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REPORT

on mobilising Information and Communication Technologies to facilitate the transition to an energy-efficient, low-carbon economy
(2009/2228(INI))

Committee on Industry, Research and Energy

Rapporteur: Patrizia Toia

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on mobilising Information and Communication Technologies to facilitate the transition to an energy-efficient, low-carbon economy
(2009/2228(INI))

The European Parliament,

– having regard to the Commission communication of 12 March 2008 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on mobilising Information and Communication Technologies to facilitate the transition to an energy-efficient, low-carbon economy (COM(2009)0111), and to the subsequent recommendation of 9 October 2009 (C(2009)7604),

– having regard to the Commission communication entitled 'Investing today for tomorrow's Europe' (COM(2009)0036),

– having regard to the conclusions of the European Council meeting of 11 and 12 December 2008, in particular the climate and energy targets laid down therein,

– having regard to the Commission communication on a European economic recovery plan (COM(2008)0800),

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

– having regard to the political agreement between Parliament and the Council on the proposal for a directive of the European Parliament and the Council on the energy performance of buildings (recast) (COM(2008)0780),

– having regard to the Commission communication of 16 December 2008 entitled 'Action plan for the deployment of intelligent transport systems in Europe' (COM(2008)0886),

– having regard to the Commission communication entitled 'Action plan for energy efficiency: Realising the potential' (COM(2006)0545),

– having regard to Rule 48 of its Rules of Procedure,

– having regard to the report of the Committee on Industry, Research and Energy and the opinion of the Committee on the Environment, Public Health and Food Safety (A7-0120/2010),

A. whereas action to reduce the impact of climate change requires the adoption of specific measures to reduce energy consumption and greenhouse gas emissions, in particular through efforts to promote energy efficiency and renewable energies,

B. whereas the ambitious climate and energy targets the Union has set for 2020 can be met only by a mix of energy-saving and energy-efficiency measures and other relevant

measures, notably within research and innovation, and by continuously setting ambitious goals for non-ETS regulated sectors and products energy-performance,

C. whereas energy savings are not being realised fast enough in order to achieve the 2020 target and the existing measures related to the ICT exploitation do not match with the scale of challenges for moving towards a sustainable low carbon energy system,

D. whereas the information and communication technology (ICT) sector accounts for some 8% of electricity consumption and 2% of carbon emissions in Europe (1.75% resulting from the use of ICT products and services and 0.25% from their production) and has a rapidly growing carbon footprint,

E. whereas ICT represents nearly 7% of the work force and over 6% of GDP, and whereas there is a serious risk the EU is losing its lead in digital technology, there is an immediate need to step up the innovation in this sector both for the benefit of our climate and for future green jobs creation,

F. whereas ICTs have an enormous untapped potential for saving energy and can help to improve energy efficiency by means of a wide range of applications; whereas, furthermore, insufficient use has been made of such applications to date,

G. whereas information and communication technologies (ICTs) can make a significant contribution to the EU economy's energy efficiency, notably in the buildings and transport sector but also in society at large through improved energy production and distribution towards the objective of 20% energy savings by 2020,

H. whereas renewable energy sources can be used to good effect in satisfying the electricity needs of ICTs; whereas ICT-based systems can reduce the energy consumption of buildings by up to 17% and carbon emissions from transport by up to 27%,

I. whereas trade and business organisations, in particular in the transport, manufacturing and building sectors, have a key role to play in reducing energy consumption and in this regard should also promote the use of ICTs,

J. whereas ICT is an enabling technology for the reduction of GHG emissions through electricity distribution grids (smart grids), smart buildings, smart homes and smart metering, eco-efficient transport and dematerialisation, eco-efficient industrial processes and organisational sustainability,

K. whereas motorised industrial systems account for 65% of the total electric power used for industrial activities, and whereas the widespread use of smart engines would lead to a 0.97 Gt reduction in CO2 emissions by 2020,

L. whereas compatible methodologies and tools are required in order to measure and monitor the efficiency of energy consumption; whereas the roll-out of smart meters can cut energy consumption by up to 10%, promote the wider use of distributed generation (microgeneration) and reduce losses in low-capacity networks, thereby promoting the spread of renewable energies,

M. whereas use of these technologies is directly linked to the roll-out and development of broadband in Europe,

N. whereas the measures taken to date under the European research and innovation policy and exchanges of information and good practice need to be incorporated to best effect, and whereas EU R&D and structural funds as well as Member State actions and EIB finance mechanisms need to be coordinated in a better manner so as to create synergies,

