

# BY THE NUMBERS: HEAT ON TAP

The potential for geothermal energy is far greater than most people realize.

Caverns are noted for having roughly the same, mild temperature all year round. The deeper you go, however, the warmer you get. Go deep enough, and the rocks are hot enough to boil water.

a number of applications—from regulating the temperature of greenhouses to process industry uses such as the drying of textiles, lumber, or concrete blocks.

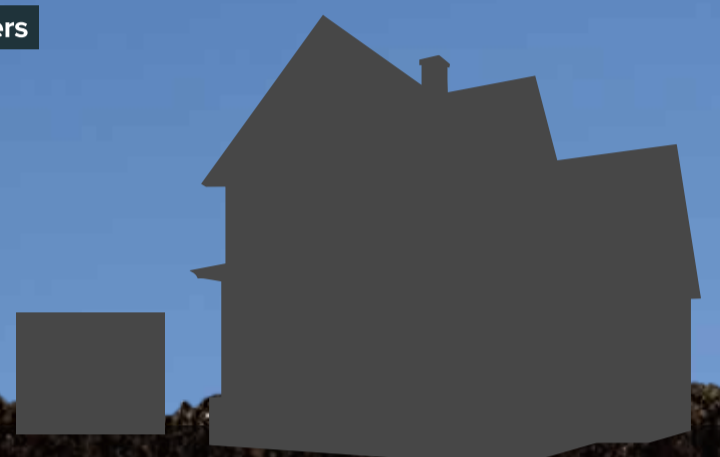
That's the theory behind deep geothermal energy, which engineers and geologists are working to turn into a reliable source of renewable power. According to a recent Department of Energy document, "GeoVision: Harnessing the Heat Beneath Our Feet," the heat flow emanating from radioactive decay in the molten core of the Earth is 44.2 terawatts, about twice the world power consumption. While it is unlikely that humans could tap all that power economically, harnessing even some of it could be a boon.

Perhaps the greatest potential for geothermal energy is in heating and cooling buildings, included houses, via heat pumps. According to the "GeoVision" report, the U.S. market potential for geothermal heat pumps is "equivalent to supplying heating and cooling solutions to 28 million households," while "district-heating installations could satisfy the demand of about 45 million households."

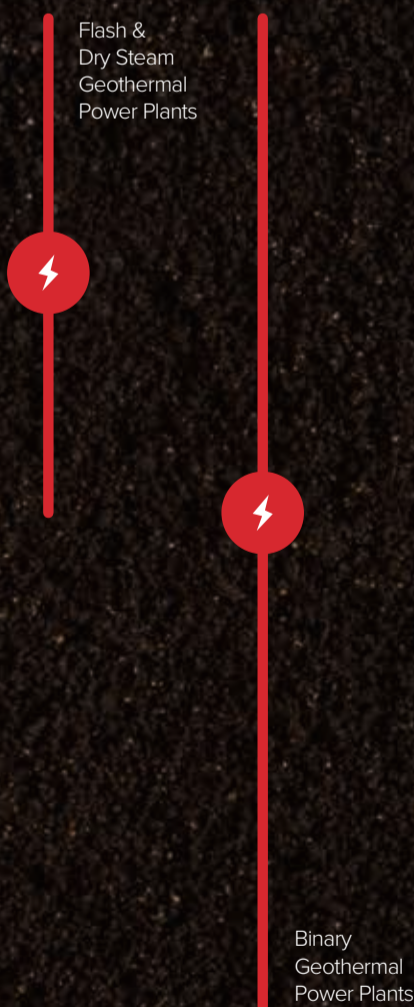
See below for what else geothermal heat can do.

While some places offer enough heat for electric power production, tapping lower grade geothermal resources can supply heat for

Jeffrey Winters



## Power Generation



## Direct Use

