

EARLHAM GIGAGRID

September 2026

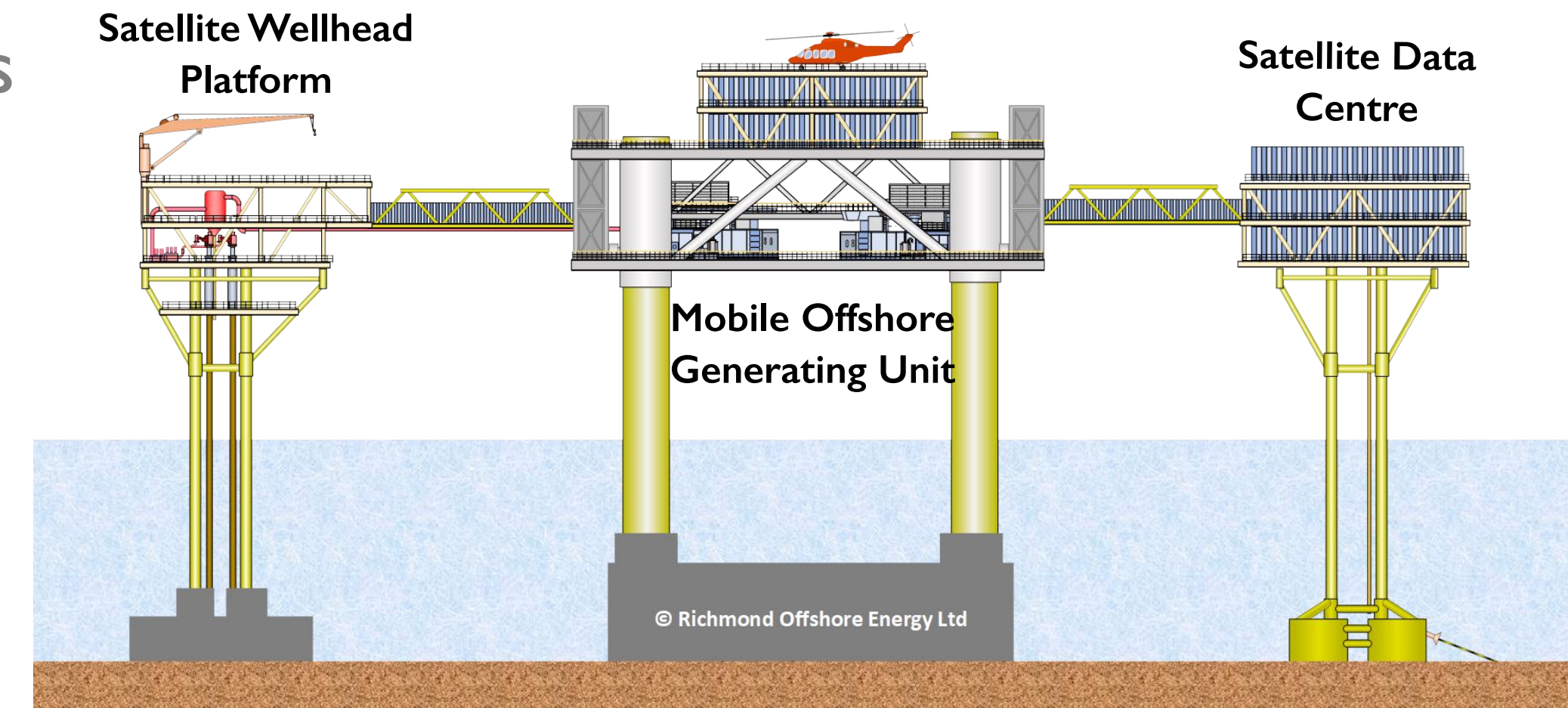


A pathway to deliver zero
emission gigascale compute

Earlham Gigagrid facilities configuration

Offshore power station with carbon capture and data centre

- Well head platform with Earlham production and injection wells
- No gas processing, only blending
 - Orcadian believe that Earlham gas blended with Orwell production can deliver c. 50% CH₄
- Power station can use low calorie gas directly in certain turbines e.g. Siemens SGT-800
- Carbon capture system to be designed to capture all combustion created CO₂ and naturally occurring CO₂
 - Capsol of Norway has a hot potassium carbonate absorbent design which is currently preferred to the conventional amine system
- 200 MW (IT) load targeted for the data centre
 - Current option is to install data centre floors on a separate offshore platform to make a three platform complex



