2026 ISO Planning Standards Update

Issue Paper

July 20, 2026

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2026 ISO Planning Standards - Update

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1. Introduction

The Voltage Standard, Planning for New Transmission versus Involuntary Load Interruption Standard and RAS Guidelines and Standards are part of the California ISO Planning Standards (ISO Standards). These standards, along with the other requirements in the Planning Standards, complement the existing NERC/WECC Reliability Standards and ensure secure and reliable ISO infrastructure development.

The purpose of this document is to identify the need for updating the Voltage Standard, provide clarification for the Planning for New Transmission versus Involuntary Load Interruption Standard sections of the ISO Planning Standards, and review remedial action scheme generation tripping limits. Additionally, this update to the ISO Planning Standards will also introduce new supplemental criteria related to requirement R6 of the NERC FAC-014-3 Standard.

2. Background and Issues

Voltage Standard.

The Voltage Standard section of the ISO Planning Standards outlines the voltage limits within which the ISO-controlled grid must operate, both under normal conditions and during contingencies. This standard should align with Operating Procedure 3100B[1]: “System Voltage Limits and Credible Multiple Contingency.” However, it has been noted that some of the operating voltage values in the ISO Planning Standards do not correspond to those specified in the latest version of the aforementioned Operating Procedure. Therefore, an update to the ISO Planning Standards is necessary.

Planning for New Transmission versus Involuntary Load Interruption Standard.

The ISO planning standards on its section number five: Planning for New Transmission versus involuntary Load Interruption Standard provides guidance on when it is necessary to upgrade the transmission system from a radial to a looped configuration or to eliminate load dropping otherwise permitted by WECC and NERC planning standards through transmission infrastructure improvements. In particular, this update to the ISO Planning Standards provides clarification for following two items:

- No single contingency should result in the loss of more than 250 MW of load.
- All single substations of 100 MW or more should be served by a looped system with at least two transmission lines "closed in" during normal operations.

With the increase of large data center load interconnections, a question arose as to whether these standards apply to single-customer transmission connected loads. This

[1] https://rc.caiso.com/DocLibs/BATOPOperatingProcedures/CAISO/3100B.pdf

update to the ISO Planning Standards will clarify that the two standards referenced above apply only to distribution loads and substations serving distribution loads.

Supplemental criteria related to requirement R6 of the NERC FAC-014-3 Standard.

In regard to the R6 requirement of the NERC FAC-014-3, which requires the ISO to implement a documented process to use Facility Ratings, System steady-state voltage limits and stability criteria in its Planning Assessment of Near-Term Transmission Planning Horizon that are equally limiting or more limiting than the criteria for Facility Ratings, System Voltage Limits and stability described in its respective Reliability Coordinator's SOL methodology. It has been determined that these requirements should be incorporated into the ISO Planning Standards.

The new requirements in the standard that are applicable to Planning Coordinators (PC) and Transmission Planners (TP) replace the requirements of FAC-014-2. FAC-014-2 required PCs and TPs to establish SOLs and IROLs that are consistent with the PCs SOL Methodology developed pursuant to FAC-010-3 and to provide the SOLs and IROLs to various entities and required PCs to identify and provide multiple contingencies from Reliability Standard TPL-003 that result in stability limits to the affected Reliability Coordinators.

In compliance with NERC FAC-014-3 Standard, the ISO performed a gap analysis for the Facility Ratings, System Voltage Limits, and Stability criteria utilized in the ISO Planning Assessment versus RC West SOL Methodology and the recommended actions, which include:

- Define Facility Ratings/Duration criteria in the ISO Planning Standards.
- Consider relationship between the Voltage Standard and supplemental criteria such as that system voltage limits must not conflict with relay trip settings for under voltage load shedding schemes (UVLS) and BES facilities or prevent the operation of protection systems.
- Identify Stability criteria related to formation of islands and that planning contingency events shall not lead to frequency decline or swings in the interconnected system that could trigger the action of Under Frequency Load Shedding (UFLS) schemes.
- Detail criteria for identifying potential cascading and uncontrolled system separation.

As an interim solution, the ISO has included these additional criteria in the Transmission Plan Process Study Plan, but this recommended update to the ISO Planning Standards will finalize the implementation process for NERC FAC-014-3 Standard. The additional criteria were added to the ISO Planning Standards in section number 9: Supplemental Criteria due to NERC FAC-014-3 Standard.

Generation Loss Criteria and Considerations.

The ISO has identified the need to review its current practices regarding the amount of generation that can be shed either directly - consequentially - or indirectly via RAS for single and multiple transmission contingencies. The contingency or RAS-driven loss of generation has implications for contingency reserves, frequency response, and other system parameters under both normal and pre-existing outage conditions. The ISO has historically limited generation connected through single or double circuit lines exceeding existing ceilings to avoid driving up contingency reserve requirements and has established criteria in ISO Planning Standards for the amount of generation that can be shed through a RAS triggered from single or double contingencies to these same limitations. These practices and requirements require review, as circumstances have evolved as the system has grown and standards have evolved.

3. Next Steps

The ISO will seek comments from the stakeholders to identify any current and additional issues as feedback to this issue paper.

4. Stakeholder Engagement

The ISO is proposing the following schedule to engage the stakeholders for this initiative.

4.1. Schedule

Table 1 lists the proposed schedule for the review and updates to the ISO Planning Standards.

Table 1: Schedule

Item	Date
Post Issue Paper	20-Jul-26
Stakeholder Call	27-Jul-26
Stakeholder Comments Due	10-Aug-26
Post Final Proposal	7-Sep-26
Stakeholder Meeting	14-Sep-26
Stakeholder Comments Due	28-Sep-26
ISO Board of Governors – For Approval	28-Oct-26

The ISO Planning Standards are approved by the ISO Board of Governors. With this the ISO is planning on bringing the updated ISO Planning Standards to the ISO Board of Governors for approval at the October 2026 meeting. The ISO is committed to providing additional opportunities for stakeholder input as required to support the goals of this initiative. Stakeholders can submit written comments through the ISO's commenting tool.