TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

OBJECTIVE OF THE PROGRAMME

is to support mitigation of climate change and
attainment of the national climate change mitigation objectives,

by contributing to technological choices, research, development,
commercialisation and implementation.

The time scale for the technologies studied extends to about 2030.

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http://www.climtech.vtt.fi/
http://akseli.tekes.fi/Resource.phx/enyr/climtech/index.htx

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

WAY OF WORKING

- Climtech is run as a framework programme to serve and guide other Finnish technology development programmes relevant to greenhouse gas emission reductions.
- The core activities are the projects for assessing the potentials of the improved existing and new emerging technologies.
- Technologies are being analysed against the background of the overall picture.
- Communication with other research programmes at national and international level, as well contacts to companies are of central importance.
- Dissemination of information at national level is crucial.
- The programme is helping to identify the most important development fields.
- Duration 1999 – 2002. Total budget 4 million Euro.

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

PROJECTS

Overall picture on mitigation of greenhouse gas emissions

Background report for the Climtech programme

- Overall picture on mitigation of climate change
- Emission reduction alternatives in various sectors
- Overview of ongoing research at national and international level
- Preliminary recommendations for research topics (completed in Feb. 2000).

Technology support report for the Finnish Ministry of Trade and Industry (Jan. 2001)

27 technology projects have been started and some of them have already been completed.

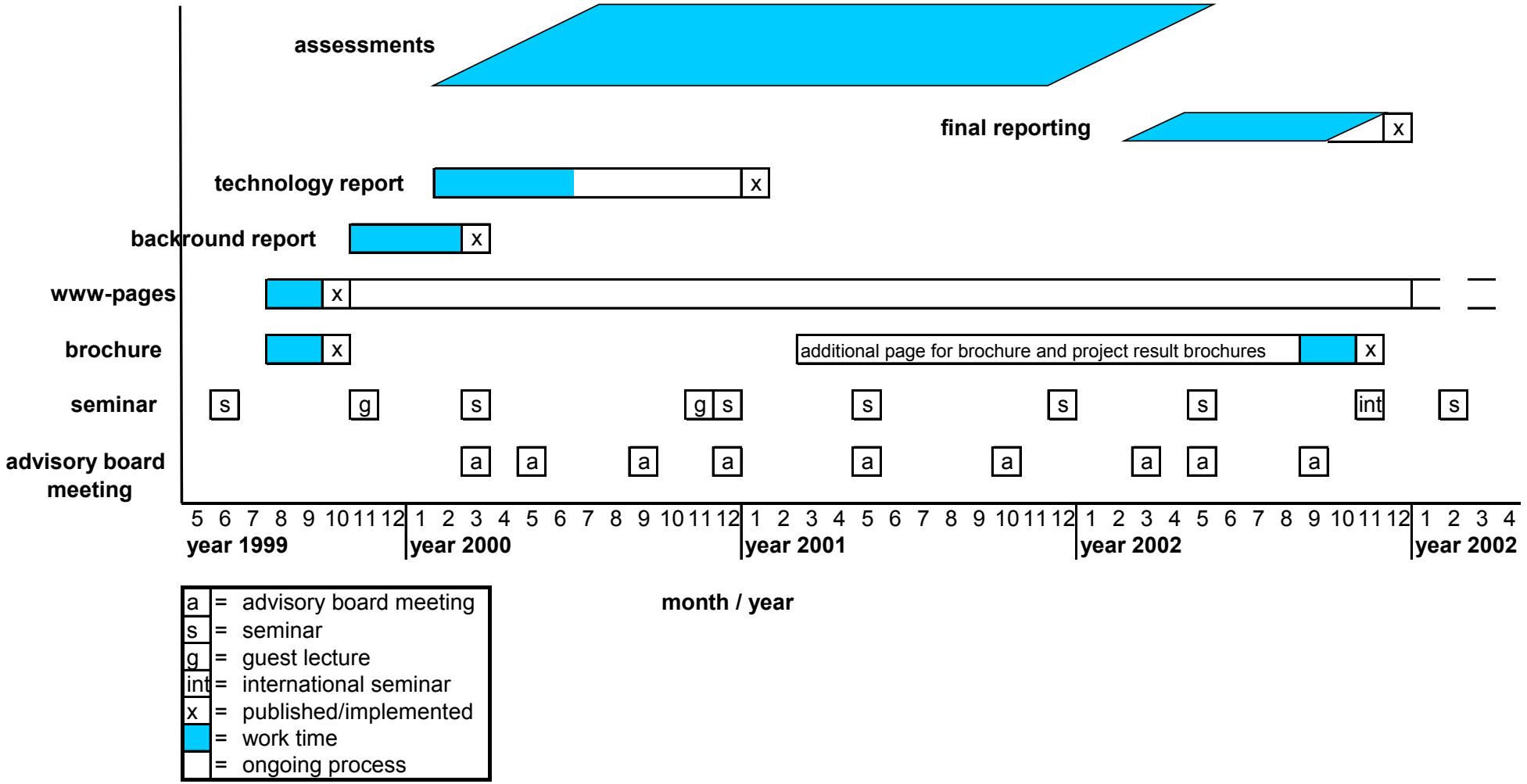
SUMMARY

The task of the Climtech programme is to help in the *identification* of the most significant technological development fields.

