PART III. NATIONAL REPORTING GUIDELINES FOR CSD-14/15 THEMATIC AREAS

B. ENERGY

Government focal point: DG Environment
Responding ministry/office: DG Environment

The EU has taken many actions on energy efficiency and sustainable energy. In 2000, the Energy Efficiency Action Plan was prepared with the aim to realise the available economic potential for energy efficiency in line with the proposed target for reduced energy intensity of 1% per year above and beyond business-as-usual trends. A set of core instruments for implementing the action plan[20] has been agreed. Promotion of cogeneration was one of the short-term priority areas identified in the Action Plan. The purpose of the Cogeneration Directive[21] of 2001 is to create a framework for promotion and development of high efficiency cogeneration based on useful heat demand and primary energy savings.

The Buildings' Directive[22] (2002) is another key element of the EU energy efficiency strategy. Buildings account for 40% of the energy consumed in the union and research shows that more than 1/5 of this energy could be saved by applying tougher standards on buildings.

In June 2005, the European Commission adopted a green paper on energy efficiency proposing to reduce 2005 energy consumption by 20% by 2020. Moreover, a directive on energy end-use efficiency and energy services has been proposed[23]. It has the objective to increase end-use energy efficiency using a number of operational measures. In the field of renewable energies, the RES-E directive of 2001 is most important, as it promotes renewable energy sources for electricity generation.

Legislation on energy efficiency and energy for sustainable development is being implemented via various Community support programmes, such as the Intelligent Energy - Europe (2003-2006) that funds initiatives like the EU-wide Campaign for Sustainable Energy.

While there are a number of legislative initiatives and programmes on sustainable energy, two have been selected to be presented here. Information on all other policies can be accessed online via the hyperlinks provided in the overview table.

Energy is also being integrated in the Commission's development policies, with a strong focus on the major role energy can play in poverty alleviation and in achieving the Millennium Development Goals. This was further stimulated by the launch of the EU Energy Initiative for Poverty Eradication and Sustainable Development (EUEI) at WSSD [24] that has now become an important framework for policy development, coordination and partnerships between EU Member States, the European Commission and developing

[20] http://europa.eu.int/comm/energy/demand/overview/measures.htm
[21] Directive 2004/8/EC of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC
[22] Directive 2002/91/EC of 16 December 2002 on the energy performance of buildings
[23] Proposal for a Directive of the European Parliament and of the Council on energy end-use efficiency and energy services [COM(2003)453]
[24] COM (2000) 212 on The European Community's Development Policy, COM (2002) 408 on Energy Cooperation with Developing Countries, COM (2003) 829 on The World Summit for Sustainable Development – implementing our commitments and COM (2004) 711 on the future development of the EUEI and the establishment of an ACP-EU Energy Facility.

countries. The EUEI, and its achievements so far, are further described in the case study provided in this report.

Promotion of electricity from renewable energy sources (RES-E)

The development of renewable energy sources is a central aim of EU energy policy, reflecting the clear benefits that clean, sustainable and secure energy supplies will bring. The central aim of the RES-E directive[25] is the promotion of renewable energy sources for electricity generation.

Since the adoption of the RES-E directive, implementation of its provisions has progressed. A comprehensive EU regulatory framework is in place and Member States have adopted national targets for green electricity consumption and are working towards them. By creating national targets, the directive gives a quantitative framework within which each Member State can plan and implement the most appropriate measures. National indicative targets are included in the Accession Treaty for new Member States. With their accession the 22.1% target set initially for the 15 then EU Member States; for 2010 becomes 21% for the EU-25. In 2004, as required by the directive, the European Commission produced an assessment of Member States' progress[26] based on reports submitted by Member States. The report emphasises that more must be done for the production of electricity, heat, as well as biofuels for transport, from bioenergy. The Commission will therefore propose a Community action plan for energy from biomass by the end of 2005. To assist the development of this, the European Commission held a public consultation from February to March 2005, the results of which are available on their website[27].

In addition, the Commission has proposed several concrete actions to take renewable energies forward and to emphasise the deployment of renewable energy in its main financial instruments, the Structural and Cohesion funds. The development of renewable energy is also supported by other programmes such as ALTENER within Intelligent Energy – Europe and the Campaign for Sustainable Energy as well as ongoing community wide standardisation of technologies and products. This includes, amongst others, the development of standards for biodiesel and solar PV through the involvement of the European Standardisation Committee (CEN) and will also be reinforced by the proposed directive on eco-design of energy using products.

