



Green Energy out of the Blue

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Shell Startup Engine




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The Challenge of Waves

So far, the technical and commercial challenges of wave energy have not been solved.

-  Cost of energy
-  Survival at sea
-  Capital intensity






**But they started from
the wrong place...**

Start Small: blueSTAR

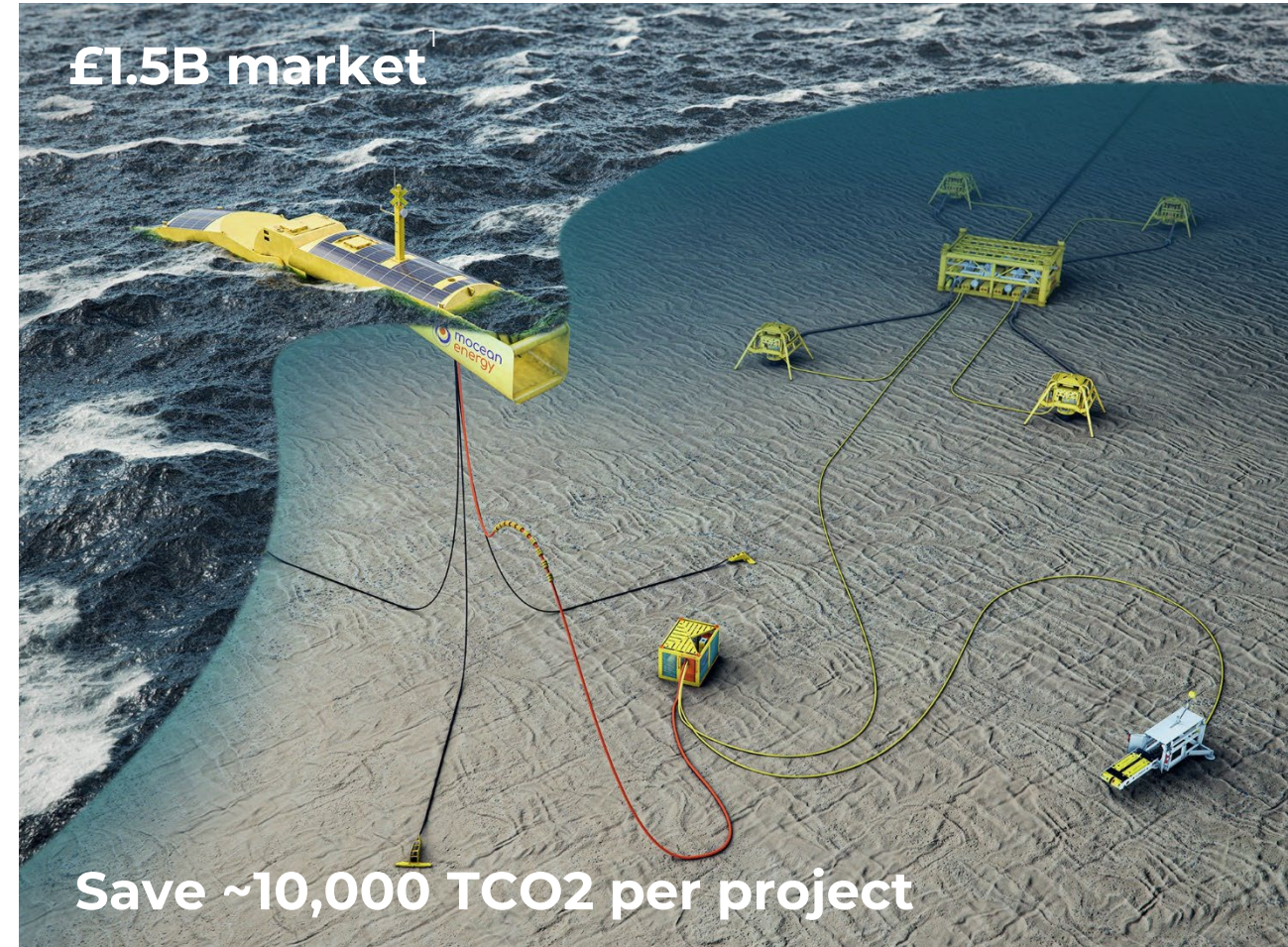


Just like solar and wind – we start with offshore off-grid where **wave energy is cost competitive now.**

Credible markets: O&G, ocean science, offshore wind, defence

-  O&G tiebacks
-  **CCS tiebacks – savings of £100m+ for long tiebacks**
-  Offshore wind vessel charging
-  Marine robotics
-  Sensors and monitoring

Blue chip customers and partners **with near term projects**



¹ Calculated from [Umbilical Manufacturers Federation](#)

Go Big: blueHORIZON



£17B¹



Saving 200,000 TCO₂ / year²

Islands use diesel generators; wind has negative visual impact; solar + batteries are not sufficient for renewable targets.

