SCOTTISH ENTERPRISE/ SCOTLAND EUROPA response to the public consultation on EIB’s Energy Lending Policy

20 December 2012

Scottish Enterprise is Scotland’s main economic development agency, responsible for identifying and exploiting the opportunities for economic growth by supporting Scottish companies to compete, helping to build globally competitive sectors, attracting new investment and creating a world-class business environment. In addition to tailored services to businesses, Scottish Enterprise works to:
- stimulate economic growth
- exploit low carbon opportunities
- improve Scotland’s business infrastructure

Scotland Europa is part of Scottish Enterprise and is also a membership-based organisation that promotes Scotland’s interests across the institutions of the European Union and to the representatives of Europe’s regions and Member States. Our membership brings together a wide range of Scottish organisations from the public, private and education sectors. For a full list of Scotland Europa Member organisations, please click here.

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4.1 Key Issues for the current review
Particularly in the current economic climate, is there a trade-off between promoting a competitive and secure energy supply and one which is environmentally sustainable? Where should the balance lie, and what implications does this have for energy sector investments?

The Scottish¹ and UK Governments, in setting out their renewable and carbon emission targets, have made their position clear: that they aim to balance the 3 objectives of a fair cost to consumer, security of supply and reduction in carbon emissions. In Scotland, the targets have been something of a call to action for the industry, giving a reliable signal of high-level political commitment.

One of Scotland’s major energy firms SSE not only supports Scottish targets but has formed a coalition with other European energy companies to voice support for a binding renewable energy target for 2030 at EU level².

According to the findings of a recent inquiry³ by the Scottish Parliament’s Economy, Energy and Tourism Committee, the Scottish Government targets are achievable. More important than this, from an economic development point of view, is the potential strong economic impact that achieving these targets can have on the Scottish economy – see below.

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¹ The Scottish Government has committed to 100% gross annual electricity demand from renewables; at least 11% renewable heat; and 10% in the transport sector by 2020. Scottish greenhouse gas emissions reduction targets are set at 42% by 2020 and 80% by 2050.
² SSE press release
³ EET Committee report on the achievability of the Scottish Government’s renewable energy targets
How does investment in the energy sector contribute to growth and employment? Are investments in all energy sub-sectors equally viable? And how does investment in the energy sector rank relative to other investments in the economy which support growth and employment?

The UK Offshore Valuation Study\(^4\) published in May 2010 is the first comprehensive valuation of the UK’s offshore renewable energy resources to 2050. It is estimated that Scotland has 206 GW of offshore wind, wave and tidal resources - almost 40% of the total UK resource and greater than previously assessed.

Renewable energy will play a critical role in supporting Scotland’s transition to a low carbon economy, within the broader context of taking bold and early action to address the global issue of climate change.

This is a transformational opportunity for Scotland and, through a swift response by the public and private sector working together to adapt to climate change and exploit the emerging global low carbon market opportunities, we will put the economy on a more prosperous, resilient and sustainable footing.

The ambition, as articulated in Government Economic Strategy\(^5\), is for a Scotland that is economically prosperous, environmentally sustainable, and resilient in the face of climate change and energy security. Renewable energy is recognised in this strategy as one of the greatest economic opportunities for Scotland in coming years.

The analysis\(^6\) that underpins the Scottish Government’s 2020 Renewables Routemap\(^7\) estimates the potential benefits of the offshore wind sector alone:

- Up to £1.3 billion in GVA in 2020 and £7.1 billion in total this decade, with an additional £6 billion of GVA from wider supply chain and employee spending.
- The potential to create 28,000 full-time equivalent jobs in the sector, supporting an additional 20,000 jobs in the wider Scottish economy by 2020.

These projections are based on decisive action being taken to deliver 6 GW of installed offshore wind capacity by the same date. The routemap also aspires to the installation of 1GW from marine sources by 2020, which could create up to 5,300 direct jobs and £4 billion of GVA this decade.

The Skills Investment Plan for Energy\(^8\) identifies the potential for up to 95,000 job opportunities within the Energy Sector to 2020. This comprises a mixture of replacement demand to sustain more established energy sectors - such as oil and gas - as well as new jobs in emerging sectors, including offshore wind and CCS.

