

ENERGEOTEK



ABOUT Energeotek.

Oscar Martin Olof Steen set up Energeotek in Stockholm in 2011, seeing the company's mission in development of technological solutions in the field of geothermal energy. Major achievements over the years of operation include development of NxGeo® technology, which helps significantly increase generation efficiency, and implementation of geothermal power capacity projects. The company is a regular participant in European meetings over sustainable power generation. Energeotek is working towards the goal of raising renewables-based electricity generation rates on a global scale.





Geothermal Energy.



The principle behind geothermal energy is not difficult: the earth's internal heat rises closer to the core. By drilling two wells 2-6 km deep, it is possible to move fluid with temperature anywhere between a hundred and several hundred grades to the surface. The equivalent depth of a shaft in Sweden is 5 km. When water reaches the surface and moves to the geothermal unit, heat exchange with the secondary heat transfer fluid of a lower boiling point takes place. Next, water changes into steam, driving the turbine for electricity generation, while hot water is used in central heating and cooling.



Environmental Sustainability

Geothermal power stations produce electricity from renewable sources that are in inexhaustible supply. This type of electricity generation eliminates the possibility of harmful emissions into the atmosphere, as it happens in the case of coal and nuclear generation.

Prospects

The current aggregate capacity of the world's geothermal power plants is 14 GW, with a mere 16% of the known resources used. At the same time, the global potential of the geothermal sector is about 80 GW. As the technologies develop, the production process gets simpler and profitability goes up.

Stable Electricity Supply

Geothermal energy sources differ from other renewables mainly in their ability to ensure stable electricity supply no matter the season or weather. For instance, solar energy-based electricity can be obtained only during the daytime, while wind turbines work only under the required wind speed conditions and have a working life of some 20 years. In contrast, geothermal power stations stay in operation for at least 60 years.

Firm Prices

Old-type power stations are fully dependent on fuel, the reason why prices for their product are directly determined by fluctuations in market prices for mineral resources. Given the fact that geothermal power stations run on renewables, prices for this electricity are stable. Moreover, as geothermal energy technologies develop, equipment will become less expensive, while production efficiency will rise, improving competitiveness of the sector.





.01 Electricity

High-temperature groundwater is supplied to a special unit, where a special turbine is driven by steam from a heat exchanger. The electricity produced as a result goes into the grid.

.02 Heating

After a heat pump is installed, a heat exchanger is placed into a special borehole. Hot water is transferred under pressure to generators on the ground, with the obtained heat used to meet demand from industrial companies and households.

.03

Cooling

The heat-carrying fluid circulating in the well is used in geothermal cooling, which involves the use of a circulation water pump producing cooling energy as well as a fan convector to transfer cool air.

.04

Technologies

Energeotek is doing extensive research on electricity generation from geothermal energy, seeking to raise performance efficiency of power stations and decrease generation costs. The company is actively involved in different projects in the field of renewable energy sources. Geothermal energy is a relatively new energy source these days. The research into what technologies can be applied best in the field is still underway. With the uniform standard ensuring maximum efficiency yet to be agreed, Energeotek is focusing on accomplishing the following objectives:

- Cutting costs per unit
- Reducing drilling-related risks
- Cutting costs of plant construction
- Raising thermodynamic efficiency
- Securing legislative support for geothermal energy projects in a number of countries having considerable potential for development of the sector
- Upgrading equipment to slow down wear rates

Making progress in meeting these targets means economic and financial improvements for the geothermal energy sector and the resulting increase in interest among entrepreneurs and investors.



Objectives.



TECHNOLOGIES

Energeotek has developed NxGeo®, an innovative solution in the area of renewable energy sources. NxGeo® is Energeotek's response to the urgent and accelerating global climate changes and environmental destabilization. The technology enables exploration, production and application of geothermal energy across the globe at lower temperatures as compared to other geothermal power stations. NxGeo® ensures protection against scale buildup, thanks to silicon inhibitor, online control over corrosion with a considerable decrease in its levels. Our system also allows well cleaning without interruption to operation. Introduction of NxGeo® technology at geothermal power stations resulted in 98% lower hydrogen sulfide emissions. By using the concept, it is possible to slash the costs associated with construction of a power station, extend equipment lifespan and reduce drilling-related risks.





OPERATIONS OUR Operations.



Exploration

Geothermal power stations can be constructed in any point of the globe, but the economic environment varies with the country. Drilling is the most capital-intensive component, since the deeper the well the more financing it involves.



Drilling

Two wells drilled some 2-6 km deep can help move hot water with temperature of a hundred to a few hundred grades, depending chiefly on the depth, to the surface. Geological conditions determine how deep the wells should go. For example, in Hungary it is enough to build 2 km wells to reach economically viable water temperature (90-130°C).



Electricity

Three schemes have been developed to generate electricity based on geothermal energy sources: direct, indirect and mixed. The direct scheme suggests the use of dry steam coming from the well and driving the turbine/generator. Indirect-production power stations, represented the most widely, use hot groundwater pulled under pressure into the generating units on the surface.

OPERATIONS HOW It Works.

To convert heat into electricity, which is the main objective of a geothermal power station, wells are drilled 2-6 km deep to access a source of hot water. The water is used to obtain electricity under the following scheme:





Global Statistics On Electricity Generation From Different Energy Sources.







INVESTOR RELATIONS

Investment Policy.



Energeotek has strong presence in the Swedish energy market. While the agreements signed with the end user guarantee the generated electricity is sold, there are also contracts concluded with an investment platform attracting financing for the project to build a 15 MW production block. It is estimated that EUR 30 million worth of investment is required. The main advantage of the project is its production focus, which means there are no additional expenses, apart from maintenance and auxiliary power. This is a project with a high rate of return due to NxGeo® at its core, the technology developed by the company as a comprehensive solution to the majority of problems related to geothermal energy sources.



A study of Swedish market prices for electricity and central heating shows that the market has been stable for a long period of time, which reinforces the company's optimistic expectations. In addition to the economic factor, political and regulatory factors are in effect, and they are also favorable — Energeotek operates in Sweden, a country offering the most comfortable conditions for investment and business, especially in the renewable energy sector. The company produces extremely beneficial energy superior to almost any other type. The main advantage of Energeotek is its production focus, which means that there are no additional costs other than maintenance and auxiliary equipment. This type of power generation is independent of raw materials and can work under any circumstances.



Prospects.



Reliable investment.



Investments in Energeotek are profitable due to the already established agreements for the sale of generated energy. The technologies developed by the company help to significantly reduce construction costs and risks, which makes investments in geothermal energy more profitable. At the moment, the company begins construction of power plants according to the model developed for the EnerCity[™] project. This event requires large investments. Most of the invested funds are used for drilling and power plant construction and development of technologies, and approximately 8% of the total investments are needed to maintain the existing power plants.



INVESTOR RELATIONS

Distribution Of Investment Flows.

Development of technologies	31%
Maintenance and support for existing stations	8%
Construction of new power stations	61%



INVESTOR RELATIONS

Calculate profitability.

With the profit calculator you can calculate the potential return on your investment. Enter the amount of your investment and calculator will show you the profit at the end of the deposit.

Daily rate	Type of payment
1%	Everyday
Minimum ammount	Deposit term
\$ 5000	170 days





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