

## Chapter 14: Conclusions and Next Steps

### Summary

- **This chapter acts both as a summary of the consultation to date and opens up to ask how we take forward action on energy efficiency.**
- **The issues that the climate change and energy efficiency agendas raise are complex, with implications for infrastructure, co-operation and funding. Scotland needs to be brave in facing them and considering how we collectively move forward.**

### Energy efficiency – a logical, but urgent, imperative

14.1 Achieving a step-change in levels of energy efficiency is an economic, social, and environmental imperative. Although energy efficiency policies have existed since the 1970s, the convergence of climate change, energy scarcity and global population growth demands a radical change in our patterns of energy use in the years to come and challenges all areas of government to include energy efficiency at the heart of policy decisions.

14.2 Global energy demand is expected to more than double in the next 20 years, just as the era of cheap energy is coming to an end. An exponential increase in demand will coincide with a simultaneous decline in the availability of many fossil fuels. This is likely to result in an increased reliance on clean coal and renewable sources of energy. Energy efficiency is the cheapest 'source' of energy possible.

14.3 Energy use is both a significant cause of climate change and directly affected by its impacts. Increased temperatures, heavier rain fall and extreme weather patterns may increase the amount of energy we use, for example in drying or cooling. Increased frequency and severity of storms, heat-waves and flooding may adversely impact wind farms, marine energy facilities, electricity grids and power stations.<sup>221</sup> At the same time, around 86% of UK emissions come from the use of fuel to generate energy and from transport fuel.<sup>222</sup> About 40% of emissions are the result of decisions we take as individuals, for example in our choice of transport, the efficiency of our home insulation, or the type of food we buy. Energy efficiency is the fastest way to reduce emissions and to save money on the energy we use.

14.4 Whilst increasing Scotland's energy efficiency will not in itself significantly reduce *global* energy emissions and associated climate change, taking the lead in energy efficiency at home will position our consumers and industries to enjoy the economic and social benefits, and enable them to be well positioned to compete in emerging global markets for energy efficient products and services. Scotland is doing well in developing a low-carbon economy, but our ambitious climate change targets mean that there will always be more progress to be made. We can emulate progress in countries such as Denmark and Sweden if we are prepared to make the necessary commitment and investment now.

14.5 Not all countries will adopt efficiency measures with the same urgency or scale. However, because energy is a global commodity and the price we pay is directly related to levels of global demand, any reluctance or delay by others in implementing energy efficiency

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<sup>221</sup> Met Office, 'Climate Change: the Facts', 2009 ([www.metoffice.gov.uk/climatechange/guide/keyfacts/](http://www.metoffice.gov.uk/climatechange/guide/keyfacts/)).

<sup>222</sup> Direct Gov, 'Causes of Climate Change' ([www.direct.gov.uk/en/Environmentandgreenerliving/Thewiderenvironment/Climatechange/DG\\_072920](http://www.direct.gov.uk/en/Environmentandgreenerliving/Thewiderenvironment/Climatechange/DG_072920)).

measures will further amplify global demand, sustain high prices, and strengthen the case for us in Scotland to reduce urgently our own energy consumption.

14.6 In all of this, Scotland should recognise the value of co-operation with countries with innovative energy efficiency sectors. The new Scottish European Green Energy Centre is well placed to develop partnerships through funding programmes at European level.

14.7 As our own energy efficiency sector develops, Scotland can begin to play a role as leader, both with regard to southern and eastern European countries, from where the greatest increases in European energy demand will arise, and the developing world. Neither area enjoys the same levels of comfort and technology as north-west Europe, and both want to catch up fast: Scotland can attempt to show the principled leadership that emphasises the importance of energy efficiency, backed up by leading by example.

14.8 This offers an opportunity for both practical leadership and to satisfy new markets. In doing this, we should ensure that our businesses can help satisfy the growing requirements for energy efficiency solutions, goods and services in the wider world.

