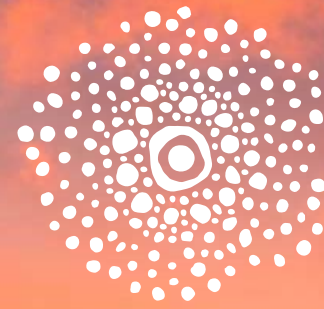


# AUSTRALIAN GEOTHERMAL IS BACK



**earths**  
energy



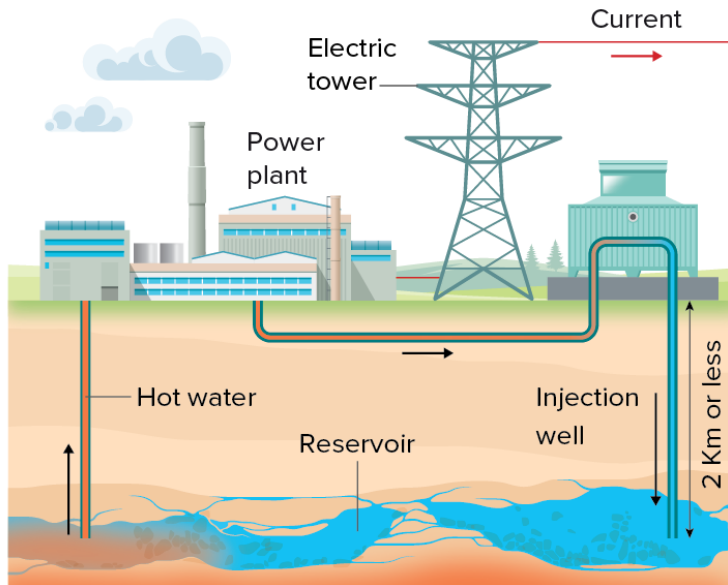
**Earths Energy (ASX: EE1) &  
Sharewise Webinar**



# Geothermal Basics

## TRADITIONAL GEOTHERMAL

Water naturally heats underground in volcanically active places. Power plants draw the hot water and/or steam to the surface where it powers electricity-generating turbines. The used water is then returned.



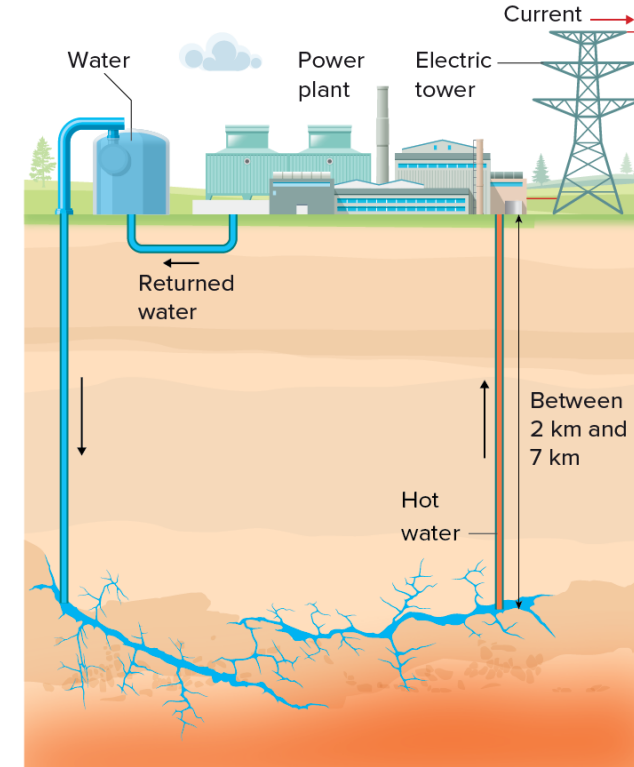
Easily Found & Engineered

Represents ~90% of the world's current projects

(“Hydrothermal”)

## ENHANCED GEOTHERMAL

Geothermal energy can be extracted from non-volcanic places by pumping cool water through a system of man-made cracks in deep hot rock formations. Once heated, the water is used to generate electricity.



Hard to Find & Historically Hard Engineering

**Perfect for Australian Conditions**

(“Hot Dry Rocks”)

**GREEN BASELOAD  
POWER PRODUCED  
RELIABLY 24/7**

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**PROJECTS ON GRID  
TO 83% OF AUSTRALIA'S  
POWER DEMAND**

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**\$40M SPENT  
ON DRILLING  
AND TESTING**

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- Australia's Most Advanced Geothermal Projects – drilled and tested during 2008 to 2011 geothermal boom
- Significant Valuation Upside – 11x to 13.5x EE1's current market capitalisation
- Projects Now More Feasible – 13 years of engineering developments in the US (e.g. horizontal drilling)
- Strong Market – market appraisal complete, confirms favourable PPA rates for project locations on grid
- Project Economics Being Assessed – Baker Hughes and GLJ reviewing new engineering/project economics





