

# Road map for renewable energy in Europe

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**PURPOSE:** to present a long term renewable energy road map with a view to building a more sustainable future.

**CONTENT:** climate change, increasing oil and fossil fuel dependence and rising energy prices: all these factors are rendering Europe increasingly vulnerable. The key to a sustainable future must involve renewable energies. As part of its Energy Policy for Europe, the European Commission has put forward a proposal for a long-term renewable energy roadmap. The proposal includes an overall binding 20% renewable energy target and a binding minimum target of 10% for transport biofuels for the EU by 2020, and a legislative pathway to bring renewable energies in the fields of electricity, heating and cooling and transport to the economic and political mainstream. Following a debate on these proposals in the Spring European Council, the Commission will bring forward legislative proposals in 2007 to start the implementation of this road map.

The proposal states that reaching the target will generate major greenhouse gas emissions savings, reduce annual fossil fuel consumption by over 250 Mtoe by 2020, of which approximately 200 Mtoe would have been imported, and spur new technologies and European industries. These benefits will come at an additional cost of between €10-18 billion per year, on average between 2005 and 2020, depending on energy prices. With a conducive regulatory framework, heavy investment has been made in the past in conventional energy sources, notably coal and nuclear energy. The time has now come to do the same for renewable energy sources. Pursuing an ambitious Energy Policy for Europe, including a more vigorous and ambitious promotion of renewable energy sources, will require changes in policy. It will entail action at all policy and decision making levels. This road map sets out a framework for such action.

## **Overall progress towards reaching the targets for renewable energy**

The 12% target for the contribution from renewables to overall EU energy consumption by 2010 is unlikely to be met. Based on current trends, the EU will not exceed 10% by 2010. This can only be considered a policy failure and a result of the inability or the unwillingness to back political declarations by political and economic incentives. Furthermore, the progress that has been achieved is largely due to efforts made by a relatively small number of Member States. This is not equitable and risks distorting the functioning of the internal market. Based on the targets for electricity and biofuels, heating would have to contribute 80 Mtoe by 2010 in order for the 12% overall renewable energy target to be met.

The European Union has made most progress in the electricity sector. Here, with policies and measures currently in place, the European Union will probably achieve a share of 19% in 2010. However, progress has been uneven across the EU, with Member States with a stable regulatory framework performing best.

In transport biofuels, there has been some progress, particularly since the adoption of the Directive, but not enough to reach the targets adopted. In the use of renewable energy sources for heating and cooling there has been hardly any progress since the 1990s.

On the basis of the experience gained, a number of **key principles** for the future renewable energy policy framework need to be established. With a view to significantly increasing the share of renewable energy sources in the EU's energy mix, the Commission considers that such a framework should:

- be based on long term mandatory targets and stability of the policy framework,
- include increased flexibility in target setting across sectors,

- be comprehensive, notably encompassing heating and cooling,
- provide for continued efforts to remove unwarranted barriers to renewable energies
- deployment,
- take into consideration environmental and social aspects,
- ensure cost-effectiveness of policies, and
- be compatible with the internal energy market.

In addition to the legislative measures outlined above and their application by Member States, the Commission will take the following action:

- propose strengthening the legal provisions to remove any unreasonable barrier to the integration of renewable energy sources in the EU energy system. Conditions for grid connections and extensions must be simplified. Some Member States have a panoply of permission procedures to be complied with in order to construct renewable energy systems. This must be reduced. Building codes normally ignore renewable energies. Red tape for innovative small and medium-sized enterprises must be eliminated. To this effect, the Commission will continue to stringently apply the Renewable Electricity Directive;
- propose legislation to address the barriers to growth in the use of renewable energies in the heating and cooling sector including administrative obstacles, inadequate distribution channels, inappropriate building codes and lack of market information;
- take further action to improve the functioning of the internal electricity market considering the development of renewable energies. Improved transparency, unbundling, higher interconnectors capacity, all improve the opportunity for new innovative renewable energy players to enter the market;
- re-examine, in 2007, the situation concerning Member States' support systems for renewable energies with a view to assessing their performance and the need to propose harmonising support schemes for renewables in the context of the EU internal electricity market. While national schemes for renewable energy in electricity may still be needed for a transitional period until the internal market is fully operational, harmonised support schemes should be the long term objective;
- promote a proposal for an incentive/support system for biofuels that, for instance, discourages the conversion of land with high biodiversity value for the purpose of cultivating biofuel feedstocks; discourages the use of bad systems for biofuel production; and encourages the use of second-generation production processes;
- continue to promote the use of renewable energy sources in public procurement for fostering clean energies, in particular with regard to transport;
- continue to pursue a balanced approach in ongoing free trade negotiations with ethanol produced countries/regions, respecting the interests of domestic producers and EU trading partners, within the context of rising demand for biofuels;
- continue to co-operate closely with grid authorities, European electricity regulators and renewable industry to enable a better integration of renewable energy sources into the power grid, with particular attention paid to the special requirements related to much larger deployment of off-shore wind energy, notably as regards cross-border grid connections. Opportunities provided by the TEN-E scheme should be examined and work on a European offshore super-grid should be initiated;
- exploit fully the possibilities offered by the Community's financial instruments – notably the Structural and Cohesion funds, the Rural Development funds, and the financial support made

available through the Community's international co-operation programmes to support the development of renewable energy sources in the EU and beyond;

- continue to promote the exchange of best practices on renewable energy sources, using different information and debate platforms, such as the existing Amsterdam Forum. In the context of the Commission initiative on Regions for Economic Change, the Commission will also establish networks of regions and cities to boost the sharing of best practices for sustainable energy use;
- continue to internalise external costs of conventional fossil energy (inter alia by means of energy taxation);
- reap all the opportunities offered for renewable energy by the result-oriented actions of the forthcoming European Strategic Energy Technology Plan (SET-Plan);
- promote the use of renewable energy sources in its external energy policies and favour opportunities for sustainable development in developing countries;
- fully implement the Biomass Action Plan adopted by the Commission in December 2005. Biomass offers great potential and major benefits in other Community policies;
- continue to use the Intelligent Energy for Europe programme to help bridge the gap between successful demonstration of innovative technologies and effective market entrance to achieve mass deployment and to boost large-scale investment across the EU in new and best performing technologies and to ensure that renewable energy is given the highest priority in the sustained efforts to maximise the use of the EU research and technology development programmes in support of zero- or low carbon energy technologies whilst developing synergies with Member States involved in similar development.

In addition to these Commission initiatives, it should be underlined that **Member States, regional and local authorities** have to make a significant contribution towards increasing the use of renewables. Currently, Member States use various policy tools to promote renewables, including feed-in tariffs, premium systems, green certificates, tax exemptions, obligations on fuel suppliers, public procurement policy and research technology and development. To make progress towards the proposed new targets, Member States will have to make further use of the range of policy instruments at their disposal, in compliance with the provisions of the EC Treaty.

Member States and/or local and regional authorities are in particular called upon to:

- ensure that authorisation procedures are simple, rapid and fair with clear guidelines for authorisation including as appropriate, appointing one-stop authorisation agencies responsible for coordinating administrative procedures related to renewable energy sources;
- improve pre-planning mechanisms whereby regions and municipalities are required to assign suitable locations for renewable energies;
- integrate renewable energies in regional and local plans.