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- **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
Finland

- **Generalities about the General Framework Programme / Agency responsible for initiating, steering and financing Multiproject programmes¹:**

Complete name
Technology Agency of Finland
Short name
Tekes
Web page address – in national language
www.tekes.fi
Web page address – in English
www.tekes.fi/eng
Duration of the Programme
Not applicable
Global objective of the programme / Agency
<p>Teques, the National Technology Agency is the main public financing and expert organisation for research and technological development in Finland. Teques finances industrial R&D projects as well as projects in research institutes. Teques especially promotes innovative, risk-intensive projects.</p> <p>The primary objective of Teques is to promote the competitiveness of Finnish industry and the service sector by assisting in the creation of world-class technology and technological know-how. Specifically, Teques' activities aim to diversify production structures, increase production and exports, and create a foundation for employment and social wellbeing.</p> <p>Teques funds come from the state budget via the Ministry of Trade and Industry. Teques has a budget of 400 million euros, a source of funding for 2000 projects annually.</p> <p>Selective project funding is the basis of Teques operations. Funding and expert services are channelled to technological R&D projects run by companies, research institutes, and universities. Teques assists companies in their search for ideas, the finalisation of business plans, and their quest to conduct meaningful</p>

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

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and valuable research. Tekes adopts an open and proactive approach towards companies' technology planning. Project proposals are evaluated individually.

Tekes' technology strategy is based on a three-dimensional approach: studying of industrial clusters, certain cross-technological technologies and important ways of working. Global trends and the needs in clusters have shown the way, and cross-technological effects and opportunities have also been taken into consideration.

Energy technology funding

The main focus in energy investments has been on the energy technology cluster. Special attention has been paid to applications that reflect the challenges of mitigating climate change in the Finnish market, while utilising the market opportunities brought about by climate change.

The energy technology sub-cluster covers both the production and distribution of energy and the industry that produces devices, machines and systems and the related consulting. This sub-cluster is export-driven and largely owned by international companies. The international ownership structure has enhanced the industry's potential for success. The sub-cluster has grown by approx. 15 percent per year, and the total production volume is approx. 4,900 million euros.

As a result of the current trends, solution optimums shift toward sustainable development, i.e., toward solutions that give rise to fewer emissions and require less resources. The same trend is reflected in environmentally aware fuel choices and renewable energy sources. The relative price of energy and, consequently, its meaning as a production factor are emphasised. This, in its turn, enables the introduction of new energy distribution systems, such as systems based on hydrogen technologies.

The application of information technology can also improve the way in which the infrastructure is used. It can also be used to improve efficiency and save resources in new solutions, and it can make a more decentralised, local energy production system based on local fuels possible. The application of information technology and intelligent products also promote the utilisation of low-value or environmentally demanding fuels and energy sources.

Tekes' role is significant in ensuring that the energy technology cluster's competence and jobs are retained, the volume of export increases and opportunities in the industry are utilised. Furthermore, Tekes is a significant actor in utilising the structural changes in the energy market and in meeting the challenges of climate change. Tekes can help to keep the internationally owned technology and thus also the jobs in Finland.

Structure / Organisation / Core activities (priority areas etc.)

Activation for innovation

Tekes encourages companies to improve their capabilities to develop and apply new technologies. Activities are targeted at new technology based firms and SMEs in particular, as well as new businesses and international cooperation. Large companies are encouraged to participate in long term research projects, which address major technological challenges and involve significant networking with research institutes or SMEs. Activation also promotes regional development.

Technology programmes

Technology programmes are launched in areas vital to the future of Finnish industry. The programmes strengthen the national knowledge base, promote the renewal of businesses and industry, competitiveness, research, and enhance cooperation between companies, research organisations and the public sector. Programmes emphasise the versatile development and utilisation of international and regional technological cooperation.

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Selective project funding

Tekes' funding is targeted at projects which produce new knowledge, bear high technological and commercial risks and in which the impact of Tekes' funding is substantial. Projects are selected using criteria based on Tekes' strategy. Projects promote sustainable competitiveness, commercialisation of research results, and emergence of new technology based companies and business activities. Projects promote the internationalisation of companies and research activities, and networking between actors. In the selection of projects, their positive impacts on society, the environment and well-being are considered.

