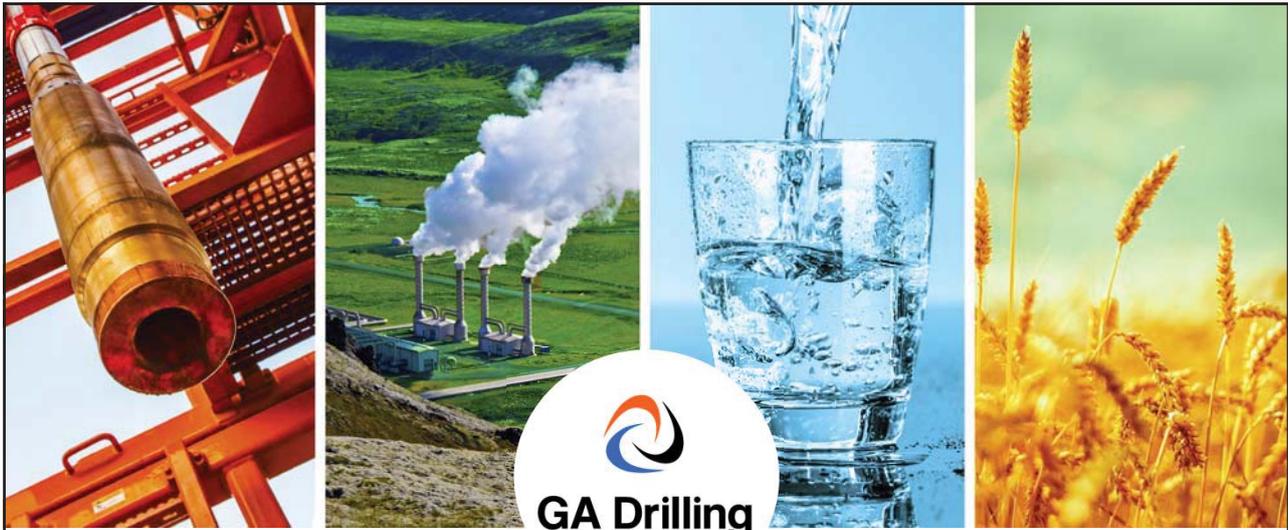


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EEF.NGO/11/19
31 May 2019

ENGLISH only



GA Drilling

Energy Security – Redefining the Renewable Energy Mix

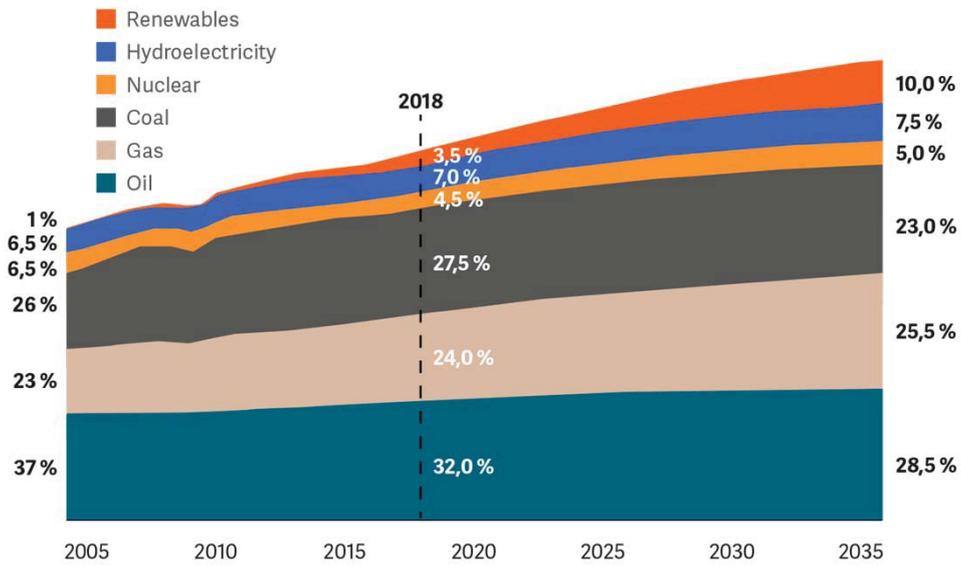
Igor Kocis, Co-founder and CEO GA Drilling