O. whereas some spatial planning, energy supply, public building and traffic management responsibilities and powers lie with national, regional and local authorities,

P. whereas it is important to raise consumer awareness of new technologies and their potential economic and energy-saving benefits, and to give consumers improved capabilities to manage their energy consumption,

Q. whereas currently 15-20% of the money spent to operate data centres is lost for powering and cooling,

R. having regard to the environmental benefits brought by ICTs in giving the services of various sectors an online availability,

S. having regard to the role in which energy efficiency can help address growing concerns for energy security across the European Union,

1. Welcomes the Commission's communication and subsequent recommendation and endorses their broad lines;

2. Calls for the introduction of measures to guarantee the privacy of personal information in relation to smart metering;

3. Asks the Commission, therefore, to submit by the end of 2010 a set of recommendations to ensure that smart metering is implemented in accordance with the timetable set out in the third energy market package and that a set of minimum functionalities for smart meters is defined in order to give consumers improved capabilities to manage their energy consumption and to even out the demand curve, as well as to facilitate the introduction of new energy services and an innovative, harmonised and interoperable European smart grid, taking into account all proven best practices employed in some Member States, particularly as regards the management of real-time, two-directional power and information flows; the definition of minimum functionalities should have due regard to the work being done by the European Standardization Organizations, CEN, CENELEC and ETSI in defining “additional functionalities” under Mandate 441 on the standardization of smart meters;

4. Stresses that significant technological progress and organisational innovations with strong relation to ICT are expected in order to obtain energy saving potentials in the next decades;

5. Considers that ICT is indispensable for decoupling economic growth from GHG emissions using three basic strategies for mitigation of climate change: a reduction of

energy consumption, an increase of energy efficiency ,an integration of renewable energies;

6. Notes that the only means of ensuring the comparability of the data produced in the various Member States and improving energy efficiency is to adopt a common methodology for measuring energy consumption and carbon emissions and a comparative methodology framework for calculating cost-optimal levels of minimum energy performance requirements in the building sector; points, furthermore, to the need for rapid standardisation of ICTs as a minimum requirement for interoperability; takes the view that standardisation should cover, in addition to measurement functions, access to contractual information and consumption data, communication with the operators' central systems over the electricity grid and remote connection and disconnection of supply;

7. Underlines that ICT standardisation is part of the general standardisations activities, and contributes to policy objectives to improve the competitiveness of European industry, as specified in the Lisbon strategy; support the implementation of the 2009 ICT Standardisation Work Programme in the priority domains identified: eHealth, e-Inclusion, Intelligent Transport, ICT for the Environment, E-Business, e-Skills, e-Learning, Protection of Personal Data, Privacy, Network and Information Security;

8. Considers that, if ICTs can help to save energy by enabling data to be continuously monitored in order to optimise public and private energy consumption and improve energy efficiency in many sectors, the ICT sector – bearing in mind the exponential growth of its own energy consumption – should set an example by undertaking to cut its consumption by a very significant margin; invites the Commission to give consideration, from now on, to how ICTs can contribute to an efficient economy in terms of resource use;

9. Stresses that Europe should be at the cutting edge in the development of ICT low-carbon applications; considers that it is essential to promote ICT research excellence and foster public and private investment in high-risk collaborative ICT research and innovation;

10. Considers that ICTs can play an important role in measuring and quantifying the global effects of climate change and evaluating climate protection measures, thereby contributing to the fine-tuning of climate policy;

11. Emphasises that the ITC sector’s undertaking to cut its own energy consumption should apply first and foremost to data centres;

12. Stresses the importance of the ICT sector's own energy consumption and urges the sector to implement the Commission's Recommendation (C(2009)7604) as soon as possible and as a minimum within the Recommendation's deadlines;

13. Considers that in order to obtain energy saving potentials in the next decades , Electricity Grids could become intelligent systems with flexible, controlled power flows supported by advanced information technology;

14. Notes that in households and in the building, transport, logistics and industrial sectors ICTs may be used in a variety of ways to improve energy efficiency and energy

management; notes that these applications have an impact on, inter alia, electricity distribution, lighting, heating, refrigeration, ventilation and air conditioning and the opportunities ICTs offer in terms of measurement, monitoring and automation; maintains that smart meters, efficient lighting, cloud computing and distributed software can transform usage patterns of energy sources;

