

**California Independent System Operator**

**&**

**SunZia Transmission, LLC**

**Joint Transmission Planning Base Case  
Preparation Process**

**NERC Reliability Standard MOD-032-1  
Data for Power System Modeling and Analysis**

Version 1.0

**June 2025**

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# **1 Introduction**

## **1.1 Purpose**

The purpose of this document is to (i) as required by NERC Reliability Standard MOD-032, Requirement 1, provide a jointly developed process for the California ISO (CAISO) as the Planning Coordinator (PC) and Balancing Authority (BA), and SunZia Transmission, LLC (SZT) as the Transmission Planner (TP), to comply with steady state, dynamics, and short circuit modeling data requirements and reporting procedures for the CAISO Planning Coordinator planning area; (ii) provide details of the assumptions for SZT and CAISO to use in the annual CAISO Transmission Planning Process (TPP) Base Cases; and (iii) provide an overview of the process used in the development of the CAISO Transmission Planning Process (TPP) and Western Electricity Coordinating Council (WECC) Base Cases.

## **1.2 Overview of the Process**

SZT owns Bulk Electric System transmission facilities in the CAISO PC Area but does not have any load directly connected to their transmission facilities. SZT will annually provide the latest available modeling data for their facilities to the CAISO. The model data will be provided during Phase 1 of each TPP planning cycle, during the timeline in the CAISO TPP Study Plan.

This document includes details of the process followed for developing the WECC and CAISO TPP base cases.

# **2 CAISO TPP and WECC Base Case Development Process**

The base case development process is completed on a yearly basis in order to keep the SZT system model up-to-date and consistent with any changes that may have occurred throughout the year.

SZT will provide validated data and ensure that it is accurate and represents up-to-date information for modeling the SZT facilities in the CAISO Planning Coordinator Area.

Requirement R6 of FAC-014-3 directs each transmission planning entity to use facility ratings and criteria that are not less limiting than those described in RC West's SOL methodology unless the entity provides a technical rationale to the entities identified in the standard. To that end, SZT as a Transmission Owner shall ensure that the facility ratings including the applicable time duration it provides for its facilities to CAISO PC in planning models and the Transmission Register are consistent with the facility ratings data they provide to their Transmission Operator

and/or RC West per the RC's SOL Methodology and the facility ratings criteria in the ISO Planning Standards and/or the ISO TPP Study Plan.

## **2.1 Roles and Responsibilities**

SZT, in its role as TP, is responsible for maintaining all models and modeling data related to SZT's ownership of transmission facilities in the CAISO Planning Coordinator Area.

## **2.2 Modeling Assumptions and Responsibilities**

SZT's modeling data will follow the WECC Data Preparation Manual wherever applicable. SZT will submit WECC base case modeling information in accordance with this CAISO- SZT Joint Transmission Planning Base Case Preparation Process document posted on the [CAISO web site](#). This section provides additional information on what assumptions are made and what level of detail is required for modeling the various aspects of the base cases created.

### *2.2.1 Transmission Project Modeling*

The existing system model of the SZT transmission facilities will be based upon as-built design and equipment test reports. Future SZT transmission projects approved by CAISO, if any, will reflect the most up-to-date information available for both scope and in-service dates.

### *2.2.2 Generation*

SZT is responsible for including generator models for generation that is connected to SZT in the base case. The generator models will reflect the latest models as provided by the generator(s).

SZT is responsible for including future generators and modifications to existing generators connected to SZT in the applicable base case. These generators will be modeled based upon using the latest generator models as provided by the generator(s). Future generators that have a status of "in construction" will be modeled in future base cases, along with projects in the ISO TPP study plan.

### *2.2.3 Outage Information*

Planned outages of transmission facilities owned by SZT that are at least six (6) months in duration will be modeled based upon the planned dates of outages using the outage information provided by SZT and CAISO.

## **2.3 Generator Owner Procedures**

Any Generator Owner(s) connected to SZT Owned Facilities shall provide modeling data in accordance with applicable NERC Reliability Standards, the WECC Data Preparation Manual, the WECC Generating Unit Model Validation Guideline, and the CAISO's Business Practice

Manual for Transmission Planning Process<sup>1</sup> to SZT (See Appendix A for contact information) and the CAISO (gridmodelingdata@caiso.com) based on the periodicity in the NERC Reliability Standards (MODs 025, 026, & 027 & PRCs 19 & 24), WECC Generating Unit Model Validation Guideline, and Section 10 of BPM for Transmission Planning Process. Upon receipt of this data from Generator Owners and after usability is validated, these generating unit data will be included in SZT's master system modeling data.

