

Chapter 5: Changing Attitudes and Behaviours

Summary

- **This chapter details how the Scottish Government is working in a range of ways, both itself and in partnership, to better understand, influence and change energy-related behaviours.**
- **Large-scale changes to our energy-related behaviours, both as individuals and in the workplace, will be required to reduce significantly our overall environmental impact and contribute towards saving costs and galvanising new industries.**
- **The Scottish Environmental Attitudes and Behaviours Survey 2008 (SEABS'08) provides up-to-date data on energy-efficiency attitudes and behaviours. It suggests that a large majority of Scots understand the importance of day-to-day behaviours, but that many of them do not follow this up with concrete action to reduce emissions or, if they do, they are unaware of the relative impact of different actions.**
- **There is a huge challenge involved in enabling and encouraging people in Scotland to make voluntary changes to their lifestyles which will significantly reduce emissions. The Government has initiated various campaigns and programmes to help people do this.**
- **We need to consider more critically how we can enable individuals, communities and businesses who want to behave more energy-efficiently to do so; and how we can encourage those who find energy efficient behaviours difficult or are not interested to take more positive action.**

Overview

5.1 Our aim is for Scotland to become as sustainable as possible in its use of energy, reducing its impact on the local and global environments as it develops a thriving, low-carbon economy. While Government action and investment have a part to play in driving the energy efficiency agenda, there are limits to what they can achieve alone. Large-scale changes to our energy-related behaviours, both as individuals and in the workplace, will be required to reduce significantly our overall environmental impact and contribute towards cost savings and galvanising new industries.

5.2 The Scottish Government's Climate Change Delivery Plan⁵⁶ acknowledges that better public understanding is essential if people are to be motivated to act. The simple energy efficiency measures that many of us can take as individuals, such as turning down the heating thermostat, washing clothes in cooler water, and installing low-energy lighting, have the potential both to save money and to contribute to emissions reductions of nearly 0.3 MtCO₂e by 2020.⁵⁷ Our use of newer, more energy-efficient technologies will realise further significant gains, although there is a challenge in creating conditions such that it becomes a natural choice to invest in these technologies over more established, but less-efficient, ones.

5.3 Before this consultation looks at our current and proposed energy efficiency activity by sector, this chapter details how the Scottish Government is working in a range of ways, both itself and in partnership, to better understand, influence and change energy-related behaviours. It sets out some of the baseline data collected from our major survey of environmental attitudes and behaviours, with specific reference to energy efficiency. It then

⁵⁶ Scottish Government, Climate Change Delivery Plan, June 2009 (www.scotland.gov.uk/Publications/2009/06/18103720/).

⁵⁷ The designation MtCO₂e here refers to 'megatonnes of carbon dioxide equivalent', i.e. metric tonnes of carbon dioxide, or amount of any other greenhouse gas with an equivalent global warming potential.

moves on to discuss examples of interventions and action by Government and key strategic partners, such as the Energy Saving Trust. It also details wider work to support and encourage behaviour change across civil society and in local communities, in part encouraged by the Climate Challenge Fund. Delivering the scale of Scotland's emissions reduction targets will require real changes from everybody in Scottish society. Institutions, public bodies, businesses and individuals will all need to make more energy efficient and environmentally-responsible choices about how they carry out day-to-day business (see Chapter 13 for partners and responsibilities).

Scottish Research that relates to behaviour change

5.4 Box 5.1 gives brief information on the Scottish Government's range of completed, ongoing and planned research activity on behaviour change. With reference to everyday energy-saving attitudes and behaviours, the Scottish Environmental Attitudes and Behaviours Survey (SEABS'08) suggests that a large majority of Scots understand the importance of day-to-day behaviours.⁵⁸ Around nine in ten people in the survey felt it was important to use energy-saving light bulbs; hang washing up rather than tumble dry it; and turn off lights in rooms that aren't being used. Around eight in ten felt it was important that people avoid over-filling kettles; and seven in ten felt it was important that they turn off heating before going out, and turn off the tap when brushing their teeth.

Box 5.1 Key Scottish Government Research on Behaviour Change

The [Scottish Environmental Attitudes and Behaviours Survey 2008](#) (SEABS'08) provides up-to-date robust data on energy-efficiency attitudes and behaviours. Detailed work is ongoing to deepen our understanding of the data; and key findings from the survey are set out in the main text of this chapter.

The Scottish Government's [Climate Challenge Fund](#) offers significant opportunities to learn about how community-led behaviour change can be enabled. Many projects have an energy-efficiency theme, and research to draw learning from these projects' experiences is currently being developed.

