Ministry of Knowledge Economy
Notification No. 2011-23

e-Standby Power Program

Regulation on Standby Power Reduction Program

2011. 2. 16

Ministry of Knowledge Economy (MKE)

Korea Energy Management Corporation (KEMCO)

Remark : This English version is only for reference, it is not effective.

Ministry of Knowledge Economy (MKE)
Notification No. 2011-23

In accordance with the provisions of Article 18 and 19 of the Rational Energy Utilization Act, the e-Standby Program Application Regulation (Ministry of Knowledge Economy Notification No. 2010-49) is amended as follows:

February 16th, 2011
Minister of Ministry of Knowledge Economy

Regulation on Standby Power Reduction Program

Amended,	1999.1.6	MOCIE Notification	No. 1998-136
Amended,	2001.3.16	MOCIE Notification	No. 2001- 33
Amended,	2002.9.16	MOCIE Notification	No. 2002- 87
Amended,	2004.1.20	MOCIE Notification	No. 2004- 7
Amended,	2005.4.21	MOCIE Notification	No. 2005- 45
Amended,	2006.4.17	MOCIE Notification	No. 2006- 39
Amended,	2007.2.9	MOCIE Notification	No. 2007- 12
Amended,	2008.3.13	MKE Notification	No. 2008- 4
Amended,	2008.8.28	MKE Notification	No. 2008-116
Amended,	2010.2.25	MKE Notification	No. 2010- 49
Amended,	2011.2.16	MKE Notification	No. 2011- 23

Article 1 (Objective)

This regulation aims to embody necessary provisions related to reduction of standby power mandated by the Rational Energy Utilization Act, related Enforcement Ordinance and regulations relative to the application of the Act.

Article 2 (Definitions)

1. Standby Power: Power consumption, when connected to the external power supply, while not performing its primary functions or while awaiting instructions to provide full services.

2. e-Standby Power Program Target Products: Energy using products designated by this regulation where the need for reduction of standby power has been widely acknowledged.

3. Standby Power Reduction Standard: Refers to standby power reductions standard for “e-Standby Power Programs Target Products” or “e-Standby Power Warning Label Target Products”

4. Products with High Standby Reduction Potentials: Products among e-Standby Power Program Target Products with superior standby power reduction potentials and compatible with Standby Power Reduction Standards.

5. e-Standby Power Warning Label Target Products: Products among e-Standby Power Program Target Products, prescribed in the regulation, which receive special attention in achieving high energy efficiency through standby power reduction.

6. e-Standby Power Warning Labeled Products: Products among e-Standby Power Program Target Products with e-Standby Power Warning label because they fall below the Standby Power Reduction Standards.

7. Standby Power Testing Institute: Refers to organizations approved by the Minister of Knowledge Economy to measure standby power of e-Standby Power Program Target Products and e-Standby Power Warning Label Target Products.

8. MKE Approved Self Testing Entity: Refers to manufacturers or importers of e-Standby Power Program Target Products and e-Standby Power Warning Label Target Products where they are approved by the Minister of Knowledge Economy to measure and self report the standby power measurements by substituting reports from designated testing institutes.

9. Test Report: Results of standby power measurement tests conducted and issued by Standby Power Testing Institutes or MKE Approved Self Testing Entities in accordance with the provisions of this regulation.

10. Model: Refers to unique designation of each products based on their functional differences by the manufacturers or importers of e-Standby Power Program Target Products and e-Standby Power Warning Label Target Products.

Article 3 (Designation of e-Standby Power Program Target Products)

① The list of e-Standby Power Program Target Products designated in this regulation are shown below:

1. Computers
2. Monitors

3. Printers
4. Fax Machine
5. Copiers
6. Scanners
7. Multifunctional Devices
8. Energy-Saving & Controlling Devices
9. Televisions
10. VCR
11. Home Audio Products
12. DVD Players
13. Radio Cassette Players
14. Microwave Ovens
15. Set-top Boxes
16. Door phones
17. Cordless/Corded Phones
18. Bidet
19. Modem
20. Home Gateway
21. Hand Dryers
22. Servers

② The e-Standby Power Program Target Products designated in paragraph ① and its application scope are shown in Annex I.

③ The e-Standby Power Program Target Products designated in paragraph ① and respective Standby Power Reduction Standard for each products are shown in Annex II.

④ The e-Standby Power Program Target Products designated in paragraph ① and respective measurement methods of standby power for each products are shown in Annex III.

⑤ The e-Standby Power Program Target Products designated in paragraph ① and respective Testing Institutes designated for each products is shown in Annex IV.

⑥ Test reports issued by Standby Power Testing Institutes or MKE Approved Self Testing Entity should specify model, product specifications, testing results, average values and final decision.

⑦ Final decision of the test report mentioned in paragraph ⑥ should be determined

based on the conformity of average values of each selected testing items to the Standby Power Reduction Standard listed in Annex II. All selected testing items' measurements should be within the allowable tolerance level in order to acquire satisfactory test results.

Article 4 (Designation of e-Standby Power Warning Label Target Products)

① The list of e-Standby Power Program Target Products designated in this regulation are shown below:

1. Computers
2. Monitors
3. Printers
4. Multifunctional Devices
5. Televisions
6. Set-top Boxes
7. Microwave Ovens
8. Fax Machine
9. Copiers
10. Scanners
11. VCR
12. Home Audio Products
13. DVD Players
14. Radio Cassette Players
15. Door phones
16. Cordless/Corded Phones
17. Bidet
18. Modem
19. Home Gateway

② The scope, Standby Power Reduction Standard and standby power measurement methodology of e-Standby Power Program Target Products follow the provisions in Article 3 paragraph ② ~ ⑦

③ The display method of warning label of e-Standby Power Program Target Products is shown in Annex V.

Article 5 (Reporting of e-Standby Power Warning Label Target Products)

① The manufacturers and importers of e-Standby Power Program Target Products should have their products tested by the Standby Power Testing Institutes. However,

MKE Approved Self Testing Entity could waive this requirement by performing self testing.

② In accordance with paragraph ①, the manufacturers and importers of e-Standby Power Program Target Products should submit the test report(Form A, along with issued test results via internet) to the President of Korea Energy Management Corporation(hereinafter referred to as the "Corporation President") within 60 days from the notification of the test results from the Standby Power Testing Institutes or the completion of the self testing. When it is apparent that the products do not meet the requirements of Standby Power Reduction Standards, the submission of the Standby Power Reporting Form (Form A), without test reports, is sufficient for the designation of e-Standby Power Warning Label.

③ When a review request is registered in accordance with paragraph ② the Corporation President should review the request and immediately notify the manufacturers and importers whether their products are classified as e-Standby Power Program Target Products. At the same time, the results should be publicly available on the internet homepage of Korea Energy Management Corporation.
④ The manufacturers and importers of e-Standby Power Program Target Products should satisfy the standby power measuring and reporting requirements in paragraph ① and ② prior to engaging in any market activities.

⑤ When the manufacturers and importers of e-Standby Power Program Target Products carry out standby power measuring and reporting requirements in paragraph ① and ②, in principle, the tests should be performed on each models for sale. However, in the case of addition or deletion of minor functions or simple change in color that do not affect the functions of standby power, after reporting in accordance with paragraph ②, the manufacturers and importers of e-Standby Power Program Target Products could skip the measuring requirement in paragraph ① and directly proceed to reporting in paragraph ②.

⑥ If significant changes(including cancellation of models due to discontinuance of production, import or sales) occur after reporting of standby power in accordance with paragraph ②, the manufacturers and importers of e-Standby Power Program Target Products should resubmit the test report(Form A and Form B in case of cancellation of a model) to the Corporation President within 60 days. In this case, standby power measurements should be retaken in accordance with paragraph ①.

Article 6 (Labeling e-Standby Power Warning)

① If the products in question do not meet the requirements of Standby Power Reduction Standard, the manufacturers and importers of e-Standby Power Program Target Products should display e-Standby Power Warning Label in accordance with Annex V.

② The displaying of e-Standby Power Warning Label in paragraph ① references manufacturing date in accordance with Article 5 paragraph ①.

Article 7 (Reporting of Products with High Standby Power Reduction Potentials)

① In order to qualify as Products with High Standby Power Reduction Potentials, the manufacturers and importers should attain test reports from the Standby Power Testing Institutes that show the products meet the requirements of Standby Power Reduction Standard in Article 3 paragraph ③. However, MKE Approved Self Testing Entity could waive this requirement by performing self testing.
② If manufacturers and importers want to qualify their products as Products with High Standby Power Reduction Potentials in accordance with paragraph ① , the manufacturers and importers should submit the test report(Form A, along with issued test results via internet) to the Corporation President within 60 days from the notification of the test results from the Standby Power Testing Institutes or the completion of the self testing.

③ If Test Reports submitted by the manufacturers and importers of e-Standby Power Program Target Products conform to the Standby Power Reduction Standard, they are perceived as reports made in accordance with paragraph ②.

④ If reports are submitted in accordance with paragraph ② and ③, the Corporation President should review the request and immediately notify the manufacturers and importers whether their products are qualified as Products with High Standby Power Reduction Potentials. At the same time, the results should be publicly available on the internet homepage of Korea Energy Management Corporation.

⑤ The manufacturers and importers who wish to qualify their products as Products with High Standby Power Reduction Potentials should satisfy the standby power measuring and reporting requirements in paragraph ① and ② prior to engaging in any market activities.

⑥ When the manufacturers and importers, who wish to qualify their products as Products with High Standby Power Reduction Potentials, carry out standby power measuring and reporting requirements in paragraph ① and ②, in principle, the tests

should be performed on each models for sale. However, in the case of addition or deletion of minor functions or simple change in color that do not affect the functions of standby power, after reporting in accordance with paragraph ②, the manufacturers and importers of e-Standby Power Program Target Products could skip the measuring requirement in paragraph ① and directly proceed to reporting in paragraph ②.

⑦ If significant changes(including cancellation of models due to discontinuance of production, import or sales) occur after reporting of standby power in accordance with paragraph ②, the manufacturers and importers of Products with High Standby Power Reduction Potentials should resubmit the test report(Form A and Form B in case of cancellation of a model) to the Corporation President within 60 days. In this case, standby power measurements should be retaken in accordance with paragraph ①.

Article 8 (Labeling Products with High Standby Power Reduction Potentials)

① Labeling method of Products with High Standby Power Reduction Potentials is shown in Annex VI.

② The manufacturers and importers, who wish to qualify their products as Products with High Standby Power Reduction Potentials could, for those products registered as Products with High Standby Power Reduction Potentials by Corporation President in accordance with Article 7 paragraph ④, label the products as Products with High Standby Power Reduction Potentials and advertise through pamphlets, advertising medium, and prints for miscellaneous.

③ The displaying of e-Standby Power Warning Label in paragraph ① references manufacturing date in accordance with Article 7 paragraph ①.

Article 9 (Post management)

① In accordance with the provisions of Article 18 and 19 of the Rational Energy Utilization Act and Article 33 paragraph 2(5)~(7) of its enforcement regulation, the Corporation President could make inspection of warehouses, offices and factories of manufacturers and importers in order to check the compliancy of e-Standby Power Program Target Products and conformity of Products with High Standby Power Reduction Potentials.

② In accordance with the provisions of Article 18 and 19 of the Rational Energy Utilization Act and Article 33 paragraph 2(5)~(7) of its enforcement regulation, the Corporation President could request testing services to Standby Power Testing

Institutes by taking sample products from warehouses, sales offices and factories of manufacturers and importers in order to check whether the products satisfy the Standby Power Reduction Standard specified in Annex II.

③ When inspection is initiated in accordance with paragraph ②, the Corporation President bears the costs associated with sample products and testing. When inspection is conducted in accordance with paragraph ①, manufacturers and importers' testing equipments and samples may be used to conduct the product inspection.

④ When standby power measurements are taken in accordance with paragraph ②, the measurement methods are conducted in accordance with Annex III.

Article 10 (Corrective Actions)

① After the implementation of post management in accordance with Article 9, the Corporation President shall make recommendations to the Minister of Knowledge Economy to enforce necessary corrective actions if any one of the findings below occurs:

1. Reporting of e-Standby Power Warning Label Target Products in Article 5 is unsatisfactory.
2. Labeling of e-Standby Power Warning Labels in Article 6 is unsatisfactory.
3. Products registered as Products with High Standby Power Reduction Potentials in accordance with Article 7 and 8 do not conform to Standby Power Reduction Standard specified in Annex II.
4. Standby power measurements or reporting in Article 7 is unsatisfactory or products are falsely registered as Products with High Standby Power Reduction Potentials

② The Corporation President shall, prior to taking measures as prescribed in paragraph ①, extend opportunities to the relevant manufacturers or importers to express their opinions. If relevant manufacturers or importers fail to express their opinion within a specified period, it is perceived that they have acknowledged the violations brought upon them.

③ After hearing relevant manufacturers or importers' opinions in pursuant of paragraph ②, it is decided that their opinions are justifiable, the manufacturers or importers may carry out the product inspection one more time in accordance with Article 9 paragraph ②. In this case, the Corporation conducts the sample collection.

④ When the Minister of Knowledge Economy is requested by the Corporation President to enforce necessary corrective actions in accordance with paragraph ①, the Minister could enforce manufacturers or importers to take relevant corrective actions within 6 months for following items below. Item 2 is limited to e-Standby Power Warning Label Target Products.

1. Removal of Products with High Standby Power Reduction Potentials logo or reporting standby power measurements
2. Displaying e-Standby Power Warning Label(Includes reporting standby power measurements if not reported)

⑤ The Minister of Knowledge Economy could publicly announce the manufacturers or importers who fail to comply with corrective actions enforced in paragraph ①

Article 11 (Additional Designation of Standby Power Testing Institutes)

① In order to be designated as Standby Power Testing Institute, at least one of the following requirements below has to be met and the application (Form #3, Application for Designation of Standby Power Testing Institute) should be submitted to the Minister of Knowledge Economy.

1. National testing and research institutes
2. Special research institutes in Article 2 of "Special Research Development Act"
3. Designated testing and research institutes under Article 23 of "National Standard Fundamental Act"
4. Organizations approved by the Minister of Knowledge Economy to have testing capabilities equivalent to institutes in #1 and #2 above.

② Applicants submitting application for designation of standby power testing institutes, should have testing equipments and professional human resources specified in Annex VII.

③ When the application for designation of standby power testing institute is submitted to the Minister of Knowledge Economy in accordance with paragraph ①, the Minister could have the Corporation President to inspect the applying organization's testing capabilities.

④ After reviewing the application submitted for designation of standby power testing institutes and the application conforms to the provisions of paragraph ①~ ③, the Minister of Knowledge Economy should approve the application and designate the

organization as Standby Power Testing Institute. The Minister of Knowledge Economy should notify the designation results to the applicant and the Corporation President.

Article 12 (Approval of Self Test Report)

① Applicants conducting self test to measure standby power of e-Standby Power Program Target Products or e-Standby Power Warning Label Target Products should complete and submit the Self Test Report for Standby Power Warning Label Target Products (Form #4) to the Minister of Knowledge Economy. Applicants could apply for approval by each product within the establishment.

② Applicants conducting self test to measure standby power of e-Standby Power Program Target Products or e-Standby Power Warning Label Target Products, should have testing equipments and professional human resources specified in Annex VIII.

③ When the application for self testing of standby power is submitted to the Minister of Knowledge Economy in accordance with paragraph ①, the Minister could have the Corporation President to inspect the applying organization's testing capabilities.

④ After reviewing the application for self testing of standby power and the application conforms to the provisions of paragraph ② and ③, the Minister of Knowledge Economy should approve the application. The Minister of Knowledge Economy should notify the designation results to the applicant and the Corporation President.

Article 13 (Cancelling the Designation of Standby Power Testing Institute)

① The Minister of Knowledge Economy could cancel the designation of Standby Power Testing Institute or suspend the designation for 6 months for the following reasons below:

1. Designation attained falsely or unlawfully (case for an immediate cancellation)
2. Operation conducted during the suspension period (case for an immediate cancellation)
3. Refuse to perform or delay testing operation without any valid reasons
4. Test operation performed in violation of Article 3 paragraph ④ or Article 4 paragraph ②
5. Violation of standard for designation of Standby Power Testing Institutes in Article 11 paragraph ① ~ ②

② The Minister of Knowledge Economy could cancel or suspend the approval of self

testing institutes for 6 months for the following reasons below:

1. Approval attained falsely or unlawfully (case for an immediate cancellation)
2. Self testing operation conducted during the suspension period (case for an immediate cancellation)
3. Test operation performed in violation of Article 3 paragraph ④ or Article 4 paragraph ② (case for suspension)
4. Insufficient testing equipments and professional human resources specified in Annex VIII (case for suspension)

③ The Minister of Knowledge Economy could have the Corporation President to inspect the self testing institutes' testing capabilities in accordance with paragraph ① and ②. In due process, the self testing institutes should provide full cooperation.

④ The Corporation President shall, prior to taking measures as prescribed in paragraph ① (cancellation of designation status) and ② (cancellation of approval status), extend opportunities to the head of Standby Power Testing Institutes or self testing institutes. If Standby Power Testing Institutes or self testing institutes fail to express their opinion within a specified period, it is perceived that they have acknowledged the violations brought upon them.

⑤ In the case of cancellation of designation status according to paragraph ① and cancellation of approval status in paragraph ②, the Minister of Knowledge Economy should notify the following results to the Corporation President for public announcement.

Article 14 (Reporting)

① The manufacturers and importers of e-Standby Power Program Target Products shall submit documents on production and sales performance in accordance with Form E(via internet) to the Corporation President by the January 31st of every year. The Corporation President should compile the collected documents and submit the analysis report to the Minister of Knowledge Economy.

② Based on the collected and analyzed documents in paragraph ①, the Corporation President could make following recommendations to the Minister of Knowledge Economy:

1. The scope of e-Standby Power Program Target Products,
2. Designation of e-Standby Power Warning Label Target Products

3. Modification of Standby Power Reduction Standard and Measuring Methodologies

③ The Standby Power Testing Institutes or self testing institutes should record and maintain the history of test reports they have issued.

Article 15 (Detailed Operational Regulation)

① The Corporation President may establish detailed regulation for operation in order to efficiently carry out the tasks prescribed in this regulation.

② The Corporation President, when establishing the detailed regulation for operation under paragraph 1, shall present the established regulation to the Minister of Knowledge Economy. In the case of modifying this regulation, the same rule applies.

Supplementary Provisions (1999.1.6)

This regulation shall come into effect as from April 1, 1999. However, participating entities, those that submitted their application prior to the date of enforcement are eligible for issuance of the participation certificate under Article 6 and Testing Institute certificate of designation under Article 11.

Supplementary Provisions (2001.3.16)

Article 1 (Date of Enforcement)

① The regulation matters related to scanners, multifunctional devices, energy-saving & controlling devices, home audio products, DVD products, microwave ovens, battery chargers & lap top computers and TV/DVD combo units, shall come into effect as from July 1, 2001. However, participating entities, those that submitted their application prior to the date of enforcement are eligible for issuance of the participation certificate under Article 6 and Testing Institute certificate of designation under Article 11 and could take necessary measure due to modifications as prescribed in Article 20.

Article 2 (Succession of the status of Testing Institute)

The participating entity designated as the electrical appliance approval testing institute prior to the amendment of this notification shall maintain the status of the Testing

Institute under this regulation by succession.

Supplementary Provisions (2002.9.16)

Article 1 (Date of Enforcement)

① This regulation shall come into effect as from the date of notification.

② The regulation matters related to the set-top boxes shall come into effect as from January 1, 2003. However, participating entities, those that submitted their application prior to the date of enforcement are eligible for issuance of the participation certificate under Article 6 and Testing Institute certificate of designation under Article 11 and could take necessary measure due to modifications as prescribed in Article 20.

Article 2 (Interim Measures)

① The participating entity prior to the amendment of this notification are considered to have participated by this notification.

② The product models that have reported prior to the amendment of this notification are considered to have participated by this notification if they satisfy the new saving ability standards as amended by this notification.

Supplementary Provisions (2004.1.20)

Article 1 (Date of Enforcement)

① This regulation shall come into effect as from the date of notification except that the external power supply and door phone shall come into effect as from November 1, 2004.

