



YNNI MOROL CYMRU

# INVESTMENT | JOBS | SUPPLY CHAIN 2017

£68.3 million direct investment in Wales to date

137 FTE jobs and 350 person years of employment to date

Predictions for over 50% of Welsh supply chain content

5 year investment plans of over £1.4 billion

In 2015, total direct investment in marine energy (wave, tidal stream and range) in Wales was £45.4 million. In 2017, that has risen to £68.3 million, an increase of over £23 million.

In 2015, the sector directly supported 36 FTE jobs and 174 person years of employment. In 2017 that has risen to 137 FTE and 350 person years of employment which represents an increase of 101 jobs and 176 years of employment.

The amount of public funding received in Wales to date totals £57.5 million. On a UK level, every £1 of public money invested in major marine energy businesses has leveraged £7 of private investment<sup>1</sup>. Current public funding of £57.5 million could therefore leverage in a further £402.5 million.

Current developers actively involved in Wales have indicated an expected investment of £1.4 billion in the next 5 years.

<sup>1</sup> Highlands and Islands Enterprise, Regen SW & Marine Energy Pembrokeshire (2016) Marine Energy: Key Steps to Maintain a Great British Success Story.

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# 1. Summary of Key Findings

## Economic Benefits for Wales

In January 2017, Marine Energy Wales carried out a survey of the marine energy industry in Wales. The purpose was to provide an update on a previous report published in 2015 aiming to understand the contribution of the marine energy sector to date, to understand future development plans and what this could potentially contribute to the low carbon economy in Wales. The analysis covers wave, tidal stream and tidal range energy.

In 2015, total direct investment in marine energy (wave, tidal stream and range) in Wales was £45.4 million. In 2017, this has risen to £68.3 million which represents an increase of over £23 million. In 2015, the sector directly supported 36 FTE jobs and 174 person years of employment. In 2017, that has risen to 137 FTE jobs and 350 person years of employment. This demonstrates an increase of 101 jobs and 176 years of employment. These are direct impacts; the contribution is increased when total gross value effects are included from the wider supply chain. Developers also provided information on their future spending aspirations for the country, with a potential investment of over £1.4 billion over the next 5 years if market and development incentives are in place.

This increased spend and the significant rise in jobs created demonstrates the momentum with which the sector is developing in Wales. Clearly, marine energy is fast becoming a dynamic and exciting part of the Welsh economy with associated supply chain and employment benefits set to rise further as more public funding is accessed and used to leverage in private investment. The sector is also assisting in supply chain diversity, clustering and resilience. It is supporting peripheral economies where new innovation is creating jobs in areas that need them the most. It is driving investment into ports and infrastructure and linking academia with the private sector. It is also providing Wales with an opportunity to be a global leader in an export market worth an estimated £76 billion by 2050 contributing around £4 billion cumulatively to UK GDP<sup>2</sup>.



<sup>2</sup> Marine Energy Programme Board (2015), Wave and Tidal Energy in the UK : Capitalising on capability.

## 2. Foreword

### Wave, tidal stream and tidal range. A diverse resource bringing multiple benefits.

There is no doubt that Wales is playing a key role in the development of this global sector. A growing number of world leading technology developers are capitalising on Wales' world class resource and significant marine renewable energy potential. With €100.4 million of EU Structural Funds dedicated to marine energy, two Demonstration Zones, a skilled and experienced supply chain and significant support from Welsh Government, Wales could soon be exporting home-grown technology and skills around the globe.



Significant industry progress has been made over the past few years. In North Wales, we have witnessed the signing of 8 berth agreements for the West Anglesey Tidal Demonstration Zone along with the recent scaling up of Minesto's Holyhead Deep project to 80 MW. In South Wales, construction is well underway for both Marine Power Systems' WaveSub and Wave-tricity's Ocean Wave Rower devices, both of which are being built by Welsh supply chain companies diversifying into new markets. Technical and feasibility studies of the world's largest wave energy demonstration zone are scheduled to start this year.

