



# European Code of Conduct for Data Centres

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# European Code of Conduct: what is it?

- Code of Conduct:  
a *voluntary commitment* of individual companies/organisations, with the aim of reducing energy consumption of products and/or systems through the setting of agreed targets and power management practices in a defined development timescale.
- *Targets* could expressed in maximum allowed power consumption for the different operational modes or based on energy/performances indicators (e.g. KWh/m<sup>2</sup>) or benchmarking
- Energy consumption levels are complemented by *general commitments* of power and energy management, switching off components not needed, and reducing energy consumption where possible.



# European Code of Conduct: what is it?

- There are 4 Codes of Conduct in operation:
  - Digital TV Service Systems (set-top boxes)
  - External Power Supplies
  - UPS
  - Broadband Equipment



## EU Code of Conduct: Basic Mechanisms

- Stage 1: Identify priority products/system and set up working groups, involving all relevant stakeholders.
- Stage 2: Improved energy efficiency criteria (must be more than BaU!) and CoC roadmap.
- Stage 3: Achieved outcome, agreed with stakeholders.
- Stage 3: Continuous review to identify best practices.

N.B. very important for fast changing technology such as Set Top Boxes, Data Centres and Broadband Equipment



## Why a CoC for DCs?

- Large electricity consumption and increasing
- No policies.
- Difficult to introduce MEPS.
- Fast changing technology.
- Many different stakeholders



# International Collaboration

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- European Codes of Conducts aim at harmonising test methods, metrics and criteria with international programmes;
  - The External Power Supply Code of Conduct use the same test method and similar criteria to the US Energy Star programme;
  - We are working with the International Community of Practice for STBs and we contribute with our stakeholder forum to the development of the STB international specifications;
  - We are keen to establish an international working group on broadband equipment (DSL and cable modems, router, home networks, home gateways), which is increasing responsible for larger standby consumption in households;
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## Guiding Criteria for the Code of Conduct for Data Centre

- identify possible energy savings, without reducing performance or hampering technological development
- Identify the systems and components that can be optimised, or temporary switched off (servers, virtualisations, power management, power supplies, cooling\A/C, Lighting, UPS, etc.)?
- What type of targets can we establish? Specific targets, and general targets (power management)
- Using international metrics and test methods already existing or under development.



## Outcomes of the March Meeting (1)

- Agreement that market forces are not enough to achieve economically justified energy savings
- Agreement by most participants on the value and need of a European Code of Conduct to promote energy savings in data centres in Europe
- Industry is working on voluntary standards for servers and data centres with several initiatives (e.g. GreenGrid, SPEC.org) and in close cooperation with Energy Star.
- The additional value of the EU Code of Conduct, is to adopt and to introduce these standards to Europe and in particular to *data centre operators*.



## Outcomes of the March Meeting (2)

- There is the need to guide and inform the policy process. Industry participation in the process is crucial. Voluntary processes are much more flexible and can be progressed quicker compared to a possible regulatory process
- A Code of Conduct is a “multipurpose” document, which would help to:
  - Raises awareness;
  - Supports procurement;
  - Sets targets;
  - ~~– Provides reference for other participants.~~



## Outcomes of the March Meeting (3)

- Decision to establish at least 3 working groups:
  - Measurement: metrics, methodology, and test methods
  - Infrastructures: Cooling (best practice), Electricity distribution
  - Utilization
  - Data collection, analysis of current data centres consumption
  - Awareness raising, procurement, interfaces with other policies (not yet started)



## Outcomes of the March Meeting (4)

- The Code of Conduct for Data Centres should employ a holistic approach which focuses on the entire data centre as a system (or single product in its self) rather than breaking it down into sub components.
- This is due to the interrelation and close coupling of the IT, cooling and power elements with respect to power consumption.
- It was also proposed to follow the working groups and structure the Green Grid and to set up a single technology working group focused on deliverables (combined with data collection, metrics and operations groups).



## Points for discussion today (1)

- Which organisations will sign up and commit to the Code of Conduct ?
- It is relatively easy when it refers to products, such as STBs or Ext. Power Supplies. when it is a systems, should be the system designer and/or user. We could also envisaged different targets for the different organisations involved.
- Certainly data centre owners and operators must have an important role, and the CoC is mainly addressed to them



## Points for discussion today (2)

- What is a Data Centre?
- Where is the DC boundary?
- Should we include large DCs, small server rooms, and decentralised DC.
- Should all the DCs of an organisation be covered or just individual DC (signing at corporate level or at DC/building level)



## Points for discussion today (3)

- Who will lead the working groups?
- Which metric to include, and how to incorporate different organisations results?
- What are the deadlines.
- How to promote it to DC owners and users



# Thank you for your attention

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[http://energyefficiency.jrc.cec.eu.int/html/standby\\_initiative.htm](http://energyefficiency.jrc.cec.eu.int/html/standby_initiative.htm)

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