



## EICTA position on Commission working document on eco-design requirements for standby and off mode losses

October 12<sup>th</sup> Brussels

EICTA welcomes the opportunity to submit comments and recommendations on the proposed working document on possible eco-design requirements for standby and off-mode electric power consumption of electrical and electronic household and office equipment.

The first part of this paper provides detailed comments; the second part features our proposals for improvement.

### Comments

#### 1. Scope

The proposed wording regarding the scope of products is unclear to EICTA.

- The definition for “household equipment” is unclear. According to Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), Annex IB is a non exhaustive list; therefore the IM should refer to Annex IA of the WEEE Directive. Moreover, EICTA strongly supports the Orgalime comment<sup>1</sup> about “grey area” products due to non harmonized national implementation. The applicable categories of Annex IA of the WEEE Directive should be named. The terminology is confusing as Annex IA categories 1 and 2 of the WEEE Directive use the wording “household appliances” while the working document uses “household equipment”.
- “Office equipment” is not sufficiently defined. ICT products intended for office use may offer functionality for groups of office users (e.g. database servers, calculation servers, internet servers, fast office printers/multifunctional). For groups of users, a certain number and type of “reactivation functions” for such products is compulsory in order to offer acceptable equipment’s availability. Sharing equipment between multiple users is a very effective way of saving energy.  
In addition sharing equipment between many users needs features built into the products, which allow easy sharing, networking and simple serviceability either remote or by non technicians. These features have additional power consumption and by that preventing to achieve stand by values as proposed (see end note).  
At the same time, voluntary labels such as ENERGY STAR for office equipment or Code of Conduct for broadband network equipment exist covering these products. These voluntary labels enable office-customers to choose energy-friendly products for workgroups.

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<sup>1</sup> Orgalime is highly concerned that the scope of the envisaged implementing measure will be most differently implemented in EU Member States and thereby cause disruption to the functioning of the Internal Market. To date, Member States still discuss what (grey area) products should be considered in or out of the scope of the WEEE Directive, which leads to very different products being covered by WEEE management requirements.

EICTA strongly recommends that the scope of office products be restricted to those which are intended for interactive use by not more than 1 person at the same time. Multi-user products with rated power of >1000W should be exempted as "industrial", "commercial" or "production" type of products.

## **2. Definitions**

EICTA welcomes the fact that "preheating functions", "safety functions" and "network reactivation functions" are excluded from "standby mode".

But due to unharmonized definitions of "standby" and "off mode" for consumer electronics and office equipment, EICTA has concerns about the use of the terminology "standby" in an IM. For consumer electronics the terminology "standby passive" and "off" shall be used as referenced in IEC 62087.

For office equipment the proposed definitions of the "off mode" and "standby mode" are inconsistent with the definitions used in the ENERGY STAR Computers and Imaging Equipment programs, and in IEC62301. This is very confusing for both product designers and end users and it is impossible to explain in regular user documentation (in the IEC standards, "standby power" is the power used while an electrical device is in its lowest power mode; "off mode" includes reactivation functions in the ENERGY STAR definitions for office equipment).

The definition of the "standby mode" is unclear, because it is referring to "reactivation function". For a broad range of different products, many specific reactivation functions can be found in different types of multi-user equipment (see the examples in the end note). All of these functions will consume small amounts of energy and would thus be restricted by the proposed IM. This is another argument to exclude complex multi-user equipment from the scope of this horizontal IM, many of them being covered in future vertical IM or under product-specific voluntary programs.

"Sleep mode" of computers and printers include functions that are not listed in the proposed definitions. This ambiguity possibly allows to assimilate "sleep mode" to "standby mode". "Sleep mode" functions are useful to allow a fast reactivation. These functions consume some energy, but much less than "ready" or "full active mode". If "sleep mode" would have to comply with the "standby mode" limits this would entail the withdrawal of such functions which would consequently push the users to avoid their equipment to fall into these lower energy modes for faster reactivation. This would have the effect of increasing the energy consumption of these products.

