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COMMISSION REGULATION (EU) No .../..

of **XXX**

amending Commission Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Commission Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions

(Text with EEA relevance)

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products¹, and in particular Article 15(1) thereof,

After consulting the Ecodesign Consultation Forum,

Whereas:

- (1) Article 16 (2) of Directive 2005/32/EC makes provision for an implementing measure, one of the priority measures being to reduce standby losses for a group of products.
- (2) The networked standby electric power consumption of electrical and electronic household and office equipment had been addressed by the technical, environmental and economic study on standby and off mode losses carried out in 2006/2007. It concluded that network connectivity was to become a common feature of household and office equipment. The Regulatory Committee on the Ecodesign of Energy-using Products recommended on 21 June 2008 addressing the question of networked standby in a separate process, due to a lack of data at the time.
- (3) The Ecodesign Work Plan 2009-2011 identified networked standby as one of the priorities. Accordingly, the Commission carried out a preparatory study in 2010/2011 which analysed the technical, environmental and economic aspects of networked standby. The study was devised in association with stakeholders and interested parties from the EU and non-member countries, and the results were made publicly available.
- (4) The study estimated the power consumption of electrical and electronic household and office equipment products sold in the Community related to conditions providing networked standby to be 54 TWh in 2010, corresponding to 23 Mt CO₂ emissions. If no specific measures are taken, consumption is predicted to increase to 90 TWh in 2020. The conclusion was that electricity consumption related to networked standby can be significantly reduced. The present Regulation should increase the market penetration of technologies yielding improved energy efficiency for networked standby, leading to estimated energy savings of 36 TWh in 2020 and 49 TWh in 2025, compared to a business-as-usual scenario.

¹ OJ L 285, 31.10.2009, p. 10.

- (5) In particular, the study found that the power management function that switches equipment into a condition having networked standby when not providing a main function is essential for delivering the potential savings. It is acknowledged that equipment, reactivated by an external or internal trigger, can be in an active mode for a limited period of time independently from its main function(s), e.g. to enable servicing or downloading of software. Power management should ensure that the product returns into a condition having networked standby after having completed the tasks.
- (6) The preparatory study concluded that for networked standby a differentiation of requirements along the degree of network availability was needed. To that end, a limited number of HiNA equipment was identified, amongst which router, network switch, wireless network access point, hub and modem whose main function is the processing of network traffic. Since this equipment is expected to react on incoming traffic immediately, the condition having networked standby can be equivalent to the idle mode.
- (7) Given that the functionalities in conditions of standby and networked standby are interlinked and the product scope is equivalent, the Ecodesign Consultation Forum supported, on 14 September 2011, the view that the ecodesign requirements regarding networked standby should be set out in an amending act to the existing Commission Regulation (EC) No 1275/2008².
- (8) The requirements for standby and off mode, and for networked standby should be reviewed together. Given that the review date laid down in Commission Regulation (EC) No 1275/2008 precedes the entry into force of the first stage of the networked standby requirements, the Regulation review date should be postponed by one year.
- (9) Given that televisions which are subject to a product-specific ecodesign implementing measure were exempted from the scope of Commission Regulation (EC) No 1275/2008, ecodesign requirements for television-related networked standby are included in Commission Regulation (EC) No 642/2009³. The technical, environmental and economic study on networked standby estimated that the ecodesign requirements for networked standby of televisions would generate estimated savings of 10 TWh by 2020.
- (10) For coffee machines, the Ecodesign Consultation Forums⁴ of 16 December 2011 and 18 April 2012 supported the view that a product-specific implementing measure should not be adopted, but that the standby requirements of Commission Regulation (EC) No 1275/2008 should be made more explicit for coffee machines.
- (11) This regulation introduces specifications for the application of the power management requirements to coffee machines with regard to the default delay time after which the equipment is automatically switched into standby/off mode.
- (12) It can be concluded from the technical, environmental and economic study on household coffee machines, carried out under the Ecodesign Directive, that limiting the delay time after which coffee machines are automatically switched into standby/off mode will result in additional annual savings of more than 2 TWh by 2020. These have not been considered in the savings assumptions for Commission Regulation (EC) No 1275/2008.

² OJ L 339, 18.12.2008, p. 45.

³ OJ L 191/42, 23.7.2009, p. 42.