Article 2 (Interim Measures)

① The participating entity prior to the amendment of this notification are considered to have participated by this notification.

② The product models that have reported prior to the amendment of this notification are considered to have participated by this notification.
③ The modified regulations of scanners, energy-saving & controlling devices shall come into effect as from February 1, 2004 and that of monitors and copiers shall come

into effect as from November 1, 2004. If the reported product models do not satisfy the modified standards prescribed in this notification, it is considered to have reported in accordance with this notification when the results of the test report under the modified notification are satisfactory.

Supplementary Provisions (2005.4.21)

Article 1 (Date of Enforcement)

① This regulation shall come into effect as from the date of notification except that the phones/cordless phones shall come into effect as from January 1, 2006. However, participating entities, those that submitted their application prior to the date of enforcement are eligible for issuance of the participation certificate under Article 6 and Testing Institute certificate of designation under Article 11 and could take necessary measure due to modifications as prescribed in Article 20.

② The measures taken by post management results under Article 15, related to energy saving logo market inspection, shall come into effect at three months after this notification. The regulation matters related to costs associated with using energy saving logo under Article 18 shall come into effect as from January 1, 2006.

Article 2 (Succession of the status of Testing Institute and the participating entity)

The participating entity designated as the participating entity and the designated Testing Institute prior to the amendment of this notification shall maintain the respective status by succession. However, the status of participating entity, without a single registered product model, shall be cancelled.

Supplementary Provisions (2006.4.17)

This regulation shall come into effect as from the date of notification except that the radio cassette players and bidet shall come into effect as from January 1, 2007. However, participating entities, those that submitted their application prior to the date of enforcement are eligible for issuance of the participation certificate under Article 6 and Testing Institute certificate of designation under Article 11, the issuance of test reports under Article 13 and could take necessary measure due to modifications as prescribed in Article 20.

Supplementary Provisions (2007.2.9)

This regulation shall come into effect as from the date of notification except that the modem shall come into effect as from January 1, 2008.

Supplementary Provisions (2008.3.13)

Article 1 (Date of Enforcement)

① This regulation shall come into effect as of July 1, 2008.

Supplementary Provisions (2008.8.28)

Article 1 (Date of Enforcement)

① This regulation shall come into effect as from the date of notification. As an exception, Article 4 paragraph 1(1)~(4), (6) and (7) shall come into effect as from July 1, 2009.

Article 2 (Interim Measures)

① Article 3 paragraph 1(9) and (16) will be effective until December 31, 2008.

② The products that have reported as Products with High Standby Power Reduction Potentials prior to the amendment of this notification will maintain such status until December 31, 2008.

③ The Standby Power Testing Institutes designated prior to the amendment of this notification will maintain such status until December 31, 2008. If the institutes wish to extend its designation status after January 1, 2009, the relevant institutes must apply again to the Minister of Knowledge Economy for designation in accordance with Article 11 of this amended notification until November 30, 2008.

④ The self testing institutes which have issued self testing reports prior to the amendment of this notification will maintain such activity until December 31, 2008. If the institutes wish to continue submit self testing reports after January 1, 2009, the relevant institutes must request to the Minister of Knowledge Economy for approval in accordance with Article 11 of this amended notification until November 30, 2008.

Supplementary Provisions (2010.2.25)

Article 1 (Date of Enforcement)

This regulation shall come into effect as from the date of notification. As an exception, Article 4 paragraph 1(8)~(19) shall come into effect as from July 1, 2010.

Supplementary Provisions (2011.2.16)

Article 1 (Date of Enforcement)

This regulation shall come into effect as from the date of notification. As an exception, Article 3 paragraph 1(21)~(22) shall come into effect as from July 1, 2011.

[Annex I]

Items subject to e-Standby Power Program (Warning Label) Target Products (Related to Article 3 paragraph 2 and Article 4 paragraph 2)

Items	Application Scope
1. Computers	- Computers with nameplate output power of power supply less than equal to 1,000W - Covers mainly computers sold commercially or for household use in the market, including personal computers, notebook computers, and including integrated computer systems. Computers for network servers, workstations and computers in standby mode awaiting instructions remotely are excluded
2. Monitor	- Commercially-available, electronic product with a display screen and its associated electronics encased in a single housing that is capable of displaying output information from a computer via one or more inputs, such as VGA and DVI with nameplate output power of power supply less than equal to 1,000W - Includes computer monitors (i.e., focusing on computer monitor as the primary function) or as dual function computer monitors and televisions. – Excludes monitor-main body integrated computers, network monitors, monitors with VoIP and other special embedded functions, monitors for broadcasting and medical purposes
3. Printers	- Commercially-available imaging product that serves as a hard copy output device, and is capable of receiving information from networked computers, or other input devices with nameplate output power of power supply less than equal to 3,000W - Standard marking technologies addressed in Annex II (direct thermal, dye sublimation, electrophotography, thermal transfer, solid ink, ink jet) - Excludes printers using continuous feeding, printers with integrated servers, and printers with heavy load capacity (more than 2000 papers at one time)
4. Fax Machine	- Commercially-available imaging product with nameplate output power of power supply less than equal to 3,000W

	whose primary functions are scanning hard copy originals for electronic transmission to remote units and receiving similar electronic transmissions to produce hard copy output - Standard marking technologies addressed in Annex II (direct thermal, dye sublimation, electrophotography, thermal transfer, solid ink, ink jet) - Includes multifunction device (printer-fax machine)
5. Copiers	- Commercially-available imaging product with nameplate output power of power supply less than equal to 5,000W whose sole function is the production of hard copy duplicates from graphic hard copy originals - Standard marking technologies addressed in Annex II (direct thermal, dye sublimation, electrophotography, thermal transfer, solid ink, ink jet) - Includes digital copiers with functional adder that add functions of printers, fax machines and scanners - Excludes large copiers and specialized copiers for document printing with ipm greater than equal to 60 (installed with special rip or output device form printing improvements)
6. Scanners	- Electro-optical device with nameplate output power of power supply less than equal to 1,000W for converting color or black-and-white information into electronic images that can be stored, edited, converted, or transmitted primarily in a personal computing environment - The main focus is on widely-used desktop scanners (flatbed, sheet-fed, and film scanners), high-end office document management scanners that meet the specifications
7. Multifunctional Devices	- A multifunction equipment able to perform core functions of copying, printing, faxing or scanning with nameplate output power of power supply less than equal to 5,000W - Standard marking technologies addressed in Annex II (direct thermal, dye sublimation, electrophotography, thermal transfer, solid ink, ink jet) - Excludes large copiers and specialized copiers for document printing with ipm greater than equal to 60

	(installed with special rip or output device form printing improvements)
8. Energy-Saving & Controlling Devices	- Controlling devices that automatically shut the power of the machine connected to multi-tab (by sensing operation or brightness of surrounding) standby power blocking receptacles, standby power blocking switches(controllers) or standby power blocking devices satisfying the requirements of standby power blocking functions designated by this regulation regardless of physical types of products. - Excludes devices or parts that are not easy to install by the users
9. Televisions	- An electronic product with nameplate output power of power supply less than equal to 1,000W, consisting of a tuner/receiver and a monitor encased in a single housing - The monitor usually relies upon a cathode-ray tube (CRT), liquid crystal display (LCD), plasma display, or other display device and designed to receive and display a television signal broadcast by antenna, satellite, or cable - Television products with computer capability are included as long as they are marketed and sold to consumers as televisions (focusing on television as the primary function) - Also includes television monitors, component television units, TV/VCR combination units, TV/DVD combination units, TV/VCR/DVD combination units - Excludes OCAP, IP and other television receivers internalized with special functions
10. VCR	- An electronic product with nameplate output power of power supply less than equal to 150W designed to play and/or record video tape - Includes VCR/DVD combination unit - Excludes portable units operated by batteries and units for broadcasting purposes
11. Home Audio Products	- An electronic product with nameplate output power of power supply less than equal to 1,000W whose intended purpose, other than providing non-video status displays, is the production of recording of signals in the audio domain as reproduced by headphones, loudspeakers, or other transducers, except radio cassette players.

	- Includes cassette decks, CD player/changers, CD recorders, equalizers, mini-and midi-systems, speakers, stereo amplifiers and stereo receivers - Includes audio/DVD combination units - Excludes radio cassette players, portable units operated by batteries, products charged by USBs, wireless headphones, car audio products and units for broadcasting purposes
12. DVD Players	- Digital Versatile Disc Players. - An electronic product with nameplate output power of power supply less than equal to 150W whose intended purpose is the production or recording of digitized video signals on a spinning reflective disc media. - Excludes portable units operated by batteries and units for broadcasting and medical purposes
13. Radio Cassette Players	- The radio receiver and cassette player with nameplate output power of power supply less than equal to 1,000W which are combined into a single unit. A product under Electronic Device Safety Management Act, where the portable cassette player and the radio receiver are separable, is also included. - Excludes clock radio and units operated by batteries
14. Microwave Ovens	- A household microwave oven with nameplate output power of power supply less than equal to 2,000W
15. Set-top Boxes	- A device with nameplate output power of power supply less than equal to 150W, capable of receiving, transmitting, processing, recording, converting signals and displaying by television or other displaying devices. - Combo, hybrid set-top boxes and set- top boxes for cable TV broadcasting, satellite broadcasting, IP set-top boxes and cable TV broadcasting - Simple converter, set-top boxes exclusively for ground wave broadcasting, television receivers, VCR, audio and DVD players are excluded.
16. Door phone	- A device with nameplate output power of power supply less than equal to 100W, capable of automatic reporting, voice and image transmitting between the internal and external units, opening and locking of the gate, communicating with the security and crime & fire controls (gas, fire, crime)

	- Door phones with wall pad and web pad features are excluded.
17. Cordless/Corded Phones	-A commercially available electronic product with nameplate output power of power supply less than equal to 150W whose purpose is to convert sound into electrical impulses for transmission. It is a device or the collection of devices with a base station and a handset which connects to ac power supply and to a local telephone line, whose purpose is to transmit sound by means of radio communication, equipped with basic functions of communication, network control, signal recovery, answering machine, caller identification, speaker phone, and mobile phone chargers. - Corded phones, corded/cordless phones, cordless phones, cordless/cordless phones and VoIP phones are included. - Cordless phones without external power supply, USB type phones, portable device using portable hand phone battery chargers, radio repeater without voice talking function and video phones are excluded.
18. Bidet	- A type of hygienic device with nameplate output power of power supply less than equal to 2,000W used to warm up the water to wash users anus or genital area after stool - Applicable to heating bidet, warm water bidet and other electric bidet - Excludes bidets that receive warm water from other heating devices or warm water bidets without electric heating devices.
19. Modem	- Short for modulator-demodulator, it is a device with nameplate output power of power supply less than equal to 150W that enables data transmission from computers or terminals of communication devices over cable lines. The application scope is limited to external modems with its own power supply device, separated from computer or communication terminals.

20. Home gateway	- Electronic products, with nameplate output power of power supply less than equal to 150W at LAN port when the maximum network traffic occur, that enable receiving external access networks, connecting home network equipments based on wire/wireless networks, converting protocols, controlling, monitoring, managing and providing other home network related services
21. Hand Dryers	- Electrical equipments that utilize fan or electrical heat to dry hands with the nameplate consumption power of 3,000W or below
22. Servers	- Computer servers are sold through enterprise channels for use in data centers and office/corporate environments. They are marketed and sold as computer servers and they must have all of the following characteristics: ● Use computer server operating systems ● Support for error-correcting code (ECC) and/or buffered memory(including both buffered DIMMs and buffered on board (BOB) configurations) ● Packaged and sold with one or more AC-DC or DC-DC power supply with the nameplate consumption power of 3,000W or below ● All processors have access to shared system memory. Servers with 3 processor sockets or more, Blade System, Fault Tolerant Server and Multi-Node servers are excluded.

[Annex II]

The Standby Power Reduction Standard
(Relating to Article 3 paragraph 3 and Article 4 paragraph 2)

1. Computers

A. Low power mode performance

Category	Sleep mode		Watts in off mode
	default time	Watts in low power mode	
Personal Computers(Laptop)	≤30 min	≤1.7W	≤1.0W
Personal Computers (Desk top)	≤30 min	≤4.0W	≤2.0W
Integrated Computer System	≤30 min	≤4.0W	≤2.0W

(1) The computers and the integrated computer system shall enter a sleep mode after a period of inactivity. Computers maintaining below 1.7W standby power consumption are not required to have sleep modes. However, prior to July 1st 2008, computers maintaining below 3W standby power consumption and integrated computer system maintaining below 5W standby power consumption are not required to have sleep modes.

(2) The participating entities shall preset the sleep mode default time as prescribed in the regulation, when shipping computers and integrated computer system. Furthermore, the computers and integrated computer system shall be equipped with default time adjusting functions so that the user is able modify the time settings or to deactivate the sleep mode. If a computer and integrated computer system are shipped with one or more operating systems (hereinafter referred to as "OS"), they shall be capable of entering and fully recovering from the sleep mode while running in at least one of those operating systems. If the product is shipped failing to meet the requirements of the proper activation and recovery of the sleep mode, the participating entity shall include this information in user's manual and brochures and advertisements shall be worded to avoid misleading statements. If the product is not shipped with operating system software, the participating entity shall include this information in user's manual and brochures and advertisements shall be worded to avoid misleading statements.

(3) The computer shall include one or more mechanisms through which it can activate the sleep modes of a monitor. The participating entity shall clearly specify in product literature that manner in which its computer can control monitors, and any special

circumstances that must exist in order for monitor power management to be accomplished. The participating entity shall set the computer's default to activate the monitor's sleep mode within 60 minutes of user inactivity. This monitor control requirement does not apply to integrated computer systems. However, integrated computer systems that are sold as part of a docking system shall have the capability to automatically control the power of an externally connected monitor.

(4) When applying the standards listed in table above to computers shipped to the market, additional allowable tolerance of +0.7W is given at sleep and off modes for computers with WOL (Wake on Lan) function.

B. Terminology Definitions

- On mode: The active mode of operation
- Sleep mode: The reduced power state that the computer enters after a period of inactivity.
- Off mode: The power state when the product is switched off.
- WOL (Wake on Lan): A function that is capable of activating computer automatically by direct wake events through the network.
- Wake events: An external event or stimulus (movement of the mouse, keyboard activity or a button press on the chassis, stimulus conveyed via a telephone) that causes the computer to transition from its low power mode to its active mode of operation.

2. Monitors

A. Low power mode performance

Category	Watts in sleep mode	Watts in off power mode
Monitor	≤2.0W	≤1.0W

- The monitors shall automatically enter a low power mode after a period of inactivity and returns to its previous mode, for the convenience of the user, when it reactivates.
- Any special software needed in activating the monitor into sleep mode, shall be shipped together with the monitor.

B. Terminology Definitions

- On mode: The product is connected to a power source and produces an image.

- Sleep mode: The reduced power state that the computer monitor enters after receiving instructions from a computer or via other functions. A blank screen characterize this mode and the computer monitor returns to on mode upon sensing a request from a user/computer (user moves the mouse or presses a key on the keyboard).
- Off mode: The power off state by switching off the power source. In case there are more than two power switches, soft switched located in the front of the product is used to create this power off state.
- No external devices shall be connected to any included USB hubs or ports and the power of the speakers shall be turned off in power measurement.

3. Printers

A. Low power mode performance

Product Format	Marking Technology	Product Speed (ipm)	Typical Electricity Consumption (kWh/week)	Electricity Consumption (sleep mode)	Electricity Consumption (off mode)
Standard	<Monochrome> Direct thermal Dye sublimation Electro-photography Thermal transfer	ipm ≤ 12	≤ 1.5	Not surveyed	≤ 1W
		12<ipm ≤ 50	≤0.20×ipm-1	Not surveyed	≤ 1W
		50 <ipm	≤0.80×ipm-31	Not surveyed	≤ 1W
	<Color> Dye sublimation Electro-photography Thermal transfer Solid ink	ipm ≤ 50	≤0.20×ipm+ 2	Not surveyed	≤ 1W
		50 <ipm	≤0.80×ipm-28	Not surveyed	≤ 1W
	<Monochrome, Color> Ink jet	ipm ≤ 10	Not surveyed	≤ 5W	≤ 1W
		10<ipm	Not surveyed	≤ 10W	≤ 1W

Product Speed (ipm)	Sleep mode default time
0< ipm ≤ 10	≤5min
11< ipm ≤ 20	≤15min
21< ipm ≤ 30	≤30min
31< ipm ≤ 50	≤60min
51 ≤ ipm	≤60min

B. Terminology Definitions

- Standard format: Products categorized as Standard include those designed for standard-sized media (A4, B4, A3 etc). Standard-size products may also be capable of printing on small-format media. However, products designed for printing on large-format media A2 or larger) or designed exclusively for printing on small-format media are excluded.
- Product speed: Product speed is referenced on the speed of monochrome image printed by the product measured at the point of shipment. A single A4 printed on one side in a minute is equal to one image-per-minute (ipm). The converted speed in ipm should be rounded to the nearest integer.
- Direct thermal: A marking technology that transfers an image by burning dots onto coated media as it passes over a heated print head. Direct thermal products do not use ribbons.
- Dye sublimation: A marking technology where images are formed by depositing (subliming) dye onto the print media based upon the amount of energy delivered by the heating elements.
- Electrophotography: A marking technology characterized by illumination of a photoconductor in a pattern representing the desired hard copy image via a light source, development of the image with particles of toner using the latent image on the photoconductor to define the presence or absence of toner at a given location, transfer of the toner to the final hard copy medium, and fusing to cause the desired hard copy to become durable. Types of EP include Laser, LED, and LCD. Two types of color EP include parallel and serial color EP.
- Solid ink: A marking technology where the ink is solid at room temperature and liquid when heated to the jetting temperature. Transfer to the media can be direct, but is most often made to an intermediate drum or belt and then offset printed to the media.
- Ink jet: A marking technology where images are formed by depositing colorant in small drops directly to the print media in a matrix manner. Color ink jet is distinguished from monochrome ink jet in that more than one colorant is available in a product at any one time. Typical types of ink jet include Piezo-electric ink jet, ink jet sublimation and thermal ink jet. However, products applying nozzle arrangement (page width) or high

performing ink jet products that have capabilities to perform additional thermal treatment to dry ink on the printing media are excluded.
- DFE (Digital Front End): A functionally-integrated, network-attached server or desktop-derived server that hosts other computers and applications and acts as an interface to imaging equipment. A DFE offers following advanced features: network connectivity in various environments, mailbox functionality, job queue management, machine management, advanced graphic user-interface, ability to initiate communication with other host servers and client computers and ability to post-process pagers.
- On mode: The normal operation mode in which the product is connected to a power source and is actively producing output, as well as performing any of its other primary functions.
- Low power mode: The reduced power state that the product enters after certain period of inactivity.
- Off mode: The power state that the product enters when it has been manually or automatically switched off.
- Ready mode: The condition that exists when the product is not producing output, has reached operating conditions, has not yet entered into any sleep modes, and can enter on mode with minimal delay.
- Sleep mode: The reduced power state that the product enters automatically after a period of inactivity.

