

Renewable heating and cooling

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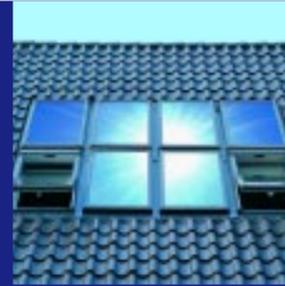
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The European trade associations of the **Renewable Heating and Cooling Industry**, in agreement with leading environmental NGOs, call the EU and its member states to introduce as soon as possible strong and coherent policies to promote the use of renewable energy sources for heating and cooling, in line with the overall growth targets of renewable energy sources (RES) in Europe.

Heat is the largest energy market in Europe, larger than electricity and transport. Over 40% of the EU's primary energy consumption is used for heating or cooling in buildings, for domestic hot water supply, for industrial process heat and for heat in the service sector. **The majority of heat is currently produced from imported and polluting fossil fuels** or from electricity largely generated by fossil fuels or nuclear power. **The energy consumption for cooling & air conditioning is dramatically increasing.** For the first time in history, the peak electricity demand in several countries is no longer in winter, but in summer.

Renewable heating and cooling technologies (solar thermal, biomass, geothermal) can replace significant amounts of fossil fuels and electricity. A large part of the buildings in Europe could cover up to 100% of their energy demand for heating by combining biomass, solar thermal and/or geothermal energy. **Heating and cooling are necessary elements of any comprehensive strategy** to develop renewables and to achieve sustainability in the energy sector. Renewable heating and cooling can significantly contribute to:

- Security of energy supply in the EU
- Reducing CO₂ emissions
- Reducing emissions that cause urban pollution
- Creating employment and wealth at a decentralised level

The European Commission's **White Paper of 1997**¹ set for 2010 a target of 12% RES contribution to the EU's gross inland energy consumption. Currently, there is EU legislation in place to promote renewable energy in the electricity (RES-E) and transport (RES-T) sectors.

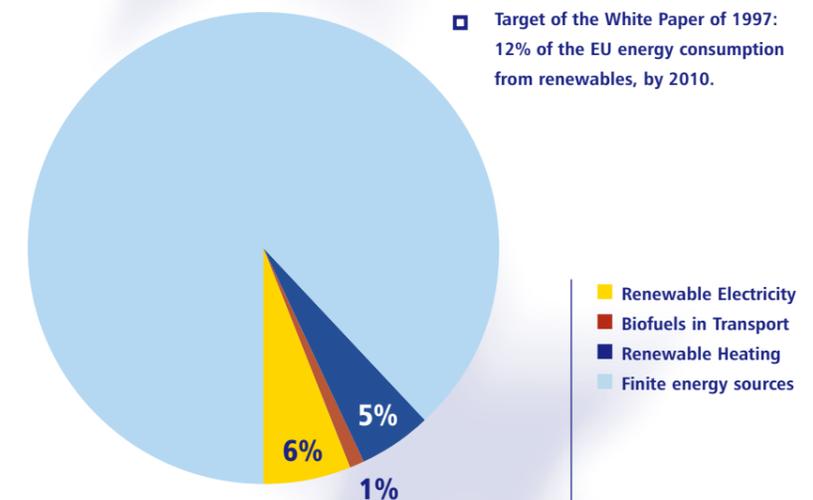
The EU **Renewable Electricity Directive**² sets specific regulations as well as specific RES-E indicative targets for each EU member state. These targets sum up to roughly 6% of the EU's gross energy consumption by 2010. The **EU Biofuels Directive**³ addresses renewables for the transport sector and sets indicative targets for each member state by 2010. These targets sum up to roughly 1% of the EU's gross energy consumption.

As seen in the diagram, 5% is missing, corresponding to circa 80 Mtoe⁴. **This additional 5% can come only from renewable heating and cooling (RES-H).** Once higher targets are set for 2020, the absolute amount of RES-H necessary will increase accordingly.

However, **renewable heating and cooling has received too little political attention so far.** At EU level and in most EU Member States, there are no specific growth targets for RES-H and coherent support policies focused on RES-H are still to come.

The recent **EC Directive on the Energy Performance of Buildings**⁵ is a very positive step to reduce energy consumption, but it **will not have a strong impact on the use of renewable heating and cooling during the next decade.** Its market-oriented approach will mainly promote the use of energy efficiency measures because they are in most cases more cost effective on the short term. However, sustainability in the heating and cooling sector cannot be achieved only by reducing energy consumption. It is also necessary to switch the production of heating and cooling to renewable energy sources.

RES-H technologies have a substantial potential for growth that goes clearly beyond the 5% of the EU's gross energy consumption. Also **the potential for economies of scale is large.** Therefore, promoting RES-H technologies today will benefit our society even more tomorrow, by creating the conditions for substantial cost reductions. Currently, RES-H sources are used very successfully in a few EU Member States. **Coherent targets and policies at EU level and in each Member State are important** to stimulate growth in the countries lagging behind and achieve more quickly the economies of scale possible at European level.



Therefore, we call for strong and coherent policies to promote renewable heating and cooling sources. These should include:

- **Specific targets for renewable heating and cooling at European level and in the Member States.** The national targets should be compatible with the overall EU targets on renewable energies. The European Commission should monitor the progress towards such targets in a similar way as it monitors those set in the EC Renewable Electricity Directive and in the EC Biofuels Directive.
- **Financial incentives, regulations and other market stimulation tools** strong enough to achieve the RES-H targets at European and national level. Within a common framework for renewable heating in general, these policies should consider the specific opportunities and barriers to growth of the individual RES-H technologies
- **Increased focus on renewable heating and cooling (long term heat storage, solar and biomass assisted cooling) in the R&D programs** at European and national level, including substantial demonstration projects for renewable cooling
- **A high level discussion should be launched** with all the stakeholders to define which elements of these policies should be tackled at national or regional level and which ones can be better managed at European level

1- Energy for the Future: Renewable Sources of Energy. White Paper for a Community Strategy and Action Plan, COM(97)599 final, 26/11/1997.

2- Directive EC/2001/77 of the European Parliament and the European Council, on the promotion of electricity produced from renewable energy sources in the internal electricity market, OJC L283/33.

3- Directive EC/2003/30 of the European Parliament and the European Council, on the promotion of the use of biofuels or other renewable fuels for transport, OJC L123/42.

4- Data elaborated from: "European Energy and Transport - Trends to 2030", European Commission, DG TREN, January 2003.

5- Directive EC/2002/91 of the European Parliament and the European Council on the energy performance of buildings.