A turning point for the "Intelligent Energy Europe" programme

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Abstract
The Intelligent Energy Europe programme is the Community instrument to overcome the non-technological barriers to energy efficiency and greater use of new and renewable energy sources in Europe. Most of its budget is distributed through calls for proposals to co-finance 2-3 year pan-European projects serving the programme's objectives. The programme is entering a new area in 2007. Its first phase ended in December 2006 and its continuation received an increased budget of EUR 730 million for the period 2007-2013. Its energy-efficiency priorities cover the building, industry, equipment and transport sectors. They have evolved to take into account the hundreds of projects funded so far, as well as the recently adopted European energy efficiency action plan. Its rules of participation have also been adapted to attract new market players, in particular small and medium-sized enterprises.

Introduction
The Spring 2006 European Council[1] called for a new European energy policy with three main objectives: combating climate change, limiting the European Union's external vulnerability to imported energy products, and promoting growth and jobs, thereby providing secure and affordable energy to consumers.

As a follow up, the European Commission adopted on 19 October 2006 an action plan for energy-efficiency[2], followed on 10 January 2007 by an integrated energy and climate change package[3]. The energy-efficiency action plan contains measures that would put the European Union (EU) on the path to achieving a key goal of reducing its global primary energy use by 20 % by 2020, equivalent to annual fuel savings worth EUR 100 billion and a 780 Mt reduction in CO_2 emissions compared with the baseline scenario. As for the energy package, it proposes inter alia an EU commitment of at least a 20 % reduction of greenhouse gases by 2020 compared to 1990, and a binding target of increasing the level of renewable energy in the EU's overall mix from less than 7 % today to 20 % by 2020. These targets were supported by Member States at the Spring 2007 European Council[4].

In addition, the European Council and the European Parliament agreed to continue the Intelligent Energy Europe programme (IEE) for the period 2007-2013 as part of a broader Competitiveness and Innovation Programme[5]. Intelligent Energy Europe is the European Commission's support programme to promote energy efficiency and renewable energy sources in

1. Presidency Conclusions of 23/24 March 2006. 7775/1/06 REV1 of 18.05.2006.

2. Action Plan for Energy Efficiency: Realising the Potential - COM(2006) 545, 19.10.2006.

3. Communication from the Commission to the European Council and the European Parliament, An energy policy for Europe, COM(2007)1 final of 10.01.2007.

4. Presidency conclusions of European Council of 8-9 March 2007 (7224/07)

5. 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), OJ L 310/15, 09.11.2006.

Europe. Most of its budget is used to offer grants via calls for proposals to European projects whose objectives fit with those of the programme.

The first programme (referred to as IEE-1) started in 2003 and ended in December 2006 with a budget of about EUR 250 million. As of January 2007, IEE-1 supports more than 300 ongoing projects, involving more than 1300 organisations across Europe. The first projects started in January 2005 and the last ones - an expected 100 new projects - will only begin in the second semester of 2007. As projects last between two and three years, only now have the first IEE-1 projects started to deliver results.

The new programme (referred to as IEE-2) will run from 2007 until 2013 with an increased budget of EUR 730 million. As in the past, the European Commission will produce every year a work programme defining the priority topics to be supported. The work programme for this year will be adopted by the Commission in March 2007.

This paper outlines the rules of participation of this new programme, its priorities for 2007 as well as an overview of the ongoing IEE-1 projects funded so far. Although the programme addresses both rational use of energy and the production of new and renewable energy sources, the focus of this paper will be on energy efficiency.

What is the Intelligent Energy Europe 2 Programme (2007-2013)?

The objective of the Intelligent Energy Europe Programme (2007-2013) is to contribute to secure, sustainable and competitively priced energy for Europe, by providing for action:

- to foster energy efficiency and the rational use of energy resources;
- to promote new and renewable energy sources and to support energy diversification;
- to promote energy efficiency and the use of new and renewable energy sources in transport.

Intelligent Energy Europe 2 (IEE-2) builds on the experience gained from its predecessor, the first Intelligent Energy Europe programme which ran from 2003 until 2006 (IEE-1). This Programme has become the main Community instrument to tackle non-technological barriers to the spread of efficient use of energy and greater use of new and renewable energy sources.

