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**Independent,  
integrated  
thinking**

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**Xodus Group  
OREF February 2016**

[www.xodusgroup.com](http://www.xodusgroup.com)

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## Our Vision

To be the world leader in energy consultancy

To integrate our services in ways that help our clients achieve success

To bring no nonsense know-how to everything we do

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# Key Statistics

Xodus in numbers

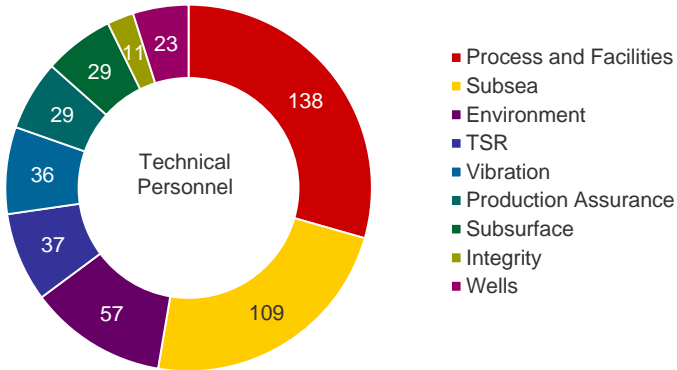


Over **3,500,000** man hours dedicated to completing more than **7,300** projects

Largest project totalling **50,000** hours and the smallest just **2** hours

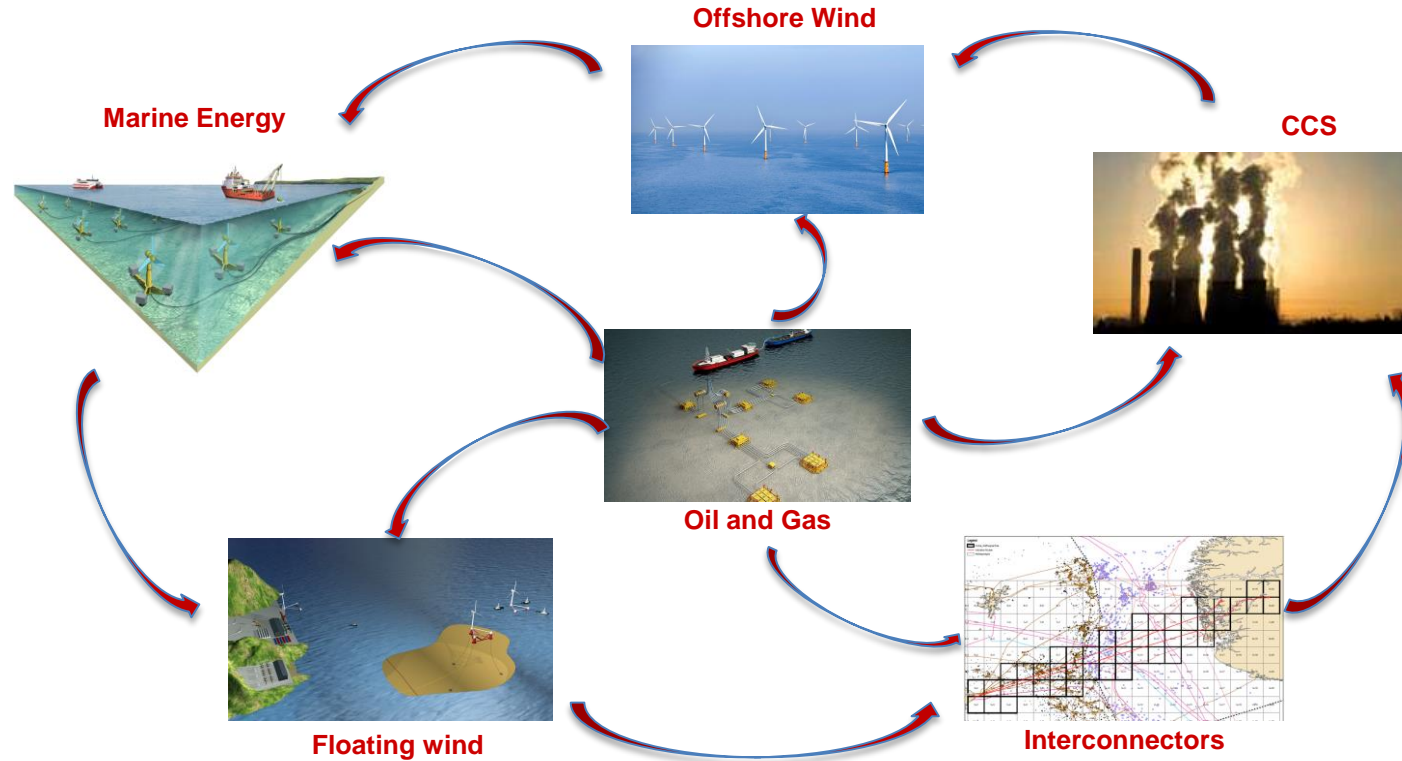
Over **500** clients of which 50+ are low carbon and interconnector clients