# Why EE1 is Australia's Most Advanced

Drilled and tested with significant heat and access to the grid

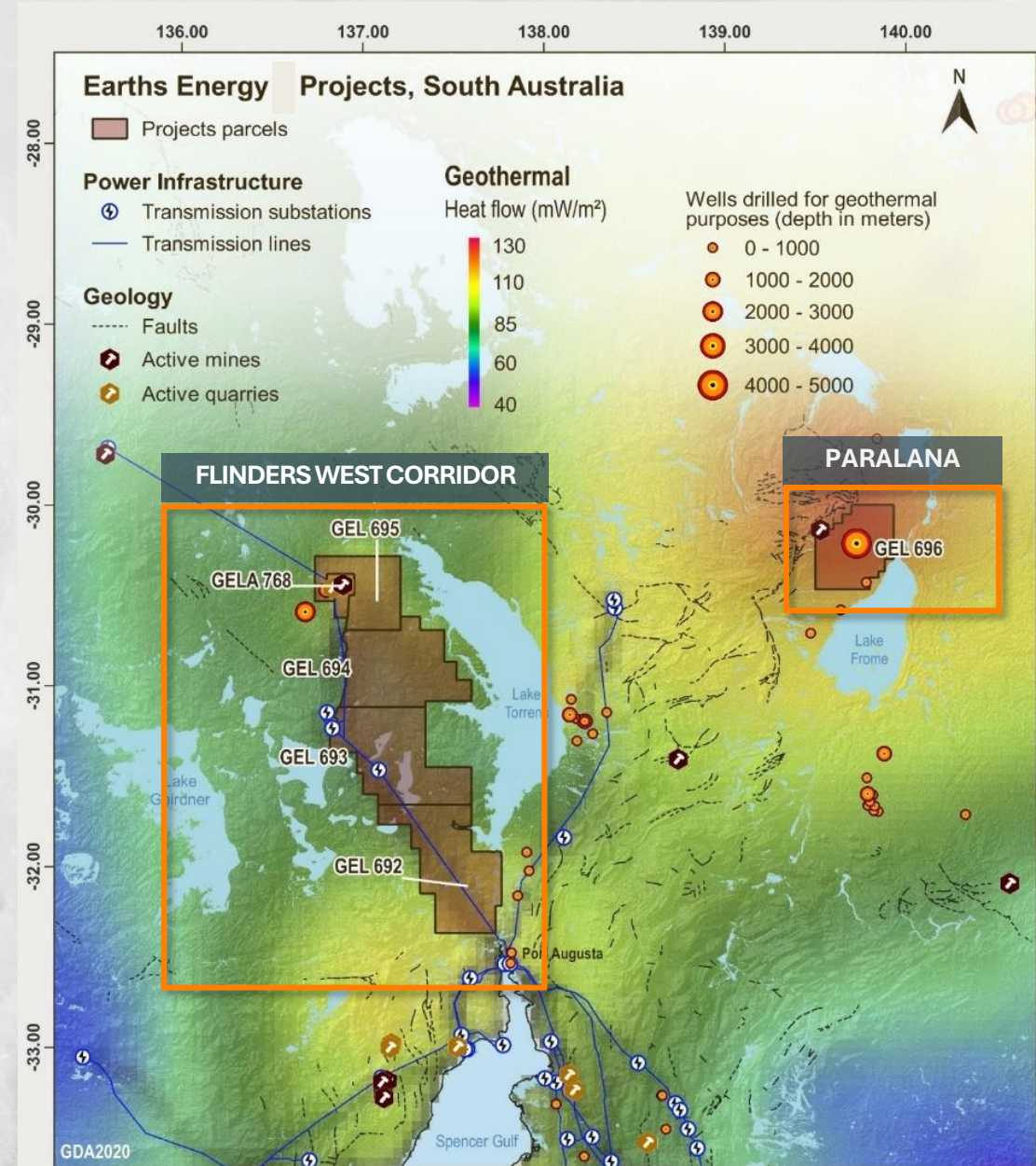
## Paralana Project Highlights

- Drilled to 4,012m depth with a reservoir temperature of 190°C
- Heat gradients as high as 80°C per km of depth in initial shallow areas
- Heat gradient of >46°C at bottom hole depth (drilled and tested) of 3,685m (1.84x the Australian average)
- Perfect candidates for the developments in EGS methods from the US
- Potential for new drilling in 2025 to extend Paralana 2's well depth

## Flinders West Project Highlights

- Existing well drilled to 1,934m depth with a reservoir temperature of 85.3°C
- Heat gradient of >43°C at bottom hole depth (drilled and tested) of 1,934m (1.72x the Australian average)
- Excellent Grid Access with Grid Services potential – SA rules enable grid access for geothermal but not for other forms of power generation
- Next Generation Geothermal Production Potential
- CCS Exploration and Development Potential

*Australia's most advanced projects **already drilled and tested** with known heat capable of EGS development*





