



EuP Lot6: Further EICTA comments to the working document on a possible Implementing Measure

Brussels, 17 March 2008

Introduction, objective of this paper

Within the framework of Directive 2005/32/EC (Ecodesign of Energy-using Products), the European Commission is developing implementing measures (IM) for the restriction of energy consumption in standby and off-mode (Lot6). EICTA welcomes the opportunity to discuss with the Commission the impact of the proposed measures (ref: working document) on our Product categories: Information Technology, Telecommunication and Consumer Electronics.

This paper presents EICTA positions on a number of important issues, raised during discussions since the publication of the working document of September 19. This paper also responds to proposals communicated by member states (DE, NL) regarding the implementing measures on standby and off-mode.

Scope definition

The main concern of EICTA members regarding the proposed implementing measure on standby and off-mode, is a proper definition of the product scope that is covered by the IM. EICTA understands and supports the commission policy to cover as many products as possible with this measure in office and household environments. However, EICTA proposes to expand the current reference to annex I B of the WEEE directive 2002/96/EC, because of the apparent ambiguity of this list of products and also taking into consideration the following:

a number of professional production tools are included in the WEEE list, which makes it contradictory to the proposed "office and household" scope;
the list itself has given rise to prolonged juridical procedures in member states, when it came to enforcing the WEEE directive;
lists of products, even when complemented with "catch all" clauses, tend to get outdated due to the development of new product categories, especially in the high-technology field.

As an extension to the WEEE-list-approach, EICTA has proposed a scope definition based on EMC standards in our position paper dated December 18, 2007.

Although EICTA believes that the aforementioned scope proposal is appropriate to define office and household products that the Lot6 implementing measures were intended for, we propose the following additional definition, in order to avoid potential loopholes in the scope definition.

Based on another EMC standard, **EICTA proposes a definition of "professional equipment"**, intended to complement the previously proposed definitions:

equipment for use in trades, professions, or industries and which is not intended for sale to the general public. The designation shall be specified by the manufacturer. (Clause 3.15 of IEC 61000-3-2:2006; EMC-Limits for harmonic current emissions).

This proposal is in line with the said harmonics standard, that professional equipment with rated power > 1kW be exempted from the product scope of the implementing measure on standby and off-mode losses.

Additionally, EICTA proposes to add a clarification to the scope definition, explaining that professionally installed products are understood to be out of scope, while they are not sold to the end-user.

Thus, the product categories mentioned in the Lot6 scope definition would be divided in the following, schematic way:

Products in the scope of the EuP Lot6 Implementing measure	Two Product Categories not in scope
Electrical and electronic office and household products <ul style="list-style-type: none"> - intended for sale to the general public, being the end-users. - all products <i>not</i> in the 2 categories that explicitly are outside the product scope 	<i>Professional products</i> <ul style="list-style-type: none"> - conforming to the definition in Clause 3.15 of IEC 61000-3-2:2006 <i>and</i> <ul style="list-style-type: none"> - having a rated power > 1kW <p>Many of the Class A IT-products per EuroNormEN55022:1998 under the EMC Directive 2004/108/EC will be covered by this definition.</p>
	Products which are designed to be professionally installed and used by enterprises and institutions in manufacturing, fleet management, transport and logistics, warehouse management, wholesale and retail operations, healthcare, etc.

Rationale on this division -

- The defined equipment in the “not in scope” categories is sold in low aggregate numbers that the impact of standby and off-mode losses from these equipments is marginal compared to the aggregate EU target.
- Due to the small aggregate numbers, investments to be made by manufacturers and additional use of material would outweigh the benefits achieved in energy saving.
- The addition of the professional products definition limits the risk of free-riding (i.e. escape EuP requirements by using the class A route, which is probably less costly in terms of radiation shielding).

The proposal from UBA/BAM to exclude WEEE category 6 “electrical and electronic tools” (except sewing machines), is largely in line with the above proposal. EICTA believes that a number of professional IT and telecommunication products (see list of examples below) perform tasks equivalent to the tasks of the products exempted in the UBA/BAM proposal.

