

RURAL ECONOMY AND CONNECTIVITY COMMITTEE
SUBMISSION FROM HIGHLANDS AND ISLANDS ENTERPRISE
THE DRAFT CLIMATE CHANGE PLAN (RPP3)

Introduction

1. Highlands and Islands Enterprise (HIE) welcomes the opportunity to contribute its views on the Draft Climate Change Plan (third Report on Proposals and Policies - RPP3).
2. HIE is the Scottish Government's economic and community development agency for the north and west of Scotland and our role is to lead regional growth and development in line with Scotland's Economic Strategy (SES), improving competitiveness and helping build a fairer society. HIE structures its delivery under four operational priorities: Supporting businesses and social enterprises; Strengthening communities and fragile areas; Developing growth sectors; and Creating the conditions for a competitive and low carbon region. These priorities are mutually reinforcing and our interventions contribute to the 'four I's' of Scotland's Economic Strategy.
3. This response covers the range of HIE activities that are relevant to the draft plan, and we hope it will be of value to all four committees that have requested evidence.

Renewable energy

4. HIE welcomes the draft Climate Change Plan, and the companion draft Energy Strategy (to which we will respond later). We are committed to the advancement and deployment of renewable energy, as an important driver of both economic and community benefit for the region. Sectoral growth across the Highlands and Islands is underpinned by some of Europe's finest wind, wave, and tidal resources, by significant investment in infrastructure, and a world-renowned supply chain capability. Through increased renewable generation, we believe the Highlands and Islands is exceptionally well placed to contribute substantially to Scotland's emission reduction targets over the period 2017-2032, and specifically policy outcome 1 of the draft plan.

Vision

5. Our vision is for the region to be '*recognised as an exemplar through the continuing development of a world class industry in sustainable and renewable energy using our people, knowledge, natural resource and technology for the economic and social benefit of the Highlands and Islands.*'

Priorities

6. Our key priority areas are to:-
 - **Build on the region's leading role in offshore renewables test and demonstration.** This includes continuing to support the development and long term sustainability of The European Marine Energy Centre (EMEC) in Orkney, capturing the opportunities arising out of our Wave Energy Scotland R&D

programme, and support for demonstration of technologies at pre-commercial sites. This includes an opportunity to develop floating wind technology which aims to enable deep water coastal sites Highlands and Islands to be developed.

- **Secure maximum supply chain benefits from wave, tidal and offshore wind developments.** As projects are built out around our coasts, there will be significant and long term opportunities for ports and harbours and the local supply chain. The primary focus for this will be the offshore wind farms planned for the Moray Firth and the build out of the MeyGen project in the Pentland Firth.
- **Development of local energy systems** – as Scottish Government policy evolves to support creation of more localised energy systems there will be opportunities to demonstrate the integration of technologies across the Highlands and Islands, and support the rollout of such projects, bringing benefits to business and communities.
- **Foster the growth of direct and shared community ownership in renewables.** Working with partners including Local Energy Scotland (CARES), the Renewable Energy Investment Fund (REIF), Social Investment Scotland, and Community Energy Scotland, we aim to create the right conditions for growth of community energy, and guide communities on investment of income from renewables.

Investments and outcomes

7. HIE has made significant energy-related investments into both regional supply chain development and supporting infrastructure. The following are highlighted as key strategic energy investments made by HIE:-

- **European Marine Energy Centre (EMEC):** Established in 2004 and having received over £5m investment from HIE, EMEC has been at the forefront of global research and development in marine energy. More than 25 prototype wave and tidal energy technologies from around the world have been trialled to date on its open-sea test sites in Orkney. EMEC's imminent (early 2017) diversification into hydrogen production from tidal energy, coupled with complementary demonstration-scale community-led hydrogen usage projects (Surf'n Turf and BIG HIT), will see Orkney develop its expertise in low carbon energy generation, storage and management systems in line with national aspirations outlined in Scottish Government's new Energy Strategy.
- **MeyGen:** The MeyGen tidal stream project, located in the Inner Sound of the Pentland Firth, is on track to become the world's first utility scale and largest tidal energy farm. HIE have contributed £3.3m into phase 1a - a 6MW four turbine array - which will be a global milestone for marine energy, moving the industry past R&D and towards commercialisation and electricity generation. Installation of the turbines is under way and full commissioning is expected by the end of March 2017.
- **Beatrice Offshore Wind Ltd. (BOWL):** The green light given to BOWL, which consists of a £2.6bn, 588MW, 84 turbine wind farm, will utilise **Wick Harbour** for operations and maintenance, and **Nigg Energy Park** for transmission/construction works. Both sites have received financial support from HIE to deliver recent upgrades, with £9.1m provided to Nigg for Quayside developments.

