- QUESTIONNAIRE on the research/innovation programme of European Union Member States
- First stage (2004): Member States on the 1st January 2004
- Objective: Identification of complementarities and barriers for collaboration

- Member State

Member State
AUSTRIA

- Generalities about the General Framework Programme / Agency responsible for initiating, steering and financing Multiproject programmes[1]:

Complete name
"Energysystems of Tomorrow", Austrian Ministry of Transport, Innovation and Technology
Short name
EdZ ("Energiesysteme der Zukunft")
Web page address – in national language
http://www.energiesystemederzukunft.at/
Web page address – in English
http://www.energiesystemederzukunft.at/english.htm
Duration of the Programme
Planned for > 5 years
Global objective of the programme
The goal of the "Energy Systems of Tomorrow" Program is to develop technologies and concepts for such an energy system – based on the use of renewable energy sources, energy efficient and flexible – which will be able to meet our energy needs over the long term. It seeks to generate decisive impulses through a broad range of technology-based activities and accompanying measures, while at the same time creating new opportunities for the Austrian economy. Building upon Austrian strong points in the areas of research and technological development (solar energy, biomass, etc.), a significant contribution can be made to the attainment and defence of technological leadership.
Structure / Organisation / Core activities (priority areas etc.)

[1] In case there is not a General Framework Programme but an Agency responsible for initiating, steering and financing Multiproject programmes

Initiate innovation

The "Energy Systems of Tomorrow" subprogram focuses on research and development questions pertaining to renewable energy sources and energy efficiency, paying special attention to aspects of an efficient overall system. Crucial to this is the exploration of innovations on the following three levels:

- Structural innovations: changes in structure and systems, system behaviour, basic conditions
- Social innovations: changes in user behaviour dependent on knowledge, attitudes and lifestyle
- Technological innovations: developments in key areas of the entire spectrum from primary energy sources to energy services

An important quality criterion applicable to all projects to be financed is their potential to make significant contributions to an intelligent overall system solution.

Pilot and demonstration projects

During the next few years there will be a number of calls for proposals that will progress successively. These will be supported by diverse accompanying measures to foster networking of the participating players and to facilitate implementation. The outcome will be the realization of specific pilot and demonstration projects based on fundamental research, concepts and technological developments.

The subprogram is particularly concerned with the exemplary realization of model projects that have a bearing on the overall system. More specifically, this means the implementation of technologies and concepts that are important elements of an energy system and thereby have great potential as multipliers. Thus projects will be especially sought out that, on the basis of an appropriate overall strategy, can be further developed into demonstration and exhibition projects within a time frame of about five years. To the degree possible, an attempt will also be made to show the interrelation and the feasibility of implementation of the innovative results of the subprogram in exemplary demonstration regions (In the context of the subprogram the term "region" refers to the local aspect - residential area, town district, industrial park, municipality, etc. - and is not limited to the common usage of the term region, e.g. EU,…). From the very beginning, therefore, great attention will be paid to the establishment of partnerships and networks with innovative players and regions.

In addition, in its respective subject areas the "Energy Systems of Tomorrow" subprogram will support the integration of Austrian players into international activities such as the EU research programme and the activities of the International Energy Agency.

Focussing / project types

In order to achieve the ambitious goals of the sustainable development impulse program, there needs to be a clear focus regarding content, on the one hand, but depending on the type of project, it will also be possible to proceed on different levels. Thus in the subprogram, projects will be supported in the categories of "fundamental research/studies", "concepts", "fundamental research related to economics" and "technology and component development". In addition to the financing of projects, synergies will be taken advantage of during project definition and assistance in implementation and know-how transfer will be made available.

- Sections / Programmes related to Distributed Generation, DER and Renewable Energy

Name of the area
Energysystems, Integration of Renewable Energy (Energiesystemfragen, Integration von erneuerbaren Energieträgern)
Web page address – in national language
http://www.energiesystemederzukunft.at/ausschreibung/energiesystem.htm
Web page address – in English
not available
Objectives of the section
Liberalisation Distributed Generation Barriers and Challenges at the grid interconnection of renewable energy sources Synergies
Research Priorities
Liberalisation of grid connected energy How does the rules of the market under the newly introduced liberalisation influence the structure of the market? What is the meaning of concentration, separation of production and grid-issues, outsourcing of different fields, specialisation of market segments in an energy system of tomorrow? In which way will the new frame work influence the construction of new power plants but also the further planning and operation of the electricity and gas grids? Distributed Generation: Innovative projects will be financed, which deal with the specific requirements concerning interaction of the generating units of a distributed generation (grid connected technologies only), most important of them: electricity. Research should be made - for example - concerning „how many distributed units can be pooled to act as one virtuell power plant, for to ease the energy management for the utilities. Barriers and chances when connecting new renewable energy sources (for electricity, heating and gas) with existing grid structures. How does the behaviour of the grid system change because of a) the influence of the deregulation

b) the integration of distributed renewable energy sources

What are the requirements on the grid structures of the future, facing new production structures and integration of distributed (partly fluctuating) renewable energy sources.

Will it be necessary to increase the generation units for reserve power because of the increased production out of renewable energy sources? (fluctuating energy)

Could this lead to problems of controlling the grid? How far can this be solved by IT?

How far can distributed generation by renewable energy improve the system behaviour?

In which way influences the characteristic of renewable energy the planning of the capacities?

Does the value of new decentralised units depend on its location? What is the influence concerning security of supply?

Which interaction and synergies exist between the use of new instruments (flexible mechanism, emission-certificated,...), the decentralised use of renewable energies as well as (high) efficient technologies and the local development of sustainable energy systems (concerning the national ambition to be leading in specific niches of the technology)

What is the influence of the changed frame conditions? Where are we facing barriers which strategies to overcome are needed?

Budget
budgets will be negotiated annualy

- Administrative and financial issues

Institution responsible for the Programme
Austrian Ministry for Transport Innovation and Technology
Web page address – in national language
http://www.bmvit.gv.at/sixcms/detail.php/template/i/_e1/3/_e2/2/_e3/1000/_relid/4861/_relid2/1674/_id/1680
Web page address – in English
http://www.energiesystemederzukunft.at/english.htm
Institution responsible for the Management of the Programme
Austrian Energy Agency (Energieverwertungsagentur)
Contact Person
DI Andreas Indinger, (indinger@eva.ac.at)

Web page address – in national language
http://www.energiesystemederzukunft.at/
Web page address – in English
http://www.energiesystemederzukunft.at/english.htm
Cost models and type of participants
Various financing schemes – up to 100 % of total cost
Call

- Type of financed projects / Programme implementation instruments

Basic Research

Concepts

Applied Research – in Cooperation with industry

Economy based basic research activities

Development of components and Technology

- Cooperation with other Member States and Regions and third countries

Not obligatory but possible

- Other interesting Programmes

Not available

- Other interesting links