



Prospectus for the world's first commercially viable wave energy capture device

ZOEX

RELIABLE, COST-EFFECTIVE AND CLEAN AUX-POWER FOR THE BLUE ECONOMY

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**A RENEWABLE ENERGY GAMECHANGER
TO ELECTRIFY THE BLUE ECONOMY**

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Executive Summary

“A first of its kind comes but once, then is gone forever”

Through a serendipitous combination of events, such a unique but elusive opportunity exists right now to deliver the world's **first** ever commercially viable wave energy capture device that works - ZOEX.

Mayfair Energy Advisory is seeking investment to bring **ZOEX** to the market and in doing so deliver a paradigm shift in renewable energy supply that will transform our lives forever.

The ZOEX clean energy device is a very special product. It is the culmination of a strategic development plan that **transcends** both the technical and commercial aspects of the genre.

By simultaneously aligning an extraordinary USP, competitive advantage and captive market the perennial dark clouds of commercial wave power failure have lifted and finally we can make **waves** work.

ZOEX design has been relentlessly honed to match the needs of marine based auxiliary scale power applications and will debut in the nascent but rapidly expanding **Aquaculture** sector where diesel has had its day and green energy is the future.

This novel entry point represents a fundamental shift in direction for wave power and will be the launchpad for this renewable energy **gamechanger**.

With all the above elements in place the growth opportunities are **extraordinary** and the investment rewards correspondingly eye watering.

We are delighted to have the **opportunity** to showcase this prospectus and welcome you to the world of ZOEX; Reliable, Cost-Effective and Clean Auxiliary Power for the Blue Economy.

Be the First!

1 Making waves work

Wave power is the largest source of renewable energy on the planet

Burning fossil fuels accounts for over 80% of global energy consumption. This is unsustainable both physically and environmentally.

Despite renewable capacity additions growing faster than ever they are not on track to meet the IEA Net Zero by 2050 Scenario.

Something needs to change.

Wave power has the potential in combination with other renewables to easily satisfy the shortfall, yet it contributes nothing to our current and near-term energy mix.

This cannot be allowed to continue. Wave power must be part of the energy mix and rapid market penetration is essential.

Previously, the focus on utility scale solutions has been the undoing of wave power as the technical complexity and prohibitive economics tarnished its reputation.

Subsequent attempts at reinventing the genre have failed having neither the all-round capability or financial backing to make a breakthrough in the industry.

Benefits of Wave Power



Waves have enormous energy density - way above those of solar or wind

Waves are constantly moving - 24/7 power at a much higher availability than solar or wind

Waves are much more predictable - accurate 5 day wave energy lookaheads

Waves are closer to areas of maximum demand - shorter transmission distances

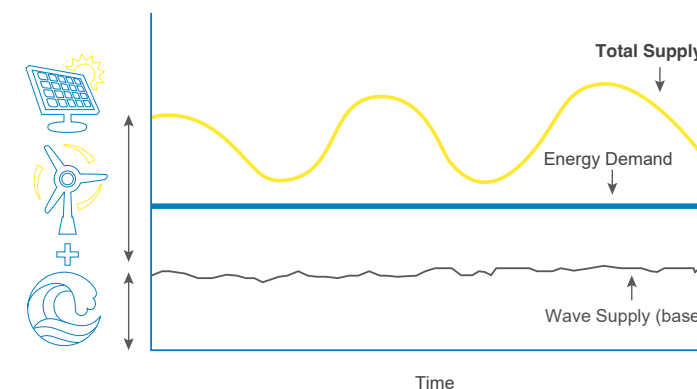
Waves reduce grid stress - helps even out peaks and troughs of solar/wind



Waves emit no operating emissions - synergies of combining with other renewables

24-hour renewable energy supply

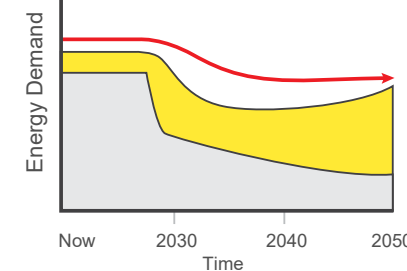
- Solar and wind have cyclical power outputs – not suited to 24-hour demand.
- Achilles heel of renewable energy – energy storage/primary energy supply required.
- Marine wave power output much less volatile – can provide steady base load.
- Combined availability profile of wave/wind/solar exceeds demand threshold.
- Synergy of joint development can provide a true 24/7 power source.



