ATIS-0600015.04.2017

Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting DC Power Plant – Rectifier Requirements

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Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting DC Power Plant – Rectifier Requirements

Alliance for Telecommunications Industry Solutions

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American National Standards Institute, Inc.

Abstract

This document defines how to measure the Telecommunication Energy Efficiency Ratio (TEER) of Direct Current (DC) Power Plant Rectifiers. The standard also provides requirements for how equipment vendors shall respond to a TEER request based on a specific application description by making use of relevant data from internal and independent test reports.

Foreword

The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Sustainability in Telecommunications and Electrical Protection (STEP) – formerly T1E1 – develops and recommends standards and technical reports. The standards and technical reports are related to power systems, electrical and physical protection for the exchange and interexchange carrier networks, and interfaces associated with user access to telecommunications networks.

ANSI guidelines specify two categories of requirements: mandatory and recommendation. The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, STEP, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of initiation or issuance of the letter ballot for this document, STEP, which was responsible for its development, had the following leadership:

E. Gallo STEP Chair (Ericsson)

J. Fuller, STEP Vice Chair (AT&T)

L. Rabinovich, STEP TEE Chair (Cisco)

S. Martin, STEP TEE Vice Chair (AT&T)

The Telecommunications Energy Efficiency (TEE) Subcommittee was responsible for the development of this document.

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1 Scope, Purpose, & Application

1.1 Scope

This document provides the methodology to be used by vendors and third party independent laboratories in the formation of a Telecommunications Energy Efficiency Ratio (TEER). The requirements and definitions in this document are for Direct Current (DC) power plant rectifiers that are deployed in the telecommunications industry. This standard represents one part of the larger ATIS suite of standards concerning Telecommunications Energy Efficiency (ATIS-0600015). This standard (ATIS-0600015.04) specifically addresses DC Power plant rectifiers and is to be used in conjunction with ATIS-0600015.

1.2 Purpose

This document provides a set of definitions, requirements, and guidelines for calculating the Telecommunications Energy Efficiency Ratio (TEER) of DC Power plant rectifier products. The test methodology employed to verify the power consumption, used as part the TEER calculation, is specific to power equipment and builds on ATIS-0600015.

1.3 Application

This document (and supporting documentation) is intended to be used by communication network operators, equipment manufacturers, suppliers, and test laboratories as a standard method for determining the energy efficiency of DC Power plant rectifiers. By comparing the TEER reports of various products, a communications network operator can select equipment that meets their energy efficiency target.

2 References

2.1 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this ATIS Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this ATIS Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ATIS-0600015, *Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting – General Requirements*.[1]

ATIS-0600315, *Voltage Levels for DC Powered Equipment Used in the Telecommunications Environment*.[1]

[1] This document is available from the Alliance for Telecommunications Industry Solutions (ATIS) at: <https://www.atis.org/docstore/default.aspx>.