May 2019

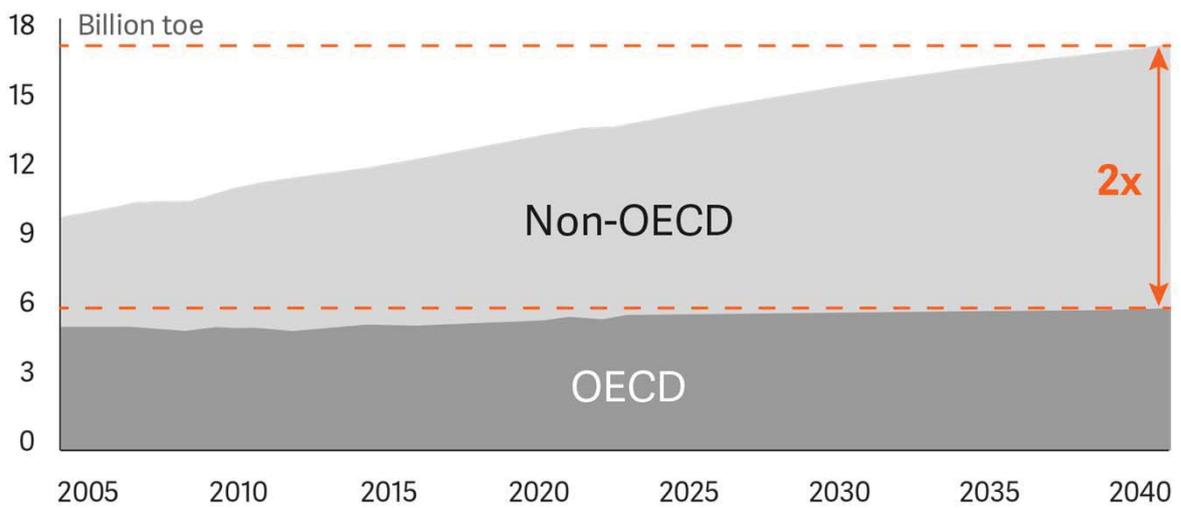
Status Quo

Current Energy Mix

Energy Consumption by Source 2005-2035



Energy Consumption in OECD and Non-OECD 2005 - 2035



Energy security

IEA defines energy security as *“the uninterrupted availability of energy sources at an affordable price”*

Availability of supply



Price affordability



Environmentally friendly

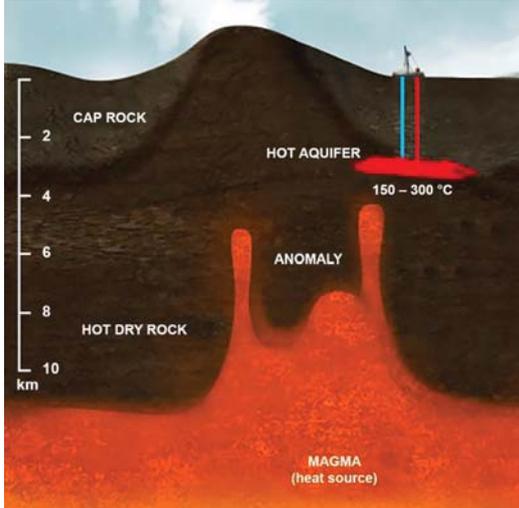


	Earth's landmass required	Intermittent	
 Geothermal			
 Wind			<ul style="list-style-type: none"> ■ Grid ■ Storage ■ Back-up
 Solar			
 Hydro			

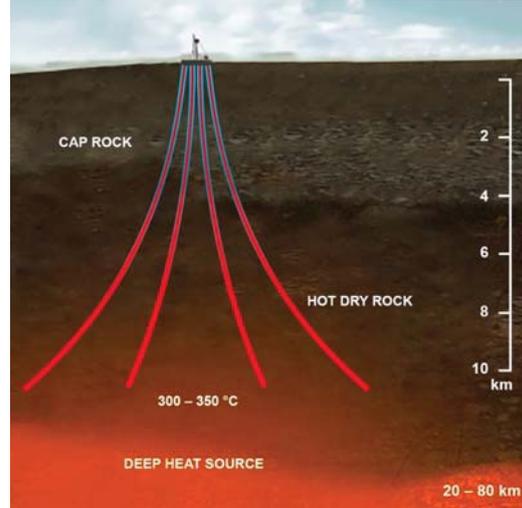


Changing the conventional approach

Deep Geothermal Systems - 5 km



Ultra Deep Geothermal Systems - 10 km



Source: GA Drilling

Ultra Deep geothermal power

DRILLING DEPTHS	TEMPERATURE TARGETED
5 – 10km	300 – 450°C
COST	POWER OUTPUT PER WELL
3 – 5 cents/kW	10-50MW
	CARBON EMISSIONS
	Zero-carbon

