

bioenergy – for a greener future

“It will be a great challenge for our consortium to define and manage joint work packages in the field of bioenergy research.”

Perfect Vision Graphics

The European strategy for renewable energy sources identifies bioenergy as the most important renewable energy source for the future – a source of cleaner, more secure and sustainable power for Europe. Bioenergy is a highly diverse area: crops are converted to biofuels for transport; landfill sites are tapped for biogas to heat towns; and forestry residues are used to produce electricity. As national programmes fund 90% of bioenergy research in Europe, coordinating them will improve outcomes. The ERA-NET BIOENERGY networks national bioenergy research programmes to improve cost-effectiveness and ensure the maximum research impacts for this vital energy sector.

Promoting renewable energy sources is a key element in the European Union's energy strategy which aims to substitute 12% of Europe's total energy consumption with energy from renewable sources by 2010. In addition, the need to reduce greenhouse gas emissions and to diversify Europe's energy sources away from over reliance on imported energy and fossil fuels are policies that are supported by the wider implementation of renewable energy sources. These policies are driving a growing research effort, at European, national and regional levels, into improving both the performance and cost-effectiveness of renewable energy sources.

Bioenergy – promising and flexible

In contrast to other renewable energy sources, bioenergy is a highly diversified resource. It can produce biofuels for the transport sector by fermenting sugar beet crops to bio-ethanol; landfill gases are methanised to produce biogas; and oil from rapeseed crops is converted by transesterification to biodiesel for transport. Biomass is co-fired in existing coal-fired power plants to produce power and replace coal. This diversity and flexibility gives strategic importance to bioenergy – as well as supplying heat and electricity, it can also

provide environmentally friendly alternatives to the fossil transport fuels that contribute so much to the growth of greenhouse gas emissions. And this is not all: each 1% substitution of conventional energy sources by bioenergy will create between 45 000 and 75 000 new jobs – most of these in the less-developed regions of Europe – so bioenergy implementation has significant positive impacts on both employment and cohesion. In addition, innovative, European bioenergy technologies are highly exportable for trade and aid.

Pulling diversity together

Driven by the potential benefits of bioenergy, and guided by the renewable energy targets, there are many national and regional bioenergy research programmes running in Europe – spending €220 million in 2001 alone. A major part of this investment comes from the six Member States which form the ERA-NET BIOENERGY – a network of national government agencies and ministries responsible for coordinating and funding national research efforts into bioenergy. The goal of this network is to strengthen national bioenergy research programmes through enhancing cooperation and coordination between the national agencies. Through collaboration, the individual national programmes will produce higher-quality results, while through coordination, they will seek to complement each other, avoiding duplication.



Coordination Action ERA-NET BIOENERGY



Full title:
ERA-NET BIOENERGY

Research field:
Renewable energy sources

Coordinator:
The Netherlands: SenterNovem

Partners:

- Austria: Federal Ministry of Transport, Innovation and Technology
- Austria: The Industrial Research Promotion Fund
- Austria: Energie Verwertungs Agentur
- Finland: National Technology Agency of Finland, TEKES
- Germany: Fachagentur Nachwachsende Rohstoffe and Federal Ministry of Consumer Protection, Food and Agriculture
- The Netherlands: Ministry of Economic Affairs
- Sweden: Swedish Energy Agency
- United Kingdom: Department of Trade and Industry, and Engineering and Physical Sciences Research Council

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Duration:
50 months

EC funding:
€2 652 000

Project reference:
CA-515738-ERA-NET-BIOENERGY

“ *Biomass and bioenergy have a great potential in our sustainable development for both new and innovative products and energy supply.* ”

To reach these goals the network is pursuing four lines of activity:

- ERA-NET BIOENERGY is establishing structures for the systematic exchange of information and best practice on programme management and evaluation procedures – aligning programme management practices to facilitate cooperative bioenergy projects.
- Identifying common strategic issues: analysing existing research areas and topics that could form the basis for integrated programmes and projects, and identifying upfront any administrative and legal obstacles to implementation.
- Undertaking joint activities at the management level, such as multinational evaluation procedures and common programme monitoring. These activities build the common tool kits needed to facilitate cooperation and are complemented by personnel exchanges – aimed at building networks between national programme managers.
- Implementing joint research activities, for example, pilots of joint work programmes linking national research, is not only an expected outcome of earlier activities but is also intended to give practical experience to feed back into building a strategic research approach to bioenergy. Further, these joint activities are chosen to demonstrate cost-efficiency gains of 5% per year and time-to-market reductions for bioenergy technologies of 30%.

The long-term goal of ERA-NET Bioenergy is a lasting governance structure for cooperation on bioenergy research between national agencies that will continue beyond the formal end of ERA-NET BIOENERGY. This is important because, despite the large national budgets devoted to bioenergy research, the take-up of bioenergy sources is behind schedule. National research programmes account for 90% of funding in the European Union for bioenergy research. So seeking integration and synergies between them will allow the partners to leverage greater impacts. In addition, the practical focus of the network will help real implementations of bioenergy resources able to take Europe forward towards a cleaner and more secure energy infrastructure, thus preserving valuable fossil resources for future generations.