Development of the innovation environment

Innovation services are developed and provided in cooperation with other financiers and expert organisations. Tekes' contributes to the development of an internationally, nationally and regionally networked innovation environment. Tekes supports the Ministry of Trade and Industry in the formulation of technology policy. The innovation environment is also developed through activities within selective project funding, technology programmes and activation for innovation.

▪ Sections / programmes related to Distributed Generation, DER and Renewable Energy

Name of the area
Technology programme: Distributed Energy Systems (Hajautetut energiajärjestelmät) Short name: DENSY 2003-2007
Web page address – in national language
www.tekes.fi/ohjelmat/densy
Web page address – in English
www.tekes.fi/programmes/densy
Objectives of the section /programme
The main objectives are to assist Finnish industry, especially SMEs, in developing products and services for a global market, to make Finnish technology known, to build an innovation environment of world-class and to produce commercial products for several niche-markets by 2010.
Research Priorities
The programme will focus on system integration and commercial services of distributed generation of power, heating and cooling. The focal areas of the programme are: <ul style="list-style-type: none"> ▪ System solutions ▪ Integration ▪ Industrial production ▪ Business concepts ▪ Utilizing ICT-technologies ▪ Demonstrations
Budget

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Total budget € 47 million

▪ **Administrative and financial issues**

Institution responsible for the Programme
Tekes, National technology agency of Finland
Web page address – in national language
www.tekes.fi
Web page address – in English
www.tekes.fi/eng/
Institution responsible for the Management of the Programme
Technology Centre Merinova Ltd.
Contact Person
Mr Jonas Wolff [Jonas.Wolff@merinova.fi]
Web page address – in national language
http://www.merinova.fi/
Web page address – in English
http://www.merinova.fi/275799.shtml
Cost models and type of participants
<p><u>R&D funding for companies</u></p> <p>Tekes offers companies grants, capital loans and industrial loans. Funding is given within the following parameters:</p> <ul style="list-style-type: none"> ○ Industrial R&D grants run from 15 to 50 percent of the eligible costs. ○ Capital R&D loans run from 35 to 60 percent of the eligible costs. ○ Industrial R&D loans run from 45 to 70 percent of the eligible costs. <p>Differing funding measures can be combined in a single project. One project may, for example, receive a grant of 15 percent of the eligible costs, and in addition, a loan of 45 percent.</p> <p><u>R&D funding for research institutes and universities</u></p> <p>Research grants can range from 60% to 100% of eligible costs. Grants are directed to the research work done at research institutes and universities. Usually projects are conducted in cooperation with companies.</p>
Call
<p>Annual calls for research organisations and universities (next call closing November 2004)</p> <p>Companies can submit applications any time.</p>

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- **Type of financed projects / Programme implementation instruments**

- **Cooperation with other Member States and Regions and third countries**

Tekes actively encourages open cooperation on programme level and is eager to be involved in the preparation of joint technology programmes in cooperation with other funding authorities in different countries. Such programmes should focus on international cooperation and how this can provide added value to the participants. Funding authorities agree on the general principles of funding and the interpretation of the results (IPR).

When deciding on funding R&D-activities, Tekes values the presence of international co-operation. Tekes can support EU-funded activities, e.g. projects in the 6th FWP with and 20 % funding grant, given that there is a national industrial interest in the projects. Tekes can also give feasibility funding for start-up of new international cooperation.

DENSY actively seeks participation especially with Scandinavian countries, the new member states and Russia.

- **Other interesting Programmes**

Climbus - Business opportunities in mitigating climate change

<http://akseli.tekes.fi/Resource.phx/enyr/climb/en/index.htm>

Small-scale production and use of wood fuels 2002 – 2004

<http://akseli.tekes.fi/Resource.phx/enyr/puuenergia/en/pientu.htm>

- **Other interesting links**

Tekes' strategy

http://www.tekes.fi/julkaisut/Tekes_Teknstrat_eng.pdf