# Paralana Project Snapshot

The most developed EGS project in Australia with proximity to demand



## GEOTHERMAL POWER PRODUCTION

- Extensive geothermal exploration and appraisal work noting sedimentary basin locally up to 5km thick (Arrowie)
- Proposed area for Enhanced Geothermal System (EGS) analogous to similar successful projects in the US and Europe. (eg Forge & Soultz sous forets)<sup>1</sup>
- Geothermal power potential estimates independently verified to 1.9 – 7.9MWe/km<sup>2</sup> <sup>2</sup>
- High range of surface heat flow (~120 mW/m<sup>2</sup>) compared to other regions of Australia and to global average<sup>3</sup>
- Deep exploratory well Paralana 2 stimulated and flow tested with temperatures up to 171°C at 3679 - 3685 m



## NEARBY MINES

- Close proximity to energy intensive Four Mile & Beverly uranium mines
- Opportunity to offset current diesel power consumption with geothermal power

1: <https://fervoenergy.com/fervo-energy-breaks-ground-on-the-worlds-largest-next-gen-geothermal-project/>

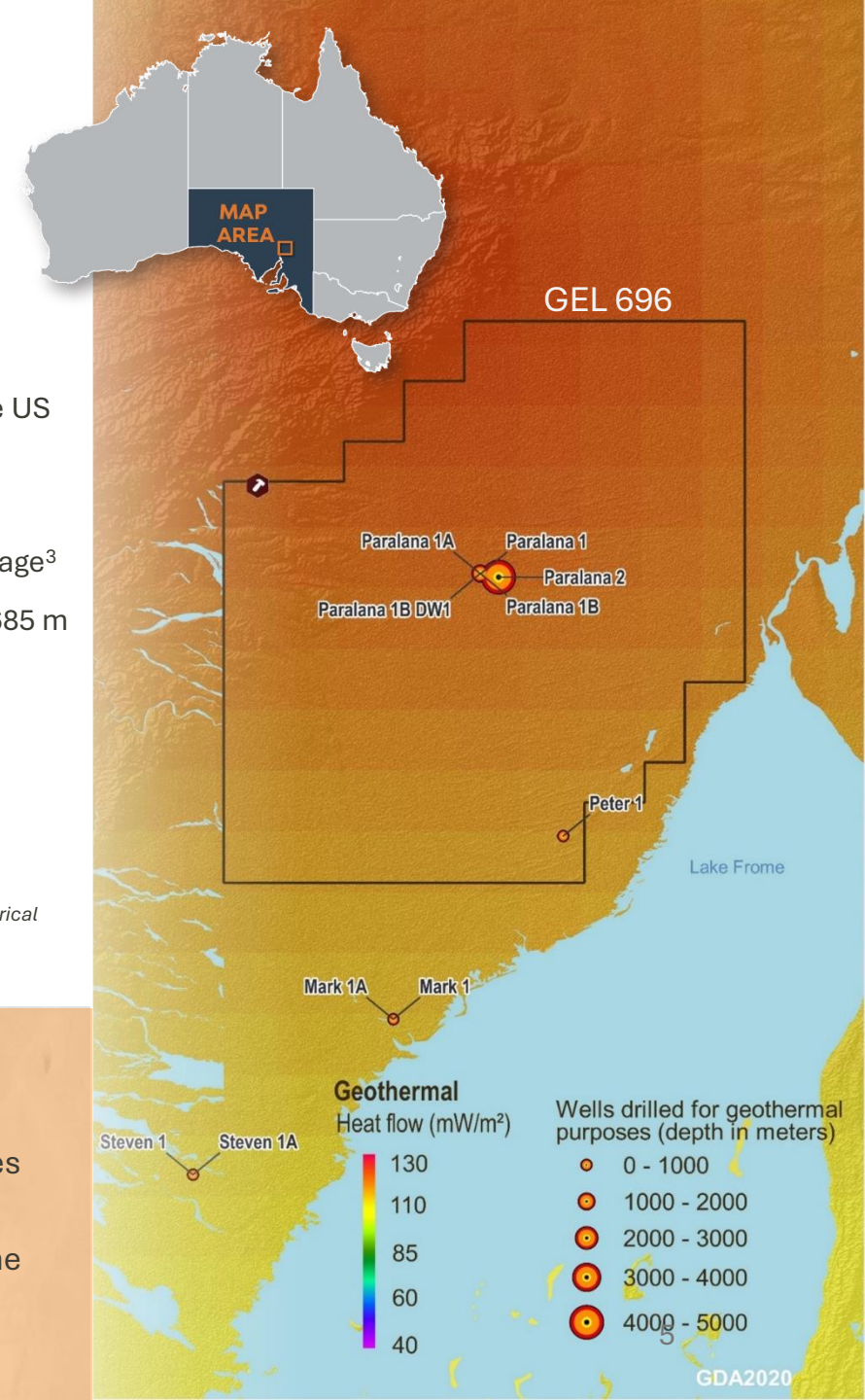
2: Independent Technical Expert's indicative aggregate estimates assuming a plant load-factor of 0.9 and a range (P90 to P10) 1.9 – 7.9MWe/km<sup>2</sup> (Megawatt electrical per square kilometer) for GELA696

