



# groundforce energy

Advanced Geothermal Patent Portfolio Acquisition

**First-to-file AGS patent portfolio addressing core engineering barriers in the fastest-growing clean energy segment. Strategic IP positioning ahead of market surge.**

**11**

patents across 4 families

**Aug 2021**

first-to-file priority

**\$150B**

geothermal capex by 2030

## strategic rationale

- Comprehensive IP coverage: subsurface to power generation systems
- Cross-system compatibility: adaptable to EGS, AGS, open/closed-loop configurations
- Market timing: positioned ahead of post-2022 patent activity surge
- Geographic protection: North America and international markets

**Bottom line:** Rare opportunity to acquire defensible first-mover position in AGS technology at the intersection of \$4T data center expansion and 24/7 carbon-free power demand.

## market dynamics

**\$4T**

data center capex 2025-2030

**95GW**

100MW+ projects by 2030

**1,670MW**

geothermal committed to data centers

## market drivers converging

- **Power bottleneck:** AI infrastructure expansion constrained by grid capacity and reliability requirements
- **24/7 carbon-free mandate:** Corporate net-zero commitments requiring baseload renewable power
- **Deployment speed:** 2-4 year geothermal timelines vs 10+ years for nuclear alternatives
- **Geographic expansion:** Next-gen AGS technologies unlock potential beyond traditional volcanic zones

## competitive validation

Major technology companies have committed significant capacity to geothermal partnerships, validating commercial viability:

- 23+ GW combined pipeline from leading geothermal companies
- Google and Meta leading with hundreds of megawatts contracted
- Oil & gas industry bringing capital and drilling expertise to sector

## portfolio scope

Four patent families addressing critical AGS challenges across the complete system architecture:

### 1. Advanced Well Construction

Enhanced-contact design, increased effective radius, embedded heat storage. Greater power density and lower per-megawatt costs.

### 2. Integrated Power Plants

Systems positioned in-well, at wellhead, or on-pad to minimize thermal loss and enable on-site generation.

### 3. Working Fluid Systems

Fluid selection and thermal conversion methods for low-to-medium temperature heat while protecting geological integrity.

### 4. Pressure Manipulation

Enhanced generation via pressure control to manipulate thermodynamic properties and increase efficiency.

**Coverage advantage:** Holistic IP protection spanning wellbore engineering through surface power generation. Technology-agnostic design enables freedom to practice across multiple AGS configurations and deployment scenarios.

# competitive positioning

## ip advantages

- **Early priority date:** August 2021 first-to-file establishes defensible position ahead of market awareness and patent surge
- **Comprehensive scope:** 11 patents cover complete system vs. competitors' point solutions
- **Cross-platform applicability:** Compatible with closed-loop, open-loop, EGS, and AGS implementations
- **International protection:** Issued and pending patents securing key markets

## commercial differentiation

- **Reduced project risk:** Addresses economic barriers, not just technical feasibility
- **Behind-the-meter capability:** Enables on-site generation for data centers and industrial facilities
- **ESG alignment:** Supports corporate net-zero commitments with 24/7 carbon-free power
- **Scalability path:** Applicable from pilot projects through utility-scale deployment

**Risk mitigation:** Portfolio provides freedom to practice foundational technologies while sector matures, avoiding potential infringement exposure as market accelerates.

# acquisition rationale by buyer type

## Energy Developers

**Value:** Differentiated technology platform reducing deployment risk and accelerating time-to-market in competitive geothermal landscape.

## Infrastructure Operators

**Value:** Behind-the-meter generation capability addressing power constraints for data centers and industrial facilities.

## Technology Investors

**Value:** Early-stage IP positioning with cross-system compatibility in high-growth clean energy segment.

## Oil & Gas Companies

**Value:** Leverages existing drilling expertise and supply chains for energy transition strategy.

# immediate benefits

- Freedom to practice across multiple AGS configurations
- Defensible IP established pre-market surge
- Path to lower-cost, scalable deployment
- Alignment with \$4T data center infrastructure expansion

**Strategic timing:** Market inflection point driven by data center power demand, corporate sustainability mandates, and geothermal technology maturation. Portfolio provides immediate leverage in rapidly scaling sector.



## transaction terms & next steps

### transaction structure

- Complete portfolio acquisition
- Technical data review available (NDA not required)
- Patent documentation and prosecution history accessible
- Flexible structure for qualified buyers

Geothermal Market

**\$100-150B**

projected capex by 2030

Data Center Market

**\$4T**

global capex 2025-2030



## appointment window

Qualified buyers and investors invited to review detailed materials

**Contact us to book a meeting**

### Contact

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*All patents registered under First To File Priority date of August 2021. Portfolio includes issued and pending patents in North America and international markets.*