In operational terms the IEE-2 programme aims to:

(a) provide the elements necessary for the improvement of sustainability, the development of the potential of cities and regions, as well as for the preparation of the legislative measures needed to attain the related strategic objectives; develop the means and instruments to follow up, monitor and evaluate the impact of the measures adopted by the Community and its Member States in the fields addressed by that programme;

(b) boost investment across Member States in new and best performing technologies in the fields of energy efficiency, renewable energy sources and energy diversification, including in transport, by bridging the gap between the successful demonstration of innovative technologies and their effective, broad market uptake in order to attain leverage of public and private sector investment, promote key strategic technologies, bring down costs, increase market experience and contribute to reducing the financial risks and other perceived risks and barriers that hinder this type of investment;

(c) remove the non-technological barriers to efficient and intelligent patterns of energy production and consumption by promoting institutional capacity building at, inter alia, local and regional level, by raising awareness, notably through the educational system, by encouraging exchanges of experience and know-how among the main players concerned, business and citizens in general and by stimulating the spread of best practices and best available technologies, notably by means of their promotion at Community level.

The IEE-2 programme is meant to complement the 7th Framework Programme for research and technological development[6] (FP7). The IEE-2 Programme focuses primarily on promoting energy products and systems which are ready for rapid market growth and on tackling non-technological market barriers, whereas FP7 supports research, demonstration and dissemination of new knowledge about innovative energy technologies and the results of technological research and demonstration projects.

The action taken under Intelligent Energy Europe also complements actions within other Community programmes with energy-related objectives, such as the Structural Funds or LIFE +.

The total budget allocated to implementation of Intelligent Energy Europe for the period 2007-2013 is EUR 730 million. For 2007, EUR 65 million has been allocated. The budget will be increased year after year during the time span for implementation of the programme.

Most of this budget is implemented by means of competitive allocation of financial support to independent parties proposing action in line with the programme's priorities (grant procedure). The decision to propose this action (or project) obviously lies exclusively with the proposers. Responsibility for carrying out the action lies entirely with the contractors.

The programme supports up to 75 % of the total eligible costs of the project. It is more than in the previous programme as the co-funding level in IEE-1 could not exceed 50 %. This increase is meant to attract new market players, in particular small and medium-sized enterprises (SME's) and/or bodies closely connected to them (e.g. chambers of commerce and industry, professional associations).

SME's are a priority target group for the Competitiveness and Innovation Programme (2007-2013) in which IEE-2 is embodied. They often lack knowledge and resources to undertake energy conservation measures. In France for instance, although SME's are responsible for 40-45 % of the energy consumption and gas emissions of all companies, a poll made in December 2006 of a representative sample of 802 managers of companies with 1-249 employees showed that 75 % of these managers consider their company to have little impact on these issues[7]. Half of these companies said they expect information and/or

6. http://cordis.europa.eu. See in particular the Cooperation Theme "Energy" / Activity No. 8 "Energy efficiency and savings" and Activity No. 9 "Knowledge for energy policy making" which will provide inter alia for research and demonstration of new concepts and technologies for buildings, transport, services, and industry.

7. Source ADEME: colloque PM4E "Environnement et maîtrise de l'énergie : le rendez-vous des PME" Paris 6-7 February 2007

financial support to come from professional chambers (e.g. chambers of commerce and industry).

Types of actions supported

Two kinds of action may be granted support: promotion and dissemination projects and market replication projects.

PROMOTION AND DISSEMINATION PROJECTS

They cover the following groups of action:

1. strategic studies on the basis of shared analysis and regular monitoring of market developments and energy trends for the preparation of future legislative measures or for the review of existing legislation, including with regard to the functioning of the internal energy market, for the implementation of the medium- and long-term strategy in the energy field to promote sustainable development, as well as for the preparation of long-term voluntary commitments with industry and other stakeholders and for the development of standards, labelling and certification systems, where appropriate also in cooperation with third countries and international organisations;
2. creation, enlargement or reorganisation of structures and instruments for sustainable energy development, including local and regional energy management, and the development of adequate financial products and market instruments;
3. promotion of sustainable energy systems and equipment in order to further accelerate their penetration of the market and stimulate investment to facilitate the transition from their demonstration to the marketing of more efficient technologies, awareness campaigns and the creation of institutional capabilities;
4. development of information, education and training structures, the utilisation of results, the promotion and dissemination of know-how and best practices involving all consumers, dissemination of results of the action and projects and cooperation with the Member States through operational networks;
5. monitoring of the implementation and the impact of Community legislative and support measures.

