



**earth's**  
energy

# Investor Briefing Note

## Enhanced Geothermal Systems (EGS)

ASX: EE1 | August 2024



# Investor Briefing Note: Enhanced Geothermal Systems

## What is an Enhanced Geothermal System (EGS)?

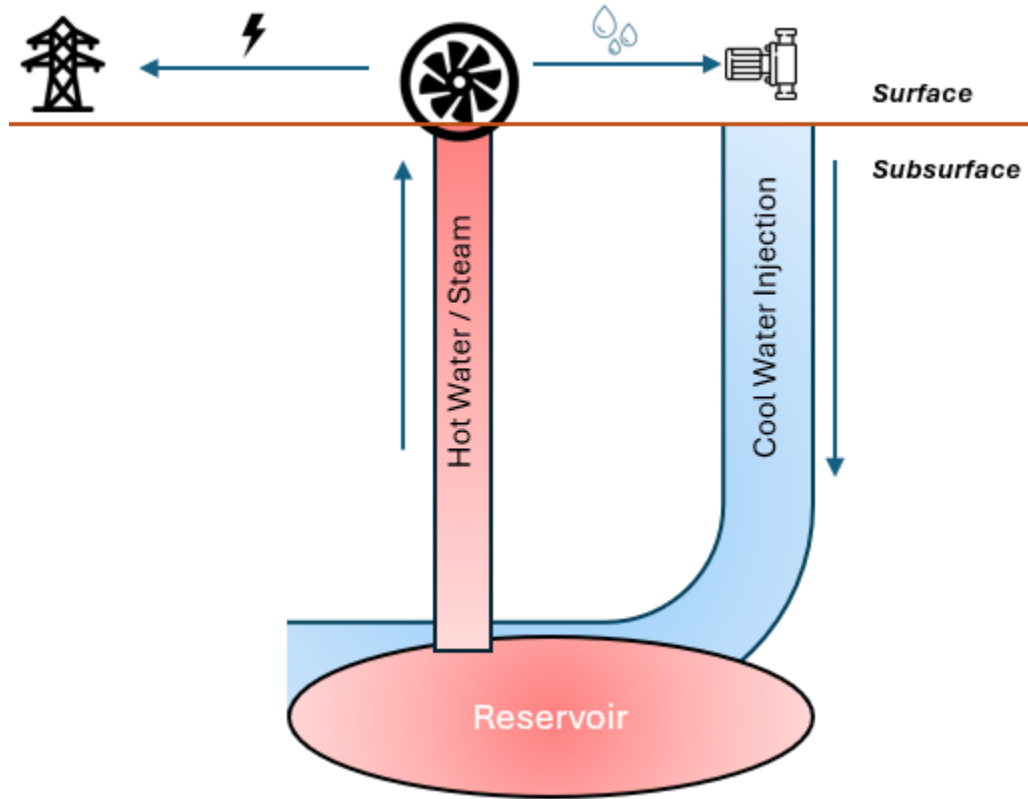


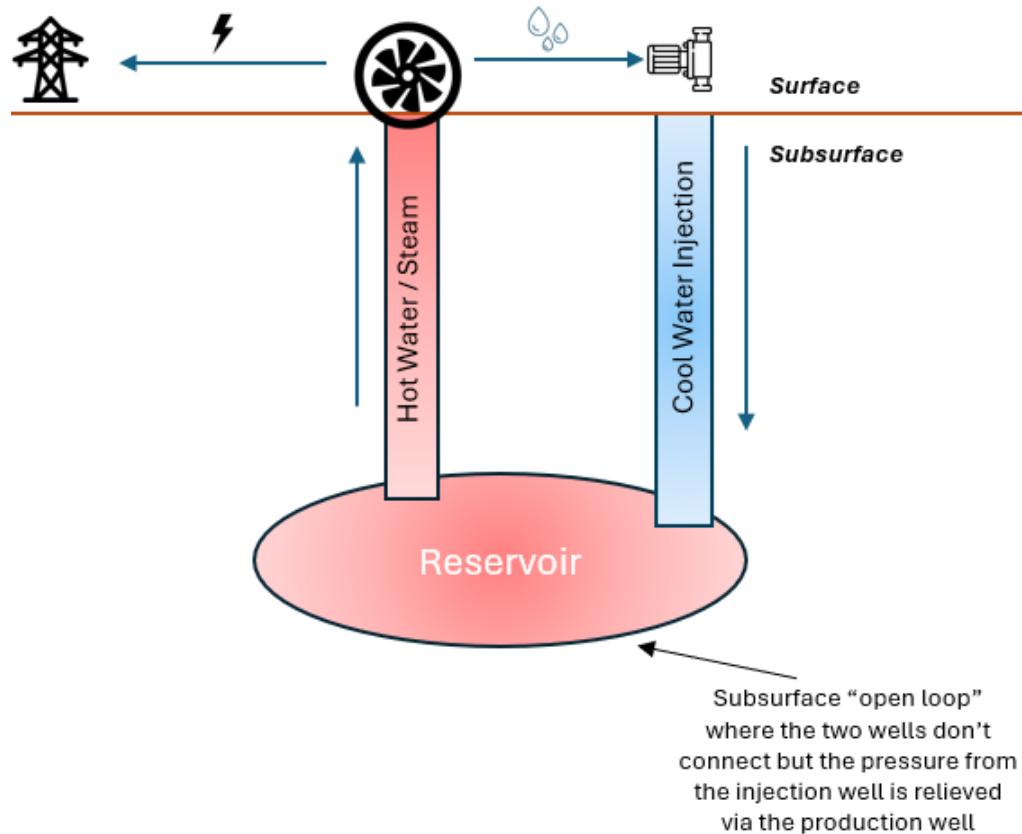
Diagram 1: Modern EGS Project

- Enhanced geothermal systems introduce water to the hot and dry reservoir
- The cool water is injected down through the injection well where it interacts with the hot dry reservoir and builds pressure
- As the pressure and heat of the fluids increase, they are channeled through the production well and brought to the surface
- At the surface, the steam spins a turbine to generate electricity and as the steam cools the newly cooled water is then re-injected back into the injection well to repeat the cycle



