



Heating and cooling markets: renewables and energy efficiency hand in hand

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EREC - European Renewable Energy Council

Umbrella organisation representing all RES sectors:

- ✓ **AEBIOM** European Biomass Association
- ✓ **EGEC** European Geothermal Energy Council
- ✓ **EPIA** European Photovoltaic Industry Association
- ✓ **ESHA** European Small Hydropower Association
- ✓ **ESTIF** European Solar Thermal Industry Federation
- ✓ **EUBIA** European Biomass Industry Association
- ✓ **EWEA** European Wind Energy Association
- ✓ **EUREC Agency** European Renewable
Energy Research Centres Agency

Representation of European RES industry, trade & research



EREC – activities

- To act as a forum for exchange of information and discussion on issues related to RES
- To provide information and consultancy on renewable energies for the political decision makers on local, regional, national and international level
- Information dissemination on RES issues (organisation of conferences, workshops, publications, etc.)
- To promote European RES equipment, products and services on world markets



The driving forces for a renewable energy policy

- **Security of supply** - independence from energy imports
- **Protection of environment** – including the necessity to reduce greenhouse gas emissions
- **Regional and local development**
- **Industrial development**
- **Employment**



RES policy framework

RES White Paper (1997)

↳ To double the share of renewable energy from 6% to 12% of gross energy consumption in Europe (EU-15) by 2010

Green Paper on Security of Energy Supply (2000)

RES Electricity Directive (2001)

↳ To establish a framework to increase the share of renewables electricity from 14% to 22% of gross electricity consumption by 2010

Directive on liquid biofuels (2003)

↳ To achieve a share of 5.75 % of biofuels for transport in the total amount of fuels in Europe by 2010

Biomass Action Plan (2005)

Green Paper "A European Strategy for Sustainable, Competitive and Secure Energy" (2006)



Renewable energy today

- About 15% of all EU electricity supply is generated by renewable energy sources
- About 10% of heat demand is supplied by renewable energy sources
- About 1% of transport fuel demand by renewable energy sources



Renewable energy targets 2010

- 22 % of all EU electricity supply is generated by renewable energy sources
- 16 % of heat demand is supplied by renewable energy sources
- 5,75 % of transport fuel demand by renewable energy sources

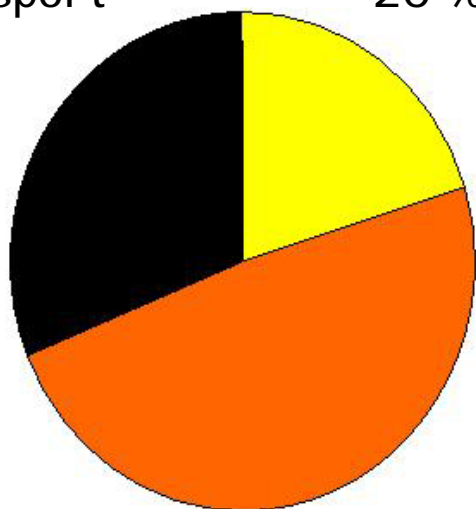


The heating sector - a neglected giant

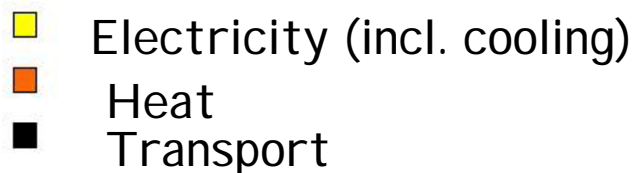
Final energy consumption by sector

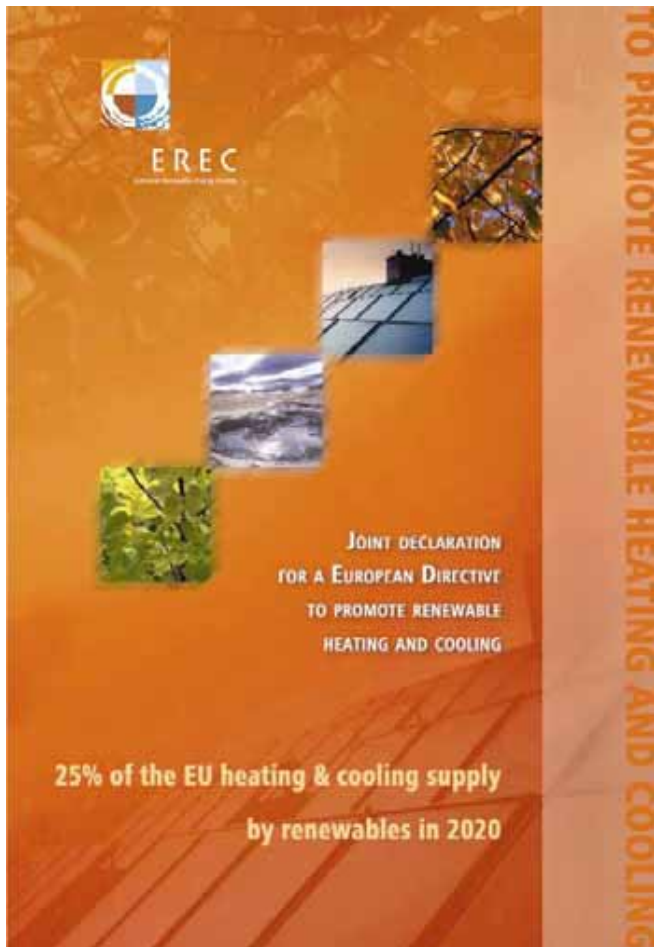
31 % Transport

20 % Electricity (incl. cooling)