There is nothing new under the sun...
but this time some aging North Sea tigers will do it

ENERGY • DATA CENTERS 14 May 2026

FORTUNE

Peter Thiel is leading investment in an ocean data center powered by waves—and the startup is reportedly worth \$1 billion

 By **Sasha Rogelberg**
Reporter

Panthalassa <https://panthalassa.com/>

BBC  For you  Home  News  Sport  Weather  iPlayer 

NEWS

Home | UK | World | Business | Culture | Politics | Health | Tech | InDepth | BBC Verify | Climate

Technology 6 June 2018

Microsoft sinks data centre off Orkney

 6 June 2018

Project Natick
<https://natick.research.microsoft.com/>

 UK 

News | Opinion | Sport | Culture | Lifestyle

Environment | Climate crisis | Wildlife | **Energy** | Pollution

China

 This article is more than 1 month old 9 June 2026

World's first wind-powered underwater datacentre starts operating in China

Datacentre off Shanghai coast uses less power and water than land-based equivalent

Floating Wind Tech Developer Zooms In on AI | Aikido Unveils Data Centre Concept, Selected for NVIDIA Programme

FLOATING WIND

March 12, 2026, by Adrijana Buljan
Share this article

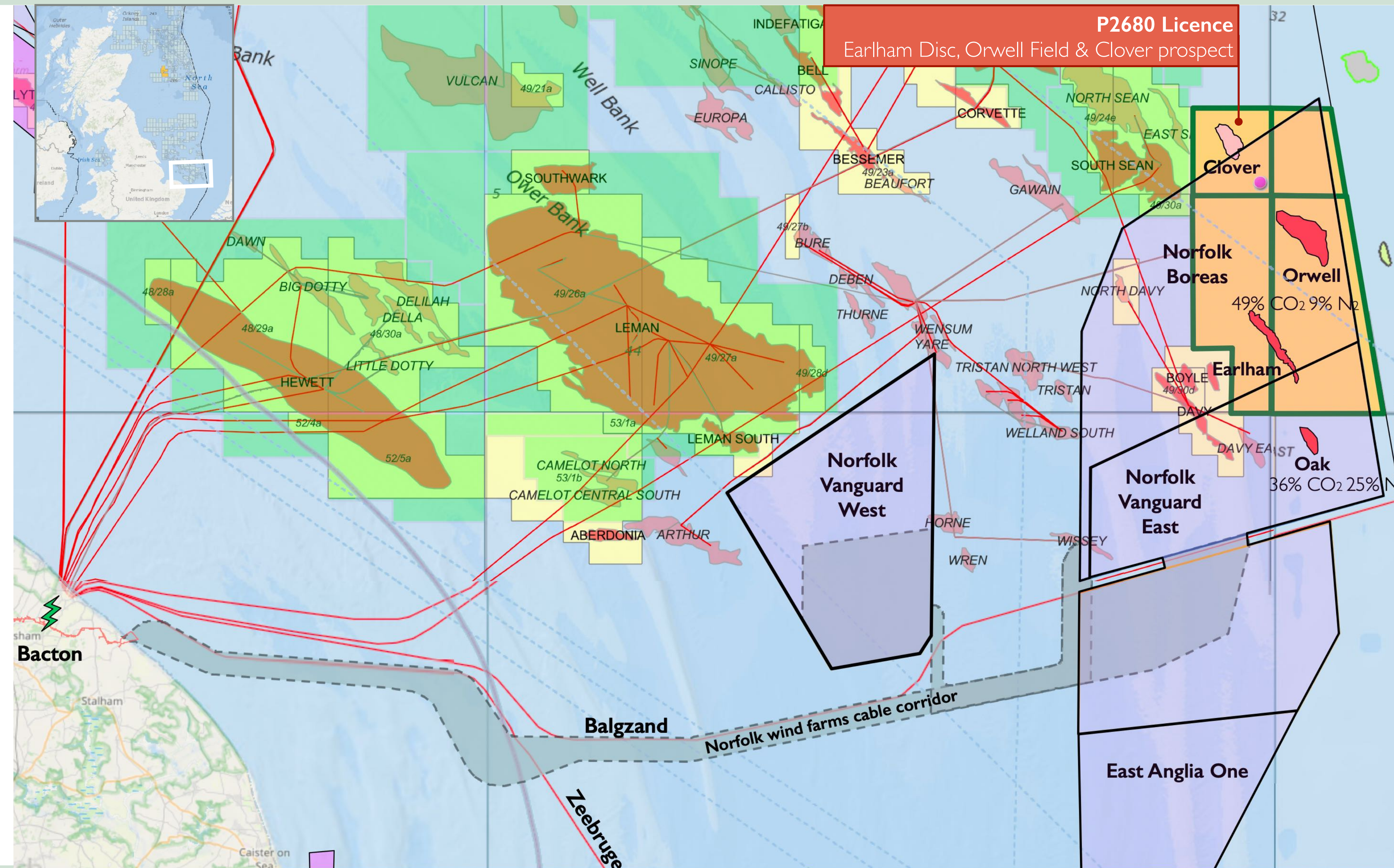
US-based floating wind foundation developer Aikido Technologies has announced two developments linking its floating wind platform with artificial intelligence (AI), including the launch of an AI-focused offshore data centre platform and its selection for an AI startup programme run by NVIDIA.

