P6_TA(2009)0044

Energy efficiency through information and communication technologies

European Parliament resolution of 4 February 2009 on the challenge of energy efficiency through information and communication technologies

The European Parliament,

– having regard to the Commission Communication of 13 May 2008 entitled Addressing the challenge of energy efficiency through information and communication technologies (COM(2008)0241),

– having regard to the Commission Communication of 23 January 2008 entitled 20 20 by 2020 - Europe's climate-change opportunity (COM(2008)0030),

– having regard to the September 2008 study commissioned by the Commission entitled Impacts of information and communication technologies on energy efficiency,

– having regard to the Presidency conclusions of the European Council meeting of 8-9 March 2007, in particular to the Action Plan (2007-2009) - An Energy Policy for Europe,

– having regard to Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings[1],

– having regard to Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services[2],

– having regard to Regulation (EC) No 106/2008 of the European Parliament and of the Council of 15 January 2008 on a Community energy-efficiency labelling programme for office equipment (recast version)[3],

– having regard to Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products[4],

– having regard to Decision No 1639/2006/EC of the European Parliament and of the Council of 24 October 2006 establishing a Competitiveness and Innovation Framework Programme (2007 to 2013) [5],

– having regard to Decision No 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-

---

1 OJ L 1, 4.1.2003, p. 65.
2 OJ L 114, 27.4.2006, p. 64.
3 OJ L 39, 13.2.2008, p. 1.
4 OJ L 191, 22.7.2005, p. 29.
5 OJ L 310, 9.11.2006, p. 15.

2013) [1],

– having regard to Regulation (EC) No 683/2008 of the European Parliament and of the Council of 9 July 2008 on the further implementation of the European satellite navigation programmes (EGNOS and Galileo)[2],

– having regard to its resolution of 9 July 2008 on the European strategic energy technology plan[3],

– having regard to its resolution of 31 January 2008 on an Action Plan for Energy Efficiency: Realising the Potential[4],

– having regard to its resolution of 15 January 2008 on CARS 21: A competitive automotive regulatory framework[5],

– having regard to its resolution of 14 December 2006 on a European strategy for sustainable, competitive and secure energy - Green Paper[6],

– having regard to its resolution of 1 June 2006 on energy efficiency or doing more with less - Green Paper[7],

– having regard to its resolution of 14 March 2006 on a European information society for growth and employment[8],

– having regard to Rule 108(5) of its Rules of Procedure,

A. whereas the EU has set the target of reducing greenhouse-gas emissions by at least 20% and of deriving 20% of its energy from renewable sources by 2020, and whereas it has also turned its efforts towards achieving a 20% improvement in energy efficiency within the same period,

B. whereas it has been calculated that the use of technologies based on information and communication technologies (ICTs) could save more than 50 million tonnes of CO_2 annually,

C. whereas the above targets are to be achieved without detriment to the competitiveness and sustainability of the EU economy,

D. whereas the EU has set itself the goal of becoming the most competitive knowledge-based economy by 2010, and whereas economic competitiveness is greatly dependent on energy efficiency and the use of ICTs,

E. whereas improving energy efficiency is one of the most economic means of reducing

---

1 OJ L 412, 30.12.2006, p. 1.
2 OJ L 196, 24.7.2008, p. 1.
3 Texts adopted, P6_TA(2008)0354.
4 Texts adopted, P6_TA(2008)0033.
5 Texts adopted, P6_TA(2008)0007.
6 OJ C 317 E, 23.12.2006, p. 876.
7 OJ C 298 E, 8.12.2006, p. 273.
8 OJ C 291 E, 30.11.2006, p. 133.

greenhouse-gas emissions, and whereas energy efficiency can lead directly to savings for consumers,

F. whereas ICTs have a key role to play in improving energy efficiency locally and globally and amongst the industrialised and the emerging economies (in particular by means of intelligent networks and intelligent buildings and the technological upgrading of the production processes of energy-intensive industries), and having regard to the potential for savings offered by intelligent transport systems in the case of manufacturing industry and transport,

G. whereas the ICT sector currently produces 2% of global CO_2 emissions, and whereas the industry would be capable not only of reducing its own CO_2 emissions, but in particular of developing innovative and more energy-efficient applications for the economy as a whole,

H. whereas technology neutrality should be respected in order to ensure that all relevant ICT-based technologies are available to assist the EU in meeting its greenhouse-gas emissions targets,

I. whereas the ICT industry offers tools that have a key role to play in monitoring any system's performance as compared with its energy consumption,

J. whereas there are already several EU programmes and initiatives in existence which support ICT research and innovation in energy matters (Seventh Framework Programme for Research and Technological Development (FP7), the ICT policy support programme and the European operational programmes for intelligent energy); whereas tax incentives and appropriate State-support instruments also provide financial backing and encouragement for intelligent energy-efficiency solutions,

K. whereas industry and small- and medium-sized enterprises (SMEs) have a key role to play in increasing energy efficiency through ICT and innovation,