49 % Heat





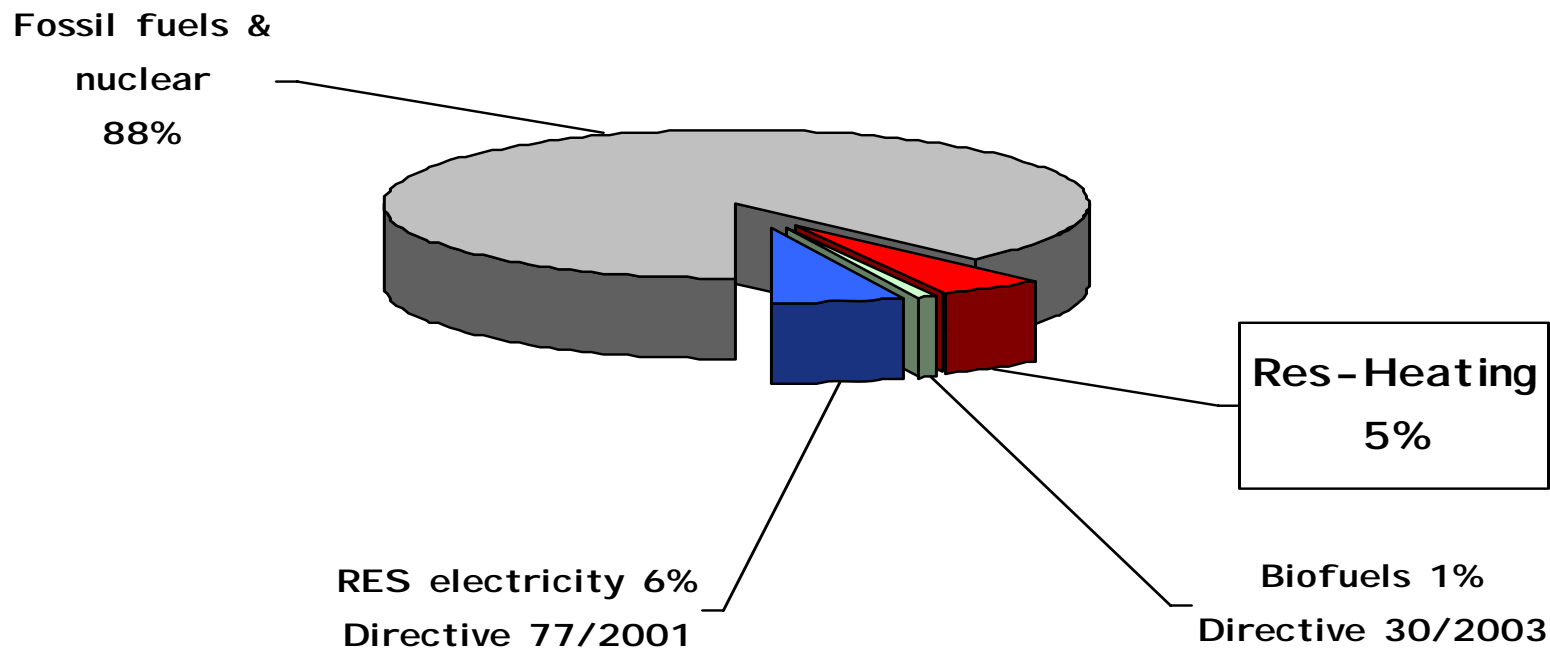
Joint Declaration For a European Directive

To promote
RES heating &
cooling, initiated
by EREC and its
members in 2005



25% of EU heating and cooling by 2020

Decisive role of RES-H to reach the EU 12 % target





Why Action at EU Level?

- Needed to reach EU renewables targets
- Missing element in the EU regulatory framework:

