



ATIS-0600015.2018 (R2023)

Energy Efficiency for Telecommunication Equipment:
Methodology for Measurement and Reporting –
General Requirements

AMERICAN NATIONAL STANDARD FOR TELECOMMUNICATIONS



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ATIS-0600015.2018(R2023), *Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting – General Requirements*

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

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ATIS-0600015.2018(R2023)

(Revision of ATIS-0600015.2013)

American National Standard for Telecommunications

**Energy Efficiency for Telecommunication Equipment:
Methodology for Measurement and Reporting –
General Requirements**

Alliance for Telecommunications Industry Solutions

Approved May 2018

American National Standards Institute, Inc.

Abstract

This document provides the methodology to be used by vendors and third-party test laboratories in the formation of a telecommunication's energy efficiency ratio (TEER). This document is the base standard for determining telecommunication's energy efficiency.

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 Telecommunications 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 it approved this document, STEP, which is responsible for the development of this Standard, 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.

Table of Contents

1	Scope, Purpose, & Application.....	1
1.1	Scope.....	1
1.2	Purpose	1
1.3	Application	1
2	References	2
2.1	Normative References	2
2.2	Informative References.....	2
3	Definitions, Acronyms, & Abbreviations	2
3.1	Definitions	2
3.2	Acronyms & Abbreviations.....	3
4	Equipment Classification.....	3
4.1	Equipment Type.....	3
4.1.1	Core Equipment	3
4.1.2	Transport Equipment	3
4.1.3	Access Equipment	3
4.1.4	Customer Premise Equipment (CPE).....	3
4.1.5	Power Equipment.....	3
5	Measurements	4
5.1	Energy and Power Measurements	4
5.2	Environmental Consideration.....	4
5.2.1	Temperature	4
5.2.2	Humidity	4
5.2.3	Barometric Pressure	4
5.2.4	Voltage.....	4
5.3	Power Measurement Equipment	5
5.4	Power Source	5
5.5	EUT Stabilization	5
5.6	Minimum Measurement Duration	5
5.7	Test Configuration	5
5.8	Energy Measurements.....	6
5.8.1	Weighted Rating	6
5.9	Non-Modular System	6
5.10	Modular System.....	6
6	Telecommunications Energy Efficiency Ratio (TEER).....	6
7	Reporting	8
A	Telecommunications Energy Efficiency Ratio Reporting Form Example.....	10

American National Standard for Telecommunications –

Energy Efficiency for Telecommunication Equipment: Methodology for Measurement and Reporting – General Requirements

1 Scope, Purpose, & Application

1.1 Scope

This document provides the methodology to be used by vendors and third-party test laboratories in the formation of a telecommunications energy efficiency ratio (TEER). This document is the base standard for determining telecommunications energy efficiency. Supplemental standards to this general document, for specific types of equipment, will provide details on configurations, TEER formulas, and other pertinent details for formulating the TEER value. This document is considered applicable to wire-line or wireless network equipment to be deployed in controlled environments. This standard does not apply to network equipment that is designed to be solely utilized in an outside plant cabinet/enclosure.

Outside plant equipment is considered outside the scope of this standard at this time and may be added in a later revision to this standard.

The intent of this document, in conjunction with the associated supporting supplemental standards, is to create a uniform method for measuring telecommunication equipment energy consumption (power) as well as establishing efficiency metrics and reporting methods.

The concept of supplemental standards will allow for the development of individual standards to address specific classes of equipment.

- This allows the set of standards (General Requirements plus supplemental) to address a wide array of equipment.
- This method will permit the development of new supplemental standards to address new technologies as the need arises.
- For example, ATIS-0600015.01 is the supplemental standard for Server Requirements and ATIS-0600015.02 is the supplemental standard for Transport Requirements.

1.2 Purpose

This document provides a uniform methodology to measure equipment power and define energy efficiency ratings for telecommunication equipment. This document serves as the base standard for all supplemental ATIS-0600015.xx standards.

1.3 Application

This standard is intended to standardize the test methodology, environmental factors, and utilization of the equipment for measuring the energy used in the formation of the telecommunications energy efficiency ratio. The specified procedures are intended to be applied in a controlled laboratory environment. Testing is to be performed by a third-party test laboratory. Vendor supplied supplemental data can also be submitted to account for different configurations than those tested by the third-party test laboratory.