How to meet 2050 Net Zero

1. Curtail Demand

- > Negative Growth
- > Drastic/Improbable



Hydrocarbons

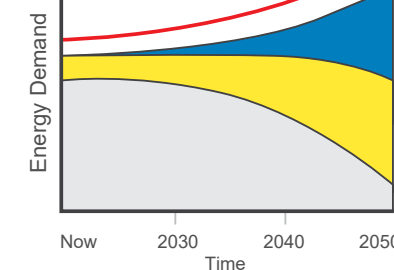
Waves

Non-Hydrocarbons

- Currently net-zero cannot be achieved without reduction in energy demand (growth)
- In any growth scenario, existing 'green' energy sources cannot bridge the gap

2. Bring Wave Power Online

- > Positive Growth
- > Achievable



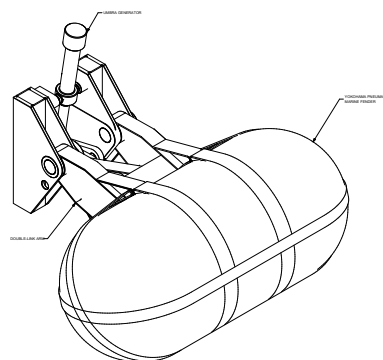
- Bringing wave power into the mix offers a net-zero with 'growth' solution
- Enables the decline of hydrocarbon consumption in a measured and achievable way

2 A journey by design

Truly green renewable electricity from wave power has arrived

ZOEX is the world's first commercially viable, deployable and reliable wave energy capture system. Delivering success in a sector that had lost its way.

- **Inspired** by a vision to make waves work and break free of the sectors uncertainty
- **Nurtured** through a pragmatic design ethos and wealth of wave system experience
- **Delivered** through a combination of targeted marketing and strategic partnering



Initially self-funded, the embryonic but elegant ZOEX design caught the eye of research and grant bodies. Subsequently ZOEX has been able to tap into targeted development funding and support from partners to advance the design towards 'proof of concept prototype' level.

Through Mayfair's guidance ZOEX has forged a credible path towards market penetration and have defined a clear trajectory towards scaled growth and commercialisation.

ZOEX has achieved this through a design brief grounded in pragmatism not idealism



INTENT

- Utilise existing technology and resources
- Apply lessons learned to date
- Product to be market driven and affordable
- Ensure the design is future proofed
- Innovate only where necessary



RATIONALE



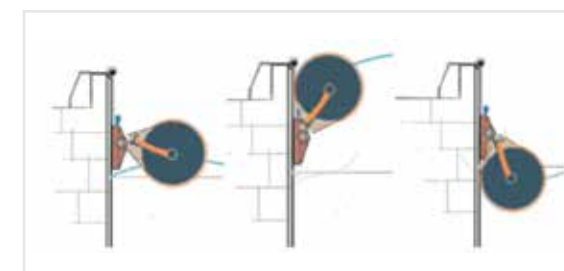
- No need to reinvent the wheel
- Wave sector experience invaluable
- Competitive advantage
- Market will evolve rapidly
- Time and cost

Do more for Less

The design has been continually refined to reflect the technological and development journey that ZOEX has been through resulting in today's commercial offering. Integral to its success is the incorporation of three design elements which together offer a wave power value proposition much greater than the sum of its parts.

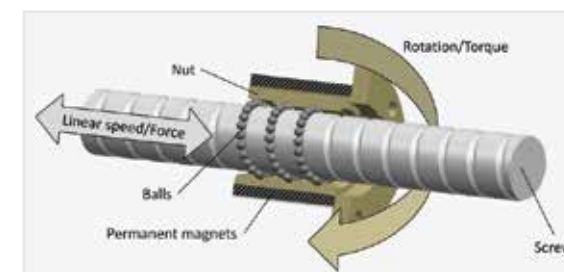
1 Yokohama Fender

- Yokohama is a marine industry stalwart – ideal companion for wave solutions
- Used for the float in which wave energy is imparted into the device
- Provides impact protection and pitch/roll stability to floating host installation
- Unhindered 180 degrees movement for maintenance and storm survival mode



