

Position Statement – National Planning Framework 4

Supplementary Paper – Climate Change and Deployment Targets

This document sets out the context for Scottish Renewables members' views on what will need to be included in National Planning Framework 4 (NPF4) to deliver the level of renewable energy technology deployment needed to meet Scotland's Climate Change commitments and achieve net-zero by 2045.

Scottish Renewables believes NPF4 must reflect and support the levels of renewable energy deployment necessary to meet our net-zero ambitions. The levels of deployment used in this paper are drawn from the Committee on Climate Change's official advice to government.

Introduction

Between March 2019 and February 2020, Scottish Renewables undertook a detailed process working with members to examine the Committee on Climate Change's (CCC) advice to the UK and Scottish Government on achieving net-zero. This process drew on the experience and expertise of SR's 260 members and involved the convening of an expert panel including developers, planning consultants and legal experts, commissioning a legal analysis of the Planning (Scotland) Act 2019 and wide consultation with our membership.

The increased emissions reduction ambition set out in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, with a 75% emissions reduction by 2030, 90% by 2040 and net-zero emissions by 2045, will be very challenging to meet. It will not be met through a 'business as usual' approach.

The Scottish Government's current Climate Change Plan (covering the period from 2018-2032) provides for a reduction in annual emissions of just over 10 megatonnes by 2032. The new targets mean more than double the effort will be required – a reduction of 25 megatonnes by the same date.

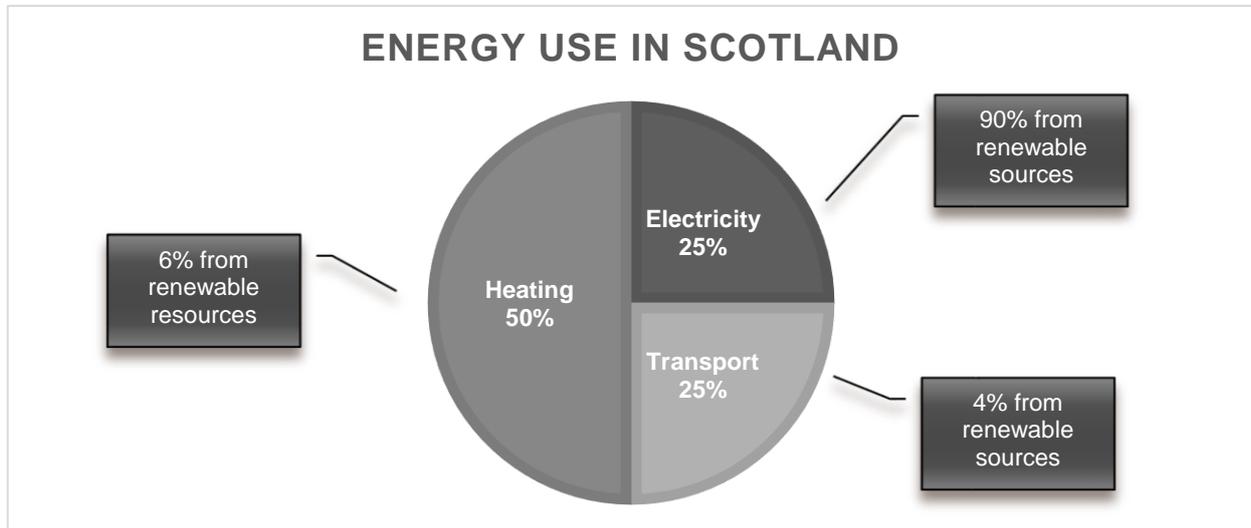
Achieving our climate change targets

Changing our patterns of energy use and how that energy is generated is a crucial element of reducing Scotland's overall climate change emissions. Renewable electricity generation is now equivalent to approximately 90% of Scotland's *current* electricity consumption. However, electricity currently accounts for only approximately 25% for our energy usage. That is set to increase as transport and heating account for approximately 25% and 50% respectively, and we have barely scratched the surface of decarbonising these sectors.

The decarbonisation of transport and heat is expected to be achieved largely through electrification and the use of green hydrogen (hydrogen produced using renewable electricity). The implication is that the amount of renewable electrical generating capacity needed to meet or go beyond 100% of Scotland's

electricity consumption will be much greater. In its Technical Report on achieving net-zero, the Committee on Climate Change (CCC) states:

“Significant new renewable generation capacity is needed to accommodate rapid uptake of electric vehicles and hybrid heat pumps. Over the period to 2035, up to 35 GW onshore wind, 45 GW offshore wind and 54 GW solar PV could be needed. Further deployment is likely to be needed over the period to 2050.”



