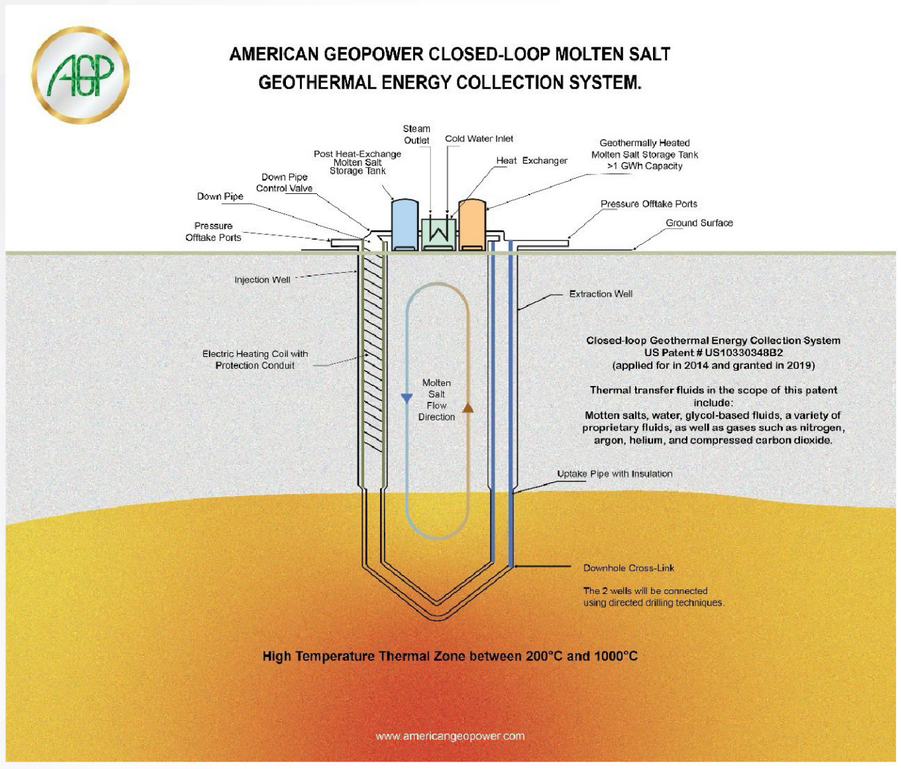
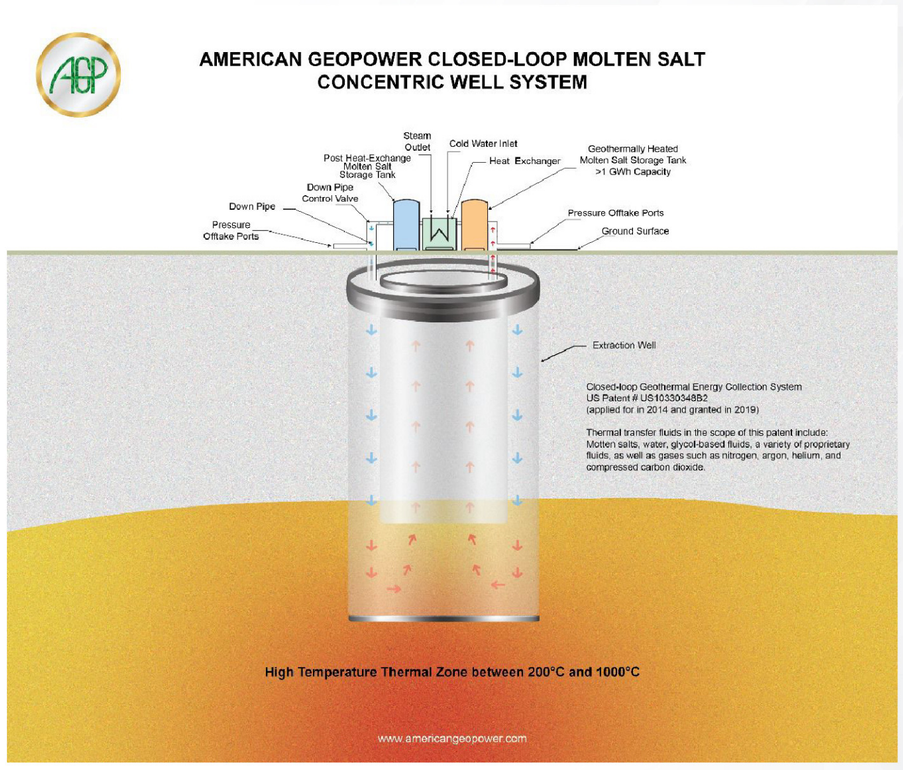
AMERICAN GEOPOWER