2 Umbra Power Take-off Device (PTO)

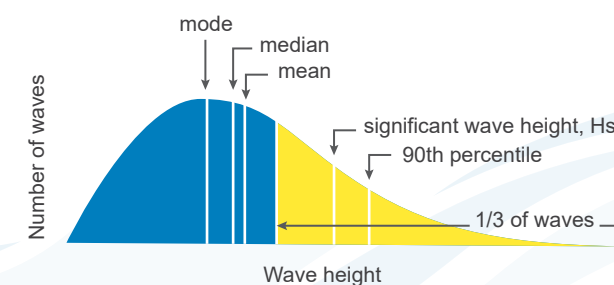
- Power generation for auxilliary loads; Derived from Umbra's landing gear technology
- Incorporates a ball screw direct-drive linear Electro-Mechanical Generator (EMG)
- EMG converts linear angular motion of the intensifier into regulated DC output
- Developed to TRL 7 between UMBRA and Wave Energy Scotland (EMERGE)
- Precise real time load control without the failure modes of hydraulic systems



3 Mechanical Intensifier

- The probability distribution of wave heights has historically led to design compromise
- Low sea states predominate but infrequent storm events must also be accommodated
- The innovative gearing mechanism provides a solution to this design conundrum
- Maximising power in 'small' waves whilst mitigating end stop failures during high seas.
- Homegrown design; together with PTO increases power capacity factor

Statistical wave distribution

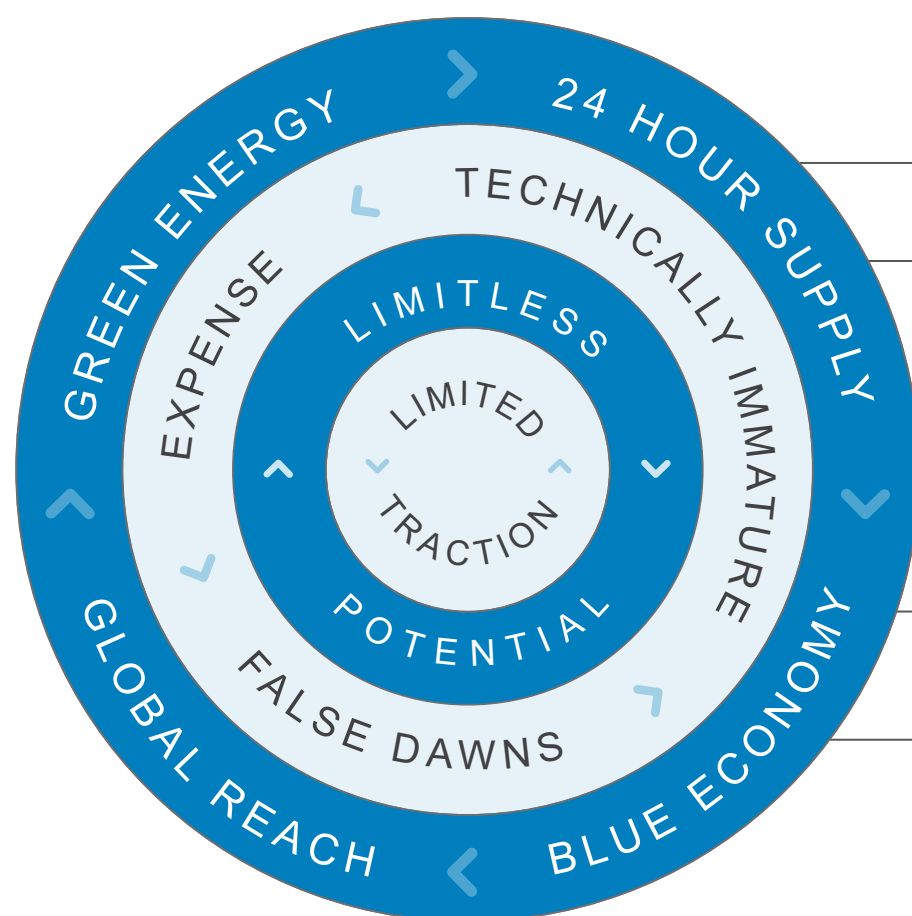


3 Breaking free from a world of uncertainty

For decades the future of commercial wave power has been trapped within a circle of uncertainty

Wave power technology is **immature** compared to wind and solar having never gained the commercial traction of its contemporaries. Early attempts focused on utility scale power but the high energy density and tough operating conditions of ocean deployment resulted in **uneconomic** over engineered white elephants that could never compete with wind and solar. What once seemed the future of renewables was consigned to **history**.

More recent attempts have been small scale and less ambitious in their scope, often little more than practical experiments of institutional research and development programmes. Each time the same technical and commercial **brick walls** are encountered resulting in development recycling, industry frustration and an inevitable widening of the **credibility** gap. With no credible path to commercialisation the future looked bleak.



