



# **Southern Maryland Electric Cooperative (SMECO) BASELINE RTEP REPORT**

For the 2016-2020 Period

## **INTRODUCTION**

The PJM Regional Transmission Expansion Planning (RTEP) Process requires that solutions for facility enhancements to solve reliability violations as well as the associated be established. There are several types of facility enhancements for which cost assignment must be made:

- Attachment Facilities required solely to interconnect a new generation project,
- Network Facilities that are required to enhance the network solely or in part because of a PJM Board approved RTEP project, and
- Network Facilities required to support load growth.

In order to establish a starting point for development of Regional Transmission Expansion Plans and determine cost responsibility for expansion facilities, a 'baseline' analysis of system adequacy and security is necessary. The purpose of this analysis is threefold:

- To identify areas where the system, as planned, is not in compliance with the applicable reliability standards (for purposes of this report, "applicable reliability standards" will be defined as NERC, RFC, SERC and PJM Reliability Planning Criteria). The baseline system is analyzed using the same criteria and analysis methods that will be used for assessing the impact of proposed new generation projects. This will ensure that the need for system enhancement of the baseline system and enhancements due to generation projects are determined in a consistent and equitable manner.
- To bring those areas into compliance, develop and recommend facility expansion plans, including cost estimates and estimated in-service dates.
- To establish what will be included as baseline costs in the allocation of the costs of expansion for those generation projects proposing to connect to the PJM system.

The system as planned is tested for its compliance with applicable reliability standards and PJM design standards to accommodate the forecast demand, committed resources, and commitments for firm transmission services for a specified time frame. Areas not in compliance with the standards are identified and enhancement plans are developed to achieve compliance.

This 'baseline' analysis and the resulting expansion plans served as the base system for the generator deliverability studies that were conducted for all generation that had an executed Interconnection Agreement with the Southern Maryland Electric Cooperative (SMECO) as of June 1, 2016.

In addition to the PJM Generator Deliverability test, common mode outage test procedure, baseline N-1 thermal and voltage analysis, and N-1-1 thermal and voltage analysis were completed for the SMECO system on a 2015 RTEP case that modeled 2020 conditions.

Future baseline RTEP reports (2016 RTEP) and analysis, will include a review of the SMECO system for all applicable NERC, RFC and PJM planning criteria along with a re-evaluation of the PJM studies. The reference year for analysis and SMECO results will be included within the PJM RTEP Baseline Report which will also include results for the existing PJM system.

**OBJECTIVE AND SCOPE**

The objectives of this study were as follows:

- To identify areas where the system as planned for the period 2016 through 2020 would not be in compliance with applicable reliability criteria.
- To develop and recommend preliminary facility expansion plans, including cost estimates and estimated in service dates, to bring those areas into compliance.
- To establish what will be included as baseline expansion costs for the allocation of the costs of expansion for future SMECO generation projects.

The scope of this study included analysis for the period 2016 through 2020 to determine compliance with the PJM Deliverability and reliability criteria requirements, Basecase Analysis requirements, Short Circuit Requirements and N-1-1 analysis requirements.

**KEY FINDINGS**

The SMECO system as planned through 2020 was found to be compliant with applicable reliability criteria.

- No Thermal issues identified in the studies performed
- No Short Circuit issues identified
- No Voltage issues identified in the studies performed

Anticipated future performance of the SMECO transmission system in PJM reliability studies: Based on the performance and loadings on SMECO facilities in the year 2020 studies, PJM does not anticipate any reliability criteria violations in the upcoming annual cycle of PJM studies unless a load, generation or topology assumption changes.

**REVISION HISTORY**

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