MARKET REPLICATION PROJECTS

These projects are concerned with the market replication of innovative techniques, processes, products or practices of Community relevance, which have already been technically demonstrated with success but, owing to residual risk, have not yet penetrated the market. Market replication projects are a novel instrument compared with the previous IEE-1 programme as they can entail Community funding for a share of the investment cost within the project. This strand will be opened for the first time under the 2008 call for proposals.

Rules of participation

Any legal person, whether public or private, established in a Member State or in an associated country[8] may propose action within the IEE-2 Programme.

Unless otherwise specified in the call for proposals, consortia participating in IEE-2 projects must be made up of at least three independent legal entities, each of which is established in a different eligible country. The only exception is the creation of new local and regional energy management agencies which only needs one legal person which must be a local or regional public authority.

Grants are implemented via calls for proposals presenting the topics open for submission. Hereafter are the energy- efficiency topics to be part of the first IEE-2 call due to be published in March 2007. They cover: energy-efficient buildings, industrial excellence in energy, energy-efficient equipment, energy use in transport, local initiatives and special initiatives. Wherever possible, action financed by the Intelligent Energy - Europe Programme will promote synergies between these different priorities and the other priorities (not presented here) related to new and renewable energy sources.

The description here below is complemented by an overview of the projects funded so far under the predecessor programme (IEE-1). Indeed, although these projects were selected in the past, they last between two and three years and so are still running. They are usually managed by consortia of seven to eight partners and cost typically around EUR 1 million, of which 50 % is supported by IEE-1. They must, of course, be considered before submitting any new proposal.

Energy-efficient buildings

Partly because of its large share of total consumption, the largest cost-effective savings potential lies in the residential and commercial buildings sector, where the full potential is now estimated by the energy efficiency action plan to be around 27 % and 30 % of energy use, respectively. By January 2006 all Member States were supposed to have transposed into national law the Energy Performance of Buildings Directive[9] (EPBD) which lays down several requirements, notably: the setting of minimum standards for energy performance for new buildings and major refurbishments; the introduction of a building certification system to make energy consumption levels more visible to owners, tenants and users; and requirements for regular inspections of boilers and air conditioning systems.

The IEE-2 programme will assist stakeholders in ensuring proper implementation of the EPBD and will also encourage actions beyond EPBD requirements. Actions supported under IEE-2 will aim:

- To improve the energy performance of new and existing buildings and promote integration of renewable energy sources (priority will be on public buildings, in particular education buildings for 2007).

8. As of January 2007: Norway, Iceland, Lichtenstein and Croatia.

9. Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings.

- To foster adoption of intelligent energy use patterns in buildings.
- To improve the capacity of building professionals to offer intelligent energy solutions and increase demand for such solutions (e.g. large-scale education and training schemes/ activities in all Member States to qualify the market for implementation of the EPBD).
- To facilitate implementation and monitoring of the EPBD.
- To ensure that the recommendations issued with the energy performance certificates are followed by practical action and thus lead to actual energy savings.
- To foster action beyond the EPBD requirements (e.g. low-energy, energy-neutral and energy-positive buildings; or voluntary action/schemes for certification of buildings in accordance with the EPBD legislation even if they are not for sale or rent, or for buildings not covered by the Directive).
- To contribute to furtherance of the EPBD in line with the suggestions listed in the Energy Efficiency Action Plan.

The new projects should build on the building-related projects funded by the IEE-1 programme. As of January 2007, the IEE-1 programme supports 44 projects in the building sector, of which 18 are targeted to the retrofitting of social housing and 26 are more general in their approach.

ONGOING PROJECTS ADDRESSING THE RETROFITTING OF SOCIAL HOUSING

Among the 18 projects addressing the retrofitting of social housing, seven projects are related to awareness raising, education and training, of which four aim at developing integrated strategies, education programs and/or decision aid tools for energy-efficient renovation of social housing. The other three projects are oriented towards tenants, with a view to have them change their behaviour.

