



Dear Readers,

Let us introduce our project, the Geothermal Power, which is a research project to assess the applicability of the geothermal steam wells in Hungary to be produced electricity by mini power plant. The Altener, Energy Framework Programme 1998-2002 of the European Commission, supports the project.

Our recent issue introduces the project, but later, our half yearly newsletters will inform you the interim results and further connected features of the project.

Thank you for your attention!

Editors

News

The Kick-off Meeting was held on 4-6 Sept. 2003, in Hévíz, Hungary, where the detailed work schedule of the first six months was finished.

The project website is operating for near a year now, and it was renewed and it expanded with Hungarian pages at the end of October 2003. The next significant refining is expectable in May 2004, when the first interim results will be published.

The assessment of the end-user requirements has been started with the help of the mailing list, which can be found on the website.

The next project meeting will be organized in Iceland, Reykjavík, in March 2004.

Starting date:
01.09.2003.

Ending date:
28. 02. 2005.

Total budget:
630 000 euro

EC contribution:
337 000 euro

Abstract

The project purpose is to develop an integrated feasibility study on installing small-scale geothermal power plants in Hungary combined by heating and balneological use through cascading system, providing a model for extended application throughout the Accession Countries and the EU-15.

Four Hungarian, one Icelandic, one Austrian and one Portuguese partner from 1 September 2003 till the end of February 2005 carry out the project.

The main result is to define the group of boreholes where the implementation of a mini-power is most feasible. For this purpose a financial counting considering the physical, technical and environmental parameters will be made.

Further information are available on the project website:

www.geothermalpower.net

INTRODUCTION

The necessary activities with the phase-leader partners are as following:

Coordination (Geonardo)

Phase 1: End-user requirement specification (Aquaplus and Geonardo)

Phase 2: Inventory and overview of potential boreholes (ELTE, Aquaplus and ISQ)

Phase 3: Policy and ownership barriers (Innoterm and ISQ)

Phase 4: Technical feasibility of mini power plant implementation (ENEX and Innoterm)

Phase 5: Financial and economic feasibility (ISQ, Innoterm and ENEX)

Phase 6: Environmental aspects (Bluewaters, Geonardo and ISQ)

Phase 7: Dissemination and exploitation (Geonardo)

In **Phase 1** we are going to reveal the potential end-users, and present the project to them. We will collect and evaluate the end-user requirements. At the end of the project we are going to arrange a special meeting for end-users to show the results of the research.

In **Phase 2** the whole potential thermal water producing boreholes will be analysed based on physical parameters. A classified digital inventory will be made.

In **Phase 3** we are going to investigate the problems of geothermal energy using related to the ownership and policy.

In **Phase 4** we will characterise the technical parameters of the mini power implementation around the potential boreholes. This new classification will be attached to the digital inventory.

In **Phase 5** we are going to determine the punctual values of the implementation and operation of the mini power in each above-mentioned category of the boreholes.

In **Phase 6** the environmental aspects will be analysed. There are different effects of the geothermal power use on the environment in different place.

In **Phase 7** the final goal is awareness raising and the dissemination of the results among the end-users.

The project will provide results to the decision makers, the geothermal business sector, and potential investors with the contribution of the municipalities, landowners and data holders.

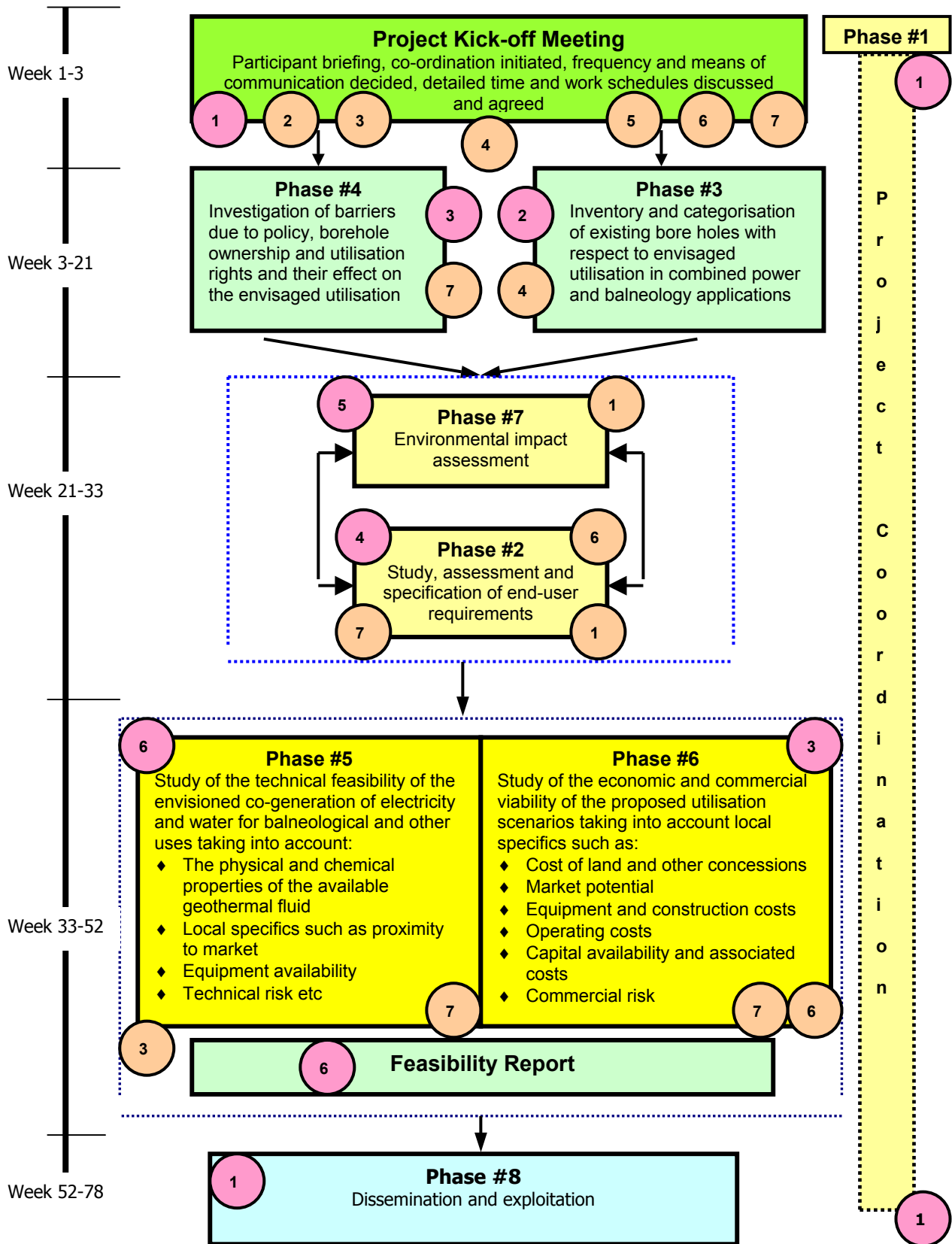
The results will provide a direct predecessor of geothermal renewable energy investments in Hungary and throughout Europe (EU-15 or 25), where applicable. The accessing CEE countries have a considerable potential of geothermal resources although the traditional investment-heavy procedures are difficult to apply in these countries

