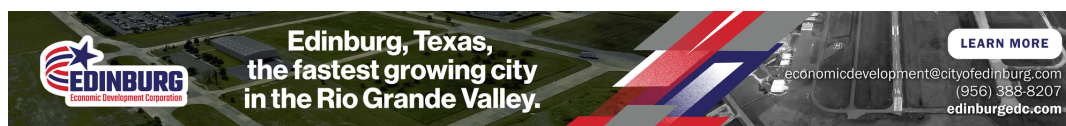


## Guerra: It's time to turn up the heat and support geothermal energy production in Texas

By R.D. 'Bobby' Guerra - December 3, 2022



Hidalgo County could be a major energy provider to the Texas power grid and to other major industries 24/7 if we invest in geothermal energy production and storage.

That's why I'm re-filing a bill this session that I first introduced last session to turn up the heat – the geothermal heat – to encourage geothermal energy production in Texas.

The bill asks the Railroad Commission to study the feasibility of and economic opportunity from geothermal energy production in Texas and evaluate how the state could best encourage investment in this technology.

First, let me clarify that this bill will not interfere with Texas' thriving oil and gas energy production industry. Geothermal energy production is another beneficial tool in our toolbox to make Texas number one in energy

production and reliability. It will provide additional jobs for Texas oil and gas workers and additional use of oil and gas equipment because approximately 90% of the oil and gas skill set from exploration through drilling and completion directly applies to geothermal energy production.

Geothermal energy production is about energy independence, job creation, and revenue for the state. Geothermal energy is also clean and renewable. What makes geothermal energy so valuable is that it is continuously available; the heat source within the Earth never wavers like wind power or solar power does. Once tapped, this source of energy is truly reliable and uninterrupted.

Geothermal energy is carbon-free, renewable and sustainable. It is continuous heat that can be transformed into energy used to power homes, businesses, military bases, and more. Additionally, it doesn't take up much space on the surface of the Earth. It has a small physical footprint; for a 30-megawatt generation facility, the footprint would be about the size of a small house. This allows for simultaneous alternative uses of the land and the small footprint makes it easier to protect from weather and/or sabotage by nefarious foes.

Geothermal energy is the heat that comes from the sub-surface of the Earth. It is contained in the rocks and fluids beneath the Earth's crust and can be found as far down as the Earth's hot molten rock called magma. The core of the Earth is the same temperature as the surface of the sun.

Geothermal wells are drilled deep into underground formations where producers access the Earth's heat which can then be used to drive turbines connected to electricity generators.

There are three key reasons why we should invest in geothermal energy:

1. Energy diversity. Winter Storm Uri in 2021 was a harsh reminder about the vulnerability of our power grid. Diversity is key, and geothermal energy is the next building block for energy production capabilities in Texas.

2. Our geology. Texas has significant potential in geothermal energy production due to its natural geological characteristics, including the ability to access heat without having to drill below 20,000 feet.

3. Our people. We have the human capital for the job. The skills necessary to explore, drill, and produce geothermal energy are similar to those used in traditional oil and gas production.

Abandoned oil and gas wells, which are a major problem in Texas, could be transformed into geothermal energy wells, which could decrease the cost of drilling geothermal wells as compared to starting a new well from scratch.

Most people don't realize that geothermal energy exploration has been underway in Texas since the 1970s. But it is still in the early developmental stages and requires investment to reach its full potential.

The Department of Defense (DOD) recognizes the need for "unbreakable" and continuous power or an easily hardened microgrid located solely on the property of a military installation; power that is available 24/7 and whose infrastructure is defensible and protected against any possible sabotage by nefarious actors. In fact, the Bureau of Economic Geology, in collaboration with Texas-based geothermal energy company Sage Geosystems, was selected by the U.S. Air Force to perform a geothermal energy feasibility at Ellington Field Joint Reserve Base in Houston, Texas. This feasibility study is complete and Sage Geosystems is working with the Air Force to move to the next phase, which is the building and commissioning of the three megawatt geothermal microgrid at this site.

Not all of Texas has the right geology for cost-efficient geothermal energy production. It is more dense, harder and more expensive to drill into the formations such as the Permian Basin that runs below Lubbock than it is into the sandier formations under Hidalgo County and other similarly sub-structured areas of the state.

In fact, right here in McAllen, Texas, one of the larger ranches is breaking ground on a three-megawatt geothermal energy production pilot project

that should be operational by the end of 2023.

With the right policies in Texas, geothermal energy would provide thousands of blue-collar jobs and attract millions, if not billions, in investments while providing competitively priced and reliable energy to its consumers.

Geothermal energy is profitable clean energy and secure clean power. Let's heat things up and support geothermal energy production in Texas.

If you want to learn more about geothermal energy production, check out [this link on my webpage](#) which includes articles, presentations, and links to organizations working on this effort.

*Editor's Note: The above guest column was penned by state Rep. R.D. 'Bobby' Guerra of McAllen, Texas. The column appears in The Rio Grande Guardian with the permission of the author. Rep. Guerra can be reached by email via: [Stephanie.Chiarello@house.texas.gov](mailto:Stephanie.Chiarello@house.texas.gov).*

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