Wave energy uses islands' abundant ocean resource.

£500B cumulative to 2050



Saving 100,000,000 TCO₂ / year³

Combined wind-wave farms improve project efficiencies reducing costs of energy.

Next Generation Wave Energy



Designed with decades of learning from previous wave energy projects and O&G

Optimised with software – tools developed in house

Proven at sea – TRL 7

MORE POWER – patented geometry

RELIABLE – direct drive generator

SURVIVABLE – dives through waves



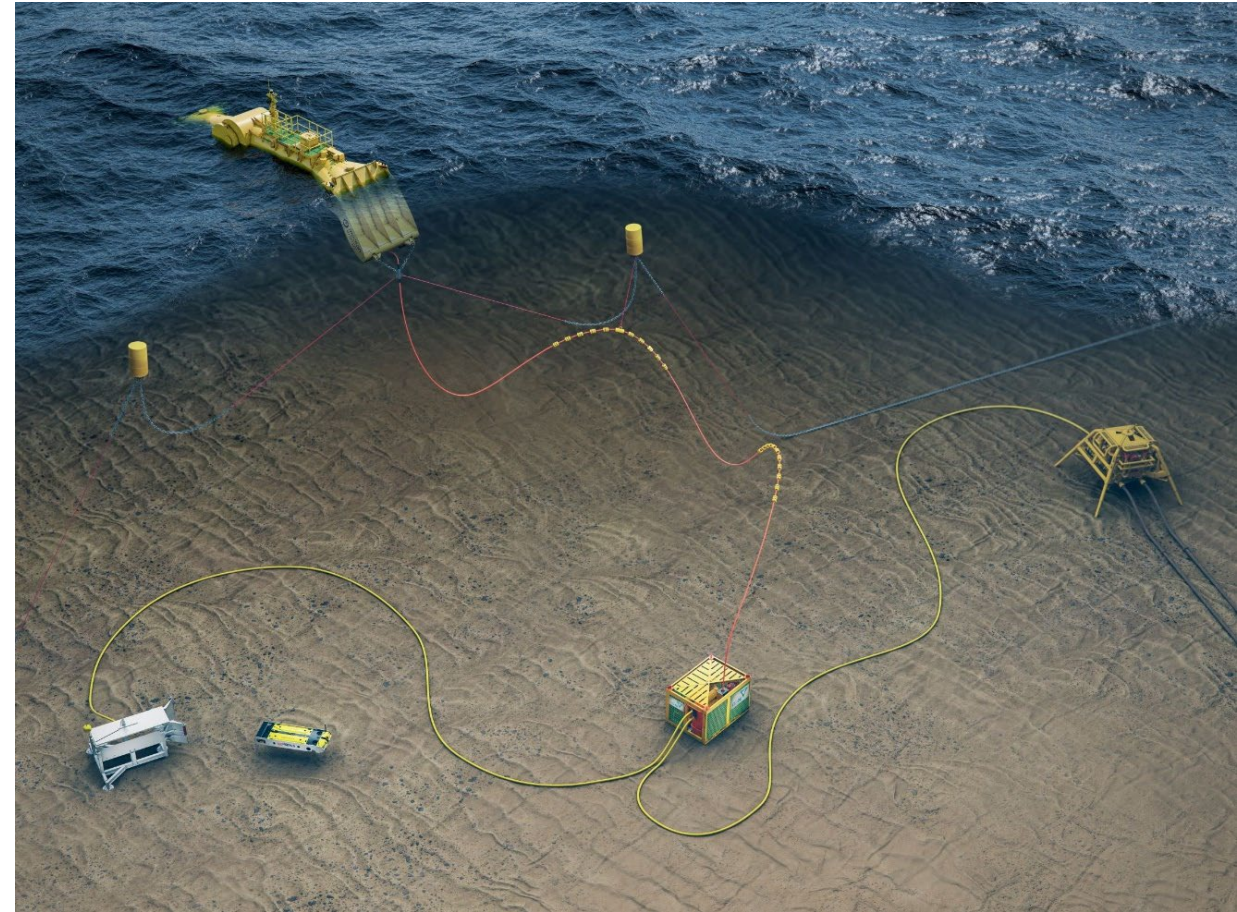
Renewables for Subsea Power

In 2023, **we are carrying out a commercial trial:**

- Mocean Energy: Blue X
- Verlume: subsea batteries
- Transmark Subsea: autonomous underwater vehicle
- Baker Hughes: subsea control system

