

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Mandatory Reliability Standards)	
For the Bulk-Power System)	
)	RM.06-16-000
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**COMMENTS OF THE CALIFORNIA INDEPENDENT
SYSTEM OPERATOR CORPORATION**

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The California Independent System Operator Corporation (CAISO) is a public benefit company organized under the laws of the state of California and charged with the reliable operation of an electric transmission grid made up of the transmission facilities of Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric Company, Trans-Elect NPD Path 15 LLC, and the Cities of Vernon, Anaheim, Azusa, Banning, Riverside and Pasadena, California. Pursuant to the October 20, 2006 Notice of Proposed Rulemaking (NOPR), the CAISO hereby submits comments regarding the Reliability Standards that the Commission is proposing to approve as mandatory and enforceable. The CAISO is also a member of the ISO/RTO Council (IRC) and supports the Joint Comments being submitted by that organization. The comments being submitted herein raise issues that are of particular significance to the CAISO and, in some instances, to other participants in the Western Interconnection as well.

I. OVERVIEW

**The Commission Should Allow A Trial Period Before The Standards
Become Enforceable.**

At ¶¶90-93 of the NOPR, the Commission proposes to eliminate a formal trial period for the implementation of the mandatory reliability standards, noting that a trial period commencing on the effective date of the standards could interfere with having enforceable standards in effect by the summer of 2007. While the CAISO understands the Commission's desire to keep moving towards this implementation date, many of the standards contain ambiguities that should be addressed and resolved before penalties are attached to the standards. Responsible entities need a validation and improvement period to establish new documentation processes and to receive feedback that such processes comply with the intent of the new standards. As it currently stands, responsible entities will not know whether their processes are in compliance until an audit has been completed. A trial period would allow for the development of consistent interpretation as well as completion of the 61 standards that are being finalized as part of this NOPR.

The establishment of a trial period would allow smaller entities to become familiar with the standards, as discussed in ¶93. In addition, there are differences in business practices between the Eastern and Western Interconnections, and an extended trial period would allow for the accommodation of these variations rather than imposing a process that makes little sense for the Western Interconnection. A trial period is especially appropriate for nationally standardizing functions that, historically, have not been uniformly performed. This includes standards that will require Reliability Coordinators (RCs) to perform tasks that are not applicable to the Western Interconnection or that, based on business practices, are currently the responsibility of other entities. Examples of such standards are EOP-002-1, R. 9.2, 9.3 and 9.4, and INT 010-1, R. 2 and R.3. The CAISO respectfully disagrees with the Commission's

assessment that the transition from voluntary to mandatory standards will not impose additional burdens on industry participants because the standards being approved (with modifications) are largely those in effect today (§1157). Compliance with the new standards being adopted, as well as the modifications being made to the existing standards, will require additional time and resources. Additionally, transition from a standard that is based on best-practice is substantially different than one based on avoiding minimum performance. It simply makes sense to give the responsible entities a trial period to deploy these resources and develop the processes necessary for compliance.

The CAISO supports the comments filed by the Western Electricity Coordinating Council (WECC) on December 22, 2006 in this proceeding addressing the need for additional flexibility with regard to compliance and penalty implementation. (WECC Comments, 5-10). In particular, the CAISO agrees that within the Western Interconnection, there is a certain amount of uncertainty as to the applicability of the NERC Functional Model registration requirements with respect to the reliability standards, notably with regard to Transmission Operator (TOP) functions. To the extent that the Commission continues to disagree that a trial period is necessary, the CAISO urges the Commission to give Regional Entities during the implementation period, the flexibility necessary to focus on education and facilitate compliance with the standards, especially those which have not yet been completely developed, rather than focusing on penalty implementation (*id.*, 9).

II. SPECIFIC RELIABILITY STANDARDS

A. The Commission Should Defer Its Decision To Make Interchange Scheduling And Coordination (INT) Standards INT-006-1, INT-007-1 And INT-008-1 Mandatory And Enforceable.

As proposed by NERC in its August 28, 2006 Supplemental Filing, INT-006-1 replaces INT-002-0 and is applicable to balancing authorities and transmission service providers. The standard is described by the Commission as requiring these entities to evaluate the energy profile and generation ramp rate of interchange transactions “in response to a request from the interchange authority to change the status of an interchange from an arranged interchange to a confirmed interchange”. (¶472) The Commission has proposed to approve the standard as mandatory and enforceable, subject to the modification that it be made applicable to transmission operators and reliability coordinators, and that tags should be reviewed on a “composite”, rather than individual, basis.

