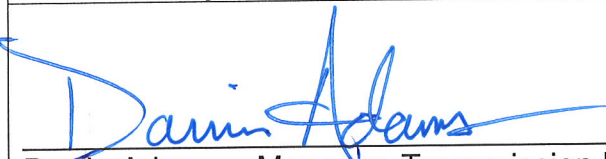




East Kentucky Power Cooperative
EKPC Transmission Planning Transfer Capability Methodology

Revision:
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Reviewed By	Date
 Darrin Adams – Manager, Transmission Planning	July 8, 2010

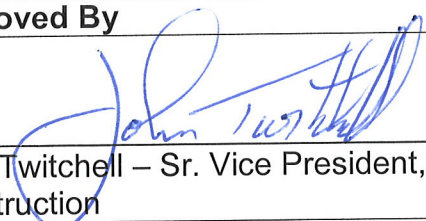
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 John Twitchell – Sr. Vice President, Power Delivery & Construction	July 29, 2010

TABLE OF CONTENTS

1.0	PURPOSE.....	4
2.0	DEFINITIONS.....	4
3.0	TRANSFER CAPABILITY METHODOLOGY	5
4.0	DOCUMENT COMMUNICATION AND MAINTENANCE.....	6
5.0	ESTABLISHMENT AND COMMUNICATION OF TRANSFER CAPABILITIES.....	7

1.0 PURPOSE

The purpose of this document is to describe East Kentucky Power Cooperative's methodology used to determine Transfer Capabilities in accordance with NERC Reliability Standard FAC-012-1 and establish and communicate Transfer Capabilities in accordance with NERC Reliability Standard FAC-013-1. EKPC has complied with these NERC Reliability Standards through participation in the SERC NTSG & LTSG processes, and the ERAG process. This document has been created to formalize this reliance on the procedural manuals for these organizations and the activities of these organizations to demonstrate EKPC's compliance with the NERC Reliability Standards FAC-012-1 and FAC-013-1.

2.0 DEFINITIONS

A **System Operating Limit (SOL)** for the Planning Horizon is defined as a value (such as MW, MVAR, MVA, Amperes, Frequency, or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. SOLs are based upon certain operating criteria. These include but are not limited to:

- Facility Ratings (applicable pre- and post-contingency equipment or facility ratings)
- Transient Stability Limits (applicable pre- and post-contingency stability limits)
- Voltage Stability Limits (applicable pre- and post-contingency voltage stability)
- System Voltage Limits (applicable pre- and post-contingency voltage limits)

The **Bulk Electric System (BES)** is the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are not included in this definition.

Transfer Capability is the measure of the ability of interconnected electric systems to move or transfer power *in a reliable manner* from one area to another over all transmission lines (or paths) between those areas under specified system conditions. The units of transfer capability are in terms of electric power, generally expressed in megawatts (MW). The transfer capability from "Area A" to "Area B" is *not* generally equal to the transfer capability from "Area B" to "Area A."

3.0 TRANSFER CAPABILITY METHODOLOGY

Intra-Regional Transfer Capabilities

EKPC has representatives on the SERC Near-Term Study Group (NTSG) and Long-Term Study Group (LTSG). EKPC has adopted the methodology of these groups for determining intra-regional Transfer Capabilities. Therefore, EKPC uses the results of the SERC NTSG and LTSG transfer studies as the intra-regional Transfer Capabilities to be used in the reliable planning and operation of the Bulk Electric System.

The methodology used by the SERC NTSG, and therefore by EKPC, to determine intra-regional Transfer Capabilities is described in the document entitled SERC Regional Criteria: Intra-Regional Near-Term Study Group (NTSG) Procedural Manual. The methodology used by the SERC LTSG, and therefore by EKPC, to determine intra-regional Transfer Capabilities is described in the document entitled SERC Regional Criteria: Intra-Regional Long-Term Study Group (NTSG) Procedural Manual.

As stated in these SERC Procedural Manuals, the Transfer Capabilities identified shall respect all applicable System Operating Limits (SOLs).

The methodologies utilized by SERC are applicable only to the planning horizon. The TVA Reliability Coordinator calculates EKPC's TTC, AFC, and ATC on behalf of EKPC for the operations horizon. The methodology described in this document does not cover the methodology used for those calculations in the operating horizon.