Akido Technologies
<https://www.aikidotechnologies.com>

P2680 Licence summary

Earlham proven resource

- Orcadian Energy (CNS) Ltd 100%
- Six year innovate licence
 - Started 1 June 2024
 - Four year Phase A, two year Phase C
- Earlham, Orwell & Clover
 - A high CO₂ discovery (49% CO₂, 9% N₂) with 114 bcf of sales gas (Earlham), a 31 bcf redevelopment project (Orwell), and a compelling prospect with 153 bcf of prospective resources (Clover)*
- Opportunity to access high CO₂ discoveries in nearby Dutch acreage
- Overlaps Norfolk Boreas wind farm site operated by RWE



* Resource estimates based upon Orcadian management 33rd Round licence application to NSTA.

Earlham Discovery

Earlham is a gas discovery, with a high levels of inerts, made by well 50/26b-6 in 1995, and later appraised by horizontal well 50/26b-8 in 1996

Trap

- Tilted horst block

Reservoir

- Leman sands (Rotliegendes) – predominantly aeolian dunes; locally c. 350 ft thick, porosity 18%; N/G 95%; 250mD
- DST in App well: 30 MMscf/day (limited rate due to CO₂)
- Core in discovery well

Seal

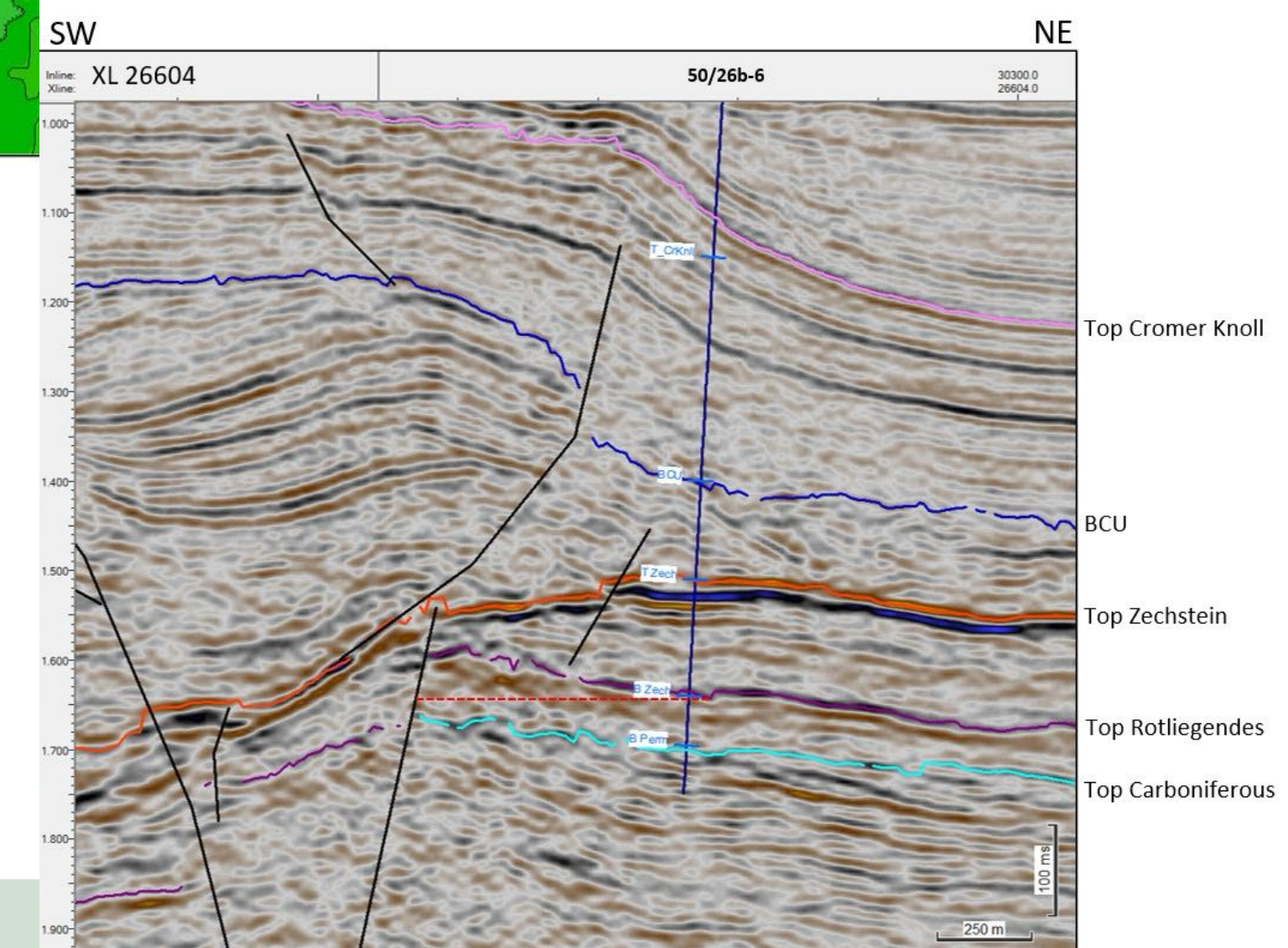
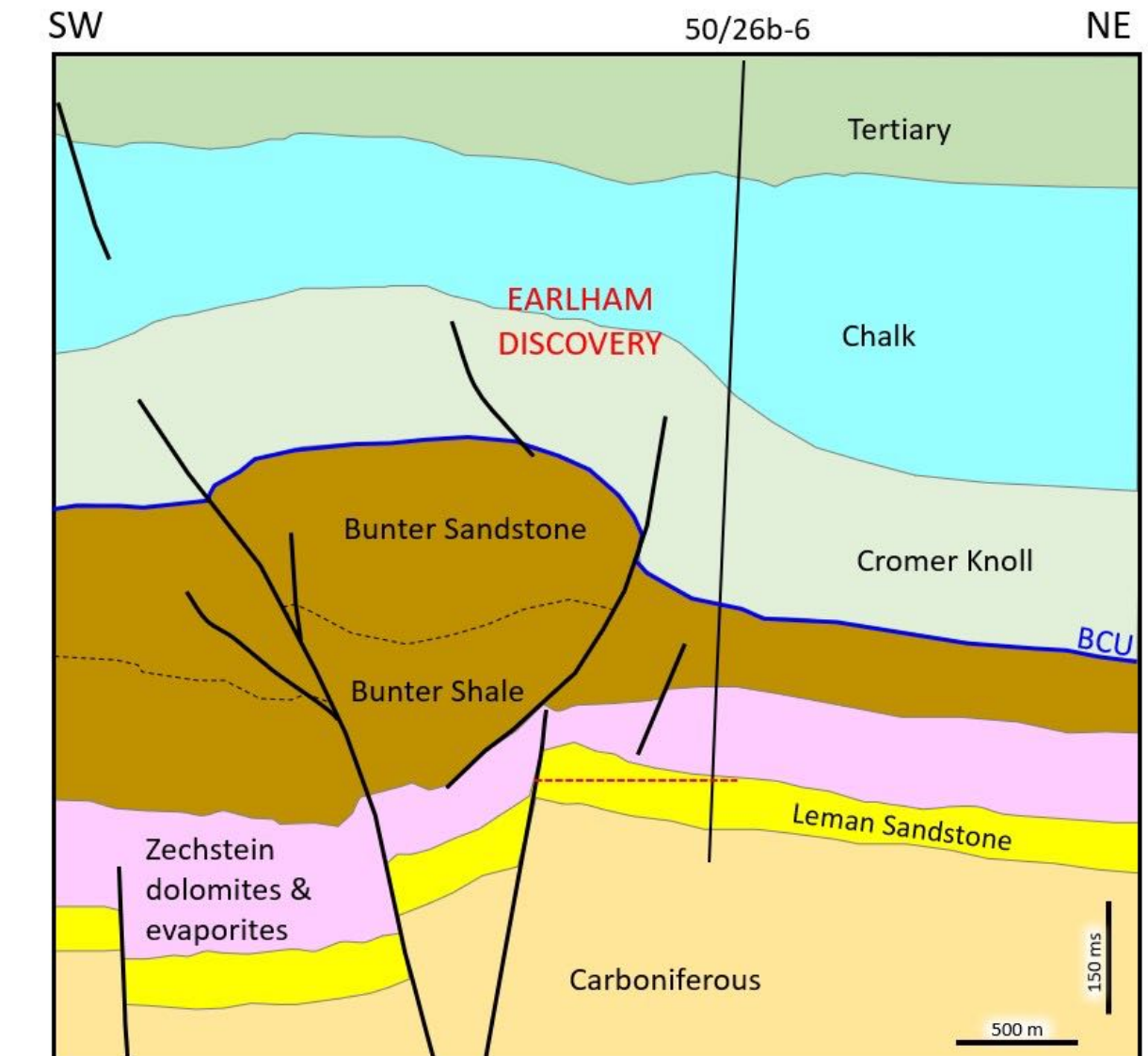
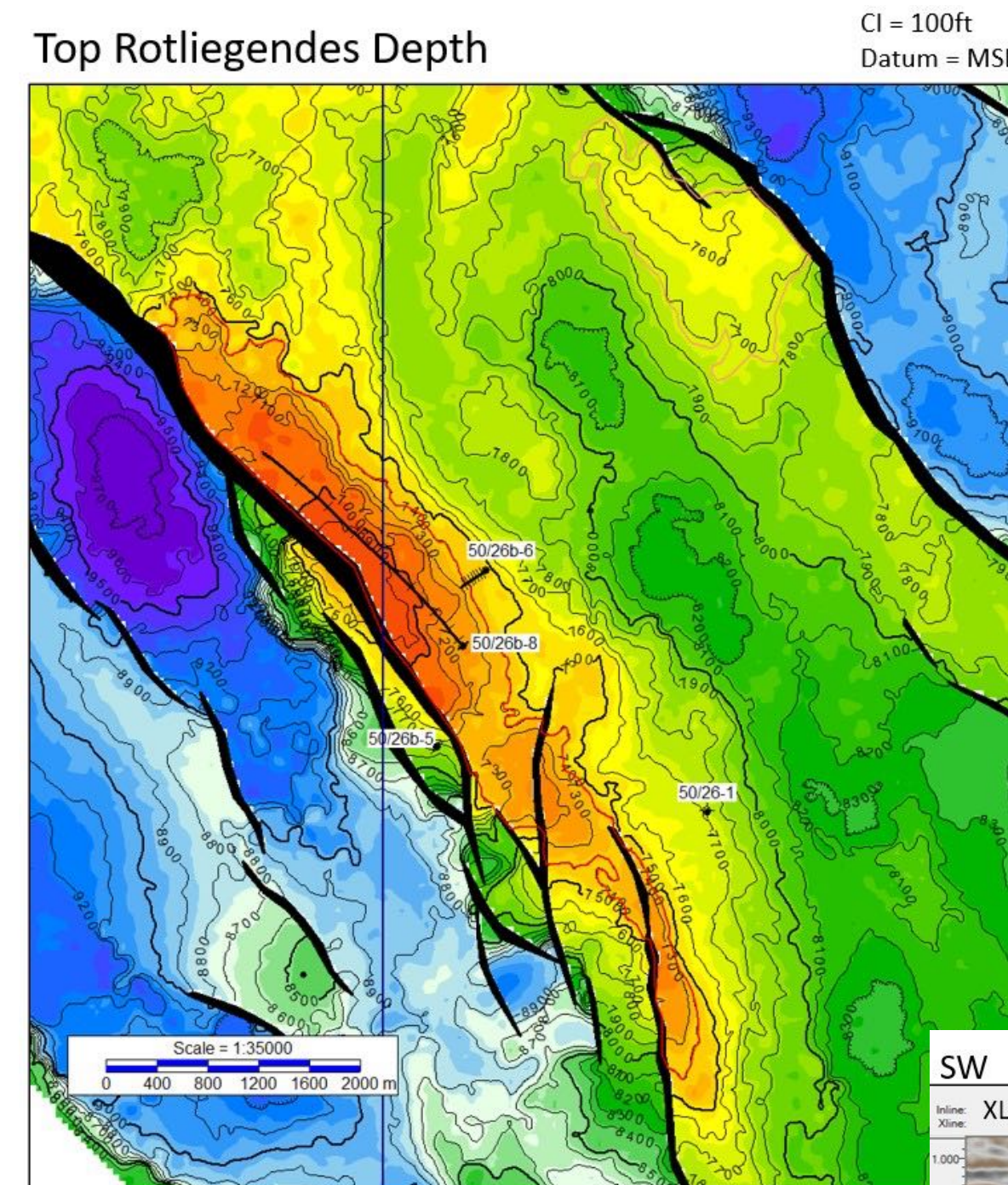
- Zechstein evaporites - high quality top seal