The CAISO suggests that it is premature to place into effect this standard (and other Interchange Coordination standards) prior to the time that more information is provided as to the role of the Interchange Authority. Version 2 of the NERC Functional Model, which is currently in effect, does not describe such a Responsible Entity, and the Commission has questioned whether this entity is a “user, owner or operator of the Bulk-Power System” (See, *e.g.*, ¶469). At best, compliance with this standard will be difficult without this clarification. Additionally, the CAISO questions what is meant by “composite Tags” and would seek clarification on that issue as well.

While the Commission states that INT-006-1 “serves an important purpose in assessing each interchange transaction from a reliability perspective” (¶ 478), the CAISO questions whether this additional level of reliability approval is necessary. Neither the

NERC nor the Commission has identified a deficiency in the current interchange reliability assessment process or pressing reliability need for this standard. The CAISO is also concerned that the standard cannot be met within the Western Interconnection. Reliability coordinators and transmission operators do not currently have a common database from which to draw the information “review composite transactions from the wide-area reliability viewpoint” and “communicate to the sink balancing authorities necessary transaction modifications prior to implementation”. It would require substantial additional resources and some reasonable amount of time for the Reliability Coordinators to establish systems for joint access to the information necessary for compliance. This is an example of where regional differences may complicate expedited implementation of standards due to the operational differences between the Western and Eastern Interconnections. Rather than scheduling to flow gate based scheduling, the transmission operators in the West use path ratings adjusted on seasonal basis. Before approving INT-006-1, the Commission should consider whether the Western Interconnection should be required to operate to this standard, or whether a transition period for the Western Interconnection is appropriate. Clearly there are a host of operational issues that should be resolved before INT-006-1 becomes effective and enforceable.

Similarly, INT-007-1 and INT-008-1 are specifically applicable to Interchange Authorities. The Commission again questioned the role of this entity, requested additional information from NERC, but nonetheless approved the standards as mandatory and enforceable. The CAISO urges the Commission to reconsider approval of these standards until they can be developed more fully..

B. Proposed Reliability Standard TOP-003-0 Should Allow Impacted TOPs Appropriate Discretion To Identify The Facilities For Which Planned Outage Information Should Be Provided Well In Advance Of The Outage.

TOP-003-0 addresses the need for TOPs, Generator Operators and BAs to coordinate planned transmission and generation outage information. R.1.1 and R.1.2 provide that GOs submit daily information regarding foreseen outages of units that are at least 50 MW, and that TOPs submit the same information for outages at the 100 kV and above level. The Commission has asked for industry input as to sufficient lead time for providing this information to impacted TOPs and Reliability Coordinators (RCs) (¶986). The NERC was also directed to modify TOP003-0 to both include a requirement that outage information be communicated well in advance, and that the TOP, BA or RC can request outage information regarding any facility less than 50 MW or 100kV that, in the opinion of the Responsible Entity, could have a direct impact on the reliable operation of the Bulk Power System. (*id.*)

The CAISO appreciates this opportunity to make suggestions as to sufficient lead time for the submission of outage information, and the discretion afforded TOPs with respect to the facilities for which such information should be submitted. This subject has been comprehensively addressed through recently-proposed changes to the CAISO's Market Redesign and Technology Update (MRTU) tariff, scheduled to become effective in January, 2008. Currently the CAISO tariff establishes 3 days as the lead time for providing outage information, which is the standard throughout WECC and other regions as well. However, the CAISO has proposed the following language for §9.3.6.3.2 of the MRTU tariff in its November 20, 2006 compliance filing in *California Independent System Operator Corporation* Docket No. ER06-615-000:

Except for Outages that may have a significant effect upon CRR revenue adequacy, an Operator may, upon ~~forty five (45) days~~ ~~seventy-two (72) hours~~ advance notice (or within the period in the Operating Procedures posted on the CAISO Website), schedule with the CAISO Outage Coordination Office a Maintenance outage for transmission facilities on its system, subject o the conditions of 9.3.6.4A, 9.3.6.7 and 9.3.6.8. For outages that may have a significant effect on the CRR revenue adequacy, an Operator may, upon thirty (30) days notice in advance of the first day of the month the Outage is proposed to be scheduled (or within the notice period in the Operating Procedures posted on the CAISO Website, schedule with the CAISO Outage Coordination Office a Maintenance Outage for transmission facilities on its system, subject to the conditions of Section 9.3.6A, 9.3.6.7 and 9.3.6.8.