Energy security - Impact of geothermal power



Reduces import dependency on fossil fuels



Mitigates greenhouse gas emissions



Provides a cost-competitive form of energy

Food & water security – Impact of geothermal power



Provides access to clean water at a competitive cost



Increases food production

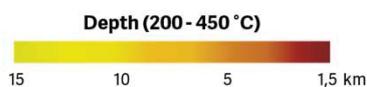
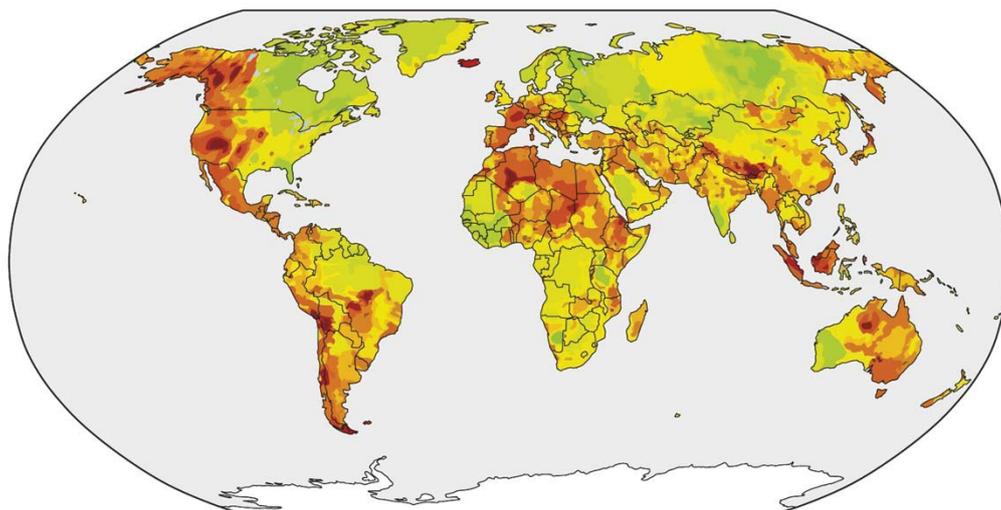


