REVIEW STUDY ON STANDBY REGULATION

Request for services No. ENER/C3/2012-418-lot 2/08/2014-558

AGENDA OF THE DAY

1. Presentation of the study team
2. Short overview of Regulation 1275/2008 (incl. four amendments)
3. Overview of the review study
4. Focus aspects of review study:
    a. Scope
        i. Products equipped with electric motor (operated by remote control)
        ii. Products with low voltage external power supplies
        iii. Products classified as professional equipment
        iv. Other products on standby/off mode scope

Lunch break (12-13:30)

    b. Requirements
        i. Level of ambition for standby/off operating modes
        ii. Appropriateness and level of ambition for networked standby requirements from the 3rd stage implementation (2019) for non HiNA-equipment
5. Other areas of review
    a. Ambiguous definitions
    b. Products covered under other Vertical Regulations and Voluntary Agreements
    c. Other aspects
6. Next steps
7. End of meeting (16:00)

STUDY TEAM

- Project manager: Larisa Maya-Drysdale
- Technical expert: Jan Viegand
- Data collection and analysis: Baijia Huang
- Support data collection and analysis: Catriona McAlister
- Reporting: All
- Contract manager: VHK

BACKGROUND

- Stock of electronic products & household appliances expected to grow to 4,6 billion by 2020 (Topten, 2013)

- Standby functionalities and off-mode losses in the Community have been predicted to increase to 49 TWh in 2020 (compared to 47 TWh in 2005)

- The estimated energy consumption for networked standby could potentially grow up to 90 TWh/year by 2020, if no action is taken (Lot 26)

BACKGROUND

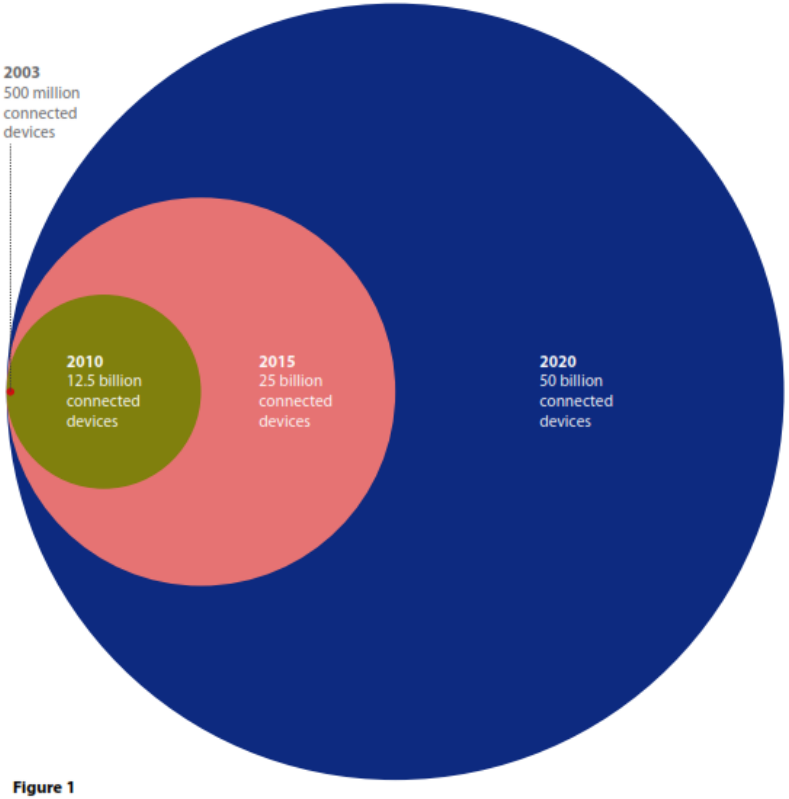


Figure 1
Scale of the IoT explosion
Source: Carré & Strauss visualization based on Cisco figures

Roadmap for The Emerging “Internet of Things”, Carre & Strauss. Available at: http://sweden.nlembassy.org/binaries/content/assets/postenweb/z/zweden/netherlands-embassy-in-stockholm/iot_roadmap_final_draft_0309145.pdf

1275/2008 (CONSOLIDATED VERSION)

