

2025 ITP Preliminary Base Reliability (BR) Powerflow Model Information – Pass 3

- **Action Required**

SPP staff is requesting stakeholder feedback on the 2025 ITP BR Powerflow models – Pass 3, and supplemental data posted today, as follows:

- Please verify topology is modeled appropriately
 - Please submit topology updates as PSS®E version 35.3 idev files through the [Model on Demand \(MOD\)](#); any questions or feedback should be submitted through the [SPP Request Management System \(RMS\)](#).
 - When submitting projects and profiles to MOD or post processing idevs, please use the following naming convention:
 - Prefix the project/profile name with your owner/area number underscore company name underscore XXXX OR company name underscore XXXX if you do not have an area/owner number. For example:
 - **Project name:** 525_WFEC_Midwest-Franklin_Rebuild.prj or Nextera_Add_GenX.prj
 - **Profile name:** 659_BEPC_2017MDAGP4-18S or Nextera_2017MDAGP4-18S
 - The file name should be separated by underscores instead of spaces (*e.g.*, 525_Patent_Gate.prj)
 - For NTC projects, include the UID or PID number at the end. For example, 659_Patent_Gate_UID300.prj or 659_Patent_Gate_UID300.idv

As a reminder, the following Base Reliability models will be used for the 2025 ITP:

- 2026 Base Reliability Light Load, Summer, and Winter models
- 2029 Base Reliability Light Load, Summer, and Winter models
- 2034 Base Reliability Light Load, Summer, and Winter models

Please note that because of SCRIPT C2/C3 efforts the 2024 series MDAG and 2025 ITP models are **NOT** being built in parallel. SPP will build ITP BR models first and then build MDAG models from these completed ITP BR models. Please refer to the model build schedule located on the SPP corporate website under the MDAG page ([2024 Series MDAG / 2025 ITP Powerflow and Short Circuit Model Build](#)) for the different deadlines and milestones.

- **Entities Required to Provide Feedback:**

All interested stakeholders, primarily TWG and MDAG stakeholders

- **Due Date and Method of Submittal**

Please provide topology updates by **Friday, November 3, 2023** through **MOD**. For any questions or feedback, please submit those by **Friday, November 3, 2023** through the SPP Request Management System (**RMS**) using the

“Submit Information” **Request Template**, “Integrated Transmission Planning (ITP)” **Subtype 1**, and “Data Submission” **Subtype 2**.

- **Changes from Last Pass**
 - Member feedback from Pass 2

- **Material Disclaimer**
CONTAINS CONFIDENTIAL AND PROTECTED MATERIAL NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL – DO NOT RELEASE

- **File location on [GlobalScape](#)**
For users who have signed an SPP non-competitive duty NDA:
This file can be found on GlobalScape under: ITP → ITP → NCD (CEII, RSD) → NDA → 2025 ITP → Powerflow Models in the “[Pass 3](#)” folder.

File Name	Description
2025 ITP Pass 2 - 2025 Pass 3 Compare.zip	Comparison of 2025 ITP Pass 2 – 2025 ITP Pass 3
2025_ITP_Pass3_Raw_V35.zip	Models in .RAW file format
2025_ITP_Pass3_Sav_V35.zip	Models in .SAV file format
2025_ITP_Pass3_Docucheck.xlsx	SPP DocuCode modeling information identifying information overviews (blue tabs), suspect conditions (orange tabs), and errors (red tabs)
2025_ITP_Pass3_NTC_Checker.xlsx	Workbook comparing TRAC NTC ratings vs model ratings
2025_ITP_Pass3_Raw_NB_V35.zip	Models in .RAW file format with Node Breaker data
2025_ITP_Pass3_Sav_NB_V35.zip	Models in .SAV file format with Node Breaker data
2025_ITP_Pass3_Islands_&_Raw_Read_Warnings.xlsx	Contains islands and raw read warning errors prior to tweaking and solving the models. These winding errors and islands need to be reviewed and corrected in MOD and/or EDST.
SPP_Planned_Generation_Resource_Retirement_List.xlsx	List of SPP planned generation retirements. If there are any updates that need to be made, update the workbook with changes highlighted and send the edited workbook back.
2024MDAG_2025ITP_Exception_Template_File_for_PF.xlsx	Workbook to provide exceptions for Docucheck Red Tab errors
Non-PSSE Users.xlsx	Any changes made must be highlighted Contains load and machine overview reports for all unique models being built. Non PSSE users can use this workbook to update their load and

