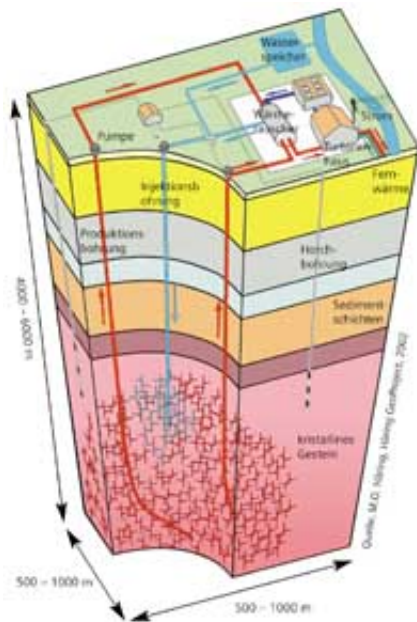


The Inexhaustible Energy Source Beneath Our Feet

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According to the expert Willy Gehrler, the environmentally friendly generation of electricity from geothermal sources is going to play an important role in the future of energy production. “I’m convinced that in 20 years geothermal power plants will be delivering ten percent of the total electricity produced worldwide,” Gehrler told Pictures of the Future, the Siemens research magazine. Gehrler is President of ETG Electrosuisse (Swiss Electrotechnical Association) and is the head of Power Systems at Siemens Switzerland.

Gehrer favors the hot dry rock process. In contrast to methods that use only hot springs in volcanically active regions as energy sources, this new process makes it possible to generate electricity anywhere in the world. With this process, water is pumped into strata of crystalline rock that lie four to six kilometers deep in the earth and have a temperature of about 200 degrees Celsius. Production wells tap the heated, pressurized water and transport it to a heat exchanger on the surface. Finally, the heat exchanger drives a steam turbine with a generator for electricity production. After it has cooled, the water is pumped back into the earth. “The first commercial power plant of this kind is due to go into operation in five years in Basel, Switzerland. It will deliver 30 megawatts of thermal energy and three megawatts of electrical power,” Gehrer says. “That’s enough to supply 5,000 households.” The cost of producing the electricity is competitive with other renewable energy sources, he adds. At 0.12 euros per kilowatt-hour for electricity and 0.02 euros for heating, the costs correspond to those of a new hydroelectric or wind-driven power plant.

Gehrer believes that geothermal energy is the energy source of the future. In addition to producing no emissions, he explains, it’s virtually inexhaustible and is available around the clock all over the world. The use of geothermal energy is more a question of will than of technical feasibility. “We know very well that we’re complacently sitting on a virtually inexhaustible supply of geothermal energy and choosing instead to transport oil, gas and coal over thousands of kilometers rather than digging a few kilometers into the earth,” Gehrer says.

The original release can be found on [Siemens](#) web-site.

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