15. Notes that ICTs can provide urban planning and city infrastructure governance with innovative solutions to reduce carbon emissions;

16. Takes the view that the use of ICTs can play a key role in improving energy efficiency, particularly in the management and operation of urban agglomerations; is of the opinion that the Smart Cities project is an example of ICTs' potential to reduce energy consumption, and encourages other cities to improve their scores and take good practices on board;

17. Stresses that closer cooperation between public authorities and public service providers in introducing smart metering could reduce costs and provide better services for consumers;

18. Emphasises the importance of involving public utilities, city councils and municipal authorities in the decision-making process with a view to introducing practical measures designed to reduce energy consumption and improve energy efficiency; emphasises the importance of ICTs in this respect;

19. Stresses that all energy-using sectors must make the greatest possible contribution to improving energy efficiency; notes that meeting the overall energy saving target at European level will depend on the aggregate savings made at all lower levels;

20. Stresses that the ICT sector must also endeavour to improve energy effectiveness and the wider use of carbon-neutral energy supply by developing equipment, communication networks and transmission systems. At the same time the Commission must be flexible in adjusting the regulations to the technical development of the sector;

21. Underlines that in the industrial sector, measuring and control technologies together with the corresponding software are crucial for realising potentials for saving resources;

22. Regrets the slow rate of progress in harnessing the potential of energy efficiency and energy savings in reducing greenhouse gas emissions; calls on the Commission to take full account of ICT saving potential in the implementation of Directive 2009/125/EC of the European Parliament and Council establishing a framework for the setting of ecodesign requirements for energy-related products[1];

23. Stresses the importance of the influence of ICT on energy efficiency, something which was also highlighted through the designation of this question in 2007 as a particular priority for ICT under the Seventh Framework Programme for Research and Technological Development[2];

[1] OJ L 285, 31.10.2009, p. 10.
[2] OJ L 412, 30.12.2006, p. 1.

24. Considers that priority should be given to boosting the European economy by investing in new technologies and in particular developing broadband in the various Member States as a means of securing economic growth, providing access to new systems and applications for an ever larger number of EU citizens and businesses, and meeting the energy efficiency targets the EU has set for 2020; furthermore, ICT development accounting for the shifting to a low carbon economy, will contribute to reducing dependence on energy supply as well as to coping with the high costs of raw materials;

25. Calls on the Member States to facilitate, through the development of the appropriate infrastructure, the availability of broadband internet to all EU citizens in order to ensure equal access to online services which can reduce the need to travel;

26. Calls for online services (eBanking, eCommerce, eGovernment, eLearning, eHealth) and teleworking to be developed and rolled out with a view to improving the quality of service provided to the public and, at the same time, reducing carbon emissions; calls on the Member States to develop such services, which, in addition to saving people time, lead to a reduction in travel;

27. Stresses the importance of logistics in the rationalisation of transport and the carbon emissions reduction; recognises the need to increase public and private investment in ICT tools in order to develop smart energy infrastructures for transport and, in particular, to achieve the e-Freight and Intelligent Transport Systems (ITS);

28. Believes that the use of intelligent transport systems (ITS) applied to road transport and interfaced with other transport modes can help reduce congestion and its harmful effects on the environment; believes that the application of ICTs to passenger transport and the availability of new technologies and minimum information on roads and their interaction with tyres and weather conditions, with on-board vehicle display, will make it possible to travel and transport goods more efficiently, more quickly and more safely;

29. Stresses the importance of ICT in the planning of a new European transport policy; calls for any such plans from the Commission to include ICT solutions, amongst others, in the regulation of traffic flows and to increase intermodality in the transport sector and optimise the balance between different modes of transport;

30. Calls on the Commission and the Member States to use the necessary applications to develop a technological infrastructure making it possible to reduce road transport and promote intermodality;

31. Stresses that in order to obtain energy saving in transport sector, trips could be avoided by virtual meetings and intelligent transport systems will enable a highly efficient transport system;

32. Urges the Commission to increase its efforts in the use of ICTs in the area of transport, in particular the use of monitoring and measuring instruments; considers it essential that the results of measurements be taken into consideration in real-time traffic control and the development and fine-tuning of the urban and regional transport network;

