AI pinpoints renewable energy resources

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All across New Mexico, a powerful energy source seethes in the Earth’s solid crust. Much of the state’s dramatic landscape, with its vast extinct volcanic caldera in the Jemez Mountains, the string of spikey volcanic necks standing tall in the Rio Puerco, Albuquerque’s lineup of volcano cones and lava escarpment – just to name a few – all hint at the presence of underground magma.

This bright orange molten rock is produced primarily by melting rocks in the Earth’s mantle, heated by the Earth’s core, which formed from star material when our planet was created. Decaying, naturally radioactive materials like uranium and potassium, along with other natural processes, also heat the core. According to the Union of Concerned Scientists, the energy given off by magma is impressive – the heat emitted within 33,000 feet of the Earth’s surface contains 50,000 times more energy than all the oil and natural gas resources in the world.

In the 1970s, scientists at Los Alamos advanced geothermal drilling technologies in order to mine heat from rocks cooked by magma to generate electricity. Today, energy companies drill deep underground in order to access superheated water in naturally occurring reservoirs. That superhot water and steam gush upward through another well into a generating station, where they drive turbines to make electricity.

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