Incredibly, the wave energy sector has failed to produce a single device that can provide meaningful electrical power profitablyuntil the arrival of ZOEX

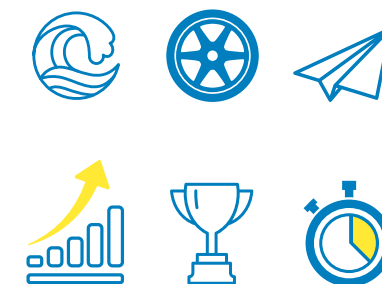
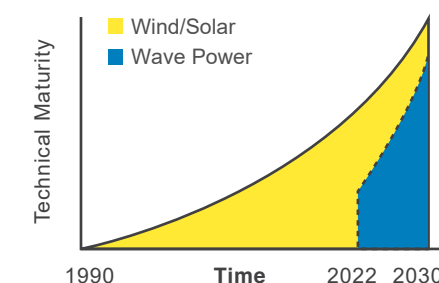
ZOEX took this seemingly forlorn situation and turned apparent weaknesses into strengths. Where others had failed shone a light on where to look for success. Clearly the wave energy entry point would be small scale but had to be targeted.

A combination of forensic market research and stringent future diesel marine legislation provided the breakthrough. With a way through identified, the technological and practical benefits of the design sealed the deal.

The Circle is broken – escape velocity achieved!

This approach has enabled ZOEX to **break free** of the circle of uncertainty that has pervaded the wave energy sector for so long thanks to its unique combination of deployability, performance and economic viability. ZOEX is a renewable energy gamechanger that will accelerate our journey to net zero and beyond.

- ZOEX harnesses technology that already exists within specialist non-energy sectors.
- By bringing these standalone technology elements into a single coherent design they have closed the technology maturity gap at a stroke.
- ZOEX competes in every recognised wave capture application with class leading performance metrics.
- Power capacity factor is significantly higher than its peers owing to the breakthrough design delivering cost effective power, high reliability and low maintenance.
- ZOEX' economics are not only competitive in aquaculture but many other analogous off-grid diesel displacement applications offshore.
- ZOEX can be deployed in a standalone capacity or in combination with other energy suppliers.



Development story & timeline

2000

Initial focus on utility scale solutions - no proven technology and no realistic economics.



Focus shifts to niche low power / off-grid applications.



2008

Challenges of open sea wave power capture moves attention towards less hostile near shore applications such as harbour /seawall but ultimately failed to gain traction.



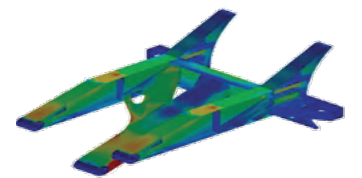
2016

Aquaculture sector auxiliary power transition from diesel identified as potential market.



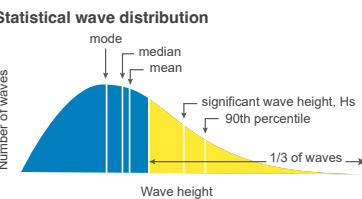
2012

Technical challenges resolved by integration of existing technologies to wave energy capture.



2010

Inshore waves are small resulting in either a large device with low efficiency or a small device with low power output. The market said no and development was stalled.



2018

ZOEX partnership with Umbra and Yokohama facilitated enhanced Power take-off in small waves, Survivability in large waves and host structure protection.



2022

ZOEX product now optimised for diesel displacement applications in the Aquaculture sector and ready for next stage of development.



2023

Offshore "charge barge" being developed to confirm product viability and green light commercialisation for tomorrows world.



Target Development Market - Aquaculture: 2024

Focus on developing and consolidating ZOEX within the Aquaculture market, enabling further development and optimisation of the technology for wider commercial application.



Contemporary Diesel Displacement Applications: 2025

Seamless transition of ZOEX into other off-grid diesel displacement applications such as offshore O&G installations, wind power auxiliary support and marine logistics markets.



Tomorrows World: 2030+

Costs will reduce dramatically as volume manufacture and industrialisation further opens up the global blue economy; nearshore grid support (port/harbour arrays) deep-sea smart aquaculture, marine charging sites etc.

As LCOE bottoms out and technology advances, larger scale opportunities will emerge; Seasteading, island community power supply and ultimately large utility scale markets to supplement other renewable energy sources.



5 The entry market

In the right market ZOEX can be the catalyst for commercial sustainable wave power

Market Penetration and the Technology Gap

Utility scale renewable power is dominated by land based Solar and Wind with a visible presence to match. Wave power cannot compete in this market for obvious reasons. To close the technology gap, wave power will need a niche market place of its own.