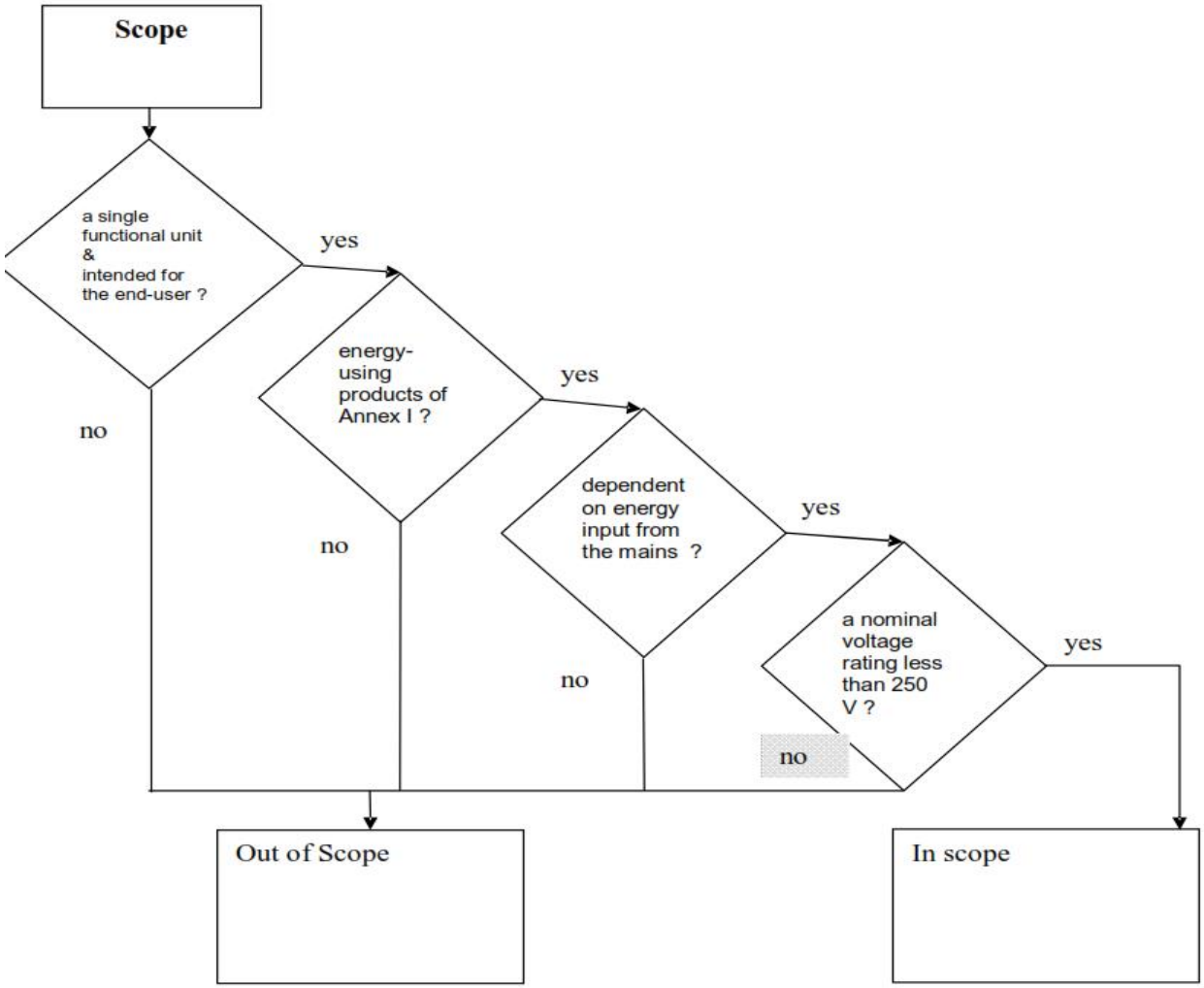
- Objective: To ensure lowest possible energy use for household appliances and electronic products in passive standby/off modes and networked standby

- Includes amendments:
  - 278/2009 External Power Supply (EPS)
  - 642/2009 Televisions
  - 617/2013 Computers and computer servers
  - 801/2013 Networked standby losses

REGULATION 1275/2008
(INCL. FOUR AMMENDMENTS)

- Scope:
  - Household appliances
  - Information technology
  - Consumer equipment
  - Toys, leisure and sport equipment
- Annex I lists specific product groups and generic product functionalities (e.g. cooking, cleaning) = products not specifically mentioned in Annex I but that fall in these functionalities are covered

REGULATION 1275/2008 (INCL. FOUR AMMENDMENTS)



Guidelines Regulation (EC) No 1275/2008 (October 2009)

REGULATION 1275/2008
(INCL. FOUR AMMENDMENTS)

- Exemption (Article 1):
  - electronic household & office equipment with low voltage external power supplies (LV EPS)
- Exclusions (Annex I):
  - desktop, integrated desktop and notebook computers
  - televisions
- Tier I, Tier II and Tier III- power consumption limits not applying to:
  - printing equipment with a power supply of a rated power larger than 750 W (until 2017)
  - tele-presence systems (until 2017)
  - large format printing equipment
  - desktop thin clients
  - workstations
  - mobile workstations
  - small-scale servers
  - computer servers

REGULATION 1275/2008
REQUIREMENTS STANDBY/OFF MODES

Listed only those relevant to current timeframe

Requirement	From 2013
Off-mode power consumption	≤ 0,50 W
Standby-mode consumption (reactivation function & mere indication of function)	≤ 0,50 W
Standby-mode consumption (reactivation function & information status display)	≤ 1 W
Availability of off and/or standby mode and/or another condition	Available unless inappropriate for the intended use under power requirements when equipment is connected to the mains power source
Power management function	Shall switch equipment automatically into standby/off/another condition after the shortest possible period of time appropriate for the intended use of the equipment, when equipment is not providing main function & other EuPs are not dependent on its functions. When on these conditions, the equipment shall comply with above requirements

REGULATION 1275/2008
REQUIREMENTS NETWORKED STANDBY

Introduced in three implementation steps: 1st January 2015, 1st January 2017 & 1st January 2019

Requirement	From 2015	From 2017	From 2019
HiNA equipment or equipment with HiNA functionality	≤ 12 W	≤ 8 W	
Other networked equipment (**other than** HiNA equipment and equipment with HiNA functionality)	≤ 6 W	≤ 3 W	≤ 2 W

REGULATION 1275/2008
REQUIREMENTS NETWORKED STANDBY

Requirement	From 2015	From 2017
Possibility to deactivate wireless network connection	Any networked equipment that can be connected to a wireless network shall offer the user this possibility (not for products which rely on a single wireless network connection for intended use & have no wired network connection)	
Power management function	Equipment shall (unless inappropriate for the intended use) switch automatically after the shortest possible time appropriate for the intended use (≤20 min) into networked standby, when equipment is not providing main function & other EuPs are not dependent on its functions	Covers also networked equipment when all wired networked ports are disconnected and when all wireless network ports are deactivated
	During networked standby, the equipment may switch automatically into standby/off modes or another condition which does not exceed standby/off requirements	Standby requirements apply also networked equipment that has one or more standby mode(s) when all wired networked ports are disconnected and all wireless network ports are deactivated
	It shall be available for all network ports of the networked equipment	
	It shall be activated unless all network ports are deactivated (in this case the power management function shall be activated if any of the network ports is activated)	

PROJECT OVERVIEW

- Aim & scope: To review the current amended Commission Regulation (EC) 1275/2008 with focus on:
  - the appropriateness and level of the requirements for standby/off mode;
  - the appropriateness and level of networked standby requirements from the third stage of implementation for non HiNA-equipment (2019);
  - the inclusion of products currently not in scope, like inter alia, professional equipment and products equipped with electric motors operated by remote control and other relevant products.
  - whether the exemption for products placed on the market with low voltage power supplies is still valid and justified.