14.9 This chapter acts both as a summary of the consultation to date and opens up to ask how we take this forward. It deliberately asks questions that are tricky and highlights the 'wickedness' of the issues involved. The issues that the climate change and energy efficiency agendas raise are complex, with their implications for infrastructure, co-operation and funding. Scotland needs to be brave in facing them and considering how we collectively move forward.

### **Summary of actions to date**

14.10 As this consultation paper has outlined, it supports many programmes that contribute to improving energy efficiency. Key amongst these are:

- A range of Scottish Government supported programmes that contribute to improving the energy performance of our housing stock. These include the Energy Saving Scotland Advice Centres, Energy Assistance Package, Home Insulation Scheme and the Energy Efficiency Design Awards;
- The Scottish Government has called on the UK Government to allow the Scottish Government to establish a separate body in Scotland that co-ordinates CERT and CESP investment, and for a ring-fenced Scottish target for CERT and CESP to ensure that Scotland gets its fair share of investment in domestic energy efficiency.
- The Scottish Government has introduced a new pathfinder loans scheme, providing interest-free loans to help householders fund significant energy efficiency measures and install microgeneration;
- The new Climate Change (Scotland) Act 2009 includes wide ranging enabling powers for introducing requirements to assess the energy performance of houses and/or requiring action to be taken based on those assessments;
- The Scottish Government funds the Carbon Trust to provide energy efficiency advice to industry and the public sector in Scotland. It has established the Leading By Example initiative to raise the environmental performance of the public sector, including its energy use. The Scottish Government will engage with COSLA, Health Facilities Scotland and Scottish Water to encourage finance directors to capitalise on the invest-to-save potential of any remaining Central Energy Efficiency Fund money. It is important that energy efficiency becomes an essential element of public sector investment plans.
- The Scottish Government has committed to undertaking detailed mapping to identify what skills are needed to support energy efficiency in Scotland to meet Scotland's

challenging climate change targets - in terms of numbers of employees and how much time each individual will have to put in.

### **Summary of action required**

14.11 Extensive action on energy efficiency is required if Scotland is to meet its climate change and economic objectives:

- Action will be taken to improve data on end-use energy consumption across all sectors and the formulation and monitoring of annual and longer-term energy efficiency targets.
- More will be done to change attitudes and influence behaviour.
- The Scottish Government will seek to identify the gap between current energy efficiency activity and what is needed in housing to contribute to 2020 climate change targets. This will compare the delivery by CERT, which is the best guide we currently have for energy efficiency activity in Scotland's housing, with calculations of what is possible.
- The Scottish Government will consider what further regulation in the housing sector is required - what standards should be applied and to what homes, and what support, if any, should be provided to low income and/or vulnerable households to enable them to meet the required standards.
- The Scottish Government will encourage the use of waste industrial heat.
- In transport, action will be required both to encourage a modal shift and the development and deployment of new technologies and material.
- In business, Scotland will need to take action to promote technology investment and opportunity across the extended supply-chain and business community.
- Work will be required to explore and promote the role of ESCOs and Energy Performance Contracting in Scotland.
- We will need greater research and development and the commercialisation of energy efficient technologies.
- We will need to ensure that Scotland has the skilled workforce needed for the transition to a low-carbon economy.

### **Key Implications and questions arising**

14.12 All of this takes time to implement – for example the collection of the necessary data and the process of installing insulation across the whole nation, planning new transport and decentralised heating infrastructures, and building businesses. It will take time before we see some of the climate change benefits. However, we must not let that stop us acting now. The benefits from increased efficiency in terms of cost savings are immediate, and some efficiency measures can be implemented fast. Individuals, communities, businesses and the public will need to put in the effort now, both singly and in partnership.

14.13 This also requires finance, involving investment from individuals, businesses and government. Much of it will need to be up front, for example to fund R&D, insulate homes, provide infrastructure, and bring businesses to production stage. Given the current economic climate, the key will be to unlock and incentivise investment, and to use available resources in the most cost-effective manner possible to enable the big switch, e.g. through loans, such as the new Pathfinder Loans Scheme, and schemes run by the Carbon Trust and Energy Saving Trust.