Charles Hendry, former Minister for the Department of Energy and Climate Change was commissioned by the UK Government to conduct a full review into the potential of tidal lagoon technologies and in his recent report provided strong support in backing not only Tidal Lagoon Power's exciting £1.3 billion project in Swansea Bay but also the wider wave and tidal stream sector. We have also been delighted to see the growing number of Welsh and international companies benefiting from the EU Structural Funding along with the confirmation of an additional €17 million of funding for the SEACAMS2 Research Project.

There is now an active industry in Wales looking at tidal range, stream, wave and floating offshore wind. This innovative sector is supporting supply chain diversity, resilience and clustering. It is providing new low carbon jobs and playing a key role in supporting the Welsh low carbon economy. The figures demonstrated by this report serve to highlight both the benefits and the potential of the marine energy industry for Wales, not only as a generator of marine energy but as an exporter of knowledge, technologies and services.

To quote the words of Charles Hendry, *"Marine energy technologies offer an energy opportunity where the UK can reasonably aspire to be the global leader, with some substantial supply chain opportunities to match it...The UK should be promoted as a centre of global excellence and opportunity for the development of all marine energy technologies, where appropriate giving a central focus to the work of organisations like Marine Energy Wales and Wave Energy Scotland."*

I am delighted to be contributing to the continuing development of the industry in Wales following on from my role as Chair of Marine Energy Pembrokeshire. Now, as we have created Marine Energy Wales, it is clear that great progress is being made with huge potential for the future. This report is evidence of the growing confidence in Wales and I commend it to you.

Martin Murphy, Chair, Marine Energy Wales



### 3. Research Findings

#### ► Total Investment in Welsh marine energy projects

**Tidal energy:** Tidal energy, including developments by Tidal Lagoon Power, Minesto, Instream Energy Systems, Nova Innovation Ltd, Repetitive Energy Company Ltd, Tidal Stream Limited, Tocado and Tidal Energy Limited, along with the development of the West Anglesey Tidal Demonstration Zone have contributed a total of £35.8 million into the Welsh economy.

**Wave energy:** Wave energy developers, including Marine Power Systems, Wave-tricity, Wavepower, Floating Power Plant, CETO Wave Energy UK, along with the development of the South Pembrokeshire Wave Demonstration Zone have contributed over £3.6 million of investment into the Welsh economy.

**Total investment:** Combining the investment into wave and tidal energy along with publicly funded Welsh research projects brings the total to £68.3 million spent in Wales to date. This represents an increased investment of £23.8 million over the past two years.

#### ► Employment benefits from the marine energy sector in Wales

**Person years of employment:** Marine energy technology developers and associated Welsh project development have directly created over 186 person years of employment to date. Alongside Welsh marine energy related academic research, this figures rises to over 350 person years of employment.

**FTE Jobs:** There are currently 137 Full Time Equivalent (FTE) jobs in Wales in the marine energy sector. With only 36 FTE jobs in 2015, this represents a significant increase of 101 jobs created over the past two years.



#### ► Developing the Welsh Supply Chain

The £68.3 million of total investment into Welsh marine energy projects represents direct spend by project developers and research projects. Figures reported in previous research on suggest that every £10 million of investment in resources in marine energy could be associated with total gross value added effects in Wales of around £2.5 million (including direct, supply chain and associated household effects)<sup>3</sup>. Using this multiplier, the potential investment in Wales of marine energy projects could total £85.3 million. Similarly, the same research suggests that each £10 million of marine energy investment would be associated with around 75 person years of employment once direct, supply chain and household effects are taken into account.

Figures collected for this report suggest that for the 27 marine energy organisations currently active in Wales who provided data for this report, approximately 40% of their supply chain has come from within the country to date. Whilst this figure is lower (10%) than the figure presented in 2015 (which looked at a total of 9 companies), it is important to remember that a number of companies who have invested money in Wales to date are yet to construct and deploy their devices, which is where many of the supply chain benefits will be felt.

<sup>3</sup> Fanning, T, Jones, C and Munday, M. (2014) Regional Employment Returns from Wave and Tidal Energy: A Welsh Analysis. Regeneris Consulting and the Welsh Economy Research Unit.