Lessons learned and good practice

Whilst policies and legislation are now in place at a European level for promoting the use of renewable energies and energy efficiency, such "top-down" approaches must be complemented by "bottom-up" actions if the ambitious EU renewable energy and energy efficiency targets are to be achieved. This implies the need for intelligent energy projects which "involve" and "engage" the local market actors in the regional and local authorities, as well as the utilities and sustainable energy technology suppliers in the cities, towns and rural communities across the EU.

The good projects of this type which have been supported under the SAVE, ALTENER and SYNERGIE programmes provide a framework within which key market actors can work together to improve their understanding of the non-technical barriers that need to be overcome, as well as to put in place new policies,

[25] Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity markets, October 2001.
[26] COM (2004) 366 final, Communication from the Commission to the Council and European Parliament 'The share of renewable energy in the EU', May 2004
[27] http://europa.eu.int/comm/energy/res/biomass_action_plan/doc/results_consultation_bap.pdf

regulations and local support schemes which will create a more favorable business environment for the suppliers of sustainable energy services.

In this context, the impacts of good projects can be measured at three levels,

(a) raising awareness

(b) changing local policies and attitudes

(c) changing the local regulations or making investments

Most projects can achieve impacts at the first level (a), but it takes time and substantially greater effort to achieve impacts (b) and (c).

Trends and emerging issues

Whilst national support schemes for renewable energy are now in place in most of the EU member states, there remain major issues to address at EU level in relation to trading of renewable electricity across national borders. In many Member States the administrative procedures which have to be implemented by end users remain a major market barrier. Similarly, whilst the leaders of electricity utilities state that they are committed to encouraging greater use of renewable energy, the experience which has been reported from demonstration projects as well as from ALTERNER[28] and SAVE[29] projects shows that the utility staff in regional and local offices do not always have the knowledge, experience and procedures needed to implement the visions of their leaders. Further capacity building actions are therefore needed.

Concerns about the overall security of energy supplies in the EU have led the European Parliament to demand that new policy and legislative frameworks be put in place across the EU for the supply of renewable heating and cooling, but new ideas are urgently needed how to do this for diverse energy sources. New ALTENER projects are therefore being supported, with a view to identifying and testing new policy and legal frameworks, which might provide a suitable basis for promoting renewable heating and cooling at an EU level.

Challenges and constraints

As the oil prices have risen more quickly in recent years, there has been increasing impatience with the rate of growth of renewable energy markets, despite year-on-year levels of market growth which have exceeded 35% in some of the renewable energy sectors. This impatience has led some politicians to question whether to seek alternative means to achieve greater security of their future energy supplies, even though it is far from clear whether or not such alternatives could come on stream more quickly than the renewable energies.

[28] ALTENER ended its five-year term at the end of 1997. It has been succeeded by ALTENER II, an initiative that extends activities in the renewable energies field and makes a major contribution to the Community Strategy and Action Plan outlined in the White Paper 'Energy for the Future: Renewable Sources of Energy'.

[29] It is the only Union-wide programme dedicated exclusively to promoting energy efficiency and encouraging energy-saving behaviour in industry, commerce and the domestic sector as well as in transport through policy measures, information, studies and pilot actions and the creation of local and regional energy management agencies.

This challenge can best be addressed in the short term by implementing major new initiatives to achieve greater energy efficiency at an EU level, since this will buy the time which is needed to permit new production facilities for renewable energy technologies to be expanded, with their associated benefits in terms of economies of scale and consequent acceleration of renewable energy markets. Typical examples of how this is being done with support from the European Commission include the new public awareness campaign for sustainable energy and the creation of more than 300 new energy Agencies across the EU, as well as the inclusion of sustainable energy by the EU regional and cohesion funds as a priority for investment, together with a wide range of regional and local capacity building and training projects supported under the SAVE and ALTENER programmes.

A key constraint in recent years has been the limited availability of co-financing for sustainable energy agencies and projects at local and regional levels, despite the evident benefits in the form of new high technology jobs and businesses.

