



SPP MOD-032-1 WEST MODEL DEVELOPMENT GUIDANCE DOCUMENT

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By SPP Engineering Modeling

REVISION HISTORY

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION	COMMENTS
2019 v1.0	SPP Engineering Modeling	First draft	
2021 v2.0	SPP Engineering Modeling	Revised to account for MOD build out for SPP - WECC models	

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SECTION 1: EXECUTIVE SUMMARY

This document outlines the process coordination between SPP, as the Planning Coordinator (“SPP PC”) and as the Western Electricity Coordinating Council (“WECC”) Data Preparation Manual (“DPM”) data submitter (“WECC DPM Data Submitter”), applicable Data Owners¹, and WECC. Data Submitters, as described in the WECC DPM, collaborate to make Western Interconnection models available to WECC in accordance with the North American Electric Reliability Corporation (“NERC”) MOD-032-1 standard.

1 Data Owner¹ – The entity that is responsible for ensuring the accuracy and timely submission of data to the SPP, as Planning Coordinator.

SECTION 2: MOD-032-1 OVERVIEW

Purpose: To establish consistent modeling data requirements and reporting procedures for development of planning horizon cases necessary to support analysis of the reliability of the interconnected transmission system.

Applicability (Functional Entities):

- Balancing Authority
- Generator Owner
- Load Serving Entity
- Planning Authority and Planning Coordinator
- Resource Planner
- Transmission Owner
- Transmission Planner
- Transmission Service Provider

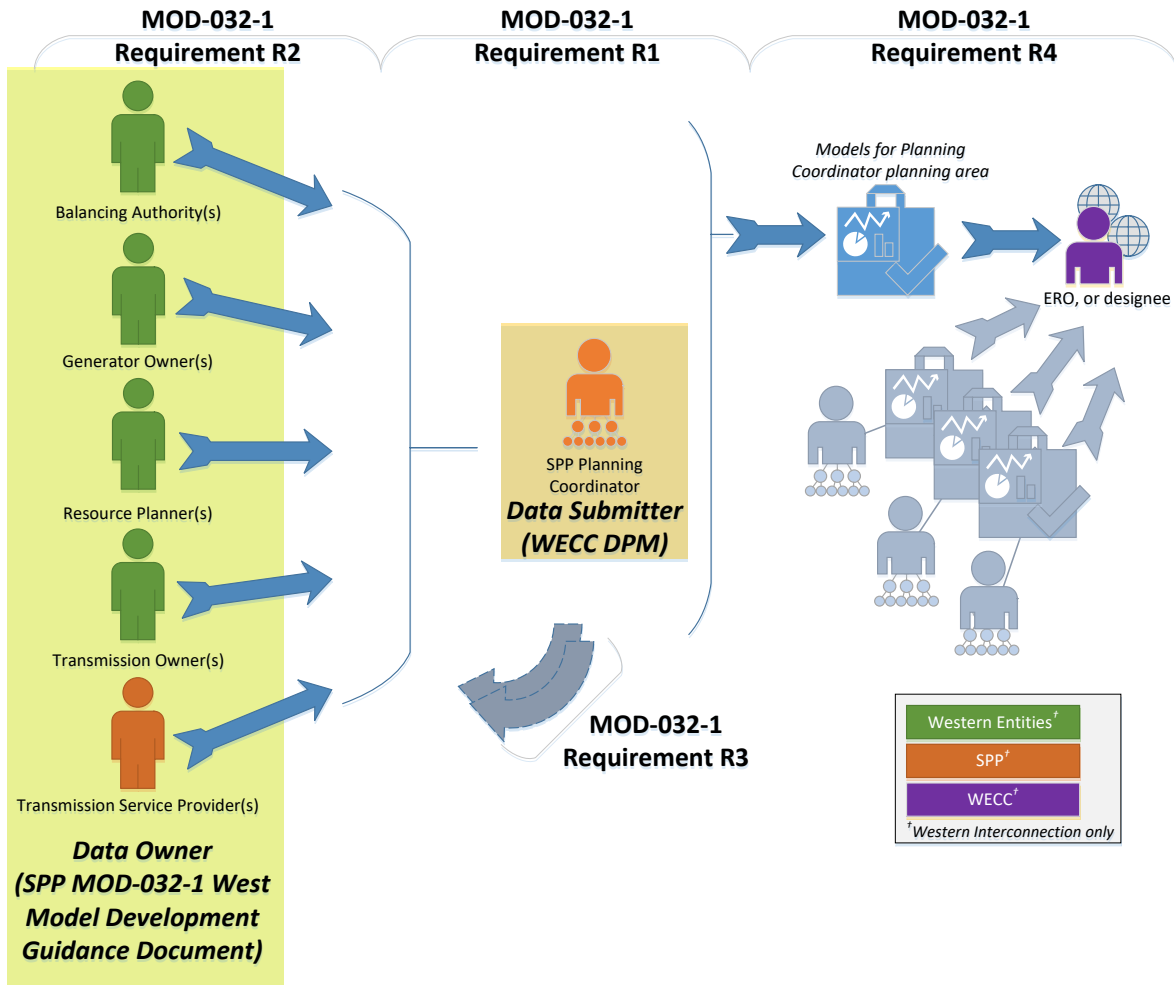
Relative Dates:

