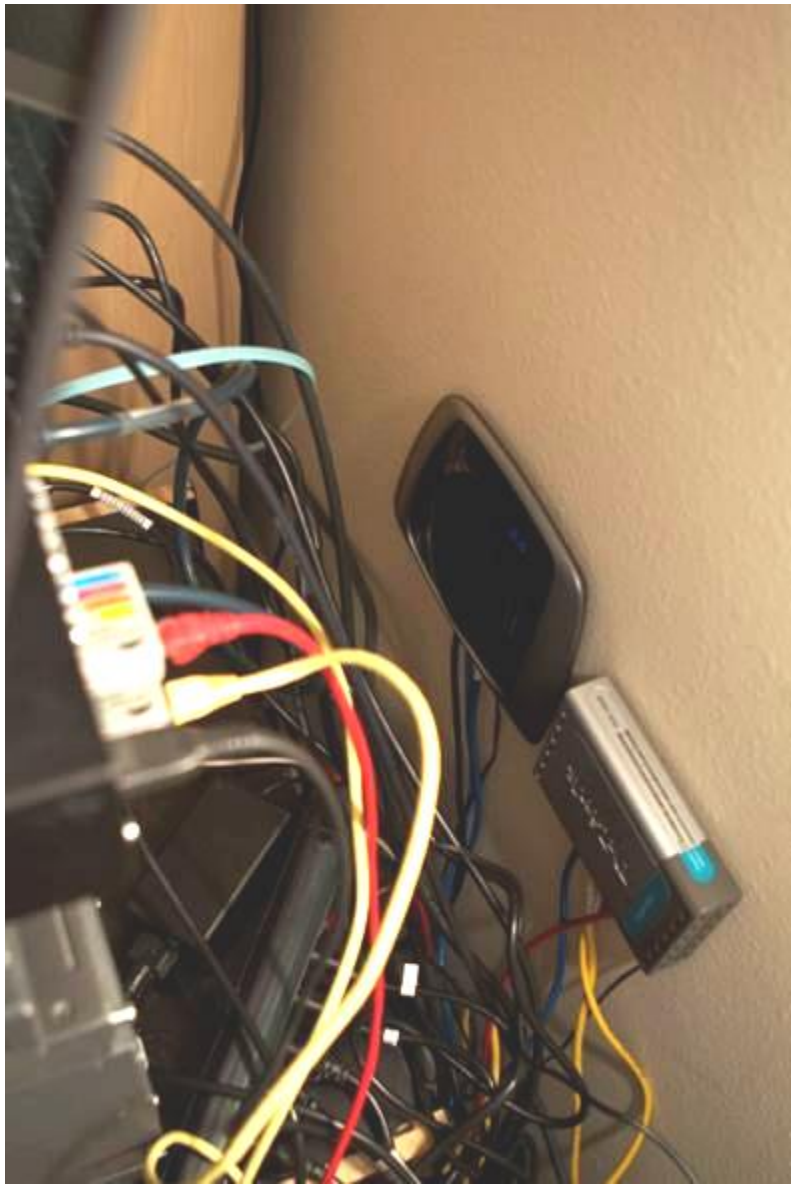

NL Agency
Ministry of Economic Affairs

Network Standby Policy in the EU

IEA/4E/SEAD
Network Standby Workshop:
Beyond 1-Watt –
Towards energy efficiency in the digital age
16 September 2013

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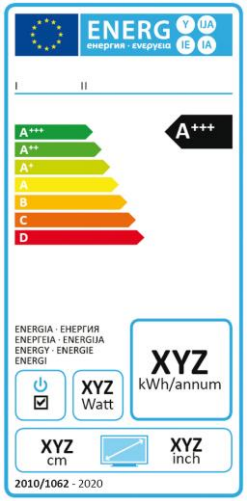
(NL Agency)

>> Focus on energy and climate change

Content

- EU product efficiency policy
- EU Standby and off mode regulation
- EU Amendment on networked standby
  - Philosophy
  - Requirements
  - Expected savings
- Future work, international cooperation

EU product efficiency policy



Mandatory instruments:

- EU energy label
- **Ecodesign requirements**

Voluntary instruments:

- Energy Star for office equipment
- EU ecolabel

EU standby and off mode regulation (1275/2008)

World first horizontal standby and off mode requirements:

Mode	Tier 1 (7 Jan 2010)	Tier 2 (7 Jan 2013)
Off	1 W	0,5 W
Standby	1 W	0,5 W
Standby+display	2 W	1 W

Tier 2 includes *power management* requirement: when equipment is not providing the main function the equipment shall after the shortest possible time appropriate for the intended use switch into standby or off mode.