# Investor Briefing Note: Enhanced Geothermal Systems

## Recent Developments in Enhanced Geothermal Systems



- Historically, most enhanced systems relied on only the vertical drilling of the injection well
- This resulted in less interaction between the cold fluids and the hot dry reservoir, seeing less pressure and heat build up (see Diagram 2)
- Horizontal drilling enables more surface area contact between the cold fluids and the hot dry reservoir, allowing for more stimulation and the generation of more heat and pressure
- While horizontal drilling has been available for over 80 years it has only recently reduced in cost by over 70% along with its accuracy greatly increasing



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## How does EE1 benefit from these advancements in EGS?

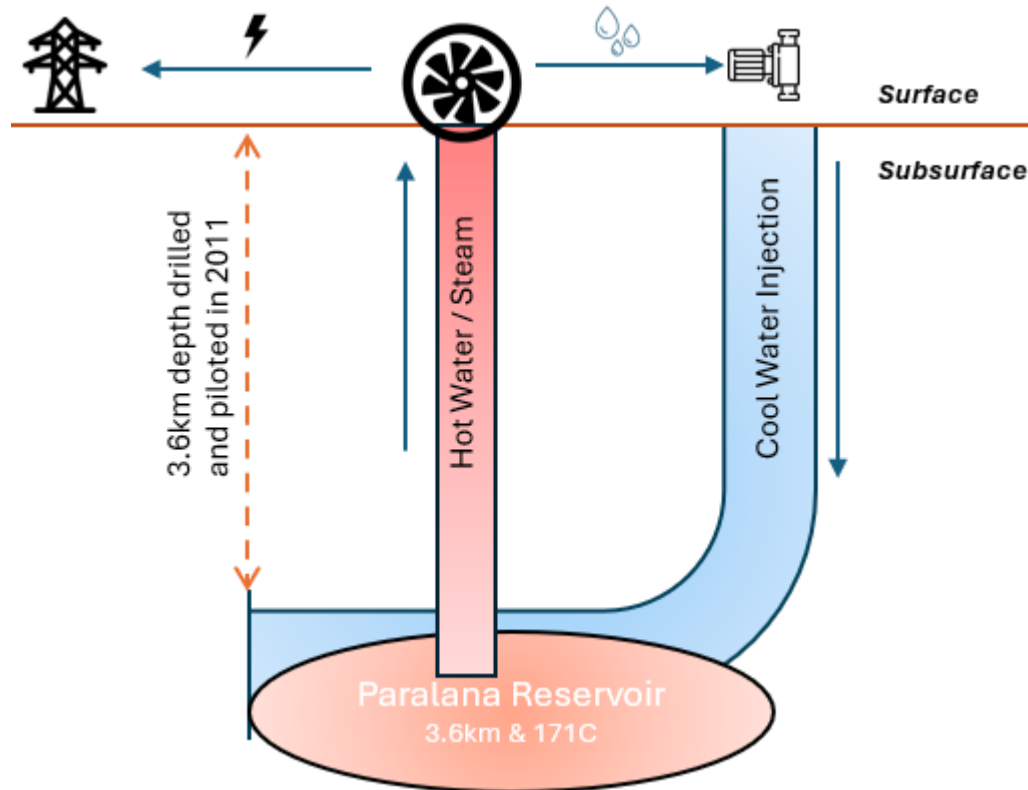


Diagram 3: EE1's EGS Project

- EE1 has Australia's most advanced EGS development project at Paralana, South Australia
- When drilled and tested in 2011 only vertical wells were used, like those in Diagram 2
- EE1's project potential stands to be greatly increased by developing Paralana with modern developments in horizontal drilling (see Diagram 3)
- Paralana's project performance and feasibility is potentially greatly improved by applying, for the first time, modern EGS developments such as horizontal drilling

## *Key summary points*

### **What is EGS?**

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**Enhanced Geothermal Systems (EGS) are where fluids like water are newly introduced to a geothermal reservoir to increase the heat and pressure brought to the surface**

### **What's changed?**

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**Horizontal drilling increases heat and pressure build up in the reservoir by increasing the surface area of cold fluids interacting with the hot dry reservoir**

### **What does this mean?**

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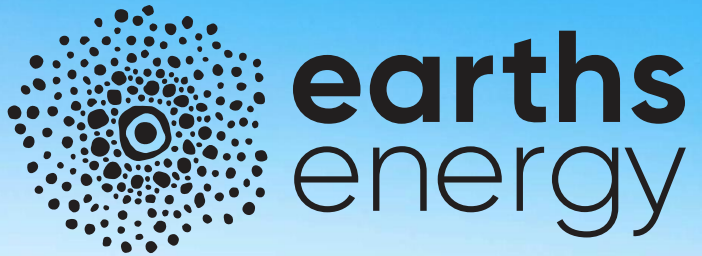
**It means that projects like those held by EE1 have the potential to be greatly improved by the use of modern EGS methods like horizontal drilling**

### **What's next?**

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**EE1 is assessing the adoption of modern EGS methods for its Paralana project and all other projects areas like those in its Flinders West project area**





**Australian Geothermal (ASX: EE1)**  
Commercial green on grid baseload power

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