### **Needs for clarification:**

- Are we to understand that the mere indication of "off mode" is restricted to a LED-type indication?
- EICTA needs to understand if a printer connected to a PC via a serial/USB connection is to be regarded as "networked".
- EICTA needs to understand if a product containing a FAX-function is to be regarded as "networked" (i.e. through the telephone network).
- Reactivation on PCs is usually obtained through a mouse move or a key click. Is it intentionally not mentioned?
- Ensure that "sleep mode" does not have to comply with "standby mode" limits.
- Network reactivation being out of the "standby" definition, are networking and telecom (routers, bridges, switches, etc...) products out of the scope of this IM?
- Must a product without "standby mode" today, have a "standby mode" in the future?

### 3. Eco-design requirements

#### Off mode:

- 1 W is achievable for a number of product categories for the mode defined by IEC 62301 and IEC 62087 as “standby”, which is equivalent to the “off mode” definition proposed in the draft IM: the lowest possible energy consumption with the equipment plugged to the power network. It is foreseen that the proposed Tier 2 criteria (0.5 W) poses severe feasibility risks for a number of products within the scope and timeframe of this measure. The Task 8 report of the Preparatory Study on Lot 6 proposes a limit of 0.75 W for “off mode” energy consumption under Tier 2 for products with rated output of > 10W (Table 8-5 on page 8-18 of the Task 8 report). EICTA wonders why the proposed IM diverges from the Task 8 report, which was based on thorough technical analysis.

#### Standby mode (excluding sleep mode):

- Some of our product categories are covered by voluntary labels. For instance desktop PCs in order to comply with the ENERGY STAR 4.0 Tier 1 requirements applicable since 20/07/2007 have to consume in “off mode” less than 2W. If the announced regulatory process is respected the horizontal measure should be enforced by September 2009 which means **all** desktop PCs put on the EU market should consume less than 1W in “off mode”.
- This means in a two years timeframe to turn the voluntary criteria into twice more stringent criteria mandatory for all PCs. If this may be achievable for a vast range of high end products it may entail some significant prices impact. And, as for the “off mode”, it is foreseen that Tier 2 criteria (0.5W or 1W) poses severe feasibility risks for a number of products within the scope and timeframe of this measure.
- The large number of different (reactivation) functions present in multi-user equipment (often more than one reactivation function at the same time, see end note) is contradictory with the severe criteria (equal to off mode) for energy consumption proposed in the draft IM. I.e. modems are one example of products that are most probably in the scope of Lot 6, but not addressed by any specific lot. A number of basic functions in modems prevent them in a fundamental way from meeting with the proposed requirements (see end note).
- Can we use the definitions from voluntary programs, with an EuP specific set of minimum criteria? One strong example is the “functional adders” approach taken in the ENERGY STAR criteria for Inkjet printers: a list of functional adders is defined, each with their own specific allowed energy consumption in a specific mode.

#### Requirement for power management

- This requirement is rather vague (“...the shortest possible period of time appropriate for the intended use ...”). In general the requirement for power management needs to be better defined.
- EICTA strongly supports the use of power management schemes but wonders how compliance to this requirement can be demonstrated and verified through the market surveillance process.
- Again voluntary programs include power management requirements that are fully described for specific product types.
- Is the power management requirement to be considered as a generic requirement in the meaning of Article 2 of the EuP Directive?

#### Relation with product specific (“vertical”) IMs

- There is some contradiction between one paragraph: *“equipment...shall meet the requirements unless product specific implementing measure adopted after this implementing measure establish different requirement”* and the following explanatory note:

*“if a product is in the scope both of vertical and the horizontal IM, the model has to comply with the horizontal and the vertical IM for affixing the CE mark”.*

What would be the rule between the date of enforcement of the horizontal IM and the date of enforcement of a vertical IM both applicable to the same product category?

#### **4. Transition period**

This draft IM does not yet provide any transitional arrangements in respect of products first placed on the market before the date on which the Implementing measure comes into force, as is anticipated by Annex VII clause 8 of 2005/32/EC. Without such arrangements, those existing products with long product life-cycles for which reengineering for compliance with this IM's eco-design requirements is not viable would have to be withdrawn from the market.

Noting the two years provision of the revised EMC Directive 2004/108/EC, EICTA recommends that a two years transition period be included in this IM.

### **Proposals for improvement**

EICTA sincerely believes in the need to reduce power losses in non-active modes. Measures taken by the European Commission can be a good instrument to achieve this reduction. We propose the following changes to the IM in order to make these measures effective.

