailment of new generation under LGIP studies and include guidelines for SIS/FSA analysis.

As a suggestion for revamping the CAISO Grid Planning Standards, please consider a review of the G-1 of the combined cycle plant requirement in both planning and operational studies. We’ve been challenged by interveners over this requirement and the previous data was too simplistic to back this up. Please

consider this requirement and have a similar statistical analysis done for all the combined cycle plants within the CAISO Controlled Grid, similar to the rigorous statistical analysis that was done by PG&E for the San Francisco Bay Area generator outage before, to back up this requirement. This will be very helpful for us in responding to future challenges by the interveners on our transmission studies' assumptions.

You may already know this, but based on my understanding, that the complete outage of a combined cycle plant is considered a G-1 if it occurs more than once every three years. New combined cycle plants are treated as a G-1 initially and they can be recategorized after three years of perfect performance. SDG&E supports this approach. My point is that we need to write this policy down, so that everyone understands what we are doing before we talk about changing it. When intervenors criticized this as too simplistic, did they understand the above?

In response to your September 24, 2007 request for comments, we request that the CAISO Grid Planning Standards be revised to address the following issues:

The San Francisco Greater Bay Area Generator Outage Standard should be updated to account for recent and planned generator retirements and additions.

In addition, a generalized standard should be developed that specifies the number of generators that should be assumed out in larger areas, like the San Francisco Greater Bay Area. This standard would replace the SF Greater Bay Area Generator Outage Standard.

Time Allowed for Manual Readjustment -- This is not always the amount of time required for the operator to take all actions necessary to prepare the system for the next contingency. Sometimes it is just the amount of time required for the operator to take all actions necessary to reduce the loading of facilities to the long-term emergency rating. Also, there should be distinction between major WECC paths (where a power flow limit if exceed could result in wide-spread outages after the next outage), and lower voltage facilities (where wide spread outages is not expected). A longer adjustment time should be allowed for the latter, and use of short-time emergency ratings based on acceptable loss of equipment life should be permitted for low-probability contingencies.

Combined cycle unit outage -- A method of qualifying combined cycle units for treatment as multiple units should be developed and added to the standards.

The requirements for determining the Local Capacity Requirements should be incorporated in the standards, and references to RMR should be removed.

Include in the standards any operational requirements that commonly are used to justify approving transmission alternatives that are more expensive than other alternatives that meet the planning standards.

Update the sections that refer to the NERC/WSCC Planning Standards to conform to the ERO and RE Reliability Standards.

Develop a standard that would require that the system have sufficient capability to take clearances on individual elements for routine scheduled maintenance during off-peak periods. The specific performance requirements would need to be worked out by the drafting group.

Develop an approach on the modeling of demand-side management in planning studies, analogous to the approach for modeling new generation, and include them both in the standards.

We also request that one or more small task forces be formed to develop the revisions, which would then be submitted to the larger group of stakeholders for review and comment. We would like to participate on the task force(s), and we are willing to help chair task force meetings.

Grid Planning Standards Potential Revisions

We appreciate the opportunity provided to stakeholders as the CAISO embarks on a stakeholder process to evaluate and potentially revise the existing CAISO Transmission Planning Standards. The following comments are preliminary in nature and are based on the existing CAISO Grid Planning Standards, discussions and presentation made during the stakeholder meeting conducted by the CAISO on September 17, 2007, and subsequent meeting notes distributed by the CAISO.

We commend the CAISO in proceeding with a broad stakeholder process to evaluate the need to revise the existing Grid Planning Standards. As opposed to prior efforts, where a small sub-group of stakeholders forming a Grid Planning Standards Committee were utilized, the current effort of the CAISO is more consistent with the intent and spirit of FERC Order No. 890 in offering a more open and transparent process. As discussed during the stakeholder meeting on September 17, the existing CAISO Grid Planning Standards, dated February 7, 2002, should be reviewed and updated to reflect both the regulatory changes and market realities since that time. Such assessments should be an ongoing activity.

As reliability standards are now mandatory and enforceable, any proposed changes to the existing Grid Planning Standards should recognize the current FERC-approved NERC reliability standards. In the case of transmission planning,

these would be the four NERC transmission planning standards (TPL-001-0 through TPL-004-0) that are applicable to the Transmission Planner and Planning Authority functions. At a minimum these standards should be the foundation for future CAISO Grid Planning Standards. We recognize that industry efforts are underway to consolidate these four standards, but nevertheless, the FERC-approved NERC standards should be the starting point and specifically identified in the revised CAISO Grid Planning Standards. To the extent that WECC has additional guidelines that are voluntarily encouraged by WECC, they should be specifically identified and so listed. Of course, to the extent WECC Planning Standards are approved by FERC to be mandatory and enforceable, they should be so identified and included in the revised CAISO Grid Planning Standards.

To the extent that CAISO/stakeholder evaluations of practices, guidelines, agreements, operating experiences, etc. find that the CAISO must incorporate standards exceeding (or more strict than) that of FERC-approved NERC or WECC standards, then these additional standards should be made transparent as to the rationale and basis for their incorporation in the revised CAISO Grid Planning Standards. We urge that the CAISO be transparent in their interpretation of the existing FERC-approved NERC and WECC reliability standards. It is important to communicate any findings in a manner that can be understood by as wide an audience as possible. We urge that as the CAISO proceeds with examining standards, for example the current San Francisco Generation Outage Standard, that the process is made transparent to all stakeholders and not limited to just the participating transmission owners (PTOs). Additionally, we urge the CAISO to proceed transparently as evaluations are made for potential revisions to the existing “New Transmission versus Involuntary Load Interruption Standard” and to the “Guides for New Generator Special Protection Systems.” Furthermore, we recommend “guides” should be distinguishable from that of “standards.”

During the September 17 stakeholders meeting and as indicated in the subsequent, distributed meeting notes, there was much discussion regarding the LCR criteria and the criteria or standards utilized in grid planning. While we understand the circumstances regarding the approach and objectives utilized in the short-term analysis of LCR and that utilized in long-term transmission planning, we believe that the standards utilized in both should be the same where infrastructure investments are being considered. For example, in the annual transmission assessment conducted by the PTOs, an examination is made of a long-term LCR Reduction Plan. The standards utilized in a long-term LCR Reduction Plan should be consistent with the standards utilized in long-term grid planning.

For consistency, where planning assumption practices, such as future generation availability, become so prevalent that study outcomes are significantly affected, these assumptions should then be considered as local standards. Specifically, when the practice of assuming future generation availability is based on contracted procurement, rather than its status of permitting and certification, they should be recognized as a local standard in the transmission planning process. The existing standards for future generation availability should be revisited to recognize this practice.

Thank you for the opportunity to provide comments. We look forward to an open and transparent stakeholder process in revising the existing CAISO Grid Planning Standards.