

Eden GeoPower and ZeroGeo Energy Collaborate for Geothermal Heat & Power and Geologic Hydrogen Projects in Europe

Overcoming limitations of traditional hydraulic fracturing in Europe with a new technology:

Electrical Reservoir Stimulation

ZUG, ZUG, SWITZERLAND, November 27, 2023 /EINPresswire.com/ -- <u>Eden GeoPower Inc</u>. ("Eden") and <u>ZeroGeo Energy GmbH</u> ("ZeroGeo") are pleased



to announce a strategy and engagement plan to deploy Eden's rock permeability enhancement technology for Geothermal Heat & Power and Geologic Hydrogen projects in Europe.



We are delighted to be working with Eden
GeoPower, to help bring their new technology to Europe. The next generation of natural resource recovery technologies are critical in the energy transition."

John Ashbridge, Chief Executive Officer, ZeroGeo Energy

Overcoming limitations of traditional hydraulic fracturing in Europe with a new technology

Many European countries have either banned or have a moratorium on traditional hydraulic fracturing for natural resource extraction (for example, France, Germany, The Netherlands, Spain). This has effectively limited the ability to economically extract geothermal heat, geologic hydrogen and other natural resources from the subsurface. Eden's technology has the potential to unlock billions of dollars in untapped value for project owners by either improving the productivity of their existing assets or developing new projects without the need for traditional hydraulic fracturing.

ZeroGeo and Eden will identify opportunities to deploy Eden's "Electrical Reservoir Stimulation" technology in Europe to:

• Increase rock permeability in geothermal and geologic hydrogen reservoirs to maximize heat and natural hydrogen extraction and therefore maximise the economic value of the resource; and

 "Create" permeability in suitable geological formations, allowing for many more geothermal projects than would be traditionally possible with conventional multi-borehole geothermal projects.

Eden's "Electrical Reservoir Stimulation" Technology

Eden has developed a first-of-its-kind Electrical Reservoir Stimulation (ERS) technology to increase the recovery of natural resources and improve the economics of resource recovery with minimal environmental impact. Its patented Electrical Reservoir Stimulation (ERS) Technology uses electricity to enhance permeability,



ZeroGeo Energy GmbH

increasing the recovery of new and existing assets. Eden's technology reduces water consumption, curbs carbon emissions, and mitigates the seismicity risks that come with traditional hydraulic fracturing, making the process fundamentally more sustainable.

Eden's unique approach is equally well suited to enhancing subsurface permeability across industries, including geologic hydrogen and geothermal.

By using high-voltage electricity and advanced reservoir monitoring techniques, Eden increases rock permeability while controlling the direction of the generated fracture network, targeting specific subsurface areas more precisely. This allows for a step change improvement in reservoir productivity and, as a result, the economic viability of energy transition initiatives that lever geological reservoirs. ERS is an evolution from traditional hydraulic-fracturing methods which are water-intensive and create uncontrollable fractures, or "short-circuits," that can hinder fluid flow and obstruct re-stimulation, functionally ending a reservoir's economic viability. Additional benefits of ERS include a substantial reduction in the number of trucks necessary for fluid and proppant transportation, emissions from wastewater treatment, pumping horsepower requirements, and seismic events. The result is a reduction in CO2 emissions, water consumption, and associated environmental hazards compared to traditional hydraulic-fracturing operations.

Alignment with ZeroGeo

ZeroGeo's project development pipeline (Project Thermo (Germany) and Project Tief (Switzerland)) and its advisory services business are aligned with Eden's objectives of enhancing

subsurface permeability across industries, including geothermal and geologic hydrogen. ZeroGeo will seek to use Eden's technology in its projects, where possible, and actively promote the use of ERS technology in Europe.

John Ashbridge, CEO of ZeroGeo, commented:

"We are delighted to be working with Eden GeoPower, to help bring their new technology to Europe. The next generation of natural resource recovery technologies are critical in the energy transition. Europe has a long history of geothermal heat and power generation, but facilities have often been unable to achieve required production rates due to restrictions on traditional hydraulic fracturing, so we expect that Eden's technology will be of great interest to project owners and project developers. Recent geologic hydrogen discoveries in Europe and ongoing exploration open the exciting possibility of developing sovereign European natural hydrogen resources with Eden's technology."

Paris Smalls, CEO of Eden, commented:

"We are delighted to have ZeroGeo assisting us with bringing our technology to Europe. Our technology is ideally suited to the operating environment in Europe, which has essentially banned the use of traditional hydraulic rock stimulation techniques in many countries. With our alternative, water-minimal electric based rock stimulation technology, we can increase permeability and avoid the injection of large volumes of water into the reservoir. We believe that our technology can be a game changer for the European renewable energy market, particularly for deep geothermal and geologic hydrogen. Our new partnership with ZeroGeo highlights our goals to bring the value of our technology to the European market, and assist many countries in achieving their renewable energy goals."

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