There are a number of very positive supply chain stories emerging from the Welsh marine energy sector over the past few years. In 2016, Pembroke Dock-based Mainstay Marine Solutions won the contract to build the first stage of a £5.8 million wave energy converter development project in South Wales on behalf of developer Wave-tricity. Also in 2016, Ledwood Mechanical Engineering, an engineering company based in Pembroke Dock, South Wales began the construction of Marine Power Systems' WaveSub quarter scale device. Tata's Port Talbot steel plant also provided the steel for Scotrenewables' 2MW tidal energy device. These examples clearly demonstrate that Welsh supply chain companies are effectively diversifying and accumulating both the required skills and experience in the marine renewables sector.

Minesto, a leading marine energy developer has chosen North Wales as the basis for their UK Headquarters, and has recently announced that the company intends to expand the commercial roll-out of its Deep Green technology in Holyhead Deep, by taking steps to increase the planned installed capacity of its tidal energy array to 80 MW.

*"This is an exciting opportunity to develop the tidal energy sector in Wales. In Holyhead, we have already created 15 full-time jobs to date. We have also created significant and tangible opportunities for the Welsh and UK supply chain. The ultimate goal is to develop Holyhead into an assembly and export hub for Minesto's international market expansion".*

**Dr Martin Edlund, CEO, Minesto**

Equally encouraging are the number of developers who have high aspirations for Welsh supply chain content once projects reach the construction stage. A number of wave and tidal developers have stated plans for between 70-80% of their supply chains to come from Wales. Tidal Lagoon Power's ambition is for half of the investment for their £1.3 billion project in Swansea to be retained within the Welsh economy.

### ➤ Public funding and private investment

The amount of public funding received in Wales to date totals £57.5 million. Figures provided in a recent UK wide report indicate that every £1 of public money invested in major marine energy businesses has leveraged in £7 of private investment, and more than 77 percent of this investment has been spent in the UK supply chain<sup>4</sup>. Based on these figures, the current public funding of £57.5 million could leverage in a further £402.5 million.

### ➤ Future development plans

Companies involved in this report were asked to detail their future spending plans in Wales. Figures provided were very encouraging with a 5 year predicted spending total of over £1.4 billion if market and development incentives are in place. Several companies have cited an ambition for rolling out development on a global scale using Wales as a manufacturing base.

<sup>4</sup> Highlands and Islands Enterprise, Regen SW & Marine Energy Pembrokeshire (2016) Marine Energy: Key Steps to maintain a Great British Success Story.



## 4. The Opportunity

### ► The Potential

A study by Regeneris and Cardiff University<sup>5</sup> highlighted the huge impact the wave and tidal stream sector could have in Wales. This was done using three illustrative development scenarios:

1. A 30MW wave installation and a 30MW tidal stream installation has the potential to support over £70 million of GVA across Wales, based on total investment of £150 million. It could also provide 2,000 person years of employment associated with development and installation, with a further £2 million in GVA and 50 FTE jobs per annum throughout the period of generation.
2. 300MW in marine energy capacity (two 30MW wave installations and eight 30MW tidal stream installations) would deliver just over £300 million of GVA for Wales. It could provide 8,500 person-years of employment during development and installation phases. The operational phase would support £7.8 million in GVA and 180 jobs per annum across Wales.
3. The final, very substantial roll out of 1GW in wave and tidal energy could deliver £840 million of GVA impact to Wales (based on a total investment in Wales of the order of £1.5 billion in 2013 prices) and deliver 24,000 person-years of employment. For the 1GW Scenario 3, Regeneris estimates that £20 million of GVA and 440 FTE jobs per annum would be supported across Wales through generation activities.