All of the sub-sectors that make up the renewable energy sector are growing, but some are more mature, and others have potential for greater impact than others. The table below underlines the expected importance of offshore wind and marine in the coming decade in Scotland. In relative terms, after offshore wind and marine, biomass provides the most jobs per MW and this seems

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\(^4\) [Offshore Valuation Study](#) (May 2010)


\(^6\) [Scottish Offshore Wind: Creating an Industry](#), IPA Energy and Water for Scottish Renewables, 2010

\(^7\) [Scottish Government Renewables Routemap](#) (June 2011)

\(^8\) [Energy Skills Investment Plan for Scotland](#) – Skills Development Scotland 2011
logical as the support activities would include forestry work, preparation and transport of the biomass as well as installation, operation and maintenance work.

The chart below also shows that the more established technologies such as biomass and hydro have a higher GVA now but their expected growth rates are slower than offshore wind and marine so after 2015 these sub-sectors eclipse the others.

This analysis has led to the conclusion that Scotland’s short and medium-term focus should be on offshore renewables, with marine renewables in the medium-term looking beyond the current focus on commercialisation, individual company investments and supply chain development.

In the long-term we anticipate that the energy mix will evolve significantly, making a much bigger contribution and driving transformational change across the economy. We are already actively considering how these longer-term opportunities may emerge and grow by identifying the technologies, global market potential and wider economic implications.

The vision is for Scotland to tap into and maximise its massive green energy potential - from its vast natural resources of a quarter of Europe's tidal and offshore wind potential and a tenth of its wave power, to the legacy of Scotland’s traditional energy industries. The most stretching targets in the world have been set in order to reindustrialise Scotland through 21st century technologies and seize the opportunities to create tens of thousands of new jobs and secure billions of pounds of investment in Scotland’s economy.

Finally, what is the relative impact of investment in energy vis à vis other growth sectors in the economy? This was a question asked specifically for the recent inquiry into Scotland’s renewables targets by the Scottish Parliament’s Enterprise, Energy and Tourism Committee, to which Scottish Enterprise responded as given below:

- Our current appraisal evidence for renewables projects involving Scottish Enterprise’s support shows a forecast GVA return on investment of over £10 for every £1 over a 10 year period.

- It is always difficult to compare returns on investment (ROI) in projects across sectors due to the different nature and objectives of each project and variation in the time-frames over which they could deliver impacts. However, looking at all Scottish Enterprise’s activities
across sectors (not just renewables), our evaluation and appraisal evidence suggests that, on average over ten years, we can expect £5-£8 net GVA return for every £1 invested.

Scottish Enterprise’s own model to assess the impact of its activities indicates that the highest impacts come from investment in the energy sector, which is also among the highest contributing sectors to increased productivity and growth in exports.

What impact do you consider the current economic crisis will have on the energy sector (demand, policies, supply)?

The level of ambition on the part of the Scottish Government remains and the recent UK Government Energy Bill announcement will have a beneficial effect as it gives some short-term clarity to 2017. However, given that the strike prices for the UK Contracts for Difference have not yet been agreed, the key issue is longer-term, post 2020 investment and the impact that the lack of clarity about this may have on investment now.

The Scottish Parliament Energy, Enterprise and Tourism Committee inquiry on Scottish Government targets heard clear evidence that the UK Government’s delay in finalising the detailed figures underpinning its reform of the current subsidy regime is leading to investor uncertainty, which they believed could stall progress towards meeting the Scottish Government’s targets.

The current economic climate highlights the role for the EIB as an important vehicle to lead energy markets, recognising market forces and responding proactively. As the European Commission looks to encourage greater coherence and consistency between national renewables support schemes (through an expected forthcoming Guidance document), the role of the EIB lending strategy in potentially stimulating convergence and mitigating uncertainty should be taken into account.

4.2 Renewable Energy
The Bank’s economic justification for supporting emerging renewable energy technologies, whose cost is significantly above that of conventional and mature renewable energy technologies, is that continued investment in these technologies will eventually lead to price reduction and will ultimately be the least-cost approach to meeting EU’s renewable energy targets. Do you agree with this approach? Is there an alternative approach to the economic justification of these technologies which you consider to be more appropriate?

We agree with the approach adopted on the basis that costs are expected to reduce over time, and there are likely to be strong positive economic impacts in offshore renewables in particular. Additionally, EIB strategy should show awareness of its role in investments whose impact can be transformational, supporting the paradigm shift to a low carbon economy.