Funded by:

- Net-zero Technology Centre
- £900k from Industry





We address the challenges of wave energy

💰 **Start Small, Go Big**

- Start small where wave energy is cost competitive
- Go big in size, project, and market → reduce costs

🌊 **Next Generation Technology**

- Design with experience + software; prove at sea
- Innovations in geometry and generator

💰 **Capital Efficiency**

- De-risk investment with profits at small-scale
- Bankable technology through deployment

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Backup Slides



The Potential of Waves

Wave energy could be 3% of a diverse global renewable mix by 2050, representing a £500B opportunity.¹



Predictable²



Consistent²



Supply better matched to demand³

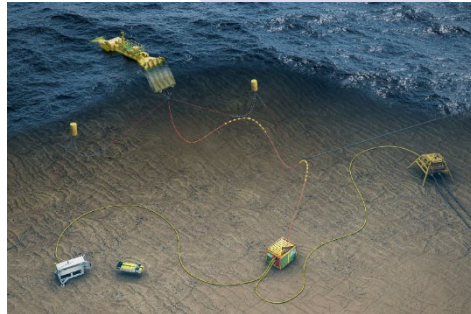
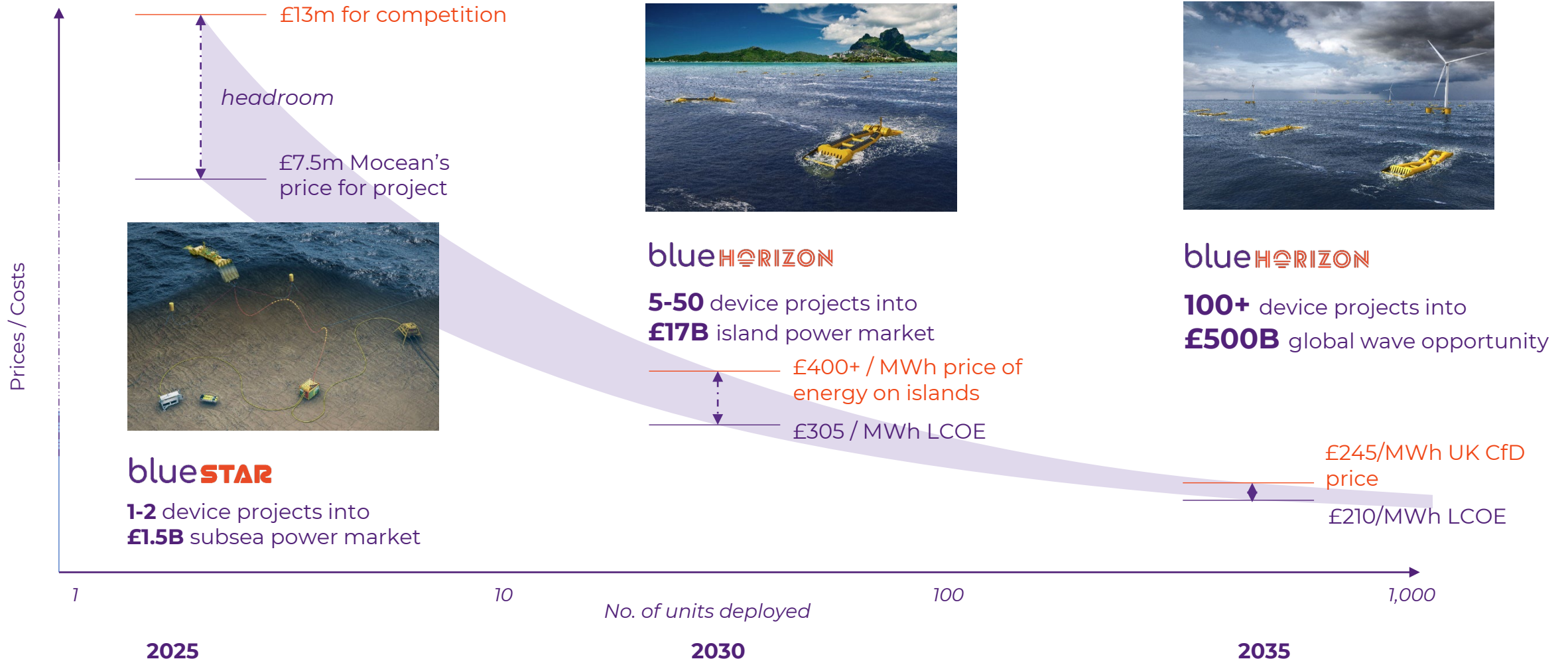


