



Geothermal Power, Turkey

This project involves a geothermal power plant in Turkey, in a region famous for its hot springs for centuries. The power plant generates emission-free electricity and sends it to the Turkish power grid to replace fossil fueled energy.

Location



The project is located in the northwestern part of Anatolia on the Biga peninsula. The hot salty springs of the arid Çanakkale region have already been described as early as 200 BC. Since classical times, the thermal springs of Kestanel, Akyekli and Tuzla (meaning “salt-works” in Turkish) have been used as spas; corresponding ruins of the Roman period can be found at all three localities.

Project



The Tuzla geothermal field has been extensively studied since the 1960's through a range of geological, geochemical and geophysical techniques including the drilling of several deep wells into the target reservoir which have confirmed it as one of Turkey's major geothermal opportunity. Geological fault zones typify the landscape at the project site. Highly saline water from deep underground mixes with ground water and sparsely spills to the surface through natural springs. These natural hydrothermal effects created barren land and led to rather scarce vegetation and fauna. The temperature of the geothermal fluid used for power generation is around 174°C.

The emission reduction project is bringing investment, state-of-the-art technologies, knowledge transfer and new jobs to a rural region with weak economic potential.



The project activity includes the drilling of one production and one re-injection well and the installation of a closed circuit system with heat exchanger, steam turbine and electricity generator. Electricity is produced without any adverse environmental impacts, which is of great importance to a country whose GHG emissions have increased by about 85% since 1990.

Project achievements

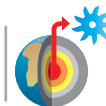


Socio-economic impact:

- In public stakeholder consultations, the local population explicitly welcomed the project.
- The construction of the geothermal plant generated about fifty temporary jobs in this rural region.
- Fifteen people underwent technical training and found permanent work in the operation and maintenance of the plant.

Environmental impact:

- All wells and drill holes have been secured thoroughly against leaking.
- By replacing fossil power from the grid, air pollution and associated diseases are being reduced.



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✓ Social and environmental benefits:	as documented in our database
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