Professional IT products include (but are not limited to):

- enterprise servers for data storage;

- enterprise routers and switches for network traffic; and
- printers, copiers, scanners and multifunctional imaging equipment for use uniquely in reprographic departments and/or commercial printing activities.

Examples of professionally installed products include (but are not limited to):

- Industrial class RFID readers for use in warehouses;
- Micro Kiosks and payment terminals; and
- Check-in terminals used in public transportation.

Further, apparatus exclusively used for activities concerning public security, defence, State security, and the activities of the State in the area of criminal law is regarded as professional equipment as well. Ref: Article 1 of Directive 1999/5/EC and Article 2, clause 3 of 2002/96/EC.

Requirements, relation with scope definition

EICTA previously has argued that the proposed Tier 2 requirements for energy consumption in standby and off-mode are not feasible for all EICTA products, based on the assumption that many of these products have EMC-filters as well as soft switches that would bring their energy consumption in off-mode to a minimum of 0.75 W. It appears that such a power architecture is present only in professional products as defined in the previous section. These products generally are more complex than consumer products or office products (multiple functional modules, multiple wall-plugs, console sizes exceeding 2x1x1 m).

Nevertheless, **EICTA finds the proposed Tier 2 requirements for power consumption in off-and standby mode very ambitious.** The results listed in the preparatory study (table 5-2, copied in Appendix 2 of this paper), show that many if not most products currently have average electricity consumption a factor two or more above the proposed Tier I requirements. Thus, the implementation of the proposed Tier 2 requirements enforces in fact a redesign of most product categories mentioned in the preparatory study, making the proposed timeline for Tier 2 requirements ambitious as well.

EICTA is willing to provide further technical evidence that the proposed Tier 2 requirements for off-mode and standby-mode are (for a number of product categories) the lower limits of achievable energy consumption, based on currently available technology.

Networked Standby

From the preparatory study conducted by the team lead by Dr. Nissen, the relative importance of the losses in networked standby becomes apparent. The European Commission rightfully proposes to deal with networked standby losses in product specific implementing measures: the complexity of the networked standby mode is evident considering the wide range of functionality covered by “networked standby” in different product categories and network types. Apart from this, network technology is rapidly developing and by no means stable, which makes it virtually impossible to oversee the consequences for energy consumption.

EICTA therefore proposes that the European Commission strives for standardisation of the definition of network types in relation to energy consumption. EICTA member companies support such a standardization effort through IEC¹ and CENELEC.

¹ Currently known activity within IEC is: the New Work Item Proposal elaborated in IEC PT62542, entitled “Standardisation of environmental aspects: glossary of terms”. EICTA members participate in this activity.

Mode definitions

As communicated before (e.g. in our position paper dated October 12, 2007), **the definitions used in the working document for standby and off-mode are different from the definitions in the IEC standards on energy consumption that are used for EICTA products (IEC/EN 62301 and IEC 62087).** During the Consultation forum held on October 19, 2007, the need was expressed to make a fresh start with standards defining off-mode and standby mode.

EICTA urges the commission not to start from scratch in developing definitions for these modes, but instead build on useful definitions present in existing standards and legislation.

EICTA has the following proposals for mode definitions:

Off mode should be defined as in the working document on possible implementing measures for Lot6: *a condition of equipment with the following characteristics: the equipment is connected to a main power source and provides no function. A mere indication of the off mode condition is also considered off-mode.*

Standby mode: EICTA proposes to use the definition of standby mode recently adopted in the US Energy Independence and Security Act (section 310), which poses a standard for the US market, in which most EICTA member companies are active as well.

This definition is unambiguous, further global harmonization should be promoted. It reads as follows:

STANDBY MODE.—*The term ‘standby mode’ means the condition in which an energy-using product:*

“(I) is connected to a main power source; and

“(II) offers 1 or more of the following user oriented or protective functions:

“(aa) To facilitate the activation or deactivation of other functions (including active mode) by remote switch (including remote control), internal sensor, or timer.