⁴ OJ L 190.18.7.2008, p. 22.

HAS ADOPTED THIS REGULATION:

Article 1
Amendments to Regulation (EC) No 1275/2008

Regulation (EC) No 1275/2008 is amended as follows:

(1) The title is replaced by the following:

‘Commission Regulation (EC) No 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode, and networked standby, electric power consumption of electrical and electronic household and office equipment’

(2) Article 1 is replaced by the following:

‘Article 1
Subject matter and scope

This Regulation establishes ecodesign requirements related to standby and off mode, and networked standby, electric power consumption for the placing on the market of electrical and electronic household and office equipment.

This Regulation shall not apply to electrical and electronic household and office equipment placed on the market with a low voltage external power supply to work as intended.’

(3) The following definitions are added in Article 2:

10. ‘network’ means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);
11. ‘networked standby’ means a condition in which the equipment is able to resume a function by way of a remotely initiated trigger from a network connection;
12. ‘remotely initiated trigger’ means a signal that comes from outside the equipment via a network;
13. ‘network port’ means a wired or wireless physical interface of the network connection located on the equipment through which the equipment can be remotely activated;
14. ‘logical network port’ means the network technology running over a physical network port;
15. ‘physical network port’ means the physical (hardware) medium of a network port. A physical network port can host two or more network technologies;
16. ‘network availability’ means the capability of the equipment to resume functions after a remotely initiated trigger has been detected by a network port;
17. ‘networked equipment’ means equipment that can connect to a network and has one or more network ports;
18. ‘networked equipment with high network availability’ (HiNA equipment) means equipment with one or more of the following functionalities, but no other, as the

- main function(s): router, network switch, wireless network access point, hub, modem, VoIP telephone, video phone;
19. 'networked equipment with high network availability functionality' (equipment with HiNA functionality) means equipment with the functionality of a router, network switch, wireless network access point or combination thereof included, but not being HiNA equipment;
 20. 'router' means a network device whose primary function is to determine the optimal path along which network traffic should be forwarded. Routers forward packets from one network to another, based on network layer information (L3);
 21. 'network switch' means a network device whose primary function is to filter, forward and distribute frames based on the destination address of each frame. All switches operate at least at the data link layer (L2);
 22. 'wireless network access point' means a device whose primary function is to provide IEEE 802.11 (Wi-Fi) connectivity to multiple clients;
 23. 'hub' means a network device that contains multiple ports and is used to connect segments of a Local Area Network;
 24. 'modem' means a device whose primary function is to transmit and receive digitally modulated analog signals over a wired network;
 25. 'printing equipment' means equipment that generates paper output from electronic input. Printing equipment may have additional functions and may be marketed as a multifunctional device or multifunctional product.
 26. 'large format printing equipment' means printing equipment designed for printing on A2 media and larger, including equipment designed to accommodate continuous-form media of at least 406 mm width;
 27. 'tele-presence system' means a dedicated system for high-definition video conferencing and collaboration which includes a user interface, a high-definition camera, a display, a sound system and processing capabilities for encoding and decoding video and audio;
 28. 'household coffee machine' means a non-commercial appliance for brewing coffee;
 29. 'drip filter household coffee machine' means a household coffee machine which uses percolation to extract the coffee;
 30. 'heating element' means a component of the coffee machine which converts electricity into heat to warm up water;
 31. 'cup preheating' means a function for warming cups that are stored on the coffee machine;
 32. 'brewing cycle' means the process that has to be completed to produce coffee;
 33. 'Self-cleaning' means a process that the coffee machine carries out to clean its interior. This process can either be a simple rinse or a washing process using specific additives;
 34. 'Descaling' means a process that the coffee machine carries out to remove totally or partially potential scale in its interior;
 35. 'Desktop thin client' means a computer that relies on a connection to remote computing resources (e.g. computer server, remote workstation) to obtain primary functionality and has no rotational storage media integral to the product. The main unit of a desktop thin client must be intended for use in a permanent location (e.g. on a desk) and not for portability. Desktop thin clients can output information to either an external or, where included with the product, an internal display;
 36. 'Workstation' means a high-performance, single-user computer primarily used for graphics, Computer Aided Design, software development, financial and

scientific applications among other compute intensive tasks, and which has the following characteristics:

- (a) has a mean time between failures (MTBF) of at least 15 000 hours;
- (b) has error-correcting code (ECC) and/or buffered memory;
- (c) meets three of the following five characteristics:
 - (1) has supplemental power support for high-end graphics (i.e. peripheral component interconnect (PCI)-E 6-pin 12V supplemental power feed);
 - (2) its system is wired for greater than x4 PCI-E on the motherboard in addition to the graphics slot(s) and/or PCI-X support;
 - (3) does not support uniform memory access (UMA) graphics;
 - (4) includes five or more PCI, PCI-E or PCI-X slots;
 - (5) is capable of multi-processor support for two or more CPU (must support physically separate CPU packages/sockets, i.e. not met with support for a single multi core CPU).

37. 'Mobile workstation' means a high-performance, single-user computer primarily used for graphics, Computer Aided Design, software development, financial and scientific applications among other compute intensive tasks, excluding game play, and which is designed specifically for portability and to be operated for extended periods of time either with or without a direct connection to an AC power source. Mobile workstations utilise an integrated display and are capable of operation on an integrated battery or other portable power source. Most mobile workstations use an external power supply and most have an integrated keyboard and pointing device.

A mobile workstation has the following characteristics:

- (a) has a mean time between failures (MTBF) of at least 13 000 hours;
- (b) has at least one discrete graphics card (dGfx) meeting the G3 (with FB Data Width >128-bit), G4, G5, G6 or G7 classification;
- (c) supports the inclusion of three or more internal storage devices;
- (d) supports at least 32GB of system memory;

38. 'Small-scale server' means a type of computer that typically uses desktop computer components in a desktop form factor but is designed primarily to be a storage host for other computers and to perform functions such as providing network infrastructure services and hosting data/media, and which has the following characteristics:

- (a) is designed in a pedestal, tower, or other form factor similar to those of desktop computers such that all data processing, storage, and network interfacing is contained within one box;
- (b) is designed to be operational 24 hours per day and 7 days per week;
- (c) is primarily designed to operate in a simultaneous multi-user environment serving several users through networked client units;

- (d) where placed on the market with an operating system, the operating system is designed for home server or low-end server applications;
 - (e) is not placed on the market with a discrete graphics card (dGfx) meeting any classification other than G1;
39. ‘Computer server’ means a computing product that provides services and manages networked resources for client devices, such as desktop computers, notebook computers, desktop thin clients, internet protocol (IP) telephones, or other computer servers. A computer server is typically placed on the market for use in data centres and office/corporate environments. A computer server is primarily accessed via network connections, and not through direct user input devices, such as a keyboard or a mouse;

A computer server has the following characteristics:

- (a) is designed to support computer server operating systems (OS) and/or hypervisors, and targeted to run user-installed enterprise applications;
 - (b) supports error-correcting code (ECC) and/or buffered memory (including both buffered dual in-line memory modules (DIMMs) and buffered on board (BOB) configurations);
 - (c) is placed on the market with one or more AC-DC power supply(ies);
 - (d) all processors have access to shared system memory and are independently visible to a single OS or hypervisor.’
- (4) Article 3 is replaced by the following:

‘Article 3
Ecodesign requirements

The ecodesign requirements related to standby and off mode, and networked standby electric power consumption, are set out in Annex II.’

- (5) Article 7 is replaced by the following:

‘Article 7
Revision

The Commission shall review this Regulation and present the results of the review to the Consultation Forum no later than 7 January 2016, in the light of technological progress. The review will in particular address the scope and the requirements for standby/off mode and the appropriateness and level of the requirements for networked standby with regard to the third stage of implementation (2019).

The review could address inter alia professional equipment and products equipped with electric motors operated by remote control.’

- (6) Article 8 is replaced by the following:

*‘Article 8
Entry into force*

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Point 1 of Annex II shall apply as from 7 January 2010.

Point 2 of Annex II shall apply as from 7 January 2013.

Point 3 of Annex II shall apply as from 1 January 2015.

Point 4 of Annex II shall apply as from 1 January 2017.

Point 5 of Annex II shall apply as from 1 January 2019.

Point 6 of Annex II shall apply as from 1 January 2015.

Point 7 of Annex II shall apply as from 1 January 2015.

This Regulation shall be binding in its entirety and directly applicable in all Member States.’