3: the mean heat flow within GEL 696 is 120 ±10 μWm<sup>-2</sup>, compared to an average of 51–54 μWm<sup>-2</sup> in other countries



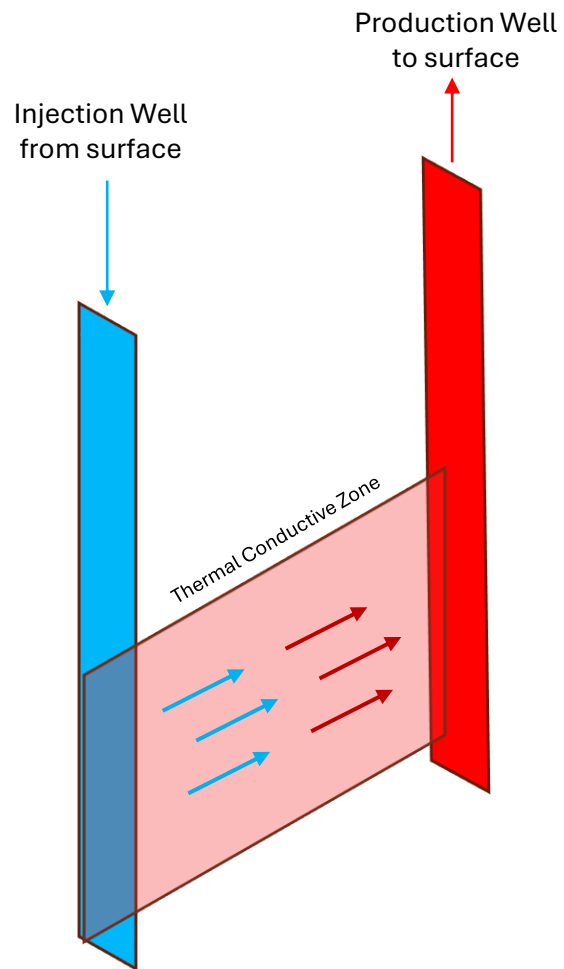
## Next Steps - Paralana Project

- Modelling work to support a new generation EGS project at Paralana
- Refine Paralana's power density modelling and likely energy production compared to US analogues utilising more modern engineering
- Assess the feasibility of further drilling at Paralana 2 in the context of further developing the project's potential EGS development
- Assess potential joint venture opportunities