Research carried out by Scottish Enterprise in 2010¹⁰ highlighted a number of opportunities to reduce costs in offshore wind. Scottish Enterprise subsequently published a guide for the oil and gas sector¹¹ to look at opportunities in offshore renewables (including wave, wind and tidal) which was launched at the Scottish Low Carbon Investment Conference in 2011.

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¹ EET Committee report on the achievability of the Scottish Government’s renewable energy targets
¹⁰ Innovation in Offshore Wind - Foresighting (2010) Scottish Enterprise
¹¹ Guide to Offshore Wind & Oil and Gas capability (2011) Scottish Enterprise
The Oil and Gas sector has considerable transferable experience and capabilities that can benefit offshore renewables. Scotland’s oil and gas industry has some of the best design, fabrication and installation capabilities in the world, and these offer significant benefits especially in relation to the challenges associated with deployment of offshore wind turbines. Our research on the oil and gas sector suggests that the skills and experience of the sector could help reduce the costs of offshore wind by 20%.

Bloomberg New Energy Finance\textsuperscript{12} has developed an Offshore Wind cost model that calculates the internal rate of return and equity cash flows of offshore wind projects using their physical attributes and equipment selections. They use the model to determine project CAPEX to within 5% of developer estimates and to calculate the Levelised Cost of Energy (LCoE).

In the UK, they expect the LCoE for offshore wind to fall 22% from €165 to €128/MWh between 2011 and 2020. This is largely due to a step change in turbine size, increased scale, standardisation and experience, improved financing terms and change in water depth and distance from shore. This latter factor will initially increase costs but these will reduce over time with the introduction of larger turbine models in 2015-16.

Their analysis of onshore wind cost reductions suggests that if cost reductions in offshore wind follow the same cost reduction trajectory as onshore wind, then the UK LCoE will be approximately EUR 112Megawatts Per Hour (MWh) by 2022, EUR 65MWh by 2030 and less than EUR 50MWh by 2040\textsuperscript{13}.

The UK Government Department of Energy and Climate Change’s Cost Reduction Task Force published its findings in June 2012\textsuperscript{14}. It sets out a specific roadmap for how the offshore wind industry will reduce the cost of generation by over 30% to £100/MWh in the next seven years. This sees the cost of delivering 18GW of electricity from offshore wind, drop from £140/MWh today to £100/MWh by 2020 and will save the industry £3 billion per year from 2020. 18GW of offshore wind power will deliver around 20% of the UK’s total electricity demand. This will bring offshore wind a significant step closer to cost parity with other forms of energy generation, reducing risk and driving investment.

Analysis for Scottish Enterprise in 2010 highlighted that the wave and tidal industry is also anticipated to see significant reductions in cost as the industry moves from pre-demonstration to demonstration and beyond. This is illustrated in the figure below from the internal Scottish Enterprise report.

Cost reduction from single prototypes to small scale array demonstration are likely to be attributed to reductions in R&D costs (the design being substantially developed and optimised at the pre-development stage, reducing detailed engineering and design costs required for future devices); performance optimisation (the understanding and learning developed from the first installation can be applied to subsequent technologies); and economies of scale (including bulk purchase of components and savings in pre-deployment, installation and O&M costs being spread over multiple devices).

The analysis also highlighted that wave is currently considered to have a higher initial cost of energy than tidal stream. This is predominantly due to the increased complexity of wave energy extraction.

\textsuperscript{12} Bloomberg NEF – H1 2012 Offshore Wind Market Outlook – the Defining Decade (January 2012)

\textsuperscript{13} Ibid

\textsuperscript{14} DECC Cost Reduction Task Force – Cost Reduction in Offshore Wind (June 2012)
In contrast, tidal stream devices have benefited from technology transfer from the wind industry, and started from a lower cost of energy as a result.

Wave energy is expected to have a lower learning rate than tidal stream, due to greater technology fragmentation in wave energy devices. However, greater deployment is expected as wave has a larger global resource. As a result, the cost of wave energy ultimately drops below that of tidal stream.

