

Natural gas and geothermal energy

[Science](#), [Physics](#)



Natural gas and geothermal energy Introduction Both natural gas and geothermal energy are found beneath the earth surface. However, geothermal energy is a renewable energy source while the natural gas is a nonrenewable source. The material sources of these energies are also different. The Rankine Cycle depicts a heat pump, which is used in the generation of energy when a working fluid is supplied to the system.

Natural gas

Natural gas depicts a fossil fuel, which formation occurs because of the pressure and intense heat of the buried gases, plants and animals. Plants gain energy from the sun, which is stored in the form of chemical bonds (Tiwari & Ghosal, 2005). Such energy is recovered as the natural gas. However, natural gas represents nonrenewable energy source because of the inability to replenish such energy.

Geothermal energy

Geothermal energy depicts the heat, which is obtained from the earth. Such heat generates a sustainable and clean energy. The resources of geothermal energy vary from deep hot rock in the ground to shallow hot water. These resources contribute in generation of energy, which does not contribute in emission of greenhouse gases. Further, geothermal energy has few chemical pollutants, minimal waste and it is renewable.

Rankine Cycle

Rankine cycle depicts a model, which is used in the process of predicting steam turbine systems performance. The system, which is a thermodynamic cycle, changes heat into mechanical work (Stanley, 2010). The supply of the heat is on the external closed loop whereby the working fluid is water. As

such, the Rankine Cycle is a form of the steam engine, which has the potential of generating electricity.

References

Stanley, M. (2010). Environmental Chemistry, 9th edition. CRC press.

Tiwari, G & Ghosal, M. (2005). Renewable Energy Resources: Basic Principles and Applications, Alpha Science