

Oilfields to Powerfields

Company Review for Prospective Investors • August 2024

Geothermal Energy from Oil & Gas Production & Infrastructure

Gradient Geothermal At A Glance

Growing Modular Geothermal & Heat Waste Capture for Oil & Gas and Beyond

We deploy modular geothermal power units in oil and gas basins across the United States to generate **clean electricity**, **reduce greenhouse gas emissions**, and provide **consistent power** from the hot water produced during oil extraction.

2024 Milestones:

- Operational revenue from contracts
- Growing contract base
- Advance to Phase 2 in DOE Wells of Opportunity
- Colorado Energy Office grant winner
- Kicked off seed-round funding



The World Needs Renewable Energy That is Baseload

Solar and Wind are Not Enough to Serve the World's Future Energy Needs



Al and the boom in clean-tech manufacturing are pushing America's power grid to the brink. Utilities can't keep up.





Texas power grid is challenged by electricityloving computer data centers

JUNE 21, 2024 · 3:44 AM ET HEARD ON MORNING EDITION FROM KUT

By Mose Buchele



Where is the power going to come from for all of these EVs?:

FINANCIAL TIMES

Energy Source Energy sector (+ Add to myFT

Soaring power demand from AI and crypto pose threat to grid

Amanda Chu JANUARY 25 2024

Geothermal Energy: Premier Renewable Baseload Energy

Capacity Factor Comparison



Geothermal	81%
Solar Concentrated:	49 %
Onshore Wind:	36%
Solar:	17%

Problem: Traditional Geothermal Energy Underdeveloped

Big-Capital Geothermal Investment Risk







Underdeveloped

2% Share of US Renewable Energy

High Cost

6.8¢ Per KWh cost of Geothermal (LCOE)

Long Lead Times

7-10yrs Activation time for Geothermal projects

Low Temp, Distributed Geothermal Opportunities

Not Geographically Limited and Ready to Scale

Current High- and Medium-Temperature Geothermal Project Locations Geothermal Sites (USGS)



High and Medium-Temp Geothermal:

- Limited to areas where heat is above 300F
- Geographically specific to the West and Southwest Region of the US

Available Low-Temperature Geothermal Project Locations Available Geothermal Resources



Low-Temp Geothermal:

- Defined by areas where heat is above 160F
- Geographically spread out throughout the US
- Corresponds Well to Regions of Oil and Gas Extraction

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Transformative Market Potential

US Market for Geothermal Electricity Produced from Oil and Gas Wells

- Millions of Available Sites
 - 2.9M Oil and gas wells in the US
- Massive # of Applicable Wells
 - 520,748 Suitable for Geothermal Electricity Production⁸
- Significant Generation Potential
 - 13GW Potential Power Generation
- Huge Total Market Size
 - \$11.4B Revenue for 13GW @ \$100/MWh Current Total Market is \$9.1B
- Meaningful GHG Reductions
 - 18.2M Tons of CO2 emissions avoided⁹



Our Technology

Proven Technology and Proprietary Design

Organic Rankine Cycle Generator (ORC)

- Transforms thermal energy to electricity via generator
- Off-the-shelf component, currently provided by partnership with ElectraTherm

HXC Sled

• Proprietary heat transfer sled from produced fluids to ORC



Active in Several Geothermal Markets

Proven Technology For A Variety of Oil & Gas Applications

Power Gen from Stable Liquid Flows

Minimum 150° F, 1800 bfpd
Any combo of water and oil



Pine Valley, NV

Cooling& Power Gen from <u>High Pressure Gas</u>

Handles most pressure ratingsAny combo of water and oil



A fluid chiller in the Haynesville

All cases:

- Off-grid application w/battery
- Mobile or static deployments
- Min 150° F, 1800 bfpde

Cooling from Liquids Flowback

- Replaces fluid chillers
- Mobile to follow cooling needs
- Generates power*

Williston Basin, ND

* depending on available thermal mass

Gradient Ge

Our Operations

North American Focused with Global Reach and Demand

Current Deployments

O&G Chiller Replacement

- Max Pipeline Fluid Temperatures
 - 120 140 F Max Operating Temp for Poly Pipe
- Chiller Rental Required to Cool Fluids
 - \$5-11k Monthly Cost to rent Chiller (excluding Operating Costs)

Global Chiller Market 2023

\$4.5B For Lease and Own

Global Chiller Market 2033

10.5B Tons of CO2 emissions avoided⁹

Technology

24x7x365 Cloud-Based Infrastructure Monitoring and Alert System

- Event-drive operational alert system with realtime text and email alerts
- Website and mobile executive and operational dashboards with real-time data from cloud-based database
- Field communications with redundant LTE, 5G, and satellite options

	Blackburn Dashboard
+	HXC Plots Table5 🔹 😴 🚥
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Intellectual Property

Robust and Growing Portfolio

Wellfinder Web App (v1.0)

• Develop an integrated software tool to help easily locate and evaluate oil and gas wells and facilities for geothermal potential.

HXC Sled (3 patents filed April 2022)

• Heat exchanger sled that allows ORC equipment to work in the oilfield. V2 modifications and enhancements in design phase now

Downhole Heat Exchanger (Patent filed July 2024)

- Proprietary technique to preserve geothermal heat to surface.
- Advanced modeling of heat loss in surface facilities and mitigations schemes

Additional Opportunities (ongoing)

• Additional Heat Capture Hardware, Software, and

Business Model

Multiple Revenue Streams

Gradient Geothermal plans to produces revenue from **6** interconnected **business lines**

> Sourcing, Acquisition, and Revenue from Geothermal Land Leases for Company Projects as well as outside clients

Manufacturing and Sales of ORC geothermal equipment to keep profit margins in house as well as benefit from additional sales

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Growth Timeline

Disciplined Growth Rooted in Operational Success

- **Pilot**: Development and deployment of first-to-market cooling strategy
- Seed: Successful initiation of 3 commercial operations totaling 7+ additional ORC units.
- Scale: Replication of operations and growth

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- Constant yearly new unit count added starting in 2025
- Execution on Energy and Service models together in 2025+
- Unit count is the key driver that affects revenue and EBITDA growth
- Opportunity to package and sell the Investment Tax Credits associated with Geothermal equipment

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2024 Seed Raise

\$3M to Deploy Customer Installations and Scale

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- Operating Expense includes all OpEx & CapEx for 12 18 month runway
 - Series A raise beginning in Q2 2025
 - \$2 MM raised
 - \$1 MM available

Gradient Geothermal

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