

**Facility Rating Methodology and Communication**

**For**

**Associated Electric Cooperative, Inc.**

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## **AECI's Facility Rating Methodology And Communication.**

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## I. Purpose / Introduction

The purpose of this document is to ensure that Facility Ratings used in the planning and operation of AECI's Bulk Electrical System (BES) are determined based on an established methodology.

This rating criteria applies to AECI's generating facilities, and discusses the methodology used to determine the maximum rating of each major element within the generating facility. This rating criteria specifically addresses generators, iso-phase bus systems, and generator step-up transformers (GSU).

Emergency ratings for subject generating equipment shall be evaluated on a case-by-case basis. Any operation of AECI generating equipment beyond its manufacturer's normal, continuous rating shall be reviewed and approved by Power Production engineering and management.

It is recognized that abnormal system or ambient conditions, or abnormal generating equipment operating issues may temporarily affect facility ratings. AECI generating facility ratings due to these abnormal conditions will be reviewed and determined on a case-by-case basis by Power Production engineering and management.

### I.1 Limiting Factor

The maximum rating of an AECI generating facility is limited by the maximum rating of one of the BES components within the generating facility, or one of the components integral to the generating system (i.e. turbine).

## II. Facility Rating Methodology

### II.1 Generators

Maximum generator ratings shall be based on the generator manufacturer's capability curves. Consideration shall be given to the fact that, depending on transmission system conditions, many times the overexcited and underexcited regions of the generator's capability curves are not fully achievable.

### II.2 Iso-Phase Bus Systems

Maximum iso-phase bus ratings shall be based on the iso-phase bus manufacturer's continuous current rating, with applicable installed cooling equipment in service.

### II.3 Generator Step-Up Transformers

Maximum GSU ratings shall be based on the transformer manufacturer's continuous nameplate rating with all installed cooling equipment in service, and with a 65 degrees C temperature rise.

### III. Communication of Facility Ratings Methodology

This document shall be posted on the AECI Public OASIS domain for review by the Reliability Coordinator, Transmission Operators, Transmission Planners and Planning Authorities that have responsibilities within the AECI BES area. It is also available on the AECI server for all departments to review.

### IV. Handling of Comments from Other Entities

AECI will provide a written response within 45 days to any written comments from a Reliability Coordinator, Transmission Operator, Transmission Planner or Planning Authority associated with this document.