### ► The Opportunity

**Funding:** The West Wales and the Valleys region has been awarded the highest level of support from the European Union for the Structural Funds programming round 2014-2020. There are €100,428,444 EU structural funds prioritised for marine energy in Wales, with a maximum intervention rate of 69.43%. These funds are administered by the Welsh European Funding Office (WEFO). The strategic objective is (3.1) to:-

*Increase the number of wave and tidal energy devices being tested in Welsh waters and off the Welsh coast, including multi-device array deployments, thereby establishing Wales as a centre for marine energy production.*

**The resource:** Wales has 1200km of coastline and up to 6.2GW of estimated generating capacity excluding tidal range<sup>6</sup>. The Welsh coast has an excellent wave and tidal stream climate, as well as significant opportunities for tidal range. Anglesey has a vast potential for tidal stream energy with a peak spring velocity of over 3 m/s. Pembrokeshire has the highest concentration of wave resource in Wales equating to an indicative capacity of up to 5.6 GW providing a significant opportunity for development of the industry. Tidal range resource is also abundant across Wales and Tidal Lagoon Power aim to deliver up to 9 GW installed capacity through their four tidal lagoon projects across the country.

<sup>5</sup> Regeneris Consulting and Welsh Economy Research Unit at Cardiff Business School, (2013) The Economic Case for the Development of Marine Energy in Wales.

<sup>6</sup> Welsh Government (2012), Energy Wales: A Low Carbon Transition.

## 5. Development Progress And Future Plans

### 5.1 > Wave Energy



#### Marine Power Systems

##### Project

Marine Power Systems Ltd. was founded specifically to develop the WaveSub wave energy converter. The WaveSub has undergone scaled sea trials, tank testing and detailed cost of energy modelling. The conclusion was that the WaveSub has the potential to compete favourably with other renewable technologies and ultimately be competitive with conventional energy generation. MPS has completed two phases of the development of the technology and is currently undertaking Phase 3: Design, Build and Testing of a 1:4 scale prototype. The fabrication of the 1:4 scale WaveSub is an important step in the journey towards commercialisation of the project and will be 15 metres long, 10 metres wide and 2.5 metres tall.



##### Benefits to Wales

MPS' WaveSub project has been part-funded by the European Regional Development Fund through the Welsh Government, with MPS receiving a £2 million grant in October 2015. MPS is supportive of creating a Welsh marine energy supply chain, with many of its suppliers for this operation being based in Wales and therefore feeding into the local economy. MPS awarded the tender for the manufacture of its WaveSub device to Ledwood Mechanical Engineering, a leading engineering company based in Pembroke Dock, South Wales.

#### Wave-tricity

##### Project

Wave-tricity has a mission to develop a commercially viable, real world, wave energy converter and has over 100 years of ocean going experience within the team. Its technology, the Ocean Wave Rower, will generate clean energy by capturing the natural motion of the waves and plans to make use of the worldwide resource of wave energy estimated to be greater than 2TW.



##### Benefits to Wales

The two-year project aims to pave the way for deployment of the technology in an array and also a long-term sustainable business in West Wales following successful testing. The company has secured £4 million in EU funding through the Welsh Government, which is matched by £1.8 million from the company. This has already created new jobs in both engineering and operations as well as supply chain opportunities for local businesses. On announcement of the funding, Matthew Fairclough-Kay, Managing Director at Wave-tricity, said: *"This announcement marks a key milestone for the company. Everyone on the Wave-tricity team is looking forward to starting operations in Pembrokeshire and bringing the prospect of clean wave energy a step closer to commercial success."* The contract for the build of the test platform and installation of the associated technology was won by Pembroke Dock-based Mainstay Marine Solutions who started constructing the device earlier this year. Wave-tricity have recently opened an office at Pembroke Port in Pembroke Dock.

# Development Progress And Future Plans

## 5.2 > Tidal Stream Energy

### Minesto

#### Project:

Swedish-based, leading tidal energy developer Minesto have chosen the UK as their home market and Wales as the base for the industrialisation of their unique technology called Deep Green. Deep Green, a subsea “tidal kite” is the only verified technology to operate cost-efficiently in low-velocity tidal and ocean currents – significantly extending the UK and world’s exploitable ocean energy resource. Deep Green produces electricity from slowly flowing underwater currents by a unique principle. By sweeping a turbine across a large area, at a speed several times the actual speed of the stream, Deep Green adds a step of energy conversion compared to other technologies.

