

Fuel Cell/Geothermal Sustainable Energy: Software Solution

Problem

- Though the geothermal pump/ fuel cell system is a more efficient and environmentally friendly way of powering and heating and cooling homes, this innovative technology has many geological, economical, and legal constraints concerning its installation.
- Most people do not have access to the well organized information needed to determine the feasibility of implementing such a device.



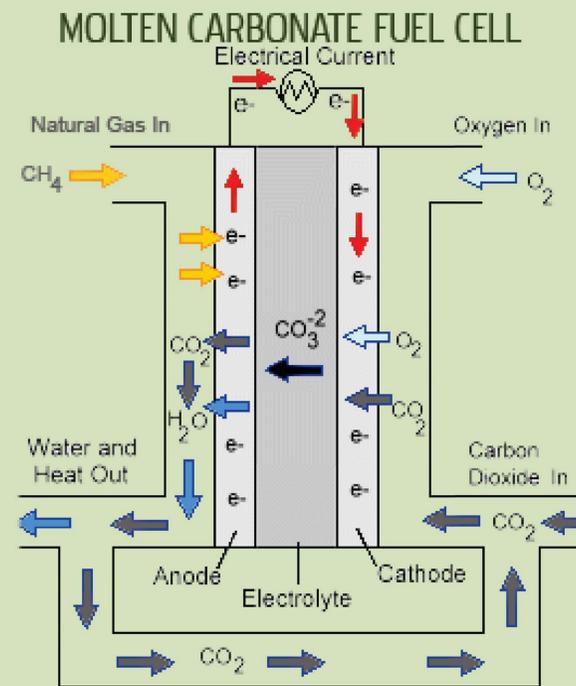
Solution

- Design a well equipped computer program with a user-friendly interface to provide those who are interesting in the geothermal pump/ fuel cell system with quick and easy access to information on design, cost, and benefits.

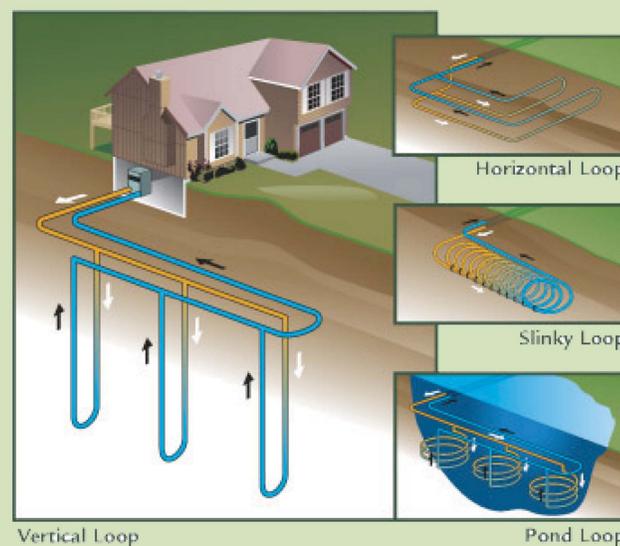


Technology

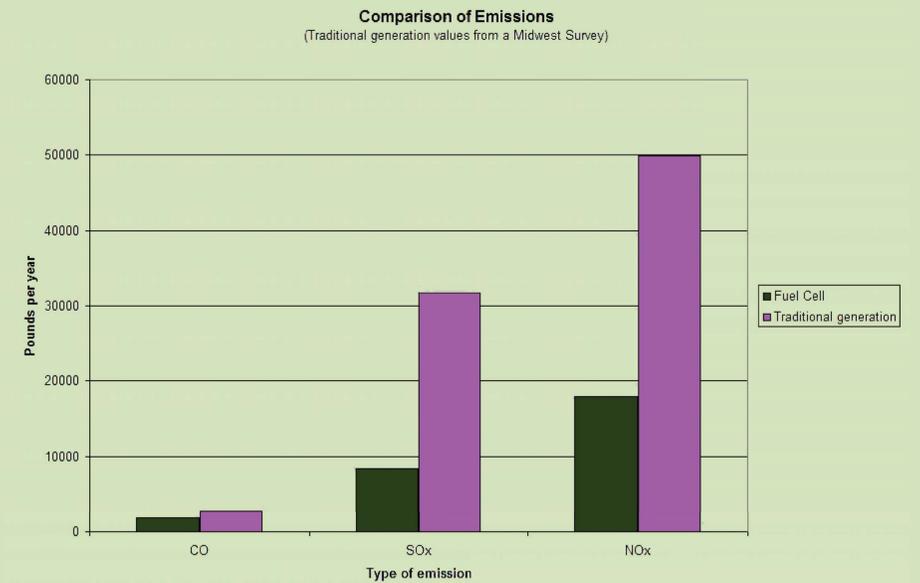
Fuel Cells: Fuel cells are electrochemical devices that convert the chemical energy of a reaction directly into electrical energy.



Geothermal Heat Pumps: Geothermal heat pumps are electrically powered systems that tap the stored energy of the earth using the relatively constant temperature of earth to provide heating, cooling, and hot water for buildings.



Why Should You Care?



- Global warming is increasingly becoming an environmental and political issue.
 - ⇒ Fuel cells can reduce CO Greenhouse Gas emissions by up to 50%
 - ⇒ SOx and NOx Emissions are negligible in a fuel cell systems, as it is not a combustion process
- The Sustainability market is a rapidly growing industry with much untapped potential.
 - ⇒ A Low Estimate for the market is \$12 billion
 - ⇒ Fuel Cells can use the by-product of many agricultural processes as their fuel source
 - ⇒ Additional energy and environmental savings are gained by storing otherwise wasted heat and reusing it for heating in buildings