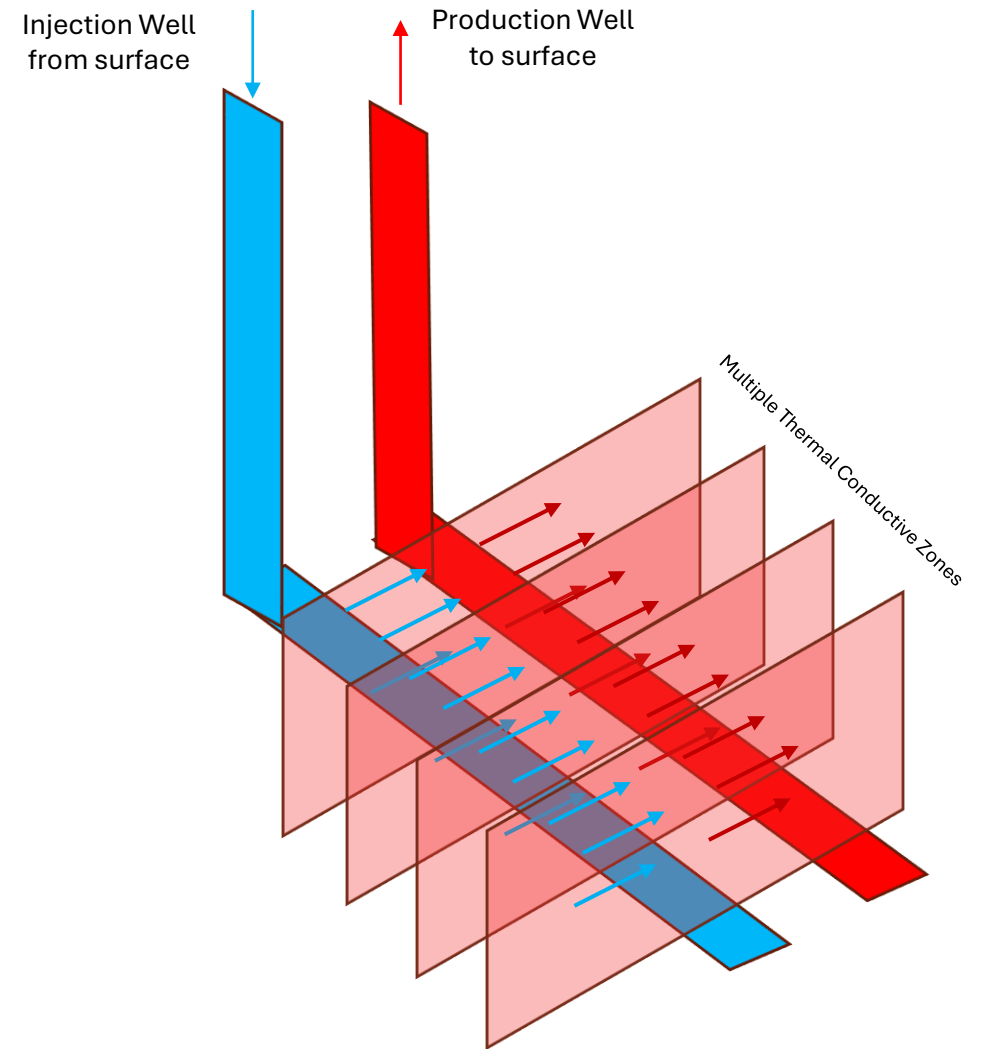




# Paralana: Then vs. Now



**Diagram 1:** Historically Paralana was only drilled vertically – this greatly limits the potential for thermally conductive zones



**Diagram 2:** Paralana was only drilled vertically – this greatly limits the potential for thermally conductive zones

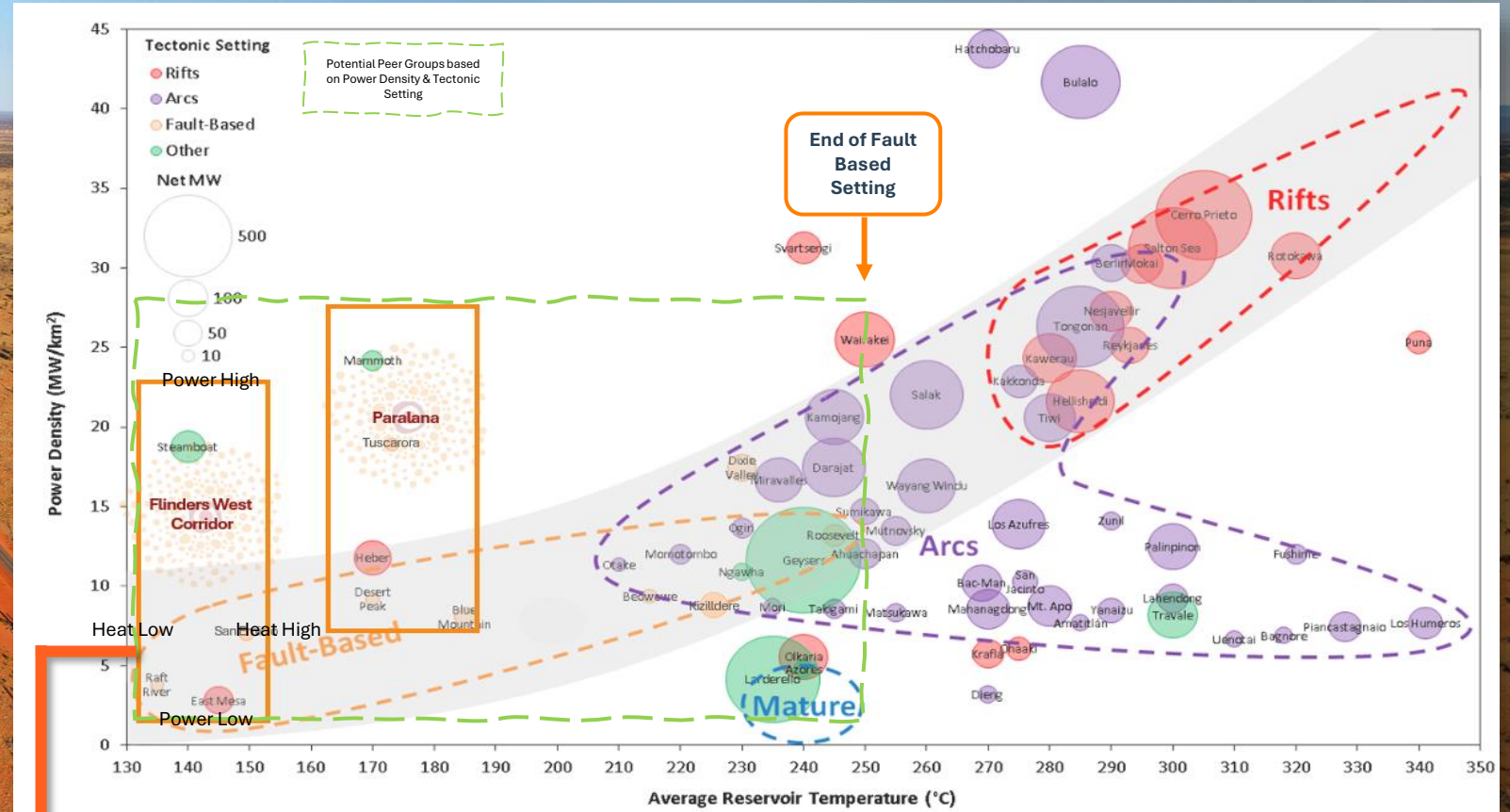


# EE1's projects have world class power potential

Utility scale power density similar to US operating projects

## KEY OBSERVATIONS

- EE1's project areas have substantial development potential
- The higher the top of the rectangle, the higher power potential which may indicate the potential for higher power yielding projects
- Paralana and Flinders West are within the same potential power density ranges as the Geysers project, the world's largest operating geothermal project which produces approximately 20% of California's renewable electricity
- Implementing modern techniques like newly styled horizontal drilling can greatly increase the power density of a project in certain areas
- EE1 routinely updates these power density assumptions based on internal work conducted and the application of new assumptions