PROJECT OVERVIEW

- Other aspects to review:
  - Ambiguous definitions
  - Interfaces with Vertical Regulations
  - Other important products currently not included in Annex I
  - Other relevant aspects

PROJECT OVERVIEW

More information on
http://www.ecostandbyreview.eu/

SCOPE

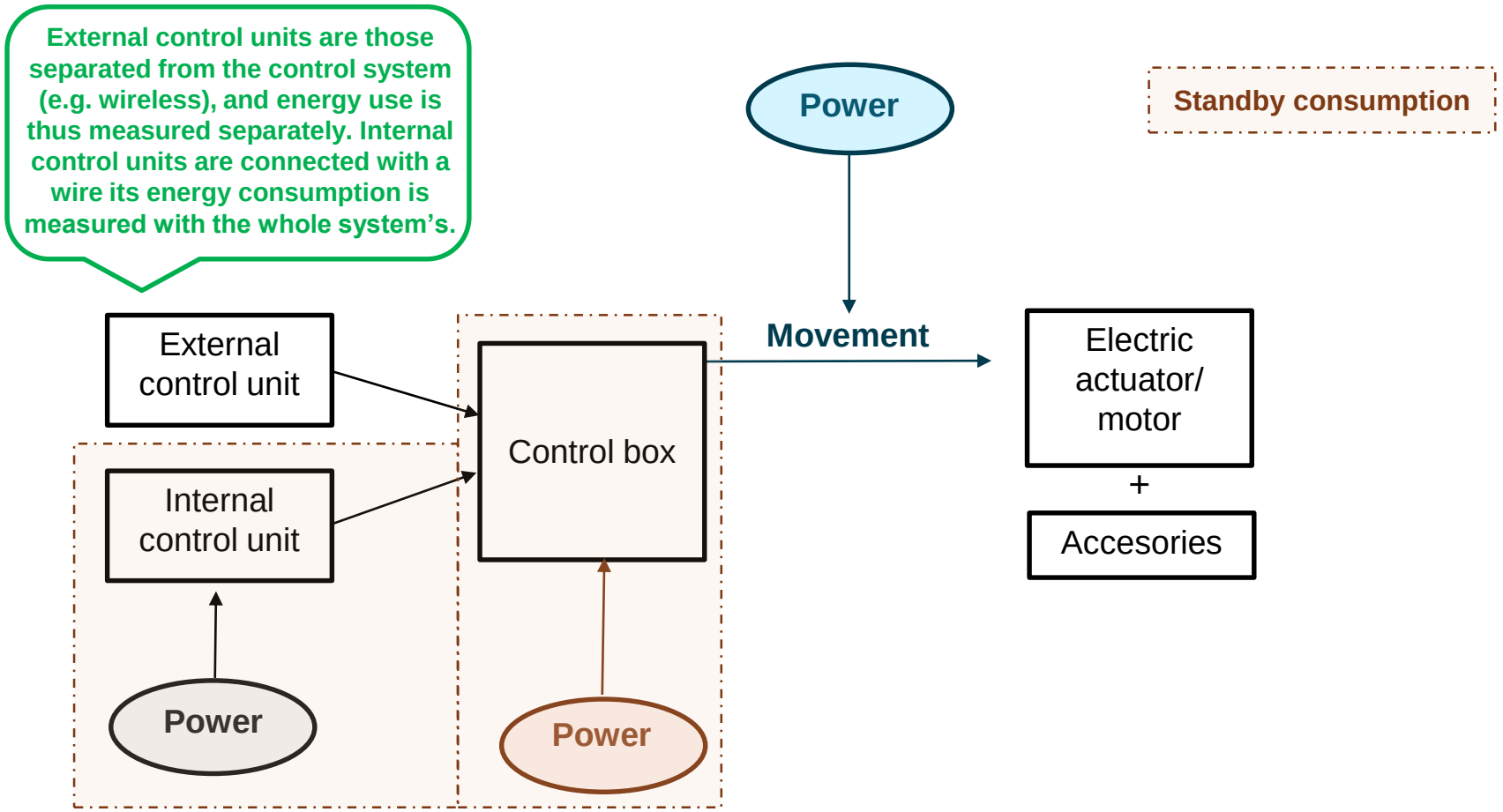
FOCUS ASPECTS OF ASSESSMENT

PRODUCTS EQUIPPED WITH ELECTRIC MOTOR (OPERATED BY REMOTE CONTROL)

- To explore: Should products equipped with motors like electrical furniture (e.g. adjustable beds, height-adjustable desk, automatic door, etc.) be added to the scope?
- Suggestion is to delimit the definition to (home/office) products with small control systems **which exert a function of movement**

This product category has created confusion with some stakeholders due to ambuiguity in definition. It was confirmed that electric furniture should be the focus (in domestic/office environments)

(HOME/OFFICE) PRODUCTS EQUIPPED WITH ELECTRIC MOTOR (SMALL CONTROL SYSTEMS) OPERATED BY REMOTE CONTROL



PRODUCTS EQUIPPED WITH ELECTRIC MOTOR (OPERATED BY REMOTE CONTROL)

- Some examples of internal control units

- Some examples of external control units

http://www.linak.com/products/controls.aspx

PRODUCTS EQUIPPED WITH ELECTRIC MOTOR (OPERATED BY REMOTE CONTROL)

- Some examples of control boxes (and integrated systems)




- Some examples of accessories




http://www.linak.com/about/?id3=2319

http://www.linak.com/products/accessories.aspx

SOME PRODUCT EXAMPLES

Product	Standby consumption (W)	Off-mode consumption (W)
Adjustable desk type 1, model 1	0,6	n.a.
Adjustable desk type 1, model 2	0,3	n.a.
Adjustable desk type 2	5,4*	n.a.
Adjustable desk type 3	0,8	n.a.
Adjustable desk type 4	0,4	n.a.

n.a. = mode not existing for this product
***** = Dealer stated that producer was fitting new control boxes with lower standby consumption compared with display model tested (2012).