MOD-032 explicitly requires the submission of data at least once every 13 calendar months. Therefore, at minimum, modeling data shall be submitted by the end of each calendar year, but not to exceed 13 calendar months between each submission. For data that has not changed since the last submission, a written confirmation that the data has not changed is sufficient. As a reminder, section 25.5 of the CAISO Tariff requires notification to the CAISO and SZT at least 90 calendar days in advance of making modifications to generating facilities. Please refer to that section of the Tariff and the Generator Management BPM on the CAISO website for more details.

## **2.4 CAISO TPP Base Case Development Process**

SZT is responsible for providing its model updates to the CAISO at least once a year, during Phase 1 of each CAISO TPP planning cycle, during the timeline in the CAISO TPP Study Plan, to accurately capture SZT's system model in the TPP study cases.

## **2.5 WECC Base Case Development Process**

SZT is the Area Coordinator for Area 82 for WECC base cases.

SZT is responsible for submitting WECC base cases and review comments for area 82 to WECC and CAISO in accordance with the WECC Base Case Compilation Schedule or revised schedule/dates as communicated by WECC. When an issue of submittal timing warrants extending the deadline, SZT may modify the due dates, not to exceed 15 calendar days, by an agreed upon extension between WECC or the CAISO. SZT will provide the initial base cases to CAISO for review and comment. The CAISO will review SZT base case data and provide comments to SZT during the Base Case Review Process. SZT will provide a written response to the CAISO, using the case review sign-off sheet in Appendix C, confirming that the WECC Base Case has been updated to address CAISO's review comments or provide an explanation for maintaining the current data. SZT will provide base case data or review comments for area 82 to WECC and CAISO. In addition, SZT and CAISO will retain documentation records for a minimum of four years.

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<sup>1</sup> <https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Transmission%20Planning%20Process>

## 2.6 Short Circuit Modeling Data

SZT maintains short circuit modeling data for their transmission planning area and will provide it to CAISO or WECC, upon request.

### Version History

Version	Change	By	Date
1.0	<u>CAISO-SZT Joint Transmission Planning Base Case Preparation Process document</u> for MOD-032-1 Requirement R1 Implementation and Compliance, initial version	Robert Sparks	6/04/2024

### Technical Review

Reviewed By	Name	Signature	Date
Infrastructure and Operations Compliance Manager, CAISO	Jamie Johnson	Original signed by Jamie Johnson	
Regional Transmission South Engineer, Lead CAISO	Rene Romo de Santos	Original signed by Rene Romo de Santos	
Sr. Manager, Regional Transmission – South, CAISO	Robert Sparks	Original signed by Robert Sparks	
Director, Regulatory Compliance, Pattern Energy Group LP, c/o SunZia Transmission, LLC	George E. Brown	Original signed by George E. Brown	

### Approval

Approved By	Name	Signature	Date
Sr. Manager, Regional Transmission South, (CAISO)	Robert Sparks	Original signed by Robert Sparks	
Director, Regulatory Compliance, Pattern Energy Group LP, c/o SunZia Transmission, LLC	George E. Brown	Original signed by George E. Brown	

## **Appendix A.      Modeling Communications**

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Entities responsible for providing data should send it to:

Planning Coordinator (PC) – California ISO at: [GridModelingData@caiso.com](mailto:GridModelingData@caiso.com)

Transmission Planner (TP) – SunZia Transmission, LLC at: [Transmission-Planning@patternenergy.com](mailto:Transmission-Planning@patternenergy.com)

## **Appendix B. Evidence Retention**

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The following evidence for demonstrating compliance with MOD-032 will be retained for a period of 4 years unless one of the following is true:

1. Maintain evidence for a longer period of time if asked by the Compliance Enforcement Authority, as part of an investigation.
2. If an applicable entity is found non-compliant, it shall keep information related to the non-compliance, at a minimum, until mitigation is complete and approved.

The following documents need to be retained:

- Documentation showing that SZT and CAISO jointly developed required modeling data requirements and reporting procedures;
- Modeling requirements document;
- Posting and reporting procedures for modeling requirements documents; and
- Written notification regarding technical concerns with data submitted under R2, including the technical basis or reason for the technical concerns.



## Appendix C. CAISO sign-off sheet for WECC Base Case review

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Case Name  
POWER FLOW CASE  
DATA COMMENT AND SYSTEM REVIEW

### PROCEDURE FOR SUBMITTAL

- 1) **ISO to PTO** (current form)
- 2) PTO to AREA COORDINATOR
- 3) AREA COORDINATOR TO WECC TECHNICAL STAFF

### DATA COMMENT

CAISO Planning Engineers have reviewed the WECC Base Case 'Case Name' for 'PTO name' area. Please find below the identified deficiencies and the recommended changes:

S.No	Deficiency	Recommended Change/s	PTO's comment
1			
2			
3			
4			
5			
6			

ISO Engineer Name: Name  
Review being submitted for PTO: PTO name  
Date: date