1. Calls on the Commission and the Member States to endeavour to increase awareness, for example through demonstration projects, of the importance of ICTs for improving energy efficiency in the EU economy and as driving forces behind increased productivity and growth and cost reductions that make for competitiveness, sustainable development and the improvement of EU citizens' quality of life;

2. Suggests to the forthcoming Council Presidencies that they make the topic of ICT and its importance in combating and adapting to climate change one of the priorities for their terms of office;

3. Calls on the Commission and the Member States to endeavour to harmonise energy efficiency-related criteria, approaches and changes to the law and to adopt an holistic approach, meaning that Member States should not only think of components but of entire systems (for example, smart buildings); urges the Commission to consider including in its Impact Assessment Guidelines an evaluation of potential energy savings through the use of ICT-based solutions;

4. Calls on those Member States which have not yet devised a green strategy based on the use of ITs/ICTs which is capable of contributing to a progressive reduction in the EU's CO_2 emissions to do so;

5. Calls on Member States to make further use of ‘green procurement’ in order to encourage the take-up of ICT solutions by their public services, which can set an example in promoting energy-efficient solutions; calls on the public sector, starting with the EU institutions, to make the greatest possible use of ‘paperless office’ policies, document management, e-governance, e-administration, teleworking and video- and teleconferencing; urges the Commission to take the lead by developing an action plan to reduce the energy consumption of EU institutions;

6. Emphasises that more efforts must be made at every level of decision-making to use all available financial tools (such as FP7, the Competitiveness and Innovation Framework Programme, the relevant operational programmes supported by the Cohesion Policy, and national and regional programmes) for the deployment and take-up of new ICT-based technological solutions which enhance energy efficiency; calls, further, on the Commission to stipulate that at least 5% of Structural Fund resources be spent on improving the energy efficiency of existing homes;

7. Calls on the Commission to support a systematic approach to intelligent ICT solutions with a particular emphasis on lower emissions in the development of towns and cities, in particular through the development of intelligent buildings, street lighting and transmission and distribution networks and through the real-time organisation of transport;

8. Calls on the Commission and the Member States to promote the use of financial incentives for smart grid technologies; calls, further, on the Member States to encourage the use of the most advanced remote sensing technologies, which will help to reduce energy losses by identifying leakages, blockages or other problems in major energy infrastructures;

9. Calls on the Commission and the Member States to promote the testing, validation, introduction and further dissemination of computer- and ICT-based methods to improve energy efficiency, particularly improved electricity networks, energy-efficient buildings, smart lighting, industrial process automation, virtualisation, dematerialisation and the replacement of physical travel with tele- and videoconferencing, in cooperation with industry, consumers, authorities, universities and research institutions;

10. Calls on the Member States to use the potential of ICTs to enable new business models, in particular within the energy market and in connection with electronic trading in energy, but also across the economy as a whole, in order to boost green innovation and entrepreneurship;

11. Urges those Member States which have not yet introduced adequate incentives to meet the 2006 requirements laid down in Directive 2006/32/EC relating to the installation of intelligent electricity metering in businesses, public services and households to do so as quickly as possible; to that end, calls on the Commission and the Member States to ensure that, through investment in automated consumer ICTs (intelligent metering and overview of immediate energy requirements, including those of households), such ICTs achieve 100% penetration by 2019;

12. Calls on the Commission, the Member States and regional and local authorities to invest substantially in ICT-enabled decentralised energy-production systems (including the use of combined heat and power generation advantageously hybridised with renewables such as solar energy-based technologies, with the emphasis on intelligent solar-tracking technologies, and wind technologies), and to amend Community legislation and Member

States´ laws accordingly; calls on the Commission, the Member States and regional and local authorities always to consider ICTs in tandem with decentralised energy production and distribution;

13. Calls on the Member States to create better conditions for the use of ICTs in energy-intensive industries, and in particular in the construction industry (for example through the deployment of advanced embedded monitoring and control technologies on production lines), since 10% of global CO_2 emissions stem from the manufacture of construction materials;

14. Calls on the Commission and the Member States also to focus on the energy efficiency of existing houses and other buildings, as 40% of total energy use is accounted for by buildings; calls, in that connection, for the creation of better conditions for the uptake of ICTs for intelligent buildings; encourages Member States to offer incentives for the restoration of older buildings and the construction of passive houses and zero-emission houses;

15. Welcomes the launch of the consultation and partnership process on ICTs; calls on the Commission and the Member States to support closer cooperation amongst all the partners in the construction, energy-efficiency and ICT sector, in particular by means of Joint Technology Initiatives (JTIs) such as the Artemis JTI and the Energy Efficient Buildings (E2B) JTI; calls on all the partners to work together to develop open norms and standards so as to ensure that different technologies are compatible;

16. Calls on the Commission and the Member States to provide active support for research and technological development and demonstration projects relating to new ICTs and their applications which offer high potential for energy efficiency, especially micro- and nano-electronics and emerging quantum- and photonics-based technologies;