(Blacklined attachment to the November 30, 2006 Compliance Filing)

The CAISO has found that the current 3 day planned outage submission requirement does not provide sufficient time for review and coordination of outages. Other RTO/ISOs are also moving towards either the 30 days or 45 days prior to the beginning of the outage month proposed by the CAISO in its MRTU tariff. As to the facilities required to submit outage information on that timeline, the CAISO intends to establish a stakeholder process to explore this issue. However, rather than identify a particular voltage or generation level, under which it is presumed that an outage will not have an impact on the Bulk Electric System, the CAISO has suggested that this analysis focus on facilities that may have a significant effect on Congestion Revenue Rights (CRR) resource adequacy. This approach is preferable to using the Bulk-Power System/Bulk Electric System voltage level paradigm used by the Commission in seeking comment on this issue.¹ The CAISO suggests that its tariff language be used as a

¹ The NOPR is not entirely clear as to how the phrase “Bulk Electric Power System” will be defined in the future. For the purpose of transitioning to mandatory reliability standards, the Commission appears to adopt the 100 kV demarcation for facilities subject to the standards. However, at ¶71 the Commission seeks further comment as to whether the Regional Entities should play a role in either defining facilities subject to the standards, or providing exceptions to the standards on a case-by-case basis. The CAISO

reasonable starting point for an analysis of system facilities that may affect reliability, and urges the Commission to allow TOPs the discretion to undertake such an analysis.

As an alternative, the level at which the Commission has set the Bulk Electric System should be reconsidered to a level above 200 kV, rather than 100 kV. This is because the Bulk Electric System has evolved operationally to where 100 kV and lower voltage facilities generally do not have the same regional impact of higher voltage facilities. In many cases, 100 kV or lower voltage facilities may be considered sub-transmission level.

C. The Commission Should Approve TOP-007-0 As Currently In Effect And Without Further Modification.

TOP-007-0 requires that TOPs report to the Reliability Coordinator (RC) violations of System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs) that have not been mitigated within 30 minutes in pre-contingency operation, or, if after a contingency, the system has not been returned to a steady state within 30 minutes. This standard imposes a reporting requirement that will enable RCs to take any necessary system corrective actions required by IRO-004-1 and IRO 005-1. The CAISO supports the Commission's approval of these standards as they are both currently written and currently interpreted as set forth in ¶540:

IRO-005-1 allows a system operation to respect IROLs in two possible ways: (1) allowing IROL to be exceeded during normal operations, *i.e.*, prior to a contingency, provided that corrective actions are taken within 30 minutes or (2) exceeding IROL only after a contingency and subsequently returning the system to a secure condition as soon as possible, but no longer than 30 minutes...

would prefer that the standards be applicable to transmission facilities at the 230 kV and above level, and that the phrase "Bulk Electric System" be defined accordingly.

In the discussion leading up to that paragraph, the Commission noted that the 30 minute limit for mitigating IROL violations is one of many standards based on years of interconnected systems operation experience, representing a trade-off between allowing system operators the flexibility to mitigate violations without load shedding or disconnecting from the system and the risk that a contingency will occur before the mitigating action is taken (§535). The CAISO believes that this is the sensible and long-standing approach to IROL violations that might occur during normal operations, and also agrees with the comments submitted by MidAmerican that the staff's more conservative interpretation of the standards—that all potential IROL violations must be avoided at all times—would impose a significant and costly burden on system operators to maintain the necessary reserve margins to avoid all violations (§537) without corresponding benefit.

Thus, the CAISO has concerns with the direction in which the Commission might be headed with these standards, implied by the language of §§541 and 542:

The Commission notes that the proposed Reliability Standards (*e.g.* TOP-007-0) do not consider operation exceeding IROL for less than 30 minutes as a compliance violation. This, in addition to the less conservative interpretation that IROL violation is permissible during normal operations, opens up a significant reliability gap that allows operations with IROL violations for less than 30 minutes at a time. Under the mandatory reliability construct, there would be no enforcement provision to sanction against such actions even (*sic*) they resulted in cascading outages.

