

Getting into Hot Water: Good for Defense Department.(DISPATCHES)

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*Geothermal energy generates power from the heat in the planet's crust, creating an energy source that is "on 24/7" with a supply line "straight down to the center" of the Earth, said Ken Wisian, associate director of the Bureau of Economic Geology's Environmental Division at the University of Texas at Austin. Advances in drilling and exploration technology, however,...*

SAN ANTONIO, Texas -- The Defense Department's reliance on civilian power grids exposes it to "unacceptable" strategic vulnerabilities such as natural disasters and cyberattacks, and the solution might be in the ground, one expert said.

Geothermal energy generates power from the heat in the planet's crust, creating an energy source that is "on 24/7" with a supply line "straight down to the center" of the Earth, said Ken Wisian, associate director of the Bureau of Economic Geology's Environmental Division at the University of Texas at Austin.

It is uninterruptible, unbreakable and once perfected, "rapidly scalable," making it an ideal solution to the Defense Department's power grid vulnerabilities, he said recently at the National Defense Industrial Association's Science and Engineering Technology conference.

Geothermal energy has been a global energy source for more than a hundred years, but its potential remains relatively untapped, said Wisian, who is a retired Air Force major general. Advances in drilling and exploration technology, however, have put it on the "cusp of a revolution," and the Defense Department needs to get in on the action.

Conventional geothermal energy mines a naturally occurring water or steam system deep--typically miles--underground, Wisian said. A relatively new approach called "Geothermal Anywhere" mines the heat in the rock using an artificial circulation system to extract heat, concentrate it and bring it to the surface.

This method offers a "critical break" in geothermal restriction, expanding viable geothermal production possibilities beyond areas such as fault zones or volcanoes.

But it needs power plants, and the Defense Department can help, Wisian said. He called the department a "perfect early adopter for this technology" due to its ability to prioritize mission success over cost effectiveness and its comfortability with new technology.

Currently, the startup world is leading the charge, but the Defense Department has issued a call for prototype plants at six bases. The Air Force's Office of Energy Assurance now rates geothermal as the number one new energy prospect above small modular reactors, Wisian said.

"So bottom line, geothermal power has real potential to solve a major vulnerability. DoD is waking up to that. They are starting to move and really skyrocketed into the lead worldwide by at least supporting the idea of, 'Let's develop these new prototype plants,'" he said. ND

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