14.14 A number of questions begin to emerge around budgeting, including around the finance mechanisms that various countries use and the balance of public/private funding and the regulatory framework that they adhere to. We need to consider on what basis we balance funding across sectors and how we should target our resources. We need to think about where this would be most cost-effective - and whether cost-effectiveness should always be our main guiding principle. For example, should we also be considering future

costs of less-established technologies and their total potential to achieve emissions reductions, as well as other positive and negative impacts, including whether energy consumption and hence energy bills are reduced. We also need to see energy efficiency as a gain rather than a cost.

14.15 In addition, this is an area where there is significant scope for international partnership working. As noted in Chapter 1, the EU Action Plan for Energy Efficiency requires each European member state to implement its own Energy Efficiency Action Plan. Several European states, for example Germany and some of the German Laender, are making significant progress in this area, and collaboration could be of immense benefit to both Scotland and others.

14.16 This consultation has looked at activities across sectors. We need to consider whether this activity in its totality will enable us to meet both our own and global highly challenging targets.

14.17 For example, we have not yet looked at energy efficiency issues by geography, e.g. the differing housing stock across different areas of Scotland; or the higher level of car ownership in accessible rural areas, and how it will be more difficult there to make the modal shift to walking, cycling or public transport, either because of the distances that need to be travelled, or because of the extent of existing infrastructure.

14.18 We also potentially need to consider whether we can govern differently to meet these challenges. The Scottish Government has already moved to strategic outcomes, and these issues are already embedded in our purpose of sustainable economic growth, our strategic objectives, and our key national outcomes and targets. We have also identified energy as one of our key sectors. We should perhaps consider whether we continue further in this direction, moving climate change and energy efficiency still more to the fore in response to the global challenges and our Climate Change (Scotland) Act. We could consider whether energy efficiency can be used in new ways across the board to make some really fundamental changes - in other words, whether energy efficiency can be used as a tool to do things in a new way. In doing so, we could, for example, make energy efficiency a key consideration in all major infrastructure projects, across housing, transport, business and public sector provision alike. This could involve adapting, in a transparent manner, public and private sector procurement policies so that they prioritise energy efficiency and low carbon more generally.

14.19 During our process of prioritisation and how we fund the required energy efficiency measures, we need to consider which groups are most likely to be adversely affected in each sector and prioritise across the whole where we least want the adverse impacts.

**Q 63: How do we best promote private sector investment in energy efficiency?**

**Q 64: How do we prioritise our financing across government, especially given that we are in a period of tighter resourcing?**

**Q 65: How can we best develop partnerships (including academics, R&D, local authorities, businesses etc.), in which all partners can demonstrate their proactive engagement and ability to promote energy efficiency?**

**Q 66: How do we tap into and better utilise the resources we have across Scotland?**

**Q 67: What larger programmes and funds are there, e.g. at EU level, that we can pool together to tap into (either within Scotland or with international partners)? Which international partnerships should we be pursuing?**

**Q 68: What do you think are the key gaps in sum of actions underway and proposed? Has anything been identified that you consider unnecessary?**

**Q 69: How do we ensure that our efforts add up to more than a simple summary of all the constituent parts? If so, how might this be?**

**Q 70: Should we make energy efficiency a core criteria for all major infrastructure investment?**

**Q 71: How should Scottish Government reduce negative impacts?**

**Q 72: What equalities implications have not already been considered?**

**Q 73: What have we missed? What else should we consider?**

14.20 This consultation on the Scottish Energy Efficiency Action Plan, will be open for discussion for 12 weeks from 8 October 2009 (see Annex A for details of how to respond). It is accompanied by a Strategic Environmental Assessment, which will be open for consultation for the same period. Responses will be analysed, and we expect to publish the final action plan in Spring 2010.

14.21 In hearing your responses to this consultation, we would particularly welcome any evidence that supports your views and arguments. We would also like to hear from you if you are involved, or could be involved, in significantly promoting energy efficiency in Scotland, detailing what your interest is.