Marine Diesel Displacement

Recent legislation mandating large cuts in secondary emissions means low carbon and clean fuel alternatives must be sought. Wave power is in poll position to exploit this need by displacing or eliminating diesel with reliable green energy sourced at the point of need.

Aquaculture as the launch pad for ZOEX

Hybrid systems have already been deployed on feed barges in the fish farming sector using excess diesel power to charge stand-by batteries. These kick in when the main generator fails negating the need for back up generation reducing diesel usage and emissions.

This scenario offers a perfect opportunity to showcase the ZOEX technology via their “charge barge” concept, providing a ready-made development incubator for its ultimate evolution.

ZOEX USP – Plug and play



DC output from ZOEX plugs directly into battery system of the “charge barge” via a short connecting cable

Continuous 15 KW (per unit) in sea states of 1m significant wave height (Hs)

Generates useable power at much lower sea states (<0.3m Hs) providing power even on calm days

Connect via ‘charge barge’ or mounts directly onto floating feed barge with no additional structures, moorings or consent requirements

No deck space required - a distinct advantage over solar or wind arrays

“Charge Barges” for Fish Farms

Initially the ZOEX “charge barge” takes up station nearby and simply takes over charging duties allowing the oversized generator to be throttled back. Alternatively, the ZOEX unit could act as the on-line power source with the diesel generator as back up. Note: direct mounting onto the feeding barge is also possible as an alternate configuration.

In future the entire power supply can be provided by ZOEX eliminating diesel usage with huge financial and environmental benefits. The mobility of the charge barge and the flexibility to change the number of ZOEX units on board further enhances the growth potential of the charge barge concept.

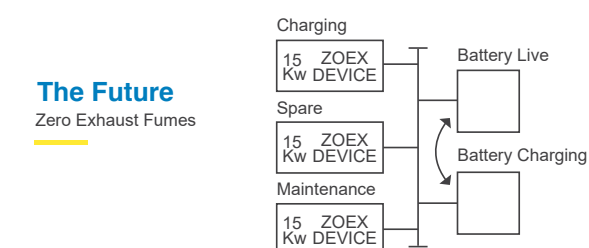
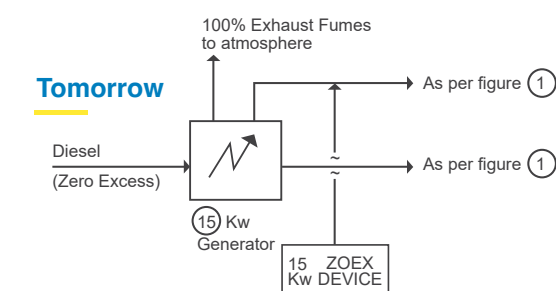
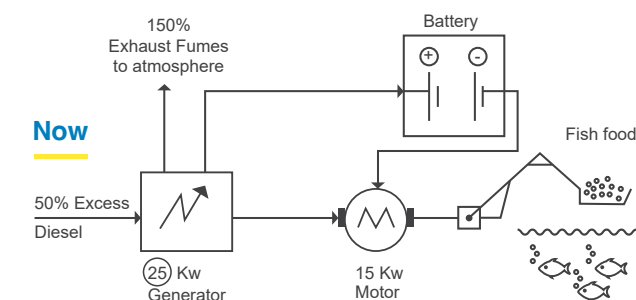
Targeted Marketing

ZOEX have been in dialogue with leading exponents of UK Aquaculture for some time and letters of intent have already been secured from leading Salmon farm and aquaculture barge manufacturers. They are keen to engage with ZOEX and their “charge barge” concept given its inherent benefits and development readiness.

Market Recognition and Expansion

Having established a foothold in nearshore Aquaculture, ZOEX will expand into more traditional diesel intensive markets such as offshore O&G and maritime transportation. ZOEX’ modular design ensures it can be adapted for other market applications and deployed in any configuration required to satisfy the power demand of the auxiliary system.

As the design evolves and unit cost production falls more complex configurations will be catered for such as utility scale joint wave/wind developments and island power supply.