Three social housing projects are meant to improve asset management tools to help social housing operators prioritise energy-efficient strategies. They are complemented by four projects looking at advanced integrated retrofitting solutions, two of them dealing with methodologies and/or tools, one focusing on ventilation, and the last one on cost-effective technologies for roof top extension in the case of high-rise buildings.

In addition, one project involves social housing union partners and aims specifically at removing legal and institutional barriers. Another one looks at solutions for the fuel poverty issue and two projects focus on financing schemes: one facilitating the development of innovative schemes tailored to the refurbishment of social housing and one concentrating on the use of energy performance contracting.

In total these projects gather more than 35 social housing companies which owe, rent and/or manage more than 6,300,000 housing units across Europe.

ONGOING PROJECTS RELATED TO OTHER TYPES OF BUILDINGS

A number of these projects have focused on providing readily available tools for existing buildings. They have provided feedback on the proposed EPBD standards, collected data and information concerning the actual status of construction and consumption in existing buildings, identified new directions and communicated this information to the appropriate target groups. Some examples of the types of activities which have been carried out in order to support implementation of the EPBD are: analysis of practical application of CEN standards to existing buildings and the preparation of recommendations to CEN concerning necessary improvements; a road map clarifying the non- technical issues to be addressed for implementation of the certification process at a national level; development of performance assessment tools and extraction of policy recommendations based on early experience, including creation of open software based on an asset rating approach and the CEN standards; development of operational rating tools for harmonised approaches to certification of public buildings.

Several other actions have supported the creation of functional EPBD certification markets. They have focused on: testing the functionality of available tools developed directly by the Member States or through projects; providing feedback and insight on relevance of their use; investigating the requirements and response of the market to the new certification procedures which are being implemented; identifying solutions to overcome barriers and new directions and communicating this information to target groups; improving energy performance assessment and certification schemes by tests; supporting regional information and competence centres which provide information, tools and advice incorporating training, guidelines and QA procedures and the evaluation of customer quality requirements; investigating field benchmarking and market development for audit methods of air conditioning.

Other actions have supported market penetration of innovative building technologies and approaches to construction, supporting the outcomes of RTD, highly efficient buildings or building components, as well as intelligent metering. Typically, these actions may include inventories of market introduction barriers to the technological concept; documentation about specific practical solutions for this technology in different regions and climates; methods and approaches for improving market penetration (conferences, awareness raising, guidelines, etc.) with provision of practical information to building professionals. This may involve, for example, presentation of the state-of-the-art and lessons learned in existing buildings; creation of best practice guidelines to ensure the appropriate design and operation of buildings with advanced components or systems (PassivHaus buildings, double skinned facades, building integrated renewables, etc.) or the development of assessment methods and benchmarking figures for comparison of building performance.

Other actions have been strengthening knowledge awareness amongst building professionals. This involves targeted education and training; restructuring of the curriculum content and approach in higher education; training of professionals and auditors to meet the requirements of the energy performance certification market; as well as the continuous professional development of architects, engineers and other buildings professionals to attain standards beyond EPBD requirements. Specific ongoing activities include dedicated education and training projects to develop educational material and courses, electronic tools and dissemination material, whilst training activities also

form individual components of many other IEE buildings actions.

Finally, there are a few local actions at local level including voluntary rating of buildings in preparation for the fully implemented EPBD; voluntary adoption of energy auditing practices in commercial and municipal buildings; and adoption of energy plans for building stock at a community level.

Industrial excellence in energy

The industrial sector's share of EU energy consumption has decreased over the years, partly due to increasing demand in other sectors and partly due to reduced consumption in industries. The reduction in the sector has been due to a considerable improvement in energy-efficiency and to structural changes. However, although industry has made more rapid progress on energy efficiency than the other sectors, the potential savings remain high, in the order of 25 % in manufacturing industry according to the energy efficiency action plan. In the new EU Member States, industrial energy intensity is higher than in Western Europe and energy efficiency investments can pay back quickly.