Reduces environmental migration

Unlocking the full potential of ultra deep geothermal power

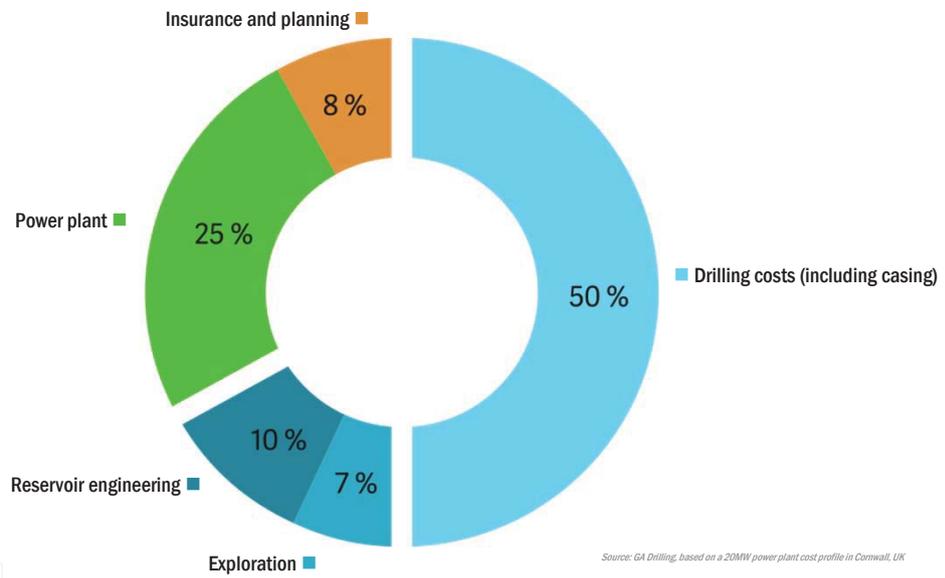
Challenges

Availability of High Volume Energy



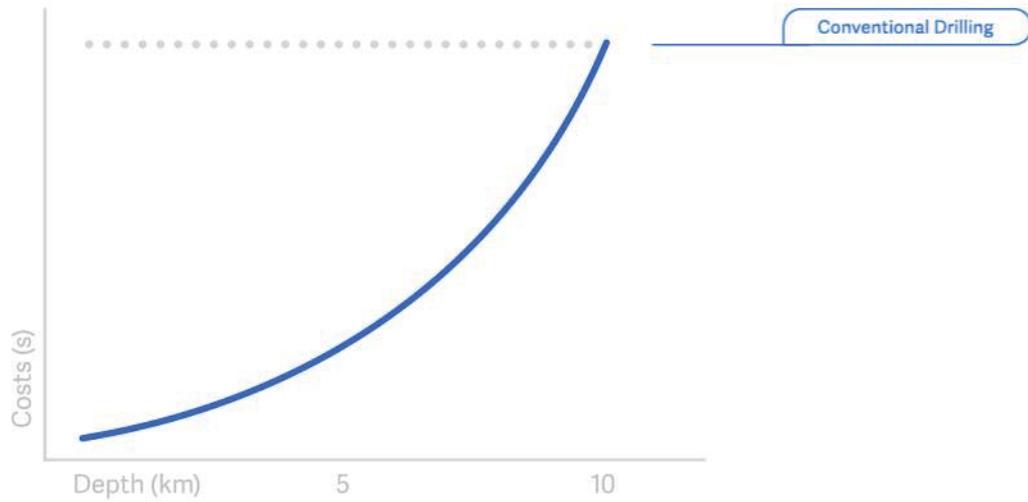
Source: Esri, DeLorme, GEBCO, NOAA/NGDC, National Geographic, HERE, Geonames and other contributors

