



## CASE STUDY 10: HUNGARY - GeoFund

<b>Barriers</b>	High upfront investment and high geological risk
<b>Instrument</b>	Resource contingent finance
<b>Application</b>	Guarantee to pay 85% of costs of unsuccessful geothermal exploration wells
<b>Amount</b>	US\$3.3 million (final payout)

### PROJECT BACKGROUND AND OBJECTIVES

GeoFund (the Geothermal Energy Development Program) is funded by a GEF trust fund and implemented jointly with IFC. The aim of GeoFund is to remove the barriers to geothermal energy use in Europe and Central Asia, and thereby reduce greenhouse gas emissions.

GeoFund was designed to provide assistance and funding to geothermal developers and institutions that promote the use of geothermal energy. It was comprised of three instruments:

- Direct investment funding window to provide low cost loans, contingent grants and outright grants to project developers;
- Geological risk insurance (GRI) window to partially insure project investors and developers against the risks involved in geological exploration (short-term cover) and operation (medium-term cover). The geological risk was seen as the most difficult barrier to overcome for the development of geothermal energy; and
- Technical assistance window to improve access to information and expertise on geothermal energy.

A GeoFund package, covering the first two of eight GeoFund sub-projects, was made available to Hungary in 2006. Hungary has a high quality geothermal resource but relatively low utilisation. Barriers to utilisation are high upfront investment costs and geological risks in the drilling phase. In the face of these barriers the private

sector had been unwilling to pursue the targeted project.

The project site was north of the village of Iklodbordoce, in the county of Zala, in southwest Hungary, with three existing hydrocarbon exploration wells. A fourth production well was to be drilled there. The planned power plant was to have been connected to the regional system of North Transdanubian Electric Service Company. Total estimated project costs were HUF 3.9 billion (US\$18.6 million), which were to be financed by MOL Hungarian Oil and Gas plc.

### INSTRUMENTS USED

The GeoFund package for Hungary included a technical assistance grant of US\$810,000 and a geological risk insurance (GRI) grant of US\$3.72 million. The GRI covered the risk that after drilling and testing the geothermal resource would be found to be inadequate for development as an energy source. The GRI grant covered 85% of the eligible drilling expenses, with the remaining 15% provided by the counterparty company (MOL).

In addition, MOL also financed all of the pre-drilling expenses (geological surveys, prefeasibility studies, staff salaries, as well as the post drilling expenses to return the land to its pre-drilling state), which are estimated at about US\$2-3 million. It also paid up-front to the GeoFund a processing fee of US\$10,000 and a 3 percent fee on the insured amount (US\$131,254). The Grant Agreement specified parameters for success/failure under which the GRI could be drawn on.

## INSTITUTIONAL ARRANGEMENTS

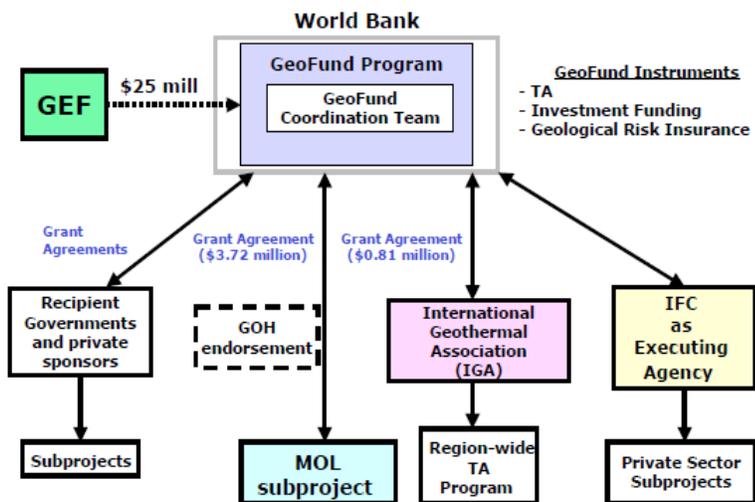
GeoFund receives its funds from GEF and the International Geothermal Association (IGA), and administered by the World Bank GeoFund coordination team. The IGA funds were used for a region wide Technical Assistance program.

MOL signed a Grant Agreement with the World Bank to access the GeoFund in the form of the GRI, with the Government of Hungary's endorsement.

## OUTCOMES

The results of the drilling and testing activities of the Hungarian subproject indicated that the two wells would not produce adequate geothermal flow rates for any geothermal-based operation. This was verified in the technical report produced by MOL, and further verified by independent experts hired by the Bank. Eligible financial expenses were verified by an international auditing firm. After verification in accordance with the Grant Agreement, a payment of US\$3.3 million was made to MOL on December 17, 2007.

The Geological Risk Insurance worked as designed when the drilling was unsuccessful and played a key role in reducing the risk of drilling for the first geothermal pilot power plant in Hungary.



## Further reading

World Bank, Innovative "Geofund" Program Supports the International Geothermal Association And Hungarian Oil And Gas Company to Promote Geothermal Energy Development, 2007 – click [here](#)