Reduces emissions and energy imports³

A diverse energy system with
0.6% marine energy reduced CO₂ by 3%⁴



Costs Down, Project Sizes & Markets Increase



Innovation



Novel geometry *(Patented)*

- 'Wave channels' increase power production
- Improve survivability
- Developed with AI optimisation

Direct drive generator *(JDA with Fountain Design)*

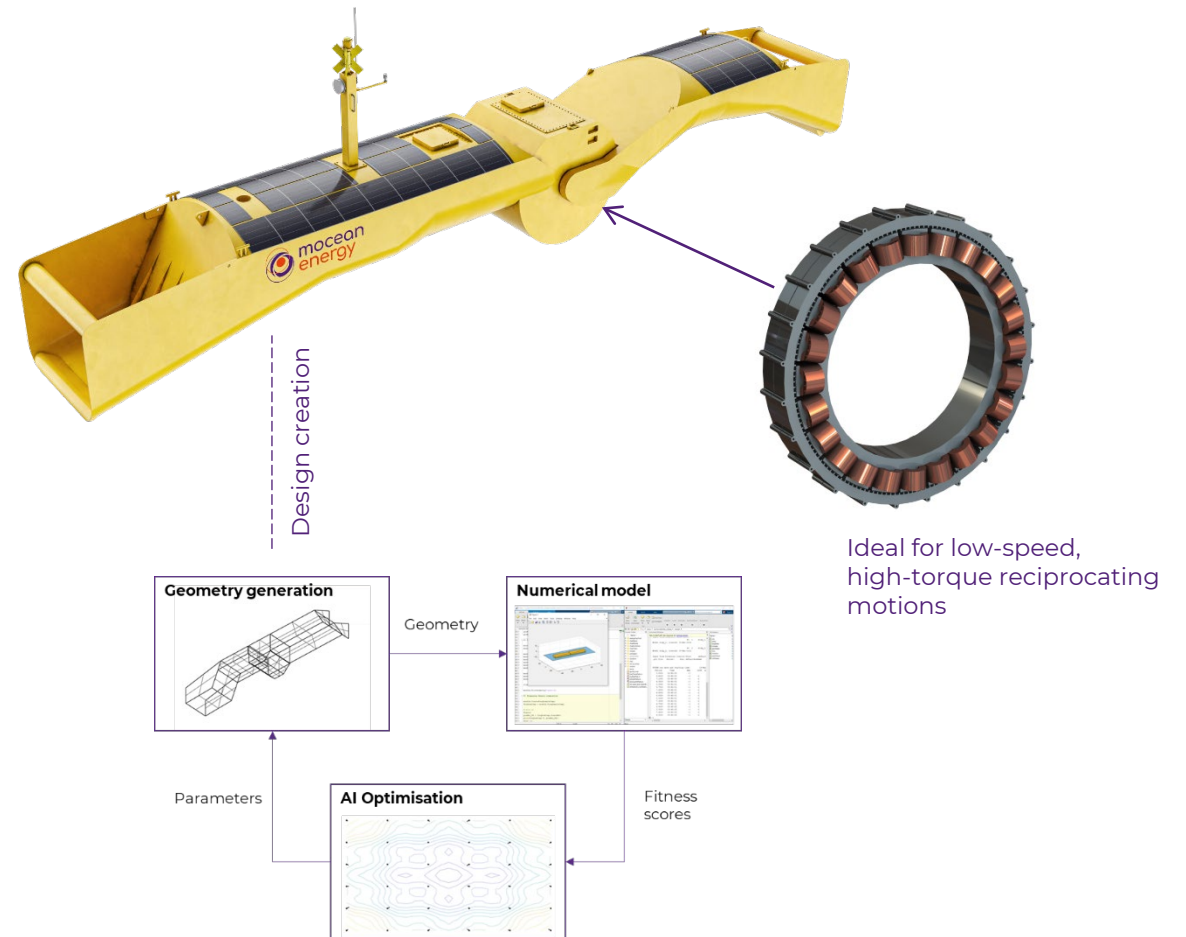
- 'Vernier Hybrid Machine' (VHM)
- Uses magnetic gearing
- Highly reliable
- High efficiency