SOME PRODUCT EXAMPLES

Product	Standby consumption (W)	Off-mode consumption (W)
Adjustable bed type 1	< 0,2	n.r.
Adjustable bed type 2, model 1	4,0*	n.r.
Adjustable bed type 2, model 2	0,3*	n.r.
Adjustable bed type 3, model 1	5,4*	n.r.
Adjustable bed type 3, model 2	0,6*	n.r.

n.r. = consumption not reported
***** = Dealer stated that producer was fitting new control boxes with lower standby consumption compared with display model tested (2012)

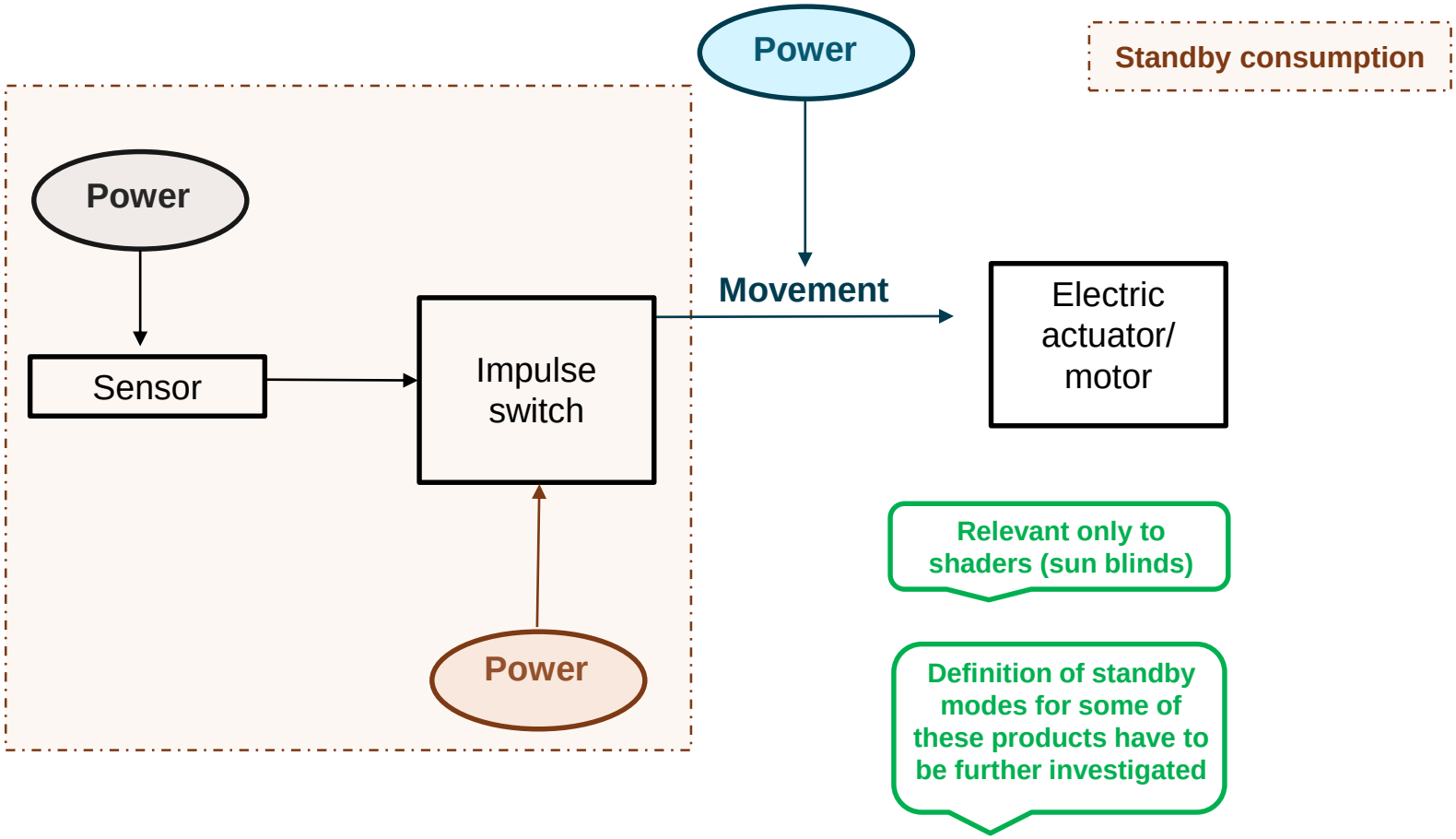
SOME PRODUCT EXAMPLES

Product	Application	Standby consumption (W)	Off-mode consumption (W)
Control box + internal control unit, model 1	Windows	2	n.r.
Control box + internal control unit, model 2	Windows	3	n.r.

n.r. = consumption not reported

Windows may be covered under the Energy Performance of Buildings Directive

PRODUCTS WITH IMPULSE SWITCHES



SOME PRODUCT EXAMPLES

Product	Application	Standby consumption (W)	Off-mode consumption (W)
Impulse switch (excl. sensor), model 1	Shader (sun blind)	0,4	n.r.
Impulse switch (excl. sensor), model 2	Shader (sun blind)	0,9	n.r.
Impulse switch (excl. sensor), model 3	Shader (sun blind)	0,4	n.r.

n.r. = consumption not reported

SUMMARY – PRODUCTS EQUIPPED WITH ELECTRIC MOTOR (OPERATED WITH REMOTE CONTROL)