File Name	Description
	<p>generation (concentrate on the tabs highlighted yellow).</p> <ul style="list-style-type: none"> Remember to prefix the non-PSSE users workbook with your company name and/or owner number (e.g., 813_LPL_non-psse users.xlsx) Load Overview: Update real and reactive power fields (P & Q). The “PF” column is optional Machine Overview: Update expected seasonal power output and machine capabilities congruent with the MDAG model development procedure manual.
Non-PSSE Users - Topology_Example.xlsx	<p>Any changes made must be highlighted</p> <ul style="list-style-type: none"> This template can be used by non-PSSE users to provide topology updates (powerflow and short circuit). SPP will then convert this data to a format that is usable in MOD and PSSE. Examples of updates include: <ul style="list-style-type: none"> Add transmission facilities Updating ratings, sequence data Etc. Remember to prefix the non-PSSE users workbook with your company name and/or owner number (e.g., 813_LPL_non-psse users.xlsx) This template can be found in GlobalScope at the following directory: <ul style="list-style-type: none"> Modeling (CEII, RSD) → MDAG Series → Powerflow → 2023 Series → x. Non-PSSE Users Topology Template
2024_2025 Initial Renewable Dispatch Values.xlsx	<p>This file contains updates to the initial renewable dispatch data provided based on the SPP Model Development Procedure Manual which states for the 2024 Series MDAG model build:</p> <ul style="list-style-type: none"> Modeling of Wind/Solar Renewable Resources PGEN (pg.33 of SPP Model Development Procedure Manual 2023 v7.0) <ul style="list-style-type: none"> Spring Light Load Off-Peak models: Output of renewable resources with long-term firm transmission service will be modeled in the light load model at each facility's latest five-year average (or

File Name	Description
	<p>replacement data if unavailable) for the SPP minimum load hour corresponding to the season of the Light Load case, not to exceed each facility's firm service amount. The methodology used to calculate replacement data is described in the ITP Manual. Solar resources will be modeled at zero MW output in the light load case regardless of the facility's long-term firm transmission service amount.</p> <ul style="list-style-type: none"> • On-Peak & Summer Shoulder Off-Peak models: Output of renewable resources with long-term firm transmission service will be modeled in the case(s) at each facility's latest five-year average (or replacement data if unavailable) for the applicable seasonal SPP coincident peak, not to exceed each facility's firm service amount. • SPP will make available the initial dispatch of renewable resources with long-term firm transmission service based on historical seasonal five-year average with the initial model pass of the each SPP MDAG model build. Any renewable resource modeling data submitted to the PC, after the initial dispatch list is provided, will be dispatched at the seasonal state dispatch percentage of the renewable resource's nameplate amount. • When an affected party disagrees with the dispatch amount for a facility, the affected parties involved should coordinate to update the dispatch amount. If agreement cannot be reached, the case can be brought to the MDAG for a decision. • Responsibility for validating and providing renewable resource dispatch updates falls to the affected parties • For resources that do not have firm service, PGEN values should not exceed

File Name	Description
	<p>average historical seasonal values for the Light Load, Spring Peak, Summer Peak, Summer Shoulder Off-Peak, Fall Peak, and Winter Peak Cases. If historical data is unavailable then the rated net capability of a resource determined according to SPP Planning Criteria section 7.1.5.3 should be followed.</p> <ul style="list-style-type: none"> • Action <ul style="list-style-type: none"> ○ For data inclusion in 2024 MDAG modeling series, these dispatch values must be submitted, by Data Submitters, as BLG profiles in MOD and any pertinent renewable transactions in the Engineering Data Submission Tool (EDST). The last chance for addition or removal for generators, loads, retirements, and transactions will be Jan 12, 2024. After this pass, new loads will be required to utilize the ITP Manual 10.3 late data submission process.

• **IMPORTANT NOTE**

• **MMWG Powerflow (PF) Checker**

- SPP Staff **highly recommends** that the MMWG PF Checker is utilized before submitting updates. This tool was developed by MMWG to enable Data Submitters validate powerflow models before submitting updates to SPP (PC) through MOD and EDST. Data Submitters should use this tool to verify and correct any data prior to submitting any updates to SPP in current and ensuing passes/iterations. The tool including the instructions manual is posted on Globalscape at the following directory: Modeling (CEII, RSD) → MDAG Series → Powerflow → x. Automation Files → 1. Powerflow Checker

• **Helpful Links and Access**

If you do not already have access to these documents in [GlobalScape](#), see the instructions for [confidentiality agreements](#) and submit the appropriate form via [RMS](#) using “Initiate a System Access Action” **Request Template**, “Globalscape File Sharing” **Subtype 1**, “Add User” **Subtype 2** and “SPPDocushare / Engineering / TCR Models” **Subtype 3**. [GlobalScape](#) frequently asked questions can be found in [Knowledgebase Article 686](#). Other helpful links can be found on [SPP.org](#).