



An Integrated Approach to Marine Renewables

Xodus Group actively supports the development of renewable energy sources to meet the ever increasing demand for electricity and the need to reduce greenhouse gas emissions

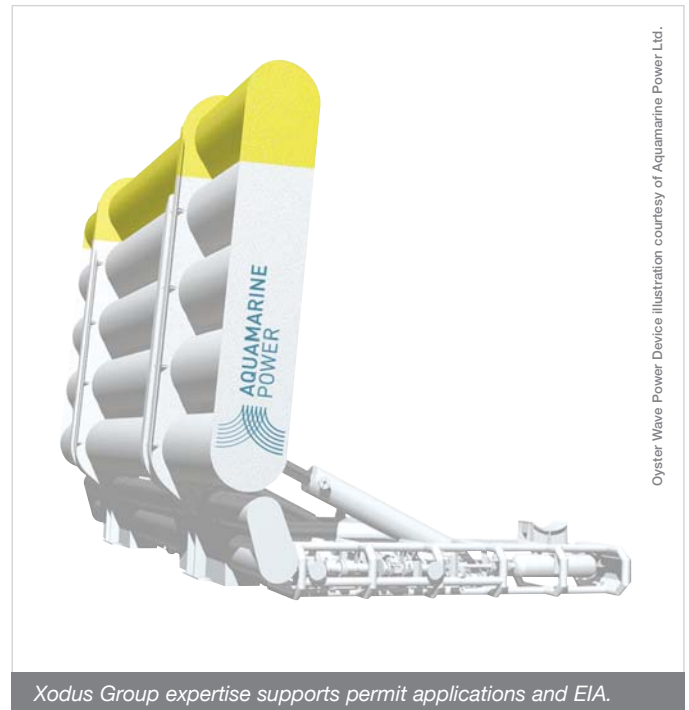
In addition to wind, the substantial wave and tidal resources around the UK and Scotland in particular are increasingly being considered for the provision of greenhouse gas free electricity from an inexhaustible and clean ocean resource. The Scottish Government has set a target for the production of 50% of electricity demand in Scotland to come from renewable sources by 2020, with an interim target of 31% by 2011. Although the marine renewables sector is presently dominated by technologies that have yet to reach full commercial viability, it is believed the sector will provide an important contribution to meeting this target.

The integrated, lateral-thinking approach of the Xodus Group is geared to meeting the challenges faced by marine renewables developers. By combining a broad range of highly specialised skills in a single team, we have built an impressive reputation for clever thinking and responsive problem-solving, providing a single consultancy and engineering company. To make a renewables project viable you need think outside the box – precisely the kind of thinking we specialise in.

Experience works

With years of experience in the oil and gas sector and an ever growing marine renewables portfolio, our engineers and environmental consultants are capable of meeting the most acute needs in the rapidly evolving marine renewables sector. Our team is truly multi-disciplinary and the integration of our skills and services is what sets Xodus apart. Whether it is support in research and development, device design, prototype deployment or development of commercial projects, we can help. In house capabilities include:

- › Concept evaluation and site selection (including GIS)
- › Baseline monitoring and surveys (including MMOs)
- › Permit applications and environmental impact assessment (EIA)
- › Structural analysis and design
- › Materials and corrosion
- › Instruments and controls
- › Electrical engineering
- › Hydro and aerodynamic loading



Oyster Wave Power Device illustration courtesy of Aquamarine Power Ltd.

Xodus Group expertise supports permit applications and EIA.

- › Installation engineering
- › Technical safety
- › Risk management and contingency
- › HSE management systems and training

Strategically important location

Xodus has offices in Stromness, Orkney – home to EMEC, the European Marine Energy Centre. At the forefront of the development of marine renewables, this world-leading facility aims to help the evolution of marine energy devices from the prototype stage to the commercial market place. Xodus is working with a number of developers using the site to test their technologies.

Currently at the prototype stage, marine renewable energy is in a bright, exciting phase. But economic and practical problems need to be overcome in order to make wave and tidal power a reality. Xodus Group specialises in the innovative, clever thinking that turns concepts into commercial projects. Calling on our specialists in subsea, electrical, control and structural engineering, and combining their skills with world-leading environmental knowledge, we build integrated teams for specific projects.

Activities	Subsea Division	Xodus AURORA Division	TSR Division
Conceptual Design	Structural, Subsea, Controls, Electrical Concept Engineering	Integrated Project Development Conceptual Evaluation, Site Screening & Selection, Rigorous Cost Estimating Environmental Screening & Scoping, Geographical Information System (GIS)	Safety Screening & Scoping
Detailed Design	Structural Analysis & Design, Installation Engineering, Controls & Electrical Instrumentation, Materials & Corrosion, Hydro & Aero Dynamic Loading	Baseline Monitoring & Surveys, Environmental Impact Assessment/ES, Permit & Consent Applications, Compliance Management, Oil Spill Contingency Planning	Project Risk Management, HAZOP/HAZID, Safety in Design
Operations	Integrity Management, Operational Maintenance	Risk Management & Contingency HSE Management Systems (ISO14001, OHSAS18001) Training (Coaching, e-Learning, Auditor Training), Operational Safety	
Decomm.		Decommissioning Plan	

Renewables capabilities.

About Xodus

Xodus Group is a leading independent specialist consultancy with offices in the UK and Australia. We provide a uniquely integrated package of solutions for our clients as they seek to overcome the challenges they face throughout the life of their projects. From conceptual definition, through design and construction and into operation, Xodus provides the clever and innovative thinking needed to maximise the return on our customers' investment.

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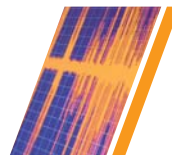
London / Aberdeen / Orkney / Perth



Subsea



Process & Facilities



Integration Technology



Xodus AURORA



TSR

To find out how we can support your development, contact:

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