“(bb) Continuous functions, including information or status displays (including clocks) or sensor-based functions.

Because the concept of sensor is ambiguous, we propose to interpret this as follows:

A **sensor** is a type of transducer which uses one type of energy, a signal of some sort, and converts it into an electronic reading for the purpose of information transfer. Examples are:

- thermocouple
- photo detector
- occupancy IR sensor

A sensor is not a microprocessor managing a set of I/O and providing, as consequence of the signal detection, more complex functions such as displaying interactive menus or preparing the Energy using Product for its main intended functions.

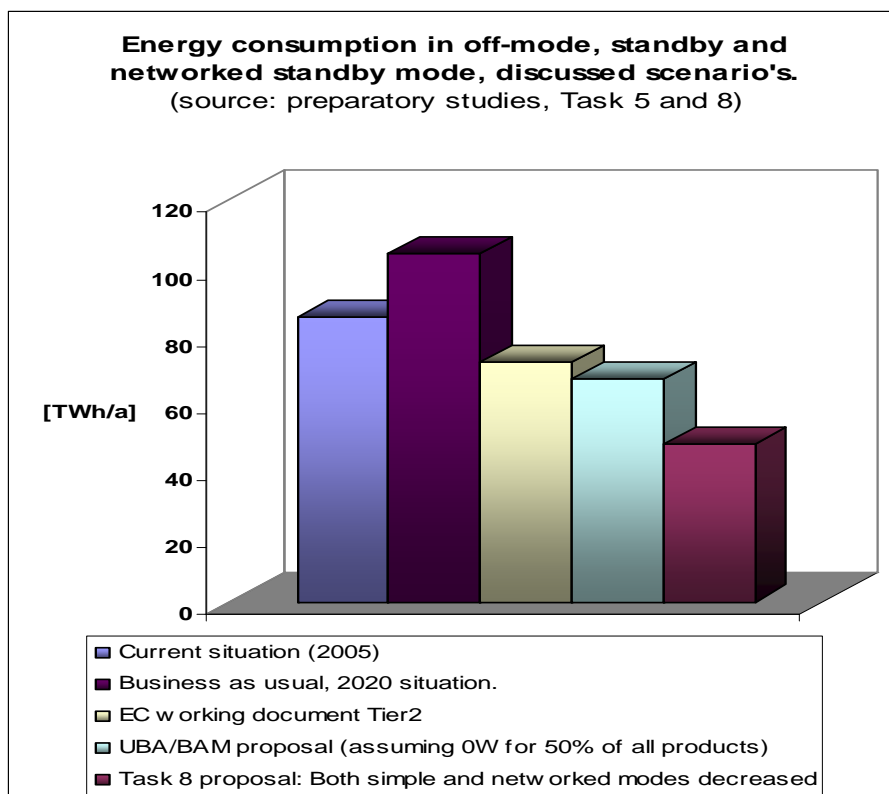
As part of their input, SenterNovem (NL) posed the question: how to define a mode in which the user unplugs or disables the network functionality? EICTA proposes to study on a product specific basis (within the EuP framework) the feasibility of the SenterNovem proposal. For the purpose of the implementing measure on standby and off-mode, EICTA proposes, to define a networked standby mode in which the network has been disabled or unplugged, as a “disabled network standby” mode. Technology detecting the presence of a “live” network is not yet commonly available, so it is not possible to automatically switch off (from the power connection) the network interface of such a product. Further, the relevance (in terms of aggregate energy consumption) of losses in products with “disabled network standby” did not become clear from the preparatory study.

Dynamisation of this implementing measure

From the data presented in the preparatory study, it can be concluded that the implementing measure as proposed by the commission will reduce the losses in off-mode and standby-mode to a fraction of the current levels (off-mode will be reduced by 64%, standby will be reduced by 90% when Tier 2 requirements are effective). Further reduction will have limited aggregate impact on the energy consumption. See the illustrative graph below.