#### **1. Scope**

EICTA proposes to limit the scope of the IM to:

- “Household products”: the IM should refer to Annex IA of the WEEE Directive. The applicable categories of Annex IA of the WEEE Directive should be named.
- “Office equipment” intended for interactive use by a single user at a time. Equipment used in offices for multiple users or with maximum power >1000W should be excluded from the scope under the “industrial”, “commercial” or “production” attribute.

#### **2. Mode Definitions**

EICTA urges the European Commission to align the definitions of the power modes with IEC 62301 and IEC 62087 definitions; a meaningful discussion on the IM is virtually impossible without globally recognised definitions.

EICTA asks for clarification on the questions mentioned in section 1 of this paper.

#### **3. Eco-design requirements**

EICTA believes that a proper and thorough Impact Assessment of, at least, Tier 2 criteria for the “off mode” (EC definition) should be carried out for feasibility before it is adopted. EICTA commits to collaborate actively and openly in this assessment.

EICTA considers that the “off mode” criteria proposed in the Task 8 report of the Preparatory Study on Lot 6 are taken as requirements for purposes of the feasibility study instead of those proposed in the draft IM:

Mode	Tier 1 requirements	Tier 2 requirements
Off Mode (EC definition) for rated output < 10W for rated output > 10W	1 W 1 W	0.5 W 0.75 W

EICTA encourages the European Commission to thoroughly revise the “standby mode” criteria . More specifically, EICTA proposes to take into account the range of functionality covered by a proper definition of “reactivation function” and that energy consumption allowances are specified for these specific functions (see examples at the end note below).

Regarding “power management”, EICTA proposes that this requirement explicitly refers to the definitions used in the existing voluntary programs applicable for the different products under the scope of the EuP Directive (i.e. ENERGY STAR for office equipment and Code of Conduct for broadband network equipment).

#### 4. Relation with Product specific (“vertical”) IM

EICTA asks the rules to be clarified concerning the application of these instruments to a product category falling under the scope of both. EICTA proposes that *if a product is in the scope both of vertical and the horizontal IM, the model has to comply with the vertical IM for affixing the CE mark.*

Moreover EICTA believes that product categories for which a vertical IM is expected (such as imaging equipment, computer, TV, and external power supplies and chargers) should be provisionally exempted from the horizontal IM. This would avoid unnecessary administrative burden related to the CE marking process.

#### 5. Transition period

EICTA proposes that product models introduced to the market before the date of enforcement of this IM may continue to be placed on the market until, at least, two years after the date on which the eco-design requirement first become enforceable.

#### Orgalime position paper

EICTA has taken notice of the Orgalime position paper on the Commision working document. EICTA fully supports this position. The above comments and following proposals should be understood as complementary to the Orgalime position from EICTA’s sector specific point of view.

## End Note

### **Examples of functionalities present in standby/off mode (EC definitions) include:**

1. Products or equipment which enter a network standby mode and thus remain connected to and visible on the network while in standby mode.
2. Products or equipment which support or contain a service processor function: a system which allows:
  - Automated system discovery on the network via DHCP or SLP while in off or standby modes. This allows systems management applications to automatically discover the server or storage hardware on the network. It also provides key system information like type/model, manufacturer, serial number, and firmware levels as well as reduces administrative effort in discovering and managing a large number of servers or storage hardware in an enterprise.
  - Remote power control. This allows remote operations like power on, power off, or reset via network command protocols (e.g., IPMI).
  - Remote problem notification and diagnosis. Event logs are kept of all unusual system events, such as power and environmental failures or system halts. It also allows alerts to be sent on the network to a central systems management application so that an administrator can come through the network to examine the event logs and determine whether the problem can be recovered or requires a repair action.
  - Simplified hardware service. This enables hardware service such that a user with little or no training can service the system themselves with the help of LED(s) that direct the user to the part that should be replaced. Failures may prevent the system from powering on; therefore, it is important to have this function available during off and standby,  
Or
  - Asset management and protection. This records and reports events that help track and monitor the asset. It provides loss and restoration of AC power (e.g., server is physically moved) and is wired to intrusion detection sensors to report access (e.g., covers are removed).
3. Standby mode for Complex STB: The target maximum power consumptions for complex STB (account taken of the most recent developments on the hardware side) are in line with the applicable Code of Conduct for Set top box (max 3W).
  - Central processing units commonly used in complex STB are powerful (300->1000DMIPS) due to High Definition MPEG4 decoding, processing power requested by conditional Access systems and Interactivity engines (especially multi tuner PVRs with embedded DOCSIS return channel and Home network connectivity). As a consequence, achieving such low power values for "passive stand-by" (<3W) is not possible for complex STB without requiring the help of an auxiliary very low power micro-controller that would just handle the management of the STB in passive low power stand-by (in practice mainly remote Control management, timers, clock, audio/video/RF switches management): the related cost and additional expense of materials would be significant.
  - Moreover, such levels of passive standby would very significantly degrade the quality of service provided by the product to the end user due to the need that the main CPU boots when the STB wakes up from its low power passive stand-by. Such boot-up time would be of the order of the minute or more (depending on Conditional access and applicative software complexity), as the STB then needs to be fed with the relevant EMM or EPG update from the broadcast network.