(7) Annex II is amended as follows:

(a) Point 2, paragraph d, is replaced by the following:

‘(d) Power management for all equipment other than networked equipment

Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing the main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into:

- standby mode, or
- off mode, or
- another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source.

The power management function shall be activated.’

(b) The following is added as new points 3, 4, 5, 6, 7.

‘3. As of 1 January 2015:

(a) Possibility of deactivating wireless network connection(s)

Any networked equipment that can be connected to a wireless network shall offer the user the possibility to deactivate the wireless network connection(s). This requirement does not apply to products which rely on a single wireless network connection for intended use and have no wired network connection.

(b) Power management for networked equipment

Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing a main function, and other energy-using product(s) are not dependent on its functions, the

power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into a condition having networked standby.

In a condition providing networked standby, the power management function may switch equipment automatically into standby mode or off mode or another condition which does not exceed the applicable power consumption requirements for standby and/or off mode.

The power management function, or a similar function, shall be available for all network ports of the networked equipment.

The power management function, or a similar function, shall be activated, unless all network ports are deactivated. In that latter case the power management function, or a similar function, shall be activated if any of the network ports is activated.

The default period of time after which the power management function, or a similar function, switches the equipment automatically into a condition providing networked standby shall not exceed 20 minutes.

(c) Networked equipment that has one or more standby modes shall comply with the requirements for these standby mode(s) when all network ports are deactivated.

(d) Networked equipment other than HiNA equipment shall comply with the provisions under 2(d) when all network ports are deactivated.

(e) Power consumption in a condition providing networked standby:

The power consumption of HiNA equipment or equipment with HiNA functionality in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function shall not exceed 12.00 W.

The power consumption of other networked equipment in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 6.00 W.

The power consumption limits as stipulated in point (e) shall not apply to:

- i. printing equipment with a power supply of a rated power larger than 750 W;
- ii. large format printing equipment;
- iii. tele-presence systems;
- iv. desktop thin clients;
- v. workstations;
- vi. mobile workstations;
- vii. small-scale servers;
- viii. computer servers.

4. As of 1 January 2017:

In addition to the requirements set out in point 3 (a) and 3 (b), the following provisions shall apply:

(a) Networked equipment that has one or more standby mode(s) shall comply with the requirements for these standby mode(s) when all wired network ports are disconnected and when all wireless network ports are deactivated.

(b) Networked equipment other than HiNA equipment shall comply with the provisions under 2(d) when all wired network ports are disconnected and when all wireless network ports are deactivated.

(c) Power consumption in a condition providing ‘networked standby’:

The power consumption of HiNA equipment or equipment with HiNA functionality, in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 8.00 W.

The power consumption of other networked equipment in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 3.00 W.

The power consumption limits as stipulated in point (c) shall not apply to:

- i. large format printing equipment;
- ii. desktop thin clients;
- iii. workstations;
- iv. mobile workstations;
- v. small-scale servers;
- vi. computer servers.

5. As of 1 January 2019:

In addition to the requirements set out in point 3 (a), 3 (b), 4 (a), 4(b) and 4(c), the following provision shall apply for networked equipment other than HiNA equipment or other than equipment with HiNA-functionality:

The power consumption of networked equipment other than HiNA equipment or other than equipment with HiNA functionality, in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 2.00 W.

6. As of 1 January 2015:

For coffee machines, the delay time after which the product switches automatically into the modes and conditions referred to in Annex II, point 2, paragraph d) shall be as follows:

- for domestic drip filter coffee machines storing the coffee in an insulated jug, a maximum of five minutes after completion of the last brewing cycle or 30 minutes after completion of a descaling or self-cleaning process;
- for domestic drip filter coffee machines storing the coffee in a non-insulated jug, a maximum of 40 minutes after completion of the last brewing cycle, or 30 minutes after completion of a descaling or self-cleaning process;
- for domestic coffee machines other than drip filter coffee machines, a maximum of 30 minutes after completion of the last brewing cycle, or a maximum of 30 minutes after activation of the heating element, or a maximum

of 60 minutes after activation of the cup preheating function, or a maximum of 30 minutes after completion of a descaling or self-cleaning process, unless an alarm has been triggered requiring users' intervention to prevent possible damage or accident.

Until the above date the ecodesign requirements set out in Annex II.2.d shall not apply.