Apart from that, further reduction of energy consumption limits may be feasible for a number of products, however it will lead to considerable technological complications for a number of other products: a horizontal measure with energy consumption limits below the proposals formulated in the working document is not backed by the assessment of best available technology presented in the preparatory study.

Given these considerations, EICTA opposes dynamisation of the Standby and Off-mode implementing measure. EICTA has no generic position against dynamisation, this should be considered on a product category specific basis.



Reaction to UBA/BAM proposals "Zero Watt", auto-off: industry concerns

Although technically not part of the preparatory studies nor the working document published by the Commission, EICTA wants to react to the UBA/BAM proposals for "zero watt" and auto-off. These proposals raise great concern within EICTA members:

- The proposed obligation for a "zero watt" mode: the proposal is not based on evidence of commonly available technology known to EICTA. Galvanic switches with minimum leakage (milliwatt range) are known to exist, but are not feasible for all products in the proposed range: products using a memory and/or hard-disk are equipped with controlled shut-down functions, in order to preserve memory contents and avoid damage of the hard-disk. Some of these products may have a hard-off

switch, that is mainly intended for safety during maintenance and repair activities. Thus the hard-off switch is not located in such a position that it can be easily used by the daily users of these products. Obligatory hard-off switches in all products will, in the case of products with memory and/or hard-disk functions, lead to no further energy saving because the daily users will switch off the products through the intended controlled shut-down procedures instead of the hard-off switch.

- Further it is unknown to EICTA what proof and/or statement will be accepted by the competent authority to allow for exemptions of the OW-requirement. EICTA can not provide a position on this proposal without a thorough business impact analysis. If the commission wants to take a "zero watt" requirement into account, EICTA is willing to assist in an impact analysis, provided the time line allows for sufficient depth.
- The auto-off requirement proposed by UBA/BAM as part of the requirement for power management may be feasible for a number of products, however, such a behaviour in energy-using products will lead to decrease in responsivity of a large number of products: reactivation from off-mode or standby mode requires significant initialisation time for IT and telecommunication equipment. Once again, the impact of the proposed measure has not been evaluated to our knowledge so a founded position is not possible.

Progress in US legislation

The United States Federal Government has officially published a package of measures intended to reduce (the dependence on) energy consumption in the USA (US Energy independence and security act of 2007). Although the product scope of this Act differs totally from the EuP directive, the US Act contains some relevant issues for the EuP programme. Appendix 1 outlines relevant facts from this Act.

Appendix 1: Background document on US Energy Independence and Security Act of 2007

Brussels, 13 February 2008

Introduction

On January 17th 2008, a delegation from EICTA met with S. Kolb (DG TREN) to discuss proposals and options regarding the Implementing Measure on *"Ecodesign requirements for standby and off-mode electric power consumption of electrical and electronic household and office equipment"* (EuP, Lot 6). During the discussions, the US Energy Independence and Security Act of 2007 was referred to numerously. An agreement was made to obtain a greater understanding on the scope, business impact of this Act and the industry position towards it.

A number of EICTA members have collected relevant facts clarifying the above issues and in this paper we present the facts and perspective on the US Energy Independence and Security Act.

Relevant Facts

Scope, timeline, business impact

This Act has considerable scope on energy issues. Within its scope, it addresses (amongst others) automotive products, buildings, agriculture (bio fuels), household appliances and lighting. There are only two references in the Act that refer to IT equipment.

1. Section 453 of the Act covers energy efficiency of data centre buildings. In that section government agencies are called upon to create a voluntary information programme on data centres and data centre equipment where there is a potential of significant energy efficiency improvements. The Act requires the programme to take into account the performance and use of servers and computer storage devices. The text states that not later than 3 years after the Act comes into effect, the government agencies should evaluate the effectiveness of the programme.
2. Section 325 describes the process towards energy labelling of a number of consumer products, whereby it should be noted that on one hand – personal computers and PC-monitors are included in the product categories to be considered for labelling, whereas on the other hand, the decision to enforce labelling is still to be made, based on feasibility and effectiveness per product category Clause (iv) of Subtitle (I) *'Labelling requirements'*. Apart from this labelling decision, the Act prescribes establishment of appropriate testing procedures followed by a transitional period of a maximum of 18 months.