- Many of the products sampled do not live up to standby requirements, some do
- Networked standby requirements would/will also apply
- Off-mode information was not available for most of these products (for adjustable desks this function is not relevant)
- A diversity of suppliers of control systems (control units + control boxes + motor/actuator) were found in the EU-market, applications vary from adjustable desks & beds, windows, shaders
- Significance (sales, operation time) shall be evaluated
- In principle, these products could be covered by the Regulation 1275/2008 (with a better definition)

Exemption of products with low voltage EPS

	Products with low voltage EPS	Small network equipment (routers, gateways etc.)	Mobiles and smartphones	Handheld and robot vacuum cleaners etc.
Problem	Defined as < 6 V and ≥ 550 mA, typically mobile phones' EPS and highly efficient, therefore exempted from Regulation 1275/2008 amended by 801/2013.	Some small networked equipment have low voltage EPS, but these should not be exempted.	These products should be exempted, but some EPS are not ≥ 550 mA. USB 3.1 EPS can deliver at different voltage.	Some products may have low voltage EPS defined as < 6 V and ≥ 550 mA. These should not be exempted. Handheld and robot vacuum cleaners are exempted already from vacuum regulation.
Data		Approx. 30% of SNE ‘s EPS are < 6 V and ≥ 550 mA. Average networked standby of 7.48 W and 77% meet stage 1 and 51% already meet stage 2 of HiNA requirements .	Approx. 40% of mobile EPS < 6 V are potentially not ≥ 550 mA, e.g. Nokia 108, Nokia Asha 210, Nokia Asha 501 with AC-11, 5 V, 450 mA, 2.25 W.	Based on desk research, a few handheld vacuum may have low voltage EPS, but not robot vacuum cleaners. More data/inputs needed from stakeholders.

Exemption of products with low voltage EPS

	Products with low voltage EPS	Small network equipment (routers, gateways etc.)	Mobiles and smartphones	Handheld and robot vacuum cleaners
Solution 1	Low voltage EPS is defined as having voltage < 6 V and current between 550 mA and 2A	13% of EPS are under 6 V with power higher than 12 W (higher than 2A) and these will no longer be exempted. Although it is not sure that all SNE have current above 2 A or below 550 mA. Most of them not exempted. Problem partially solved.	Phones with current less than 550 mA are still not exempted. Problem is not solved.	Vacuum cleaners with EPS low voltage EPS are still exempted. Problem is not solved.

Exemption of products with low voltage EPS

	Products with low voltage EPS	Small network equipment (routers, gateways etc.)	Mobiles and smartphones	Handheld and robot vacuum cleaners
Solution 2	Clarify low voltage EPS as used with products only connected to the mains for battery charging purposes, excluding EPS used with products that are intended to be continuously connected to the mains.	Not exempted. Problem solved.	Exempted. Problem solved.	If EPS is still defined as < 6 V and ≥ 550 mA, these would be exempted in this clarification. Exempted. Problem is not solved.
Solution 3	Clarify low voltage EPS as being used with mobile devices and products that are designed to operated off a battery. Although definition of “mobile” would need to robust.	Not exempted. Problem solved.	Exempted. Problem solved.	If EPS is still defined as < 6 V and ≥ 550 mA and the product operates off a battery, these would be exempted in this clarification. Problem is not solved.

Exemption of products with low voltage EPS

	Products with low voltage EPS	Small network equipment (routers, gateways etc.)	Mobiles and smartphones	Handheld and robot vacuum cleaners
Solution 4	Remove exemption of products with low voltage EPS, so the requirement is fairly applied to all products.	Not exempted. Problem solved.	Not exempted. Mobiles and smartphones have no problem with meeting requirements, it gives extra administrative burden, but it may be fair that all products have to comply. Problem solved. We will investigate further on the extra administrative cost for the mobile/smartphone manufacturers.	Not exempted. Problem solved.

The problem of requirements applying unfairly to some of the mobile and smartphones is solved. It was a benefit that they have been exempted.

PRODUCTS CLASSIFIED AS PROFESSIONAL EQUIPMENT

Analyses

- Annex I, section 1: "Household appliances"
  Annex I, section 2: "Information technology equipment intended primarily for use in the domestic environment"
- Annex I, section 3: "Consumer equipment"
- ~~Annex I, section 4: "Toys, leisure and sports equipment"~~

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

The list is from the Regulation

PROFESSIONAL VS HOUSEHOLD

Profesional appliances often differ in:

- Legislative requirements:
  - Sanitation (dishes, clothes etc.)
  - Working environment (safety etc.)
- Robustness: Higher intensity use
- Sizes: Often larger
- Speed: Often faster
- Work principles: E.g. batch vs continuous dishwashing
- Voltage requirements: 3-phases, 400 V, outside scope
- Price
- Other areas?

IT EQUIPMENT FOR USE IN THE DOMESTIC ENVIRONMENT

- EMC class B products
  - Excl. desktops, integrated desktops and notebooks

EMC class B: Less electromagnetic disturbances to surroundings than class A.

There may be class B products used for professional environments

PROFESSIONAL VS DOMESTIC

Examples professional IT products:

- Network equipment: Switches, routers etc.
- Imaging equipment: Digital press etc.
- Information displays: Outdoor signage etc.

PROFESSIONAL VS DOMESTIC

Professional IT products often differ in:

- On time: Always or almost always on
- Sizes: Often larger
- Product variations: Complex, diverse and customised
- Safety requirements: Firewalls etc.
- Quality of Service (QoS) requirements
- Voltage requirements: 3-phases, 400 V, outside scope
- Volumes: Often smaller
- Price
- Other areas?

CONSUMER EQUIPMENT

- Radio sets
- Videocameras
- Video recorders
- Hi-fi recorders
- 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, but excluding televisions as defined in Commission Regulation (EC) No 642/2009

The list is from the Regulation

CONSUMER VS PROFESSIONAL EQUIPMENT

Professional equipment often differ in:

- Robustness: Higher intensity use
- Sizes: Often larger
- Product variations: Complex, diverse and customised
- Quality: Requires powerful electronics
- Volumes: Often smaller
- Price
- Other areas?

