



- Preparatory study: brief overview

## ● Study: stakeholder participation

- preparatory work study on standby/off mode started in March 06
- technical results have been developed together with stakeholders, e.g. by
  - » public consultation of stakeholders on intermediate results regularly published on study website
  - » workshop (May 07)
  - » frequent discussions between contractors and stakeholders (and TREN)

## ● Study: stakeholder participation

- account of feedback and its reflection in the study documented in the final report
- final report available on the website [www.ecostandby.org](http://www.ecostandby.org)

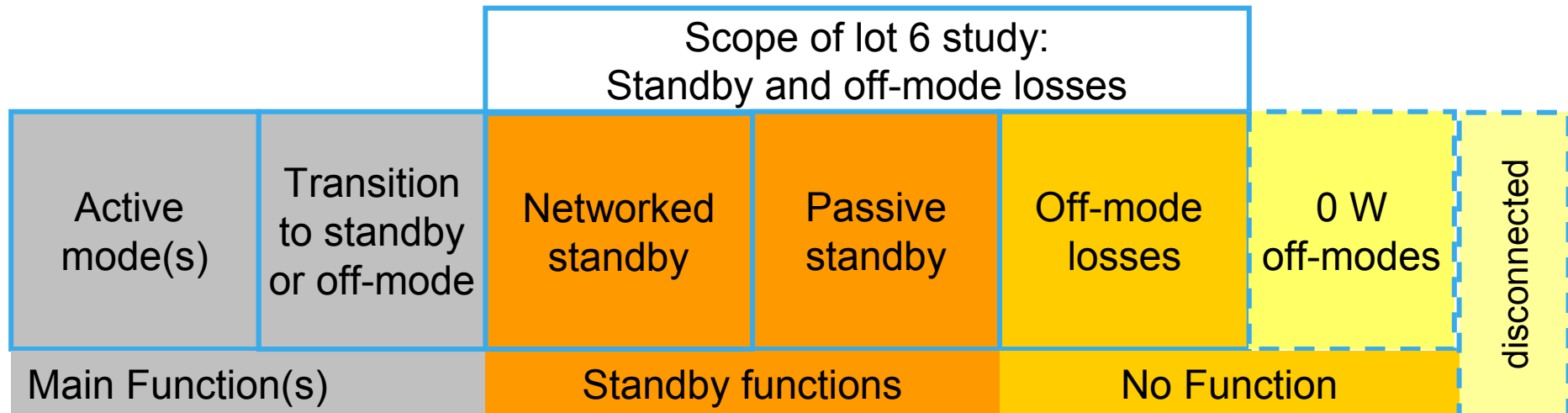
## ● Study: definitions of standby/off

- in order to cope with EP/Council mandate for «horizontal» measure addressing standby/off:
  - » set of standby/off mode definitions based on a functional approach had to be developed
  - » i.e.: definitions of standby/off are based on the function(s) provided by the equipment
  - » results of study are basis for revision of definition section of IEC 62301 (on-going)

# ● Study: scope of functions

- Off: no function provided
- (passive) standby:
  - » reactivation function
  - » (sensor based) safety function
  - » display
- networked standby: functions providing data exchange in a network environment

- Functions covered by EuP prep study



# ● Study: standby/off mode definitions

- Examples «off»:
  - » TV plugged into the wall socket, but disconnected by a «hard-off switch» (off, not consuming electricity)
  - » Desktop PC, not booted (off, consuming electricity)
- Examples «reactivation» function:
  - » TV, CD/DVD player ... «waiting»/capable to be switched on by remote control
  - » TV, video recorder ... switched on at a certain point in time defined by the user (timer)

# ● Study: standby/off mode definitions

- Examples «display»
  - » Microwave oven or LCD display showing time, programs, remaining time of cycle
- Examples «networked standby»:
  - » pay TV set top box exchanging data with broadcast station
  - » «Wake on LAN» of PC

## ● Study: main results

- technical implementation/realization of standby functions analysed for 15 example cases from the household and office equipment sector
- energy consumption of an individual product related to these functions is in general «low» compared to typical «on» consumption
- But: almost all types of equipment have standby/off

## ● Study: main results

- resulting sum of «individual consumptions» in standby/off mode is large
- power consumption in EU due to these functions estimated at approx 100 TWh per year (corresponding to the electricity consumption of NL)

## ● Study: main results

- technical solutions for providing off/standby functions with low power consumption available
  - » being cost-effective (even «best available» solutions), and
  - » life cycle impact beneficial even when taking into account possible additional production related environmental impacts (e.g. due to additional electronics)