

Geothermal Power

Executive Summary

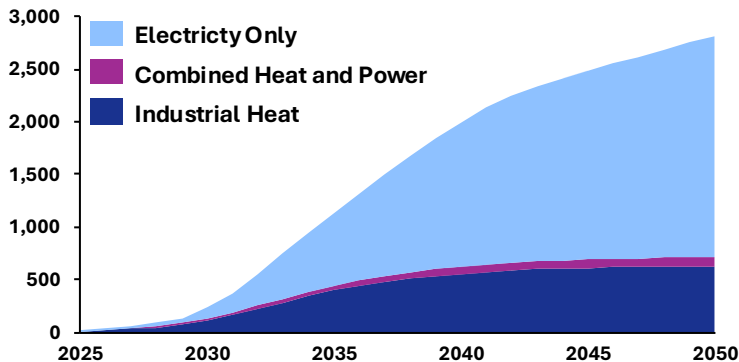
See Slide 3 of deck

- Geothermal provides **firm, dispatchable, zero-carbon power**, one of only two scalable 24/7 technologies alongside nuclear with broad bipartisan support
- Geothermal reserves are estimated to be 500x larger than all proven oil & gas reserves; just 1% of resources **could meet global electricity demand** 140 times over
- Currently **only ~16 GW are installed** across 32 countries, supplying <1% of global electricity; next-gen technologies are removing constraints for scale-up
- With continued investment into next-gen technologies, geothermal could become cost-competitive with solar + storage by 2035 and **supply ~15% of global electricity demand** by 2050
- Hyperscalers are signing **large PPAs** and making equity investments to secure **geothermal power for data centers**

Why invest in geothermal power? Slide 4

- Geothermal provides firm, clean power, complementing renewables and strengthening grid reliability
- Geothermal enhances energy security by reducing reliance on imported fuels and supply chains
- Geothermal assets offer 30-50 yr stable cash-flows that appeal to long-term institutional investors
- Leveraging oil & gas technology and workforce can reduce costs and de-risk next-generation development
- Geothermal brines can contain critical minerals, creating additional strategic opportunities

IEA Cumulative Investment Estimate of Geothermal (\$Bn)



Risks and Mitigation Strategies Slide 16

- Exploration risk (25% drilling success rate) can be mitigated by AI-enabled subsurface modeling and government risk-sharing programs
- High drilling costs (~54% of next-gen LCOE) can fall with O&G technology transfer (i.e., MMW, plasma, laser)
- Grid interconnection permit timelines in the U.S. can be reduced with on-site (behind-the-meter) deployment

Investment Opportunities Slide 19

Power-generating assets

Conventional Hydrothermal TRL 8-9

▲ Low Risk – *Investor type: Project Finance*

Taps hot water reservoirs near tectonic zones. Proven technology globally deployed and derisked, with unexploited reserves remaining.

Complementary Tech

Enhanced Geothermal Systems (EGS) TRL 7-8

▲ Medium Risk – *Growth, Private Equity*

Hydraulic stimulation creates fractures in hot rock to circulate fluid. EGS are the most promising next-gen geothermal technology.

Complementary Tech

Closed Loop Systems (AGS) TRL 7-8

▲ Medium-High Risk – *Venture Capital, PE*

Sealed subsurface pipes circulate fluid without requiring fracturing or brine; geographically flexible and targeting \$0.08/kWh by 2035.

Complementary Tech

AI-Enabled Exploration TRL 6-9

▲ High Risk – *VC*

ML models can process seismic, satellite, and well-log data faster and more accurate than current models to pinpoint drilling targets.

Complementary Tech

Advanced Drilling TRL 4-5

▲ High Risk – *VC*

Vaporizes rock via high-power millimeter waves, plasma, or lasers to reach 10–20 km depths without mechanical wear.

Adoption & Investment Trends Slide 78

- ~16 GW installed globally; concentrated in 10 countries (US, Indonesia, Philippines, Türkiye, New Zealand, Mexico, Kenya, Iceland, Italy, Japan)
- Main growth driver are Hyperscaler PPAs, i.e., Microsoft (\$1B Kenya), Google (Nevada 115 MW, Fervo), Meta (150 MW XGS in NM + Sage), Amazon (Japan)
- Fervo IPO in 2026 as a major market-validation event