EKPC, along with the other SERC member companies, develops and submits to SERC the load forecast and profile, the generation commitment and dispatch, the projected transmission uses (including coordinated interchange), and the transmission system topology in the base case models to be used by the SERC NTSG and LTSG based on anticipated peak operating conditions.

Inter-Regional Transfer Capabilities

Inter-regional transfer capabilities are studied under the Eastern Interconnection Reliability Assessment Group (ERAG) Agreement in various study forums, including the SERC East-RFC Study and MRO-RFC-Serc West-SPP studies. These inter-regional study efforts are guided by the procedures developed to address these activities through the ERAG study forums.

EKPC provides information and coordinates with the SERC representative on the ERAG study groups. EKPC has adopted the methodology of these

groups for determining inter-regional Transfer Capabilities. Therefore, EKPC uses the results of the ERAG studies as the inter-regional Transfer Capabilities to be used in the reliable planning and operation of the Bulk Electric System.

The methodology used by the ERAG study groups, and therefore by EKPC, to determine inter-regional Transfer Capabilities is described in the documents entitled ERAG Western Study Forum Procedural Manual and the ERAG SERC East-RFC (SER) Study Procedures Manual.

The Transfer Capabilities identified in these inter-regional studies shall respect all applicable System Operating Limits (SOLs).

The methodologies utilized by the ERAG study groups are applicable only to the planning horizon.

EKPC provides information as required to the SERC representatives on the ERAG groups regarding load forecast and profile, generation commitment and dispatch, projected transmission uses (including coordinated interchange), and transmission system topology.

Company-to-Company Transfer Capabilities

Transfer Capabilities between EKPC and neighboring companies will be studied periodically by EKPC using processes similar to those used by the SERC NTSG. Transfers Capabilities between EKPC and E.ON U.S., and between EKPC and TVA are already determined as part of the SERC NTSG and LTSG study processes. EKPC will periodically also determine Transfer Capabilities with its other interconnected neighbors, which includes AEP/PJM and Duke Energy/MISO.

While company-to-company transfers are beyond the scope of the NERC Reliability Standards FAC-012-1 and FAC-013-1, this information provides value and will enhance the ability of EKPC to reliably plan and operate the BES.

4.0 DOCUMENT COMMUNICATION AND MAINTENANCE

EKPC will issue this Transfer Capability methodology to the following entities:

- Each Transmission Planner that works in EKPC's Planning Authority (PA) Area. EKPC is the only Transmission Planner presently operating in the EKPC PA Area, and is therefore responsible for developing this methodology.

- Each adjacent Planning Authority and each Planning Authority that indicates it has a reliability-related need for the methodology. The adjacent Planning Authorities to be provided this methodology are presently identified as E.ON U.S., MISO, PJM, and TVA. Presently, no other Planning Authority has identified a need for the methodology.
- Each Reliability Coordinator (RC) and Transmission Operator (TOP) that operates any portion of EKPC's PA Area. TVA is the only RC presently operating in EKPC's PA Area. EKPC is the only TOP presently operating in the EKPC PA Area.

If a recipient of this Transfer Capability methodology provides documented technical comments on the methodology, EKPC will provide a documented response to that recipient within 45 calendar days of receipt of those comments. The response will indicate whether a change will be made to this Transfer Capability methodology and, if no change will be made to this Transfer Capability methodology, the reason will be given.

EKPC will review this Transfer Capability methodology periodically to determine if any revisions should be made. EKPC will issue any revisions to this document to the above entities prior to the effective date of the revisions.

EKPC will post this methodology on its public OASIS page.

5.0 ESTABLISHMENT AND COMMUNICATION OF TRANSFER CAPABILITIES

EKPC establishes its intra-regional and inter-regional Transfer Capabilities through the SERC NTSG and LTSG and the ERAG processes. The results of the studies performed by these study groups will comprise the set of Transfer Capabilities for EKPC. Copies of the final documented results will be kept by EKPC for reference to the calculated Transfer Capabilities as the studies are completed by SERC and the ERAG.

EKPC shall provide its set of inter-regional and intra-regional Transfer Capabilities to any of the following entities that submit a written request to EKPC that includes a schedule of delivery:

- its associated Reliability Coordinator (which is TVA)
- its Regional Reliability Organization (which is SERC)
- all Transmission Planners and Transmission Service Providers that work within the EKPC Planning Authority area (currently only EKPC performs the TP and TSP functions within this area)