

FACTSHEET 1

RENEWABLE ENERGY, NEW OPPORTUNITIES IN RURAL AREAS

Reliable sources of energy, needed to meet our demands for warmth, lighting and mechanical power, are central to the workings of our society and to our well-being. Renewable energy, which has been harnessed in Europe for thousands of years, is now playing a growing role in meeting these needs.

The dispersed nature of renewable energy sources, particularly biomass, hydropower, solar power and wind power, establishes them as a key asset in rural areas, where they are able to:

- Improve the economic situation,
- Create local skilled jobs and
- Help reduce environmental pressures

RENEWABLE ENERGY IN EUROPE

There are several technologies that are widely recognised as being proven and mature:

- Hydropower and biomass are used extensively in countries such as Sweden and Austria;
- Wind power makes a significant and growing contribution to electricity demand in Denmark;
- Solar water heaters are used in many parts of southern Europe.

Renewable energy accounts for approximately 6% of all energy consumed in the European Union.

THE ROLE OF RENEWABLE ENERGY IN THE EUROPEAN UNION (% OF ENERGY FROM RENEWABLE SOURCES)

Country	1990	1995
Sweden.....	24.7.....	25.4
Austria.....	22.1.....	24.3
Finland.....	18.9.....	21.3
Portugal.....	17.6.....	15.7
Greece.....	7.1.....	7.3
Denmark.....	6.3.....	7.3
France.....	6.4.....	7.1
Spain.....	6.7.....	5.7
Italy.....	5.3.....	5.5
Ireland.....	1.6.....	2.0
Germany.....	1.7.....	1.8
Luxembourg.....	1.3.....	1.4
Netherlands.....	1.3.....	1.4
Belgium.....	1.0.....	1.0
United Kingdom.....	0.5.....	0.7

POTENTIAL FOR RENEWABLE SOURCES OF ENERGY ACROSS EUROPE

Europe has vast untapped renewable energy resources which can make a significant contribution to meeting growing energy needs. The European Commission's Directorate for Energy (DG XVII) has produced scenarios which show renewable energy contributing between 10% and 15% of total primary energy supply by 2020 (accounting for the single largest indigenous source of primary energy production within the European Union).

Energy obtained from the wind, sun and biomass is expected to witness the most growth.

The Commission's White Paper "*Energy for the future: renewable sources of energy*" sets out a strategy to obtain 12% of energy in the EU from renewable sources by 2010.

ESTIMATED CONTRIBUTIONS FROM EACH SECTOR IN 2010

Type of Energy	1995	2010
Wind Power.....	2.5 GW.....	40 GW
Hydropower.....	92 GW.....	105 GW
Photovoltaics.....	0.03 GWp.....	3 GWp
Biomass.....	44.8 Mtep.....	135 Mtep
Geothermal.....	1.3 GWth.....	1 GW (electric)
Geothermal.....	1.3 GW.....	5 GWth (heat)
Solar thermal.....	6.5 million m ²	100 million m ²
Passive Solar.....	35 Mtep
Others.....	1 GW

Source: White Paper "*Energy for the future: renewable sources of energy*" European Commission, 1997

The investment needed to achieve this goal is projected to be ECU 165 billion. It is forecast to lead to an estimated 500,000 new jobs (net figure allowing for losses of jobs in other parts of the energy sector), save ECU 21 billion in fuel costs, reduce imported fuels by 17.4% and reduce CO² emissions by over 400 million tonnes per year by 2010.

JOBS

Each renewable energy technology has its own characteristics in terms of the quality and the quantity of employment generated. Biomass creates large numbers of jobs during the production and collection of the raw material. Photovoltaics and solar water heating systems create large numbers of installation, operation and maintenance jobs, as individual installations are generally small and dispersed. In general, the employment potential of a renewable energy scheme is typically several times greater than that for energy produced from fossil fuels or nuclear power, for example, including employment associated with extracting and transporting the fuels.

The European Wind Energy Association (EWEA) estimates that between 190,000 and 320,000 jobs can be created if the European Commission target of 40 GW of installed wind power capacity is reached by 2010. Already more than 30,000 jobs have been created in the wind power sector in Europe. The European Photovoltaic Industry Association (EPIA) estimates that achieving the 3 GW peak of capacity will create approximately 100,000 jobs by 2010 if the biomass potential is fully exploited. On top of this, an annual export business of ECU 17 billion is projected for 2010, which could create an additional 350,000 jobs.

It is quite clear that as renewable energy schemes are most suited to rural areas, a proactive move towards promoting these energy sources will lead to significant new rural employment opportunities.

RURAL BENEFITS

Renewable energy schemes can play an important role in regional development by injecting a valuable and sustainable source of income into rural areas. The Commission's White

Paper "Energy for the future: renewable sources of energy", stresses the importance of renewables in providing a focus for cohesion and development in less favoured regions, stating that: *"regional funds invested in renewable energy sources development could contribute to increased standards of living and income in less favoured, peripheral, island, remote or declining regions in different ways.*

- Favours the use of local resources and therefore indigenous development;
- Being usually labour intensive, they could contribute to the creation of local permanent jobs;
- Contributing to reduce the dependence on energy imports;
- Reinforcing energy supply for local communities, green tourism, preserved areas, etc;
- Contributing to develop the local R&TD and innovation potential, through the promotion of specific research innovation projects adapted to local needs."

The White Paper goes on to add that: *"New incentives should also be undertaken in the tourism sector as the great potential of renewable energies in this area is still largely unexplored."* Renewable energy is also likely to play an increased role in Europe following changes to the Common Agricultural Policy.

INVESTMENT AND PARTNERSHIP

Initiatives which have a good regional identity, involving rural enterprises working in partnership with companies from outside the region, can be particularly beneficial to a rural area. A renewable energy scheme is well suited to forming part of a sustainable development strategy for an area, providing leverage and in some cases a focus for other development initiatives. Many Local Agenda 21 groups are considering how to incorporate renewable energy into their plans for their local area.

Support and funding for renewable energy schemes are increasingly being made available at the regional, national, and EU level. The White Paper on renewables states that: *"With the future rural development policy, the Commission will encourage Member States and regions to give renewable energy projects a high priority within their programmes for rural areas."* Liberalisation of the electricity and gas sectors, which is opening up the market to competition, is also creating opportunities for renewable energy generators to sell energy directly to customers.

Harnessing solar energy, biomass and hydropower is already cost effective in many situations across Europe and in some areas renewables can be the cheapest form of energy. In many areas, however, it should be stressed that a renewable energy scheme may still not be a viable proposition at the present time. Nevertheless, the cost of renewable energy has fallen drastically over the last decade and is set to continue to do so in most parts of Europe. Electricity from wind power, for example, which was being developed for ECU 0.15/kWh in the UK in 1990, can now be developed for below ECU 0.04/kWh.

The political will to conserve energy and develop renewable energy is growing, in part due to concerns over global warming. In its 1996 Energy Policy White Paper, *"An Energy Policy for the European Union"*, the European Commission stated that: *"Given that renewable energy suppliers have few hidden costs (they produce little or no pollution) and are in many cases readily*

available, an increased share of renewables in the Community's energy balance would make a contribution to both its security of supply and environmental protection."