7. Product information requirements

As of 1 January 2015, the following information for networked equipment shall be visibly displayed on manufacturers' freely accessible websites:

(a) for each standby and/or off mode and the condition providing networked standby into which the equipment is switched by the power management function or similar function:

- the power consumption data in Watt rounded to the first decimal place,
- the period of time after which the power management function, or a similar function, switches the equipment automatically into standby and/or off mode and/or the condition providing networked standby;

(b) the power consumption of the product in networked standby if all wired network ports are connected and all wireless network ports are activated;

(c) guidance on how to activate and deactivate wireless network ports.

The power consumption of the product in networked standby as referred to in point (b) and the guidance as referred to in point (c) shall also be included in the user manual.'

(c) Point 3 is replaced by new point 8:

'8. Measurements

The power consumption referred to in points 1(a), 1(b), 2(a), 2(b), 3(e), 4(c) and 5. and the delay times referred to in point 6. shall be established by a reliable, accurate and reproducible measurement procedure, which takes into account the generally recognised state of the art.'

(d) Point 4 is replaced by new point 9:

'9. Information to be provided by manufacturers

For the purposes of conformity assessment pursuant to Article 4, the technical documentation shall contain the following elements:

(a) for each standby and/or off mode:

- the power consumption data in Watt rounded to the first decimal place,
- the measurement method used,
- a description of how the equipment mode was selected or programmed,
- the sequence of events leading to the condition where the equipment automatically changes modes,
- any notes regarding the operation of the equipment, e.g. information on how the user switches the equipment into a condition having networked standby,

- if applicable, the default time after which the power management function, or similar function, has switched the equipment into the applicable low power mode or condition;

(b) for networked equipment:

- the number and type of network ports and, with the exception of wireless network ports, where these ports are located on the equipment; in particular it shall be declared if the same physical network port accommodates two or more types of network ports,
- whether all network ports are deactivated before delivery,
- whether the equipment qualifies as HiNA equipment or equipment with HiNa functionality; where no information is provided, this is considered not to be the case;

and for each type of network port:

- the default time after which the power management function, or a similar function, switches the equipment into a condition providing networked standby,
- the trigger that is used to reactivate the equipment,
- the (maximum) performance specifications,
- the (maximum) power consumption of the equipment in a condition providing networked standby into which the power management function, or a similar function, will switch the equipment, if only this port is used for remote activation,
- the communication protocol used by the equipment;

If no information is provided, the equipment is considered not to be networked equipment unless it provides the functionalities of a router, network switch, wireless network access point (not being a terminal), hub, modem, VoIP telephone, video phone.

(c) test parameters for measurements:

- ambient temperature,
- test voltage in V and frequency in Hz,
- total harmonic distortion of the electricity supply system,
- information and documentation on the instrumentation, set-up and circuits used for electrical testing;

(d) the equipment characteristics relevant for assessing conformity with the requirements set out in point 1(c), or the requirements set out in points 2(c) and/or 2(d) and/or 3(b), as applicable, including the time taken to automatically reach standby, or off mode, or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode.

In particular, if applicable, a technical justification shall be provided that the requirements set out in point 1(c), or the requirements set out in points 2(c) and/or 2(d) and/or 3(b), are inappropriate for the intended use of equipment. The need to maintain one or more network connections or to wait for a remotely initiated trigger is not considered a technical justification for exemption from the requirements set

out in 2(d) in the case of equipment that is not defined as networked equipment by the manufacturer.’

(8) The following is added to Annex III:

‘Regarding the requirements set out in Annex II, point 2(d), Member States’ authorities shall use the applicable procedure above to measure the power consumption after the power management function, or similar function, has switched the equipment into the applicable mode or condition.

Regarding the requirements set out in Annex II, points 3(c) and 4(a) Member States authorities shall use the applicable procedure above, after having deactivated and/or disconnected, as applicable, all network ports of the unit.

When performing the market surveillance checks referred to in Article 3(2) of Directive 2009/125/EC, the Member States’ authorities shall apply the following verification procedure for the requirements set out in Annex II, points 3 and 4, as applicable.

