Memorandum

To: ISO Board of Governors

From: Neil Millar, Vice President of Infrastructure and Operations Planning

Date: October 22, 2026

Re: **Decision on ISO Planning Standards**

This memorandum requires ISO Board of Governors action.

Management is seeking the Board of Governors' approval of the ISO Planning Standards, Attachment 1. The California ISO (ISO) tariff provides for the establishment of planning guidelines and standards above those established by NERC and WECC to ensure the secure and reliable operation of the ISO controlled grid. The primary guiding principle of these Planning Standards is to develop consistent reliability standards for the ISO grid that will maintain or improve transmission system reliability to a level appropriate for the California system.

These ISO Planning Standards are not intended to duplicate the NERC and WECC reliability standards, but to complement them where it is in the best interests of the security and reliability of the ISO controlled grid. In particular, the ISO planning standards:

- Address specifics not covered in the NERC Reliability Standards and WECC Regional Criteria;
- Provide interpretations of the NERC Reliability Standards and WECC Regional Criteria specific to the ISO Grid;
- Identify whether specific criteria should be adopted that are more stringent than the NERC Reliability Standards and WECC Regional Criteria where it is in the best interest of ensuring the ISO controlled grid remains secure and reliable.

Management proposes updates to the ISO Planning Standards in the following sections to address emerging issues, updated information from transmission owners, and new NERC standards requirements as described in more detail below:

- Voltage standard;
- Planning for new transmission versus involuntary load interruption standard sections of the ISO Planning Standards;

- Addition of a new supplemental criteria related NERC FAC 014-3 reliability standard; and
- Addition of a new generation loss criterion.

Management recommends the following motion:

> ***Moved, that the ISO Board of Governors approves the ISO Planning Standards, as described in the memorandum dated October 22, 2026, and as included as Attachment 1 thereto.***

DISCUSSION AND ANALYSIS

The current planning standards have been in effect since February 2023. The ISO initiated a stakeholder process to review and update the ISO Planning Standards in July 2026. The following proposed changes were developed through the ISO stakeholder process:

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 3100B1: “System Voltage Limits and Credible Multiple Contingency.” However, it was determined 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 was necessary.

Planning for New Transmission versus Involuntary Load Interruption Standard: This section 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. This update provides clarification for following two items of the standard where:

- 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, the question arose as to whether these standards apply to single-customer transmission connected loads. This

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

Supplemental Criteria due to NERC FAC-014-3 Standard: Requirement R6 of NERC FAC-014-3 Standard 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 System Operator Limit (SOL) methodology. The ISO Planning standard has been updated to incorporate the documented process to satisfy this requirement.

Generation Loss Criteria: The ISO identified the need to review its current practices regarding the amount of generation that can be shed either directly - consequentially - or indirectly via remedial action schemes (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. The ISO Planning Standard has been updated to increase the amount of generation that can be tripped via a RAS that is connected to radial systems to match the capacity identified in the Western Electricity Coordinating Council's (WECC) resource loss protection criteria limits. For non-radial system generation loss via a RAS, the existing RAS standards and guidelines will continue to be used, as the typical RAS monitor multiple contingencies, leading to the potential to more frequently disrupt the operation of both the balancing authority (BA) area and the transmission system.

POSITION OF PARTIES

The ISO received generally supportive comments and detailed questions throughout the stakeholder process.

Pacific Gas & Electric (PG&E) provided additional updates to the voltage standard and section that has been reflected in the updated ISO Planning Standard.

The Metropolitan Water District of Southern California requested that their voltage criteria found in Operating Procedure 3100B be included in the ISO Planning Standards; however, since the ISO Planning Standards are only applicable to the ISO PTO facilities the ISO has not included the requested revision and will continue to rely on Operating Procedure 3100B to identify MWD's voltage limits.

CONCLUSION

Management recommends the ISO Board of Governors approve the attached ISO Planning Standards. Upon Board approval, management will apply the updated planning standards in the 2026-2027 transmission planning process that is underway.