- The orange rectangles show the projects' heat ranges (the horizontal width) and the power density potential range per km<sup>2</sup> (the top being the Power High estimate and the bottom being the Power Low estimate) of each of the South Australian project areas. This is marked on the Flinders West rectangle.
- The size of the circles represent the size of the projects. The bigger the circle, the greater the installed capacity and power production potential of the project.



# Board, Management and Capital Structure

High caliber team, tight capital structure, set for growth

## BOARD AND MANAGEMENT



**GRANT DAVEY**  
Executive Chairman

Entrepreneur with 30 years in mining and energy project leadership, Chairman of Frontier Energy (ASX: FHE), Director of Lotus Resources (ASX: LOT), and is a member of the Australian Institute of Company Directors.



**JOSH PUCKRIDGE**  
Chief Executive Officer

Experienced Mining Executive with over 10 years' experience running ASX-listed companies. Mr Puckridge most recently ran Steam Resources as its Managing Director where he assembled one of the world's largest geothermal exploration and development projects. Josh maintains strong international networks of geothermal advisors and experts. He has focused on sourcing new technologies, such as supercritical CO<sub>2</sub> plant designs, which are particularly suited to commercially optimising Australian geothermal projects.



**CHRIS BATH**  
Finance Director

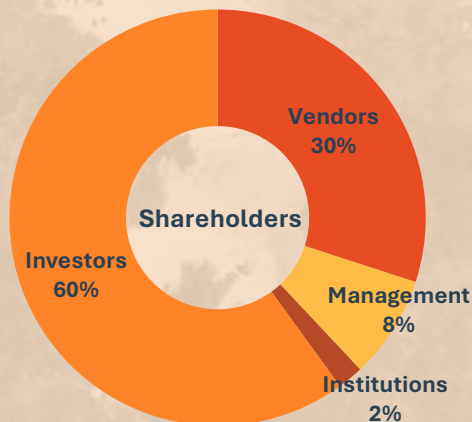
A Chartered Accountant with over 20 years of senior management experience in energy and resources, including financial reporting, commercial management, project acquisition, and ASX compliance. Mr Bath is Executive Director and CFO of Frontier Energy Limited (ASX: FHE) and Company Secretary of Copper Strike Limited (ASX: CSE).



**DAVID WHEELER**  
Non-Executive Director

Over 30 years of experience in executive management and advisory, working with Pathways Corporate for family offices and ASX-listed companies. Mr Wheeler has international project experience in major regions and is a Fellow of the Australian Institute of Company Directors, holding multiple directorships.

## CAPITAL STRUCTURE



1 – Various vesting periods, exercise prices and vesting conditions – see ASX announcements 4 January 2024, 3 June 2024 and 5 July 2024

2 – 220.4m shares escrowed until 7 February 2026, 73.8m escrowed until 7 February 2025