The Commission believes a proactive standard, that clearly defines that reliable operations means operating the system within IROLs and requires such operating practice be reinforced by periodic reporting of the frequency, duration and causes of IROL violations, is needed to prevent or mitigate the risk of blackouts. This is because, by definition, when the system is operating in violation of IROLs and if a critical contingency occurs, cascading outages will result.

The CAISO would caution the Commission against adopting, a standard that would impose penalties on system operators for anytime IROL limits are exceeded, regardless of whether mitigation occurred within 30 minutes. Of course, good transmission operators would never plan to exceed an IROL, but, occasionally, there are circumstances beyond immediate operational control that will cause flows to exceed the established limits for a short period of time (less than 30 minutes). In the Western Interconnection, these short time periods could be caused by unscheduled (*i.e.* “loop”) flows that cannot be anticipated but which are detected and corrected as soon as possible. A requirement that imposes penalties for these short periods in which the IROL is exceeded would significantly affect Western Interconnection operations.

Indeed, the implementation of a more stringent compliance requirement could have the perverse effect of negatively impacting system reliability. This is because the system is planned to the 30 minute correction window, and the resources are simply not available to permit operations that are constantly within IROL limits. It bears repeating that such a significant change in operations could impose substantial operational, system planning and cost burdens on entities within the Western Interconnection, which ultimately will be reflected in end-user rates. The CAISO urges the Commission to proceed with caution if headed in the direction of absolute compliance with IROL, and supports the survey that NERC has been directed to undertake to determine the extent to which systems are actually “drifting” in and out of IROL limits (§545). The CAISO also agrees that the levels and measures of non-compliance that the NERC has been directed to provide will assist the Commission with identifying the scope of the concerns with “drifting”. Finally, the CAISO recommends that, should a more conservative

interpretation of the standards be considered, that SOLs and IROLs be clarified, and that a reasonable time for implementation is provided to avoid regional shortfalls of energy

D. With Respect to TPL-001-0, The CAISO Has Experienced Difficulty In Obtaining Information Regarding New And Retiring Generation.

Standard TPL-001-0 addresses system performance planning under normal operating conditions (no system contingency or unexpected failure or outage of a system component). At ¶1060, the Commission quite correctly notes that the reliability standards impose no obligations on the owners of generation assets to provide information to Planning Authorities (PAs) and Transmission Planners (TSP) about new and retiring generation. The CAISO wholeheartedly agrees that there is a gap in its ability to obtain this information, particularly from adjacent BAs. In addition, the CAISO is often unable to obtain load growth information from neighboring BAs, making it difficult to assess changes in regional supply and demand. Such information would be useful in assessing import levels into the CAISO Balancing Authority Area (BAA).

In order to bridge this information gap, the CAISO would suggest that Generation Owners and Generation Operators be required to provide data about new and retiring generation to their PAs, and that the PAs be required to share this information with neighboring BAs, subject to appropriate non-disclosure agreements to protect proprietary information, if necessary. There currently exists no centralized database for the collection and dissemination of this information within the Western Interconnection. The CAISO's recommendation would be a step in this direction.

Respectfully submitted,

/s/Judith B. Sanders

Judith B. Sanders



California Independent
System Operator Corporation

January 3, 2007

Via Electronic Filing

The Honorable Magalie R. Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Mandatory Reliability Standards for the Bulk-Power System
Docket No. RM06-16-000

Dear Secretary Salas:

Transmitted herewith for electronic filing in the above-referenced proceedings Comments of the California Independent System Operator Corporation.

Thank you for your attention to this matter.

Yours truly,

/s/ Judith B. Sanders

Judith B. Sanders
Counsel for the California Independent
System Operator Corporation

Enclosure
cc: Service List

CERTIFICATE OF SERVICE

I hereby certify that I have served, by electronic and United States mail,
Comments of The California Independent System Operator on the January 3, 2007 in the
Mandatory Reliability Standards for the Bulk-Power System, Docket No. RM06-16-000.

Executed on January 3, 2007, at Folsom, California.

/s/Susan L. Montana
Susan L. Montana