Member States’ authorities shall test one single unit as follows:

If the equipment has, as indicated in the technical documentation, one type of network port and if two or more ports of that type are available, one of these ports is randomly chosen and that port is connected to the appropriate network complying with the maximum specification of the port. In the event of multiple wireless network ports of the same type, the other wireless ports shall be deactivated if possible. In the event of multiple wired network ports of the same type for verifying requirements set out in Annex II point 3, the other network ports shall be deactivated if possible. If only one network port is available, that port is connected to the appropriate network complying with the maximum specification of the port.

The unit is put in on mode. Once the unit in on mode is working properly, it is allowed to go into the condition providing networked standby and the power consumption is measured. Then the appropriate trigger is given to the equipment through the network port and a check is made on whether the equipment is reactivated.

If the equipment has, as indicated in the technical documentation, more than one type of network port for each type of network port the following procedure is repeated. If two or more network ports of a type are available, one port is chosen randomly for each type of network port and that port is connected to the appropriate network complying with the maximum specification of the port.

If for a certain type of network port only one port is available, that port is connected to the appropriate network complying with the maximum specification of the port. Wireless ports not used shall be deactivated if possible. In the event of verification of requirements set out in Annex II point 3, the wired network ports not used shall be deactivated if possible.

The unit is put in on mode. Once the unit in on mode is working properly, it is allowed to go into the condition providing networked standby and the power consumption is measured. Then the appropriate trigger is given to the equipment through the network port and a check is made whether the equipment is reactivated. If one physical network port is shared by two or more types of (logical) network

ports this procedure is repeated for each type of logical network port, with the other logical network ports being logical-disconnected.

The model shall be considered to comply with this Regulation if the results for each type of network port do not exceed the limit value by more than 10 %.

Otherwise, three more units shall be tested. The model shall be considered to comply with this Regulation if the average of the results for each type of network port of the latter three tests does not exceed the limit value by more than 10 %.

Otherwise, the model shall be considered not to comply.

The Member State authorities shall provide the test results and other relevant information to the authorities of the other Member States and to the Commission within one month of the decision being taken on the non-compliance of the model.

In addition to the procedures set out above, Member States' authorities shall use reliable, accurate and reproducible measurement procedures which take into account the generally recognised state of the art, including methods set out in documents the reference numbers of which have been published for that purpose in the *Official Journal of the European Union*.

(9) Annex IV is amended as follows:

The following is added after the last sentence of Annex IV:

'Networked standby: 3 W for HiNA equipment; 1 W or less for non-HiNA equipment.'

Article 2 **Amendments to Regulation (EC) No 642/2009**

Regulation (EC) No 642/2009 is amended as follows:

(1) In Article 2, the following definitions are added:

12. 'network' means a communication infrastructure with a topology of links, an architecture including the physical components, organisational principles, communication procedures and formats (protocols);
13. 'network port' means a wired or wireless physical interface of the network connection located at the television through which the television can be remotely activated;
14. 'networked television' means a television that can connect to a network and has one or more network ports;
15. 'network availability' means the capability of the television to resume functions after a remotely initiated trigger has been detected by a network port;
16. 'remotely initiated trigger' means a signal that comes from outside the television via a network;
17. 'networked standby' means a condition in which the television is able to resume a function through a remotely initiated trigger via a network connection;
18. 'networked television with high network availability functionality' (a television with HiNA functionality) means a television with the functionality of a router, network switch, wireless network access point (not being a terminal) or combination thereof included;

19. 'router' means a network device that, as its primary function, determines the optimal path along which network traffic should be forwarded. Routers forward packets from one network to another, based on network layer information (L3);
20. 'network switch' means a network device that, as its primary function, filters, forwards, and distributes frames based on the destination address of each frame. All switches operate at least at the data link layer (L2);
21. 'wireless network access point' means a device that, as its primary function, provides IEEE 802.11 (Wi-Fi) connectivity to multiple clients.'

(2) Annex I is amended as follows:

(a) The following is added as new point 3:

'3. NETWORKED STANDBY POWER CONSUMPTION

For networked televisions, the following requirements shall apply:

1. As of 1 January 2015:

(a) Possibility to deactivate wireless network connection(s)

If a networked television has the ability to connect to a wireless network, it shall be possible for the user to deactivate the wireless network connection(s). This requirement does not apply to products which rely on a single wireless network connection for intended use and have no wired network connection.

