

ITU Symposium on ICTs and Climate Change

Towards a high-bandwidth, low-carbon future

- A regulator's view

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Ofcom and ICT

- Ofcom is the regulator for the UK's communications industry (~£50bn pa)
- We have responsibilities across television, radio, telecommunications, and management of the radio spectrum

There are a range of definitions for ICT

from... to...

The convergence of IT and telecoms Anything to do with the communication of information

- Give our range of responsibilities, we tend to take a wide view:
 - All of the UK markets we regulate could be considered to fall under the ICT umbrella



ICT's energy usage and trends

Broadband power usage (modem pair)

ADSL	3W
VDSL	6.75W
PON	3W

From ITU-T, SG15/WP1

Standby Power Usage

Domestic

PCs = 1TWh, TV/DVD/STB = 2.6TWh

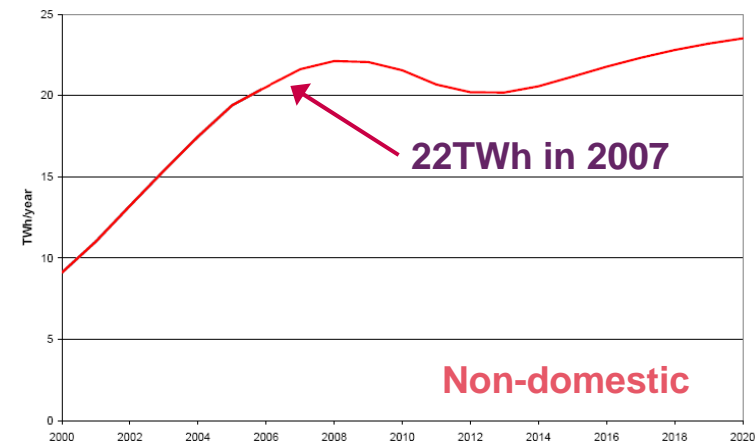
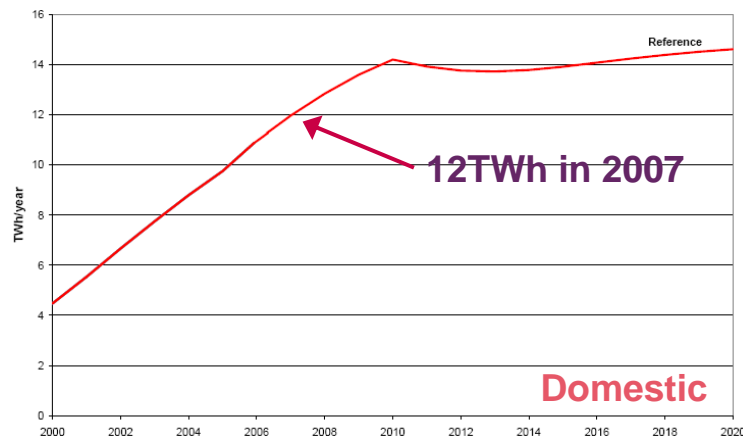
Non-domestic

ICT uses 2TWh per year

In total this amounts to as much as 4% of UK electricity use

From Market Transformation Programme

Total Energy consumption of ICT products in the UK, assuming current trends continue



From: http://www.mtprog.com/ReferenceLibrary/Sustainable_products_consultation_Chapter_5_ICT.pdf
ICT defined here as PCs & their displays and printers

Halting the trend for growing ICT energy consumption

- In the UK, Europe and internationally, there are many initiatives underway to reduce the energy used by ICT, for example

UK

- Energy Saving Trust's Energy Saving Recommended scheme
- Eco-design of Energy-using Product Directive.



For computers this recommends mandatory requirements over the next 3 years for:

- power management enabling, high efficiency power supplies, minimum sleep/off, displaying consumption in visible location and monitor on power

- Recommendations for other products on their way

EU

- EU industry 'Codes of Conduct' – including efficiency targets
- The Waste Electrical and Electronic Equipment (WEEE) and Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directives