6 The competition – ZOEX v's Peers

ZOEX is not the only wave energy capture design – others are available

It is prudent therefore to review the competition to understand where ZOEX stands in real measurable terms not just hyperbole. Three criteria have been used; resolution of legacy design issues, deployability and commercial viability:

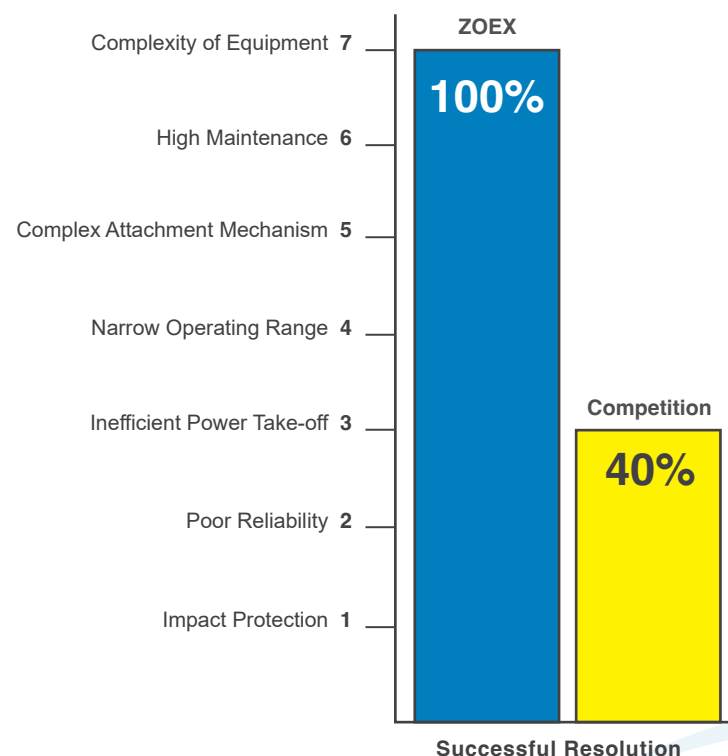
Resolution of Legacy Design Issues

There are 7 technical legacy issues that have stalled wave energy converters over the years which need to be resolved such that they no longer inhibit commercial application.

Who has solved these legacy design issues?

ZOEX Score card – 100%

- Optimised power capture across most sea states (1 to 6m)
- Real time load control to optimise power take-off
- Generates useable power with small waves (0.3 m)
- 30 - 60% power capacity factor
- 15KW continuous rated power per unit (100KW peak)
- Electromagnetic generator simplifies power take off
- Use of fully proven industry derived technology
- Application specific components designed for longevity
- Inherent impact protection from dual purpose float/fender
- Attached direct to host (floating or fixed) - no new structures/moorings



Deployability

The broader the range of contemporary applications, the increased likelihood of early market penetration and subsequent deployment in larger scale challenges that lie ahead.

ZOEX – Hits the bullseye, no other competitor comes close

Offshore diesel/FG displacement applications

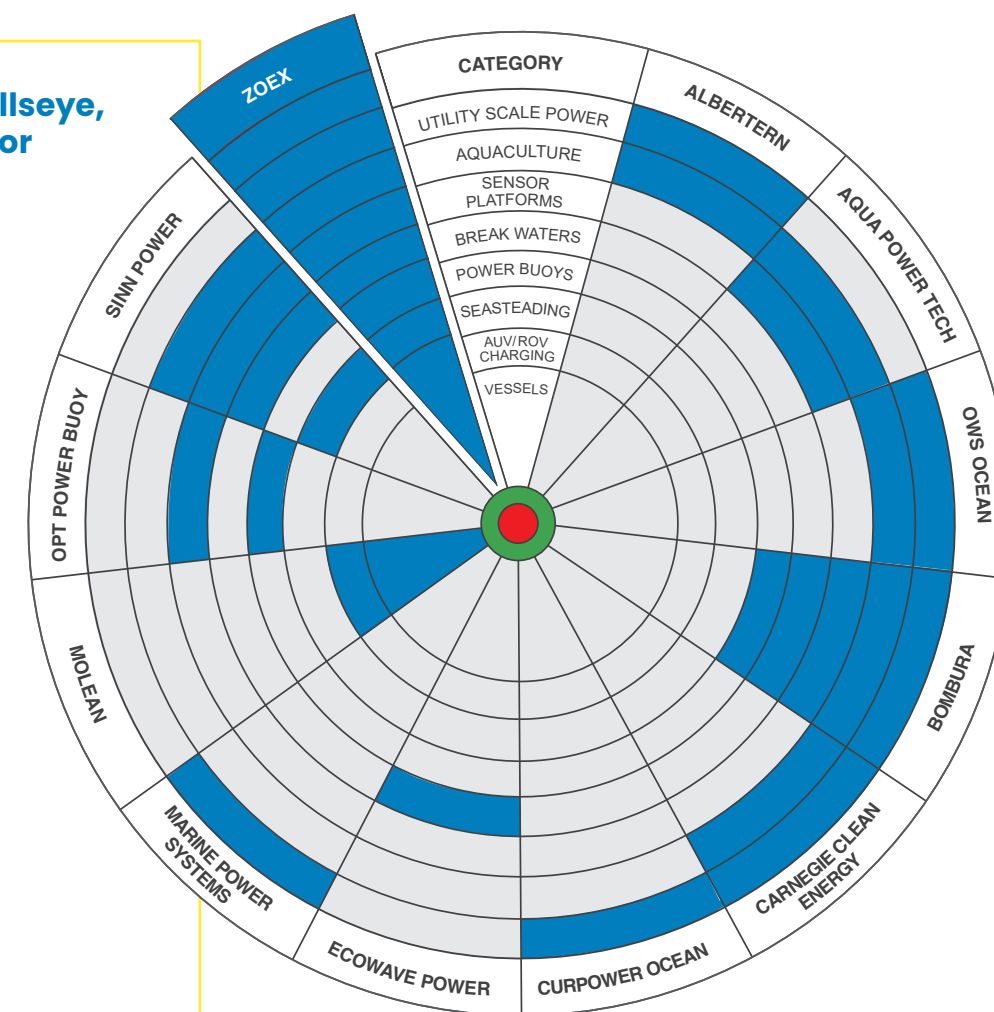
- Aquaculture
- Offshore O&G infrastructure
- Marine Vessel power on station/anchor
- AUV/ROV Charging
- Sensor Platforms