- **Wave Energy Scotland (WES):** Funded by the Scottish Government, WES as established as a subsidiary of HIE in 2014 and is investing £8m in 2016/17. Since inception, the WES technology programme has run 46 projects, involving 130 organisations from across industry and academia. WES has awarded £15m to date, and supported 11 wave energy developers.
8. In the current financial year, HIE has committed £7.4m to renewable development activity, against total investment of £17.8m. This is expected to generate projected increase in international sales of £9.5m, company turnover growth of £13.1m and job creation/retention of 195 FTEs.

Barriers to growth

9. Key barriers to growth of renewable deployment and greater system flexibility include: consenting; technology risk; access to finance; available skills; regulatory and policy measures, and in the context of the Highlands and Islands, access to and financing of grid capacity.
10. The draft Climate Change Plan recognises the requirement to address current and future challenges for greater renewable deployment, including market and policy barriers. HIE is actively engaged with the Scottish Government, industry and stakeholders to influence UK support (through the Levy Control Framework), and is integral to the development of complementary support for developing new technologies and enhanced community ownership. Examples include the establishment of WES to address technology risk in the wave sector, and the recent response to UK government on treatment of island wind. HIE proactively manages the input to proposed regulatory changes by Ofgem, National Grid and BEIS on behalf of the region's local authorities and with the Scottish Government, with a view to unlocking regulatory and grid access barriers.
11. HIE is integral to the delivery of the Low Carbon Infrastructure Transition Programme (LCITP), and will continue to explore business models, innovation support, supply chain opportunities, and community requirements, to unlock barriers to a more flexible energy system.

Economy, Jobs and Fair Work Committee interests

12. We understand the specific interests of the Committee in considering the draft Climate Change Plan are electricity generation, reducing energy demand, renewable energy (electricity and heat), interconnection and grid issues, and fuel poverty. In this response we seek to focus primarily on electricity generation, renewable energy, interconnection and grid issues.
13. Fuel poverty is evident across the Highlands and Islands, with 63% of households in Orkney (30% of those being extreme) and 53% in Shetland (67% of those being extreme) being in fuel poverty¹. HIE will consider the SG's Scottish Energy Efficiency Plan and seek to influence the development of the Scottish Energy Efficiency Routemap (due to be published in 2018) with a view to addressing this issue, and understanding the business and economic opportunities to arise from a sustained

¹ http://www.parliament.scot/ResearchBriefingsAndFactsheets/S4/SB_16-18_Fuel_poverty_in_Scotland_2016.pdf

financial commitment. Also HIE will seek to ensure that the distribution of support is equitable and inclusive, noting the specific challenges in our island areas.

Electricity generation

14. HIE has welcomed the progress made on renewable deployment across Scotland, noting the supply chain opportunities and community benefits. The interim target of 50% of electricity consumption being met by renewable energy has been met, and in places such as Orkney 120% has been achieved. Supply chain growth is evidenced by success in securing a tower manufacturing facility in a remote location such as Machrihanish, and a growing number of companies in the engineering and fabrication space securing orders from the renewables sector.
15. There remains significant scope to increase renewable generation. HIE strongly believes that effort should be invested in ensuring that remote island wind projects, currently constrained by lack of inter-connection and grid capacity, should form a significant share of Scotland electricity generation. HIE's [response to the Consultation on treatment of non-mainland GB onshore wind projects](#), submitted on 31 January 2017, firmly makes the case for the necessary support to enable island wind to be developed. We urge the Committee to support our position.
16. The Northern and Western Isles are home to abundant wind resource, having low correlation with mainland wind, thereby potential to provide material security of supply benefits – a key imperative of a decarbonised electricity system. However, they are faced with significant additional costs due to long radial transmission links required. After more than a decade of close co-operation and joint working with the Scottish and UK Governments, developers, island local authorities, Ofgem and SHE-T, and following failure of Ofgem's review of transmission charging to assist (Project TransmiT), a workable solution was found in proposed treatment of island wind as a distinct technology to participate in future Contract for Difference (CfD) auctions. A Remote Island Wind CfD has the potential to deliver around 800MW of high yield island wind by 2022, investment of over £2.5 billion, and substantial supply chain benefits. Such additional capacity will contribute significantly to additional electricity demand for decarbonised heat and transport energy needs.