The above explanation of the scope highlights that the EuP Directive (2005/32/EC), focuses on a different range of products, such as ICT equipment and has a broader scope of requirements for these products, than the US Energy Independence and Security Act of 2007.

The following issues in the scope of the Act are also treated in the EuP framework and are relevant for EICTA member companies:

1. External Power Supplies:

The goal of the Act was to create one set of mandatory rules that would be used throughout the US, rather than having a large number of separate rules from many of

the US states. Industry favoured Federal harmonisation in the US to avoid this additional layer of administration by managing numerous (potential) separate rules and regulations.

The US government adopted the existing California Energy Commission legislation on External Power Supplies, which has been developed much earlier. The Federal legislation on External Power Supplies that will enter into force July 1, 2008 is a direct implementation of the Californian legislation.

The Californian Energy Commission uses a multiple tier approach. EICTA confirms that the first official communiqué of the Californian legislation documents the proposed Tier 2 approach, which has been adopted within the current legislation from the Californian Energy Commission. This was published on December 12, 2004. Prior to that, draft versions of the said document also include the same Tier 2 energy limits. Therefore these mandatory requirements from California are identical to this new Federal Act, and have been known by industry for at least 3.5 years in advance of the present legislation coming into force.

However, there is some ambiguity about whether the preemption provisions of the US Act would actually prevent other US States from enacting more restrictive requirements (as External Power Supplies are not "covered products"). Likely Federal standards would be given preemptive effect.

2. *Battery Charger Rules:*

California did not establish any Battery Charger rules. However, the Federal Government aims to develop these rules. This is reflected in the recent Act, in which the US Department of Energy has until July 1st 2011, to decide whether or not they will set standards for battery chargers. Should the Department elect to impose energy efficiency limits on Battery Chargers, this would not become effective until possibly 2013². Thus the government is allowing 3.5 years to establish new Battery Charger rules.

3. *Standby Power:*

The US Act defines Off, Standby and Active modes. The definitions of these modes, listed in IEC 62301 and IEC 62087, may be subject to change, once they have been revised. The US Act proposes no energy consumption limits for Off, Standby and Active modes.

For the Standby mode the Act states that any new or revised energy rules should include a standby mode limit by July 1st, 2010, if feasible. However, there is no reference to the permissible time allowable from the development of the requirements and entry into force of these requirements.

Industry Position:

Due to the product scope in this Act, the Consumer Electronics Association (www.ce.org) has been extensively involved in the discussions with the US Federal government. The CEA published a positive press release when US President Bush signed the Act. Please see refer to CEA's press release, dated 19 December 2007³.

² Note that the US Act doesn't include any reference that states how much time would be allowed between the creation of the rules and the time they would come into effect.

³

Conclusions

- ➡ The product scope relevant for EICTA, from the US Energy Independence and Security Act of 2007 is limited to consumer electronics products. Enterprise IT products, such as and not limited to servers and imaging equipment are not covered in this Act. Personal Computers are referred to only within the framework of an intended energy labelling programme.
- ➡ The EuP Directive (2005/32/EC) has broader product scope regarding IT products and aims to address a larger number of horizontal and product specific energy consumption requirements for all products covered.
- ➡ For External Power Supplies, the Act provides harmonised energy consumption rules throughout the US. These rules are not an issue, as the Act does not require industry to make any changes (the ICT sector currently meets the Californian requirements), and all relevant stakeholders have been aware of the rules for at least 4 years.
- ➡ For Battery Chargers and Standby mode, the Act merely expresses the intention to implement rules on a US Federal level, which is comparable to the EuP framework Directive 2005/32/EC. The intended milestones for the Battery Charger and Standby rules are further away in the future than the EC targets for EuP implementing measures for these Lots.
- ➡ The definitions for standby and off-mode in the said Act are welcomed by industry in the US.
- ➡ EICTA would also like to state that we represent multinational companies, and therefore our approach is of a global compliance with energy efficiency requirements.