Coastal local grid applications

- Breakwaters
- Harbour walls
- Marinas

Scalable for higher power applications

- Seasteading
- Island communities
- Utility Scale grid power



Commercial Viability

Given ZOEX already outperforms its peers, both in technical capability and deployment opportunities, its commercial viability is a given. It already competes with diesel and has a ready-made market in Aquaculture to further exploit its green credentials, reduce its LCOE and achieve general sector adoption.

Conclusion

The comparison is unambiguous – only ZOEX can provide continuous rated power supply in all practical wave energy capture applications.

7 Development road map

ZOEX is the genesis of something new – it will shape the future of the next era of energy supply

Sooner or later, commercial wave power is going to happen but only with a product that transcends all the design, deployment and operability challenges that have plagued the sector to date.

Diesel displacement within the offshore marine auxiliary power sector offers a genuine opportunity for ZOEX to gain a competitive advantage and provide a breakout route for the sector.

ZOEX not only offers the best performance metrics within the wave power space but is also the most widely deployable and flexible in design.

The lifetime costs/KW (LCOE) are not only comparable with diesel today but the energy is 100% green, renewable and limitless.

Phase 1

Prototype and Commercialisation

In the near term, focus on technology development in the Aquaculture sector, delivering demonstration projects with early adopter partners.

- Update financial model with transparent pricing and realistic LCOE reduction targets
- Mobilise and supplement ZOEX management and design team
- Activate consortium partnerships and develop site specific fabrication drawings
- Development of prototype “charge barge” units and connection to client floating feed barges
- Demonstrate performance of prototype in service conditions
- Enhance design through operational feedback and ongoing technology development
- 2 Year development period over multiple sites after which revenue commences

Phase 2

Industrialisation and Upscaling of Operations

In the medium to long term, ZOEX’s primary objective is to maximise product sales to generate volume and drive cost reductions in the underlying technology.

- Move into other diesel displacement sectors - O&G, Marine logistics, Windfarm support
- Through volume purchase and technology learning factors unit cost to drop rapidly
- Target 500 + units by 2030 which allows industrialisation of the PTO (Umbra)
- This will drop the LCOE to that of offshore wind paving the way for future utility scale applications
- Develop future supporting technology to expand application and scalability

Phase 3

Utility scale and joint wave/wind/solar/energy storage solutions

The ultimate goal is to bring wave energy into the mainstream and offer 24-hour reliable green energy for all customers at a price that compels transition to renewables.

- Transition into utility scale grid connection combined with energy storage solutions
- Coordinate joint offshore wave/wind/solar arrays to minimise grid stress
- LCOE to continue to drop to offshore wind levels as growth momentum gathers pace
- Full utility scale ‘wave farms’ to proceed with global reach and billions revenue by 2040

This brings access to the 100TWhr utility market and translates into several million units and a £multibillion revenue stream by 2040.

