

## FACILITATING SUSTAINABLE DEVELOPMENT OF RENEWABLE ENERGY GENERATION CAPACITY

### Purpose

1. This paper briefly describes the work being done by SNH to facilitate the development of renewable energy generation in Scotland, focusing on terrestrial renewables.

### Action

#### 2. Board are invited to:

- Comment on the present nature of our engagement with the industry and on SNH's role in facilitating sustainable development of the sector;
- Discuss whether any further action is required to enhance our input;
- Identify future challenges, opportunities and priorities for the organisation;
- Identify any specific topics which the Board wishes to consider in more detail.

### Background

#### Facilitating development

3. We have invested considerable staff resources, research and preparation of advice in the development of renewable energy in Scotland, including:
  - Recruitment of 3 full time Renewable Energy Casework Advisers and a team of 3 full time policy staff (a further 6 new posts are dedicated to marine renewables, discussed further in paper on marine renewables)
  - Investment of approximately £250,000 in renewable energy related research
  - Establishing a strongly supportive [Renewable Energy Policy](#)
  - Publication of over 30 pieces of guidance for developers and planners on renewable energy, many of which are now setting the 'standard' across the UK
  - Publishing a [Renewable Energy Service Level Statement](#) to clarify our engagement in the planning and development process, the level of service which can be expected of us and to encourage early engagement and dialogue
  - Responding to over 230 formal planning applications for renewable energy proposals, and engaging in over 1,300 applications during the development process
  - Engaging extensively with the renewable energy industry by speaking at conferences, seminars and events and by engaging the industry in the development of our policy and guidance
  - Delivering a total of 9 Sharing Good Practice events on renewable energy
  - Publishing all guidance on the SNH website (currently being upgraded)
4. We have been involved in renewable energy since the mid 1990's when the first sites were developed, but the bulk of our input has been since 2000.

## **Our support for renewables**

5. SNH supports, in principle, over 75% of renewable energy applications. Those which we object to tend to be in, or have the potential to affect, a designated site. SNH has sought to steer wind energy developments away from designated sites through the publication of our '[Strategic Locational Guidance for onshore windfarms](#)' (first published in 2002, updated March 2009, see map attached) and by supporting the strategic approach identified in [Scottish Planning Policy 6](#) (SPP6).
7. Our support for renewables extends to all technologies, including micro, hydro and bioenergy. We have recently published guidance on micro renewables, we are working on joint guidance with SEPA on hydro and we published 'Bioenergy and Natural Heritage' earlier this year.

## **Progress towards renewable energy targets**

8. The Scottish Government's current target for renewable electricity is 50% by 2020. This equates to approximately 8,000 MW of installed capacity. Installed renewable energy capacity is currently around 2834 MW. Capacity which has been granted consent (but yet to be constructed) equates to around 3739 MW. Combining the two figures provides a total of installed and consented capacity of **6573** MW which means we are making excellent progress towards the 2020 target of 8,000 MW. A large proportion of this capacity (c 4000 MW) is from onshore wind (see map attached).
9. A further 9,000 MW of capacity remains within the planning system, and an additional 8,500 MW of offshore wind and between 500 and 2000 MW of marine renewables is under development (and scheduled for development by 2020). Thus Scotland can easily meet its existing renewables ambitions, and could easily meet 100% of our electricity needs, based on the resource available. The challenge now is to find the best mix of technologies and the right balance between environmental impacts and the climate change / socio economic benefits of renewable energy, as outlined in SPP6. Given the good progress we are making towards targets and the exceptional renewable energy resources we have, there does not seem to be a need to make significant changes to our approach.

## **Sustainable development**

10. One of our key objectives, as set out in both our policy position and guidance, is to ensure that the development of renewable energy occurs in a sustainable manner. Our advice to decision makers has evolved with experience of various impacts and whereas we have built up a robust methodology for assessing ecological effects, our understanding of cumulative and landscape scale impacts is still evolving. We will shortly be publishing further guidance on this issue called 'Siting and designing windfarms in the landscape'.
11. Developers' interest is focused in those areas which have good access to the grid, good transport options and a good wind resource. This has led to a pattern of 'clustering' of windfarms in some areas, which corresponds quite well to our Strategic Locational Guidance (see maps attached), but which leads to the risk of significant adverse cumulative landscape and visual effects in areas close to the Scottish population. Adverse cumulative effects form the basis of many of our comments in relation to windfarm cases in the wider countryside.
12. Our work on renewables exemplifies our approach to planning reform. We work closely with industry and seek solutions to development proposals. Our approach is

proportionate and facilitative. We are currently working on identifying when impacts from renewable energy developments are of national interest in the wider countryside to determine how to comment in these cases.

## Challenges

13. Despite our greatly improved understanding of the impacts of renewable energy developments, a number of challenges for SNH remain:
  - Helping Local Authorities develop an understanding of landscape capacity for windfarms – an area where local communities have strong views;
  - Making decisions on the basis of cumulative impacts is challenging as our understanding of cumulative impacts is still evolving;
  - Of the 4000 MW of onshore wind which has been consented, only around 1,400 MW has been built. Whilst we have offered advice in relation to each individual application, including a consideration of cumulative impacts, our understanding of the cumulative effect of these windfarms nationally will evolve as they are built;
  - Debate over the construction of windfarms on deep peat is ongoing and there are concerns about the carbon payback of some windfarm proposals. Commenting on these issues is likely to be the responsibility of SEPA, but SNH clearly has a role to play in advising on peatland issues;
  - Where windfarms offer a particularly poor carbon payback, there may be a need for us to revisit our current approach;
  - As further windfarms are consented the difficult question of capacity (both in terms of landscape and nature conservation interests) will arise;
  - Renewed interest in hydro development has led to a large number of proposals, many of which are on watercourses which are designated for salmon, fresh water pearl mussels and other species of conservation importance. Similar issues in relation to cumulative effects and capacity will arise and have already done so in areas such as Glen Lyon;
  - Our understanding of the effects of micro renewables (and in particular micro wind turbines) on nature conservation is limited, with little evidence from installed devices to base our advice on. Further research is needed to clarify if there is any impact on birds and bats in particular.

## Conclusion

14. We have invested considerable time, resources and effort in the development of renewable energy in Scotland. Our staff have worked hard to support the industry, improve our understanding of the impacts and identify methods for assessing impacts on nature conservation and landscape. Our understanding is evolving quickly as the industry expands rapidly across Scotland. Defining acceptable limits of change and offering clear advice to decision makers on cumulative effects are identified as the key challenges that remain.

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November 2009