The cost of drilling can vary from 20 – 70%



Source: GA Drilling, based on a 20MW power plant cost profile in Cornwall, UK





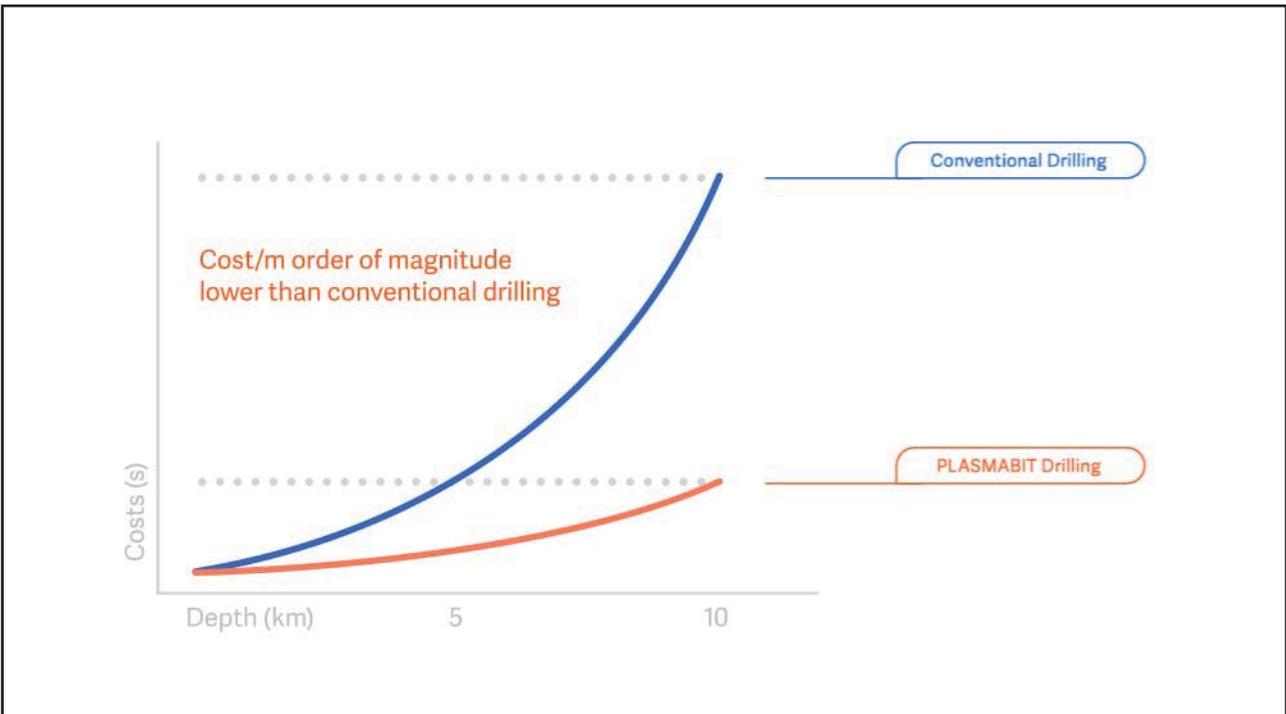
An innovative approach
Solution

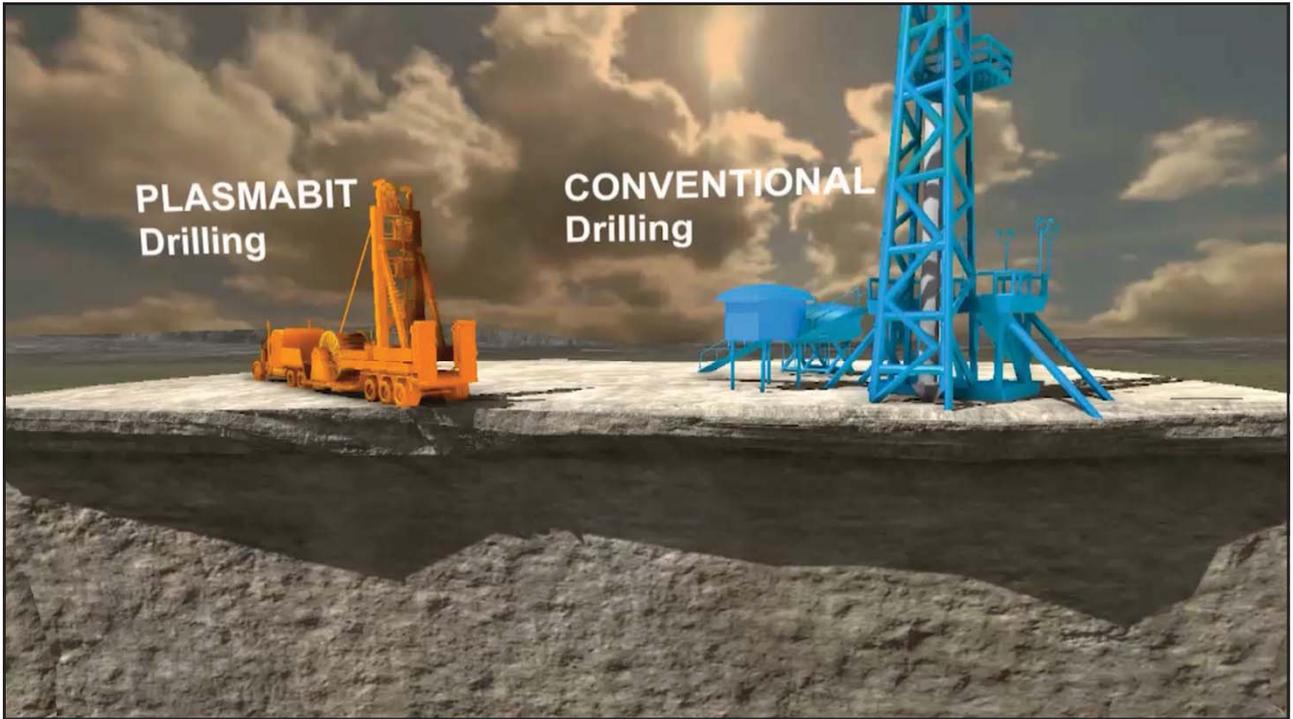


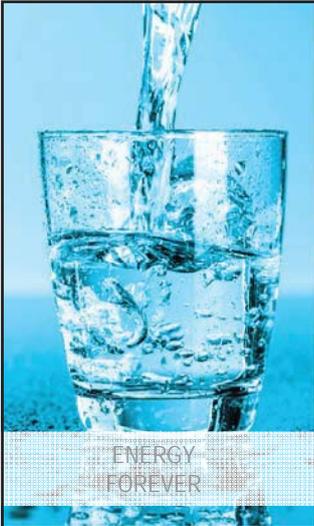


PLASMABIT Technology

1. Drilling through all materials
2. No physical contact, no wear and tear
3. Rapid constant penetration rate







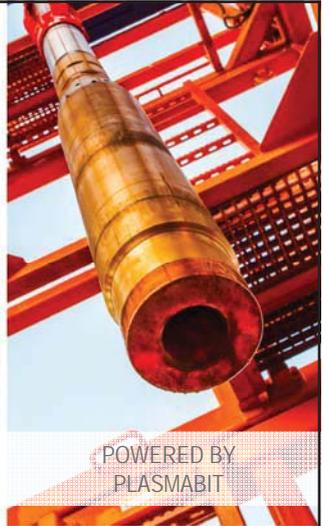
ENERGY
FOREVER



ENERGY
ANYWHERE



ENERGY
FOR EVERYONE



POWERED BY
PLASMABIT