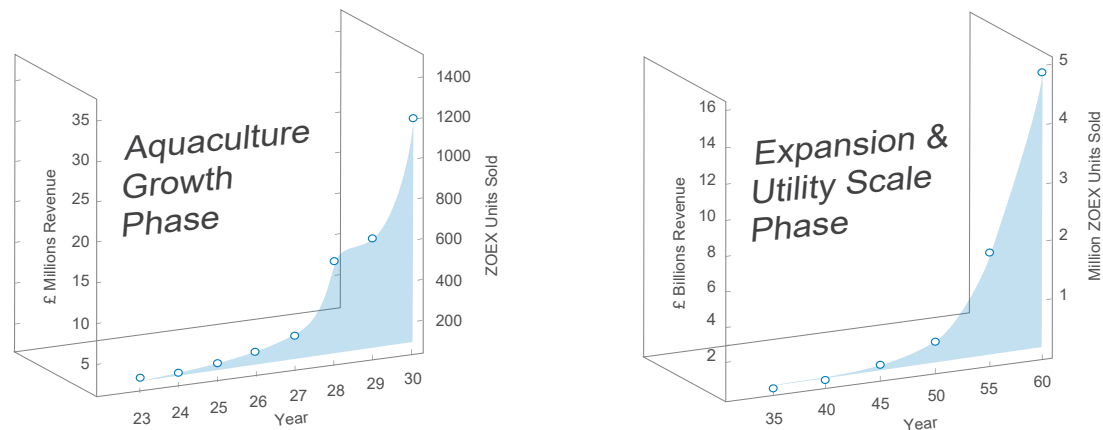
8 Investing for growth

ZOEX will deliver a paradigm shift in renewable energy

ZOEX intends to become the leading supplier of green energy solutions to the aquaculture industry by building a dominant position in the existing market and exploiting new opportunities. Aquaculture is a rapidly expanding sector whose energy needs are projected to be worth \$10 billion globally by 2027.

The ZOEX growth strategy is to expedite commercial viability with minimum development expenditure thereby bringing forward revenue streams and accelerate payback on initial investment. Subsequent market expansion into the blue economy and utility scale applications will be funded through a combination of organic growth, equity investment rounds and potential public flotation.

Investment and Unit Sales



Possible Investment Profile

| FUNDING | | | Scope of Work |
|---------|----------|-------------|---|
| Year | Stage | Amount £ | |
| 2023 | Series A | 6.0 million | Design and installation of the pre-commercial prototypes |
| | | | Refinement of product and first commercial offering to market |
| 2025 | Series B | - | Scaling up business within Aquaculture through revenue and investment |
| 2026 | Series C | - | Secure access to financial and logistical expertise to fully scale up opportunity |
| 2027 | IPO | - | Balance sheet expansion for diversification into other markets |
| | | | Continual period of product innovation and growth |

The Investment opportunities are clear to see

ZOEX will yield exceptional returns to those that Join us on our journey to liberate the greatest untapped energy source on the planet.

ZOEX started as a personal odyssey to make waves work, they now stand on the brink of commercialising the world's first viable energy capture device for universal wave industry application.

The ZOEX team has the goal of making ZOEX a global force for good. Our strategic partners bring specific capabilities and expertise to the development program and will support our in-house engineering team to ensure learning is captured and IP rights remain protected.

Future Valuation – Money talks and great ideas have to walk

Only OPT and ECOWAVE have received significant investment via IPO floatation's. These products have some promise within their own niche but limited potential for growth elsewhere. Their hopes of cracking utility scale markets will prove fruitless given their limited applicability. Their valuation is only as good as their future limited prospects.

ZOEX has reached a similar point of development to its closest rivals through a combination of self-funding and research grants. Already exceeding the limited capabilities of its peers, ZOEX' foresight in targeting the synergy with Aquaculture will be the key to unlocking its loftier ambitions. With ZOEX game changing credentials, its valuation will be priceless.

| Company | Product | Location Opportunities | Current Applicability | Special Features | Investment Status | Valuation |
|---------------|---|---|--|-----------------------------|-------------------------|-----------------|
| Ecowave Power | Fived body mounted Pitching float | Breakwaters and seawalls | Harbour auxiliary power contribution | Cheap and simple | IPO | \$US 20 million |
| OPT | Single point floating absorber | All open sea floating applications | Senior instruments - very low power applications | Simple deployment | IPO | \$US 60 million |
| ZOEX | Hinged float - floating or fixed body mounted | All floating or fixed marine structures | All marine diesel displacement applications | Efficient in all sea states | Self-funding and grants | ? |