The costs of shallow tidal technology at the pre-development stage are lower than those for deep tidal. This is because shallow tidal stream technology is currently at more advanced stage of deployment than deep tidal stream, with the majority of demonstration units in shallow tidal streams. Although the learning rates of the two are inherently linked and the resource is similar, the costs of deep tidal stream ultimately become lower than shallow tidal stream. This is because deep tidal will be developed at a later stage after having benefited from the learning and development of shallow tidal stream. Unit costs are therefore expected to fall even further during their deployment.

Figure 1: Levelised costs and breakeven revenues for marine energy devices in Scotland

What evidence is there that the cost of emerging renewable energy technology is falling?

See above

Do you agree there is significant scope for investment in renewable heating and cooling?

Scottish Enterprise sits on the UK Low Carbon Innovation Co-ordination Group (LCICG) which brings together the major public sector backed organisations that are supporting low carbon innovation in the UK. The group aims to maximise the impact of UK public sector funding for low carbon technology, in order to:

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15 Device costs based on Ernst & Young graphs from the DECC Marine Energy Action Plan 2010. Wave and tidal revenues based on IPA analysis and B&V data for 50 MW device arrays, using a discount rate of 12%, load factors of 30% and a device lifetime of 25 years.
Deliver affordable, secure, sustainable energy for the UK

Deliver UK economic growth

Develop the UK’s capabilities, knowledge and skills

The LCICG have published a series of TINAs (Technology Innovation Needs Assessments) which aim to identify and value the key innovation needs of specific low carbon technology families to inform the prioritisation of public sector investment in low carbon innovation.

The Heat TINA\(^\text{16}\) focuses on heat pumps, heat networks and heat storage as three key heat technologies that could play a key role in meeting UK and global heat demand in an emissions constrained future. Innovation in these technologies could reduce UK energy system costs by £14-66bn to 2050, with heat storage also offering additional value by enabling other system adjustments. Innovation can also help create a UK industry with the potential to contribute further economic value of £2-12bn to 2050. Significant private sector investment in innovation, catalysed by public sector support where there are market failures, can deliver the bulk of these benefits with strong value for money.

Early results from a Scottish Universities-led research programme\(^\text{17}\) examining the development of sustainable, low carbon heating in urban areas recognise multiple benefits of district heating and combined heat and power schemes, including an impact on local economic regeneration. The research programme recognises the scale of projects can be a barrier for local actors and that measures to reduce investment risk are necessary.

The technical development of district heating schemes represents a significant proportion of overall project costs. Funding is available for this work (including through the ELENA instrument) but much time and effort is required to secure this resource, and local authorities are cautious about the ability to deliver the subsequent required scale of investment in urban energy.

**What are the barriers to investment in this sector and how might these be overcome?**

As concerns the renewables sector as a whole, there is asymmetry between; the needs of renewable energy companies for massive injections of funding; projects that require billions of investment; and the supply of finance. The only way to build an offshore renewables industry is to close this gap. The ramping up of activity between now and 2020 is the biggest challenge of all.

Scottish Enterprise’s role, together with the Scottish Government, is to bring together industry and the financial sector across Scotland and to work with colleagues in Scottish Development International, the inward investment agency, to bring in key investments to support the industry. A major issue is the level of risk and understanding of technology. This is a new industry emerging around a set of new technologies and market drivers. In that context, a supporting financial infrastructure has to be developed alongside and in parallel with the industry.

According to a 2020 thought piece\(^\text{18}\) for the Scottish Low Carbon Investment Conference (SLCIC) the key challenge is that significant capital requirement is needed in a relatively short space of time and

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\(^{16}\) [Technology Innovation Needs Assessment: Heat](September 2012)

\(^{17}\) “Heat and the City”: Year one findings (September 2011)

\(^{18}\) [Scottish Low Carbon Investment Conference](#)
in the absence of significant debt financing, new sources of capital will have to be found. Indeed, the size of such essential investment dictates that large-scale private sector finance will be required.

Considering the wave and tidal industry in particular, the main challenges currently facing wave and tidal generation relate to proving early stage technology and planning consents to develop the infrastructure. It is recognised that the large-scale private sector investment required to realise the commercial success of the Scottish marine energy sector in the medium to long-term will be levered by continuing to pursue de-risking activities such as the deployment and operation of pre-commercial arrays.

Widespread capital funding of arrays is largely outwith the scope of the UK public sector at present but public funding does have a strong role to play in enabling key technological improvements relating to cost reduction, reliability and operability. The recently announced UK Marine Energy: Supporting Array Technologies programme is a good example of how that public sector support can be focused.