Renewable energy

17. The commitment in the draft Plan to seek a greater penetration of renewables from a range of technologies is particularly welcome. A broad mix of technologies will be required to ensure system security. HIE advocates an approach that encourages innovation in design, technology, deployment and business models, and also ensures system flexibility through storage and demand-side management. Whilst more established technologies, such as onshore wind, hydro, solar and bioenergy have a significant role to play, the Highlands and Islands have been at the forefront of new technology development, not least through the establishment of EMEC and more recently WES, geared towards supporting innovative, world-leading technology development in Scotland. A sustained commitment to development of emerging technologies where Scotland has a lead and where the economic potential is significant must be a priority.

18. The region is already witnessing the beginning of large scale offshore renewable developments including Atlantis's MeyGen tidal array, and SSE's Beatrice Offshore Windfarm project in the Moray Firth, with more in the pipeline. Critical to further deployment and increasing supply chain benefits is cost reduction, which can be achieved through support for further innovation and demonstration, the provision of a viable route to market and long term funding under the UK's Levy Control Framework.
19. The region is also home to pioneering local, low carbon, energy and storage management systems which is reflected in the Scottish Government's new Energy Strategy, with views sought on priorities for developing smart, local energy systems over coming decades.
20. HIE welcomes commitment to date via Renewable Energy Investment Fund (REIF) and Low Carbon Infrastructure Transition Programme (LCITP), in which HIE plays a lead delivery role, to facilitate technology and project development across the more emerging technology areas and to demonstrate greater integration of demand and supply. Going forward it is recognised that more local energy systems will require a combination of innovation support and regulatory change to incentivise and create sustainable business models. To enable this, HIE had already invested in specialist support contract (£200k) to aid project development within our region. An example of this is the West Harris Trust, Pairc Niseaboist, supported by LCITP and HIE to develop a self-sustaining local energy economy to power a new community hub and six new social housing units.
21. Further, the role of Community and Renewable Energy Scheme (CARES) combined with HIE's role in community-led development and a legacy of supporting community energy, positions the region well to continue to lead on the development of more decentralised, local energy systems, ensuring our communities have a significant role in emerging opportunities.
22. HIE is well placed to assist the Scottish Government with policies in the plan to support a high penetration of renewable energy and greater system flexibility. We are focused on realising maximum economic and social benefits from such a transition in Scotland's energy system.

23. Interconnection and grid issues

24. Enhanced flexibility, and greater requirement for electricity for heat and transport as well as power, will require even greater grid capacity, both at distribution and transmission levels.
25. The region is currently witnessing unprecedented levels of investment being made in the transmission system, amounting to over £2bn, generating economic benefits for the Scottish and UK economy (an estimated £643.5m spent with UK-based supplier and contractors). Despite such investment, many mainland projects are unable to connect until after 2020. What's more, no solution is yet in place for the islands (as described above) and high connection costs, coupled with delays in connection, are negatively impacting on small scale, demonstrator and community projects. HIE continues to work with local authorities, industry, Ofgem, National Grid and the Scottish Government

to influence the means by which the required grid infrastructure is triggered, underwritten and paid for, with a view to accelerating developments.

26. Transmission charging (TNUoS) remains a challenge for generators in the Highlands and Islands. Despite Ofgem's fundamental review of transmission charging (implemented in April 2016), the locational pricing that remains continues to risk undermining the ability of the region to contribute to national targets. Sample wider tariffs across GB (2020/21)² illustrate the point clearly:-

| | Wider tariff £kW/pa |
|--------------------------------|---------------------|
| North Scotland | 18 |
| South West Scotland | 9 |
| North Lancashire and the Lakes | -6 |
| Cotswold | -17 |

27. In addition, generators have to pay a local tariff related to the costs to connect their generation to the nearest main interconnected transmission system node. In the case of the Northern and Western Isles this represents significant additional costs due to the long radial links required. Further, current transmission charges are volatile, and considered to erode investor confidence.

28. It is understood that National Grid plans to conduct a comprehensive review of network charges (transmission, distribution, consumers and generators). Through this there will be opportunity to influence a better deal for the region, in terms of security of supply, decarbonisation targets and for consumers. HIE will seek to engage with partners fully to secure a positive outcome.

Forestry

29. The Forestry and Timber Industries contribute to a number of Scottish Government priorities including integrated land use, climate change, biodiversity, access, health and wellbeing, recreation and tourism and economic development. In Scotland the sector consists of 1,700 businesses contributing £1bn in GVA to the economy and employing around 25,867 direct and indirect FTEs. 44% of forestry and timber processing businesses are rural based, with 15% in remote rural or very remote rural areas. The reforestation of large parts of the HIE area in the last century has provided new opportunities for tourism, recreation and communities.