Software backbone

- Optimisation – new products, custom projects
- Project evaluation

Wave + Solar + Batteries

- Consistent power



Best in Class

Mocean tech **selected over competition using international standards** through 5 stage gates in the Wave Energy Scotland and EuropeWave programmes! ¹



¹ 3 stage-gates in Wave Energy Scotland program; 2 stage gates in EuropeWave; The programs use IEA-OES International Evaluation and Guidance Framework for Ocean Energy Technology

Customers and Partners



Energy traction: £900k from industry for JIP; contracts with Shell, Subsea 7, Horisont Energi; MoU with Baker Hughes; MoU with Texo; Growing pipeline

Islands traction: MoU and LoS with MERIC (Chile); industry board incl. GtM Partners and Customers; Case studies; Growing pipeline

Purpose Driven Leaders



Our vision is: *People living in harmony with the ocean and each other through sustainable technology*



Cameron McNatt
Managing Director



Chris Retzler
Technical Director



Ian Crossland
Commercial Director



Jenny Young
Head of Business Operations



Torger Skillingstad
Chair
Former CEO, RESMAN



Lynne Ross
Investor Director, Equity Gap
Cleantech investor



Iain Sinclair
Investor Director, OCC
Global Energy Group

Progress and Traction



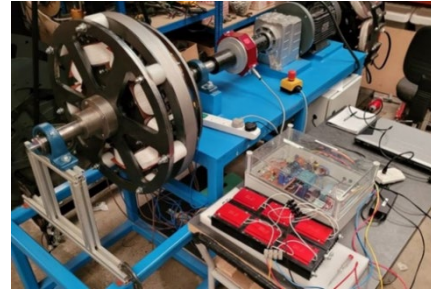
TECHNOLOGY



- 2 person team
- Concept proven
- Software developed



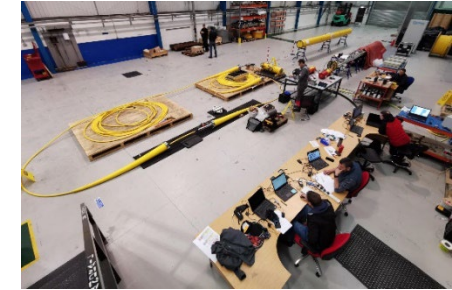
- 6 person team
- Build & test project awarded



- VHM generator prototyped



- 15 person team
- Prototype built & tested at sea



- Testing of commercial equipment
- Phase 1 & 2 Blue Horizon project

2016-18

- Market exploration

2019

- Net-zero Technology Centre TechX accelerator
- Customer engagement



2020

- Angle investment raised
- Harbour Energy supports Renewable for Subsea Power project



2021

- Serica joins RSP
- Commercial partner projects started

2022

- Shell study
- MoU with Baker Hughes
- Lol from Serica
- Pipeline of opportunities



COMMERCIAL

Milestones

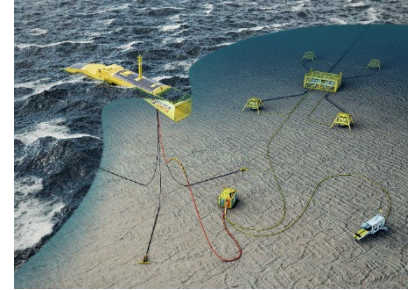
TECHNOLOGY



- RSP Testing complete
- Blue Star product design complete
- VHM proven



- Blue Star product built



- Blue Star operating in commercial project
- Serial Blue Star production



- Blue Horizon testing complete

2023

- Blue Star commercial project awarded
- €4m Blue Horizon award



2024

- Close £10m Series A
- Multiple Blue Star commercial awards
- Lol for Blue Horizon project