- FERC approval of MOD-032-1: May 1, 2014
- NERC MOD-032-1, R1 Effective Date: July 1, 2015
- NERC MOD-032-1, R2 – R4 Effective Date: July 1, 2016

SECTION 3: REPORTING PROCEDURES AND DATA COORDINATION

The SPP PC, as the WECC DPM Data Submitter, participates in WECC's Western Interconnection-wide model creation process. Data Owners in the Western Interconnection under the SPP PC utilize the WECC DPM and SPP Model Development Advisory Group ("MDAG") Model Development Procedure Manual ("SPP MDAG Procedure Manual") as procedure documents for the data requirements and reporting procedures necessary to support creation of WECC's Interconnection-wide cases. As necessary, the SPP PC will request that Data Owners provide modeling data incrementally for the WECC DPM model building purposes or to meet SPP governing documents requirements.

1. WECC provides a model data request to the SPP PC in furtherance of SPP's role as the WECC DPM Data Submitter. The SPP PC requests steady state and dynamic modeling data, in accordance with the WECC DPM and SPP MDAG Procedure Manual, from applicable Data Owners. The SPP PC requests short circuit modeling data, in accordance with the SPP MDAG Procedure Manual, from applicable Data Owners. Data Owners must provide their respective data to the SPP PC in accordance with the reporting guidelines established in the WECC DPM for steady state and dynamic modeling data, and the SPP MDAG Procedure Manual for short circuit modeling data.
2. SPP PC requires Data Owners to submit their respective data through the SPP Model On Demand ("MOD") tool. SPP MOD submittals to SPP for the WECC model build, should be done following the SPP Western Interconnection MOD Matrix in Appendix 1. For modeling data requests unrelated to, or incremental to, the creation of the WECC Interconnection-wide case build, the SPP PC will provide reporting guidelines in the SPP modeling data request. Two such incremental data requests needed by SPP are the known outage(s) of generation or Transmission Facility (ies) in accordance with NERC Standard TPL-001 and known commitments for Firm Transmission Service and Interchange.
3. If a technical concern about the modeling data is submitted to the SPP PC, the SPP PC will submit an email to the applicable Data Owners that includes the technical basis or reason for the technical concerns. Within the timeline set forth in the WECC Base Case Compilation Schedule, the applicable Data Owners must provide a written response to the SPP PC that includes either updated data or an explanation containing a technical basis for maintaining the current data.
4. The SPP PC, as the WECC DPM Data Submitter, makes available steady-state power flow, short circuit, and dynamic models to WECC for creation of the Interconnection-wide cases.
5. This process will be followed for each Interconnection-wide case built throughout the annual WECC Base Case Compilation Schedule, and will remain in effect until such time as it is revised by mutual agreement of the acknowledging parties.



NERC is the Electric Reliability Organization (“ERO”). WECC is the ERO designee in the Western Interconnection.

