California Independent System Operator

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City of Pasadena

Joint Transmission Planning Base Case Preparation Process

NERC Reliability Standard MOD-032-1

Version 1.0

January 2018

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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 CAISO (as Planning Coordinator (PC) and Balancing Authority (BA), and City of Pasadena (as Transmission Planner (TP)), steady state, dynamics, and short circuit modeling data requirements and reporting procedures for the PC planning area; (ii) provide details of the assumptions for the City of Pasadena area used in the Annual CAISO Transmission Planning Process (TPP) Base Cases; and (iii) provide an overview of the process used in the development of CAISO TPP and Western Electricity Coordinating Council (WECC) Base Cases.

1.2   Overview of the Process

City of Pasadena will annually provide CAISO TPP base case data to the CAISO and will copy Southern California Edison (SCE), City of Pasadena's Transmission Operator, on the base case submittal. The submittal of this CAISO TPP base case data will follow the CAISO TPP timeline and use the assumptions included in the CAISO TPP Study Plan.

For the development of WECC base cases, City of Pasadena will provide inputs to SCE, depending on SCE's role as either area or sub-area coordinator for area 24. City of Pasadena will also include the CAISO on WECC base case submittals.

This document includes details of the assumptions used and 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 City of Pasadena system model up-to-date and consistent with changes that have occurred throughout the year.

The City of Pasadena will provide validated data and ensure that it is accurate and represents up-to-date information for modeling the City of Pasadena system.

2.1   Roles and Responsibilities

The City of Pasadena, as its own TP, is responsible for maintaining all models and modeling data related to City of Pasadena's ownership of transmission, resources and loads directly connected to The City of Pasadena's Bulk Electric System (BES) transmission system.

2.2   Modeling Assumptions and Responsibilities

The City of Pasadena Transmission System model will follow the WECC's Data Preparation Manual wherever is applicable. The City of Pasadena will submit WECC base case modeling information in accordance with the CAISO-SCE 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*

Existing system model will be based upon as-built design and equipment test reports. Future capacity projects approved by City of Pasadena will reflect the most up-to-date information available for both scope and in-service dates.

Future maintenance projects in-service dates are based upon the latest information on the schedule of the maintenance projects. The maintenance projects that have a firm plan to be implemented and are either "under construction" or scheduled to be "under construction" will be modelled in the cases based upon the scope of work provided by the maintenance team.

2.2.2   *Generation*

a.   Models

Existing generator models will reflect the latest models provided by the City of Pasadena.

Future Generators or modifications to existing generators will be modeled based upon City of Pasadena project status using the latest generator models available. Future projects that have a status of "in construction" will be modeled in future base cases. The exception to this will be for the cases that require the Renewable Portfolio Standard (RPS) needs to be modelled. If the "in construction" list of generation does not meet the RPS needs, additional generation will be modeled to meet these needs. This additional generation shall be based upon most likely to occur generation that is still moving forward.

b.   Dispatch

Generation dispatch for existing units will be based either on historical information (if available) or based upon Net Qualifying Capacity (NQC) values. Future renewable generation dispatch will be based upon the CAISO TPP Study Plan for the given scenario.

2.2.3 *Demand*

City of Pasadena's demand models will follow WECC's Data Preparation Manual wherever is applicable, as well as other requirements found in the CAISO-SCE MOD-032-1 Requirements document posted on the [CAISO web site](#).

2.2.4 *Outage Information*

Planned outages that are at least 6 months in duration will be modelled based upon the planned dates of outages using the outage information provided by City of Pasadena and CAISO.

2.2.5 *Firm Transmission Service and Interchange*

Known commitments for Firm Transmission Service and Interchange on the City of Pasadena system will be modelled.

2.3   CAISO TPP Base Case Development Process

The City of Pasadena is responsible for providing its transmission system model updates to the CAISO and SCE at least once a year, usually at the beginning of the CAISO TPP, to accurately capture the City of Pasadena's transmission system model in the TPP study cases.

Submittal of CAISO TPP base cases shall be provided to CAISO and SCE.

2.4   WECC Base Case Development Process

For the development of WECC base cases, SCE requests the City of Pasadena to provide inputs to SCE, depending on SCE's role as either the area or sub-area coordinator for area 24. The City of Pasadena will also include the CAISO on WECC base case submittals.

2.4.1 *Initial Base Case Data Submittal*

a.   City of Pasadena shall submit its loads for each WECC base case scenario to SCE, and CAISO in accordance with the WECC's Annual Base Case Compilation Schedule.

b.   If other changes are needed to the base case models, the City of Pasadena shall submit their data to SCE, and CAISO in accordance with the WECC's Annual Compilation schedule for the requested WECC's base case scenario.

c.   Generator Owners within area 24 of the WECC base cases shall submit their data to SCE and CAISO, if applicable for the base case scenarios, if changes are needed to the base case.

f.   All WECC base case submittals shall be provided to SCE at basecase@sce.com, and CAISO at GridModelingData@caiso.com .

2.4.2 *WECC's Base Cases for Base Case Review*

The City of Pasadena is responsible for providing comments on the initial WECC base cases to SCE. SCE is responsible for submitting revised WECC base cases to the Area Coordinator or, if SCE is the area coordinator, to WECC in accordance with WECC Compilation schedule. As shown in SCE's WECC Base Case Development Process Document posted on the CAISO web site, SCE will provide the initial base cases to the City of Pasadena for review and comment. The City of Pasadena will provide review comments and the appropriate signoff sheet(s) for each WECC base case review request. Review comments and signoff sheet(s) must be received by SCE prior to the stipulated deadline in-order for them to be incorporated into the base case. The City of Pasadena will also include the CAISO on WECC Base Case review emails.

2.5   Short Circuit Modeling Data

The City of Pasadena maintains short circuit modeling data for their transmission planning area and will provide it to SCE, CAISO, or WECC upon request.

Version History

Version	Change	By	Date
1.0	CAISO City of Pasadena Joint Process Document for MOD-032-1 Requirement R1 Implementation and Compliance, initial version	Mudita Suri Burhan Alshanti	02/08/2018

Technical Review

Reviewed By	Name	Signature	Date
Regional Transmission Engineer, Regional Transmission South (CAISO)	Mudita Suri	Original Signed	02/14/2018
Principal Electrical Engineer City of Pasadena	Burhan Alshanti	Original Signed	02/08/2018

Approval

Approved By	Name	Signature	Date
Manager, Regional Transmission South, Infrastructure Development (CAISO)	Robert Sparks	Original Signed	02/14/2018
Acting Assistant General Manager City of Pasadena	Varoojan Avedian	Original Signed	02/08/2018

Appendix A.   Modeling Communications

Entities responsible for providing data should send it to:

PC – ISO at: GridModelingData@caiso.com

TP – City of Pasadena at: vavedian@cityofpasadena.net

As WECC Area Coordinator or Sub- coordinator of area 24 data, data may also be submitted to SCE:

TP – SCE at: basecase@sce.com

Appendix B.   Evidence Retention

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. Last audit performed by the Compliance Enforcement Authority was over 4 years ago, then at a minimum, maintain evidence from the last audit until a new audit is performed.
2. Maintain evidence for a longer period of time if asked by the Compliance Enforcement Authority, as part of an investigation.
3. 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 City of Pasadena 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.