

THE OFFSHORE WIND PEOPLE



***“It’s not just about experience,
innovation and thought leadership.
It’s about always delivering what we
set out to deliver.”***

Andy Kinsella
CEO Offshore



OVERVIEW

Mainstream Renewable Power is a world leading renewable energy company actively developing over 12,000MW of wind and solar projects across eight countries on four continents.

In Europe, the company is advancing three offshore projects of over 5.6GW in Scotland, England and Germany. Mainstream is recognised as a thought leader in the offshore wind sector where it continues to shape the market in areas such as interconnection through the Supergrid and SuperNode®. The company is pioneering new engineering concepts such as the installation of the world's first "twisted jacket" foundation and it continues its efforts towards reducing the cost of energy, risk reduction and performance optimisation.

The company's business model involves identifying an area of sea, obtaining a licence to develop it and securing the full planning permits to put a wind farm there. In parallel, Mainstream negotiates all the major construction and services contracts in order to take the project to a stage where it is fully designed, fully engineered and all the key components are secured. At this point Mainstream sells the project so that the owner can immediately reach financial close and build the project.

Financially, Mainstream is equipped to take projects to this stage due to its fundraising expertise. To date it has raised €155 million in equity and mezzanine finance, including a €20 million equity investment from Barclays Capital.

- **Over 5.6GW in development offshore.**
- **Scotland, England and Germany.**
- **Pioneering the Supergrid.**
- **More than ten years offshore experience.**
- **Installing world's first "twisted jacket" foundation.**
- **Grid connection received for two projects.**
- **On track to start construction in 2014.**
- **Scoping global offshore opportunities.**



Milestones achieved:

- **Grid connection secured for first 1GW.**
- **5-year geotechnical framework agreement signed with Fugro GeoConsulting.**
- **Installing the world's first 'twisted jacket' foundation for its met mast.**
- **Scoping Report for Project One submitted.**
- **Held first series of public consultation events in the region in early 2011.**

PROJECTS

Hornsea

4GW, England

In 2008, Mainstream joined forces with Siemens Project Ventures (SPV) to form SMart Wind, a 50:50 joint venture that successfully secured the rights to develop the Hornsea Zone as part of The Crown Estate's Round 3 programme.

SMart Wind is the only supply chain led consortium in the Round 3 programme and has key relationships with leading supply chain companies including Siemens T&DL, Siemens Wind Power, EMU Limited, RPS and Fugro GeoConsulting.

The development strategy involves consenting the Zone in four 1GW phases, each containing two 500MW project blocks that share a connection to shore. Geotechnical studies are being carried out for each block on an annual basis.



Courtesy of Siemens

“We’re focused on delivering at least 4GW into operation by 2020.”

Chris Hill

General Manager, SMart Wind

PROJECTS

Horizont

1.2GW, Germany

The Horizont offshore wind farm, located in the German exclusive zone of the North Sea comprises three sites: Horizont I, II and III. When completed, the site will consist of over 200 turbines.

Mainstream has undertaken all necessary environmental surveys, geophysical and geotechnical investigations and is aiming to receive consent and first release (technical consent) in mid 2012 with a view to delivering the project into construction in 2015.

The German Government has recently announced the decommissioning of its nuclear plants, making the country's ambitious targets for offshore wind energy (at least 25GW by 2030) more urgent. Mainstream plans to connect its UK and German projects as part of the first phase of the Supergrid.

Milestones achieved:

- **Consent and first release application submitted to the consenting authority BSH in December 2009.**
- **Environmental, geophysical and preliminary geotechnical surveys completed in 2009/2010.**
- **Foundation, installation and O&M studies on track for completion in 2011.**



“Germany’s renewed focus on offshore wind energy places our Horizont project central to securing the country’s energy future.”

Tilman Schwencke

General Manager for Germany

PROJECTS

Neart na Gaoithe

450MW, Scotland

Mainstream won the exclusive right to develop the Neart na Gaoithe ('Strength of the Wind') project as part of a competitive bidding process run by The Crown Estate in February 2009.

Mainstream's bid was the culmination of extensive site selection, analysis and stakeholder engagement and was chosen because it combines technical, economic and environmental deliverability.

Milestones achieved:

- **Secured firm grid connection for 2014.**
- **Site complies with the Scottish Government's Strategic Environmental Assessment (SEA) for offshore wind.**
- **Scoping Report submitted to the Scottish Government and a Scoping Opinion received from the Scottish Government in early 2010.**
- **Successful series of consultation events held with local stakeholders throughout 2010 and early 2011.**
- **Completed geophysical, preliminary geotechnical and met ocean campaigns.**
- **Bird survey program on target for completion October 2011.**
- **Commenced EIA of the onshore cable and grid connection, April 2011.**



“All our key surveys are progressing well and the project is on track to be ready to build by 2014.”