EU network standby amendment (2013/801)

Basic principles:

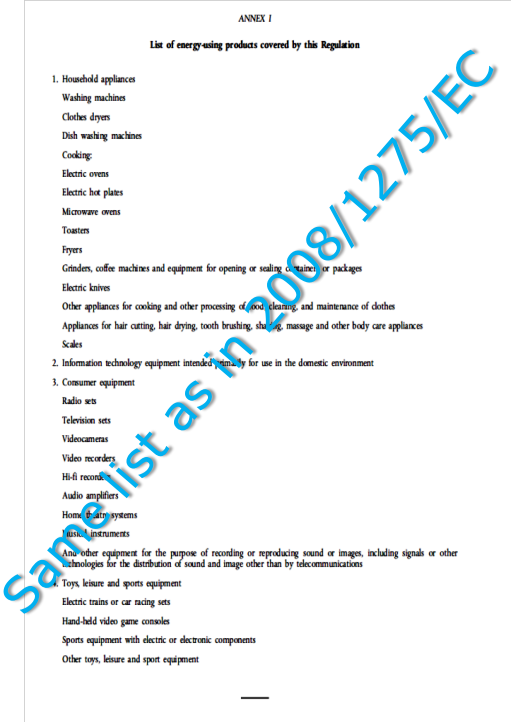
1. Horizontal approach
2. Power management
3. Differentiation based on functionality

EU networked standby amendment: horizontal approach

- Household appliances
- ICT equipment
- Consumer (electronics) equipment
- Toys, leisure and sports equipment

Several products are regulated vertically:

- Televisions
- Washing machines
- Dishwashers
- Driers



ANNEX I

List of energy-using products covered by this Regulation

1. Household appliances
   - Washing machines
   - Clothes dryers
   - Dish washing machines
   - Cooking:
   - Electric ovens
   - Electric hot plates
   - Microwave ovens
   - Toasters
   - Fryers
   - Grinders, coffee machines and equipment for opening or sealing containers or packages
   - Electric knives
   - Other appliances for cooking and other processing of food, cleaning, and maintenance of clothes
   - Appliances for hair cutting, hair drying, tooth brushing, shaving, massage and other body care appliances
   - Scales
2. Information technology equipment intended primarily for use in the domestic environment
3. Consumer equipment
   - Radio sets
   - Television sets
   - Videocameras
   - Video recorders
   - Hi-fi record
   - Audio amplifiers
   - Home theatre systems
   - Musical instruments
   - And other equipment for the purpose of recording or reproducing sound or images, including signals or other technologies for the distribution of sound and image other than by telecommunications
4. Toys, leisure and sports equipment
   - Electric trains or car racing sets
   - Hand-held video game consoles
   - Sports equipment with electric or electronic components
   - Other toys, leisure and sport equipment

—

Same list as in 2008/1275/EC

EU networked standby amendment: scope

The amendment only applies to *networked equipment*.

Networked equipment: equipment that has at least one *network port*.

Network port: physical interface of network connection through which the equipment can be remotely activated.

Manufacturers decide whether a network connection is a network port, and thereby whether equipment is networked equipment, but:

1. Equipment with functionality of router, network switch, wireless network access point (not being a terminal), hub, modem, VoIP telephone or video phone is always considered to be networked equipment.
2. Non networked equipment has to meet the 2008/1275/EC requirements including power management (and waiting for a remote trigger can not be used as an argument for exemption).

EU networked standby amendment: power management I

Power management: delay time and resume time

- Delay time: period of inactivity after which the product is powered down.
- Resume time: time that it takes for the product to wake up and have functionality available (after recieving a trigger).
  Two elements:
  - network interface: low power consumption, short resume time
  - functionality to be activated: resume time to be balanced with power consumption

A short delay time requires a (very) short resume time, otherwise consumers will disable power management.

Default delay time shall not exceed 20 minutes, for coffee machines this is 30, 40 or 60 minutes.

EU networked standby amendment: power management II

Power management is also stimulated by:

- the *measurement method*: per type only 1 network port is connected, others are deactivated (tier 1, wireless) or not connected (tier 2)
- in combination with the *requirements*: no differentiation with respect to number of network ports

EU networked standby amendment: functionality

- Network availability: main functional aspect, can be expressed in resume time, but resume time will not be used in regulation due to problems with measuring resume time for all products covered by the regulation.
  - **Hi**gh **N**etwork **A**vailability: resume time < 1 s (“immediately”)
  - Low Network Availability: resume time > 1 s
- 3 categories of networked equipment:
  - HiNA equipment: router, network switch, hub, wireless network access point, hub, modem, VoIP telephone, video phone
  - Equipment with HiNA functionality: equipment with the functionality of a router, network switch, wireless access point, but not being HiNA equipment
  - Other networked equipment