CONCLUSION AND NEXT STEPS

- As a whole, large differences between professional and household equipment
- For some appliances, small overlaps between professional and household
- Scope of the regulation (household and office equipment) should overall be kept.
- Cases might be further explored that are at the borderline (valid in paticular for ICT or equipment used in residential settings, similar to household equipment)
- Cases and data?

OTHER PRODUCTS NOT IN SCOPE

- Not covered by current Regulation but identified from market surveillance and discussions with stakeholders
- Evaluate standby/off consumption and significance (sales, operation time)
- Paper shredders as an example

The assessment of this item will only focus on some product examples and their specific potential inclusion in the scope of the Regulation

OTHER PRODUCTS NOT IN SCOPE – PAPER SHREDDERS

- Normally seen as business equipment or IT-equipment (ADCO), used at home and offices (small, medium, large machines)

- However, IT-equipment defined in Regulation: *"information technology equipment' means any equipment which has a primary function of either entry, storage, display, retrieval, transmission, processing, switching, or control, of data and of telecommunication messages or a combination of these functions and may be equipped with one or more terminal ports typically operated for information transfer".*

- Don't fit in any of the other categories (household appliances, consumer equipment, toys leisure and sports equipment), although the Regulation covers household and office equipment intended for use in the domestic environment

OTHER PRODUCTS NOT IN SCOPE – PAPER SHREDDERS

- Office equipment is defined together as household equipment in Regulation and covers those listed in Annex I
- Lot 6 briefly discusses it:
  - Office equipment covers EuPs installed directly in the workplace environments and in the possibly adjacent rooms for copiers, printers, **document shredders** and so on (listed as *'other'*)
  - *'…the extrapolation to more horizontal office products which do not appear in households (e.g. document shredders) is not as secure as for the more elaborate mix of household products'*
- A suggestion is to include a category 'business equipment' in Annex I where this miscellaneous products used in home/office environments can fit in
- Nordman and Sanchez, 2006 (referred in Lot 6) lists business equipment examples:
  - Adding machine
  - Pencil sharpener
  - **Shredder**
  - Stapler
  - typewriter

THREE EXAMPLES

Product	Standby consumption (W)	Other modes consumption (W)	Off-mode consumption (W)
Paper shredder 1 (250 sheets daily capacity)	1,9	1,8 (soft off)*	0 (hard off)**
Paper shredder 2 (similar to 1)	1	n.r.	n.r.
Paper shredder 3 (with 'zero energy standby feature')	0	n.r.	n.r.

n.r. = not reported
* = Driven by a soft switch, which is monitored by an analog or digital circuit, which then in turn activates or deactivates an electronic power switch or for example a relay (Lot 6).
** = A hard switch, which galvanically cuts off all electric energy input at the mains level to the EuP. Sometimes "hard off switch" is used for this configuration as well (but this should not include secondary side switches) – Lot 6.

SUMMARY – OTHER PRODUCTS NOT IN SCOPE (PAPER SHREDDER)

- Most paper shredders do not show standby/off consumption, those that do have a special ‘zero energy standby feature’
- Off-mode information was not available for most of them either
- Lot 6: a paper shredder was estimated to operate 0,1h/d at standby (incl. active?) & 23,9h/d in off-mode (with & w/o losses)
- Significance (sales & better assumptions for operation time) shall be evaluated

REQUIREMENTS

FOCUS ASPECTS OF ASSESSMENT

LEVEL OF AMBITION FOR STANDBY/OFF - HISTORY

- Lot 6, completed in 2007
- Regulation 1275/2008: Dec. 2008
- 1st Tier: 7 January 2010
  - Off/standby modes: 1 W (2 W w. display)
- 2nd Tier: 7 January 2013
  - Off/standby modes: 0.5 W (1 W w. display)

LEVEL OF AMBITION FOR STANDBY/OFF - STATUS TODAY

- An area with fast technological development
- Market surveillance indicate a downward trend from the standby/off 0.5 W limit
- Benchmarks from current regulation:
  - Off mode: 0 W-0.3 W
  - Standby — reactivation function: 0.1 W
  - Standby — display: simple displays and low power LEDs 0.1 W (larger displays require more power)
- EPS review, draft working document (~ US DOE) no load:
  - ≤ 49 W AC-DC: 0.10 W
  - > 49 W AC-DC: 0.21 W

LEVEL OF AMBITION FOR STANDBY/OFF - SIMPLE CALCULATION POTENTIAL

- Year 2030
- Clothes (washing, drying), dishwashers, ovens, electric hobs:
  850 mill. units
- 0.5 W > 0.2 W (example)

This is a calculation example of potential energy savings that could be achieved if the standby mode level would be reduced from 0.5 W to 0.2 W to illustrate the size of potential energy savings in order to see if there would be a sufficiently large possible saving potential to justify further assessments.

- Potential savings 2030: 2 TWh

LEVEL OF AMBITION FOR STANDBY/OFF - SIMPLE CALCULATION FEASIBILITY

- 1 unit, lifetime 10 years
- 0.5 W > 0.2 W

Total savings lifetime:
24 kWh / 5 EUR

This is a simple calculation example of economic gain over the product lifetime for an end-user if the standby/off mode consumption was reduced from 0.5 W to 0.2 W. This can illustrate the size of possible max end-user price increase due to needed product modification to reach the lower standby/off level

Modification costs?