The idea of small-scale geothermal power plants can be a new opportunity for these markets and worldwide, as well. This is strong tool for achieving local sustainability and decentralisation and also can be applied at remote territories. It will create new investment opportunities for EU businesses. The developments create new opportunities also for other sectors, such as balneology, eco-tourism, which are environmentally friendly, service-intensive ways of creating profit and have an especially positive aspects, when applied in countries, where polluting and inefficient, energy-intensive heavy industry must be maintained for social (employment) reasons

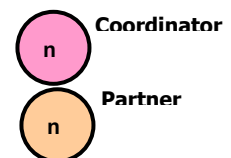
List of deliverables:

- [Project website](#)
- [Project newsletter](#)
- [A classification of available boreholes by physical, technical, and environmental parameters](#)
- [A integrated feasibility study including all the classified and ranked boreholes](#)
- [A study about the problems of the ownership and the policy](#)
- [Brochures, CD-ROMs](#)
- [Final report](#)

PROPOSED PROJECT FLOW DIAGRAM



The above diagram depicts the envisaged project phase division, their evolution with time and an outline of the tasks intended for each phase. The coloured and numbered circles indicate the participants in the various phases; the numbers are referred to the partner list of the next page.



THE PROJECT PARTNERS



1. Coordinator: GEONARDO Ltd - www.geonardo.hu

GEONARDO Ltd is a fast growing and well-reputed Hungarian environmental consulting enterprise working at the forefront of technology in mapping of geothermal potential, natural resources management, applied remote sensing and GIS development. The company is interested in the assessment of the utilization of different renewable energy sources in Hungary.



2. Eötvös University, Dept. Of Geophysics - <http://pangea.elte.hu>

The Department of Geophysics was founded in 1951 and recently is the member of University's Institute of Environmental Physics. Our research and education activity includes both, the physics of the Earth and the applied geophysics. In applied geophysics we have laid special emphasis on environmental issues a decade since.



3. Innoterm Ltd, Hungary - www.innoterm.hu

Innoterm is a steadily growing Hungarian engineering office and consultancy founded in 1989 in Budapest. Its main fields of actions include the development and the implementation of environmental- and user-friendly energy supply systems, herewith trying to contribute to the sustainable development by optimal utilisation of the available energy resources.



4. Bluewaters Ltd, Austria – www.bluewaters.at

Bluewaters is a young company working in the field of project development, project management and environmental engineering. Our experts have academic and post-graduate qualifications in various technical areas (e.g. Environmental Engineering, Landscape Planning, Chemistry, Agricultural Engineering, Civil Engineering, Mechanical Engineering, Hydrogeology, Hydrobiology and Water Management).



5. Enex hf, Iceland – www.enex.is

Enex Ltd is a young but fast growing Icelandic enterprise through which is channelled the export drive of Iceland's four largest power utilities, the Iceland Drilling Company, the Orkustofnun, GeoScience Division (ROS) and the major Engineering Consulting Companies of Iceland.

The affiliated company of ENEX in Hungary is: [ENEX GEOTERMIA](http://www.enex.is).



6. Aquaplus Ltd, Hungary - www.aquaplus.hu

AQUAPLUS Well-boring, Well-repairing and Hydraulic Engineering Ltd., was established on 15th September 1989. Its members are natural persons, who have been previously working in the field of water drilling and maintenance demanding high professional requirements. The main activities of the company are related to the planning, construction and operation of water supply, and the planning, execution and repairing of deep drilling water and thermal water wells.



7. ISQ, Portugal – www.isq.pt

ISQ, Instituto de Soldadura e Qualidade, is a private, non-profit making independent research centre and the largest inspection company in Portugal with a staff of about 500. ISQ was founded in 1965 and has been involved in all major engineering projects in Portugal and other European countries and also in Africa, Latin America and Asia. ISQ developed expertise in several fields of engineering and also environmental sciences through these years. ISQ has also a considerable experience in participation and management of European R&D projects,