33. Calls on the Commission to promote the roll-out of smart engines to support the main

sectors and joint technology platforms concerned;

34. Stresses the need for a common strategy on the development and production of electric cars; furthermore, urges the Commission to prioritise smart cars and smart roads projects, as well as R&D pilot projects for V2V and V2R devices, which can open up new business opportunities for European ICT companies;

35. Recommends that, in the context of the work of the European Institute of Innovation and Technology, priority be given to initiatives to develop ICTs for sustainable intelligent cities, since more than 80% of EU citizens live in cities, which are facing the greatest challenges now confronting European societies in the areas of sustainable development, mobility, communications, health, security, welfare and so on;

36. Stresses that the Commission's future proposal on defining a New Digital Agenda for Europe should aim at mainstreaming ICT for a low-carbon economy; calls for exploitation of ICT technologies to enable targeted reductions in CO^2 emissions to be achieved in key sectors by 2020 and calls for promotion of responsible energy consumption, notably through the installation of smart meters; points out also that specific targets for the reduction of the ICT sector footprint for 2015 should be established;

37. Notes that an important obstacle to the widespread usage of ICTs in industry and public services is due to the insufficient level of necessary training in this field;

38. Recommends that the review clause of the Energy Performance of Buildings Directive be respected and the scope extended to include smaller buildings in the next review; urges the Member States to implement this directive; also recommends that ICTs be incorporated into the energy efficiency implementing measures; encourages Member States to make energy performance certificates for public buildings publicly available and easy to compare;

39. Maintains that no time must be lost in rolling out smart appliances through commercial utilisation of the ARTEMIS Joint Technology Initiative;

40. Maintains that more widespread use of ICTs will stimulate European economic growth, create new skilled jobs and boost the market in new energy efficiency technologies and green jobs creation; believes that significant investments are needed both for R&D and the utilisation of existing technologies; calls on the Member States to provide the incentives for both public and private energy efficiency investments; in this respect reiterates the Member States' and the Commission's responsibility as public procurers;

41. Stresses the significant role of private investments in reaching the funding levels needed and therefore believes the EU should ensure a favourable market and regulatory framework incentivising business to pursue an ambitious energy efficiency strategy; believes with these conditions that the markets will reach the goals set out for them; therefore calls on the Commission to bring forward concrete, ambitious goals as according to the potential of the different ICTs as outlined in its communication (COM(2009)0111);

42. Calls upon the Member States to invest in energy efficiency education which should start from the schools and encourages the development of innovative ICT-enabled energy

efficiency educational courses in a wide network of primary and secondary schools;

43. Believes that smart metering and ICT projects in general require broad information campaigns to explain their benefits to citizens; stresses that informing society about the need for, and benefits of, smart metering is crucial to avoiding misinterpretation and lack of public support; maintains, therefore, that no time should be lost in promoting smart metering, enabling consumers to manage their consumption as efficiently as possible, with a view to optimising energy production, delivery and electricity grids; emphasises, in this connection, that the measurement, monitoring and automation of consumption will be part and parcel of optimised electrical network architecture, the purpose of which must be to ensure energy efficiency, on the one hand, and to incorporate renewable energy sources, energy storage management and the recharging of future electric vehicles, on the other; emphasises, however, that while smart metering systems are a crucial stage in the process, they are only the first step towards the development of smart networks;

44. Stresses that, in connection with the important influence of ICTs on the economic development of EU cities and regions, it is vital to consult official representatives of local and regional communities, where EU programmes provide support for the drawing up of priority action areas important for these communities;

45. Stresses that smart grids on the Member State and European level are necessary in order to fully exploit the benefits of smart metering; therefore calls on the Commission to consider European scale investment programs; Calls on the Member States to promote and facilitate the use of smart metering for users in commercial and residential properties; Stresses that the introduction of smart metering is only one necessary element in the construction of a European integrated smart grid; Encourages the Member States and the Commission to push forward with the application of ICT solutions to this end;

46. Stresses the need to monitor the influence of the development of ICT on aspects of sustainable development, with particular reference to environmental and social questions, including the threat to the environment and health connected with the use of old equipment and the social inequalities deriving from digital exclusion;

47. Commends those Member States that have already introduced smart metering, and urges the other Member States to make progress in this area as swiftly as possible; calls on the Commission to cofinance the greatest possible number of large-scale projects, drawing on existing financial and research instruments for this purpose;