- Products in scope
- Products not yet in scope

LEVEL OF AMBITION FOR STANDBY/OFF - CONCLUSION AND NEXT STEPS

- Consider new products in scope
- Select varied base cases
- Data:
  - Sales and stock
  - Power data
  - Modification costs

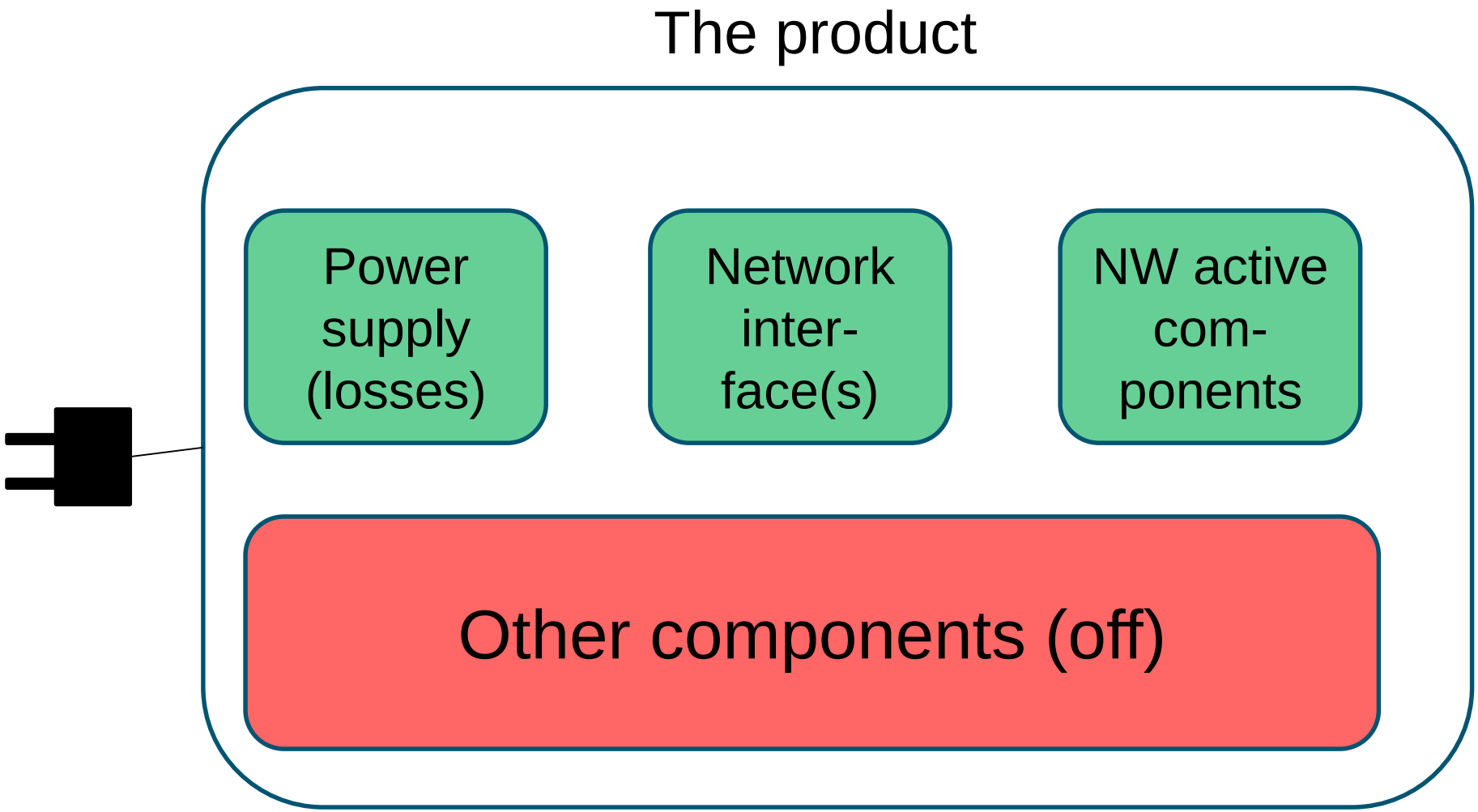
NETWORKED STANDBY NON HINA 3RD STAGE - OVERVIEW

- 1 January 2015: 6 W
- 1 January 2017: 3 W
- 1 January 2019: 2 W
- Benchmark from current regulation: 1 W or less for non-HiNA equipment

Method:

- Data product on market
- Technological developments
- Component-based power budget

NETWORKED STANDBY NON HINA 3RD STAGE - COMPONENTS



NETWORKED STANDBY NON HINA 3RD STAGE - NETWORK INTERFACES

Network type	Power consumption W (dc)		
	Min	Max	Average
Bluetooth Classic			1,00
Bluetooth LE (4.0 or Smart)	0,00	0,50	0,25
Wi-Fi	0,51	1,90	1,21
ZigBee	0,07	0,59	0,33
Z-Wave			0,07
Ethernet, active link, 1000 Mbps	0,43	1,64	1,03
Ethernet, active link, 100 Mbps	0,22	0,65	0,44
Ethernet, active link, 10 Mbps	0,22	0,69	0,46

These figures are from 1 source for illustrating different power levels. These and more network types will be further assessed.

NETWORKED STANDBY NON HINA 3RD STAGE - OTHER ACTIVE COMPONENTS

Basic types:

- Control logic to start the remaining device
  - Limited consumption?
- Specific functionality such as machine door lock
  - Should be limited functionality in NW standby
  - Case specific, inputs sought

NETWORKED STANDBY NON HINA 3RD STAGE - POWER SUPPLY LOSSES

- Optimised power supplies: 85-90 % eff.
- Non-optimised power supplies: ~ 50 % eff.

NETWORKED STANDBY NON HINA 3RD STAGE - EXAMPLES

Good case

- Bluetooth 4.0, ZigBee, Z-Wave: 0.25 W
- PSU eff.: 0.85
- Total AC power: 0.29 W
- Rest for other: 1.71 W

These figures are illustrative examples. Both worse and better cases are possible.