In this context the IEE-2 programme will support actions:

- To increase the energy performance of industry, in particular SME's, thereby improving their reliability, competitiveness and reputation.
- To raise awareness among industrial decision-makers and have them consider energy as a profit centre (e.g. actions making industrial decision-makers commit to improving the energy performance of their company and communicating their achievements to their customers, suppliers and shareholders).
- To promote energy services, energy management schemes, procurement guidelines and training for industry (e.g. action enhancing the awareness, capabilities and skills of energy and utilities managers and maintenance personnel in industry).
- To develop well-targeted tools and information for industries to reduce their energy use (e.g. development and promotion of free user-friendly energy management tools customised for industry, including tools for competitively priced energy audits and for energy benchmarking).
- To help to improve energy conversion and increase the share of poly-generation in industry, including combined heat and power.

New projects should complement the 15 ongoing projects currently supported by the IEE-1 programme in the industry sector. These projects tackle energy efficiency potentials in industry in such a way as to address industrial actors in most EU countries.

While four of these projects promote poly-generation, including combined heat and power, the others aim to provide instruments for energy management, including auditing and benchmarking tools. The latter are generally targeted to specific sectors. The sectors covered so far include the food and drink industry, craft SME's, textile companies, plastics processors, wine producers, graphic media, and the ceramic industry. However, a few projects are also addressing opportunities for energy savings across different industry sectors, either through the use of more energy-efficient motors and drive systems, or through training and capacity building activities.

As a matter of illustration, the project "Training and Network of European Energy Managers" (EUREM.NET, 2007-2009) aims at implementing training and certification schemes for energy managers in 13 European countries. The schemes are developed in such a way as to be sustainable in the long term and are tested with 200 pilot trainees. Each trainee is developing a concrete project to improve his/her company's energy performance, resulting in savings of 400 MWh per year and per trainee. This initiative involves Chambers of Commerce and Industry and is targeted at enterprises from the industry & trade sector, particularly SME's. Results are shared with bodies in charge of standardization activities at CEN/CENELEC, in particular with Task Force 189 members who are mandated to elaborate an EU standard on energy managers.

Energy-efficient equipment

Consumers do not take into account to a sufficient degree the economic benefits of energy-efficient appliances and equipment. Consumers' buying decisions are, however, crucial to successful results. Efficiency should become a key element in the consumers' decisions. A comprehensive framework of directives and regulations to improve energy- efficiency in energy-using products is in force in Community law. These include the Eco-Design Directive[10], the Energy Star Regulation[11], the Labelling Directive[12] and its eight implementing Directives.

The IEE-2 programme will look for projects converting these policies into action with the aim:

- To increase the market share of energy-efficient products and systems (especially those representing the biggest energy savings potential).
- To foster gradual phasing-out of the less efficient products available on the market and accelerate replacement of old, less efficient appliances in use.
- To have buyers/salesmen consider energy labels and energy efficiency in general in their purchases/sales.
- To have energy-using products designed, manufactured, purchased, installed, used and disposed of in the most energy-intelligent way.

In support to EU legislation, priority will be given to actions communicating independent testing of products, aiming to explain, check and enforce proper energy labelling, or monitoring and forecasting market transformation. But the programme will also encourage voluntary approaches and codes of conduct: on the supplier side mainly with manufacturers,

10. 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.

11. Council Decision of 14 May 2001 concerning the conclusion on behalf of the European Community of the Agreement between the Government of the United States of America and the European Community on the coordination of energy-efficient labelling programmes for office equipment, Official Journal L 172 of 26.6.2001.

12. Directive 92/75/EC, OJ L 297, 13.10.1992, p. 16-19.

but also with wholesalers and/or retailers, where appropriate, and on the consumer side mainly with public authorities and big buyer groups. It will also favour actions making procurement practices more favourable to energy-efficient products, as well as communication campaigns relying on the EU labelling scheme and actions using Internet as a marketplace.

To contribute to change consumers' behaviour, the programme will finance projects to convince consumers to purchase the most efficient products adapted to their actual needs (promoting both efficiency and sufficiency), including provision of energy consumption data in the specialised press. Priority will also be given to actions to persuade end-users to reduce their energy use, e.g. through appropriate metering, informative billing, public recognition, etc.

Financial barriers will be tackled by projects constituting large buyers' groups, or exchanging information and best practices on tax incentives, rebates and accelerated depreciation rules for commercial and industrial equipment.

Finally, training will also be given high priority: training of sales personnel on energy labels and life-cycle cost principles, so that they can use them as a sales argument, and training of technicians responsible for installation and maintenance of energy-using products.

