ATIS-0600015.10.2022

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

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ATIS-0600015.10.2022, *Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting DC Power Plant – Inverter Requirements*

Is an American National Standard developed by the **Telecommunications Energy Efficiency (TEE)** Subcommittee under the **ATIS Sustainability in Telecom: Energy and Protection Committee (STEP)**.

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American National Standard for Telecommunications

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

Alliance for Telecommunications Industry Solutions

Approved January 21, 2022

Abstract

This document defines how to measure the Telecommunication Energy Efficiency Ratio (TEER) of Telecom Inverters for use in DC Power Plant configurations. The standard will also provide 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 providers, customers, and manufacturers. The Sustainability in Telecom: Energy and Protection (STEP) Committee – formerly the Network Interface, Power, and Protection Committee (NIPP) – engages industry expertise to develop standards and technical reports for telecommunications equipment and environments in the areas of energy efficiency, environmental impacts, power, and protection. The work products of STEP enable vendors, operators, and their customers to deploy and operate reliable, environmentally sustainable, energy efficient communications technologies. STEP is committed to proactive engagement with national, regional, and international standards development organizations and forums that share its scope of work.

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 consensus on this document, STEP, which was responsible for its development, had the following leadership:

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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. The requirements and definitions in this document are for DC power plant Inverters that are deployed in the telecommunications industry. This supplemental standard represents one part of the larger ATIS suite of standards concerning Telecommunications Energy Efficiency (ATIS-0600015.10). This supplemental standard (ATIS-0600015.10) specifically addresses DC Power plant Inverters and is to be used in conjunction with ATIS-0600015 [Ref 1].

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 Inverter products. The test methodology employed to verify the power consumption, used as part the TEER calculation, is specific to power equipment and therefore differs from ATIS-0600015 [Ref 1].

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 Inverters. By comparing the TEER reports of various products, a communications network operator can select equipment that meets their energy efficiency target.

2 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.

2.1 Normative

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

[Ref 2] 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, 1200 G Street N.W., Suite 500, Washington, DC 20005 at: < http://www.atis.org >.