Bad case

- Wi-Fi: 1.90 W
- PSU eff.: 0.60
- Total AC power: 3.17 W
- Rest for other: 0 W
- Cannot comply

- More active interfaces worsen the issue

NETWORKED STANDBY NON HINA 3RD STAGE - CONCLUSION AND NEXT STEPS

- Select varied base cases
  - Incl. with more NW connections
- Data:
  - Product power data
  - Component power data
  - Expected technogical development

OTHER AREAS OF ASSESSMENT

Ambiguous definitions

- Scope definitions in the regulation have led to different interpretations
- Some MSAs have had major problems with determining whether a product is in scope according to the list in Annex I
- Some wording/definitions in the regulation are ambiguous or problematic
- This led to problems during market surveillance for assessing compliance and for the industry
- Some of the key issues collected will be presented and needing inputs

Ambiguous definitions

Definitions	Problems/cases	Comments/questions
Scope as defined in Annex I	MSAs from several Member States mentioned that it is hard to decide whether some products are in scope according to the list in Annex I and this makes it difficult to enforce the regulation.	Give a better/extensive clarification or an open list of the products in scope is suggested. Any comments or suggestions?
Reactivation function	A MSA mentioned the definition in regulation describes an activation not reactivation. E.g. a DVD player should go into standby mode regardless of whether it has played a DVD beforehand or not, if it is not providing main function. Some could argue that the period between DVD player in off mode to it being activated via remote control is not standby, because it will be “activated” and not “reactivated”.	It is suggested to replace “reactivation function” with the expression “activation function”, but the definition remains unchanged. Is this suggestion acceptable?

Ambiguous definitions

Definitions	Problems/cases	Comments/questions
Main function	An example from a MSA showed whether a networked washing machine has a networked standby or not is debatable. It is argued that the equipment is providing safety function as the main function during the time (left-on or similar mode) when the door is locked.	Some MSAs argue that the main function of a washing machine is to wash, safety is the main function of only the door lock. Any comments/suggestions?
	Another example from a MSA is the left-on or similar mode after a washing cycle ended, is argued by manufacturer, not a standby mode due to lack of reactivation function.	It's in our opinion and MSA's that the regulation requires the machine to go into a mode (standby or similar ≤ 0.5 or 1 W) when not providing main function which in this case is washing, so any mode after washing cycle ended should be standby or similar that does not exceed the standby limit. Any comments?

Ambiguous definitions

Definitions	Problems/cases	Comments/questions
Intended use	A MSA pointed out that intended use and the actual use of the product can be different. This can be used to avoid complying with the requirements.	Any examples of this? How big is the problem?
Product with HiNA functionality	Non-HiNA wireless speakers during use phase undergo software update which includes HiNA functionality.	In our opinion, this does not make it a product with HiNA functionality, when the product was sold and first used by users, it was not a product with HiNA functionality. Any comments?

To be discussed further with Member States

Products covered by 1275/2008 with vertical regulations

Products	Regulations	Review date	Standby/off requirement in vertical regulation
Washing machines	Ecodesign 1015/2010 Energy labelling 1061/2010	Revision started in 2014	No standby/off or networked standby requirement.
Dishwashers	Ecodesign 1016/2010 Energy labelling 1059/2010	Revision started in 2014	No standby/off or networked standby requirement.
Clothes dryers	Ecodesign 932/2012 Energy labelling 392/2012	October 2017	No standby/off or networked standby requirement.
Electric ovens	Ecodesign 66/2014 Energy labelling 65/2014	January 2021	No standby/off or networked standby requirement.
Vacuum cleaners	Ecodesign 666/2013 Energy labelling 665/2013	July 2018	No standby/off or networked standby requirement.
Simple set-top boxes	Ecodesign 107/2009	Review study finished in 2014. No revised regulation so far.	0.5 W standby 1 W standby with display
Complex set-top boxes	Voluntary agreement	Draft version 4 with proposed tier 3 is published	No standby/off or networked standby requirement.
Printers	Voluntary agreement	Draft 5.1 revised in 2014 and implemented in January 2015.	No standby/off or networked standby requirement.

For some, standby/off consumption are included in the calculation of annual energy consumption

SWITCH NETWORKED STANDBY TO STANDBY/OFF MODES

- Could this potentially yield significant savings potential?
  - E.g. a networked washing machine going to standby (instead of networked standby), if no longer in use
  - Comments?

This item would be also applicable to other household appliances

OTHER ISSUES/SUGGESTIONS? - DEACTIVATION OF WIRELESS CONNECTIONS

Issues brought up by Digital Europe

Possibility to deactivate wireless network connections:

- Alarm system using wireless communication
  - Rely on a single wireless NW connection for intended use?
- One Bluetooth (BT) interface communicates with several devices
  - Just a single connection and it should not be possible to deactivate it
- Wireless adapter such as Wi-Fi access point/repeater/adapter
  Is this “Any networked equipment that can be connected to a wireless network..”?
  Should be only edge devices

- Digital Europe suggests to add the wording “ unless the wireless deactivation of the port is inappropriate for the intended use” in Annex II point 3 (a).

OTHER ISSUES/SUGGESTIONS?
- VERIFICATION OF DOCSIS CABLE NW PORTS

Issue brought up by Digital Europe:

- Verification of DOCSIS cable NW ports, higher consumption when disconnected, as required by verification procedure
- Digital Europe suggests change for deactivation

OTHER ISSUES/SUGGESTIONS?

NEXT STEPS

- Collect further cases from industry & market surveillance

- Assessment (sales, operation time, power levels, costs etc.) for:
  - Diverse products assessed to be included in scope, specially products equipped with electric motors, ICT & non-ICT professional equipment and other products (e.g. paper shredders)
  - Resolving the issue with exemption of products with LV EPS
  - Level of ambition for standby/off modes
  - Networked standby non HiNA 3rd stage
  - Other technological possibilities (e.g. switching from networked standby to standby/off modes)

Input is needed, specially from industry stakeholders, Market Surveillance Authorities and consumer organisations who have some data/previous studies

NEXT STEPS

- Assess qualitatively and quantitatively the significance of clarifying some ambiguous definitions reported by industry and market surveillance, specially on:
  - The easiness of interpreting and applying the Regulation
  - The potential energy savings of extending the scope