New projects must complement the 19 projects funded under this topic in IEE-1. These projects cover a wide range of products, technologies and markets. Market transformation actions on individual energy-efficient products are carried out for residential lighting, office and street lighting, IT servers, boilers, air conditioners, motor systems, pumps, distribution transformers and construction materials. In addition, some broader awareness raising actions cover different equipment and products, such as projects to boost successful voluntary programmes to the new Member States (e.g. GreenLight[13] and Motor Challenge), another project designing a homepage on energy-efficient residential appliances, projects dealing with residential and tertiary databases and monitoring activities on energy-efficient appliances, or again the establishment of a European smart metering alliance for the residential sector.

The ongoing IEE projects on energy-efficient equipment and products are not completed yet but have already produced: brochures, guidelines, training, press kits, articles, tools and databases, awards, compact fluorescent lamp campaigns and quality charter, voluntary commitments, benchmarks for IT servers, development of voluntary agreement on distribution transformers, voluntary label on construction materials and draft standard on street lighting, promotion of energy-efficient pumps, etc.

Energy use in transport

The Spring 2007 European Council stressed the necessity of an efficient, safe and sustainable European transport policy[14]. Transport plays a central role in the European economy and accounts for almost 20 % of total primary energy consumption in Europe. 98 % of the energy consumed in this sector is fossil fuel. As transport is also the fastest growing sector in terms of energy use[15], it is essential to tap the potential for energy-efficiency gains in this sector.

The IEE-2 programme will give priority to projects which promote, build on and/or implement the existing EU policy and legislative frameworks for energy efficiency and alternative fuels in transport, taking into account the suggestions made in the energy efficiency action plan. Projects should build on well-tested strategies and technologies and remove the market barriers to wider application thereof.

Priority will also be given to projects which do more than raise the awareness of individual citizens, householders and decision-makers but actually achieve changes in transport behaviour and modal choice, including persons and goods. Projects should deliver and apply existing knowledge in a convincing and motivating way to the relevant target groups and contribute to wider dissemination and use of well-proven strategies. They should help end-users to take informed decisions and increase public acceptance of more energy-efficient transport behaviour, alternative fuels and clean vehicles.

Priority will also be given to training professionals and officials, whose daily work has an impact on take-up of energy-efficient transport strategies and alternative fuels on the one hand and on the other, the knowledge and capacity of end-users to decide for and use modes of transport with lower energy consumption and/or alternative fuels will be built up.

Actions must relate to one or both of the following priorities:

Alternative fuels and clean vehicles, with actions aiming:

- To diversify energy sources used in transport.
- To stimulate demand for alternative fuels and clean vehicles.
- To promote greater use of biofuels in order to meet the targets set in the Biofuels Directive.
- To develop a market for clean vehicles through captive fleets[16] (e.g. promoting joint procurement).

Energy-efficient transport, with actions aiming:

- To encourage a shift of passengers and/or freight to less energy-intensive modes, especially in urban areas and over long distances.
- To reduce unnecessary demand for transport.
- To increase the energy efficiency of transport and promote co-modality.
- To transfer, apply and promote widely, well-proven best practice, strategies and technologies.
- To raise the awareness of different target groups of the impact of their mobility behaviour on energy efficiency and to motivate and achieve changes in behaviour.

13. http://www.eu-greenlight.org

14. Presidency conclusions of European Council of 8-9 March 2007 (7224/07)

15. According the European Environment Agency (EEA), between 1990 and 2003, passenger transport volumes in the EEA countries grew by 20 %. Air transport grew the most, 96 %, during this period. Overall, greenhouse gas emissions from transport increased by 34 % between 1990 and 2004. Source: "Transport and environment: on the way to a new common transport policy. TERM 2006: indicators tracking transport and environment in the European Union". EEA Report No 1/2007. http://www.eea.europa.eu.

16. A vehicle fleet is a coherent group of vehicles operated by a single operator.

As of January 2007, this latter priority is covered by 14 on-going projects. The organisations involved are mainly energy agencies, consultants and public authorities.

Three of these projects aim to reduce the demand for transport through a better integration of city development and transport planning. One project integrates mobility issues into existing urban development plans, one implements two successful approaches – corridor-based and area-based - for smoothing traffic flows and making areas better accessible for energy-efficient transport modes; whereas the third project exploits the potential of residential areas built to avoid travel.

