



Transfer Capability Methodology for the Near-Term Transmission Planning Horizon

Process Owner: Compliance and Advanced Studies
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Revision History

Version	Revision Date	Author	Comments
1	3/28/13	Staff	Initial Release
2	8/24/16	Staff	Update method for reporting transfer capability.
3	10/20/16	Staff	Removed requirement for R3 (retired).

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1. Introduction

Pursuant to SPP's function as Planning Coordinator, SPP has developed this methodology to meet the requirements set forth in FAC-013-2.

During each calendar year, SPP will conduct an assessment for at least one year in the Near-Term Planning Horizon to establish the transfer capabilities within SPP's PC footprint **(R.4)**. As part of the assessment, SPP will perform a system intact and N-1 analysis based on the assumptions in more detail below. Once the transfer capabilities have been established, SPP will distribute its assessment results to respective entities within 45 calendar days.

2. Assessment Assumptions

For the annual assessment, SPP will use a POR/POD approach when selecting transfers. These transfers will include, but not be limited to, all internal PORs and PODs within SPP's PC footprint as well as all first tier PORs and PODs **(R1.1)**.

The assessment will use annual MDWG model(s) as its starting point. The MDWG develops its models in accordance with the [SPP MDWG Powerflow Procedure Manual](#), which takes into account anticipated load levels, generation dispatch, transmission topology, long-term planned outages, and projected long-term transmission service. Updates will be made to the models to reflect the most accurate system configuration, generation, and load representation for each pertinent individual modeling area for the study period. No adjustments will be made to model parallel path flow or loop flows in the load flow models used in the determination of transfer capability **(R1.4.1-5)**.

To simulate a transfer across a path, SPP will increase generation in one POR and decrease generation in another POD. All combinations of the selected PORs and PODs will be simulated **(R1.5)**.

At a minimum the monitored elements and contingencies used in the assessment will include all non-radial BES transmission lines and transformers¹ 100 kV and above. Additional contingencies or monitored elements will be included as provided by TPs and/or TOs within the PC footprint **(R1.4.6-7)**.

SPP will respect all known System Operating Limits (SOLs) and will follow SPP Criteria in its assessment **(R1.2-3)**. SPP will determine transfer capability for each POR/POD combination based on the most limiting element under system intact or contingency conditions. The limiting element will have a minimum 3% outage transfer distribution factor or power transfer distribution factor.

3. Transfer Capability Assessment

Annually, SPP will perform a system intact and N-1 analysis simulating all combinations of selected PORs and PODs. The analysis will cover at least one year in the Near-Term Transmission Planning Horizon. The output of this analysis will be the maximum transfer capabilities based on the lesser of 1) the most limiting elements under system intact and contingency conditions, 2) the maximum amount of generation available for export in the selected POR, or 3) the maximum generation available for import in the selected POD. Following the analysis, SPP will verify if the most limiting elements for each transfer path are valid

¹ Applies to lower voltage of transformers



limits and then establish the transfer capabilities. POR/POD combination transfer capabilities determined under this process to be less than zero (negative FCITC) will be shown as having zero (0) transfer capability.

4. Transfer Capability Methodology Distribution

SPP will distribute this Transfer Capability methodology to all PCs with an adjacent or overlapping area and to each Transmission Planner (TP) within SPP **(R2.1)**. SPP will also distribute this Transfer Capability methodology within 30 calendar days to all reliability-related entities that submit a request in writing. Requests should be sent to Planning@spp.org **(R2.2)**.

5. Transfer Capability Assessment Distribution

SPP will distribute the results of the annual Transfer Capability assessment within 45 calendar days to the entities with which SPP is required to share its methodology and to those reliability-related entities which provide a documented request of the results **(R5)**. SPP will also provide data to support its annual Transfer Capability Assessment results within 45 calendar days upon receiving a documented request for supporting data from a recipient of the annual Transfer Capability assessment **(R6)**. Requests for the assessment and supporting data should be sent to Planning@spp.org.