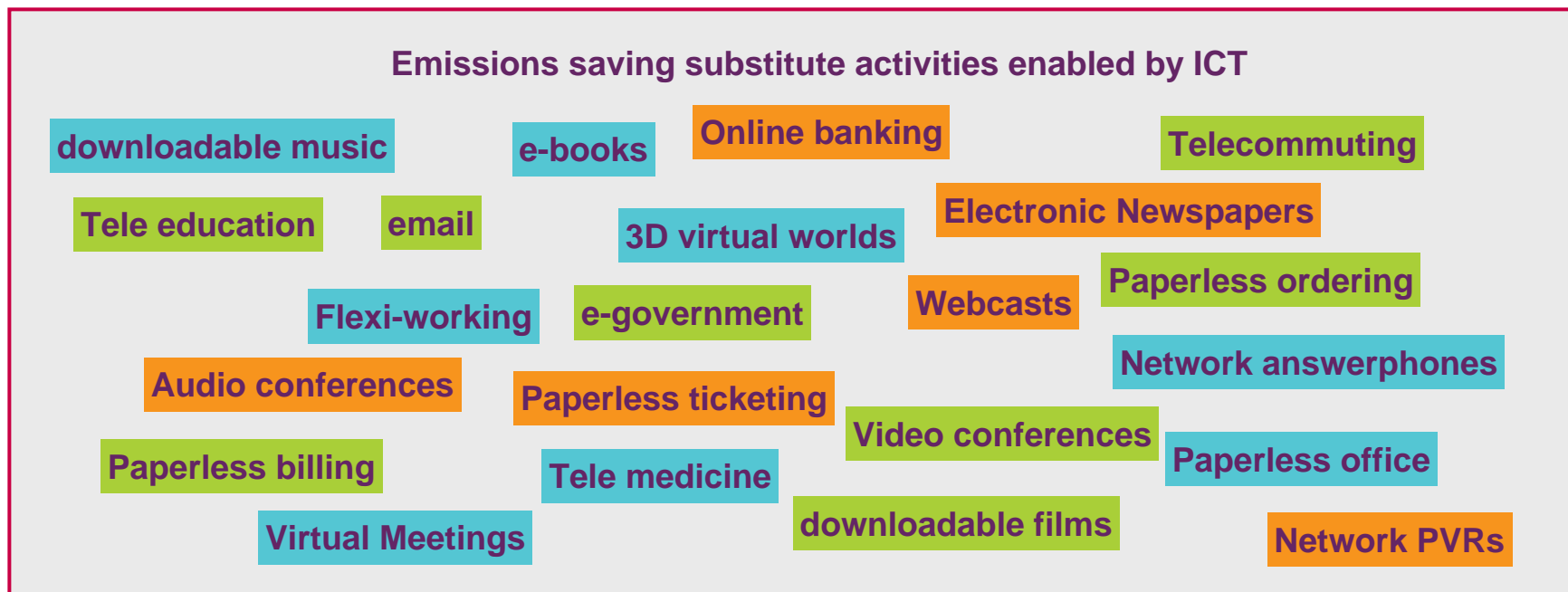
International

- Energy Star – current and future international standards and labelling for a range of energy using devices



The other side of the story – ICT reduces environmental impact elsewhere

- ICT already brings massive environmental benefits, which are often ignored
 - Hardly mentioned in the Stern review of economics of climate change



Short Term – travel avoidance dominates

Longer Term – endless possibilities...

Ofcom's specific duties

- Ofcom's **principal duties** (via the UK Comms Act 2003) are
 - To further the interests of **citizens** in relation to communications matters
 - To further the interests of **consumers** in relevant markets, where appropriate by promoting competition
- In carrying out its duties Ofcom must have regard, in particular, to the desirability of encouraging:
 - Investment and innovation in relevant markets
 - The availability and use of high-speed data transfer services throughout the UK
- No specific duties in relation to the environment, but this could change through a review of the EU Communications Framework and a new Communications Act, or as a result of other Climate Change legislation
- Acting on Climate Change could be consistent with existing duties to further the interests of citizens and consumers

Regulator's/Ofcom's role

Two areas where regulators/Ofcom may be able to help:

- **Encouraging Innovation:** Innovation may offer us the best chance of balancing the demands of a high-bandwidth future with the need to reduce carbon emissions, eg:
 - PC 'sleep'
 - Data centre power management
 - Virtualisation
 - Software as a Service
 - Teleworking
- **Impact Assessments:** publication of Impact Assessment that fully take account of environmental considerations in weighing the costs and benefits of proposed regulatory interventions.

Whither Standards?

Without standards for auditing and benchmarking carbon emissions, it will be difficult to share best practice, compare performance, and ultimately to hold organisations accountable for meeting carbon reduction targets.