Fluid

- Methane 42%, CO₂ 49%, N₂ 9%

Critical Uncertainties:

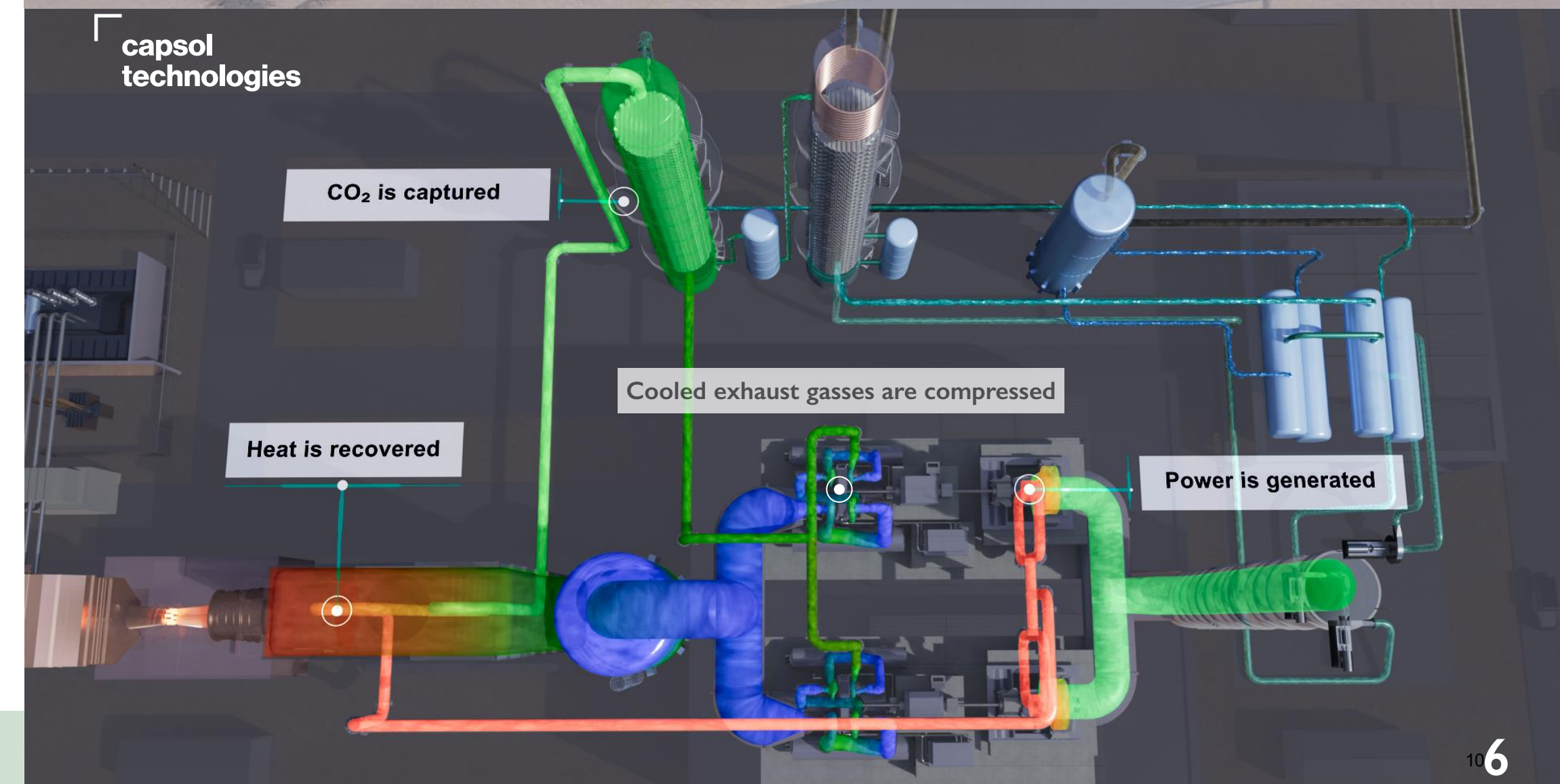
- Gross rock volume, primarily due to depth conversion uncertainty



Post-combustion carbon capture

Capsol Technologies ASA

- CapsolGT® for low carbon power
 - Developed in partnership with a leading gas turbine generator manufacturer and Capsol
 - Uses the safe solvent Hot Potassium Carbonate for cost-efficient and safe emission capture
 - Like amines it captures over 90% CO₂ from the exhaust gas
 - Hot Potassium Carbonate (HPC) process extracts energy from high exhaust gas temperatures to drive the capture cycle and generate additional power
 - No transportation costs for captured carbon dioxide, injection well costs included in the Earlham Enhanced Gas Recovery (EGR) scheme
 - To be integrated into design of offshore power station



