CONCERTED ACTION
ENERGY SERVICES
DIRECTIVE

Practical tools for improving the energy efficiency of ICT in the public sector

Cuno van Geet, NL Agency, the Netherlands

Tadeusz Skoczkowski, Warsaw Technical University, KAPE, Poland

Date: 21 November 2012

Working Group 3.3 was focused on the ways in which improvements in the energy efficiency of Information and Communication Technology (ICT) in the public sector could contribute to the implementation of the Energy Services Directive (ESD) and transfer the whole ICT market towards greener technologies.

This report addresses the following issues:

- The role ICT plays in Member States' (MS) National Energy Efficiency Action Plans (NEEAP) and whether the public sector is also addressed

- ICT-oriented policy instruments and tools used that can also be implemented in the public sector

- ICT products or services that are especially important and suitable for the public sector

- Schemes for procurement and management of ICT in the public sector

- The main challenges and benefits of using practical tools addressing ICT in the public sector

To gather information on these issues, a questionnaire was issued to CA ESD participants in MS. Responses to the questionnaire were analysed and discussed. From this work, the following conclusions were formulated:

1. The "state of the art" for energy efficiency of ICT in the public sector differs greatly between MS. There are countries where ICT energy efficiency receives much attention and is an essential part of national energy efficiency policy. On the other hand, there are countries in which the issue is only partially addressed and remains marginal.

2. CA ESD participants reported that in a few MS, ICT energy efficiency was properly covered in national energy efficiency policy. In a small number of MS, it was properly tackled in the National Energy Efficiency Action Plan (NEEAP).

3. The majority of CA ESD participants are rather modest in their States self-assessment of their work to improve ICT energy efficiency in the public sector; this can be interpreted as awareness of the huge untapped potential for improving energy efficiency through more efficient ICT and the need for further work to be undertaken.

4. Properly organised public procurement of ICT equipment and services remains a crucial element in the process of improving energy efficiency in the public sector; some of the existing schemes can be duplicated in other countries.

5. Apart from standard actions like the use of more efficient office equipment (e.g. computers, servers, printing and copying equipment), the need for a more sophisticated approach was reported. This could include reducing the need to travel, appropriate and properly used software for energy saving modes of electronic equipment, energy management systems based on ICT, standardisation and minimum efficiency standards and regulations. Some areas, however, were not mentioned; for example, electronic identity (e-ID) technologies and authentication services which are essential for transactions on the internet both in the private and public sectors.

Recommendations

1. **We need a long term strategy combined with short term actions.** Member States should recognise and answer the challenge of transferring new ICT into the public sector. A strategic long-term vision should be prepared; at the same time, everyday routines need to be updated and existing ICT resources developed.

2. **We should recognise that the further penetration of ICT into all public sector activities will have a deep impact on our lives.** The introduction of new ICT is more than a purely technical process; it should be seen as an element of building a smart society rather than a change taking place entirely in the technology layer. Life cycle analysis, including all aspects of flexible working, should provide arguments for this type of employment.

3. **All benefits to society from improved ICT implementation in the public sector should be properly valued.** There are some ICT improvements which intuitively suggest a reduction in investment costs (e.g. in transport infrastructure). These should be supported by research and analysis to provide robust figures for assessing the resulting financial or energy savings. Other costs associated with ICT in the public sector (e.g. reduction of operational costs due to ICT, cost of initial deployment and costs of downtime and

potential data breaches) should also be assessed to provide a full picture of the benefits that ICT might bring.

4. **The role of the public sector in building an e-society cannot be overestimated**. The social impact and purchasing power of the public sector make it suitable to play a leading role in the process of social transformation, giving a properly weighted value to the energy saving benefits of improvements. The process of bridging between citizens and the public sector will involve both sides and should respect their requirements, limits and expectations.

5. **The above mentioned ICT development should be addressed "internally" in the public sector units**. This internal response should *inter alia* embrace:

   a. Training of staff and capacity building on new services enabled by the newest ICT, covering the energy saving opportunities *in* ICT hardware and software and *enabled by* ICT

   b. The introduction of "green" criteria into internal ICT public procurement procedures if such national criteria are missing

   c. The introduction of life-cycle assessment (LCA) for ICT equipment taking into account investment, energy and maintenance costs. There needs to be closer links between – or a unification of - those purchasing ICT equipment and those paying energy costs.

The questionnaires enabled the identity of a large number of different approaches used in the public sector and best practice examples being implemented in a number of countries.

There is significant potential for exchanging experience and working tools. On the supply and demand sides, there are items that can easily be "traded" in bilateral contacts.

For more information please email
tskocz@itc.pw.edu.pl