(b) Power management for networked televisions

Networked televisions shall provide a function with the following characteristics:

After no more than 4 hours in on mode following the last user interaction and/or a channel change, the television shall be automatically switched from on mode to a condition of networked standby or any other condition which does not exceed the applicable power consumption requirements for conditions providing networked standby.

Televisions shall display an alert message before the automatic switch from on mode to the applicable condition/modes. This function shall be set as default.

In a condition providing networked standby, the power management function may switch the television automatically into standby mode, or off mode or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode.

The power management function, or a similar function, shall be available for all network ports of the networked television.

The power management function, or a similar function, shall be activated, unless all wireless network ports are deactivated. In that case the power management function, or a similar function, shall be activated if any one of the network ports is activated.

(c) A networked television that has one or more standby modes shall comply with the requirements for these standby mode(s) when all wireless network ports are deactivated.

(d) Power consumption in a condition providing networked standby:

The power consumption of television with HiNA functionality, in a condition providing networked standby into which the television is switched by the power management function, or a similar function, shall not exceed 12.00 W.

The power consumption of televisions without HiNA functionality in a condition providing networked standby into which the television is switched by the power management function, or a similar function, shall not exceed 6.00 W.

2. As of 1 January 2017:

In addition to the requirements set out in point 1 (a) and 1(b), the following provisions shall apply:

(a) A networked television that has one or more standby modes shall comply with the requirements for these standby mode(s) when all wired network ports are disconnected and when all wireless network ports are deactivated.

(b) A networked television shall comply with the provisions under 2.2 (d) when all wired network ports are disconnected and when all network ports are deactivated.

(c) Power consumption in a condition providing networked standby:

The power consumption of television with HiNA functionality, in a condition providing networked standby into which the television is switched by the power management function, or a similar function, shall not exceed 8.00 W.

The power consumption of televisions without HiNA functionality in a condition of networked standby into which the television is switched by the power management function, or a similar function, shall not exceed 3.00 W.

3. As of 1 January 2019:

In addition to the requirements set out in point 1 (a), 1(b), 2 (a), 2 (b) and 2 (c) the following provisions shall apply for networked televisions other than HiNA equipment or televisions with HiNA-functionality:

The power consumption of televisions without HiNA functionality in a condition of networked standby into which the television is switched by the power management function, or a similar function, shall not exceed 2.00 W.'

(b) Point 3 becomes point 4

(c) Point 4 becomes point 5

(d) Point 5 becomes point 6

(e) In point 5.1 (new point 6.1), the following is added after (d) as new point (e):

'(e) for networked standby

- the number and type of network ports and, except for wireless network ports, where these ports are located on the television; in particular it shall be noted if the same physical network port accommodates two or more types of network ports;
- whether all network ports are deactivated before delivery;
- whether the television qualifies as television with HiNA functionality; if no information is provided the television is considered not to be HiNA equipment or a television with HiNA functionality.'

(f) In point 5.1 (new point 6.1), the following is added after new point (e) as new point (f):

‘(f) for each type of network port:

- the default time after which the power management function, or a similar function, switches the television into a condition providing networked standby,
- the trigger that is used to reactivate the equipment,
- the (maximum) performance specifications,
- the (maximum) power consumption of the television in a condition providing networked standby into which the power management function, or a similar function, will switch the equipment, if only this port is used for remote activation.

If no information is provided, the television is considered not to be a networked television.’

(g) Point 5.1 (e) becomes new point 6.1 (g)

(h) In point 5.2 (new point 6.2), the second indent is replaced by the following:

- for each standby and/or off mode and the condition providing networked standby, the power consumption data in Watt rounded to the second decimal place;’

(3) Annex II is amended as follows:

Point 2 is replaced by the following:

‘2. Measurements of standby/off-mode, and networked standby power consumption

Measurements of the power consumption referred to in Annex I, Part 2 and 3 shall fulfil all of the following conditions:

The power consumption referred to in points 2.1(a), 2.1(b), 2.2(a), 2.2(b), 3.1(d) and 3.2(c) shall be established by a reliable, accurate and reproducible measurement procedure, which takes into account the generally recognised state of the art.’

(4) Annex III is replaced by the following:

‘Verification procedure

A. Verification procedure for requirements established in parts 1, 2, 4 and 5 of Annex I.

(1) When performing the market surveillance checks referred to in Article 3(2) of Directive 2009/125/EC, the Member States’ authorities shall apply the following verification procedure for the requirements set out in Annex I, parts 1, 2, 4 and 5.

