Tri-State Generation & Transmission Association, Inc.

Transmission Reliability Margin Implementation Document (TRMID)

June 2011

Purpose

The Transmission Reliability Margin Implementation Document (TRMID) provides for the documentation of required information as specified in the NERC Standard MOD-008-1.

Definitions

Transmission Reliability Margin (TRM) is the amount of transmission transfer capability necessary to provide reasonable assurance that the interconnected transmission network will be secure. TRM accounts for the inherent uncertainty in system conditions and the need for operating flexibility to ensure reliable system operation as system conditions change.

Requirements

NERC Standard MOD-008-1, Transmission Reliability Margin Calculation Methodology, requires that each Transmission Operator prepare and keep current a TRM Implementation Document (TRMID).

NAESB OASIS Standard 001-13.1.5 requires that a TRM Implementation Document (TRMID) be posted under the ATC Information Link on the Transmission Provider's OASIS.

Implementation

1.0 Identification of Paths Allocated TRM. In FERC Order 890, FERC notes the acceptable uses of TRM which includes the use for automatic sharing of reserves. The allocation of TRM is further supported in MOD-008-1 as stated in R2 of the standard. The Transmission Provider has allocated TRM for the use of automatic sharing of reserves and may change its policy on the use of TRM from time to time.

1.1 To accommodate transmission service requirements for reserve sharing requirements the Transmission Provider has allocated TRM on the paths and in the amounts shown in Table 1-A, below. The Transmission Provider does not allocate capacity for TRM for any of the other uses of the transmission system as allowed in MOD-008-1, R1.1.

Table 1-A: List of TSGT Paths with TRM Allocated		
POR	**POD**	**TRM MW**
LRS	LRS230	44
LRS230	SGW	44
STY	LRS	44
NYUM	STY	44
BURL	WRAY	44
WRAY	NYUM	44
PEGS	AMBROSIA230	40
FOURCORNE345	SJ345	60
PYGS	HIDALGO115	80

TSGT is allocating TRM capacity for the delivery and receipt of reserves associated with the Rocky Mountain Reserve Group (RMRG) and the Southwest Reserve Sharing Group (SRSG).

2.0 Calculation and TRM Allocation Methodology. The Transmission Provider works in conjunction with its Network Integration Transmission Service customers to utilize the sharing matrices utilized by the respective reserve sharing groups to determine the megawatt amounts the customer is to provide in response to a contingency. The customer also determines with which Network Resources the customer will respond with. The response megawatt values, determined by the respective reserve sharing groups, are the values utilized to allocate TRM on the Transmission Provider's system.

2.1 Conditions Under Which the Transmission Provider Uses TRM. The Transmission Provider uses TRM to set aside capacity to deliver reserve obligations of its Network Integration Transmission Service customers. Generally, when a loss of a generation resource, which resides within the reserve sharing group's footprint, occurs the members of the reserve sharing group respond by delivering replacement energy to the member who experienced the loss. TRM is reserved to ensure sufficient transmission capacity exists to deliver the replacement energy requirement to the member experiencing the loss. As a contingency can occur at any time, the Transmission Provider does not release TRM for non-firm use, ensuring its availability for reserve activations.

3.0 TRM Calculation Time Periods. Due to the nature of reserve activations and the inherent inconsistency surrounding events that would trigger an activation, and the need for transmission capacity to be available immediately, this Transmission Provider

does not release TRM for use as non-firm capacity. The calculations for all time periods decrease the available transfer capability (ATC) for both firm and non-firm capacity.

3.1 Scheduling Horizon. A specified number of hours extending past the current hour. For the Transmission Provider, the OASIS Scheduling Horizon is equal to the current hour plus eight (8) hours.

3.2 Operating Horizon. A specified number of hours extending past the end of the Scheduling Horizon. For the Transmission Provider, the OASIS Operating Horizon is equal to the end of the Scheduling Horizon plus 168 hours.

3.3 Planning Horizon. A specified number of days extending past the end of the Operating Horizon. For the Transmission Provider, the OASIS Planning Horizon is equal to the end of the Operating Horizon plus 3650 days.

4.0 Demonstration of No-Double Counting of Contingency Outages When Performing CBM and TRM Calculations. As the Transmission Provider does not allocate for CBM and because the value for CBM is set to zero (0) for all ATC calculation methodologies in all horizons, the Transmission Provider does not include any components of CBM within the TRM capacity allocation.

5.0 Review of TRM Methodology. The Transmission Provider will review its allocation methodology of TRM for reserve sharing groups at least annually (every 12 months), or as conditions warrant a review.

6.0 Dissemination of TRM Allocation Information. The Transmission Provider will disseminate TRM allocation information in accordance with NERC MOD Standard 008-01.

Definitions/List of Acronyms Used in this Document

TSGT – Tri-State Generation and Transmission Association, Inc.

NAESB – North American Energy Standards Board

OASIS – Open Access Same Time Information System

ATC – Available Transfer Capability. A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. It is defined as Total Transfer Capability less Existing Transmission Commitments (including retail customer service), less a Capacity Benefit margin, less a Transmission Reliability Margin, plus Postbacks, plus counterflows.

CBM – Capacity Benefit Margin. The amount of firm transmission transfer capability preserved by the transmission provider for Load-Serving Entities (LSEs), whose loads are located on that Transmission Service Provider's system, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies.

TRM – Transmission Reliability Margin. The amount of transmission transfer capability necessary to provide reasonable assurance that the interconnected transmission network will be secure. TRM accounts for the inherent uncertainty in system conditions and the need for operating flexibility to ensure reliable system operation as system conditions change.