3 – as at 24 July 2024

## TOP 10 SHAREHOLDERS<sup>3</sup>

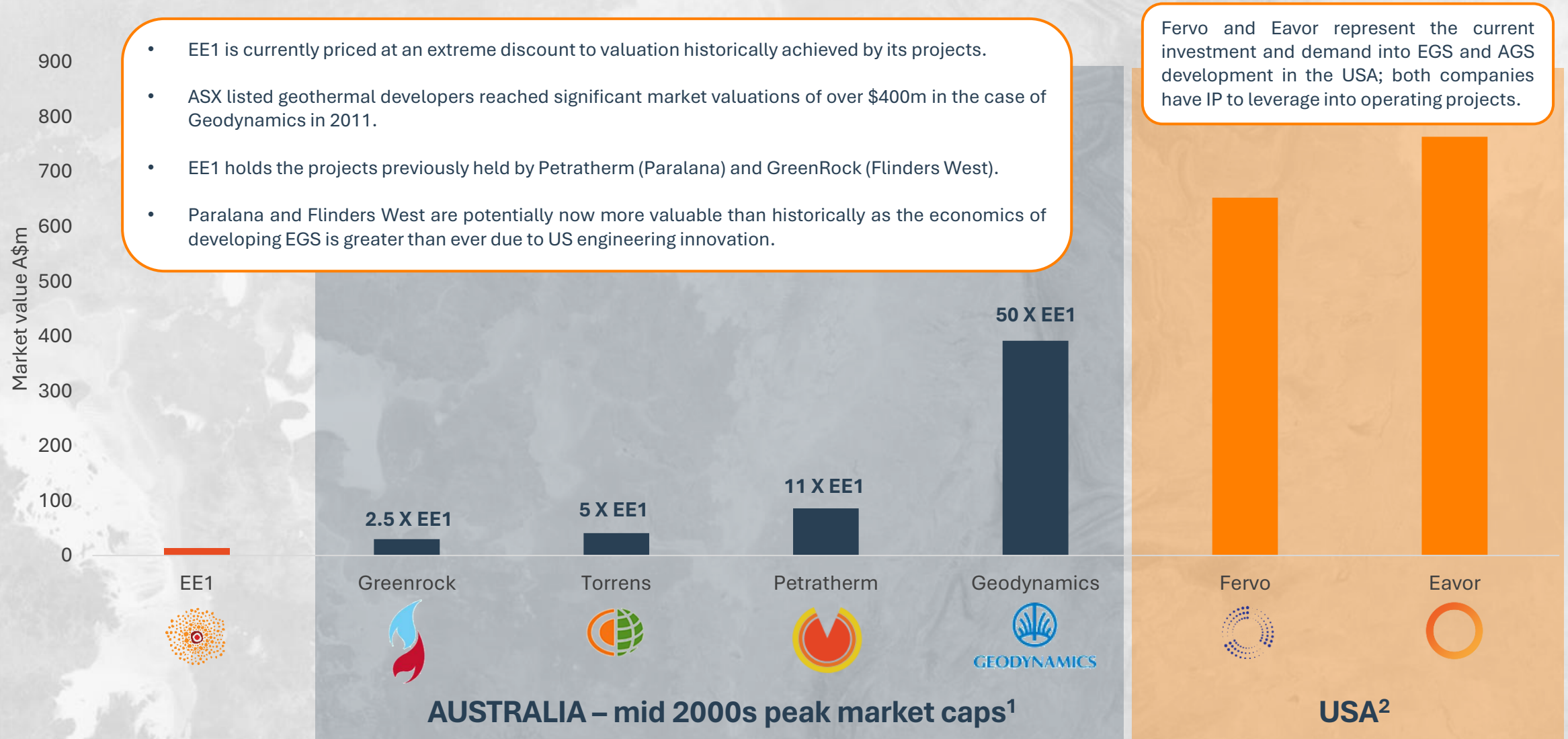
Shareholder	% held
Mimo Strategies	10.6%
Stephen Biggins	9.4%
Grant Davey	7.2%
Jadematt Investments	5.9%
Sunset Capital	5.9%
Aviemoore Capital	4.3%
Ninety35	3.5%
Arredo	2.9%
HSBC Nominees	2.4%
BNP Paribas Nominees	2.3%





# EE1 holds projects with market tested upside

Significant valuation upside compared to previous Australian cycle and current US developers



1 – asx.com.au; <https://www.warwickhughes.com/blog/?p=2371>

2 – [https://www.energystartups.org/top/geothermal/?trk=feed-detail\\_main-feed-card\\_feed-article-content](https://www.energystartups.org/top/geothermal/?trk=feed-detail_main-feed-card_feed-article-content)