4. Fax machines

A. Low power mode performance

Product Format	Marking Technology	Product Speed (ipm)	Typical Electricity Consumption (kWh/week)	Electricity Consumption (sleep mode)	Electricity Consumption (off mode)
Standard	<Monochrome> Direct thermal Dye sublimation Electro-photography Thermal transfer	ipm ≤ 12	≤ 1.5	Not surveyed	≤ 2W
		12<ipm ≤ 50	≤0.20×ipm-1	Not surveyed	≤ 2W
		50 <ipm	≤0.80×ipm-31	Not surveyed	≤ 2W
	<Color> Dye sublimation Electro-photography Thermal transfer Solid ink	ipm ≤ 50	≤0.20×ipm+ 2	Not surveyed	≤ 2W
		50 <ipm	≤0.80×ipm-28	Not surveyed	≤ 2W

	<Monochrome, Color> Ink jet	ipm ≤ 10	Not surveyed	≤ 5W	≤ 2W
		10<ipm	Not surveyed	≤ 10W	≤ 2W

Product Speed (ipm)	Sleep mode default time
All products	≤5min

B. Terminology Definitions

- Standard format: Products categorized as Standard include those designed for standard-sized media (A4, B4, A3 etc). Standard-size products may also be capable of printing on small-format media. However, products designed for printing on large-format media A2 or larger) or designed exclusively for printing on small-format media are excluded.
- Product speed: Product speed is referenced on the speed of monochrome image printed by the product measured at the point of shipment. A single A4 printed on one side in a minute is equal to one image-per-minute (ipm). The converted speed in ipm should be rounded to the nearest integer.
- Direct thermal: A marking technology that transfers an image by burning dots onto coated media as it passes over a heated print head. Direct thermal products do not use ribbons.
- Dye sublimation: A marking technology where images are formed by depositing (subliming) dye onto the print media based upon the amount of energy delivered by the heating elements.
- Electrophotography: A marking technology characterized by illumination of a photoconductor in a pattern representing the desired hard copy image via a light source, development of the image with particles of toner using the latent image on the photoconductor to define the presence or absence of toner at a given location, transfer of the toner to the final hard copy medium, and fusing to cause the desired hard copy to become durable. Types of EP include Laser, LED, and LCD. Two types of color EP include parallel and serial color EP.
- Solid ink: A marking technology where the ink is solid at room temperature and liquid when heated to the jetting temperature. Transfer to the media can be direct, but is most often made to an intermediate drum or belt and then offset printed to the media.
- Ink jet: A marking technology where images are formed by depositing colorant in small drops directly to the print media in a matrix manner. Color ink jet is distinguished from monochrome ink jet in that more than one colorant is available in a product at any one time. Typical types of ink jet include Piezo-electric ink jet, ink jet sublimation and thermal ink jet. However, products applying nozzle arrangement (page width) or high

performing ink jet products that have capabilities to perform additional thermal treatment to dry ink on the printing media are excluded.
- DFE (Digital Front End): A functionally-integrated, network-attached server or desktop-derived server that hosts other computers and applications and acts as an interface to imaging equipment. A DFE offers following advanced features: network connectivity in various environments, mailbox functionality, job queue management, machine management, advanced graphic user-interface, ability to initiate communication with other host servers and client computers and ability to post-process pagers.
- On mode: The normal operation mode in which the product is connected to a power source and is actively producing output, as well as performing any of its other primary functions.
- Off mode: The power state that the product enters when it has been manually or automatically switched off.
- Ready mode: The condition that exists when the product is not producing output, has reached operating conditions, has not yet entered into any sleep modes, and can enter on mode with minimal delay.
- Sleep mode: The reduced power state that the product enters automatically after a period of inactivity.

5. Copiers

A. Low power mode performance

<table>
<tr><th>Product Format</th><th>Marking Technology</th><th>Product Speed (ipm)</th><th>Typical Electricity Consumption (kWh/week)</th><th>Electricity Consumption (off mode)</th></tr>
<tr><td rowspan="4">Standard</td><td rowspan="3"><Monochrome>
Direct thermal
Dye sublimation
Electro-photography
Thermal transfer</td><td>ipm ≤ 12</td><td>≤ 1.5</td><td rowspan="4">≤ 1W
(without fax machine functionality)
≤ 2W
(with fax machine functionality)</td></tr>
<tr><td>12<ipm ≤ 50</td><td>≤0.20×ipm-1</td></tr>
<tr><td>50 <ipm</td><td>≤0.80×ipm-31</td></tr>
<tr><td rowspan="2"><Color>
Dye sublimation
Electro-photography
Thermal transfer
Solid ink</td><td>ipm ≤ 50</td><td>≤0.20×ipm+ 2</td></tr>
<tr><td>50 <ipm</td><td>≤0.80×ipm-28</td></tr>
</table>

B. Terminology Definitions

- Standard format: Products categorized as Standard include those designed for standard-sized media (A4, B4, A3 etc). Standard-size products may also be capable of printing on small-format media. However, products designed for printing on large-format media A2 or larger) or designed exclusively for printing on small-format media are excluded.
- Product speed: Product speed is referenced on the speed of monochrome image printed by the product measured at the point of shipment. A single A4 printed on one side in a minute is equal to one image-per-minute (ipm). The converted speed in ipm should be rounded to the nearest integer.
- Direct thermal: A marking technology that transfers an image by burning dots onto coated media as it passes over a heated print head. Direct thermal products do not use ribbons.
- Dye sublimation: A marking technology where images are formed by depositing (subliming) dye onto the print media based upon the amount of energy delivered by the heating elements.
- Electrophotography: A marking technology characterized by illumination of a photoconductor in a pattern representing the desired hard copy image via a light source, development of the image with particles of toner using the latent image on the photoconductor to define the presence or absence of toner at a given location, transfer of the toner to the final hard copy medium, and fusing to cause the desired hard copy to become durable. Types of EP include Laser, LED, and LCD. Two types of color EP include parallel and serial color EP.
- Solid ink: A marking technology where the ink is solid at room temperature and liquid when heated to the jetting temperature. Transfer to the media can be direct, but is most often made to an intermediate drum or belt and then offset printed to the media.
- Ink jet: A marking technology where images are formed by depositing colorant in small drops directly to the print media in a matrix manner. Color ink jet is distinguished from monochrome ink jet in that more than one colorant is available in a product at any one time. Typical types of ink jet include Piezo-electric ink jet, ink jet sublimation and thermal ink jet. However, products applying nozzle arrangement (page width) or high performing ink jet products that have capabilities to perform additional thermal treatment to dry ink on the printing media are excluded.
- DFE (Digital Front End): A functionally-integrated, network-attached server or desktop-derived server that hosts other computers and applications and acts as an interface to imaging equipment. A DFE offers following advanced features: network connectivity in various environments, mailbox functionality, job queue management, machine management, advanced graphic user-interface, ability to initiate communication with other host servers and client computers and ability to post-process pagers.
- On mode: The normal operation mode in which the product is connected to a power source and is actively producing output, as well as performing any of its other primary

functions.
- Low power mode: The reduced power state that the product enters after certain period of inactivity.
- Off mode: The power state that the product enters when it has been manually or automatically switched off.
- Ready mode: The condition that exists when the product is not producing output, has reached operating conditions, has not yet entered into any sleep modes, and can enter on mode with minimal delay.
- Sleep mode: The reduced power state that the product enters automatically after a period of inactivity.

6. Scanners

(A) Low power mode performance

Category	sleep mode		Electricity Consumption (off mode)
	Default time	Watts	
A. Scanners with off mode	≤15min	≤12.0W	≤1.0W
B. Scanners without off mode	≤15min	≤5.0W	Not Surveyed

- Scanners that do have off power modes are good enough to satisfy the requirements of sleep mode. However, the sleep mode should be maintained below 5W.

(B) Terminologies used in the table above:

- On mode: The normal operation mode
- Sleep mode: The reduced power state that the scanner enters after certain period of inactivity.
- Off mode: The power off state by switching off the power source.
- Default times: The time period set by the participating entity that determines when the scanner enters into the low power mode from the time the last copy was made.

7. Multifunctional Devices

A. Low power mode performance

Product Format	Marking Technology	Product Speed (ipm)	Typical Electricity Consumption (kWh/week)	Electricity Consumption (sleep mode)	Electricity Consumption (off mode)

Standard	<Monochrome> Direct thermal Dye sublimation Electro-photography Thermal transfer	ipm ≤ 12	≤ 1.5	Not surveyed	≤ 2W
		12<ipm ≤ 50	≤0.20×ipm-1	Not surveyed	≤ 2W
		50 <ipm	≤0.80×ipm-31	Not surveyed	≤ 2W
	<Color> Dye sublimation Electro-photography Thermal transfer Solid ink	ipm ≤ 50	≤0.20×ipm+ 2	Not surveyed	≤ 2W
		50 <ipm	≤0.80×ipm-28	Not surveyed	≤ 2W
	<Monochrome, Color> Ink jet	ipm ≤ 10	Not surveyed	≤ 5W	≤ 2W
		10<ipm	Not surveyed	≤ 10W	≤ 2W

Product Speed (ipm)	Sleep mode default time
0< ipm ≤ 10	≤15min
11< ipm ≤ 20	≤30min
21< ipm ≤ 30	≤60min
31< ipm ≤ 50	≤60min
51 ≤ ipm	≤60min

B. Terminology Definitions

- Standard format: Products categorized as Standard include those designed for standard-sized media (A4, B4, A3 etc). Standard-size products may also be capable of printing on small-format media. However, products designed for printing on large-format media A2 or larger) or designed exclusively for printing on small-format media are excluded.
- Product speed: Product speed is referenced on the speed of monochrome image printed by the product measured at the point of shipment. A single A4 printed on one side in a minute is equal to one image-per-minute (ipm). The converted speed in ipm should be rounded to the nearest integer.
- Direct thermal: A marking technology that transfers an image by burning dots onto coated media as it passes over a heated print head. Direct thermal products do not use ribbons.
- Dye sublimation: A marking technology where images are formed by depositing (subliming) dye onto the print media based upon the amount of energy delivered by the

heating elements.
- Electrophotography: A marking technology characterized by illumination of a photoconductor in a pattern representing the desired hard copy image via a light source, development of the image with particles of toner using the latent image on the photoconductor to define the presence or absence of toner at a given location, transfer of the toner to the final hard copy medium, and fusing to cause the desired hard copy to become durable. Types of EP include Laser, LED, and LCD. Two types of color EP include parallel and serial color EP.
- Solid ink: A marking technology where the ink is solid at room temperature and liquid when heated to the jetting temperature. Transfer to the media can be direct, but is most often made to an intermediate drum or belt and then offset printed to the media.
- Ink jet: A marking technology where images are formed by depositing colorant in small drops directly to the print media in a matrix manner. Color ink jet is distinguished from monochrome ink jet in that more than one colorant is available in a product at any one time. Typical types of ink jet include Piezo-electric ink jet, ink jet sublimation and thermal ink jet. However, products applying nozzle arrangement (page width) or high performing ink jet products that have capabilities to perform additional thermal treatment to dry ink on the printing media are excluded.
- DFE (Digital Front End): A functionally-integrated, network-attached server or desktop-derived server that hosts other computers and applications and acts as an interface to imaging equipment. A DFE offers following advanced features: network connectivity in various environments, mailbox functionality, job queue management, machine management, advanced graphic user-interface, ability to initiate communication with other host servers and client computers and ability to post-process pagers.
- On mode: The normal operation mode in which the product is connected to a power source and is actively producing output, as well as performing any of its other primary functions.
- Off mode: The power state that the product enters when it has been manually or automatically switched off.
- Ready mode: The condition that exists when the product is not producing output, has reached operating conditions, has not yet entered into any sleep modes, and can enter on mode with minimal delay.
- Sleep mode: The reduced power state that the product enters automatically after a period of inactivity.

8. Energy-Saving & Controlling Devices

(A) Low power mode performance (standby power blocking functions)

Category	Controlling type	Auto off (Watts)	Power auto off or standby power blocking default time
Auto power saving multi-tab	- Load sensing type - Light sensing type - Timer type -Combination type (load, light, body sensing)	≤1.0W	≤3min
Power saving outlet controlling device			
Standby power blocking switches (controller)			
Other standby power blocking devices			

- Energy-Saving & Controlling Devices (Auto power saving multi-tab, Power saving outlet, Standby power blocking switches(controller), other standby power blocking devices) shall automatically sense the power off or switch, auto off, light and time settings of the electronic products and computers and shall shut the power supply connected to these products in 3 minutes. The power consumed at this auto power off stage shall be less than 1.0W. If the computer operates normally and the light intensity around the energy saving & controlling devices exceeds the preset level or there is a change in the setting time, the power shall be reapplied to the device in 10 seconds. The life of the device should exceed more than 5000 repetitions of turning the switch on/off. (For timer type, minimum of 100 repetitions)

(1) If the application scope of the Energy-Saving & Controlling Devices is limited, the limitation scope should be specified in the product literature (pamphlet, manual, product reporting form)
(2) Products with main operational power should indicate that the product is for main operational power.

(B) Terminologies used in the table above:

Products with regular power supply should have inscription on the product that the product is for regular power supply.
- Load sensing type: When the main power of the computer and television enter into off mode, the controlling device senses the change and automatically shuts off the power of the peripherals like monitors, scanners, VCR, set-top boxes and printers.
- Light sensing type: The internal light sensing device detects the change in surrounding light intensity

and shuts off the power of the product if the intensity falls below 1.0Lux. However, products equipped with Lux sensor controlling device shall shut off the power of the product at the minimum light sensing intensity of 0.5Lux.

- Timer type; Shuts off the power of the product as preset by the user
- Combination type: When the main power of the computer enters into off mode, the device shuts off the power of the computer, monitor, scanner and other peripherals by sensing this change through load, light intensity and body recognition.
- Auto power saving multi-tab: A device that satisfactorily blocks the standby power prescribed in this regulation by detecting the operation status of connected equipments, or by presetting a specific time by the user or by sensing the change in surrounding light intensity.
- Power saving outlet controlling device: Wall outlets that satisfy the requirements of standby power blocking functions designated by this regulation.
- Standby power blocking switches (controller): An automatic switch (controller), which is connected to 2 or more electric outlet or multi-tab by wire or wireless to block standby power, that both has comprehensive and selective control functions which satisfies the requirements of standby power blocking functions designated by this regulation . Comprehensive control functions can turn off the power of all connected outlets or multi-tab all together. Selective control functions can individually turn off the power of the selected outlet or multi-tab.
- Other standby power blocking devices: Other standby power blocking devices, except auto power saving multi-tab, power saving outlet controlling devices, and standby power blocking switches (controller), which satisfy the requirements of standby power blocking functions designated by this regulation.

9. Televisions

(A) Low power mode performance (Televisions, television monitors, component television units, TV/VCR combination units, TV/DVD combination units, TV/VCR/DVD combination units, TV/ Set-top Box (all pay TV broadcasting) Combination Units)

Category	Passive standby mode (Watts)
Televisions	≤1.0W
Television monitors	≤1.0W
Component television units	≤1.0W
TV/VCR combination units	≤1.0W
TV/DVD combination units	≤1.0W
TV/VCR/DVD combination units	≤1.0W

(B) Terminologies used in the table above:

- On mode: When the appliance is connected to a power supply and it is able to perform its normal operation which includes receiving signals from peripheral devices.
- Passive standby power mode: When an appliance is switched to off/standby and is not performing its primary functions while still connected to a power supply but can be activated by a remote control or other internal signals.
- Active standby power mode: When an appliance is switched to off/standby and is not performing its primary functions while still connected to a power supply but can be activated by a remote control or other internal signals. In addition, it can also be activated into other power modes by receiving external signals or when it is receiving minimum level of data from service providers.
- Off mode: A condition where the product is switched off from a power source and there is no obvious function being performed. It is not possible to activate the appliance with a remote control, internal or external signals.

10. VCR

(A) Low power mode performance (Videocassette recorder, VCR/DVD combination unit)

Category	Standby power (Watts)
Videocassette recorder	≤1.0W
VCR/DVD combination unit	≤1.0W

- Products shipped with remote controls shall satisfy the specifications listed in the above table at the standby mode. Those without remote controls shall satisfy the specifications listed in the above table at the off mode.

(B) Terminologies used in the table above:

- On mode: The normal operation mode
- Standby power mode: A power off state by the remote control
- Off mode: A condition where the product is switched off from a power source.

11. Home Audio Products

(A) Low power mode performance

Category	Standby power (Watts)
Audio	≤1.0W
Audio/DVD combination unit	≤1.0W

- Products shipped with remote controls shall satisfy the specifications listed in the above table at the standby mode. Those without remote controls shall satisfy the specifications listed in the above table at the off mode.

(B) Terminologies used in the table above:

- On mode: The normal operation mode
- Standby power mode: A power off state by the remote control
- Off mode: A condition where the product is switched off from a power source.

12. DVD Players

(A) Low power mode performance

Category	Standby power (Watts)
DVD players	≤1.0W

- Products shipped with remote controls shall satisfy the specifications listed in the above table at the standby mode. Those without remote controls shall satisfy the specifications listed in the above table at the off mode.

(B) Terminologies used in the table above:

- On mode: The normal operation mode
- Standby power mode: A power off state by the remote control
- Off mode: A condition where the product is switched off from a power source.

13. Radio Cassette Players

(A) Low power mode performance

Category	Standby power (Watts)
Radio Cassette Players	≤1.0W

- Products shipped with remote controls shall satisfy the specifications listed in the above table at the standby mode. Those without remote controls shall satisfy the specifications listed in the above table at the off mode.

(B) Terminologies used in the table above:

- On mode: The normal operation mode

- Standby power mode: A power off state by the remote control
- Off mode: A condition where the product is switched off from a power source.

14. Microwave Ovens

(A) Low power mode performance

Category	Standby power (Watts)
Microwave Oven	≤1.0W

- Products shipped with remote controls shall satisfy the specifications listed in the above table at the standby mode. Those without remote controls shall satisfy the specifications listed in the above table at the off mode.

(B) Terminologies used in the table above:

- On mode: The normal operation mode
- Standby power mode: A condition where the door of the microwave oven is shut after the operation is completed.
- Off mode: A condition where the product is switched off from a power source.

15. Set-top boxes

(A) Low power mode performance

Category	Cable	Satellite	IP
Passive standby power mode (recommended)	≤1.0W	≤1.0W	≤1.0W
Active standby power mode	≤10.0W (+ Max 10.0W)	≤10.0W (+ Max 10.0W)	≤10.0W (+ Max 10.0W)

Accessory devices of Set-Top Boxes (excluding main components of set-top boxes)	Allowable on mode or active standby power of each accessory devices (Watts)
Internal hard disk drive	2.2W
IEEE 1394 interface	0.8W
Ethernet interface	0.5W/port (100M), 1.2W/port (1000M)
Wireless interface	3.0W (WLAN 802.11a/b/g/n) 0.3W (Bluetooth)
USB/RS-232 interface	0.3W/port

Home automation interface	0.4W
xDSL Modem	2.0W
Cable Modem	4.5W
Additional LNB feed	2.6W
Additional tuner	2.0W
Additional demodulator	1.0W
Bypass output power	0.5W
Power line communication module	2.0W
VoIP phone interface	4.0W
Video conference module	3.0W
HD Decoder	4.0W
HDMI interface	1.0W
CA	3.0W
Smart card	0.5W
Additional MPEG decoder	2.5W
SPIDF Audio output power	0.5W
PSTN modem	1.0W

- Allowable on mode or active standby power of set-top boxes' accessory devices are shown in table above. However, regardless of the number of accessory devices, the total power consumption at active standby power shall not exceed above 20W.
- Simple converter: Commercialized electronic device that converts ground wave digital signals for use in television or other display devices. Integrated hard disk and other accessories can be included. If the set-top box does not CA functions, it is viewed as a simple converter set-top box.
- Set top boxes for All Pay TV: Electronic products that perform descrambling and receiving broadcasting signals form cable, satellite, and broadband sources.
- The definition of "main components of a set-top box" is as follows:

Components		Types of set-top box		
Component	Standard	Cable	Satellite	IP
IR remote control receiver		o	o	o
Front panel		o	o	o
Ethernet	1 unit			o
Tuner/demodulator	1 unit	o	o	
Decoder	MPEG	o	o	o
Image processing	SD	o	o	o
Image output	Composite/S-video	o	o	o

	Component	o	o	o
Audio output		o	o	o

(B) Terminologies used in the table above:

- On mode: When the appliance is connected to a power supply and it is able to perform its normal operation which includes receiving signals from peripheral devices.
- Passive standby power mode: When an appliance is switched to off/standby and is not performing its primary functions while still connected to a power supply but can be activated by a remote control or other internal signals.
- Active standby power mode: When an appliance is switched to off/standby and is not performing its primary functions while still connected to a power supply but can be activated by a remote control or other internal signals. In addition, it can also be activated into other power modes by receiving external signals or when it is receiving minimum level of data from service providers.
- Off mode: A condition where the product is switched off from a power source and there is no obvious function being performed. It is not possible to activate the appliance with a remote control, internal or external signals.
- CA (Conditional Access): A device that gives access to those who have obtained the necessary rights to receive all pay TV services.
- LNB (Low Noise Block): A device that converts the signals from satellites into intermediate frequency.
- Main function: Image and audio output, STB upgrade (Firmware/Application), DVR storage, HDD access (Video Server)
- Ordinary function: STB function(excluding main function, ex: remote control, front panel, CA message processing, user contents processing, EPG renewal, wire/wireless networks, cable modem, bypass output, etc)

16. Door phone

(A) Low power mode performance

Category	Standby power (Watts)
Simple function door phone	≤1.0W
Multifunction door phone	≤5.0W
Web-pad	≤9.0W
Wall-pad	≤10.0W

(B) Terminologies used in the table above:

- Simple function door phone: A door phone capable of calling and communicating between the internal and external units or transmitting images.
- Multifunction door phone: Door phones with additional functionalities to the simple function
* Opening and locking of the gate, security alarm, “out of home” sign
* Bathroom phone
* Kitchen TV, Video phone
* Home auto system (crime prevention, gas, fire, external telephone control, emergency telephone, “out of home” sign, door locking/opening, on-spot surveillance, video image memory)
- Multifunction door phone equipped with additional functionalities shall satisfy the specifications of the standby mode power consumption, excluding the standby power consumed by the additional functionalities.
- Web Pad: Wireless device, smaller than notebook computer and larger than PDA, that is capable of sending/receiving electronic messages through LCD touch screen or perform word processing or other various tasks such as reading electronic books.
- Wall Pad: Installed on the wall such as home auto-system, checks and controls the identification of visitor, security, gas, heating and other home network services through the touch screen.
- On mode: The normal operation mode
- Standby power mode: A standby condition where the door phone is not performing its primary function.