David Sweeney

Offshore Manager, Scotland



NEW MARKETS

Mainstream sees Europe’s rapid commercialisation and industrialisation of offshore wind as a major first step towards a global transition. The company has positioned itself as a facilitator of this transition with large scale, cutting edge projects in the UK and Germany.

Policy makers around the world are now seeking to replicate the success of these pioneering markets and reap the energy security, industrial development and carbon reduction benefits associated with a thriving offshore wind industry. Mainstream sees many exciting, strategic opportunities ahead.

Mainstream believes that all development is local and that only by taking a locally-focused approach to development and partnerships will successful projects become reality. For this reason the company seeks to partner with companies that complement its experience with a skills base that is both locally resourced and respected.

The company’s objective is to build on its European success and extend its business model in targeted new markets. In so doing they look to:

- **Create a robust portfolio of projects that maximises value for shareholders.**
- **Identify the best sites and development strategies to deliver low cost, locally generated power.**
- **Facilitate the development of a vibrant and sustainable local supply chain.**
- **Minimise harm to and maximise benefits for the environment and stakeholders.**
- **Carry out all activities in accordance with its core values of safety, respect, innovation, teamwork, entrepreneurship and sustainability.**

“We’re looking for significant opportunities where we can continue our success, and for partners who share our vision.”

Cathryn Hooper

Offshore Strategic Development Manager



LEADING THE INDUSTRY

Mainstream is recognised as a thought leader in the renewable energy sector, identifying where the challenges lie and providing innovative solutions.

- **Reducing the cost of energy.**
Mainstream is a key member of the Offshore Wind Accelerator (OWA) - one of the world's leading technology research and development programmes designed to drive down the costs of offshore wind. Its main objective is to reduce costs by 10% over the next decade which would enable deployment to happen faster.
- **First to install the “twisted jacket” foundation.**
SMart Wind will install its first met mast using the innovative ‘twisted jacket’ foundation in the Hornsea Zone demonstrating commitment to reducing the cost of energy.
- **Bringing the “suction bucket” foundation into offshore wind to mitigate noise and simplify installation.**
Mainstream’s engineering team, together with innovative engineering companies, accomplished a certified feasibility study and is now aiming for building a demonstrator in the North Sea.

- **World leading Offshore Advisory Committee.**
In 2010, Mainstream formed its Offshore Advisory Committee to support the growth of its international offshore activities and to draw from leading industrialists with particular expertise in the energy sector.



Offshore Advisory Committee:
Back row: Sir Brian Bender, Andy Kinsella, Herbert Henzler, Fintan Whelan, Jeff Scott
Front row: Vivienne Cox, Sir Roy Gardner, Dr Eddie O'Connor.

- **Pioneering the Supergrid.**

Mainstream's advancement of the pan-European Supergrid proposal as a fundamental and necessary anchor for Europe's energy future.

- **Unrivalled experience.**

The Mainstream team brings together a decade of experience delivering significant infrastructure projects across four continents. Its people played a key role in delivering Ireland's first offshore wind farm at Arklow and successfully developed the German Offshore Wind project Butendiek and the Greater Gabbard project in the UK which is one of the largest offshore wind farms currently in construction.

- **Supply chain.**

Identification of key supply chain issues along with proposals for managing these issues and associated risks as part of a cost reduction programme.

- **Trade associations.**

Mainstream is represented on the Board, or leadership council, of the main renewables trade bodies including the European Wind Energy Association, RenewableUK, RenewableUK Health and Safety group, the German Offshore Wind Forum (OFW), and the Offshore Wind Development Coalition in the US.

- **Data management (ISIS).**

Mainstream is committed to developing an Integrated Sea Information System (ISIS) by working with stakeholders from industry, academia and government agencies.

- ISIS reduces project risk by setting data standards, aligning policies and centralising data collection, storage and analysis.
- ISIS brings the latest IT innovation to offshore wind development through visualisation and advanced predictive analysis.
- ISIS aligns fully with the EC Marine Knowledge 2020 Directive and will be developed in phases as the offshore wind industry expands.



Friends of the Supergrid members:



“Supergrid is vital to the success of Europe’s offshore wind industry. That’s why Friends of the Supergrid has some of the world’s most influential companies on board.”