#### Benefits to Wales:

In June 2014, Minesto was awarded an Agreement for Lease by The Crown Estate for a 10 MW installation in Holyhead Deep, aiming to deliver reliable, predictable energy to 8,000 Welsh homes. In February 2017, Minesto announced that the company intends to expand the commercial roll-out of this project by increasing the planned installed capacity of its tidal energy array in Holyhead Deep to 80 MW with an ultimate goal of developing Holyhead into an assembly and export hub for Minesto’s international market expansion. Minesto’s listing on the Nasdaq in Stockholm in 2015, together with funding from ERDF and InnoEnergy, has raised more than €30 million – of which the vast part will be spent in the UK. Their business is investing in highly skilled jobs in electrical, mechanical and offshore engineering



## Development Progress And Future Plans

### 5.3 ➤ The Crown Estate Demonstration Zones

The West Anglesey Tidal Demonstration Zone and South Pembrokeshire Wave Demonstration Zone are two of several zones around the United Kingdom which have been leased out by The Crown Estate in a bid to encourage and accelerate technology development. These zones were identified because they offer appropriate wave and tidal energy potential and access to necessary infrastructure, including ports and electricity grid.

#### West Anglesey Tidal Demonstration Zone – Morlais Marine Energy

##### Project:

The West Anglesey Tidal Demonstration Zone has been identified by the Crown Estate as being a suitable location for the installation of tidal energy devices in the short to medium term. The zone has a good tidal current resource and a relatively low wave regime. It comprises of 37km<sup>2</sup> and is generally based around the promontory of Holy Island. Morlais Marine Energy was created by Menter Môn following its appointment as the managers for The West Anglesey Tidal Demonstration Zone by The Crown Estate. Morlais operates the Zone on a 45 year lease on behalf of the Crown Estate and will manage and sub-let areas within the zone for test and demonstration activities alongside some of the first array scale commercial projects.

##### Benefits to Wales:

One of the project aims is to establish Anglesey as a marine energy hub and secure maximum added value for the local economy. Eight developers and manufacturers from around the world have signed up for berths in the zone – utilising several tidal stream technology devices and balance of plant. In addition to OpenHydro and Tocardo, other companies to secure berths at the West Anglesey Tidal Stream Demonstration Zone include Aquantis, Instream Energy Systems, Kepler Energy, Nova Innovation, TidalStream and Verdant Isles. The £33 million project consent and construction phase for the West Anglesey Tidal Demonstration Zone will mostly be sourced from UK supply chain. Morlais is expecting to secure €20 million funding for tidal energy infrastructure.

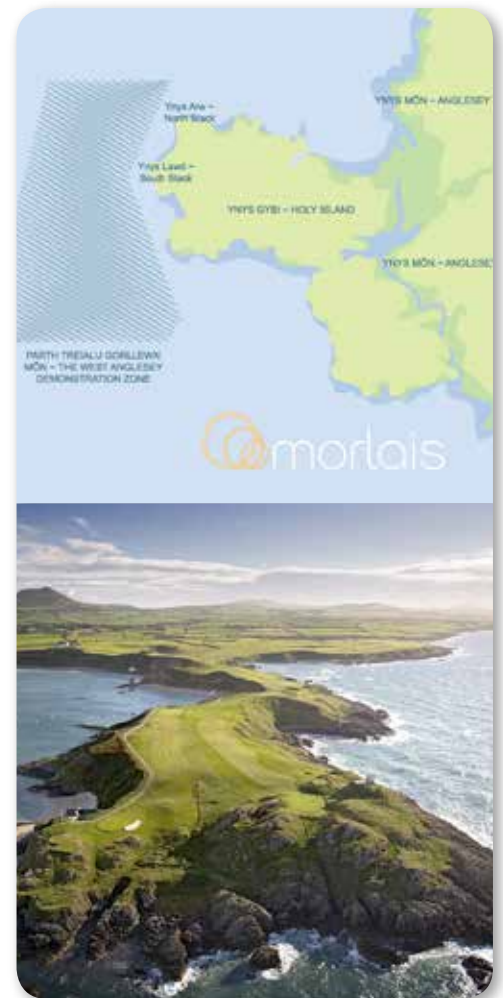
#### South Pembrokeshire Wave Demonstration Zone – Wave Hub Ltd

##### Project:

The South Pembrokeshire Wave Demonstration Zone is a 90km<sup>2</sup> area located 13 km off the South Pembrokeshire coast. It is the world's largest seabed lease and has the potential to support multiple wave arrays with a generating capacity of up to 30MW for each project. The site offers excellent grid connection possibilities (400kV transmission line and substation located coastally), along with world class deep water port facilities and support services.