17. Cordless/Corded phones

(A) Low power mode performance

Category	Standby power (Watts)
Portable device battery charger	≤1.3W
Base set	≤1.3W(+ Maximum 1.0W)
VoIP phones	≤3.0W(+ Maximum 1.0W)

Additional functions excluding the basic functions of base set and VoIP phones	Allowable Standby power (Watts) for each addition
Portable device add on functions	0.6W
Battery charging	0.2W
Speaker phone	0.2W
Answering machine	0.2W
Alarm	0.2W

- If the product is composed of a combination of base sets and battery chargers, each specifications of the standby mode power consumption shall be satisfied in order to meet the standby power consumption requirements of the cordless/corded phone.
- For base set and VoIP phones, power consumption for each addition of function is listed in the table above. However, regardless the number of functions being added on each base set and VoIP phones can not exceed 2.3W and 4.0W respectively.

(B) Terminologies used in the table above:

- On mode: The normal operation mode
- Standby mode: A condition where the device is connected to the local line and the AC power source, however it is not in the communication mode and the battery charging is completed. The device is considered to be connected to the AC power source when the external power device is connected to the AC power source.

- Base set: A device that is connected to the local line and performs the broadcasting of the basic functions (speaking, network control and signal recovery). Includes separate external power supplying devices, if there are any.
- Portable device: An accessing device that is connected to the base set by employing wireless method and performs the basic functions.
- Portable device battery charger: A device separated from the base set that charges the portable device's battery. Includes separate external power supplying devices.
- Caller ID: A device that displays the number of incoming calls
- Speaker phone: A device, where the microphone and speaker is internalized, capable of communicating with other person without picking up a receiver
- Automatic reply: A device that responds to incoming messages with a customized reply or records the voice of the incoming caller.
- VoIP phones: A device exclusively used for communicating with other people by sending and receiving sound signals through data network.
- Image phone: A communication device used for sending and receiving still image or moving image through local line or network.

18. Bidet

(A) Low power mode performance

Category	Heating standby Power mode (W)	Off mode(W)
Bidet that has automatic circuit breaker	≤15.0W	≤2.0W
Bidet that does not have automatic circuit breaker	≤15.0W	≤1.0W

- It shall satisfy the both standards of heating standby power and off mode. Exceptions are made to bidets without heating toilet seat functions by only satisfying the standards of off mode.
- Bidets without automatic circuit breaker shall measure its off mode power consumption by also considering the power associated with automatic circuit breaker

(B) Terminologies used in the table above:

- Heating bidet: A bidet with heating toilet seat functions
- Warm water cleansing bidet: Heating bidet with warm water cleansing device
- Toilet seat heating function: Adjusting the temperature of toilet seat
- On mode: The normal operation mode
- Heating standby power mode: A condition where the power of bidet is connected to the commercial power source and toilet seat heating function is ready to activate.
- Off mode: A condition where the product is switched off from a power source

19. Modem

(A) Low power mode performance

Category	Standby Power mode (W)	Off mode(W)
xDSL Modem	≤2.0W	≤0.75W
Cable Modem	≤5.0W	≤0.75W

Peripheral device(Excluding basic Modem components)	Allowable Standby Power mode (W)	Off mode(W)
Multi-port modem	≤1.0W	-
Wireless LAN AP	≤5.0W	-

- By satisfying both standby and off power mode specifications, it is deemed to have satisfied the standards specified in table above.
- If the power is supplied to the modem through external power adapter, the external power adapter is considered as a part of the modem.

(B) Terminologies used in the table above:

- On mode: When the modem is connected to the computer (or terminal) but there is no intentional communication transmission and it physically maintains active connection

with the local area network.
- Standby power mode: When the modem is connected to the computer (or terminal) and the power of the modem is on while the power of the computer (or terminal) is switched off
- Off mode: A condition where the product is switched off from a power source.
- xDSL(x Digital Subscriber Line) : A digital data transmission method that delivers high-bandwidth data rates to dispersed locations with relatively small changes to the existing infrastructure. It refers collectively to all types of digital subscriber lines, ADSL, SDSL, HDSL and BDSL
- Multi-port Modem: It is comprised of modem, hub, switch, LAN router and etc.
- Wireless LAN AP (Access Point): A device that connects wireless communication devices together to form a wireless network.

20. Home Gateway

Category	Default time	Electricity consumption (sleep mode)
Home gateway	≤10 minutes	≤10.0W

Additional functions excluding the basic functions of base set and VoIP phones	Allowable Standby power (Watts) for each addition(sleep mode)
LAN(8 port)	±0.25W
Wireless LAN AP	1.0W
WAN port	0.5W
Optical port	0.5W
PLC port	0.5W
USB port	0.5W
RS485 port	0.5W
RS232 port	0.5W

- Home gateway should automatically enter into sleep mode after a specified period of communication traffic has occurred.
- Power consumption for each addition of function (except LAN prot) is listed in the table above. However, regardless the number of addition of functions the total electricity consumption can not exceed 16W.
- Electricity consumption is measured while the all LAN port is physically connected to the traffic generator in the local area network. However, the function of each port,

except the LAN port, should be in inactive state while measurements are taken.

- Sleep mode: The reduced power state the device enters after a specified period of communication traffic has occurred. In other words, the traffic generator is physically connected in the local area network but while in reduced power state, the actual communication traffic exchange has not occurred.
- WAN port (Wide Area Network port): A device used to access the large scale communication network such as LAN or MAN through communication line service such as ISDN, package exchange network or other network line provided by communication service providers.
- Optical port: A device for accessing broadband services through utilizing fiber optics
- PLC port (Power Line Communication port): A device used to send voice and data in a high frequency signal through the power line.
- RS485 port: A device manufactured to send data in a parallel transmission type in accordance with TIA/EIA-485 standards.
- RS485 port: A device manufactured to send data in a serial transmission type in accordance with TIA/EIA-485 standards.
- Access network: Network designed to allow registered members to access the network.
- Home-network: Network that integrates personal computers, electronic appliances, controllers, cellular phones and PDA in the household by using wire/wireless technology.
- Protocol: The set of rules for exchanging information in an efficient manner.

21. Hand dryer

A. Low power mode performance

Category	Detection method	Sleep mode		Watts in off power mode
		Default time	Watts in sleep mode	
Hand dryer	Discrete	≤20 sec	≤2.0W	≤1.0W
	Continuous	≤5 sec	≤2.0W	≤1.0W

Additional functions excluding the basic functions of hand dryer	Allowable sleep mode power consumption for each addition
Music play function	+ 2.0W

- Only sleep mode power consumption standard is applied to those hand dryers without power switch.

B. Terminology Definitions

- Sleep mode: The reduced power state that the hand dryer enters after the default time specified in the table above.
- Off mode: The power off state by switching off the power source.
- Default time: The time from the completion of hand detection to the entry of sleep mode
- Discrete detection: A method that automatically interrupts the operation of the hand dryer after a pre-determined period.
- Continuous detection: A method that automatically interrupts the operation of the hand dryer until the hands are placed in front of the sensor's detection zone.
- Music play functions: A function intended to play music at the sleep mode by utilizing CD or USB and other storage media.

22. Servers

A. Low power mode performance

Computer Server Type	Standby power (Watts)
Standard single installed processor servers	≤55.0W
Managed single installed processor servers	≤65.0W
Standard dual installed processor servers	≤100.0W
Managed dual installed processor servers	≤150.0W

Device	Basic component	Additional standby power allowance
Power supplies	Minimum power supplies installed for server operation	20.0 watts
Hard drives(including solid state drives)	Installed hard drives greater than one	8.0 watts
Memory	Installed memory greater than 4 GB	2.0 watts per GB
I/O devices	Installed devices greater than two ports of 1 Gbit, onboard Ethernet	<1Gbit : Not applicable =1Gbit 2.0W per I/O port >1Gbit and <10Gbit : 4.0 W per I/O port ≥10Gbit : 8.0W per I/O port

- The participating establishment should install more than one operating system on the server.
- The first table distinguishes the four types of server power consumptions for base configurations.

- Servers are tested after installing additional components above that of a base configuration. The second table above presents additional standby power allowances for servers with additional capabilities above that of a base configuration.
- Standby power allowances are granted for power supplies in addition to the minimum number needed to operate the server. For example, if a server requires two power supplies to operate, and the configuration includes three power supplies, the server would receive an additional 20.0 watt standby power allowance.
- Example : power consumption calculation
 ·Managed dual installed processor servers(150.0W) + 1 additional power supply(20.0W) + 3 additional HDD(24.0W) + 1 additional 4GB memory (8.0W) + 2 additional ports of 1Gbit onboard Ethernet (40W) = 206.0W
 - The standby power of dual-node servers can be found by measuring the combined standby power of the whole unit and dividing the total standby power by two.

B. Terminology Definitions

- Standby power mode: An operational state in which the operating system and other software have completed loading and the server is capable of completing workload transactions, but no active workload transactions are requested or pending by the system.
- Standard servers: All servers not meeting the definition for managed servers.
- Managed servers: Servers designed for a high level of availability in a highly managed environment. A managed server must have all of the following characteristics:
 · Capability to operate with redundant power supplies; and
 · An installed dedicated management controller (ex: service processor, baseboard management controller, etc)
- Single installed processor servers: Servers with one physical core
- Dual installed processor servers: Servers with two physical cores
- Power supply: Also referred to as DC power supply and they are available as internally fixed or separable types.
- I/O devices : Devices which provide data input and output capability to the server from other devices. I/O devices can either be integral to the main board or can be separate devices connected through expansion slots such as PCI or PCIe. Examples of I/O devices include: Ethernet devices, InfiniBand devices, external RAID/SAS controllers and Fibre Channel devices.

[Annex III]

Standby power measurement methods
(Related to Article 3 paragraph 4 and Article 4 paragraph 2)

1. Sample size, measurement items and allowable tolerance(post management)

Category	Total sample size	Number of defects allowed	Measurement items	Decimal places	Allowable Tolerance (post management)
Computer	2	0	Sleep mode default time(min) Sleep mode Power consumption (W) Off mode Power consumption (W)	first first first	- The range of default time and recovery time shall fall within 110% of the values defined in the regulation. -Power consumption shall fall within 105% of the values defined in the regulation.
Monitors	2	0	Sleep mode Power consumption (W) Off mode Power consumption (W)	first first	
Printers	2	0	Electricity Consumption (kWh/week) Sleep mode default time(min) Sleep mode Power consumption (W) Off mode Power consumption (W)	first first first first	
Fax machines	2	0	Electricity Consumption (kWh/week) Sleep mode default time(min) Sleep mode Power consumption (W) Off mode Power consumption (W)	first first first first	
Copiers	2	0	Electricity Consumption (kWh/week) Off mode Power consumption (W)	first first	
Scanners	2	0	Sleep mode default time(min) Sleep mode Power consumption (W) Off mode Power consumption (W)	first first first	
Multifunctional devices	2	0	Electricity Consumption (kWh/week) Sleep mode default time(min) Sleep mode Power consumption (W) Off mode Power consumption (W)	first first first first	
Energy-Saving & Controlling Devices	2	0	Power consumption (W) in blocking standby power Auto power off or standby power blocking function default time(min)	first first	
Televisions	2	0	Passive Standby mode Power consumption (W) Active Standby mode Power consumption(W)	first first	
VCR	2	0	Standby mode Power consumption (W)	first	
Home audio products	2	0	Standby mode Power consumption (W)	first	
DVD players	2	0	Standby mode Power consumption (W)	first	
Radio cassette players	2	0	Standby mode Power consumption (W)	first	
Microwave Ovens	2	0	Standby mode Power consumption (W)	first	
Set-top Boxes	2	0	Standby mode Power consumption (W)	first	

Door phone	2	0	Standby mode Power consumption (W)	first	
Cordless/Corded Phones	2	0	Standby mode Power consumption (W)	first	
Bidet	2	0	Heating standby mode power consumption (W) Off mode power consumption (W)	first first	
Modem	2	0	Standby mode Power consumption (W) Off mode Power consumption (W)	first second	
Home Gateway	2	0	Sleep mode default time(min) Sleep mode Power consumption (W)	first first	
Hand dryers	2	0	Sleep mode default time(sec) Sleep mode Power consumption (W) Off mode power consumption (W)	integer first first	
Servers	1	0	Standby mode Power consumption (W)	first	

* Decimal points are rounded in accordance with KS 3251-1

2. The conditions for measuring standby power

Line impedance	Below 0.25 ohm
Input voltage	220V±1%
Input frequency	60Hz±1%
Ambient temperature	23±5C 20±1C (for bidet)
Distortion of input voltage	Within 2%
Relative humidity	10~80% (for copier, multifunctional device)
Distance from wall	Over 60 cm (for copier, multifunctional device)

3. Measurement methods for each product

KS C IEC 62301(Measuring standby power of household appliances) is applied when energy consumption is measured at off or no load mode.

(1) Computer

Measurements of power consumption at sleep and off modes shall be taken.

○ Measurement methods at sleep mode

- The product should be plugged in to a live power line but turned off and stabilized at room ambient

conditions for at least 1 hour.
- The product where the computer and the monitor is separable, separate power shall be supplied to respective units and the measurement is taken after the monitor is connected to the computer.
- Turn on the power switch to start the booting of the computer and to enter into its initial screen mode.
- Verify and measure the time it takes from the point where there are no induced movements at its initial screen mode to the point where it enters into a sleep mode.
- After 5 minutes of sleep mode, measure the average power consumption over a 1 hour period when in the sleep mode.
- Repeat the above said power consumption measurement procedure in sleep mode.
- The average of first and second power consumption measurements in sleep modes shall be taken.

(2) Monitors
Measurements of power consumption at sleep and off modes shall be taken.

○ Measurement methods at sleep mode

- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 1 hour.
- The product where the computer and the monitor is separable, separate power shall be supplied to respective units and the measurement is taken after the monitor is connected to the computer.
- Power on the machine by using the power switch and set the machine to initial default settings.
- Input signal takes the testing equipment's maximum horizontal frequency.
- Brightness, contrast, horizontal/vertical screen size settings are adjusted to maximum conditions.
- Verify and measure the time it takes from the point where there are no induced movements at its initial screen mode to the point where it enters into a sleep mode.
- After 5 minutes of sleep mode, measure the average power consumption over a 1 hour period when in the sleep mode.
- Repeat the above said power consumption measurement procedure in sleep mode.
- The average of first and second power consumption measurements in sleep modes shall be taken.

(3) Printers

Measurements of power consumption at typical (weekly), sleep and off modes shall be

taken. Typical electricity consumption and consumption at sleep modes should exclude consumption attributable to DFE. Measurements are taken by setting the printing option to monochrome single side printing. Auto-off function is disabled and network connection is enabled if applicable. Dehumidifier can be turned off if the user can control it. The test image is Test Pattern A from ISO/IEC standard 10561:1999.

* Typical Electricity Consumption methods (Printer, Fax Machines and MFDs with print capability)

- Typical electricity consumption (TEC) = (Daily electricity consumption×5) + (Electricity consumption at sleep mode×48)

· Electricity consumption per day

= Electricity consumption for job per day+ (Final electricity consumption×2) + Electricity consumption per day at sleep mode

· Electricity consumption for jobs per day

= (Job 1×2) + {(jobs per day-2) × average electricity consumption for jobs

· Average electricity consumption for jobs = (job2+ job3+ job4)/3

· Electricity consumption per day at sleep mode

= [24 hours – {(job per day/4) + (final time×2)}] × Electricity consumption at sleep mode

· Calculation method for jobs per day

Product speed (ipm)	Jobs per day
ipm ≤ 8	8
8 〈 ipm 〈 32	Same as ipm (ex: 14 ipm =14)
32 ≤ ipm	32

· Calculate the nominal amount of images per day (image per day = 0.50 × ipm^2). For example, a 14 ipm unit shall use 0.50×14^2 or 98 images per day.

· Calculate the number of images per job by dividing the number of images per day by the number of jobs per day. Round down (truncate) to the nearest integer. For example, a figure of 15.8 indicates that 15 images should be made per job, rather than rounding to 16 images per job.

