



- Implementing measure: main elements

● Scope

- "Electrical and electronic household and office equipment dependent on energy input from the mains power source", in the following abbreviated as "equipment", means equipment falling under the product categories specified in Directive 2002/96/EC, Annex IB, with the exception of equipment not corresponding to household and office equipment, and intended for the end-user, and dependent on energy input from the mains power source in order to work properly, and designed for use with a voltage rating not exceeding 380V, also when marketed for non-household or non-office use.

● Scope: rationale

- household and office equipment are the relevant sectors for electricity consumption in off mode and standby
- basic and simple functions standby functions can be defined for such equipment, which can be addressed «horizontally»
- target: electrical standby/off, not gas ...
- end-use equipment, not «energy using products» in general including components ...
- household and office equipment also included when sold for commercial use
- Reference to WEEE and limit on voltage used to define «household and office»

● Definition (passive) standby:

(deviation from preparatory study)

- Sensor based safety function **not** included, because
 - » safety is priority
 - » function relevant only for few categories appliances (wet, covered by vertical measures; cooking)

● Relation to vertical IMs

- Equipment falling under the definitions of paragraph "Definitions", first subparagraph, shall meet the ecodesign requirements set out in Annex I **unless** product specific implementing measures pursuant to Directive 2005/32/EC adopted after this implementing measure establish different requirements.

● Relation to vertical IMs: rationale

- horizontal IM defines requirements on standby/off for all household and office equipment
- equipment «considered» for vertical IMs is covered as well

● Relation to vertical IMs: rationale

- no exceptions in horizontal IM because
 - » huge legal uncertainty would be created (which products should be taken out from horizontal IM? Products «currently under development», products «considered for the working plan» (without clear definition...)...?),
 - » feasibility of horizontal approach has been shown in preparatory study, no exceptions necessary

● Relation to vertical IMs: rationale

- vertical IM in principle could set different requirements on standby/off if deemed necessary **at a later stage**

● Requirements for off/standby: Rationale

No limit on networked standby

- networked standby significantly contributes to electricity consumption
- but:
 - » fastly evolving new concepts/technologies
 - » highly product and data content specific
 - » difficult/missing clear measurement methods (e.g. clear definition of product condition?)
- mandatory horizontal limit values impossible (at least at this stage)
- vertical IMs more appropriate to tackle this issue

● Requirements for off/standby

One year after IM has come into force:

- ... **any off mode** condition shall not exceed **1.0 Watt**
- ... any condition providing only a **reactivation function**, or a reactivation function and a mere indication of enabled reactivation function shall not exceed **1.0 Watt**.
- ... any condition providing **information or status display**, or a combination of **reactivation function and information or status display** shall not exceed **2.0 Watts**.

● Requirements for off/standby

Three years after IM has come into force:

- ... **any off mode** condition shall not exceed **0.5 Watt**
- ... any condition providing only a **reactivation function**, or a reactivation function and a mere indication of enabled reactivation function shall not exceed **0.5 Watt**.
- ... any condition providing **information or status display**, or a combination of **reactivation function and information or status display** shall not exceed **1.0 Watt**.

● Rationale

- power levels can be achieved horizontally by existing design options for the functions addressed
- LLC design options are the best available technology (i.a. BAT is cost-effective)
- No trade-offs with other environmental aspects (e.g. via higher material-related environmental impact)
- no requirement for hard-off because usefulness depends on product category and should be considered – if deemed appropriate – in vertical IMs

● Rationale

- one year transition time to meet requirements reflecting the current state of the art technology readily available
- two more years are foreseen to allow for equipment redesign so as to implement design options (for very basic functions/no function) corresponding to the LLCC

● Rationale

- distinction between reactivation function only, and reactivation and information and status display, because latter functions need additional power
- no distinction between «off» and «reactivation» only is a very, because «reactivation only» is a very basic function that can be realized with low power
- 2nd stage for off lower than in study because study predicts off power consumption with 0.75 W of approx 11 TWh in 2020
- this is not ambitious enough for «no function», therefore 0.5 W proposed

● Auto power down (general requirement)

- Equipment shall, without prejudice to good engineering practice and unless inappropriate for the intended use, offer a power management function, or a similar function that switches equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into a condition with reduced energy consumption when the equipment is not providing the main function, or when other energy-using product(s) are not dependent on its functions.

● Auto power down: rationale

- auto power down important to save energy
- actual technical implementation highly dependent on product category, usage pattern, operating environment ...
- more concrete requirements only possible «vertically»
- provision nevertheless useful to encourage take up of auto power down functions

- Market surveillance testing procedure
 - When performing the market surveillance checks referred to in Directive 2005/32/EC, Article 3 (2), Member State authorities shall apply the verification procedure set out in Annex II of this IM