Intelligent Energy – Europe (IEE)

Intelligent Energy – Europe[30] supports sustainable development in the energy context. Its objectives are:

- to provide the elements needed for the promotion of energy efficiency, the increased use or renewable energy sources and energy diversification;
- to develop means and instruments to monitor and evaluate the impact of measures adopted by the Community and Member States in these fields; and
- to promote efficient and intelligent patterns of energy production and consumption.

There are four specific fields in the programme:

- SAVE, which concerns the improvement of energy efficiency and rational use of energy.
- ALTENER, which promotes new and renewable energy sources.
- STEER, which concerns support relating to all energy aspects of transport.
- COOPENER, which concerns support for initiatives relating to the promotion of renewable energy sources and energy efficiency in developing countries.

The financial framework for the implementation of the programme 2003-2006 is 250 million euros[31]. In April 2005, a proposal was adopted for the continuation of the Intelligent Energy - Europe programme during 2007-2013, as part of the *Competitiveness and Innovation framework Programme (CIP).* The continued IEE programme will provide support in the same fields as the current IEE programme. However, as far as COOPENER is concerned, the continuation of the related activities is foreseen under the Community instruments for external co-operation, whose legal basis were proposed by the Commission in September 2004. The continued IEE will also introduce 'Replication Projects' throughout the SAVE, ALTENER and STEER parts of the programme which aim to help speed commercialisation of particularly innovative processes or products that are close to but not yet cost-competitive. The proposed IEE budget from 2007-2013 is 780 million euros, with approximately 315 million (40%) allocated to replication projects.

Lessons learned and good practice

The Intelligent Energy – Europe (IEE) programme has built on the earlier experience and lessons learned from the Altener, Save and Synergie programmes, with the aim not only of providing benefits within the EU, but also to tackle poverty in developing countries through COOPENER. Support under COOPENER has therefore been focused on projects falling within the context of the EU Energy Initiative for poverty eradication and sustainable development. The best projects of this type have been selected with a view to building local capacity amongst the local policy makers, regulators and other market actors in the poorest developing countries of sub-Saharan Africa, and of Central and Latin America.

Although work on the first COOPENER projects began only at the start of 2005, it is already clear that the governments and other key energy market actors in several of the poorest countries are keen to participate, and are pleased to benefit from the capacity building which is offered by experienced EU organisations.

[30] Decision 1230/2003/EC adopting a multiannual programme for action in the field of energy: 'Intelligent Energy – Europe' (2003-2006), 26 June 2003.
[31] http://europa.eu.int/comm/energy/intelligent/work_programme/doc/global_wp_%202003_2006_en_final.pdf

On-going COOPENER activities include the structuring and analysis of local energy data as a basis for future planning and policy making, as well as capacity building for energy policy development and planning with a view to strengthening the provision of sustainable energy services that aim to meet the needs of the poorest people. Networking between energy sector organisations in different African countries, and training of energy professionals, including energy planners and regulators is also being supported.

Trends and emerging issues

Within the EU there is considerable interest in the potential for a greater use of modern forms of biomass, and employing the technologies and experience which have been developed during recent years in the EU. This implies improvements to the entire biomass energy supply chain, and new policies governing the use of biomass for electricity production, heating and transport fuels.

Following the WSSD, there is a strong interest in working on projects with local policy makers in developing countries, with the aim of trying to ensure that energy is given greater priority in their ***Poverty Reduction Strategy Papers*** and other development strategy documents. This is expected to lead to more requests for donor financing of sustainable energy systems (possibly in combination with financing from other investors or lenders), which will provide energy services, mainly in the form of electricity for clean water supplies, health care, education, and communications, for local productive purposes as well as for cooking and heating.

Challenges and constraints

One of the most complicated aspects of the COOPENER programme is that of the co-financing of projects, which requires complex financial procedures between the various actors. A more flexible approach is being investigated for the implementation of future COOPENER projects.

In the developing countries, the longer term need is for a combination of investment capital and donor aid for sustainable electricity generation and for the secure supply and distribution of other electricity and other modern fuels for heating and cooling applications. It remains to be seen whether the on-going COOPENER projects can succeed in helping to create a more favorable policy, regulatory, and business environment, and thereby encourage the required investors and donors to step forward.

Additional relevant EU policies/initiatives

In July 2005, the European Commission has adopted a proposal on passenger car related taxes (COM (2005) 261 final) which introduces the use of fiscal incentives, as a tool to contribute to the achievement of the Community's strategic objective to reduce the carbon dioxide emissions from passenger cars.