NTT

NTT Group

Energy Efficiency Guidelines

Version 9

April 2021 revision

Revision History

Version	Enacted/revised	Date	Changes
Version 1.0	Initial version	Apr. 2010	
Version 1.1	Revised	Dec. 2010	Changes to reflect version 1.1 revision of the *ICT Ecology Guidelines*
Version 2	Revised	Apr. 2011	Changes to reflect version 2 revision of the *ICT Ecology Guidelines*
Version 2.1	Revised	Sep.2011	Changes to reflect version 2.1 revision of the *ICT Ecology Guidelines*
Version 3	Revised	Feb.2012	Changes to reflect version 3 revision of the *ICT Ecology Guidelines*
Version 4	Revised	Apr.2013	Changes to reflect version 4 revision of the *ICT Ecology Guidelines* Add 5.3 Functional requirements related to energy efficiency
Version 4.1	Revised	Dec.2013	Changes to reflect the *Guidelines for Green Procurements* Change of contact
Version 5	Revised	Apr.2014	Changes to reflect version 5 revision of the *ICT Ecology Guidelines*
Version 6	Revised	Apr.2015	Changes to reflect version 6 revision of the *ICT Ecology Guidelines*
Version 7	Revised	Apr.2016	Changes to reflect version 7 revision of the *ICT Ecology Guidelines*
Version 8	Revised	Apr.2018	Changes to reflect version 8 revision of the *ICT Ecology Guidelines*
Version 8.1	Revised	Apr.2020	Changes to reflect version 8.2 revision of the *ICT Ecology Guidelines* Change of contact
Version 9	Revised	Apr 2021	Changes to reflect version 9 revision of the ICT Ecology Guidelines

1. Background

In keeping with its commitment to reduce CO2 emissions, NTT Group gives careful consideration to the energy efficiency of ICT equipment that it develops and procures for use by the group along with other standard criteria of functionality, performance, and cost.

This Guideline represents NTT Group's basic energy efficiency policy when developing or procuring ICT equipment. Note that the various companies making up the NTT Group indicate specific requirement items and show how they evaluate energy efficiency in their own separate technical specification documents.

2. Guideline Framework

This Guideline is closely related to the *NTT Guidelines for Green Procurement* that offer direction for reducing environmental load with respect to procurement and to the *NTT Group Green R&D Guidelines* that define procedures relating to research and development for reducing environmental load. These latter two guidelines make explicit reference to the energy efficiency related provisions of this Guideline.

3. Scope

Applies to new development and procurement of ICT equipment by the NTT Group.

4. Definitions

(1) ICT Ecology Guideline Council

The ICT Ecology Guideline Council was organized in June 2009 by five industry organizations—Telecommunications Carriers Association (TCA), Telecom Services Association (TELESA), Japan Internet Providers Association (JAIPA), Communications and Information Network Association of Japan (CIAJ), and ASP-SaaS-Cloud Consortium (ASPIC)— for the purpose of developing and publishing the *ICT Ecology Guidelines*.

(2) ICT Ecology Guidelines

The *ICT Ecology Guidelines* were developed by the ICT Ecology Guideline Council (1) to provide an "assessment standard" for aiding in the formulation of "procurement standards" by telecommunications service providers for equipment and services with emphasis on lowering CO2 emissions, and (2) to provide a self-assessment checklist to help make the emissions-reduction efforts of telecommunications service providers more visible.

(3) Group targets for each type of equipment

These are energy efficiency index targets established for each type of equipment that is developed or procured by the NTT Group, and are used in common throughout the NTT Group.

(4) Normative reference

Assessment standards defined by the *ICT Ecology Guidelines* for assessing the energy efficiency of ICT equipment.

(5) Star rating

An assessment scale of five ranks representing the rate of reduction in energy consumption versus the normative reference as set forth in the ICT Ecology Guidelines. Ranks are indicated by the number of starts (★). The greater the number of stars, the greater the energy efficiency.

(6) Environmental value added

Environmental value added is the economic value created by eco-efficiency above a benchmark level. The additional value added is converted to carbon offsets, green certificates, or tradable permits or credits.

5. Guideline

5.1 Development and Procurement of ICT Equipment

In the development and procurement of ICT equipment by NTT Group companies, efforts are made to develop and procure equipment having the highest ranking (i.e., most stars) based on the normative reference in the *ICT Ecology Guidelines*. In addition, efforts are also made to develop and procure ICT equipment having the ability to help reducing the overall power consumption of communication equipment rooms and data centers. Equipment targeted for development or procurement is comprehensively evaluated in terms of cost, environmental value added, and other energy-related factors when running air conditioning, power supplies, or other systems, in addition to the conventional criteria of functionality, performance, and product cost.

5.2 Group Targets for Each Type of Equipment

Target values for each type of equipment are the normative references specified in the *ICT Ecology Guidelines* (version 9). Note that older equipment dating from before the "approximate date for achieving normative references" are not restricted by these target values.

5.3 Functional requirements related to energy efficiency

5.3.1 ICT equipment needs to have an interface to collect its data (inlet temperature, input power, etc.) and control its power state (shutdown, active, etc.) in order to achieve energy saving management for communication equipment rooms and data centers. For specific requirements, see Annex D and Appendix V in ITU-T Recommendation L.1300.

5.3.2 The airflow direction of ICT equipment needs to be front-to-rear in order to increase the

cooling efficiency of communication equipment rooms and data centers. If the airflow direction of the equipment is not front-to-rear, it is necessary to install a plate or duct to correct the airflow direction of the equipment. For specific requirements, see Annex C and Appendix IV in ITU-T Recommendation L.1300.

6. Other

This Guideline is subject to revision as circumstances or new insights require.

This Guideline has been adopted by the following eight NTT Group companies. We continue to encourage other group companies to also adopt the Guideline.

・ Nippon Telegraph and Telephone Corporation
・ Nippon Telegraph and Telephone East Corporation
・ Nippon Telegraph and Telephone West Corporation
・ NTT Communications Corporation
・ NTT DoCoMo, Inc.
・ NTT Data Corporation
・ NTT Facilities, Inc.
・ NTT Comware Corporation

This English version is an unofficial translation, for reference only.

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