48. Calls on the Commission and the Member States to promote ICT solutions that are efficient, upgradeable and expandable through public procurement contracts;

49. Calls on the Commission to establish a European web portal containing the best practices on usage of ICTs to improve energy efficiency, which could provide useful information to consumers and public authorities; Calls for the establishment of a European wide media campaign aiming at educating the public on energy saving practices concerning the use of electronic devices;

50. Calls on the Commission to take into account the less developed regions of the Union in ICT planning and to secure assets for the purpose of cofinancing the implementation of

smart meters and other ICT projects in these regions to assure their participation and to prevent their exclusion from common European ventures;

51. Welcomes the establishment of a smart grids task force within the Commission and recommends that it take due account of the opinions of all stakeholders; asks the Commission to provide Parliament with regular progress reports on its work;

52. Calls on the Commission to consider drafting, on the basis of the work carried out by the task force, a communication on smart metering which

a. identifies the obstacles to widespread use of smart metering,

b. welcomes the practical guide put forward by the Commission together with the Committee of the Regions on how local and regional authorities can exploit ICTs in their energy efficiency and environmental plans and believes that this application will increase business opportunities at local and regional level,

c. puts forward a procedure for the drafting of a common minimum functional specification for smart metering systems as swiftly as possible,

d. lays down a roadmap for the creation of specifications and standards for the development of smart consumer electronic appliances, compatible with smart metering systems,

e. lays down a roadmap that sets smart (specific, measurable, appropriate, realistic and time-based) objectives and targets for the roll-out of such systems in the Member States, and

f. establishes a system for pooling best practice in this area;

53. Considers it essential for the Member States to agree, by the end of 2010, on a common minimum functional specification for smart metering systems, which encourage decentralised production and energy efficiency, with a view to providing consumers with comprehensive and relevant information enabling them to monitor their energy consumption at all times and to adapt it to their needs, thereby helping them to manage it more effectively;

54. Calls on the Commission to lay down a concise action plan for the reduction of energy consumption through the use of ICT in the buildings of EU institutions, in order to set the example for Member States and European citizens;

55. Calls on the Commission to propose, by the end of 2010, a timetable with ambitious and binding ICT-driven energy-saving goals for all ICT sectors and the Member States, with a view to meeting the carbon emissions reduction targets;

56. Believes that, when deciding on legal instruments and joint measures at European level, special attention should be paid to the additional costs to European citizens these measures might entail, as well as the burdens on European industry with regard to production and administration costs;

57. Calls on the Commission to come forward with a financial instrument, as part of the EU funding, in order to encourage SMEs to develop their sustainable low carbon energy technologies;

58. Calls on the Commission to adjust the EU budget in order to accelerate the development and deployment of cost-effective low carbon technologies, in particular aiming at meeting the financial needs for the implementation of the Strategic Energy Technology Plan (SET-Plan);

59. Welcomes the establishment of the Covenant of Mayors as a forum for the exchange of good practices and a trailblazer for cities that are setting themselves ambitious goals with a view to improving their energy efficiency; congratulates, in this connection, those cities and associations that are developing good practices in terms of using ICTs to make cities more energy-efficient, and encourages the dissemination of such practices;

60. Calls on the Member States and the Commission to support education and awareness-raising for users to enable the full energy saving potential of ICT to be realised;

61. Calls on the Commission to promote in collaboration with appropriate international partners the development of common international standards for carbon emission reporting of companies in order to enable them to measure their own emissions in a comparable and efficient way;

62. Calls on the Commission and the Member States to support the development of off-site processing, given the vast potential of this technology to contribute to energy efficiency and to reduce the waste normally associated with regular upgrading of ICTs;

63. Hopes that steps will be taken to utilise ICTs' potential to reduce wastage within the logistics chain in the area of food production, in particular through coordinated action under the common agricultural policy and FP7;

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

EXPLANATORY STATEMENT

In December 2008, the European Union set ambitious energy saving and carbon emissions reduction targets for 2020. With a view to meeting those targets, the Commission communication of 12 March 2009 identifies information and communication technologies (ICTs) as a means of improving energy efficiency in the individual Member States.

The role of ICTS

ICTs can help to:

monitor and manage energy consumption in various sectors, in particular the building and transport industries,

and to provide new applications and technologies to improve the use of natural resources and foster the use of cleaner production and industrial processes.