· Job Table Calculated

Table 4. Job Table Calculated

Speed	Jobs/ Day	Interim Images/ Day	Interim Images/ Job	Images/ Job	Images/ Day	Speed	Jobs/ Day	Interim Images/ Day	Interim Images/ Job	Images/ Job	Images/ Day
1	8	1	0.06	**1**	8	51	32	1301	40.64	**40**	1280
2	8	2	0.25	**1**	8	52	32	1352	42.25	**42**	1344
3	8	5	0.56	**1**	8	53	32	1405	43.89	**43**	1376
4	8	8	1.00	**1**	8	54	32	1458	45.56	**45**	1440
5	8	13	1.56	**1**	8	55	32	1513	47.27	**47**	1504
6	8	18	2.25	**2**	16	56	32	1568	49.00	**49**	1568
7	8	25	3.06	**3**	24	57	32	1625	50.77	**50**	1600
8	8	32	4.00	**4**	32	58	32	1682	52.56	**52**	1664
9	9	41	4.50	**4**	36	59	32	1741	54.39	**54**	1728
10	10	50	5.00	**5**	50	60	32	1800	56.25	**56**	1792
11	11	61	5.50	**5**	55	61	32	1861	58.14	**58**	1856
12	12	72	6.00	**6**	72	62	32	1922	60.06	**60**	1920
13	13	85	6.50	**6**	78	63	32	1985	62.02	**62**	1984
14	14	98	7.00	**7**	98	64	32	2048	64.00	**64**	2048
15	15	113	7.50	**7**	105	65	32	2113	66.02	**66**	2112
16	16	128	8.00	**8**	128	66	32	2178	68.06	**68**	2176
17	17	145	8.50	**8**	136	67	32	2245	70.14	**70**	2240
18	18	162	9.00	**9**	162	68	32	2312	72.25	**72**	2304
19	19	181	9.50	**9**	171	69	32	2381	74.39	**74**	2368
20	20	200	10.00	**10**	200	70	32	2450	76.56	**76**	2432
21	21	221	10.50	**10**	210	71	32	2521	78.77	**78**	2496
22	22	242	11.00	**11**	242	72	32	2592	81.00	**81**	2592
23	23	265	11.50	**11**	253	73	32	2665	83.27	**83**	2656
24	24	288	12.00	**12**	288	74	32	2738	85.56	**85**	2720
25	25	313	12.50	**12**	300	75	32	2813	87.89	**87**	2784
26	26	338	13.00	**13**	338	76	32	2888	90.25	**90**	2880
27	27	365	13.50	**13**	351	77	32	2965	92.64	**92**	2944
28	28	392	14.00	**14**	392	78	32	3042	95.06	**95**	3040
29	29	421	14.50	**14**	406	79	32	3121	97.52	**97**	3104
30	30	450	15.00	**15**	450	80	32	3200	100.00	**100**	3200
31	31	481	15.50	**15**	465	81	32	3281	102.52	**102**	3264
32	32	512	16.00	**16**	512	82	32	3362	105.06	**105**	3360
33	32	545	17.02	**17**	544	83	32	3445	107.64	**107**	3424
34	32	578	18.06	**18**	576	84	32	3528	110.25	**110**	3520
35	32	613	19.14	**19**	608	85	32	3613	112.89	**112**	3584
36	32	648	20.25	**20**	640	86	32	3698	115.56	**115**	3680
37	32	685	21.39	**21**	672	87	32	3785	118.27	**118**	3776
38	32	722	22.56	**22**	704	88	32	3872	121.00	**121**	3872
39	32	761	23.77	**23**	736	89	32	3961	123.77	**123**	3936
40	32	800	25.00	**25**	800	90	32	4050	126.56	**126**	4032
41	32	841	26.27	**26**	832	91	32	4141	129.39	**129**	4128
42	32	882	27.56	**27**	864	92	32	4232	132.25	**132**	4224
43	32	925	28.89	**28**	896	93	32	4325	135.14	**135**	4320
44	32	968	30.25	**30**	960	94	32	4418	138.06	**138**	4416
45	32	1013	31.64	**31**	992	95	32	4513	141.02	**141**	4512
46	32	1058	33.06	**33**	1056	96	32	4608	144.00	**144**	4608
47	32	1105	34.52	**34**	1088	97	32	4705	147.02	**147**	4704
48	32	1152	36.00	**36**	1152	98	32	4802	150.06	**150**	4800
49	32	1201	37.52	**37**	1184	99	32	4901	153.14	**153**	4896
50	32	1250	39.06	**39**	1248	100	32	5000	156.25	**156**	4992

○ Typical Electricity Consumption methods (Printer, Fax Machines and MFDs with print capability)

Step	Initial state	Action	Record (at end of step)	Possible States Measured	Measuring Time
1	Off	- Plug the unit into meter - Zero the meter and wait test period (5 minutes or more)	Off energy Testing Interval time	Off	More than 5 minutes
2	Off	- Turn on unit - Wait until unit indicates it is in Ready mode	-	-	Various
3	Ready	- Print a job of at least one output image but no more than a single job per Job Table. - Wait until the meter shows that the unit has entered its final Sleep mode	Active 0 time (Time to output 1 page)	-	Various
4	Sleep	- Zero meter - Wait one hour	Sleep energy	Sleep	60 minutes
5	Sleep	- Zero meter and timer - Print one job per Job Table - Wait until timer shows that 15 minutes have elapsed	Job1 energy Active 1 time (Time to output 1 page)	Recovery, on, ready, sleep	15 minutes
6	Ready	- Repeat Step 5	Job2 energy Active 2 time (Time to output 1 page)	Recovery, on, ready, sleep	15 minutes
7	Ready	- Repeat Step 5 (without Active time measurement)	Job3 energy	Recovery, on, ready, sleep	15 minutes
8	Ready	- Repeat Step 5 (without Active time measurement)	Job4 energy	Recovery, on, ready, sleep	15 minutes
9	Ready	- Zero meter and timer - Wait until meter and/or unit shows that unit has entered its final Sleep mode	Final time (15 minutes after the final task to time it takes to enter into final sleep mode	Ready, sleep	Various

			Final energy	-	

Notes: Cautions taken while taking measurements

Step 1: The Off measurement period can be longer if desired to reduce measurement error. Note that the Off power is not used in the calculations.

Step 2: If the nit has no Ready indicator, use the time at which the power consumption level stabilizes to the Ready level.

Step 3: After recording the Active0 time, the remainder of this job can be canceled.

Step 5: The 15 minutes is form the job initiation. The unit must show increased energy consumption within 5 seconds of zeroing the meter and timer. It may be necessary to initiate the printing device before zeroing to assure this.

Step 6: A unit that is shipped with short default-delay times might begin steps 6-8 from sleep.

Step 9: Units may have multiple Sleep modes so that all but the last Sleep mode are included in the Final period.

Figure 1. TEC Measurement Procedure

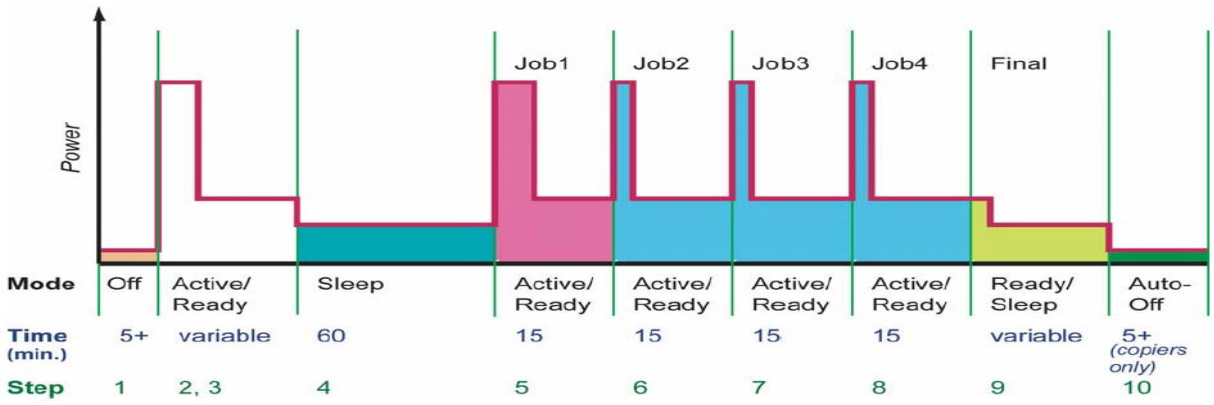
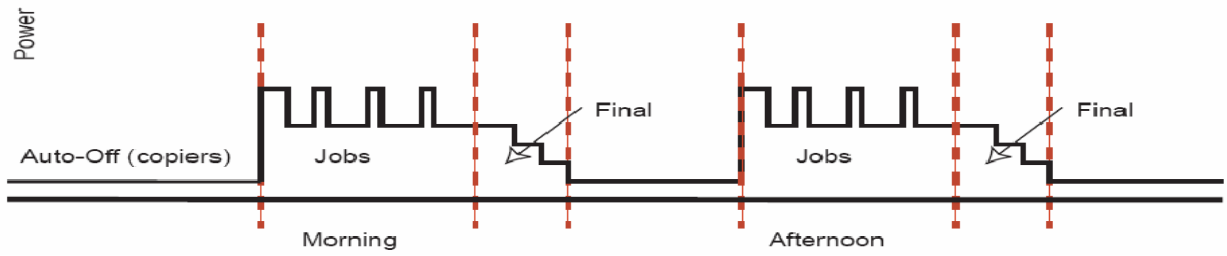


Figure 2. A Typical Day



○ Measurement methods at sleep mode

- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 12 hour.
- Power on the machine by using the power switch and allow the machine to go through its warm up cycle.
- Verify and measure the time it takes to print a copy of the A4 sized paper in its normal operating conditions.
- After 5 minutes of sleep mode, measure the average power consumption over a 1 hour period when in the sleep mode.
- Repeat the above said power consumption measurement procedure in sleep mode.
- The average of first and second power consumption measurements in sleep modes shall be taken.

(4) Fax machines

Measurements of power consumption at typical (weekly), sleep and off modes shall be taken. Typical electricity consumption and consumption at sleep modes should exclude consumption attributable to DFE. Measurements are taken by setting the printing option to monochrome single side printing. Auto-off function is disabled and network connection is enabled if applicable. Dehumidifier can be turned off if the user can control it. The test image is Test Pattern A from ISO/IEC standard 10561:1999.

○ Measurement methods of typical electricity consumption and at sleep mode is same as the measurement method of printers in (3).

(5) Copiers

Measurements of power consumption at typical (weekly), sleep and off modes shall be taken. Typical electricity consumption and consumption at sleep modes should exclude consumption attributable to DFE. Measurements are taken by setting the printing option to monochrome single side printing. Auto-off function is disabled and network connection is enabled if applicable. Dehumidifier can be turned off if the user can control it. The test image is Test Pattern A from ISO/IEC standard 10561:1999.

* Typical Electricity Consumption methods (Printer, Fax Machines and MFDs with print capability)
- Typical electricity consumption (TEC) = (Daily electricity consumption×5) + (Electricity consumption at sleep mode×48)
· Electricity consumption per day

= Electricity consumption for job per day+ (Final electricity consumption×2) + Electricity consumption per day at sleep mode

· Electricity consumption for jobs per day

= (Job 1×2) + {(jobs per day−2) × average electricity consumption for jobs

· Average electricity consumption for jobs = (job2+ job3+ job4)/3

· Electricity consumption per day at sleep mode

= [24 hours – {(job per day/4) + (final time×2)}] × Electricity consumption at sleep mode

· Calculation method for jobs per day

Product speed (ipm)	Jobs per day
ipm ≤ 8	8
8 〈 ipm 〈 32	Same as ipm (ex: 14 ipm =14)
32 ≤ ipm	32

· Calculate the nominal amount of images per day (image per day = 0.50 × ipm^2). For example, a 14 ipm unit shall use 0.50×14^2 or 98 images per day.

· Calculate the number of images per job by dividing the number of images per day by the number of jobs per day. Round down (truncate) to the nearest integer. For example, a figure of 15.8 indicates that 15 images should be made per job, rather than rounding to 16 images per job.

· Job Table Calculated

Table 4. Job Table Calculated

Speed	Jobs/ Day	Interim Images/ Day	Interim Images/ Job	Images/ Job	Images/ Day	Speed	Jobs/ Day	Interim Images/ Day	Interim Images/ Job	Images/ Job	Images/ Day
1	8	1	0.06	**1**	8	51	32	1301	40.64	**40**	1280
2	8	2	0.25	**1**	8	52	32	1352	42.25	**42**	1344
3	8	5	0.56	**1**	8	53	32	1405	43.89	**43**	1376
4	8	8	1.00	**1**	8	54	32	1458	45.56	**45**	1440
5	8	13	1.56	**1**	8	55	32	1513	47.27	**47**	1504
6	8	18	2.25	**2**	16	56	32	1568	49.00	**49**	1568
7	8	25	3.06	**3**	24	57	32	1625	50.77	**50**	1600
8	8	32	4.00	**4**	32	58	32	1682	52.56	**52**	1664
9	9	41	4.50	**4**	36	59	32	1741	54.39	**54**	1728
10	10	50	5.00	**5**	50	60	32	1800	56.25	**56**	1792
11	11	61	5.50	**5**	55	61	32	1861	58.14	**58**	1856
12	12	72	6.00	**6**	72	62	32	1922	60.06	**60**	1920
13	13	85	6.50	**6**	78	63	32	1985	62.02	**62**	1984
14	14	98	7.00	**7**	98	64	32	2048	64.00	**64**	2048
15	15	113	7.50	**7**	105	65	32	2113	66.02	**66**	2112
16	16	128	8.00	**8**	128	66	32	2178	68.06	**68**	2176
17	17	145	8.50	**8**	136	67	32	2245	70.14	**70**	2240
18	18	162	9.00	**9**	162	68	32	2312	72.25	**72**	2304
19	19	181	9.50	**9**	171	69	32	2381	74.39	**74**	2368
20	20	200	10.00	**10**	200	70	32	2450	76.56	**76**	2432
21	21	221	10.50	**10**	210	71	32	2521	78.77	**78**	2496
22	22	242	11.00	**11**	242	72	32	2592	81.00	**81**	2592
23	23	265	11.50	**11**	253	73	32	2665	83.27	**83**	2656
24	24	288	12.00	**12**	288	74	32	2738	85.56	**85**	2720
25	25	313	12.50	**12**	300	75	32	2813	87.89	**87**	2784
26	26	338	13.00	**13**	338	76	32	2888	90.25	**90**	2880
27	27	365	13.50	**13**	351	77	32	2965	92.64	**92**	2944
28	28	392	14.00	**14**	392	78	32	3042	95.06	**95**	3040
29	29	421	14.50	**14**	406	79	32	3121	97.52	**97**	3104
30	30	450	15.00	**15**	450	80	32	3200	100.00	**100**	3200
31	31	481	15.50	**15**	465	81	32	3281	102.52	**102**	3264
32	32	512	16.00	**16**	512	82	32	3362	105.06	**105**	3360
33	32	545	17.02	**17**	544	83	32	3445	107.64	**107**	3424
34	32	578	18.06	**18**	576	84	32	3528	110.25	**110**	3520
35	32	613	19.14	**19**	608	85	32	3613	112.89	**112**	3584
36	32	648	20.25	**20**	640	86	32	3698	115.56	**115**	3680
37	32	685	21.39	**21**	672	87	32	3785	118.27	**118**	3776
38	32	722	22.56	**22**	704	88	32	3872	121.00	**121**	3872
39	32	761	23.77	**23**	736	89	32	3961	123.77	**123**	3936
40	32	800	25.00	**25**	800	90	32	4050	126.56	**126**	4032
41	32	841	26.27	**26**	832	91	32	4141	129.39	**129**	4128
42	32	882	27.56	**27**	864	92	32	4232	132.25	**132**	4224
43	32	925	28.89	**28**	896	93	32	4325	135.14	**135**	4320
44	32	968	30.25	**30**	960	94	32	4418	138.06	**138**	4416
45	32	1013	31.64	**31**	992	95	32	4513	141.02	**141**	4512
46	32	1058	33.06	**33**	1056	96	32	4608	144.00	**144**	4608
47	32	1105	34.52	**34**	1088	97	32	4705	147.02	**147**	4704
48	32	1152	36.00	**36**	1152	98	32	4802	150.06	**150**	4800
49	32	1201	37.52	**37**	1184	99	32	4901	153.14	**153**	4896
50	32	1250	39.06	**39**	1248	100	32	5000	156.25	**156**	4992

○ Typical Electricity Consumption methods (Copier, MFD without printing capability)

Step	Initial state	Action	Record (at end of step)	Possible States Measured	Measuring Time
1	Off	- Plug the unit into meter - Zero the meter and wait test period (5 minutes or more)	Off energy Testing Interval time	Off	More than 5 minutes
2	Off	- Turn on unit - Wait until unit indicates it is in Ready mode	-	-	Various
3	Ready	- Print a job of at least one output image but no more than a single job per Job Table. - Wait until the meter shows that the unit has entered its final Sleep mode	Active 0 time (Time to output 1 page)	-	Various
4	Sleep	- Zero meter and wait one hour	Sleep energy	Sleep	60 minutes
5	Sleep	- Zero meter and timer - Print one job per Job Table - Wait until timer shows that 15 minutes have elapsed	Job1 energy Active 1 time (Time to output 1 page)	Recovery, on, ready, sleep, auto-off	15 minutes
6	Ready	- Repeat Step 5	Job2 energy Active 2 time (Time to output 1 page)	Recovery, on, ready, sleep, auto-off	15 minutes
7	Ready	- Repeat Step 5 (without Active time measurement)	Job3 energy	Recovery, on, ready, sleep, auto-off	15 minutes
8	Ready	- Repeat Step 5 (without Active time measurement)	Job4 energy	Recovery, on, ready, sleep, auto-off	15 minutes
9	Ready	- Zero meter and timer - Wait until meter and/or unit shows that unit has entered its final Sleep mode	Final energy (15 minutes after the final task to time it takes to enter into auto-off mode	Ready, sleep -	Various
10	Auto-off	- Zero the meter	Auto-off energy	Auto-off	5 minutes

		- Wait until the test ends (5 minutes or more)			

Notes: Cautions taken while taking measurements

Step 1: The Off measurement period can be longer if desired to reduce measurement error. Note that the Off power is not used in the calculations.
Step 2: If the nit has no Ready indicator, use the time at which the power consumption level stabilizes to the Ready level.
Step 3: After recording the Active0 time, the remainder of this job can be canceled.
Step 5: The 15 minutes is form the job initiation. The unit must show increased energy consumption within 5 seconds of zeroing the meter and timer. It may be necessary to initiate the printing device before zeroing to assure this.
Step 6: A unit that is shipped with short default-delay times might begin steps 6-8 from sleep.
Step 9: If the unit has already entered Auto-off before the start of Step 9, then the values for final energy and final time are zero.
Step 10: The Auto-off testing interval may be longer to improve accuracy.

(6) Scanners

Measurements of power consumption on the basic components of the product, excluding parts that consume external power supplies, at sleep and off modes shall be taken.

○ Measurement methods at sleep mode

- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 12 hours.
- Power on the machine by using the power switch and allow the machine to go through its warm up cycle.
- Scan one copy (A4 sized paper), and then wait exactly 15 minutes. After 15 minutes has passed, read and record the measurement results in sleep mode.
- After 5 minutes of off mode, measure the average power consumption over a 1 hour period when in the sleep mode.
- Repeat the above said power consumption measurement procedure in the sleep mode.
- The average of first and second power consumption measurements in the sleep mode shall be taken.

(7) Multifunctional devices

Measurements of power consumption at typical (weekly), sleep and off modes shall be taken. Typical electricity consumption and consumption at sleep modes should exclude consumption attributable to DFE. Measurements are taken by setting the printing option to monochrome single side printing. Auto-off function is disabled and network connection is enabled if applicable. Dehumidifier can be turned off if the user can control it. The test image is Test Pattern A from ISO/IEC standard 10561:1999.

○ Measurement methods of typical electricity consumption and at sleep mode is same as the measurement method of printers in (3) and (5).

(8) Energy-Saving & Controlling Devices

Measurements of power consumption on the basic components of the product shall be taken when the standby power consumption is blocked.

○ Measurement methods when the standby power consumption is blocked

- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 1 hour.
- Make sure the energy-saving & controlling devices terminates its operation and shuts down its power completely in 3 minutes while the 60W incandescent light bulb or 60W of AC load (power factor of 90% or more) is connected to the sockets (power on) of energy-saving & controlling devices (auto power saving multi-tab, power saving outlet, standby power blocking switches (controller), other standby power blocking devices).
- After disconnecting the permanent power source from the incandescent light bulb or the AC load, measure the power consumption of the energy-saving & controlling devices over a 1 hour period.
- The test is repeated for 5000 times(100 times for timer type) and it is tested under the maximum continuous power rating of power supply setting, as specified in the test model.

Controlling devices that automatically shut the power of the machine connected to multi-tab (by sensing operation or brightness of surrounding) standby power blocking receptacles, standby power blocking switches(controllers) or standby power blocking devices satisfying the requirements of standby power blocking functions designated by this regulation regardless of physical types of products.

(9) Televisions

Measurements of power consumption on the basic components of the product in active standby mode or passive standby mode shall be taken. Measurements of power consumption at passive standby power mode shall follow the off mode measurement method.

○ Measurement method at active standby mode

- Testing equipments and DC power supply device are activated by connecting to the power line and turning on the switch or using the remote control.
- Brightness, luminosity, resolution, shade, color, voice input, image signal settings are set to maximum power consumption state.
- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 1 hour.
- Products equipped with remote controls shall use them to stop the operation and those without the remote controls but equipped with separate power switch shall use the switch to halt the current operation (This is a state where the power supply is not blocked through plugs or power switches. Products that use remote controls and separate power blocking switches at the same time shall use the remote controls to halt the current operation without turning off the power blocking switches).
- Measure the average standby mode (active standby mode) power consumption from 30 minutes after the product has stopped its operation over a period of one hour. After half an hour, take the second average standby mode (active standby mode) measurement by repeating the procedure.
- The final power consumption in standby mode (active standby mode) is obtained by taking the average of first and second power consumption measurements in standby mode (active standby mode).

(10) VCR

Measurements of power consumption on the basic components of the product in standby mode shall be taken.

○ Measurements of power consumption at standby power mode shall follow the off mode measurement method.

(11) Home audio products

Measurements of power consumption on the basic components of the product in standby mode shall be taken.