We welcome the recent Award Decision on the NER 300 scheme, which includes support to the Sound of Islay demonstration tidal array and Kyle Rhea tidal stream array project.

Through the Scottish Low Carbon Investment Project, and associated Conference, we are bringing together the industry, nationally and internationally, to consider and find new ways to bring the required investment to the sector.

A number of activities are underway in Scotland which will help provide additional support to the sector and lever in private capital, for example the support for marine technology development through the WATERS 1 and 2 (Wave and Tidal Energy: Research, Development and Demonstration Support) Programmes.

The Scottish Investment Bank (SIB) has played a key role in supporting, in particular, marine technology and helping to broker investment from other sources. Scottish Enterprise and others are further currently looking at how to maximise the impact of the Fossil Fuel Levy funds recently released to the Scottish Government. The UK Green Investment Bank will be a key source of financial support for offshore renewables, as will the Green Deal. Further, and complementarily, large scale investment is still required, however.

4.3 Energy Efficiency
What do you think are the main barriers to energy efficiency investments? What might be done to overcome them?

Demand for electricity is likely to increase so a focus on developing the renewables sector must go hand in hand with energy efficiency measures. Scottish Enterprise has a strong focus on working with businesses to improve resource efficiency (energy, water, waste materials) to reduce cost and CO₂ emissions, and is working to deliver economic opportunity and efficiency solutions across the emerging clean technology sector. The Green Deal is expected to make a big contribution to the energy efficiency – a workable model is required to mobilise household and commercial investment.

The EU’s Smart Cities scheme can play a positive role in encouraging investments in energy efficiency as part of holistic sustainable urban plans. An Alliance of Scotland’s cities is working with the Scottish Futures Trust to develop Spend to Save financial business models to enable large scale investment in cost effective efficiency improvements. It is supported by a £7 million Cities Investment Fund designed to accelerate the pace of investment by developing programmes that
lever in other funding (including private sector and European); and supporting collaborative programmes between cities (including their regions) which will develop large-scale projects.

Innovative financing solutions should be further explored to leverage higher levels of investment at local level, where much of energy efficiency actions need to be taken. Excessively demanding leverage factors or a lack of liquidity can act as barriers to a city’s participation energy efficiency schemes. For some cities, instruments such as the ELENA facility have in the past required beneficiary projects to be of prohibitive scale and leverage rates.

4.4 Security of Supply
Is the traditional model for electricity transmission and distribution changing? What implications does this have for future investments in electricity networks?

Operating a power network with a high share of renewables will be very different from the way these networks operate now. Integrating renewables will create significant challenges, mainly because of the variability (or intermittency) of their supply. Successfully dealing with this will be critical for delivering both Scotland’s and other EU regions’ renewable energy targets.

Power output from renewables can be highly variable. Successfully operating such a system will need a combination of more energy storage, flexible thermal generation, increased interconnection between neighbouring power networks and demand-side management. New developments will require a holistic focus on the energy system that will generate innovative solutions to meet the challenges and market needs of a resource efficient Europe.

Successful exploitation of these innovations will provide new business opportunities and boost the competitiveness of regional clusters and the European economy in general.

What is future role of smart grids, offshore grids and energy storage solutions?

All of these areas are key to the development of renewables and the EIB will be critical in driving these forward, particularly in relation to cross-border activity. We welcome that the EU’s draft energy infrastructure package recognises the strategic importance of key projects such as the development of a North Seas Offshore Grid in harnessing offshore generation capacity in the region and supports the successful regional cooperation model already apparent in this initiative. It further rightly recognises the need to speed progress on smart grids and address the storage challenge.

Scotland’s University of Strathclyde is establishing a first-of-its-kind Power Network Demonstration Centre to foster innovation in tackling these, and other, issues in realising a decarbonised grid.

Scottish Enterprise is supporting the FP7 project European North Sea Energy Alliance (ENSEA) which is focused on intermittency of supply of renewables and the need to address this and will cover all the technologies and challenges associated with integrating a high level of renewables into power networks.

