Geothermal Energy

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As the energy demand is increasing every day, the environmental pollution has been a main concern. To reduce environmental pollution while satisfying the energy demand, we can start using renewable sources of energy. We will start by geothermal energy as a solution. The geothermal energy is found beneath the Earth's crust; Earth's heat originates from the decay of radioactive materials. The tectonic activity of the Gulf of Suez and the Red Sea shore plays an important role in controlling the thermal energy beneath water. We will dig in pipes to the ground to a particular depth starting from 1,000 meters and above where temperature will be high enough to heat up carbon dioxide and start injecting carbon dioxide within the pipes. Carbon dioxide (CO_2) will be heated and start spinning turbine, generating electrical energy from thermal energy. We chose carbon dioxide instead of water because its heat capacity is much lower; this means it will heat faster and easier. The promised geothermal resources of Egypt are mainly located along the Gulf of Suez, the Red Sea, and in some locations at the Western Desert of Egypt. There are many different types of usage for geothermal energy; it can be used in providing electricity, heating, or metal induction depending on the thermal energy outputs. Metal induction is due to the proximity of geothermal extracting locations to mining spots that will benefit that metal ore and can go into manufacture straight forward.

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