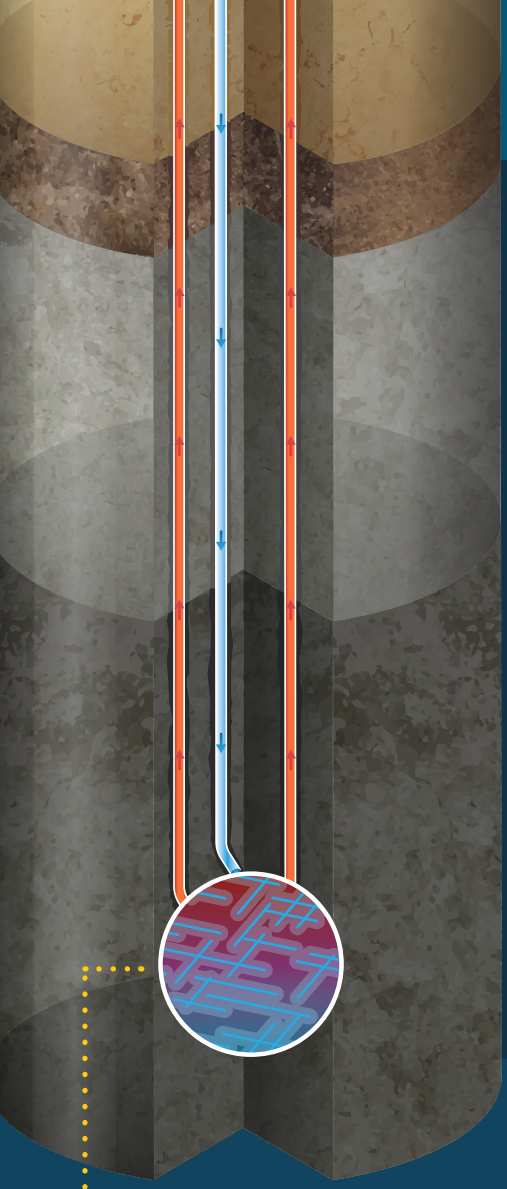


U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Geothermal Technologies Office

Natural Geothermal Systems

To generate power from natural geothermal systems, you need:

Abundant heat found in rocks deep underground + Fluid to carry heat from the rocks + Small pathways to move fluid through the hot rocks

Problem

Despite the presence of heat, sometimes conditions are not ideal for power generation from natural geothermal systems. In these cases you have:

Abundant heat found in rocks deep underground + Insufficient fluid to carry the heat + Limited pathways to conduct fluid

ENHANCED GEOTHERMAL SYSTEMS

Solution

A human-made enhanced geothermal system (EGS) can extract heat from tens of thousands of feet below the surface and put it to good use.

What makes **EGS?** = An abundant, previously inaccessible, heat source + Fluid injected from the surface + Pathways expanded by injected fluid

With an enhanced geothermal reservoir, you can generate power anywhere with hot rocks deep underground!

ENERGY THAT *works* AROUND THE CLOCK

EGS is a reliable, baseload energy source. It can provide power *24* hours a day, *365* days a year, independent of weather conditions and with the flexibility to meet consumer demand.

GREEN TECHNOLOGY FOR A *greener* WORLD

Power plants built for EGS emit *very* little carbon dioxide (CO_2) over their lifetime.

CO_2 emissions

0.05 kilogram (kg)

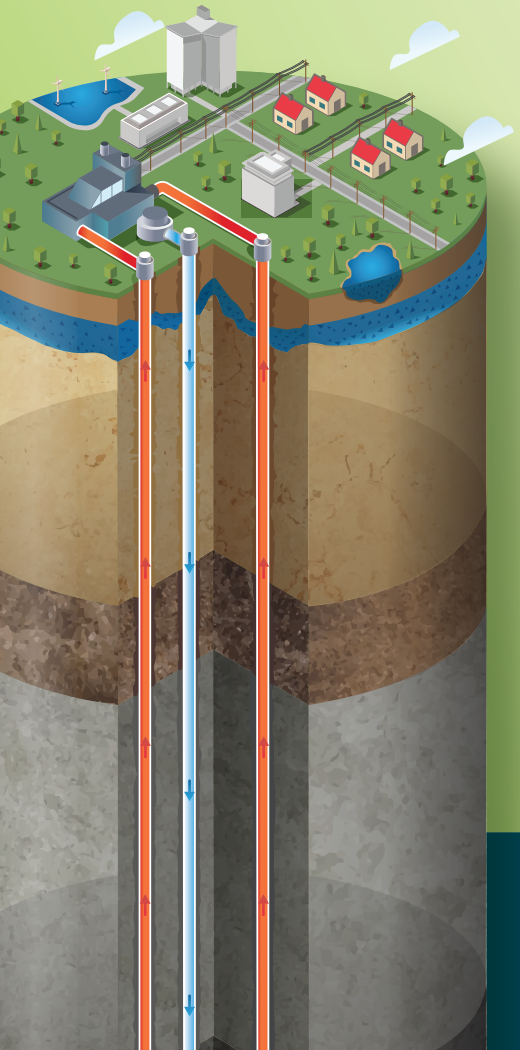
Geothermal binary closed-loop plant* life cycle of *30 years*[1]

8.91 kg

using 1 gallon of gasoline[2]

[1&2] For more information about the references, visit: energy.gov/eere/geothermal/forge

* A plant uses moderately heated geothermal and secondary fluid that pass through a heat exchanger. The geothermal fluid causes the secondary fluid to flash into vapor, driving turbines to power generators.



CLEAN ENERGY FOR AMERICA'S HOMES

EGS has the potential to affordably *power*...

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For more information visit: geothermal.energy.gov

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