○ Measurements of power consumption at standby power mode shall follow the off mode measurement method.

(12) DVD players

Measurements of power consumption on the basic components of the product in standby mode shall be taken.

○ Measurements of power consumption at standby power mode shall follow the off mode measurement method.

(13) Radio cassette players

Measurements of power consumption on the basic components of the product in standby mode shall be taken.

○ Measurements of power consumption at standby power mode shall follow the off mode measurement method.

(14) Microwave ovens

Measurements of power consumption on the basic components of the product in standby mode shall be taken.

○ Measurements of power consumption at standby power mode

- Connect the testing equipments and other devices to power lines with certain voltages.
- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 1 hour.
- After the authorization of the nameplate power voltage rating, place a glass of water (200cc) in the oven then shut the door and start the oven in its maximum output power rating for 2 minutes.
- After the 2 minutes of operation, open the door and take out the glass and shut the door (This is a state where simply the door is shut after the operation and the power is not being shut off artificially by the switch).
- Measure the average standby power mode consumption from 30 minutes after the door has been shut over a period of one hour. After half an hour, take the second average standby power mode measurement by repeating the procedure.
- The final power consumption in standby mode is obtained by taking the average of first and second power consumption measurements in standby modes.

(15) Set-top Boxes

Measurements of power consumption on the basic components of the product in standby mode (active standby mode or passive standby mode) or on mode shall be taken. Measurements in standby mode are

taken while the power supply is confirmed and making sure that the A/V cable and signal are connected. Measurements of power consumption at passive standby power mode shall follow the measurement method at off mode

○ Measurements of power consumption at active standby power mode

- Testing equipments and DC power supply device are activated by connecting to the power line and turning on the switch or using the remote control.
- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 1 hour.
- Products equipped with remote controls shall use them to stop the operation and those without the remote controls but equipped with separate power switch shall use the switch to halt the current operation (This is a state where the power supply is not blocked through plugs or power switches. Products that use remote controls and separate power blocking switches at the same time shall use the remote controls to halt the current operation without turning off the power blocking switches).
- Measure the average standby power mode (active standby mode) consumption from 30 minutes after the product has stopped its operation over a period of one hour. After half an hour, take the second average standby power mode (active standby mode) measurement by repeating the procedure.
- The final power consumption in standby mode (active standby mode) is obtained by taking the average of first and second power consumption measurements in standby modes (active standby mode).

(16) Door phone

Measurements of power consumption on the basic components of the product in standby mode shall be taken. Products with connecting terminals from inside and outside of home that enable basic invocation and communication or image transferring function are included when taking measurements. If there is no difference between internal and external device for transmitting images, the product with internal and external devices are included when taking measurements. Products with battery charging capabilities, the batteries should be excluded when taking measurements.

○ Measurements of power consumption at standby power mode

- Connect the testing equipments and other devices to power lines with certain voltages.
- The product should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 1 hour.
- Measure the average standby power mode consumption from 30 minutes after the product has stopped its operation over a period of one hour. After half an hour, take the second average standby power mode measurement by repeating the procedure.
- The final power consumption in standby mode is obtained by taking the average of first and second power consumption measurements in standby modes.

(17) Cordless/Corded Phones

Measurements of power consumption on the basic components of the product in standby power mode shall be taken. The measurements in the standby power mode shall be taken when the cordless/corded phone is connected to the telephone wire and those with LCD saving functions are measured in the power saving state.

○ Measurements of power consumption at standby power mode

- The testing equipments and the product should be stabilized at room ambient conditions for at least 1 hour and then connect the testing equipments and other devices to power lines with certain voltages.
- Connect the power cable to the cordless/corded phones (base set, battery chargers for portable devices) and complete the battery charging process if needed. The cordless/corded phone should be on hook mode while performing this task and the handset of cordless phone or combined cordless phone/answering machine shall be placed on the chargers.
- Wait until the complete charging cycle is finished
- Measure the average standby power mode consumption from 30 minutes after the completion of the charging cycle, while the cordless phone is still placed on the charger, over a period of one hour (However, considering the characteristics of the circuits, those products attempting recharging after one hour of discharging, one cycle is defined from the time it attempts to recharge after a complete discharge). After half an hour, take the second average standby power mode measurement by repeating the procedure.
- The final power consumption in standby mode is obtained by taking the average of first and second power consumption measurements in standby modes.

(18) Bidet

Measurements of power consumption on the basic components of the product in heating standby mode and off mode shall be taken. When taking the measurement, heating standby mode of the toilet seat heating function shall be taken at ambient temperature of 20±1℃ and setting the surface temperature to its maximum possible temperature. If the bidet has power saving button, the maximum temperature is set and measured while the power saving button is pushed down. Bidets with automatic circuit breaker shall measure its off mode power consumption by also considering the power associated with automatic circuit breaker.

- The product should be plugged in to a live power line and switched off and then stabilized at room ambient conditions for at least 1 hour.
- Check whether the ambient temperature is set to 20±1℃
- Turn on the power switch to activate the toilet seat heating function. If the toilet seat heating function

has several standard surface temperature settings, the maximum available temperature is selected for the testing (If the bidet has power saving button, the maximum temperature is set and measured while the power saving button is pushed down)
- Measure the average heating standby power mode consumption from 30 minutes after the product has initiated its operation over a period of one hour. After half an hour later, take the second heating standby power mode measurement by repeating the procedure.
- For bidets with power saving function, the average power consumption at heating standby power mode measurements shall be taken 30 minutes after the product has initiated it power saving function over a period of one hour.
- The final power consumption in standby mode is obtained by taking the average of first and second power consumption measurements in heating standby power modes.

(19) Modem

Measurements of power consumption at standby power and off modes shall be taken.

- The product and measurement device should be plugged in to a live power line but turned off and stabilized at room ambient conditions for at least 1 hour.
- Turn on the power switch and observe that the modem is in normal operation by checking that it has successfully transmitted data. Then, take the measurement of power consumption at on mode for an hour.
- Turn off the power of the computer (or any other kinds of terminals) connected to the modem and wait for half an hour.
- Measure the first power consumption at standby power mode over a 1 hour period. After the completion of the first measurement, turn off the power of the modem and wait for half an hour to take the first power consumption at off mode.
- After taking the first off mode power consumption, repeat the above said power consumption measurement procedure in on and standby power mode.

(20) Home gateway

Measurements of power consumption at sleep modes shall be taken. Measurements are taken while all LAN ports within the device are physically connected to the traffic generator in the local area network. However, all port should be active, except LAN port, when the measurements are taken.

○ Measurements of power consumption at sleep mode

- The testing equipments and the product should be stabilized at room ambient conditions for at least 1 hour and then connect the testing equipments and other devices to power lines with certain voltages.
- Turn on the power and check whether the device is in normal operation by verifying the transmission of

data through the traffic generator. Allowable maximum traffic is achieved through the device's LAN ports.
- After the sending and receiving of the traffic, time is measured within the specified sleep mode.
- After 5 minutes the device has entered into sleep mode, take the electricity consumption for an hour and take the average electricity consumption at sleep mode.
- Repeat the above step.
- The final power consumption in standby mode is obtained by taking the average of first and second power consumption measurements in sleep modes.

(21) Hand dryers

Measurements of power consumption at sleep modes shall be taken. If the hand dryer contains switch to activate heating element, then measurements should be taken while the heating element is in operation.

○ Measurements of power consumption at sleep mode

- The testing equipments and the product should be connected to power lines with certain voltages.
- The testing equipments and the product should be stabilized at room ambient conditions for at least 1 hour.
- Activate the hand dryer once by raising the power to its maximum range for the maximum duration as specified in the user's product manual.
- After the hand dryer enters into sleep mode, wait for half an hour and then measure the power consumption for an hour and calculate the average power consumption.
- Repeat the above step.
- The final power consumption in sleep mode is obtained by taking the average of first and second power consumption.

22) Servers

Measurements of power consumption at standby power modes shall be taken.

○ Measurements of power consumption at standby power mode
- For example, specifications of servers should be accurately recorded in the test report as shown below:

Category	Contents to be recorded
Form factor	1U
Number of processor sockets	2
Type and number of installed processor	1/ Intel Zeon 3430
Number of DIMM slots/ Maximum capacity of memory (GB)	8/32
Support availability for ECC or buffered DIMM	support

Maximum number of HDD(SSD) that can be supported	8
Maximum number of power supplies that can be supported	2
Installed OS	Windows server 2003

- Standby power allowances for each additional device should be recorded in the test report as shown below:

Device	Number of installed devices in addition to the basic configuration	Additional standby power allowance for each additional device in addition to the basic configuration
Power supply	1	20.0W
HDD(SSD)	3	24.0W
Memory	4 GB	8.0W
I/O	2 ports of 1 Gbit, onboard Ethernet	4.0W

- The measuring device and the server should be plugged in to a live power line while the switch is turned off and stabilized at room ambient conditions for at least 1 hour.
- Turn on the power switch to start the booting of the server and then check whether the ports of I/O devices are in operation.
- At the initial screen mode where there are no induced movements, wait for 15 minutes and then measure the power consumption over a 1 hour period to get the standby power consumption.
- Repeat the above standby power consumption measurement procedure.

Verify and measure the time it takes from the point where there are no induced movements at its initial screen mode to the point where it enters into a sleep mode.

- The standby power consumption is obtained by taking the average of first and second power consumption measurements.
- The standby power of dual-node servers can be found by repeating the procedure stated above. The standard of single node server is applied by dividing the total standby power measured in dual node servers by two.

[Annex IV]

Designated testing institutes and items selected for testing
(Related to Article 3 paragraph 5 and Article 4 paragraph 2)

Product	Designated Testing Institute
1. Computers	KTL, KTC, KETI, KTR, KERI, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
2. Monitor	KTL, KTC, KETI, KTR, KERI, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
3. Printers	KTL, KTC, KETI, KTR, KERI, ERI, TTA, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, KSQ, EMC Compliance, Standard Bank, KES
4. Fax Machine	KTL, KTC, KETI, KTR, KERI, ERI, TTA, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
5. Copiers	KTL, KTC, KETI, KTR, KERI, ERI, TTA, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, KSQ, EMC Compliance, Standard Bank, KES
6. Scanners	KTL, KTC, KETI, KTR, KERI, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK

	TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
7. Multifunctional Devices	KTL, KTC, KETI, KTR, KERI, ERI, TTA, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, KSQ, EMC Compliance, Standard Bank, KES
8. Energy-Saving & Controlling Devices	KTL, KTC, KETI, KTR, KERI, ERI, TTA, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, KSQ, EMC Compliance, Standard Bank, KES
9. Televisions	KTL, KTC, KETI, KTR, KERI, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, KSQ, EMC Compliance, Standard Bank, KES
10. VCR	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Bank, KES
11. Home Audio Products	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Bank, KES
12. DVD Players	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
13. Radio Cassette	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS

Players	Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
14. Microwave Ovens	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
15. Set-top Boxes	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
16. Door phone	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
17. Cordless/Corded Phones	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, KSQ, EMC Compliance, Standard Bank, KES
18. Bidet	KTL, KTC, KETI, KERI, KTR, ERI, TTA, KETI, SGS Testing Korea, Nemko Korea, Digital EMC, UCS, Safety Compliance, CTK, Intertek ETL SEMKO Korea, IST, SK TECH, ESTECH, HCT, LTA, ONETECH, E-Testing Laboratory, KOSTEC, Stdeng, KSQ, EMC Compliance, Standard Wraps, Standard Bank, KES
19. Modem	KTC, KETI, KERI, TTA
20. Home gateway	KTC, KETI, KERI, TTA
21. Hand dryers	To be announced via KEMCO website(www.kemco.or.kr)
22. Servers	To be announced via KEMCO website(www.kemco.or.kr)

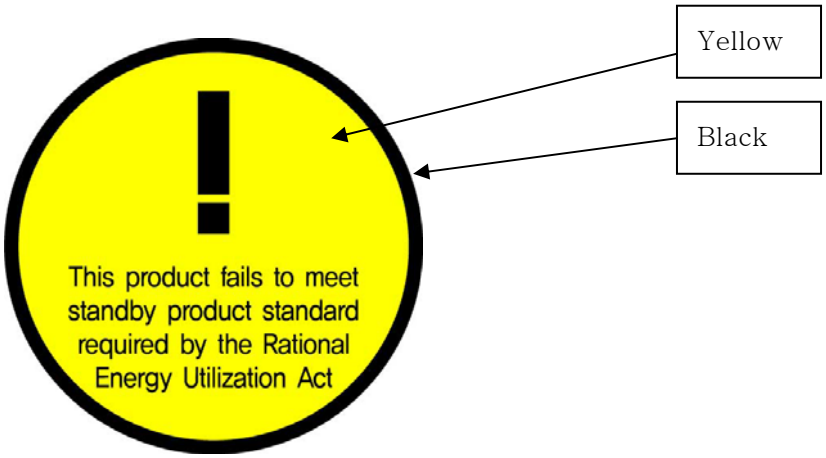
Remark:

1. KTL：Korea Testing Laboratory
   KETI：Korea Electric Testing Institute
   KERI：Korea Electrotechnology Research Institute
   ERI：EMC Research Institute
   TTA：Telecommunications Technology Associations,
   KETI：Korea Electronics Technology Institute
   IST：International Standard Technology
   LTA：Laboratory for Test & Approval
   Stdeng：Standard Engineering
   KSQ：Korea Standard Quality Laboratory

[Annex V]

The display method of warning label of e-Standby Power Program Target Products (Related to Article 4 paragraph 3)

1. e-Standby Power Warning Label



A. Color

(1) In principle, various colors are used to display the logo. In this case, PANTONE COLORS are used in principle but 4 primary colors can be used according to the characteristics of the product.

Category		4 primary colors
Yellow	PANTONE Process Yellow C	Y100%
Black	PANTONE Process Black C	K100%

(2) In some cases the simple colors are used for expression and 100% ink or the predominant color of the product's surface is used.

B. The minimum size of the label is specified below:

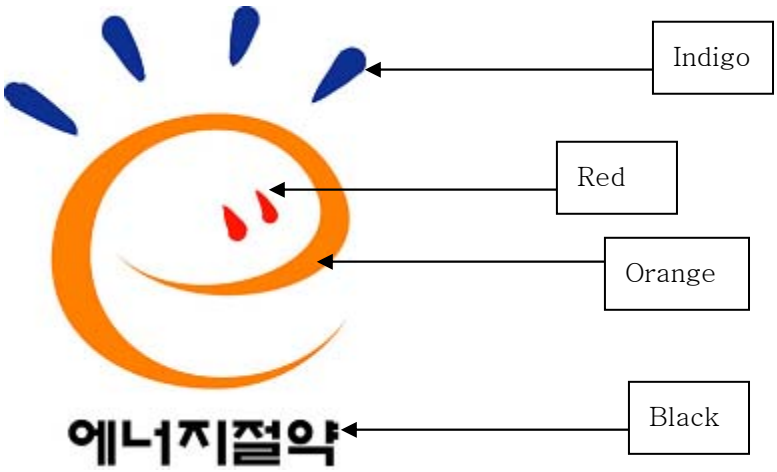
2. The location of the e-Standby Power Warning Label

The label should be displayed in front, on the upper side or the nameplate of the product where it is visually easy to find.

[Annex VI]

Labeling method of Products with High Standby Power Reduction Potentials
(Related to Article 8 paragraph 1)

1. Marking an energy saving logo on a product



Energy saving

A. Color of the logo

(1) In principle, various colors are used to display the logo. In this case, the principle specified by the Korea Standard Color is used. However, depending on the special particulars of the product, the 4 primary colors can also be used. For proper usage of the energy saving design logo, it is recommended to visit www.kemco.or.kr and download the energy saving design logo for use.

Category	Korea Standard Color	Munsell No.	4 primary colors
Orange	KS 0187	2.5YR 6/14	Magenta 50%, Yellow 100%
Red	KS 0106	7.5R 5/16	Magenta 90%, Yellow 100%
Indigo	KS 1102	5PB 3/10	Cyan 100%, Magenta 70%
Black		N1	Black 100%

(2) In some cases the simple colors are used for expression and 100% ink or the predominant color of the product's surface is used.

B. The size of the logo

The participating entity can determine the size of the logo in proportionate to their product size.

C. Logo marking methods

(1) Marking methods, in principle, are as follows:

Products	Marking methods
Computer	Power saving Computer
Monitors	Power saving Monitors
Printers	Power saving Printers
Fax machines	Power saving Fax machines
Copiers	Power saving Copiers
Scanners	Power saving Scanners
Multifunctional devices	Power saving Multifunctional devices
Energy-Saving & Controlling Devices	Power saving Energy-Saving & Controlling Devices
Televisions	Power saving Televisions
VCR	Power saving VCR
Home audio products	Power saving Home audio products
DVD players	Power saving DVD players
Radio cassette players	Power saving radio cassette players
Microwave Ovens	Power saving Microwave Ovens
Set-top Boxes	Power saving Set-top Boxes
Door phone	Power saving Door phone
Cordless/Corded Phones	Power saving Cordless/Corded Phones
Bidet	Power saving bidet
Modem	Power saving modem
Home gateway	Power saving Home gateway
Hand dryers	Power saving hand dryers
Servers	Power saving servers

(2) In some cases, the participating entity can modify the marking method or decides not to display.

2. Methods to use energy saving logo advertisements

For the purpose of promoting the power saving products, the energy saving logo can be used in the products participating in the E-Standby Program (e-Standby Program), pamphlets and other promotional prints.

[Annex VII]

Standard for Testing Equipments and Professional Human Resources required for Standby Power Testing Institutes (Related to Article 11 paragraph 2)

Testing Equipments	Maximum measurement range	Allowable tolerance	Decomposition Capability	Number of Device
Stop watch or timer	-	±1%		More than 2
Room temperature thermometer	50℃	±2%		More than 2
Humidity gage	95% RH	±6% RH		More than 2
Watt hour meter or automatic power recorder ①	≤ 1W 1W~2000W	±20mW ±3%	- ≤ 0.01W for electricity consumption less than 10W - ≤0.1W for electricity consumption greater than 10W and less than 100W - ≤1W for electricity consumption greater than 100W and less than 1.5kW - ≤10W for electricity consumption greater than 1.5kW	More than 3
Automatic volt recorder	600V	±1.5%		More than 3
Oscilloscope	3kHz	±0.2%		More than 2
Volt stabilizer	-	±1.5%		More than 2
Traffic generator	-	-		More than 1

1) Humidity gage is applied to copier and MFDs

2) Traffic generators are applied to modem and home gateways

3) The devices owned by the institutes are recognized if their precisions fall within the allowable tolerance range after coordination even if their maximum measurement range exceeds the maximum measurement values specified in this regulation.

2. Professional Human Resources

A. Qualification of Testing Agents

- Testing agents should have passed the qualifying exam and completed necessary courses in KS A ISO/IEC operations at designated education centers in accordance with Article 37 of “Operational Directive of Accreditation of Public Organization” of Agency for Technology and Standards.
- Following requirements are needed to qualify a person as a testing agent:

Field	High School	University(less than 4 years)	University(Above 4 years)
Electric/Electronic Testing	3 years	2 years	1 year

B. Total number of electric/electronic test agents required for a Standby Power Testing Institute: More than 5 testing agents

[Annex VIII]

Standard for Testing Equipments and Professional Human Resources required for Self-testing Institutes (related to Article 12 paragraph 2)

Testing Equipments	Maximum measurement range	Allowable tolerance	Decomposition Capability	Number of Device
Stop watch or timer	-	±1%		More than 1
Room temperature thermometer	50℃	±2%		More than 1
Humidity gage	95% RH	±6% RH		More than 1
Watt hour meter or automatic power recorder ①	≤ 1W 1W~2000W	±20mW ±3%	- ≤ 0.01W for electricity consumption less than 10W - ≤0.1W for electricity consumption greater than 10W and less than 100W - ≤1W for electricity consumption greater than 100W and less than 1.5kW - ≤10W for electricity consumption greater than 1.5kW	More than 1
Automatic volt recorder	600V	±1.5%		More than 1
Oscilloscope	3kHz	±0.2%		More than 1
Volt stabilizer	-	±1.5%		More than 1
Traffic generator	-	-		More than 1

1) Humidity gage is applied to copier and MFDs

2) Traffic generators are applied to modem and home gateways

3) The devices owned by the institutes are recognized if their precisions fall within the allowable tolerance range after coordination even if their maximum measurement range exceeds the maximum measurement values specified in this regulation.