30. Integration and alignment will help realise Forestry's potential to deliver against a number of Scottish Government priorities for a Low Carbon Society, economic development, health, fair work and community empowerment amongst others

31. Other businesses such as forest nurseries, game and wild foods businesses rely in whole or in part on forestry. In addition to the more obvious environmental benefits around carbon capture, wildlife and landscape, effective forest management has a role to play in minimising and reducing the effects of flooding, and protecting key infrastructure, for example by stabilising steep ground above key roads. It is noted that the proposed plan takes cognisance of these additional benefits.

² <http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Approval-conditions/Condition-5/>

32. Strategic delivery of the forestry element of the Climate Change Plan should demonstrate clarity of purpose, openness and engagement with both communities and stakeholders.
33. As Scotland came from one of the lowest levels of forest cover at the start of the last century to the current situation, many parts of Scotland do not have a 'Forest Culture'. Promotion and development of such a culture, where living and working in the forest and the associated individuals and communities deriving benefit, could help deliver more sustainable communities in Scotland. It is also likely to help address some of the challenges that are likely to arise as a result of the ambitious planting targets in the climate change plan where there are competing land uses. HIE notes the aspiration to move from 18% of forest cover to 21% by 2032. Based on past planting rates it is likely there will be significant challenges in securing the land to achieve this ambitious target, and in supplying the nursery stock to deliver the planting.
34. HIE also notes and welcomes the objective to increase the use of Scottish wood products in construction from the current level of 2.2 million cubic metres to 3.0 million cubic metres by 2031/32. This will have the added benefit of increasing the economic impact of the forestry sector through adding value to timber harvested in Scotland. There are a number of initiatives under way that aim to drive up the use of timber in construction. These are to be welcomed.
35. There is competition from the Biomass energy sector for timber and fibre resource, which is having an impact on prices. Where possible the cascade principle should be applied, with timber/fibre only being diverted to energy use when other higher value options have been exhausted.
36. It is therefore important that the net effect of the draft Climate Change Plan is considered and that the principles of multi-use, sustainable forestry are applied. As land is a finite resource, there has been competition in the past between farming, forestry, sporting estates and more recently conservation for the same land. We believe that the principle of delivering the greatest economic impact and benefit to society should be applied. Consideration should be given to include the concept of Natural Capital Accounting to the woodland carbon code. Work will also need to be carried out with the Forest Nurseries to ensure that there is a supply of nursery stock (3-5 year lead time) to meet planting targets.

Peatland restoration

37. HIE notes that progress on peatland restoration has been slower than the target under RPP2, with only half the number of hectares achieved, and at greater cost than expected. A more ambitious model centred on economic and environmental measures, based on Natural Capital and a peatland code, is considered to be more effective. Scotland would benefit from a peatland code which establishes clear measures and restoration costs together with a benefits realisation framework. This would enable agencies, landowners and communities to maximise the desired outcomes from the investments. The draft Climate Change Plan would benefit from a wider focus on this area beyond simply emissions reduction.

Summary

38. HIE recognises that the Scottish Government draft Climate Change Plan sets ambitious targets for Scotland. The draft Scottish Energy Strategy puts forward a 2030 'all energy' target for the equivalent of 50% of Scotland's heat, transport and electricity consumption to be supplied from renewable sources. This presents the Highlands and Islands with distinct economic and social development opportunities.
39. Exceptional progress has been made in exceeding the original interim target of 50% of electricity consumption by 2015. This broader target will require: a stable policy framework; appropriate long term financial support (particularly for less established technologies), and shared commitment to unlock barriers to renewable deployment.
40. HIE welcomes the ambition and the recognition given to the need for a wide range of technologies within a whole-system view of energy in Scotland. We will work with partners, stakeholders and industry to develop a more considered response to the draft Scottish Energy Strategy in due course, and to deliver our respective priorities through a strong, collaborative approach.
41. Also, the draft Plan takes full account of the wide range of benefits afforded by the forestry sector. In particular, HIE welcomes the opportunity to generate economic growth from the target to increase the use of wood products, adding value to timber harvested within the region.
42. Lastly, HIE considers that a Peatland Code encompassing an assessment of the wider economic and social benefits should be developed.

Highlands and Islands Enterprise

10th February 2017