More widespread use of ICTs can therefore help to improve energy efficiency within the Union and make EU industry more competitive. The countless applications on offer, which have been underused to date, have considerable energy-saving potential in many economic sectors. These include public and private lighting, building heating and air conditioning control, traffic control, logistics and transport, and online services.

The Commission has calculated that ICT-based systems can cut energy consumption in buildings – currently put at some 40% of overall energy consumption in Europe – by up to 17%, and transport carbon emissions by up to 27%.

One important means of rationalising energy use is smart metering, which provides consumers with comprehensive real-time information on their energy consumption and its cost.

Smart metering allows two-way information flows between network operators, energy suppliers and consumers. According to some studies, the roll-out of smart metering could lower energy consumption by up to 10%.

Commission position

Following the publication of the communication of 12 March 2009, on which this own-initiative report is based, the Commission opened broad public consultations which, with valuable contributions from experts and sector-specific studies, clarified the manner in which ICTs can help to improve energy efficiency.

A number of economic sectors within Europe in which the use of ICTs will enable the ambitious energy saving targets to be met were identified, as was the role the Commission should play in fostering the use of these new technologies.

One of the main obstacles to the widespread use of ICTs is the lack of common measurement, quantification and management methodologies and tools for smart metering as a means of measuring energy consumption and carbon emissions.

The Commission's recommendation of 9 October 2009 accordingly called on the ICT sector to formulate, by the end of 2010, common methodologies for establishing a common specification for smart metering. It also proposes a roadmap for the introduction of smart meters in European households and looks at the various legislative options open with a view to speeding up progress towards the targets set for 2020.

Rapporteur's position

The rapporteur endorses the broad lines of the Commission communication and recommendation. She considers, furthermore, that more widespread use of ICTs will stimulate European industry and boost the new technologies market. On that basis, the rapporteur believes that greater emphasis should be placed on a number of priority means of meeting the EU targets. These include:

- the standardisation of measuring instruments: a large number of the obstacles to the rapid roll-out of ICT tools and innovations may be attributed to the lack of common measurement methods and tools. In the rapporteur's view, no time should be lost in adopting binding measures and a precise timetable with which all firms operating in the sector must comply. With a view to this, the Commission should take due account of the measurement criteria already in use in some parts of Europe which have proved to make a tangible contribution to lowering energy consumption and improving energy efficiency, thus bringing significant economic benefits to end-users. This should form the best practice on the basis of which to establish a technological lowest common denominator for Europe. Standardisation should cover both measurement functions and access to contractual information and consumption data, communication with operators' central systems over the electricity grid and remote connection and disconnection of supply. Furthermore, the remote handling of the vast majority of commercial transactions and the main metering operations will also have a positive effect in terms of reducing carbon emissions, by obviating the need for on-site intervention. A similar approach should be taken to gas consumption metering, bringing the benefits of smart metering to the natural gas supply grid. Lastly, the roll-out of smart metering throughout Europe is of fundamental importance to smart cars, on which mobility will be based in the near future. The legal instrument that should be chosen is that which will enable standardisation to be achieved fastest. In this connection, the use of a recommendation should not be ruled out, if the legislative approach is shown to involve too many financial and administrative complications.

- the launch of pilot projects: with a view to ensuring the mass roll-out of ICTs, the rapporteur considers that inter-sector partnerships should be encouraged and local and regional authorities should be made aware of the energy efficiency benefits that ICTs can provide. With a view to this, the Commission and the Member States should make greater efforts to launch pilot projects, drawing on existing tools and research programmes or devising new tailor-made projects.

- the wide range of ICT applications: improving energy efficiency requires the adoption of a mix of measures to reduce consumption and improve management of the production and supply of services. The rapporteur points to the major contribution that ICTs can make to meeting the joint energy targets that have been sets and takes the view that applications that have been underused to date should in future be put to more widespread use in the various economic sectors. The rapid roll-out of ICT-based solutions also calls for the mass roll-out of broadband.

- dissemination of good practice: Europe's population is increasingly concentrated in urban areas. Improvements in the way that medium-sized and large towns are organised and run will therefore be an important factor in meeting the ambitious carbon emissions reduction and energy efficiency targets. The rapporteur stresses that the use of ICTs in organising and running urban areas can make a major contribution towards improving energy efficiency. The 'smart cities' project and the 'Covenant of Mayors' initiative have shown the way forward. Efficient urban organisation achieved through the use of ICTs can substantially reduce the energy impact of urban areas. Action should be taken to disseminate good practice and raise local decision-makers' awareness of the benefits that ICTs have to offer.