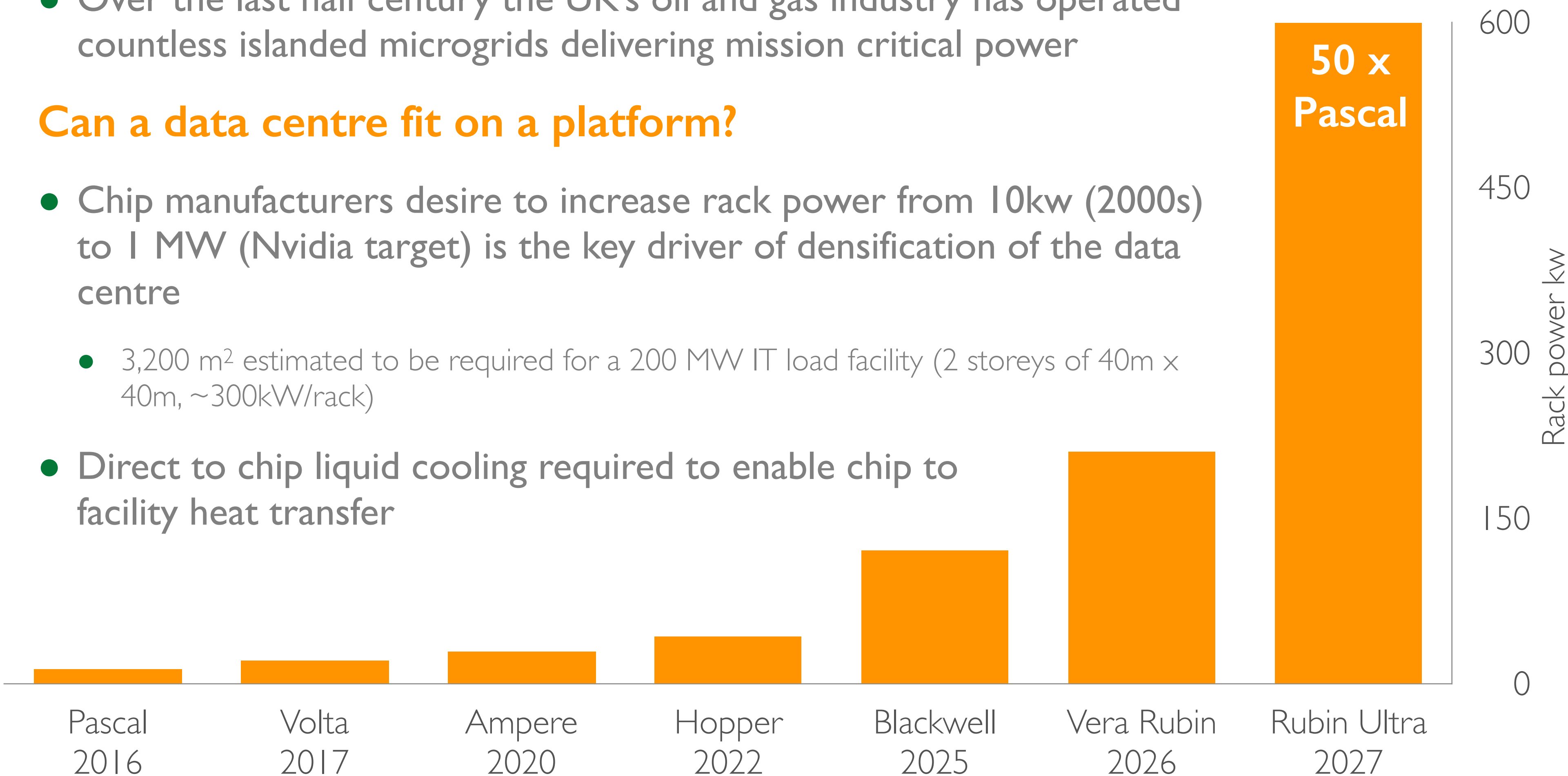
Can a data centre work offshore?

Can an offshore power station work?

- Over the last half century the UK's oil and gas industry has operated countless islanded microgrids delivering mission critical power

Can a data centre fit on a platform?

- Chip manufacturers desire to increase rack power from 10kw (2000s) to 1 MW (Nvidia target) is the key driver of densification of the data centre
 - 3,200 m² estimated to be required for a 200 MW IT load facility (2 storeys of 40m x 40m, ~300kW/rack)
- Direct to chip liquid cooling required to enable chip to facility heat transfer



Why put a data centre offshore?

Why put a data centre offshore next to a power platform?

- It is where the gas is and where the power is: energy first
- Private wire electricity prices are much lower than grid prices even with CO₂ abatement
- No need for HV transformers
- There is no grid integration to delay the project
- There are no neighbours to raise objections
- Facility heat rejection is simple
- No planning permissions and potentially a single regulator
 - *The North Sea Transition Authority*
- Future potential to upscale the project and incorporate wind power as a gas saver



Earlham Gigagrid – a project enabled by the oil and gas, wind and data centre, industries and government departments working together



Wind farm operator

Potential alternate route to market

Licensees

Low calorie gas is monetised

Compute operator

Secure data centre site close to power and demand

Communities

Jobs, no noise, no disruption, no water used

Earlham Gigagrid

NSTA

MER and Net Zero central obligations met

Offshore

Workers

Long term high skill transition jobs

NESO

No grid connections and no strain on the grid

Sovereign AI

Viable option for a gigascale data centre

DESNZ

Carbon capture and storage proven without subsidies