- The consequence of this long boot-up time will be that the final user always keeps its product "ON" in order to overcome this quality of service degradation.

#### 4. Cable STB with embedded euroDOCSIS Voice Over IP modem:

- The definition/scope of the working document does not take into account "always on" networks, in particular those "always on" networks that utilize RF technologies (e.g. SCTE-55, DOCSIS, Euro\_DOCSIS).
- Such product is supposed to instantaneously react on an incoming call in order to ring=> it is not imaginable that the product takes several minutes before being able to signal an incoming call.
- The same product is also supposed to be able to place a call=> it is not imaginable that 1 minute would be necessary (boot up time from low power stand-by) in order for the user to place its call. It would be a major issue with non acceptable impact on Security
- As a conclusion: imposed constraints for complex STBs need to be a compromise between minimum power consumption and short waking-up time. This is what is regularly discussed in the framework of Code Of conducts for digital TV.

#### 5. Cable STB with PVR functionality and embedded DOCSIS cable Embedded Terminal Adaptor (EMTA):

- Complex STBs raise the question of complex devices embedding several functionalities for the purposes of lot 6:
  - A stand alone STB
  - + A stand alone PVR
  - + A stand alone DOCSIS EMTA
- So it is logical that such complex equipments may consume more energy than a simple unique stand alone equipment, and the Lot 6 horizontal IM should address such equipment as the addition of equipments with each specific requirements.

#### 6. ADSL modems:

- During the Code of Conduct on Broadband products meetings with the Joint Research Center of the EC, industry worked together with chipset manufacturers and with the environmental experts from several European Member States and all came to an already very challenging estimate of what the Low Power mode of a ADSL modem could consume: 2.0W.
- The IM of 1W or even 0.5W three years later is therefore is not achievable. Setting the low power modes so very low might result that manufacturers do not implement a low power mode at all, if not forced to (see question on Power management requirements), and that they let the modems use much more energy than what the Code of Conduct provides for.

#### 7. Cable modems:

Although standardisation work is ongoing for DSL technologies in order to implement a low power mode, this is not the case for cable DOCSIS technologies.

- Therefore, a cable modem with a low power mode will automatically become incompatible for other vendors (see question on Power management requirements). Such a function would make the cable modem not workable.
- Although EICTA understands the need for a low power mode in cable modems, it appears that unless DOCSIS updates the standards, it would not make sense to speak of low power modes for these types of technologies.

## 8. EMC immunity filters in EuP.

- Several EuP with complex electronics (e.g. printers/multifunctional devices) are required to have EMC immunity according to IEC 61000-4. The net-filter which is part of this, will be placed between the on/off switch and the wall plug, to ensure full immunity. Net-filters should be equipped with bleeder resistors which ensure timely voltage drop on switch off (Safety requirements under TÜV/UL regulations). For equipment with rated power  $> 1\text{kW}$  these bleeder resistors will consume  $\pm 0.5\text{W}$ . Thus the joint EMC immunity and Safety requirements are contradictory to the proposed “off mode” requirements for energy consumption for EuP using electronics that are to be immunized under IEC 61000-4.



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EICTA, founded in 1999 is the voice of the European digital technology industry, which includes large and small companies in the Information and Communications Technology and Consumer Electronics Industry sectors. It is composed of 57 major multinational companies and 39 national associations from 27 European countries. In all, EICTA represents more than 10,000 companies all over Europe with more than 2 million employees and over EUR 1,000 billion in revenues.

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