17. Calls on the Commission and the Member States to provide active support for research and technological development and demonstration activities relating to lighting technologies and intelligent lighting applications, so that the introduction of more energy-efficient lighting in both indoor and outdoor public spaces - with an emphasis on highly efficient light-emitting diodes (LEDs) - can be more vigorously promoted; urges the Commission and the Member States to promote research into lighting systems as a whole, and not only into components of such systems;

18. Calls on the Commission and the Member States to exploit to the utmost the potential of the Galileo satellite-navigation system so as to ensure that the broadest possible use is made of the relevant applications in combination with ICTs in the transport field, in particular in connection with the management and organisation of traffic flows, real-time information concerning the movement of goods and persons and optimised selection of routes and modes of transport;

19. Calls on the Member States to cooperate at national and local level in coordinating an approach to energy-efficient mobility and to environmentally-friendly mobility based on intelligent solutions offered by ICT-based technologies (such as private transport optimisation, smart logistics, efficient vehicles and traffic-flow monitoring, planning and simulation), so as to ensure interoperability, lower costs and greater impact; calls, further, on the Member States to support standardisation bodies in framing and introducing EU and global standards for smart transport systems;

20. Calls on the Member States to launch programmes and incentives aimed at improving the emissions performance of existing vehicles, in particular by using advanced ICT solutions when retrofitting emissions-control systems and through the deployment of real-time mobile monitoring platforms;

21. Encourages the Member States to promote information campaigns on energy-saving behaviour aimed at the general public and training in energy-efficient driving behaviour for drivers of road vehicles; notes that, in this context, high priority should be given to the launching of pilot programmes to demonstrate best-practice implementation in transport, especially involving added-value ICT solutions to existing problems at local level;

22. Calls on the Commission to publish a 'best experiences' guide for local authorities concerning energy-efficient solutions to traffic management and to cooperate with industry representatives on a list of 'eco-innovations' in order to make eco-driving a reality (such as an indicator showing economic fuel consumption, software that monitors internal tyre pressure, a dynamic eco-navigation system, driving-speed regulation, adaptive cruise control and real-time estimation of environmental impact on the basis of driving profiles);

23. Urges the Commission to promote initiatives to raise the awareness of local authorities, including the use of ICT modelling tools in city planning and housing management and in the provision of energy-efficient digital services; welcomes the Covenant of Mayors initiative, which brings together in a permanent network the mayors of Europe's most pioneering cities; calls for this initiative to pay particular attention to using ICTs to improve energy efficiency;

24. Calls on the Member States to pay suitable attention to the use of ICTs in the manufacturing industry and on the Commission to give the Member States greater access to examples of research and development projects which incorporate a key ICT contribution to the manufacturing industry, upon which 70% of jobs in the EU directly or indirectly depend, thereby promoting best practice examples for modernising the EU manufacturing industry;

25. Calls on the Commission and the Member States to support and encourage the ICT industry in reducing its carbon footprint by complying with the highest efficiency and innovation standards throughout entire product life-cycles, and by monitoring energy consumption at every stage of its supply chain; encourages the development of voluntary initiatives to reduce energy consumption in the ICT sector; recommends, further, the use of software and operating systems that consume the least energy;

26. Calls on the Member States to invest in energy-efficiency education, which should start at school by cultivating eco-consciousness among future consumers; calls, further, on the Commission and the Member States to provide massive support for education and training programmes in the interests of supplying an adequate number of trained ICT specialists and to encourage individuals and firms to adopt efficient practices through target-driven education and training aimed at using equipment efficiently, quantifying the resulting energy savings and developing green skills;

27. Calls on the Commission and the Member States to create a more favourable regulatory environment with better access to finance for SMEs that can play a key role in implementing ICT-based solutions for energy efficiency;

28. Welcomes the extension of the scope of the Energy Star cooperation with the United States

and the inclusion in the implementing regulation of a mandatory public procurement provision; urges the Commission to move negotiations on further products forward;

29. Notes that new technologies and approaches can in certain cases lead to an increase in energy consumption compared to the systems they are replacing; calls on the Commission and the Member States to take steps to ensure that consumers are made fully aware of the energy-efficiency performance of innovative systems compared to the technologies that are being replaced; calls on the Commission to come forward with a methodology for rating the energy performance of systems; notes the crucial role that smart meters can play in alerting consumers who change their behaviour or adopt new systems to the overall consequences of these changes in terms of energy efficiency;

30. Calls on the Commission to cooperate closely with third countries in order to make ICTs for energy efficiency more widely available; calls also for the establishment of common standards for energy-efficient products, especially for EU-based Energy Star projects with high achievements in energy efficiency and environmental impact which could be transferred to third countries for implementation;

31. Calls on the Member States to provide active support for the deployment in remote EU areas, such as islands and mountainous and isolated areas, of ICT applications which offer great potential for energy savings;

32. Instructs its President to forward this resolution to the Council, the Commission and the governments of the Member States.