Dr Eddie O'Connor
Chief Executive



SUPERGRID

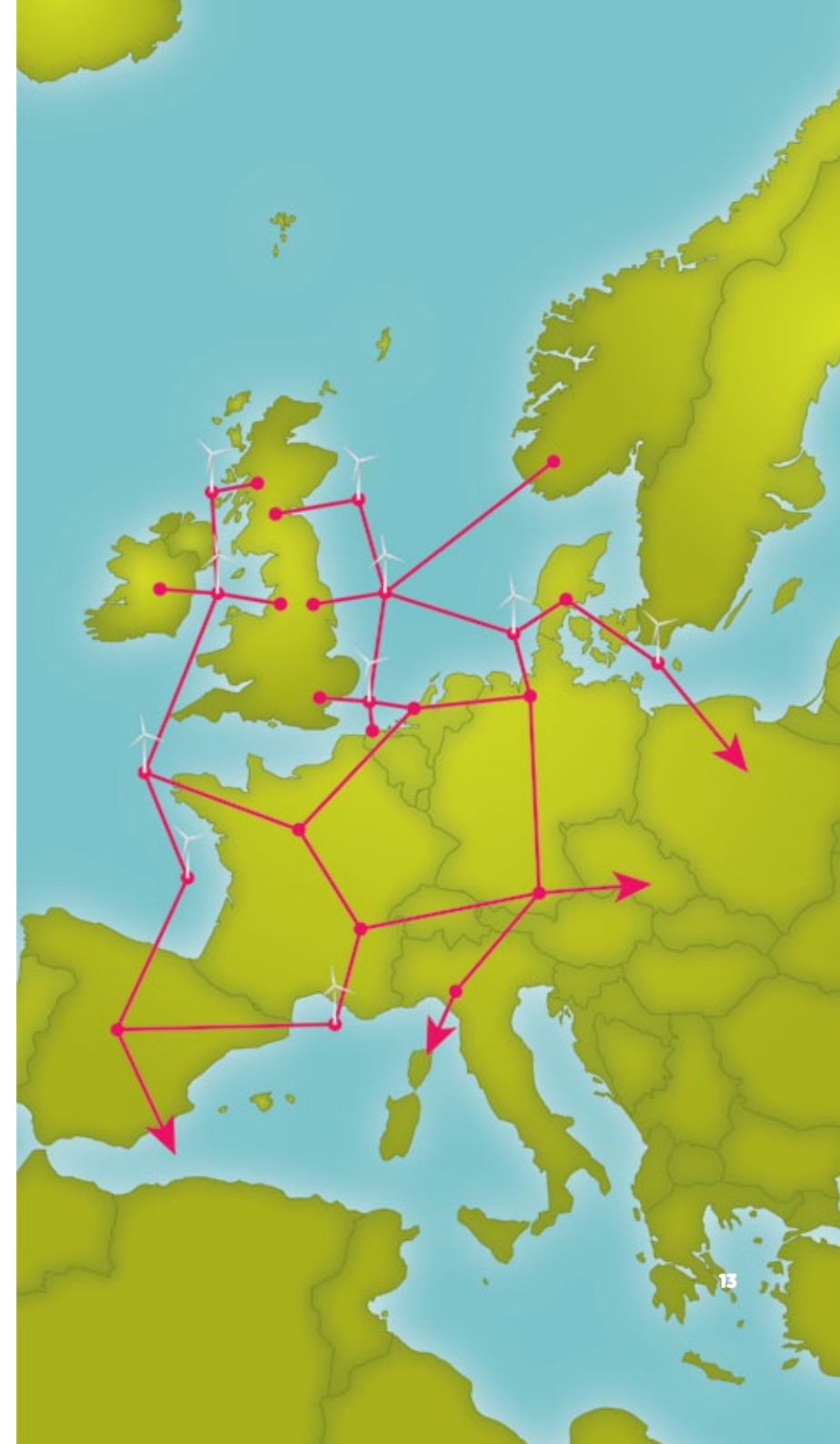
Mainstream's Chief Executive, Dr Eddie O'Connor, formulated the initial proposals for the European Offshore Supergrid in 2001. Whilst not seen by policy makers as a priority at that time, today Supergrid is acknowledged as central to achieving Europe's goals of security of supply and sustainability.

The Supergrid is a high voltage direct current (HVDC) network connecting offshore and onshore SuperNodes which collect the renewable energy and deliver it to the existing high voltage grid on land.

The Supergrid has the technology and scale to harness Europe's abundant offshore wind in the North Sea. It is also capable of being deployed on land where there are gaps in a country's or continent's energy capacity, such as in the US.

- **Mainstream initiated the setting up of the 'Friends of the Supergrid' (FOSG) in 2010.**
- **FOSG is a group of twenty one of the world's leading companies that have come together to promote the policy agenda for a Supergrid in Europe.**
- **These companies combine all sectors – HVDC infrastructure and related technology, together with companies that will develop, install, own and operate that infrastructure.**
- **FOSG submitted the Supergrid Phase 1 proposal to the European Commission in December 2010.**

For more information visit, www.friendsofthesupergrid.eu



VALUES

Mainstream has built its business on six core values which transcend geographic and cultural boundaries, as well as being clearly aligned with its business activities.

- 1. We believe in a Safe Environment for our people.**
- 2. We believe that by Working Together as a team, we deliver more.**
- 3. We believe in a sustainable approach to everything we do.**
- 4. We believe in Personal Respect for the people we deal with.**
- 5. We believe that an Entrepreneurial approach will find the solutions others can't see.**
- 6. We believe that by Embracing Innovation we will stay ahead of the game.**





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