

SCOTLAND'S NATIONAL PLANNING FRAMEWORK 4 THINK PIECE – BLOG - GREENHOUSE GAS EMISSION REDUCTIONS

Introduction

The Scottish Government is keen to bring together views and ideas from a wide range of sectors and to explore the priorities Scotland's fourth National Planning Framework (NPF4) should address.

In the final in a series of Think Pieces, Andy Kerr, UK and Ireland Director for EIT Climate-KIC sets out his thoughts on Scotland2050 and specifically on greenhouse gas emission reductions. The opinions expressed are that of the author and we hope that they will stimulate debate and discussion.

The issues and opportunities:

The Scottish Parliament recently passed the Climate Change (Emission Reduction Targets) Act (2019)¹, which sets Scotland's ambition for net zero emissions by 2045. In other words, Scotland will not be contributing to human-induced climate change by that time. This will place Scotland in the leading group of countries seeking to deliver the climate ambitions of the UN Paris Agreement², which has been ratified by over 185 countries.

What will a zero carbon and climate-resilient Scotland look like towards 2050 compared with today? Major sources of greenhouse gas emissions today are transport, buildings (from heating), and agriculture and land use. Each of these sectors will undergo fundamental transformation over the coming years, in part driven by emission reduction targets and in part by wider changes in social and economic practices occurring in Scotland and elsewhere.

- Some of these emission reductions will be driven by new technology and markets, for example the rapid growth of affordable electric vehicles in the coming decade, replacing diesel and petrol cars and vans, underpinned by increasingly cheap, smart local electricity generation – from sources such as wind and solar coupled with battery and data technologies.
- Some will be led by a wider social rationale, such as delivering affordable warmth in buildings, requiring massive building retrofit to zero emission standards, coupled with a move from natural gas to heat supplied by heat pumps and perhaps hydrogen.
- And some emission reductions will happen through choices we make about future funding support for different patterns of land use, such as changing the EU Common Agriculture Policy after Brexit.

Over the same time, the changing climate will also moderate certain social and economic practices. For example, we are likely to see different land use patterns and types of vegetation in Scotland, as we aim to become more resilient to changing rainfall patterns and increasing warmth in addition to delivering net zero carbon landscapes.

¹ <https://www.parliament.scot/parliamentarybusiness/Bills/108483.aspx>

² <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

In each case, the emission reduction and climate resilience outcome will be heavily influenced by patterns of settlement and mobility, and the competing spatial demands for energy, food, fuel and fibre production, green space, social amenity and urban development, over which planning policy and practice plays a key role.

What will be required to meet these competing spatial demands will be very different in the highly urbanised central belt compared with more highly dispersed communities of the Borders or Highlands and Islands.

Planning solutions:

The critical factors for emission reductions over which the planning system should have influence are:

- *Matching transport, power and building energy needs with renewable energy supply.* This requires a clear spatial framework to agree and prioritise the competing demands on our land and marine areas to meet socially agreed outcomes.
- *Zero carbon landscapes:* To meet emission targets, Scotland will have to create landscapes which sequester (draw down) carbon dioxide. Maximising this potential requires regional-scale planning to ensure our land meets social, economic and environmental goals.

Perhaps most importantly, with these rapid social changes, we have the chance to capture wider social and economic goals of wellbeing for citizens, from cleaner air (from electric vehicles) to more resilient – and liveable - buildings and settlements.

This then is the challenge for National Planning Framework 4.

Summary:

Short term (next 10 years): Scotland will develop regional land use plans which explicitly capture, mediate and resolve the competing land uses to support net carbon sinks from land use³, local energy generation needs for buildings and transport, and wider social and economic goals.

*Long term – what **could** happen?* We embed citizen wellbeing (clean air, green space, access to amenities, local economic opportunities) at the heart of the planning system. The planning system continues to constantly evolve to meet emerging needs, as society transforms over the coming 30 years.

*Overall – what **should** happen?* The wellbeing of Scotland's citizens should improve.

Biography

Andy Kerr is UK and Ireland Director for EIT Climate-KIC, Europe's largest public-private innovation partnership tackling climate change. Previously, co-Founder of the Edinburgh Centre for Carbon Innovation and co-Director of ClimateXChange, supporting Scottish Government policy development and implementation, Andy is a leading figure in helping Scotland respond to climate change.

³ <https://www.gov.scot/publications/protecting-scotlands-future-governments-programme-scotland-2019-20/>