Appendix 2: Survey of product categories considered in preparatory studies.

For reference, we copied table 5-2 from the preparatory study. It shows the actual average energy consumption in off-mode and standby mode for a number of products, considered as base cases in the preparatory studies. It can be seen that the proposed off-mode and standby mode requirements will significantly reduce the average energy consumption of these products. This shows, that significant redesigns of the power architecture of these products will have to be done in order to comply with the proposed Tier 2 requirements.

Table	5-2:	Product case specific EcoReport inputs		
Source: preparatory study on Standby and off-mode losses, Task5.		In Stock(a) (billion units)	Electricity consumption in mode	
			standby (Wh/h)	off (Wh/h)
EPS	(mobile phone)	0.78	0	0.3
Lighting		0.179	0	0.99
Radio		0.1144	0	0.75
Electric	toothbrush	0.0427	0	1.4
Oven		0.073	3	0
Cordless	phone	0.1796	2.4	0
Television		0.2759	5.83	0
TV+ Set-top-boxes		0.0563	10.7	0
Washing	machine	0.1846	5.7	1.2
DVD	player/recorder	0.1433	4.8	1.5
Audio	minisystem	0.1144	8	1.5
Fax	machine	0.02	5.9	0
Destkop+notebook		0.0805	3.56	2.17
Monitors	(CRT+LCD)	0.0445	4.46	1.43
Hubs		0.0064	5	0
Destkop+notebook		0.126	3.81	2.46
Monitors	(CRT+LCD)	0.1045	4.48	1.43
Modems		0.073	10.2	2.6
PC	speakers	0.064	3.6	2.5
Laser	printer	0.0166	20	3
Inkjet	printer	0.0902	6	3

EICTA MEMBERSHIP

About EICTA:

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 58 major multinational companies and 40 national associations from 28 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.

The membership of EICTA:

Company Members:

Adobe, Agilent, Alcatel-Lucent, AMD, Apple, Bang & Olufsen, Brother, Canon, Cisco, Corning, Dell, EADS, Elcoteq, Epson, Ericsson, Fujitsu, Hitachi, HP, IBM, Infineon, Ingram Micro, Intel, JVC, Kenwood, Kodak, Konica Minolta, Lexmark, LG Electronics, Micronas, Microsoft, Motorola, NEC, Nokia, Nokia Siemens Networks, Nortel, NXP, Océ, Oki, Oracle, Panasonic, Philips, Pioneer, Qualcomm, Research In Motion, Samsung, Sanyo, SAP, Sharp, Siemens, Sony, Sony Ericsson, STMicroelectronics, Sun Microsystems, Texas Instruments, Thales, Thomson, Toshiba, Xerox.

National Trade Associations:

Austria: FEEL; **Belgium:** AGORIA; **Bulgaria:** BAIT; **Cyprus:** CITEA; **Czech Republic:** ASE, SPIS; **Denmark:** ITEK, IT-Branchen; **Estonia:** ITL; **Finland:** FFTI; **France:** ALLIANCE TICS, SIMAVELEC; **Germany:** BITKOM, ZVEI; **Greece:** SEPE; **Hungary:** IVSZ; **Ireland:** ICT Ireland; **Italy:** ANIE, AiTech-ASSINFORM; **Latvia:** LIKTA; **Lithuania:** INFOBALT; **Malta:** ITTS; **Netherlands:** ICT-Office, FIAR; **Norway:** ABELIA, IKT Norge; **Poland:** KIGeIT, PIIT; **Slovakia:** ITAS; **Slovenia:** GZS; **Spain:** AETIC, ASIMELEC; **Sweden:** IT Företagen; **Switzerland:** SWICO, SWISSMEM; **Turkey:** ECID, TESID, TÜBISAD; **Ukraine:** IT Ukraine; **United Kingdom:** INTELLECT.