##### Benefits to Wales:

Third Party Management for the site is a collaborative approach being led by Wave Hub Ltd with partners including Marine Energy Pembrokeshire and the Port of Milford Haven. Wave Hub Ltd have recently opened an office in the Marine Energy Hub in Pembroke Dock and is currently undertaking technical and feasibility studies.



## Development Progress And Future Plans

### 5.4 ➤ Tidal Range Energy

#### Tidal Lagoon Power

##### Project:

At 320MW installed capacity, with first power expected in 2018, Swansea Bay Tidal Lagoon will be the largest marine energy development in the world. Developed by Tidal Lagoon Power Limited, it will have an entirely predictable 495GWh output each year of clean, green electricity and is estimated that it will power 155,000 homes for 120 years – that's about 90% of Swansea Bay and 11% of Wales' domestic use.

##### Benefits to Wales:

Tidal Lagoon Power's ambition is for half of the investment for their £1.3 billion project in Swansea to be retained within the Welsh economy. In addition to very significant supply chain and employment benefits, this project will provide:-

- An international watersport centre that will host a variety of national and international events, from triathlon to sailing
- An Offshore Visitor Centre that will work with local schools and colleges, as well as welcoming 100,000 tourists to Swansea Bay each year
- The creation of new habitat, sea reefs and seabed sanctuaries and the reintroduction of species through an onsite hatchery with an initial focus on the restoration of the local native oyster



*After years of debating, the evidence is I believe clear that tidal lagoons can play a cost-effective part of the UK's energy mix."*

*Rt Hon Charles Hendry, Independent Review of Tidal Lagoons*

# Development Progress And Future Plans

## 5.5 ► Swansea Bay City Region Deal

### Pembroke Dock Marine

A £76 million “Pembroke Dock Marine” project has been shortlisted by the Swansea Bay City Region Deal which includes a UK Catapult led Marine Energy Engineering Centre of Excellence based in Wales.

Pembroke Dock Marine is a part of the wider Swansea Bay City Region Deal which aims to drive the Welsh economy forwards, increasing productivity, supporting jobs and increasing investment in the Swansea Bay City Region. A collaboration between four key partners (Port of Milford Haven, Marine Energy Pembrokeshire, Offshore Renewable Energy Catapult, and Wave Hub Ltd.), Pembroke Dock Marine aims to develop a world class centre for wave and tidal stream energy development, fabrication, testing and deployment. The Pembroke Dock Marine Project comprises four key elements:-

**Marine Energy Engineering Centre of Excellence (MEECE)** – This element of the project will see the creation of a knowledge centre with on-site practical testing and learning opportunities. MEECE will be a resource for developers, helping them identify solutions that maximise efficiency and reduce costs whether still at design stage or during the multiple test phases.

**Pembroke Port** – As a part of this project, Pembroke Port (the delivery site at the Port of Milford Haven) will redevelop their existing space to incorporate increased deep water access, internal and external heavy fabrication areas, the construction of MEECE and also to provide an education facility.

**Marine Energy Test Area (META)** – The Marine Energy Test Area aims to provide consented areas of waterway, close to an operational base complete with licences and enabling infrastructure. META will allow device developers to quickly perform tests on components, sub-assemblies and complete devices, and practice installation and O&M methodologies.

**South Pembrokeshire Wave Demonstration Zone (SPWDZ)** – As detailed previously in this report, the SPWDZ project will see the development of a 90km<sup>2</sup> site for commercial deployment of full scale wave energy arrays. It is currently the world’s largest wave energy seabed lease.

