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VOLCANIC ENERGY COULD BE NEW SOURCE OF SUSTAINABLE POWER

 SUSTAINABILITY

Iceland is experimenting with a well drilled almost three miles down into the Earth that captures volcanic heat for a new supply of more sustainable energy.

Although not without pollutants, the new approach to accessing and using Iceland's geothermal energy would require only three to five wells to generate the same amount of power as that of 30 to 35 conventional high temperature wells. Drilling so deeply into the Earth provides access to supercritical fluid that generates turbine-powering steam. Due to the pressure and high temperatures exerted by the depth, such material is neither liquid nor solid.

If the new well, nicknamed Thor, proves itself over two years of gathering energy from magma, the country may have another alternative to non-fossil-fuel energy. Currently, all of Iceland's electricity is generated from non-fossil-fuel sources, with three-fourths coming from hydroelectric dams. Concerns about the volcanic energy that have been raised by environmentalists include rapid rises in carbon dioxide emissions. At the moment, the country's energy-intensive industries and increasing volume of tourists are prime culprits. Engineers point out that geothermal emissions are far lower than those of traditional oil and natural gas wells.

The battle against fossil fuel use isn't yet won, and to that end, numerous projects are finding ways to make sustainable energy more accessible, whether through miniaturization or personalization. A [mini wind turbine](#) uses wind, water or manual power to charge any device using a USB port. And a [portable, smart solar panel system](#) in the shape of a flower makes a plug-and-play system a good-

looking reality. How else can material and engineering developments expand the use of alternative energies?

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Email: postur@environment.is

Website: www.government.is

Contact: postur@environment.is