22.3.2010

OPINION OF THE COMMITTEE ON THE ENVIRONMENT, PUBLIC HEALTH AND FOOD SAFETY

for the Committee on Industry, Research and Energy

on Mobilising Information and Communication Technologies to facilitate the transition to an energy-efficient, low-carbon economy
(2009/2228(INI))

Rapporteur: Daciana Octavia Sârbu

SUGGESTIONS

The Committee on the Environment, Public Health and Food Safety calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions in its motion for a resolution:

A. whereas information and communication technologies (ICTs) can make a significant contribution to the EU economy's energy efficiency, notably in the buildings and transport sector but also in society at large through improved energy production and distribution towards the objective of 20% energy savings by 2020,

B. whereas energy savings achieved through ICTs will increase with better user engagement and access, and improvements in energy efficiency in the ICT sector itself,

C. whereas ICTs are indispensable for a sustainable economy based on renewable energy production,

D. whereas ICT can be applied to inform users of their real-time electricity consumption, thereby enabling more energy-efficient behaviour,

1. Welcomes the Commission's efforts to promote smart metering and smart grids in energy production, distribution and use; highlights that this should enable a two-way communication between network operators, suppliers and users, thus facilitating optimal usage of smart metering; calls for the introduction of measures to guarantee the privacy of personal information in relation to smart metering;

2. Stresses that energy efficiency is a way of reducing energy consumption, increasing energy security and helping to curb environmental damage, particularly greenhouse gas emissions;

3. Highlights the role of ICTs in reducing the need to travel, for example through teleconferencing, and in relation to the development of e-services such as e-governance and e-health, as well as **in** delivering intelligent, environmentally friendly transport solutions which can result in reduced carbon emissions, less pollution and noise, and improved journey times; stresses however that ICT alone will not be sufficient to achieve the necessary reductions in transport related emissions;

4. Notes, however, that societies which have high ICT use also have high mobility, and that reducing the need to travel for some activities will not necessarily reduce the overall number of journeys; considers that ICT solutions must be accompanied by awareness, education, and a determined policy to reduce travel; considers further that reduction targets for companies and organisations would be useful in this context;

5. Regrets the slow rate of progress in harnessing the potential of energy efficiency and energy savings in reducing greenhouse gas emissions; calls on the Commission to take full account of ICT saving potential in the implementation of Directive 2009/125/EC of the European Parliament and Council establishing a framework for the setting of ecodesign requirements for energy-related products[1];

6. Stresses the importance of the influence of ICT on energy efficiency, something which was also highlighted through the designation of this question in 2007 as a particular priority for ICT under the Seventh Framework Programme for Research and Technological Development[2];

7. Highlights the contribution that ICTs have already made to the energy-efficiency of buildings through solutions such as energy-management systems, solid-state lighting, and intelligent lighting systems;

8. Calls on the Member States to implement smart grid technology, particularly with a view to maximising the use of renewable energy sources in electricity networks as soon as possible;

9. Recognises the potential of ICT to contribute to increased energy efficiency of carbon-intensive production processes, such as the production of construction materials and other manufacturing processes;

10. Supports the establishment of standardised methodology for measuring energy efficiency and carbon emissions of the ICT sector to enable a verifiable reduction in energy intensity and carbon emissions throughout the entire lifecycle of ICT equipment and components, which will allow innovation-driving competition between genuinely environmentally friendly ICT solutions;

11. Stresses the need to monitor the influence of the development of ICT on aspects of sustainable development, with particular reference to environmental and social questions, including the threat to the environment and health connected with the use of old equipment and the social inequalities deriving from digital exclusion;

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1 OJ L 285, 31.10.2009, p. 10.
2 OJ L 412, 30.12.2006, p. 1.