The results of the Climtech programme can be used in companies in the selection of *long term strategies* for technology development for domestic and export markets.

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

TIME SCHEDULE OF CLIMTECH PROGRAMME



a	=	advisory board meeting
s	=	seminar
g	=	guest lecture
int	=	international seminar
x	=	published/implemented
	=	work time
	=	ongoing process

CLIMTECH

TEKES

VTT

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

PROJECTS 1/6

Subject field 1: RENEWABLE ENERGY SOURCES AND DISTRIBUTED ENERGY PRODUCTION

Project title and author(s)	*Completion*
• The possibilities of wind power for mitigating climate change,VTT Energy	completed
•"Road-map for solar-energy technology and markets in Finland", Solpros Ltd.	completed
• Increasing the use of biomass in energy production, VTT Energy	completed
• Distributed energy systems: technology, fuels, markets, and CO_2 emissions, Gaia Group Ltd.	completed
• Hydrogen technology survey, Helsinki University of Technology (HUT)	completed

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

PROJECTS 2/6

Subject field 2: ENERGY EFFICIENCY AND INDUSTRY

Project title and author(s)	*Completion*
• Electricity saving possibilities in household and service appliances, TTS-Institute & VTT Energy	completed
• Operation of Energy Service Companies (ESCO) in view of climate change mitigation, Motiva & Electrowatt-Ekono	completed
• Development scenarios of high-efficiency power plant technologies in centralised electricity and heat production and their impacts on greenhouse gas emissions, Fortum & VTT Energy	completed
• New technologies to reduce greenhouse gas emissions of forest industry, JP Consulting Europe Ltd.	completed
• Biotechnological solutions in energy economy of pulp production, VTT Biotechnology/Chemical Technology/Energy	reporting
• Industrial ecology and the reduction of greenhouse gas emissions, Fortum & HUT	reporting

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

PROJECTS 3/6

Subject field 3: NON-CO2 GREENHOUSE GASES

Project title and author(s)	*Completion*
• Abatement of new greenhouse gases, The Finnish Environment Institute (FEI) & VTT Energy	Completed
• Mitigation of greenhouse gases from waste management, VTT Energy, VTT Chemical Technology & The Finnish Environment Institute (FEI)	Completed

PROJECTS 4/6

Subject field 4: CAPTURE AND UTILISATION OF CO_2

Project title and author(s)	*Completion*
• CO_2 capture technologies and their potentials, Fortum & Tampere University of Technology (TUT)	completed
• Disposal and utilisation of CO_2, VTT Energy & HUT	completed

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

PROJECTS 5/6

Subject field 5: MODELS AND SYSTEMS

Project title and author(s)	*Completion*
• The development of Finnish energy system models within IEA ETSAP agreement, VTT Energy & HUT	reporting
• Participating in the IEA project "Greenhouse gas balances of biomass and bioenergy systems" (IEA Bioenergy Task 38), VTT Energy	at the end of 2002
• Carbon sink and other greenhouse gas impacts of wood products, VTT Energy & European Forest Institute (EFI)	reporting
• Developing and testing of Renewable Energy Certificate System (RECS), Fingrid Ltd.	at the end of 2002
• The impact of information technology and internet economy on energy economy, energy technologies and greenhouse gas emissions, VTT Energy	reporting
• The greenhouse gas impact of transportation sector and its reduction potential, TUT & VTT Energy	reporting
• The impact of climate change on energy supply, FMI, FEI & Fortum	reporting
• Local means of livelihood in mitigating climate change - preliminary survey, The Association of Finnish Local and Regional Authorities	completed
• The impact of climate change mitigation on other environmental emissions, VTT	reporting

TECHNOLOGY AND CLIMATE CHANGE (CLIMTECH)

PROJECTS 6/6

Subject field 6: COMMERCIALISATION

Project title and author(s)	*Completion*
• Societal embedding of innovations related to renewable energies and energy saving, VTT Group for Technology Studies	reporting
• Methods for promotion of commercialisation and implementation of new climate neutral technologies, LTT Research Ltd.	completed
• New energy technology markets, Programme coordination, VTT	reporting