2025

- Revenues from offshore projects
- Strong Blue Horizon project pipeline



2026

- Multiple commercial offshore projects
- Blue Horizon pilot project secured

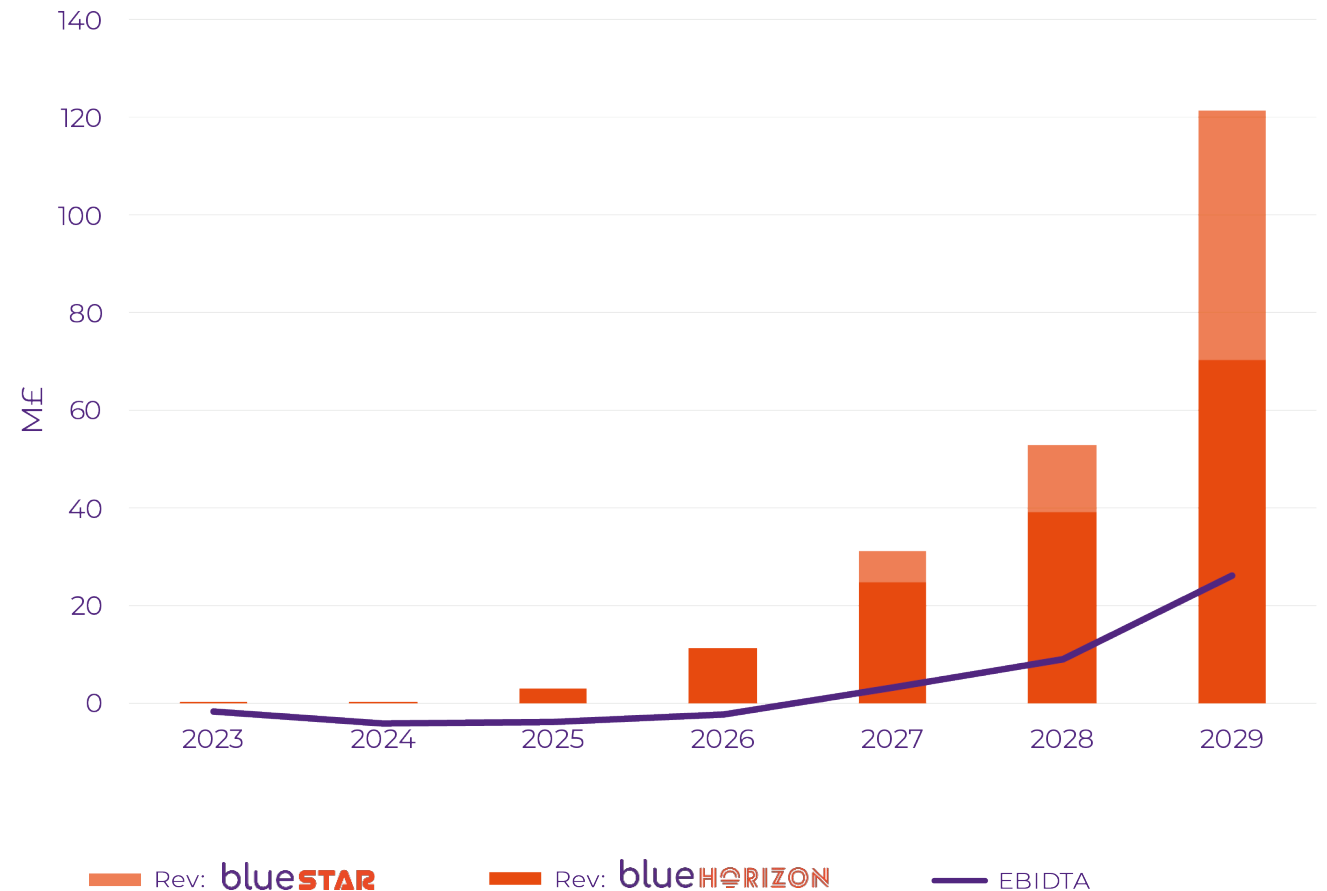


COMMERCIAL

Projections



- £22m in non-dilutive R&D funding (cumulative)
- Blue Star revenues re-invested in R&D
- 2035 targets
 - 200 **blueSTAR**
 - 100 MW **blueHORIZON**
 - £500m+ revenue
 - £150m+ EBITDA



Raising £10m



Series A delivers:

- ✓ Blue Star product built and commercial project
- ✓ Sustained commercial revenues from Blue Star
- ✓ Build and testing of Blue Horizon 250
- ✓ Blue Horizon project pipeline

Other funding:

- Closing Seed funding – *opportunity for the right investor*
- Project financing
- Series B scale up funding

Exit

- Blue Star business sold in next 5 years
- Mocean Energy sold to integrated energy company like TotalEnergies, Shell, or BP

Capital Efficiency



Non-dilutive funding

- £8.0m grants + £1.4m commercial raised to date
- €4.0m EuropeWave Phase 3 funding potential
- £2.3m Scottish Government funding potential
- Funding dedicated to marine energy in UK, US, EU

Near-term Blue Star profits de-risk investment

- Provide substantial profits
- Makes larger technology bankable
- Early exit opportunity

Blue Star will not be built with equity investment

- Partners will support working capital for projects