The total project delivery costs will be £76.3 million. The initiative’s driving force is to de-risk development, reduce the price of marine derived energy and make it a relevant energy option in a smart energy system. Pembroke Dock Marine will focus the commercialisation of wave and tidal stream technologies through the provision of infrastructure, facilities, knowledge and skills across the life-cycle of technical readiness levels.



## 6. Marine Energy Wales

### Supporting the Wave and Tidal industry in Wales

Marine Energy Wales brings together technology developers, the supply chain, academia and the public sector to establish Wales as a global leader in sustainable marine energy generation, making a significant contribution to a low carbon economy. The benefits of this industry are being felt throughout the country with the creation of green sustainable jobs, growth and skills providing significant development opportunities for Wales.



### Marine Energy Wales Objectives

To create a thriving and diverse marine energy industry in Wales by:

- Providing support and guidance for the marine energy sector by means of a single point of access, helping the sector to develop skills, make sound business decisions and connecting businesses with key industry contacts
- Encouraging learning and collaboration through regular working group meetings which are viewed as unique on a UK level and highly valued by industry, allowing accelerated business-to-business relationships and knowledge sharing
- Raising awareness of the country's key development opportunities, unlocking creativity and ideas for the development of the sector through ongoing stakeholder engagement, including the annual Marine Energy Conference that attracts delegates from across the world
- Representing the industry at Governmental departmental and Ministerial level, maintaining the key profile of the marine energy opportunity and ensuring that it features strongly in policy
- Encouraging wide participation in the marine energy industry through widespread networking at local, national and global marine energy events
- Promoting wider public understanding of the benefits of marine energy including the commitment to developing a low carbon sustainable economy which utilises our world leading position to create significant job and growth opportunities within the country

*"It is too difficult to build a new industry on your own. Developers, suppliers and public actors in marine energy have to work closely together to secure the path towards commercial breakthrough. Marine Energy Wales is the driver and enabler of such collaboration and thus plays a vital role for Minesto to succeed in our number one market, Wales."*

**Dr Martin Edlund, CEO, Minesto**

## 7. Why Wales

The country has a number of factors that make it an ideal location for marine energy development with up to 6.4GW (over 10GW including the Severn Estuary) of estimated generating capacity:

- €100.4 million of funding prioritised for marine energy in Wales
- An indicative wave capacity of up to 5600MW
- Tidal streams of up to 4ms<sup>-1</sup>
- The potential for 8,720MW installed capacity from four tidal lagoons
- Long term, dedicated political support from Welsh Government
- 400kV transmission lines and substations located coastally at resources areas
- Array scale Demonstration Zones in Anglesey and Pembrokeshire
- Eight strategically located ports sited along the North, West and South coast
- Established energy sector supply chains and workforce with transferable skill opportunities
- Experience in constructing and deploying Wales' first tidal stream device
- Dedicated, Government backed Enterprise Zones with business development incentives
- Access to expert academic and research facilities
- Marine Energy Wales providing a single point of access for marine energy developers interested in Wales

*"The Welsh Government is committed to unlocking this potential and putting Wales firmly on the marine energy industry's global map. The benefits for Wales could be significant – not only for industrial and economic regeneration, but also in terms of reducing carbon emissions and promoting sustainable energy"*

***The Rt Hon Carwyn Jones AM, First Minister for Wales***



For a full list of Marine Energy Wales support services and membership options,  
please visit our website at

[www.marineenergywales.co.uk](http://www.marineenergywales.co.uk)





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*"Marine energy technologies offer an energy opportunity where the UK can reasonably aspire to be the global leader, with some substantial supply chain opportunities to match it...The UK should be promoted as a centre of global excellence and opportunity for the development of all marine energy technologies, where appropriate giving a central focus to the work of organisations like Marine Energy Wales and Wave Energy Scotland."*

**Charles Hendry, The Hendry Review of Tidal Lagoons**

*If you require this report in Welsh please contact [holly.pretious@marineenergywales.co.uk](mailto:holly.pretious@marineenergywales.co.uk)*