RES-E, Biofuels.....RES-H

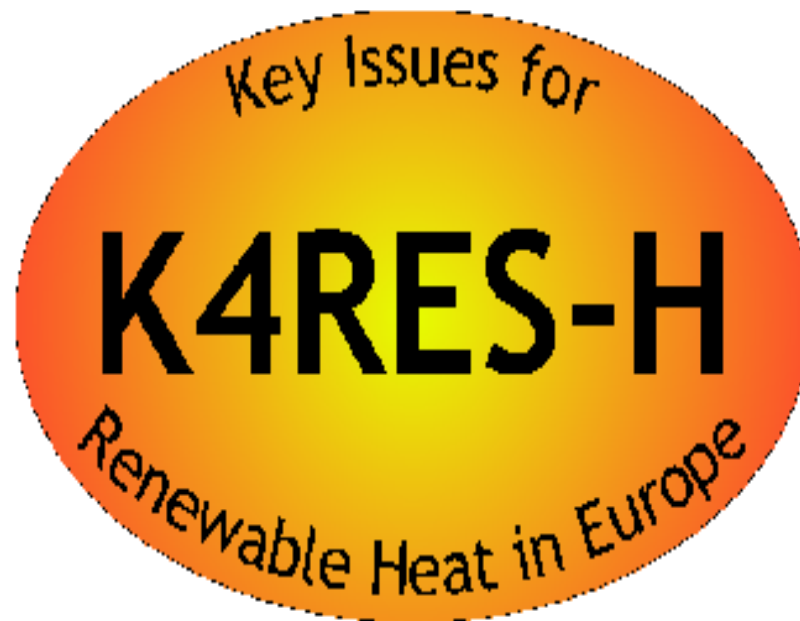
- Buildings Directive: too unspecific, too slow
- Uneven growth among EU-Member States



K4RES-H Project

5 Key Issues for RES-H:

1. Verifiable Targets for RES-H: Market monitoring, statistics and methods for target setting
2. Quantifying the energy delivery of individual RES-H installations: Methods for measurement and calculation
3. Regulations: Best practice to promote RES-H, identification of regulations hampering RES-H usage
4. Financial Incentives: Best practice to promote RES-H
5. Innovative RES-H applications: Issues specific to upcoming RES-H technologies



Duration of the project: 30 months (1st January 2005 – 31st June 2007)

Partners: AEBI OM, BEA, EC-JRC, EGEC, EREC, ESTIF, Energie2000, IDEA, WIP Renewable Energies



WP 1 Project Co-ordination & management (EREC)

- Co-ordination of work
- Project meetings
- Reporting etc.



WP 2 TECHNOLOGY MARKETING CAMPAIGN (EREC)

1. Development of corporate identity
2. Co-ordination of sectoral activities

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SECTORIAL APPROACH				
WP3 PV (EPIA/ADEME) <u>Technologies selected</u> 1. Thin-film technology 2. Hybrid & mini grid systems 3. Support schemes for PV	WP4 SHP (ESHA/ADEME) <u>Technologies selected</u> 1. Application of IHA sustainability protocol to SHP; 2. Sustainable hydropower technologies	WP 5 Biomass (AEBIOM/EUBIA/ADEME) <u>Technologies selected</u> 1. Pellets for individual heating systems 2. Use of biomass waste 3. Collection of wood residues in forests 4. CHP at small scale 5. Bioethanol production/use	WP 6 Geothermal (EGEC/ADEME) <u>Technologies selected</u> Electricity from medium-to-low-temperature (EGS), Other geothermal applications (agriculture snow melting/, desalination/water treatment Shallow geothermal heating and cooling systems (GHP)	WP 7 Solar thermal (ESTIF) <u>Technologies</u> Solar thermal cooling
Technology promotion (Publications, Technology transfer workshops, sectorial promotion)				

GEOGRAPHICAL APPROACH
WP 8: New Member States (EC Bratislava/EREC) Slovenia, Hungary, Poland, Baltic States, Slovakia, Czech Republic
WP 9: European Islands (NTUA/GAIA/EREC) Corsica (France), Canary Islands (Spain) Dodecanese (Greece)
WP 10: Actions outside the EU (EREC/EWEA/EPIA) Brazil, China, Mexico, Mediterranean area

3. Integration of sectoral findings
 - 1) Website
 - 2) Catalogue of best-practice
 - 3) Technological roadmap for RES up to 2020
4. Cross-sectoral promotion & dissemination



WP 11: Closing conference (EREC / ADEME)

Duration of the project: 24 months (1st June 2006 – 31st May 2008)
 Partners of the project: EREC, ESHA, AEBIOM, EUBIA, EWEA, ESTIF, EGEC, EPIA, EC Bratislava, NTUA, GAIA, ADEME



Renewable Energy House - Key facts

- Headquarters for the European renewable energy sector
- Ambitious energy concept for renovation of a 120 year old monument protected building
- 2.000 m² of modern office building hosting currently 50 staff from 15 different countries
- Prestigious inauguration of the Renewable Energy House on 22nd March 2006
- More than 4.000 visitors in less than 7 months





Ambitious energy concept integrating renewable energy and energy efficiency measures

- Insulation of roof and façade
- Double glazing
- High efficiency T5 fluorescent lamps
- Ventilation with heat recovery
- 100 % RES heating and cooling supply from RES:
 - 80 kW pellets boiler
 - 60 m² solar thermal collectors
 - 4 geothermal ground coupled heat pump with vertical borehole heat exchangers (4 x 115 m deep)
- Electricity production with PV (modules, semi-transparent, thin film)





Further information

European Renewable
Energy
Policy conference
29-31 January 2007
Brussels

www.erec-renewables.org

Thanks for your attention!

EREC
European Renewable Energy Council

Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

Security of Supply,
Environmental Protection,
Competitiveness

2007 European Renewable
Energy Policy Conference

First Announcement

Brussels 29-31 January 2007

with the support of
Intelligent Energy Europe