# EE1 is On Grid to 83% of Australia

83% of Australia's electricity demand from site

## Connection to 83% of Australia's power demand

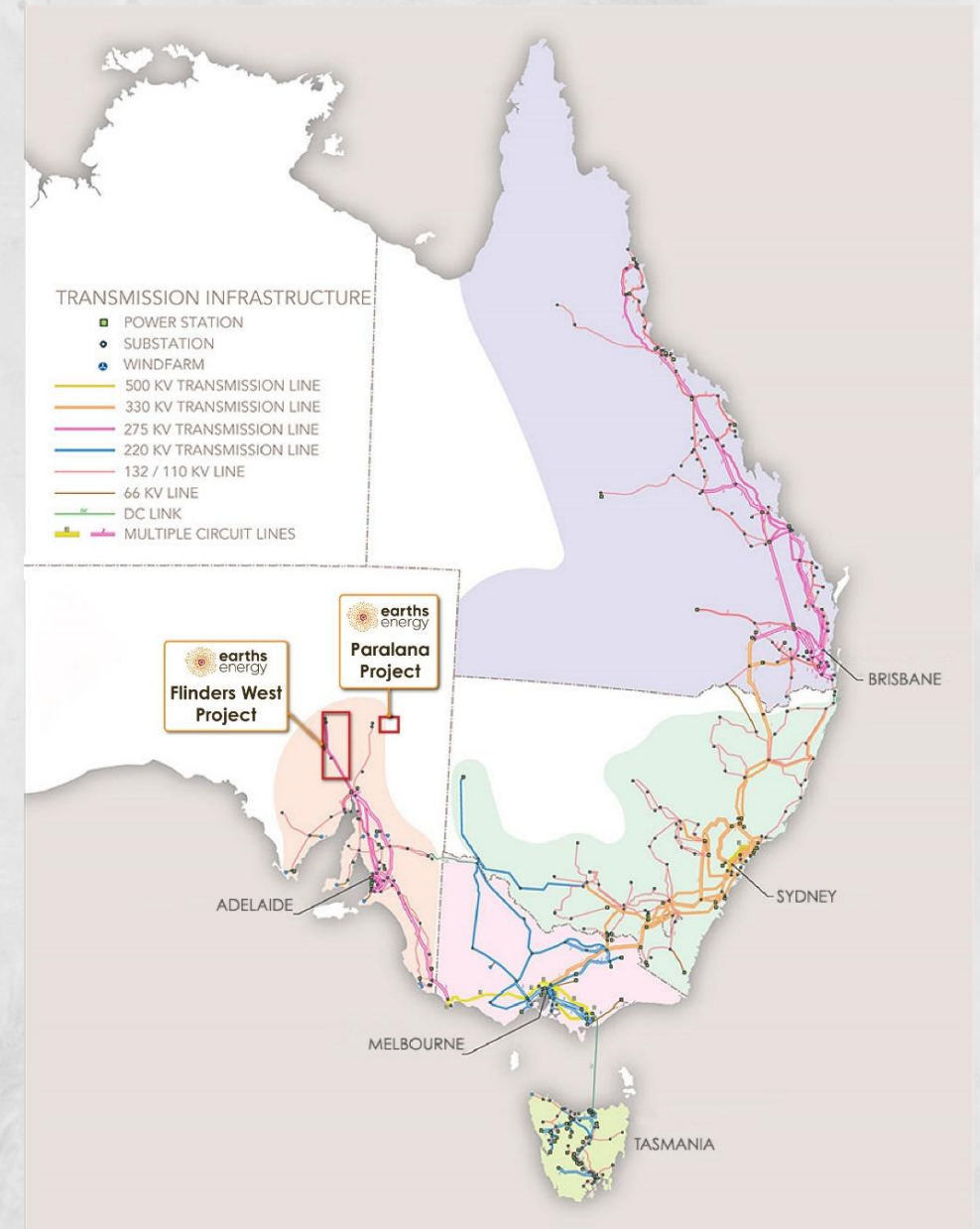
- EE1's Flinders West project has multiple 132kV power lines along its entire strike, as well as multiple network connection points
- The South Australian electricity network is ultimately connected to the Australian East Coast network and the National Electricity Market (NEM)
- South Australia standards allow for geothermal baseload power to reach grid connection (unlike wind and solar)

## National Electricity Market still far short of 2030 renewable target

- The target for 2030 is to produce 82% of electricity from renewables
- In FY24, renewable power produced only represented 38%<sup>2</sup> of total on the NEM

## Reliance on non-renewables and higher prices

- The average price on the NEM over FY24 was \$99/MWh
- While SA had one of the higher power prices at \$103/MWh, and >69% renewable generation, in other parts of the NEM such as NSW, power prices were even higher, and the contribution of renewables lower (NSW: 32%)



EE1's South Australian Projects relative to the east coast grid

1 - <https://www.aemc.gov.au/energy-system/electricity/electricity-system/NEM>

2 - <https://opennem.org.au/energy/nem/>



# World Class Technical Partners

EE1 is capable of world class development potential via its global partners



## Baker Hughes

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- **Global energy leader in technology and engineering** that provides solutions to energy and industrial customers worldwide
- Pioneering Advanced Geothermal System development with GreenFire Energy (potential for Australian roll out)
- **MoU Executed with EE1 based on the potential of the Company's projects**



## GLJ

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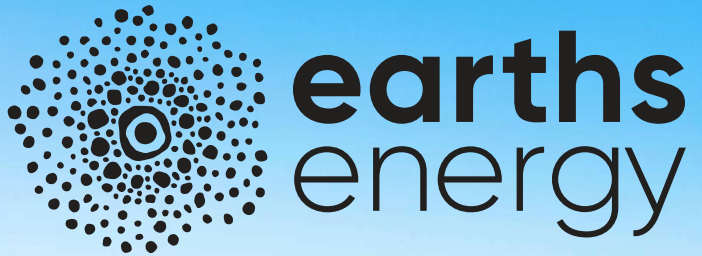
- **Global leader in geothermal development** and project integration such as in Carbon Capture, Usage and Storage (CCUS) in geothermal projects
- Focused on the Company's geothermal project development
- Played a key role in the development of Vulcan Energy's Zero Carbon Lithium™ project's development



## JRG

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- **Global team of expert geoscientists and geophysicists**
- Experienced in the project assessment and development of geothermal prospects and operations around the world including: USA, Mexico, Europe, Australia and the Middle East
- Unmatched agility to work various stages of project development from early evaluation to pre-feasibility



## Australian **Geothermal**

Commercial green on grid baseload power

**For more information contact:**

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**Chief Executive Officer**

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**E** [jrp@ee1.com.au](mailto:jrp@ee1.com.au)



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Assumptions have been made regarding, among other things: the energy market, the Company's peers, the Company's ability to carry on its future development works, construction and production activities, the timely receipt of required approvals, the price of electricity, the ability of the Company to operate in a safe, efficient and effective manner and the ability of the Company to obtain financing as and when required and on reasonable terms. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used.

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