APPENDIX 1: SPP WESTERN INTERCONNECTION MOD MATRIX

SPP MOD Project Type/Status Matrix								
Type	Description	Status	Description	Applied to this Model Set:				Notes
				WECC	ITP/ITPL	TS	GI	
WI SPP-approved Transmission System Upgrade	<p>Must have an NTC for:</p> <ol style="list-style-type: none"> 1) transmission service request(s); 2) transmission changes originating from the integrated transmission planning (ITP) process; 3) transmission changes originating from the Balanced Portfolio process; 4) transmission changes directed by the high priority study process; 5) transmission changes associated with Sponsored Upgrades. 	Approved		X	X	X	X	<p>Transmission changes that materially-modify the SPP Transmission System. Projects associated with changing the generation or load components interconnected to the SPP Transmission System in accordance with SPP OATT Attachment V and AQ processes, are submitted separately under the "Generation Interconnection" or "Attachment AQ Load" MOD Types.</p> <p>MOD Projects must contain area/owner/zone number, area/owner/zone abbreviated name, NTC/PID/UID number.</p> <p>Example Prj/Idv Name: -659_Patent_Gate_NTC300.prj -659_BEPC_Build_New_Line_SUS-###.pr -659_Patent_Gate_PID2230.prj</p>
WI Planned Transmission System Change	<p>For Material Planned Transmission System Changes, Data Submitters shall submit an RMS ticket to notify SPP. An expected change to the SPP Transmission System that does not yet have or does not require an NTC, including:</p> <ol style="list-style-type: none"> 1) transmission changes budgeted for or planned by the TO; 2) transmission changes budgeted for by a Transmission Customer or other entity; 3) transmission changes resulting from an emergency (e.g., unplanned equipment failure); 4) transmission, load, or generation changes that otherwise have a strong likelihood or commitment to implement (e.g., load changes not yet approved by Attachment AQ, a GI with an IA but on suspension, a GI without an IA, etc.) 	Acknowledged	Material transmission changes that have been acknowledged by SPP and may be included in model sets.	X	X	X	X	<p>The status for this MOD type will only be changed to "Acknowledged" by Data Submitters after receiving a notification from SPP for inclusion in the model sets.</p>
		Requested	Material transmission changes that have not yet been acknowledged by SPP and may not be included in model sets					<p>This MOD Project Type & Status is the default to represent transmission changes expected to be implemented in the future, but are not yet, or will not be, part of any SPP planning processes under Attachment O in the SPP OATT.</p> <p>Do not use this MOD Project Type to submit speculative changes to the transmission model that simply correct basecase system conditions (See MOD Project Type "System In tact Alteration").</p>
WI Attachment AQ	Changes to load and/or delivery points approved in accordance with Attachment AQ, including any transmission changes associated with the Attachment AQ project (e.g., equipment upgrades, changes to normally-open/closed topology).	Approved		X	X	X	X	<p>Load changes and transmission changes, including upgrades and changes to normally-open/closed topology, associated with the approved Attachment AQ load modification.</p> <p>MOD Projects must contain area/owner/zone number, area/owner/zone abbreviated name, DPA/DPNS number.</p> <p>Example Prj/Idv Name: a. Project name: 525_WFEC_Midwest-Franklin_Rebuild_NTC2002 OR 525_WFEC_Midwest-Franklin_Rebuild_DPA-2018-Month-###.prj OR 525_WFEC_Midwest-Franklin_Rebuild_DPNS-20#-Month-###.prj b. Profile name: 659_BEPC_2017MDWGP4-18S.raw or NexEra_2017MDWGP4-18S.raw</p>
WI Generation Interconnection	<p>Additions or changes to generating units, including any transmission changes associated with the Generation Interconnection Service project(s), approved in accordance with the Generator Interconnection Procedure (GIP) that:</p> <ol style="list-style-type: none"> 1) have an executed Interconnection Agreement (IA) or executed Interim Generator Interconnection Agreement (IGIA), and 2) are not suspended. 	Approved		X	X	X	X	<p>Generation changes and transmission changes, including upgrades that may not have been included in the executed IA, associated with the approved GI.</p> <p>MOD Projects must contain area/owner/zone number, area/owner/zone abbreviated name, NTC/PID/UID number.</p> <p>Example Prj/Idv Name: 622_NexEra_Add_Blue_Cloud_Wind_GEN-20YY-###.prj</p>
WI Modeling Correction	Changes to the transmission model necessary to correct or update the existing transmission model represented by the MOD network data.	Update		X	X	X	X	<p>Projects with this status will be immediately committed to the MOD base case upon review.</p>