The Scottish Smart Grid Sector Strategy19 was launched in 2012, which recognises the importance of smart grids in realising the low carbon transition and Scotland strengths in this area, including significant company and academic capabilities. Building on research by Scottish Enterprise, it creates a Smart Grid vision for Scotland for 2020 as an examplar of Smart Grid adoption and a leading international provider of Smart Grid technologies and know-how. The ambition is to create

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19 Scottish Smart Grid Sector Strategy (2012) Scottish Enterprise
up to 12,000 new jobs in Smart Grids. The Strategy highlights the challenges Scotland faces, the actions which will be required to realise the vision and the business opportunities for companies with Smart Grid capabilities.

From a Scottish perspective, there is further recognition of the need to look wider than generation in planning significant infrastructure upgrades, taking into account the full supply chain and potential for manufacturing and construction opportunities which will maximise the economic benefits from renewables.

There is further awareness of the unique opportunity for regeneration, not least in coastal and port locations where investments will be necessary to tap Scotland’s offshore and marine renewable resource. There is a unique opportunity for economic development and job creation in those areas of deployment, which face challenges due to their remote nature.

4.5 Fossil Fuel
What role will coal and lignite fired generation have in the EU power system in the medium term, with or without CCS, and how is this consistent with the EUs Climate Action Goals and its security of supply objectives?

Development of CCS is a key priority for the Scottish Government and Scottish Enterprise, based on the conviction that without CCS, carbon reduction targets will not be met. Scotland has significant strengths: the North Sea offers huge capacity as natural and effective storage facilities for CO₂ in depleted hydrocarbon resevoirs and saline aquifers (as outlined in a recent report by Scottish Enterprise on a Central North Sea CO₂ Storage Hub)\(^{20}\); the presence of the 40 year old oil & gas industry with relevant skills and expertise, including companies such as Doosan Power Systems, Wood Group and Mott MacDonald with expertise in this area; world leading industrial research and academic institutions; and support from government and agencies. We commend the inclusion of a transport and storage network for CO₂ in the EU’s trans-European energy network Guidelines.

The economic opportunities from the development of CCS are considerable – it is estimated that the CCS market could generate more than £2bn in GVA and create more than 13,000 jobs in Scotland by 2025. Scotland has 2 full chain CCS proposals which are through to the final round of the UK Government CCS Commercialisation Programme. Scottish projects include CCS on the gas-fired station at Peterhead, which was ranked in the reserve list of the first round of NER 300 calls.

As we move to greater penetration of renewables, an increased role is foreseen in providing system flexibility and balancing; the increasing role for gas in the energy transition is recognised in the European Commission’s 2050 Roadmap for a low carbon energy system. Carbon capture technology for gas will therefore be important to ensure emissions reduction goals can be met in conjunction with energy targets. Support schemes should not therefore be designed to favour coal projects.

4.7 RDI
Which are the key innovative energy technologies under development?  The development of which key innovative low carbon energy technologies should receive most financial support?

Key technologies include marine tidal and wave, which we see as potentially having a very big economic impact. We note that the EU Member States also made clear their support for continuing EU efforts to boost marine renewables in their recent Energy Council Conclusions on the Commission’s Renewable Energy Strategy Communication.
Scotland remains a strong leader in the development of the industry, with the European Marine Energy Centre in Orkney being the world’s only accredited wave and tidal testing centre for marine renewables and first major arrays are likely to happen in Scottish waters.

For Scotland to retain its position as world leader in the development of the sector, we must continue to support the development of existing and new wave and tidal technologies, businesses and projects.

Overall the marine energy sector is at a key point in its development and needs to continue its progress from proving and demonstrating individual devices through to the deployment of the first pre-commercial arrays during 2014-17, creating the opportunity for installation and operation of major arrays in the Pentland Firth and Orkney Waters and at other prime location around Scotland from 2017 onwards.

Scotland is working towards the ambition of £1 bn GVA and 4,500 jobs from marine by 2020, accounting for 15% of CO₂ savings by 2050.

Other priorities include Offshore Wind technologies (see earlier sections on cost reduction), CCS (see above), Smart Grids (see above) and Energy Storage more generally.

Which barriers are hindering the development of innovative, low-carbon energy technologies most significantly?

As highlighted in earlier sections barriers include the scale of investment required (such as that for array development in marine) and uncertainty about subsidy regimes. Other barriers include finding a workable balance of risk between developers, financiers and supply chain; and securing finance at construction phase (for example, with offshore wind) before debt markets will come in.