Two additional projects promote a more energy-efficient driving style: one focusing on car, bus and truck drivers and the other addressing train drivers and railway staff. Training manuals are elaborated and trainees are recruited and educated through, respectively, a Europe-wide campaign and the direct involvement of railway operators.

Four projects encourage modal shift: two of them reaching out to employees and citizens as (potential) cyclists, one improving the cycling conditions through policy quality audits for regions and small cities, and the last one making tourist travel more energy-efficient by shifting modes away from private vehicles.

Two projects specifically address freight transport. One is aimed at the distribution of goods in urban areas and implements incentive schemes for regulated access with a preferential treatment given to energy-efficient vehicles. The other one makes the transport of goods more energy-efficient for various industrial sectors.

Finally, two projects are aimed at having existing local and regional energy agencies offer services in the mobility sector and one last project aims to change policies related to energy efficiency, transport and renewable fuels via a sophisticated participatory approach addressing youngsters.

Local initiatives

Actions at local and regional level, close to citizens, are essential to achieve the overall energy objectives of the European Union. This is to be done in the IEE-2 programme by fostering actions aimed at inducing a change in present behaviours, encouraging the use of efficient and renewable technologies and the adoption of energy-intelligent patterns by local end-users, in particular local authorities.

The programme will continue to foster development of regional/local public sustainable energy communities committed to increasing their energy performance and their share of renewable energy sources beyond European Union targets, where decision-makers lead by example and convince their citizens, companies and peers to follow suit.

In this respect, priority will be given to proposals with high visibility and strong replication potential, likely to generate interest at Europe-wide level, where a few front-running communities transfer their knowledge and experience to the large number of communities where energy issues are not yet being given high priority, in particular in less-favoured regions.

Priority will also go to proposals where local/regional governments play a clear leading role and where local stakeholders, including citizens, are closely associated; proposals stimulating energy-efficient behaviour on the part of citizens/enterprises and promoting development of a local market for energy services; and proposals resulting in practical action plans with clear, realistic and measurable targets, achievement of which is monitored and widely communicated in a transparent way.

In addition, the programme will continue providing support for the creation of new local and regional energy management agencies where these have not yet been established and where there is a clear commitment by the local authorities to support them in the long run.

Local and regional energy agencies support the transition to more sustainable energy systems. They spread management practices, provide information guidance, and offer a range of services based on specific local needs. They operate impartially on both energy demand and supply issues. Fifty-five new energy agencies have been set up so far with support of Intelligent Energy - Europe since 2004. They add up to about 200 agencies set up under SAVE II, the predecessor of the IEE programme.

Special initiatives

In addition to the energy efficiency priorities listed above, new special priorities have also been introduced which give more focus on specific cross-sector topics of political relevance. Especially noteworthy are the "intelligent energy education initiative" and the "energy services initiative".

INTELLIGENT ENERGY EDUCATION INITIATIVE

Education is an area in which Member States have exclusive competence. However, the Commission has a role in developing activities in this area that enable dissemination of existing information and programmes, and promoting best practice. A Europe-wide survey on the cost effectiveness of energy-saving initiatives in education organised by ManagEnergy[17] showed that 'doing' via hands-on or experimental work was deemed the most cost-effective approach. This included laboratory classes, energy efficiency measures at school, simple installation of renewable energy, energy audits and monitoring of energy consumption.

The intelligent energy education initiative will seek projects to contribute to development of energy education in primary, secondary and higher education by encouraging cooperation between MS, thus making young generations adopt intelligent energy behaviour and influence their wider social community via family and friends.

The focus in 2007 will be on secondary schools. Proposals will be expected to build on the seven on-going education projects and make the best use of existing didactic tools, in particular those developed with IEE support. One example is the 'KidsCorner' website developed with IEE support to collect information and tools related to education in several EU languages. The website contains games, competitions and other information aimed at younger people and their educators.

17. Education on energy – Teaching tomorrow's energy consumers. European Communities 2006. http://www.managenergy.net

ENERGY SERVICES INITIATIVE

The energy services initiative is conceived specifically to support effective implementation of the newly adopted Directive on energy end-use efficiency and energy services[18], with actions aimed:

- To provide background information for setting appropriate energy-saving targets.
- To support monitoring and evaluation of policies, programmes and projects.
- To contribute to developing and testing widely accepted measurement and verification methods for energy savings.
- To forecast progress in energy efficiency under different scenarios.
- To develop and promote tailor-made financial mechanisms for energy efficiency projects.
- To boost the market for energy service companies (ESCO).
- To pave the way for future energy efficiency policies and strategies.