2. Professional Human Resources

A. Qualification of Testing Agents

- Following requirements are needed to qualify a person as a testing agent:

Field	High School	University(less than 4 years)	University(Above 4 years)
Electric/Electronic Testing	3 years	2 years	1 year

B. Total number of electric/electronic test agents required for a Standby Power Testing Institute: More than 1 testing agent

[Form A]

1. Computers

Standby Power Reporting Form (Computer)

□ **Products with High Standby Reduction Potentials**

□ **e-Standby Power Warning Labeled Products**

① Company name		② Department	(Telephone)
③ Manufacturing factory			

④ Standby power

☐ Personal computer ☐ Network computer ☐ Integrated PC

☐ others:

Brand name	Model name (Model Series Units Multiple model name possible)	CPU	CPU speed (MHz)	RAM(MB) (Board)	Hard disk (GB)	Cache memory (KB)

Power supply Rated power consumption (W)	Computer(main) On mode power consumption(W)	Computer(main) Sleep mode power consumption(W)	Computer(main) Sleep mode default time(min)	Computer(main) Off mode power consumption(W)	Monitor sleep mode default time(min)	Expected shipping date

Product specifications

Bus type		Speaker		CD-ROM Drive	
Keyboard		USB		DVD Drive	
Mouse		Operating system			
Video RAM(MB)		others			

⑥ Testing institute(name of the institute or self testing)	
⑦ WOL function availability on shipment	☐ Yes ☐ No
⑧ WOL function active on shipment	☐ Yes ☐ No
⑨ Monitor controlling method	☐ DPMS ☐ Switch ☐ Others
⑩ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:
⑪ Other remarks	

⑫ Additional model reporting (if applicable)

Original Model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded) 2. Product image or pamphlets

2. Monitors

Standby Power Reporting Form (Monitors)

□ **Products with High Standby Reduction Potentials**

□ **e-Standby Power Warning Labeled Products**

①Company name		② Department in charge	(Telephone)
③Manufacturing factory			

④ Standby Power

☐ CRT monitor ☐ LCD monitor ☐ Others

Brand name	Model name (Model Series Units Multiple model name possible)	Monitor size	Maximum resolution	Dot pitch
		cm (inch)		

Refresh ratio	Rated power consumption (W)	On mode power consumption (W)	Sleep mode power consumption (W)	Off mode power consumption (W)	Expected shipping date

⑤ Functionality remarks (Multiple selection possible)								
	EGA		SVGA		TCO		MAC compatibility	
	VGA		XGA		MPR II		USB	
	Others							

⑥Testing institute(name of the institute or self testing)	
⑦Sleep mode entering method	
⑧ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:
⑨ Other remarks	

⑩Additional model reporting (if applicable)	Original model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

3. Printers,/fax machines

Standby Power Reporting Form (Printers, Fax machines)

□ **Products with High Standby Reduction Potentials**

□ **e-Standby Power Warning Labeled Products**

①Company name		②Department in charge	(Telephone)
③Manufacturing factory			
④Products	☐Printer ☐Fax machine ☐Combination printer/fax machine		

⑤Standby power	Brand name	Model name (Model Series Units Multiple model name possible)	Printing speed (ipm)	Typical Electricity Consumption(TEC)	
				Reference (kWh)	Average Estimate (kWh)

Rated power consumption (W)	On mode power consumption (W)	Sleep mode power consumption (W)	Sleep mode default time (min)	Off mode power consumption (W)	Expected shipping date

⑥Networks support functions	☐Basic ☐Optional ☐None
⑦ Testing institute(name of the institute or self testing)	
⑧Color	☐Monochrome ☐Color
⑨Printing method	☐Direct thermal ☐Dye sublimation ☐Electrophotography ☐Thermal transfer ☐Solid ink ☐Ink jet
⑩Duplex printing	☐Yes ☐No ☐Optional
⑪Location of the energy saving or warning label	☐ Front ☐ Top ☐ Nameplate
⑫Other remarks	

⑬ Additional model reporting (if applicable)	Original model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded) 2. Product image or pamphlets

4. Copiers

Standby Power Reporting Form (Copiers)

□ Products with High Standby Reduction Potentials

① Company name		② Department in charge	(Telephone)
③ Manufacturing factory			
④ Types	☐ Analog ☐ Digital		

⑤ Standby power	Brand name	Model name (Model Series Units Multiple model name possible)	Copier speed (ipm)	Duplex copying speed (cpm)	TEC	
					Reference (kWh)	Average Estimate (kWh)

Nameplate power consumption (W)	On mode power consumption (W)	Sleep mode power consumption (W)	Sleep mode default time (min)	Off mode power consumption (W)	Expected shipping date

⑥ Networks support functions	☐Basic ☐Optional ☐None
⑦ Testing institute(name of the institute or self testing)	
⑧ Color	☐Monochrome ☐ Color
⑨ Printing method	☐Direct thermal ☐Dye sublimation ☐Electrophotography ☐Thermal transfer ☐Solid ink ☐Ink jet
⑩ Duplex copying	☐ Yes ☐ No ☐ Optional
⑪ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Nameplate
⑫ Other remarks	

⑬ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)

2. Product image or pamphlets

5. Scanners

Standby Power Reporting Form(Scanners)

□ Products with High Standby Reduction Potentials

① Company name		② Department in charge	(Telephone)
③ manufacturing factory			

④Standby Power

☐ Flat scanners ☐ Seat pad scanners ☐ Film scanners

Brand name	Model name (Model Series Units Multiple model name possible)	Color (Yes/No)	Optical resolution	Maximum resolution	Bit depth Grayscale /Color

Compatibility (PC, MAC, all)	Rated power consumption (W)	On mode power consumption (W)	Sleep mode power consumption (W)	Sleep mode default time (min)	Off mode power consumption (W)	Expected shipping date

⑤ Testing institute(name of the institute or self testing)	
⑥ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:
⑦ Other remarks	

⑧Additional model reporting (if applicable)	Original Model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

6. Multifunctional device

<table>
<tr><td colspan="11">Standby Power Reporting Form((Multifunctional device)
□ Products with High Standby Reduction Potentials □ e-Standby Power Warning Labeled Products</td></tr>
<tr><td colspan="2">① Company name</td><td colspan="3"></td><td>② Department in charge</td><td colspan="4">(Telephone)</td></tr>
<tr><td colspan="2">③ Manufacturing factory</td><td colspan="9"></td></tr>
<tr><td colspan="2">④ Classification</td><td colspan="9">☐ Multifunctional device ☐ Upgradeable digital copier</td></tr>
<tr><td colspan="2" rowspan="4">⑤ Multifunction</td><td colspan="2">Copier function(default)</td><td colspan="7">☐ Yes ☐ No</td></tr>
<tr><td colspan="2">Print function</td><td colspan="7">☐ Default ☐ Optional ☐ None</td></tr>
<tr><td colspan="2">Fax function</td><td colspan="7">☐ Default ☐ Optional ☐ None</td></tr>
<tr><td colspan="2">Scan function</td><td colspan="7">☐ Default ☐ Optional ☐ None</td></tr>
<tr><td rowspan="4">⑥ Standby power</td><td>Brand name</td><td>Model name (Model Series Units Multiple model name possible)</td><td colspan="2">Image reproduction speed (ipm)</td><td colspan="5">TEC</td></tr>
<tr><td></td><td></td><td colspan="2"></td><td colspan="2">Reference (kWh)</td><td colspan="3">Average Estimate (kWh)</td></tr>
<tr><td>Rated power consumption (W)</td><td colspan="2">On mode power consumption (W)</td><td>Sleep mode power consumption (W)</td><td>Sleep mode default time (min)</td><td>Off mode default time (min)</td><td colspan="2">Expected shipping date</td></tr>
<tr><td></td><td colspan="2"></td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td colspan="4">⑦Networks support functions</td><td colspan="7">☐Basic ☐Optional ☐None</td></tr>
<tr><td colspan="4">⑧Testing institute(name of the institute or self testing)</td><td colspan="7"></td></tr>
<tr><td colspan="2">⑨Color</td><td colspan="9">☐Monochrome ☐ Color</td></tr>
<tr><td colspan="4">⑩Printing method</td><td colspan="7">☐Direct thermal ☐Dye sublimation ☐Electrophotography
☐Thermal transfer ☐Solid ink ☐Ink jet</td></tr>
<tr><td colspan="4">⑪Duplex function availability</td><td colspan="7">☐ Yes ☐ No ☐ Optional</td></tr>
<tr><td colspan="3">⑫ Location of the energy saving or warning label</td><td colspan="8">☐ Front ☐ Top ☐ Others:</td></tr>
<tr><td colspan="3">⑬Other remarks</td><td colspan="8"></td></tr>
<tr><td colspan="3" rowspan="2">⑭ Additional model reporting (if applicable)</td><td>Original Model name</td><td colspan="7">Modification(additional) contents</td></tr>
<tr><td></td><td colspan="7"></td></tr>
<tr><td colspan="11">I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation
Applicant: Signature: Date (year/month/date):
The President of the Korea Energy Management Corporation, Esq.</td></tr>
<tr><td colspan="11">Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets</td></tr>
</table>

7. Energy-Saving & Controlling Devices

<table>
<tr><td colspan="7">Standby Power Reporting Form(Energy-Saving & Controlling Devices)
□ Products with High Standby Reduction Potentials</td></tr>
<tr><td colspan="2">① Company name</td><td></td><td colspan="2">② Department in charge</td><td colspan="2">(Telephone)</td></tr>
<tr><td colspan="2">③ Manufacturing factory</td><td colspan="5"></td></tr>
<tr><td>④ Classifications</td><td colspan="2">☐ Power saving multi-tab
☐ Power saving outlet
☐ Standby power blocking switch (controller)
☐ Other standby power blocking devices</td><td>⑤ Control type</td><td colspan="3">☐ Load sensing
☐ Light sensing
☐ Timer
☐ Combination type(load, light, body sensing)</td></tr>
<tr><td rowspan="4">⑥Standby power</td><td>Brand name</td><td colspan="2">Model name</td><td colspan="3">Product name (product type)</td></tr>
<tr><td></td><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td>Convert to on mode (Auto/Manual)</td><td>Rated power consumption (W)</td><td>Auto power off or standby power blocking (W)</td><td>Auto power off or standby power blocking default time(min)</td><td colspan="2">Expected shipping date</td></tr>
<tr><td></td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td colspan="2">⑦ Operating principle</td><td colspan="5"></td></tr>
<tr><td colspan="3">⑧ Safety authentication or other authentication matters</td><td colspan="4"></td></tr>
<tr><td colspan="3">⑨ Limitations in using the controlling devices (if limitation exists)</td><td colspan="4"></td></tr>
<tr><td colspan="3">⑩ Testing institute(name of the institute or self testing)</td><td colspan="4"></td></tr>
<tr><td colspan="2">⑪ Location of the energy saving or warning label</td><td colspan="5">☐ Front ☐ Top ☐ Others:</td></tr>
<tr><td colspan="2">⑫ Other remarks</td><td colspan="5"></td></tr>
<tr><td colspan="2" rowspan="2">⑬ Additional model reporting (if applicable)</td><td colspan="2">Original Model name</td><td colspan="3">Modification(additional) contents</td></tr>
<tr><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td colspan="7">I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):
Applicant: Signature:
The President of the Korea Energy Management Corporation, Esq.</td></tr>
<tr><td colspan="7">Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets</td></tr>
</table>

8. TV, VCR

Standby Power Reporting Form(TV, VCR) □ Products with High Standby Reduction Potentials □ e-Standby Power Warning Labeled Products							
① Company name		② Department in charge	(Telephone)				
③ Manufacturing factory							
④ Classification	☐ TV ☐ TV monitor ☐ Component TV ☐ TV/VCR combination ☐ TV/DVD combination ☐ TV/VCR/DVD combination ☐ TV/Set-top box combination ☐ VCR ☐ VCR/DVD combination						
⑤ Standby power	Brand name	Model name (Model Series Units Multiple model name possible)	Monitor size	Monitor ratio (width : height)	Number of heads		
			cm (Inch)	:			
	Mono/ Stereo	Hi-fi	Rated power consumption (W)	On mode power consumption (W)	Standby mode power consumption (W)	Off mode power consumption (W)	Expected shipping date
⑥ Display type(TV)	☐ CRT ☐ LCD ☐ PDP ☐ Projection ☐ others:						
⑦ Digital broadcasting function availability	☐ Digital TV(internal set-top box) ☐ Digital TV(needs set-top box connection) ☐ Analog TV						
⑧ Digital TV display quality	☐ HDTV ☐ SDTV						
⑨ Remote control availability	☐ Yes ☐ No						
⑩ Testing institute(name of the institute or self testing)							
⑪ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:						
⑫ Other remarks							
⑬ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents					
I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation Applicant: Signature: Date (year/month/date): The President of the Korea Energy Management Corporation, Esq.							
Attachment: 1. Test report (In the case of additional model reporting, excluded) 2. Product image or pamphlets							

9. Home Audio Products, DVD players

Standby Power Reporting Form(Home Audio Products, DVD players)

□ Products with High Standby Reduction Potentials

① Company name		② Department in charge	(Telephone)
③ Manufacturing factory			

④ Standby power

☐ Tuner ☐ Stereo Amp/Free Amp ☐ Receiver
☐ CD player/changer ☐ Cassette deck ☐ Equalizer
☐ Mini/midi system ☐ Laser disk player ☐ Mini disk player
☐ Power speaker ☐ Rack system ☐ Audio/DVD combination
☐ DVD player

Brand name	Model name (Model Series Units Multiple model name possible)	Rated power consumption (W)	On mode power consumption (W)	Standby mode power consumption (W)	Off mode power consumption (W)	Expected shipping date

⑤ Remote control availability	☐ Yes ☐ No
⑥ Testing institute(name of the institute or self testing)	
⑦ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:
⑧ Other remarks	

⑨ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

10. Radio cassette player

Standby Power Reporting Form(Radio cassette player)

□ Products with High Standby Reduction Potentials

① Company name		② Department in charge	(Telephone)
③ Manufacturing factory			

④ Standby power	☐ Radio ☐ Radio + cassette player ☐ Radio + cassette player+ CD player ☐ Other ( )							
	Brand name	Model name (Model Series Units Multiple model name possible)	Rated power consumption (W)	On mode power consumption (W)	Standby mode power consumption (W)	Off mode power consumption (W)	Expected shipping date	

⑤ Remote control availability	☐ Yes ☐ No	
⑥ Testing institute(name of the institute or self testing)		
⑦ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:	
⑧ Other remarks		
⑨ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

11. Microwave ovens

Standby Power Reporting Form(Microwave ovens)

□ Products with High Standby Reduction Potentials □ e-Standby Power Warning Labeled Products

① Company name		② Department in charge	(Telephone)				
③ Manufacturing factory							
④ Standby power	☐ Simple function ☐ Multiple function						
	Brand name	Model name (Model Series Units Multiple model name possible)	Capacity (ℓ)	Rated power consumption (W)	On mode power consumption (W)	Standby mode power consumption (W)	Expected shipping date
⑤ Microwave oven function							
⑥ Testing institute(name of the institute or self testing)							
⑦ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:						
⑧ Other remarks							
⑨ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents					

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

12. Set-top boxes

Standby Power Reporting Form(Set-top Boxes) □ Products with High Standby Reduction Potentials □ e-Standby Power Warning Labeled Products								
① Company name			② Department in charge		(Telephone)			
③ Manufacturing factory								
④Standby power	☐ Cable ☐ Satellite ☐ IP ☐ Combo ( ) ☐ Hybrid ☐ Others							
	Brand name	Model name (Model Series Units Multiple model name possible)	Rated power consumption (W)	On mode power consumption (W)	Standby mode power consumption (W)	Off mode power consumption (W)	Expected shipping date	
⑤ Additional functions (multiple selection possible)	☐ Internal hard disk drive ☐ xDSL modem ☐ Video conference module ☐ IEEE 1394 interface ☐ Cable modem ☐ HD Decoder ☐ Ethernet interface 100M (Port) ☐ Additional LNB feed (mA) ☐ HDMI interface ☐ Ethernet interface 1000M (Port) ☐ Additional tuner ☐ CA ☐ WLAN 80211a/b/g/n ☐ Additional demodulator ☐ Smart card ☐ Bluetooth ☐ Bypass output ☐ Additional MPEG decoder ☐ USB/RS-232 interface (port) ☐ Power line communication module ☐ SPIDF Audio output ☐ Home automation interface ☐ VoIP phone interface ☐ PSTN modem							
⑥ Performance of set-top box	☐ HD ☐ SD ☐ PVR							
⑦ Remote control availability	☐ Yes ☐ No							
⑧ Testing institute(name of the institute or self testing)								
⑨ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:							
⑩ Other remarks								
⑪ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents						

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

13. Door phone

Standby Power Reporting Form(Door phone)

□ Products with High Standby Reduction Potentials

① Company name		② Department in charge	(Telephone)
③ Manufacturing factory			

④ Standby power

☐ Door phone (no LCD) ☐ CRT door phone (simple function)
☐ LCD door phone (simple function) ☐ Door phone (multiple function)
☐ Wall pad ☐ Web pad

Brand name	Model name (Model Series Units Multiple model name possible)	Rated power consumption (W)	On mode power consumption (W)	Standby mode power consumption (W)	Expected shipping date

⑤ Multiple function

☐ Yes ☐ No

☐ Fire ☐ Bathroom phone
☐ Gas ☐ Kitchen TV, video phone
☐ Crime prevention ☐ Emergency telephone
☐ Gate opening/locking

⑥ Testing institute(name of the institute or self testing)	
⑦ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:
⑧ Other remarks	

⑨ Additional model reporting (if applicable)

Original Model name	Modification(additional) contents

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

14. Cordless/corded phone

Standby Power Reporting Form (Cordless/corded phone)

□ Products with High Standby Reduction Potentials

① Company name		② Department in charge	(Telephone)
③ Manufacturing factory			

④ Standby power	☐ Corded phone ☐ Cordless/corded phone ☐ Cordless phone ☐ Cordless/cordless phone ☐ Others				
	Brand name	Model name (Model Series Units Multiple model name possible)	Frequency		
	Base set Rated power consumption(W)	Base set on mode power consumption(W)	Base set standby mode power consumption(W)	VoIP rated power consumption(W)	VoIP on mode power consumption(W)
	VoIP standby mode power consumption(W)	Battery charger Rated power consumption(W)	Battery charger on mode power consumption(W)	Battery charger standby mode power consumption(W)	Expected shipping date

⑤ Base set or other functions except basic components of VOIP phones	☐ Add on functions ☐ Speaker phone	☐ Battery charging ☐ Answering machine	☐ Alarm
⑥ Fundamental technology	☐ Digital	☐ Analog	
⑦ Testing institute(name of the institute or self testing)			
⑧ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:		
⑨ Other remarks			

⑩ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)

2. Product image or pamphlets

15. Bidet

Standby Power Reporting Form (Bidet) □ Products with High Standby Reduction Potentials							
① Company name		② Department in charge	(Telephone)				
③ Manufacturing factory							
④ Standby power	☐ Bidet with off function ☐ Bidet without off function						
	Brand name	Model name (Model Series Units Multiple model name possible)	Rated power consumption (W)	On mode power consumption (W)	Heating Standby mode power consumption (W)	Off mode power consumption (W)	Expected shipping date
⑤ Bidet types	☐ Heating bidet ☐ Warm water washing bidet (no warm water storage tank) ☐ Warm water washing bidet (with warm water storage tank) ☐ Other ( )						
⑥ Function of bidet							
⑦Maximum temperature of heated toilet seat	℃						
⑧ Storage capacity of warm water storage tank	liter						
⑨ Automatic circuit breaker availability	☐ Yes ☐ No						
⑩ Testing institute(name of the institute or self testing)							
⑪ Location of the energy saving or warning label	☐ Front ☐ Top ☐ Others:						
⑫ Other remarks							
⑬ Additional model reporting (if applicable)	Original Model name	Modification(additional) contents					

I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):

Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.

Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets

16. Modem

<table>
<tr><td colspan="8">Standby Power Reporting Form (Modem)
□ Products with High Standby Reduction Potentials</td></tr>
<tr><td>① Company name</td><td colspan="2"></td><td>② Department in charge</td><td colspan="4">(Telephone)</td></tr>
<tr><td>③ Manufacturing factory</td><td colspan="7"></td></tr>
<tr><td rowspan="3">④ Standby power</td><td colspan="7">☐ ADSL Modem ☐ VDSL Modem ☐ Cable Modem</td></tr>
<tr><td>Brand name</td><td>Model name (Model Series Units Multiple model name possible)</td><td>Rated power consumption (W)</td><td>On mode power consumption (W)</td><td>Standby mode power consumption (W)</td><td>Off mode power consumption (W)</td><td>Expected shipping date</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>⑤ Additional Devices</td><td colspan="7">☐ Multi-port Modem ☐ Wireless LAN AP</td></tr>
<tr><td>⑥ Connectivity</td><td colspan="7">☐ USB ☐ ethernet ☐ Wireless ☐ Other :</td></tr>
<tr><td>⑦Adapter Availability</td><td colspan="7">☐ Yes ☐ No</td></tr>
<tr><td>⑧ Adapter Information</td><td colspan="7">Brand: Model No:</td></tr>
<tr><td colspan="2">⑨ Testing institute(name of the institute or self testing)</td><td colspan="6"></td></tr>
<tr><td colspan="2">⑩ Location of the energy saving or warning label</td><td colspan="6">☐ Front ☐ Top ☐ Others:</td></tr>
<tr><td colspan="2">⑪ Other remarks</td><td colspan="6"></td></tr>
<tr><td colspan="2" rowspan="2">⑫ Additional model reporting (if applicable)</td><td colspan="3">Original Model name</td><td colspan="3">Modification(additional) contents</td></tr>
<tr><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td colspan="8">I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):
Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.</td></tr>
<tr><td colspan="8">Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets</td></tr>
</table>

17. Home Gateway

<table>
<tr><td colspan="6">Standby Power Reporting Form (Home gateway)
□ Products with High Standby Reduction Potentials</td></tr>
<tr><td colspan="2">① Company name</td><td></td><td>② Department in charge</td><td colspan="2">(Telephone)</td></tr>
<tr><td colspan="2">③ Manufacturing factory</td><td colspan="4"></td></tr>
<tr><td rowspan="4">④ Standby power</td><td>Brand name</td><td colspan="2">Model name
(Model Series Units
Multiple model name possible)</td><td colspan="2">Rated
power consumption
(W)</td></tr>
<tr><td></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td>On mode power consumption (W)</td><td>Power saving mode power consumption (W)</td><td>Power saving mode default time (minutes)</td><td colspan="2">Expected shipping date</td></tr>
<tr><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td colspan="2">⑤ Additional devices (multiple selection possible)</td><td colspan="4">☐ Wireless LAN AP ☐ USB port
☐ WAN port ☐ RS485 port
☐ Optical port ☐ RS232 port
☐ PLC port</td></tr>
<tr><td colspan="2">⑥ Remote controller availability</td><td colspan="4">☐ Yes ☐ No</td></tr>
<tr><td colspan="2">⑦ Testing institute(name of the institute or self testing)</td><td colspan="4">☐ Yes ☐ No</td></tr>
<tr><td colspan="2">⑧ Location of the energy saving or warning label</td><td colspan="4">☐ Front ☐ Top ☐ Others:</td></tr>
<tr><td colspan="2">⑨ Other remarks</td><td colspan="4"></td></tr>
<tr><td colspan="2" rowspan="2">⑩ Additional model reporting (if applicable)</td><td colspan="2">Original Model name</td><td colspan="2">Modification(additional) contents</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="6">I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):
Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.</td></tr>
<tr><td colspan="6">Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets</td></tr>
</table>

18. Hand dryers

<table>
<tr><td colspan="6">Standby Power Reporting Form (Hand dryers)
□ Products with High Standby Reduction Potentials</td></tr>
<tr><td colspan="2">① Company name</td><td></td><td>② Department in charge</td><td colspan="2">(Telephone)</td></tr>
<tr><td colspan="2">③ Manufacturing factory</td><td colspan="4"></td></tr>
<tr><td rowspan="5">④ Standby power</td><td colspan="5">☐ Discrete Detection ☐ Continuous Detection</td></tr>
<tr><td>Brand name</td><td>Model name
(Model Series Units
Multiple model name
possible)</td><td colspan="2">Rated power consumption
(W)</td><td>On mode
power consumption
(W)</td></tr>
<tr><td></td><td></td><td colspan="2"></td><td></td></tr>
<tr><td>Power saving mode
power consumption
(W)</td><td>Power saving mode
default time
(minutes)</td><td>Off mode power
consumption
(W)</td><td colspan="2">Expected shipping date</td></tr>
<tr><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td colspan="2">⑤ Power switch availability</td><td colspan="4">☐ Yes ☐ No</td></tr>
<tr><td colspan="2">⑥ Music play function</td><td colspan="4">☐ Yes ☐ No</td></tr>
<tr><td colspan="2">⑦ Testing institute(name of the institute or self testing)</td><td colspan="4">☐ Yes ☐ No</td></tr>
<tr><td colspan="2">⑧ Location of the energy saving or warning label</td><td colspan="4">☐ Front ☐ Top ☐ Others:</td></tr>
<tr><td colspan="2">⑨ Other remarks</td><td colspan="4"></td></tr>
<tr><td colspan="2" rowspan="2">⑩ Additional model reporting (if applicable)</td><td colspan="2">Original Model name</td><td colspan="2">Modification(additional) contents</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="6">I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):
Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.</td></tr>
<tr><td colspan="6">Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets</td></tr>
</table>

19. Servers

<table>
<tr><td colspan="8">Standby Power Reporting Form (Servers)
□ Products with High Standby Reduction Potentials</td></tr>
<tr><td colspan="2">① Company name</td><td colspan="2"></td><td>② Department in charge</td><td colspan="3">(Telephone)</td></tr>
<tr><td colspan="2">③ Manufacturing factory</td><td colspan="6"></td></tr>
<tr><td rowspan="3">④ Standby power</td><td colspan="7">☐ Standard single installed processor servers ☐ Managed single installed processor servers
☐ Standard dual installed processor servers ☐ Managed dual installed processor servers</td></tr>
<tr><td>Brand name</td><td colspan="3">Model name
(Model Series Units
Multiple model name possible)</td><td colspan="2">Rated power consumption
(W)</td><td>Standby mode power consumption
(W)</td></tr>
<tr><td></td><td colspan="3"></td><td colspan="2"></td><td></td></tr>
<tr><td rowspan="4">⑤ Product specifications</td><td>Form factor</td><td>Number of processor sockets</td><td>Number of installed processor</td><td>Types of installed processor</td><td>Number of DIMM slots</td><td>Maximum Memory Capacity
(GB)</td><td>FCC or Buffered DIMM availability</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Supportable number of HDD(SDD)</td><td>Supportable number of power supplies</td><td>Installed OS</td><td>Installed number of power supplies</td><td>Installed number of HDD(SDD)</td><td>Installed Memory</td><td>I/O</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">⑥ Testing institute(name of the institute or self testing)</td><td colspan="6"></td></tr>
<tr><td colspan="2">⑦ Location of the energy saving or warning label</td><td colspan="6">☐ Front ☐ Top ☐ Others:</td></tr>
<tr><td colspan="2">⑧ Other remarks</td><td colspan="6"></td></tr>
<tr><td colspan="2" rowspan="2">⑨ Additional model reporting (if applicable)</td><td colspan="3">Original Model name</td><td colspan="3">Modification(additional) contents</td></tr>
<tr><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td colspan="8">I hereby report the standby power of the above said product complying with the provisions of the government's E-Standby Program Application Regulation

Date (year/month/date):
Applicant: Signature:

The President of the Korea Energy Management Corporation, Esq.</td></tr>
<tr><td colspan="8">Attachment: 1. Test report (In the case of additional model reporting, excluded)
2. Product image or pamphlets</td></tr>
</table>

[Form B]

Cancellation Request for Standby Power Program Registered Products

Company Name: Reported Date:
Department:
Person in charge: (phone) (Fax) (e-mail)

To : Corporation President
CC:
Subject: Cancellation Request for Standby Power Program Registered Products

In accordance with the provisions of the government's e-Standby Program Application Regulation, we hereby report the cancellation of products registered in the e-Standby power program as follows:

Reporting the cancellation of e-Standby Power Program Target Products

Product	Brand	Model	Date the production and importing has stopped	Date the sales have been stopped	Reasons
Subtotal					

1. Please state the reasons the production and importing has stopped in accordance with Article 19 paragraph 3
2. State the date in Year/Month/Day format

Date :
Name: Signature:

[Form C]

(Front)

<table>
<tr><td colspan="2">Application for the designation of Standby Power Testing Institute</td><td>Processing Period
30 days</td></tr>
<tr><td>① Company name</td><td>② CEO</td><td></td></tr>
<tr><td>③ Business Registration Number</td><td colspan="2"></td></tr>
<tr><td>④ Office Address</td><td colspan="2"></td></tr>
<tr><td>⑤ Factory Address</td><td colspan="2"></td></tr>
<tr><td>⑥ e-Standby Power Programs Target Products & e-Standby Power Warning Label Target Products</td><td colspan="2"></td></tr>
<tr><td colspan="3">I hereby submit the application for the designation of Standby Power Testing Institute complying with the provisions of the Article 19 paragraph 5 of the Rational Energy Utilization Act.

Date (year/month/date):

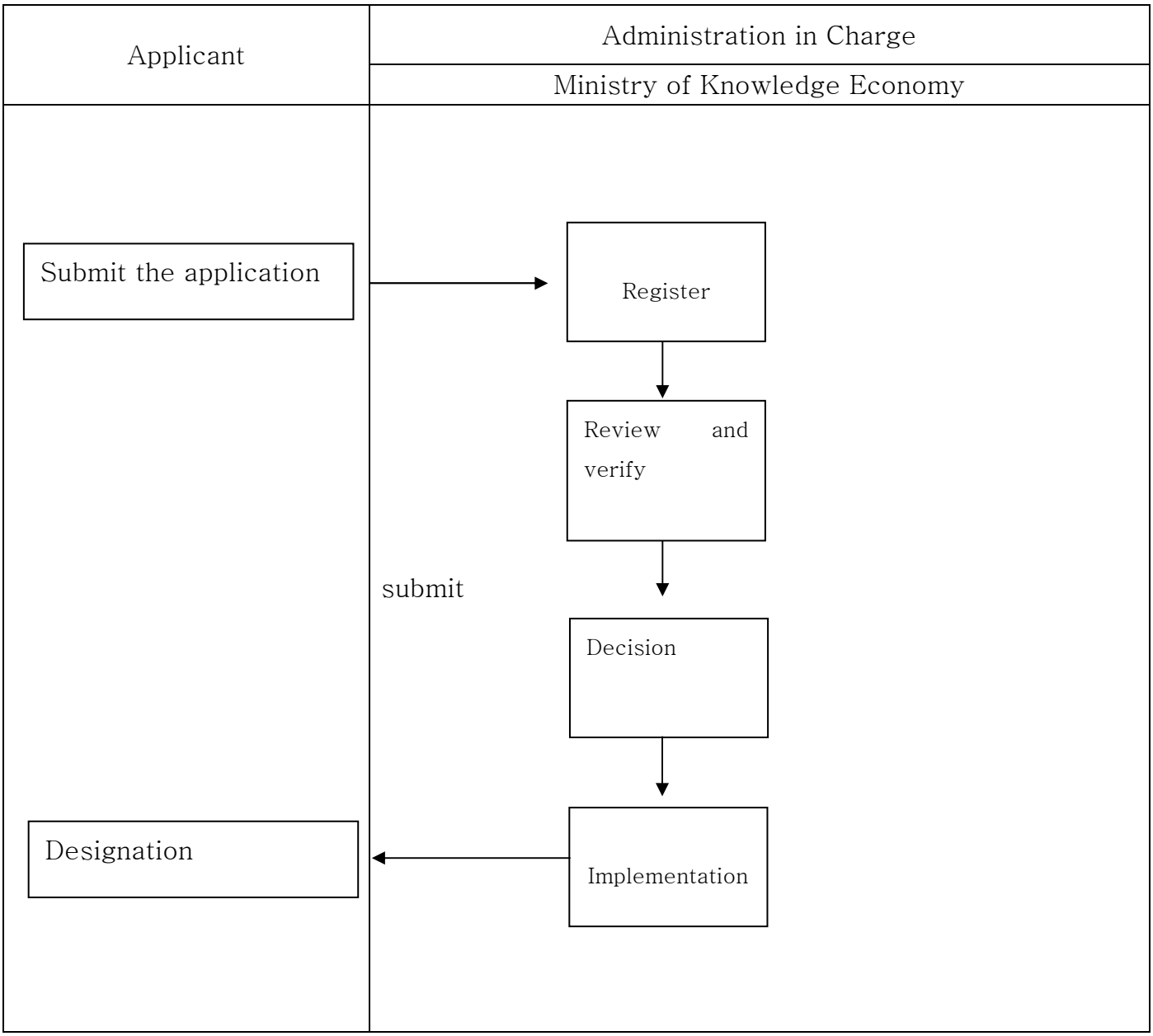
Applicant: Signature:

The Minister of Knowledge Economy, Esq.</td></tr>
<tr><td>Application Fee</td><td colspan="2">None</td></tr>
<tr><td colspan="3">* Application documents
1. Documents on testing equipments (The list of testing equipments with pictures)
2. Documents on professional testing agents (The list of testing agents and credentials)
3. A copy of Accreditation document under Article 23 of “National Standard Fundamental Act” (if applicable)</td></tr>
</table>

210mm × 297mm [regular paper 60g/m^2(recycled)]

(Back)

Submitted application is processed with the procedure described below:



[Form D]

(Front)

<table>
<tr><td colspan="2">Application for the MKE Approved Self Testing Entity</td><td>Processing Period
30 days</td></tr>
<tr><td>① Company name</td><td>② CEO</td><td></td></tr>
<tr><td>③ Business Registration Number</td><td colspan="2"></td></tr>
<tr><td>④ Office Address</td><td colspan="2"></td></tr>
<tr><td>⑤ Factory Address</td><td colspan="2"></td></tr>
<tr><td>⑥ e-Standby Power Programs Target Products & e-Standby Power Warning Label Target Products</td><td colspan="2"></td></tr>
<tr><td colspan="3">I hereby submit the application for the designation of Standby Power Testing Institute complying with the provisions of the Article 19 paragraph 2, Article 20 paragraph 1 and the Article 15 of the enforcement regulation of the Rational Energy Utilization Act

Date (year/month/date):

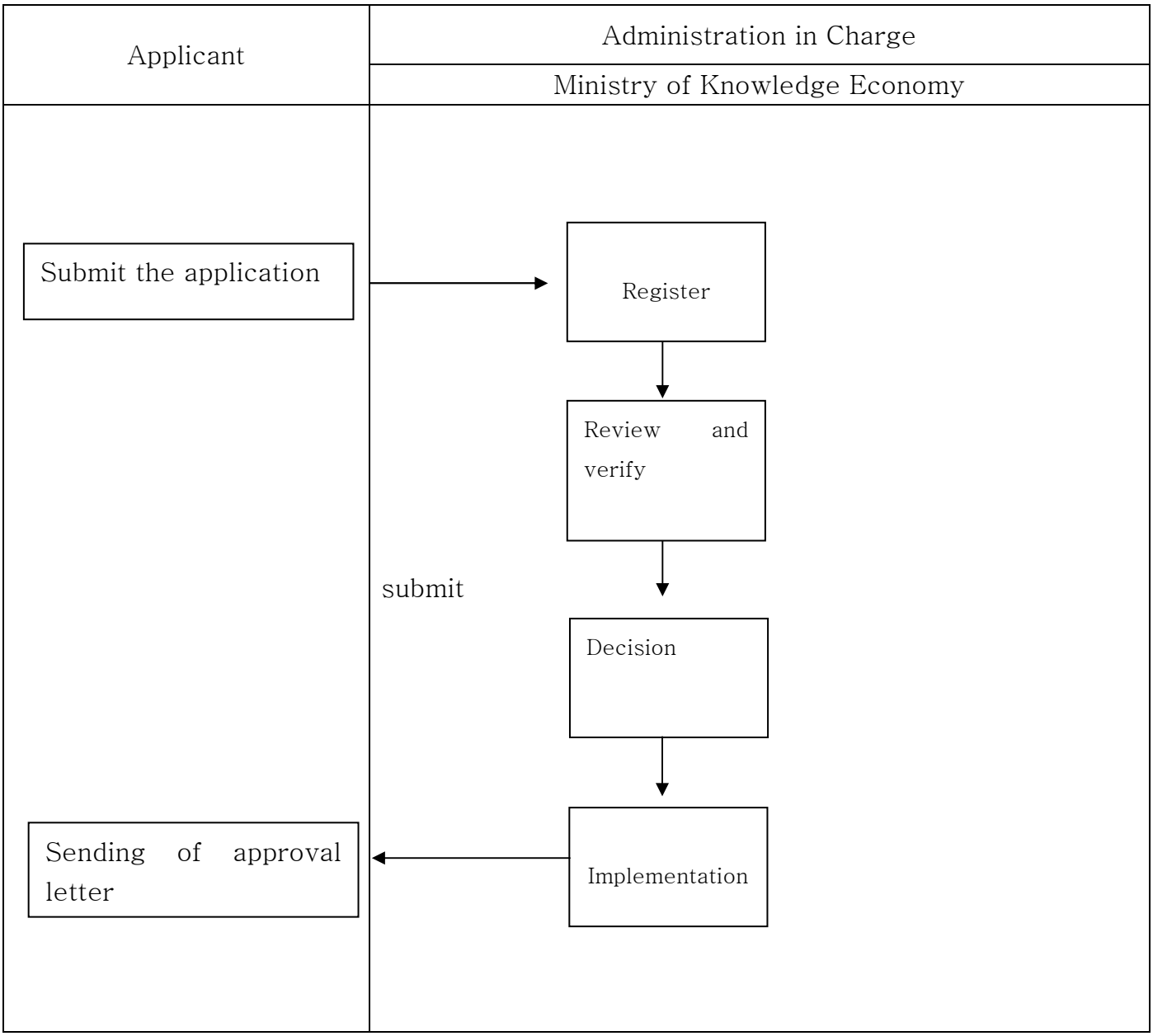
Applicant: Signature:

The Minister of Knowledge Economy, Esq.</td></tr>
<tr><td>Application Fee</td><td colspan="2">None</td></tr>
<tr><td colspan="3">* Application documents
1. Documents on testing equipments (The list of testing equipments with pictures)
2. Documents on professional testing agents (The list of testing agents and credentials)
3. A copy of Accreditation document under Article 23 of “National Standard Fundamental Act” (if applicable)</td></tr>
</table>

210mm × 297mm [regular paper 60g/m^2(recycled)]

(Back)

Submitted application is processed with the procedure described below:



[Form E]

e-Standby Power Program Target Products -production and sales performance

Company name :

Office in charge :

Person in charge: (Telephone) (Fax) (E-mail)

To : The President of the Korea Energy Management Corporation

CC :

Title: ( ) year energy saving logo labeled product production and sales performance

In accordance with the provisions of the E-Standby Program Application Regulation, the production (imports) and sales performance report of the energy saving logo labeled product is as follows:

Production (imports) and sales performance

(Unit: units)

Product category	Brand name	Model name	Products with High Standby Power Reduction Potentials (Yes/No)	( )year performance record	
				Production/Import quantity	Sales quantity
Subtotal					

1. Production/import quantity is based on domestic sales quantity
2. The data above is solely used for the purpose of compiling production/import quantity data and analyzing the effects of energy saving efforts. Please input accurate data for the stated purposes.
3. Include the product that has reported the withdrawal of the participation.