Member States’ authorities shall test one single television unit.

The model shall be considered to comply with the provisions set out in Annex I, if:

- (a) the result for on-mode power consumption does not exceed the applicable limit value set out in Annex I, point 1 and 2 of Part 1 by more than 7 %; and

- (b) the results for off-mode/standby conditions, as applicable, do not exceed the applicable limit values set out in Annex I, point 1(a) 1 (b), 2 (a) and 2 (b) of Part 2 by more than 0.10 Watt; and
- (c) the result for the peak luminance ratio set out in Annex I, Part 5 does not fall below 60 %.

If the results referred to in point 1(a) or 1(b) or 1(c) are not achieved, three additional units of the same model shall be tested.

- (2) After three additional units of the same model have been tested, the model shall be considered to comply with the requirements set out in Annex I, if:
 - (a) the average of the results for the latter three units for on-mode power consumption does not exceed the applicable limit value set out in Annex I, point 1 and 2 of Part 1 by more than 7%; and
 - (b) the average of the results for the latter three units for off-mode/standby conditions, as applicable, do not exceed the applicable limit values set out in Annex I, point 1 (a), 1 (b), 2 (a) and 2 (b) of Part 2 by more than 0.10 Watt; and
 - (c) the average of the results for the latter three units for the peak luminance ratio set out in Annex I, Part 5 does not fall below 60 %.

If the results referred to in point 2(a) and 2(b) and 2(c) are not achieved, the model shall be considered not to comply with the requirements.

B. Verification procedure for requirements established in part 3 of Annex I

When performing the market surveillance checks referred to in Article 3(2) of Directive 2009/125/EC, the Member States' authorities shall apply the following verification procedure for the requirements set out in Annex I, points 1(d) and 2(c) of Part 3, as applicable. They shall use the applicable procedure below, after having deactivated and/or disconnected, as applicable, all network ports of the unit.

Member States' authorities shall test one single unit as follows:

If the television has, as indicated in the technical documentation, one type of network port and if two or more ports of that type are available, one of these ports is chosen randomly and that port is connected to the appropriate network complying with the maximum specification of the port. In the event of multiple wireless network ports of the same type, the other wireless ports shall be deactivated if possible. In the event of multiple wired network ports of the same type for verifying requirements set out in Annex I point 2, the other network ports shall be deactivated if possible. If only one network port is available, that port is connected to the appropriate network complying with the maximum specification of the port.

The unit is put in on mode. Once the unit in on mode is working properly, it is allowed to go into the condition providing networked standby and the power consumption is measured. Then the appropriate trigger is provided to the television through the network port and a check is made whether the television is reactivated.

Where the television has, as indicated in the technical documentation, more than one type of network port, for each type of network port the following procedure is repeated. If two or more network ports of a type are available, one port is chosen

randomly for each type of network port and that port is connected to the appropriate network complying with the maximum specification of the port.

If for a certain type of network port only one port is available, that port is connected to the appropriate network complying with the maximum specification of the port. Wireless ports not used shall be deactivated if possible. In the event of verification of requirements set out in Annex II point 3, the wired network ports not used shall be deactivated if possible.

The unit is put in on mode. Once the unit in on mode is working properly, it is allowed to go into the condition providing networked standby and the power consumption is measured. Then the appropriate trigger is provided to the television through the network port and a check is made whether the television is reactivated.

If one physical network port is shared by two or more types of (logical) network ports this procedure is repeated for each type of logical network port, with the other logical network ports being logical-disconnected.

The model shall be considered to comply with this Regulation if the results for each type of network port do not exceed the limit value by more than 7%.

Otherwise, three more units shall be tested. The model shall be considered to comply with this Regulation if the average of the results for each type of network port of the latter three tests does not exceed the limit value by more than 7%.

Otherwise, the model shall be considered not to comply.

The Member State authorities shall provide the test results and other relevant information to the authorities of the other Member States and to the Commission within one month of the decision being taken on the non-compliance of the model.

C. Conformity check

For the purpose of checking conformity with the requirements, the authorities of the Member States shall use the procedure set out in Annex II and reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state of the art measurement methods, including methods set in documents the reference numbers of which have been published for that purpose in the *Official Journal of the European Union*.