

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

BAL-013-1 – Large Loss of Load Performance Standard Background Document

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RELIABILITY | ACCOUNTABILITY



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Introduction

Since loss of large loss of load occurs and impacts all Balancing Authorities throughout an Interconnection, BAL-013-1 was created to specify recovery actions and associated timeframes. This document provides background on the development and implementation of BAL-013-1, Large Loss of Load Performance. The intent is to explain the rationale and considerations for the requirements and their associated compliance information. ~~The original Standards Authorization Request (SAR) approved by the industry presumes there is presently sufficient Contingency Reserve in all the North American Interconnections. The underlying goal of the SAR was to update the standard to make the measurement process more objective and to provide information to the Balancing Authority or Reserve Sharing Group, such that the parties would better understand the use of Contingency Reserve to balance resources and demand and return Interconnection frequency within defined limits following a Large Loss of Load Event.~~

Background and Rationale by Requirement

Requirement 1

- R1. ~~The~~Each ~~RR~~responsible ~~EE~~entity ~~Balancing Authority or Reserve Sharing Group~~ shall correct its ACE following each Large Loss of Load Event within 15 ~~clock~~ minutes of the ~~initiation of that~~ event resulting from an amount of lost load equal to the lesser of the Responsible Entity's Most Severe Single Contingency or 500 MW, as follows:
- If the ~~RR~~responsible ~~EE~~entity's ~~Balancing Authority or Reserve Sharing Group's~~ ACE value just prior to a Large Loss of Load Event is negative or equal to zero, the ~~RR~~responsible ~~EE~~entity ~~Balancing Authority or Reserve Sharing Group~~ shall return its ACE to zero.
 - If the ~~RR~~responsible ~~EE~~entity's ~~Balancing Authority or Reserve Sharing Group's~~ ACE value just prior to a Large Loss of Load Event is positive, the ~~RR~~responsible ~~EE~~entity ~~Balancing Authority or Reserve Sharing Group~~ shall return its ACE to its pre-event value.

Background and Rationale

Requirement R1 is intended to provide the information needed to determine if the BA or Reserve Sharing Group corrected its ACE in recovering from a Large Loss of Load Event, and if they did so within the 15-minute time period allowed by the requirement.

The SDT has mirrored the reporting threshold from BAL-002-2. This will allow for consistent monitoring of system performance since a single threshold will be used for all Contingencies.

The 15 minutes for recovery was chosen to be consistent with the 15-minute Disturbance recovery period for BAL-002, Loss of Resources. The 15-minute recovery period is one that has long been used in BAL-002, and goes back to initial NERC policy.

As the load lost in an event may not all occur at the same time, a threshold of load loss for determining the event start time is needed. To provide system operators with a fair opportunity to determine if the load loss is large enough to fall under the scope of BAL-013, the event start time has been chosen to be the point in time at which the event resulting from an amount of lost load equals the lesser of the Responsible Entity's Most Severe Single Contingency or 500 MW.