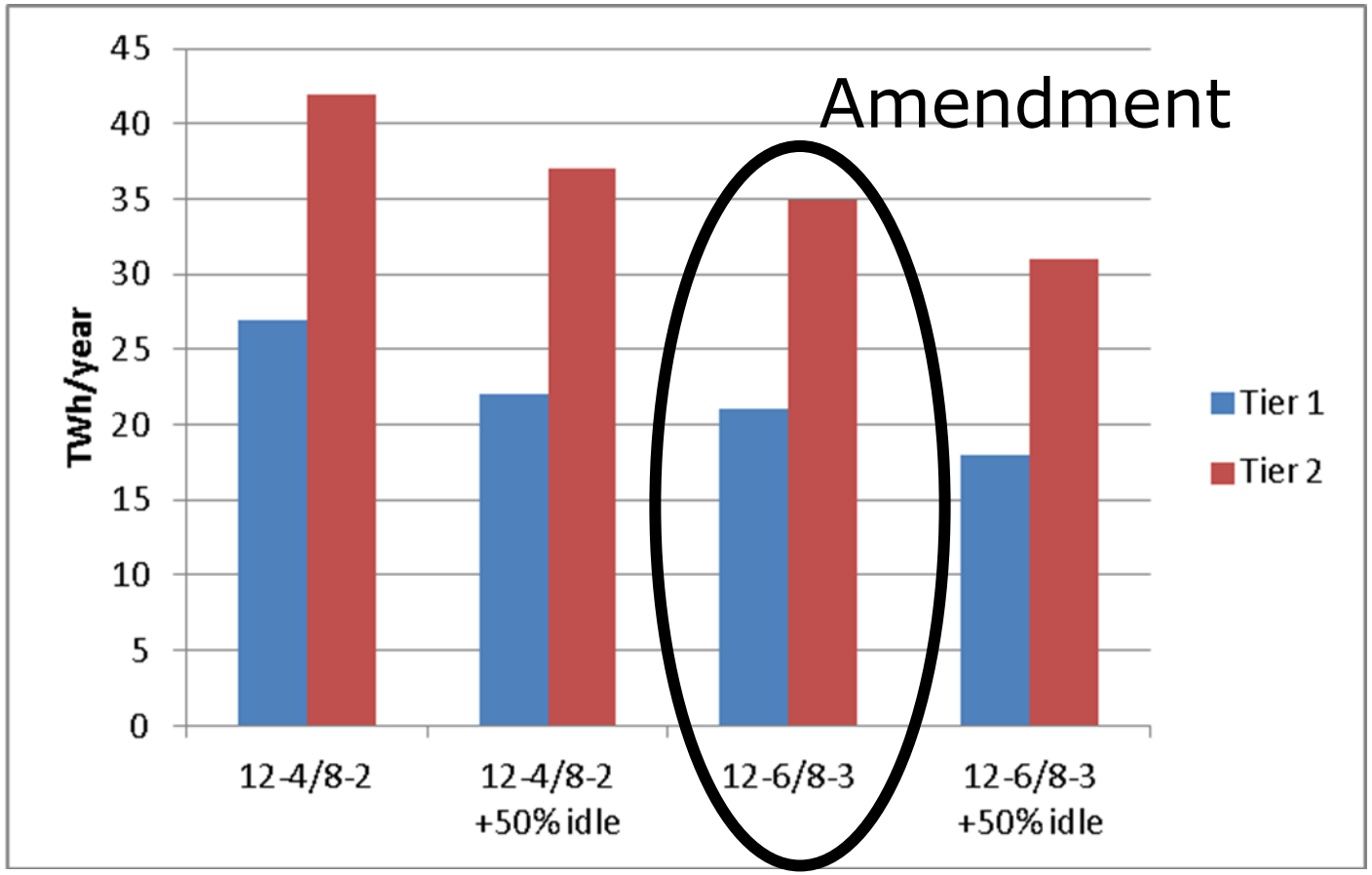
EU network standby amendment: requirements

- Power levels:

Network standby condition	Tier 1 (1/1/2015)	Tier 2 (1/1/2017)	Tier 3 (1/1/2019)
High **N**etwork **A**vailability	12 W	8 W	8 W
Other	6 W	3 W	2 W

- Possibility to deactivate wireless network connection(s).
- Power management requirement.
- Equipment with HiNA functionality and other networked equipment shall comply with the standby and off mode requirements:
  - When all network ports are deactivated (tier 1)
  - When all wired network ports are disconnected and all wireless network ports are deactivated (tier 2)

Expected savings



Future work, international cooperation

- Policy:
  - Exchange of (market) data, e.g. through 4^E or SEAD
  - Discussion on targets, defining a pathway to a **1 W+** goal

- Standardization:
  - Development of measurement methods
  - Development of energy efficient protocols, e.g. EEE

- Technical developments:
  - Further development of power management for non mobile products
  - Lower power consumption of individual components

Concluding remarks and suggestions

- A **1W+** goal for networked standby in 2020 is simple, flexible and achievable.

- A horizontal approach to networked standby is feasible; 'major' appliances are to be treated individually.

- International co-operation is needed:
  - Policy co-operation (4^E, SEAD)
  - Development of measurement standards (IEC)
  - Greening of network protocols

Thank you for your attention!

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