**Chiyoda Corporation** is the majority shareholder in Xodus Group



## Our Approach – Transfer lessons learned between sectors

Fundamental to our success it transferring lessons learned between renewable and O&G sectors and we are set up to integrate this knowledge



# Our Services

Supporting clients throughout the project lifecycle



## Multi disciplinary engineering teams

- > Technology assessments
- > Geotechnical, structural, electrical, instrumentation and controls
- > Cable design (include cable protection)
- > Advanced engineering (CFD / FEA / dynamic / fatigue analysis)
- > Reliability engineering (RAM / FMECA)
- > Array optimisation
- > Construction strategy
- > Schedule and weather risk analysis
- > O&M strategy development and asset integrity support



## We work for the following clients:

- > Government and agencies
- > Technology developers
- > Project developers
- > Investors
- > Supply chain companies

## Environment and Consenting

- > Legislation and policy advice
- > Constraints mapping & GIS
- > Site selection
- > Monitoring and survey
- > EIA screening and scoping
- > Environmental Statement and consent applications
- > Stakeholder engagement
- > Environmental management plans & contingency planning
- > Decommissioning Programmes
- > Research

## Health and Safety

- > HSE management systems
- > Training
- > Chair and facilitate risk assessments (HAZOP / HAZID)



## Advisory and strategic advice

- > Strategic Environmental Assessment
- > Feasibility studies
- > Risk management Government advisory
- > Due Diligence
- > Peer review / peer assist

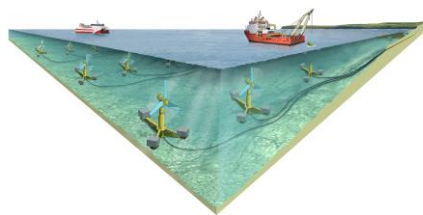
# Integrated Services

Expert support that spans the asset lifecycle



## Project Development

- Concept integration and selection
- Schedule and budget development
- Integrated multi discipline engineering teams
- Environmental and consenting support



## Integrated Projects

- FEED
  - Integrated multidisciplinary teams
    - Foundations & sub structures
    - Construction & commissioning
    - O & M strategies
- Post consent and environmental support



## Integrated Asset Support

- Risk and uncertainty management
- Specialist integrity support
- Operational excellence and system optimisation
- Operations and maintenance modeling



## Management Consultancy

- Strategic advice
- Due diligence
- Feasibility assessment
- Economic modeling
- Risk management

➤ Research and development projects



# Offshore Renewables Projects

Worldwide Presence and Experience



**EMEC**  
 Site selection  
 EIA guidance  
 Environmental monitoring programme  
 Baseline descriptions full scale & nursery sites  
 Management system support & procedures

**MeyGen Tidal Energy Project**  
 EIA  
 Engineering  
 Commercial

**Costa Head Wave Energy Project**  
 Stakeholder engagement  
 Geotechnical  
 EIA

**Aegir Wave Energy Project**  
 Stakeholder engagement  
 EIA Scoping

**NorthConnect**  
 Route selection study

**IceLink**  
 Route selection study

**Tidal technology developer**  
 Engineering design  
 EIA  
 HSE

**APL Orkney Projects**  
 Marine wildlife monitoring  
 Site selection  
 Stakeholder engagement  
 EIA

**UK Offshore wind projects**

**Xodus presence in Japan through**

Other clients



**Siadar Wave Energy Project**  
 Marine wildlife monitoring  
 Stakeholder engagement  
 EIA

**Western Isles Interconnector**  
 Route selection  
 EIA

**Guernsey RET**  
 Offshore wind feasibility study  
 Strategic advice on permitting and leasing process

**Statoil Hywind Scotland Pilot Park**  
 Stakeholder engagement  
 Geotechnical  
 EIA

**SE Asia**  
 Tidal energy feasibility

**Offshore wind turbine manufacturer**  
 HSE, Offshore Installation and O&M training

**Torr Head Tidal Energy Project**  
 EIA  
 Engineering

**Race Tidal**  
 EIA scoping

**EMEC Developers**

**OceanLinx**  
 EIA for 30MW demonstration project

**Minesto Tidal Energy Project**  
 EIA  
 Engineering  
 Stakeholder consultation

**Marine Energy Mission 2012**  
 Consenting & project development

✗ Xodus office locations

## OREF

How has it supported Xodus and what else could it offer

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### What has OREF provided Xodus:

- BD/marketing opportunities
  - Networking lunches
  - Representation of Orkney at events / conferences
  - OREF/Orkney annual newsletter
  - Helped shape wider Orkney marketing initiatives
- E mail circulars
- CPD opportunities for our Orkney staff
  - Pete Tipler, Chair
  - Andrea Taylor, Committee member

### What else could OREF provide?

- Continued BD/marketing opportunities
    - Opportunities to expand these?
    - Lessons learned from recent events
  - Provide feedback e.g. from events
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