12. Calls on the Commission and the private sector to ensure R&D investment in ICT, to improve the energy efficiency of ICTs themselves, to develop their role in future electricity infrastructure so as to allow for two-stream electricity flows and alignment of electricity production and consumption, and to develop low-carbon ICT products and services and therefore to ensure that the EU continues to lead in the development of green jobs;

13. Calls on the Commission, in collaboration with the Committee of the Regions and Member States, to work on establishing a web network for the exchange of best practices among regional and local authorities on improving energy performance through use of ICTs;

14. Calls on the Member States and the Commission to support education and awareness-raising for users to enable the full energy saving potential of ICT to be realised;

15. Calls on the Commission to promote the use of new social media to facilitate interactive knowledge-sharing, to ease access to information on the potential of energy saving measures, and to mobilise citizens to take environmentally friendly action;

16. Calls on the Member States to facilitate, through the development of the appropriate infrastructure, the availability of broadband internet to all EU citizens in order to ensure equal access to online services which can reduce the need to travel;

17. Calls on the Member States to further implement ICT solutions to reduce traffic congestion and its associated adverse effects on public health, such as pollution and noise;

18. Calls on the Commission and the Member States to support the development of off-site processing, given the vast potential of this technology to contribute to energy efficiency and to reduce the waste normally associated with regular upgrading of ICTs;

19. Calls on the Member States to promote and facilitate the use of smart metering for users in commercial and residential properties;

20. Calls on the Commission and the Member States, to promote through public procurement contracts, energy-efficient ICT solutions that are upgradeable and expandable.

RESULT OF FINAL VOTE IN COMMITTEE

Date adopted	16.3.2010
Result of final vote	+: 51 –: 1 0: 0
Members present for the final vote	Elena Oana Antonescu, Kriton Arsenis, Pilar Ayuso, Paolo Bartolozzi, Sergio Berlato, Milan Cabrnoch, Martin Callanan, Nessa Childers, Chris Davies, Esther de Lange, Anne Delvaux, Bas Eickhout, Edite Estrela, Jill Evans, Elisabetta Gardini, Gerben-Jan Gerbrandy, Julie Girling, Nick Griffin, Satu Hassi, Jolanta Emilia Hibner, Dan Jørgensen, Karin Kadenbach, Christa Klaß, Jo Leinen, Peter Liese, Kartika Tamara Liotard, Linda McAvan, Radvilė Morkūnaitė-Mikulėnienė, Miroslav Ouzký, Vladko Todorov Panayotov, Antonyia Parvanova, Andres Perello Rodriguez, Pavel Poc, Vittorio Prodi, Frédérique Ries, Anna Rosbach, Daciana Octavia Sârbu, Richard Seeber, Theodoros Skylakakis, Bogusław Sonik, Anja Weisgerber, Åsa Westlund, Glenis Willmott, Sabine Wils, Marina Yannakoudakis
Substitute(s) present for the final vote	Christofer Fjellner, Matthias Groote, Judith A. Merkies, Michail Tremopoulos, Anna Záborská
Substitute(s) under Rule 187(2) present for the final vote	Dieter-Lebrecht Koch, Markus Pieper

RESULT OF FINAL VOTE IN COMMITTEE

Date adopted	7.4.2010
Result of final vote	+: 30 –: 1 0: 23
Members present for the final vote	Jean-Pierre Audy, Zigmantas Balčytis, Bendt Bendtsen, Jan Březina, Maria Da Graça Carvalho, Giles Chichester, Pilar del Castillo Vera, Lena Ek, Ioan Enciu, Adam Gierek, Norbert Glante, Robert Goebbels, Fiona Hall, Jacky Hénin, Edit Herczog, Sajjad Karim, Arturs Krišjānis Kariņš, Marisa Matias, Judith A. Merkies, Jaroslav Paška, Aldo Patriciello, Miloslav Ransdorf, Herbert Reul, Michèle Rivasi, Jens Rohde, Paul Rübig, Amalia Sartori, Francisco Sosa Wagner, Konrad Szymański, Patrizia Toia, Evžen Tošenovský, Ioannis A. Tsoukalas, Claude Turmes, Niki Tzavela, Adina-Ioana Vălean, Kathleen Van Brempt, Alejo Vidal-Quadras
Substitute(s) present for the final vote	Lara Comi, António Fernando Correia De Campos, Rachida Dati, Françoise Grossetête, Cristina Gutiérrez-Cortines, Jolanta Emilia Hibner, Oriol Junqueras Vies, Bernd Lange, Marian-Jean Marinescu, Ivari Padar, Vladko Todorov Panayotov, Markus Pieper, Mario Pirillo, Silvia-Adriana Ţicău, Lambert van Nistelrooij, Hermann Winkler
Substitute(s) under Rule 187(2) present for the final vote	Isabelle Durant