This new priority will in particular strengthen the six on-going IEE projects related to monitoring and evaluation, as well as the 11 actions currently addressing financing mechanisms and incentives.

The six current projects addressing monitoring and evaluation consist of two projects monitoring energy efficiency indicators and measures across the whole of Europe; one project identifying the key success factors in energy efficiency policy; one project evaluating sustainable energy policy instruments in the context of large metropolitan areas; one project evaluating behaviour change policies and programmes; and finally one last recent project closely related to the aforementioned Directive and developing bottom-up impact evaluation methods for individual programmes and measures, as well as schemes for monitoring the overall impact of all measures implemented in one Member State.

As for the 11 projects related to financing mechanisms and incentives, they have various focuses:

Six of them focus on promoting various forms of financing sources. Among them, three aim at mobilising EU structural and cohesion funds for sustainable energy projects. Another project is promoting the use of private (family) financial resources through the concept of "prime projects". Another is working directly with the banking sector in order to identify the opportunities and promote the use of commercial lending. A more recent project establishes clearing houses in several New Member States with the purpose of offering various financing possibilities for sustainable energy projects in those countries.

Two other ongoing actions focus on local authorities, one encouraging them to use energy services, and the other creating and promoting procurement routines for sustainable energy products and services.

Two more projects are related directly to energy service companies, one promoting energy performance contracting and the other the creation of such companies for solar thermal projects in southern Europe.

Finally, one last on-going project is undertaking a comprehensive analysis of the existing and planned white certificate schemes in EU Member States in order to study the possibility and implications of a possible pan-European white certificate policy.

Conclusion

The IEE programme is the Community instrument to tackle non-technological barriers to the spread of efficient use of energy and greater use of new and renewable energy sources in Europe. It is entering a new area this year. The most visible aspect of this is probably its 70 % budget increase - a sign of the highest priority being given to intelligent energy issues at the EU political level - but it is also reflected in the new priorities and participation rules which have been described in this paper.

Seen against the predecessor programme, these new priorities and rules mark an evolution rather than a revolution. As part of this evolution, it is expected to facilitate entry of new players, in particular SME's. It is also expected that new entrants, together with the hundreds of organisations forming the existing programme's clientele, will submit high-quality suggestions to effectively contribute to the programme's objectives.

Although the principal focus of this paper has been on energy efficiency, the programme contains several other priorities related to renewable energy sources and even encourages submission of proposals addressing both supply and demand side issues as these are often closely interlinked.

Generally speaking all ideas are welcome and will be examined provided they fit with the programme priorities and clearly build on previous projects and experience. To this end, the Intelligent Energy Executive Agency, which has been implementing the Intelligent Energy Europe programme since 2005, has reinforced its communication activities on the programme, in particular as regards the ongoing and past projects. This paper only allowed a glance at some of these projects but more information is available on the programme web site[19], in particular fact sheets and links toward project web sites.

The IEE programme web site also gives users the possibility of being alerted in case of new developments (e.g. new calls for proposals) and of submitting ideas for improvements or new priorities. As said before, the programme runs from 2007 until 2013 but will have work programmes adopted every year to define the topics eligible for funding. While some continuity can be expected from one year to the other, evolution of topics is possible and in this respect all suggestions will be considered, in particular as regards the market replication projects which will be introduced for the first time in 2008.

It is everyone's responsibility to have the programme attract, support and communicate the best ideas which can put the EU on the path to becoming a low carbon energy economy,

18. Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC

19. IEE programme web site: http://ec.europa.eu/energy/intelligent/index_en.html

improve its security of supply and make a progressively more significant contribution to competitiveness.

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The overview of ongoing projects is extracted from the key sector reports produced by the Project Officers of the Intelligent Energy Executive Agency: Mesdames P. Cadima, K. Lichtenvort, A. Wilhelm and Messrs B. Decker, P. Enok, F. Mil-Homens, P. Naghten, and G. Sutherland. These reports are available on the IEE programme web site.