As the majority of the UK’s renewable energy resource is in Scotland, we would expect to see a large percentage of this deployment in Scotland. Based on historical levels of deployment in Scotland versus the rest of the UK, an increase from the current 8 GW of installed onshore wind capacity to 21-24 GW by 2035 is a reasonable assumption. Industry research would also indicate an increase in offshore wind from the current installed capacity of 1 GW to 12 GW by 2030 and an increase in solar from the current 0.35 GW of installed capacity to 1.6 GW by 2035 are reasonable assumptions.

In its latest progress report for Scotland, the CCC states:

“To a large extent, delivering further expansion of renewable electricity and improving the electricity network in Scotland is contingent on policies from the UK Government. However, the strategic direction for low-carbon energy as a whole set by the Scottish Government, including for heat and transport, and an appropriate planning framework can play important roles in encouraging investment in the required new facilities.”

This builds on the statement made in the net-zero report that:

(achieving net-zero) “is only possible if clear, stable and well-designed policies to reduce emissions further are introduced across the economy without delay. Current policy is insufficient for even the existing targets.”

The CCC’s advice to government makes it clear that changes to planning policy will be necessary if net-zero is to be achieved. Scotland’s First Minister acknowledged the level of change required in the 2019 Programme for Government stating, *“the global climate emergency means that the time is right for wide ranging debate on more radical planning policy options.”* We have set out what these changes should be in our NPF4 Position Statement and in our supplementary papers on Peat, Wild Land, Landscape Capacity Studies and Spatial Planning.

Specific Issues - Onshore wind

Scotland currently has 8.3 GW of operational onshore wind capacity. There is a further 4 GW of consented but unbuilt onshore wind projects and 3.8 GW of onshore projects currently progressing through the planning system. However, great caution should be taken in making any assumptions on the contribution these projects will make to achieving the required levels of deployment needed by 2035. By 2035 many operational projects will reach the end of their consented period and will require re-consenting and repowering with the latest turbines. For projects that have been consented or are seeking consent, this should not lead to the assumption that consent means that they will be built.

The economics of onshore wind have changed substantially over the last five years and turbine technology continues to change and evolve. The business models and technology on which existing consents and planning applications are based will, in most cases, have changed since the applications were made. A percentage of the consented projects are now likely to be economically unviable. Of the remainder, it is likely that they will need to be amended so they use the most modern and efficient turbine technology to ensure their viability. As such, changes will almost certainly involve increases in rotor diameters and tip heights, it cannot be assumed under the current planning system that such changes will be consented.

It is essential that the current figures for operational and consented projects and those currently in planning do not lead to complacency regarding the achievement of the levels of onshore wind deployment Scotland will need to achieve net-zero. The success of our planning system should be judged on the capacity of existing projects that are repowered and the viable renewable energy projects that are actually built, not on assumptions about capacity consented.

Specific Issues - Heat

With regards to the decarbonisation of the heat sector, much of the effort over the last decade has focused on increasing insulation levels and energy efficiency measures. While these actions are extremely important in decarbonising the energy use of our buildings, it is wholly incorrect to assume that the majority of decarbonisation of heat can be achieved by these measures.

Work by the Existing Homes Alliance Scotland indicates that even a highly ambitious national programme of energy efficiency measures would result in the majority of housing achieving Energy Performance Certificate (EPC) band C by 2030. While this is expected to lower the heat demand of Scotland's homes by approximately 20%, the remaining 80% will need to be met from low carbon sources.

This will be achieved by the electrification of heat, largely through heat pumps. This will result in a corresponding increase in electricity demand and the need for further deployment of renewable energy technologies to ensure this demand is met from low-carbon sources.

It is essential that the fall in electricity demand that has occurred over the last decade due to energy efficiency measures does not lead to complacency regarding the achievement of the levels of renewable energy deployment Scotland will need to achieve net-zero.

Conclusion

Meeting Scotland's ambition to achieve net-zero climate change emissions by 2045 is an unprecedented challenge that will require fundamental and urgent changes in our society and the policies that shape it. Scotland's success in decarbonising its electricity system should not be used as the basis for

complacency. It has taken nearly 20 years to decarbonise approximately 25% of our energy use; we have 25 years to decarbonise the remaining 75% with the majority of this effort needed over the next ten years.

It is essential that the development of NPF4 is grounded firmly in the realities of this challenge. Every effort should be made to ensure that our planning system maximises the options for harnessing Scotland's abundant renewable energy resources to enable the maximum opportunity for successfully achieving the levels of renewable energy deployment we will need.