The Future Is Under Our Feet

American GeoPower (AGP) develops innovative and practical solutions to transform how geothermal energy is accessed, harvested, stored, and distributed. A key component of our geothermal energy technology is using molten salts in a closed-loop system to extract thermal energy from hot briny fluids, and supercritical temperature sources, such as the Kakkonda geothermal field in Northern Japan. These are the sources that will unlock the true potential of geothermal power. We believe that our system represents the best means of capitalizing on supercritical temperature geothermal energy. Our technology also offers an effective means to exploit such geothermal systems without the expense of building surface infrastructure such as wellhead, pipelines and power station.





SOLUTIONS WE OFFER

- A patented system for extracting and transferring high-temperature thermal energy to the surface while minimizing heat loss
- Our patented closed-loop system that provides an efficient means of continuously extracting geothermal heat without fluid extraction from supercritical geothermal reservoirs
- Patented storage solutions capable of maintaining thermal energy losses to around 1% per day
- Portable solutions for distributing high-grade thermal energy to both nearby and distant locations
- Retrofitting existing gas or water well systems together with existing geothermal systems
- Green hydrogen/ammonia production completely derived from 100% advanced geothermal closed-loop energy systems
- Desalination systems
- Geothermal pyrolysis
- Super-hot drilling technology (spallation drilling)

TYPICAL USE CASE SCENARIOS

1 Sending molten salt to depth, extracting the thermal energy directly at the source, then pumping it to the surface, with minimal energy for pumping necessary. It can be stored in insulated tanks (less than 1% of heat loss per day), then used or transported as needed, reusing the cooled molten salts to harvest more thermal energy. This system does not depend on naturally occurring or injected fluids in the zone surrounding the well.

2 Using waste geothermal fluids wherever available at the surface to preheat molten salt, for further heating at depth, storage, or transport as needed. This is not as efficient or clean as the closed-loop/supercritical temperature; however, it is an excellent way to enhance conventional geothermal facilities.

Our technology is suitable for exploiting any supercritical reservoir and for retrofitting existing facilities. Existing geothermal and other deep well structures can be leveraged to accelerate the transition to state-of-the-art geothermal power facilities.

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Properties that make molten salts ideal as a heat transfer fluid for geothermal applications:

- High specific heat capacity
- 2 to 4 times the thermal conductivity of water
- Low the vapor pressure
- Working temperatures from 65°C to 1000°C (depending on the species of molten salt)
- Very stable above 400°C
- Excellent heat retention
- Service life over 30 years with little degradation
- Non-toxic, non-flammable, and environmentally benign

TARGET MARKETS

- Geothermal energy companies looking to become more cost-efficient and environmentally responsible
- Other thermal energy-producing facilities looking for efficient thermal energy storage solutions
- Municipalities/Power utilities
- High energy consumption industries in need of Environmentally friendly heat sources, such as decommissioned natural gas and coal power plants

ADVANTAGES OVER OTHER GEOTHERMAL TECHNOLOGIES

- Closed-loop system abates the release of harmful gases and fluids into the environment.
- The amount of water and energy consumption needed to drive the processes is greatly reduced.
- Operating costs are reduced by cutting the amount of maintenance compared to conventional geothermal systems.
- Improved ability to store and distribute thermal energy.
- Greatly reduced environmental impact compared to other enhanced geothermal energy extraction systems.

OUR MISSION

Empower geothermal power providers to unleash the true potential of clean, sustainable energy by harnessing their expertise and accelerating innovation, powering the brighter future for all.

PATENTS

For more information about our patents, please contact us or visit:

https://patents.google.com/?inventor=David+Alan+McBay&status=GRANT&num=25&dups=language

CONTACT

We are happy to answer any questions you may have about our technology and licensing.

American GeoPower

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