

Geothermal Power Plant, Turkey

The power plant generates emission-free electricity for the growing demand of the Turkish power grid. Greenhouse gas emission reductions are achieved through utilizing geothermal power to generate electricity, which otherwise would have been generated through burning fossil fuel (coal).

The Location



The project is located in the Salavatli geothermal area, which is 26 km away from the city of Aydin, in west Anatolia, in the Eagean region.

The project is located in the remote geothermal region of Salavatli, identified as an area with high potential for electricity production; however, the private sector hasn't taken advantage of the potential so far because of the high transaction costs associated with research activities and because of a lack of technical skills and the potential risks during operation. This is the first Gold Standard geothermal power plant developed in Turkey.

The Project

The Project includes the construction of a plant for electric power generation with an installed capacity of 9.5 MWe. Geothermal heat is brought to the surface through geothermal generation wells. The annual electricity generation is about 70,000 MWh.



Utilising the environmental friendly energy source provided by the geothermal field, the project produces clean electricity. The Project employs state-of-the-art geothermal technology and contributes to supplying some of the rapidly growing demand for energy in Turkey. Electricity is produced without any adverse affects on the environment, which is of great importance in a country whose emission have increased by about 85% since 1990.

The operation of the plant avoids the emission of around 41'160 tons of CO₂ annually.



The Benefits



Besides reducing CO₂ emissions, the project:

- Is non-invasive: Environmental impact assessments carried out by Turkey's Ministry of Environment and Forestry shows no negative impact from the construction and operation of the plant.
- Promotes the sustainable use of renewable energy resources and shows how geothermal potential in Turkey can be used to foster sustainable growth.
- Contributes to reduce the pollution typically associated to electricity generation from fossil fuels.
- Provides an example of a clean and long-term solution for the ever-increasing electricity demand of Turkey's growing economy.
- Reduces the dependency on imported fossil fuels, particularly natural gas, used for electricity generation, with a positive effect on the balance of payments.
- Brings significant additional employment opportunities to a poor agricultural region including, 97 temporary jobs during construction and more than 20 permanent jobs recruited in the local area.
- Secures increased incomes for a large number of local families through employment.
- Brings benefits to the local staff through ongoing technical training and good working conditions.
- Improves the local education system: The project owner has undertaken several initiatives to support local school facilities and infrastructure, including the renovation of school buildings, maintenance of playgrounds, gardens and recreational areas. School material for students (eg. projectors to be used during the lessons) and improvement of local safety measures are also part of the assistance provided by the project owner.

The Details

KEY DATA South Pole Project No. 300274

Estimation of annual emission reductions over a crediting period of seven years: 41,160 tCO₂e

Commissioning date: 2010

Expected Standard: Gold Standard VER



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