The Scottish Government's [Building Standards Division](#) proposes research for 2010-11 to develop guidance for occupants on how to live energy efficiently in a low-carbon home. We have already published research into the capital, life-cycle and in-use costs of measures to reduce CO₂ emissions from new homes by 30% beyond the current energy standards in building regulations (see www.sbsa.gov.uk/research/summ_dom_energ_2010.htm/)

In [transport](#), an ongoing, large-scale monitoring and evaluation exercise seeks to measure and understand behaviour change in seven sub-local authority areas. Scottish Government funding has been made available via local authorities as part of the *Smarter Choices, Smarter Places* initiative to promote sustainable transport/travel in these areas. The project will last for three years. The first year's baseline data has recently been collected.

In [housing](#), there is a planned review of the implementation of the home insulation scheme which will provide baseline information on the levels and reasons for take-up or rejection of the scheme, as well as ways to improve this policy intervention.

Government analysts are currently considering how behaviour change research across different policy areas can be brought together so as to be more strategic and joined up in approach, and how best this research can contribute to the forthcoming public engagement strategy (see paragraph 5.16). Analysts are also committed to working effectively with universities and research councils on a range of knowledge exchange activities in order to maximise the learning from research spend. For more details on energy-efficiency research across Scottish Government see: www.scotland.gov.uk/socialresearch and www.sbsa.gov.uk/research/Research.htm.

5.5 However, when asked how often they, personally, undertook each of these behaviours, people's answers were somewhat different; a majority of respondents said they use energy saving light bulbs and hang up washing to dry 'most of the time'. Around two thirds said they rarely or never leave lights on in rooms that are not being used. Significantly fewer people said they turn off heating before going out or turn off the tap when brushing

⁵⁸Scottish Government, Scottish Environmental Attitudes and Behaviours Survey 2008, March 2009, (www.scotland.gov.uk/Topics/Research/by-topic/environment/social-research/SESEN/workprogramme/Themes). SEABS'08 was carried out with a representative sample of 3000 adults across Scotland between August and November 2008.

their teeth. Roughly as many people 'rarely' or 'never' did these things as did them 'always' or 'most of the time'. This suggests a disconnect – often termed the 'attitude-action gap' or 'value-action gap' - between appreciating the importance of energy efficiency in principle and following this up in one's own behaviour.

5.6 Similarly, there appears to be a weak understanding of which personal behaviours have a high impact in terms of energy efficiency. SEABS'08 suggests that many people see recycling as the key action for tackling climate change, mentioned by almost half of the survey's respondents. Few mentioned reducing domestic energy and taking fewer flights. While the argument for recycling appears to be generally accepted, there is clearly scope to raise public awareness of the impact of the most energy-intensive actions.

5.7 SEABS'08 identified four recurring reasons as to why people do not always choose to adapt their behaviour. The barriers to behaviour change were: convenience; cost; a lack of alternative options; and practical considerations. Convenience was the factor that most commonly underpinned people's choice of behaviour. It was the main reason respondents gave for opting to: drive to work; drive to do grocery shopping; and use air travel within the UK for leisure or business purposes. Cost considerations were among the main reasons respondents gave for changing their gas and/or electricity supplier and for not buying more locally-produced food. A lack of alternative options was most commonly cited in relation to travel behaviour, most specifically: driving to work, driving to do grocery shopping and driving children to school. Practical considerations cited were closely related to convenience. For example, among the reasons people gave for driving to work were that public transport takes too long and that their work is too far to walk or cycle. Similarly, a significant proportion of those who drove to do grocery shopping said they did so because their shopping is too heavy to carry home on foot or on public transport. The travel and transport element of the GoGreener campaign (see below) recognises these constraints and takes a pragmatic approach that acknowledges the financial and practical considerations which many face in relation to their travel choices and wider behaviours.

5.8 In addition, SEABS'08 suggests that understanding of microgeneration (see Chapter 10) is low. Usage is very low, with only around 1% of people in the survey using energy from microgeneration. People were generally very unsure as to whether their homes were suitable for photovoltaics, solar panels, air and ground source heat pumps, or micro wind turbines.

5.9 The survey also suggests that awareness of the energy efficiency ratings of domestic appliances could be improved. People surveyed who had bought electrical appliances in the last two years were asked whether they knew the energy efficiency rating of their appliance. Most said they did not or that they could not remember the rating, although the figure varied depending on the specific type of appliance bought. Of those who had bought a television, just over four in five did not know its energy-efficiency rating, compared with around half of those who had bought a fridge, freezer, washing machine or dish washer.

5.10 SEABS'08 offers an important insight into how people in Scotland think and behave on energy efficiency issues. In some respects, the findings provide grounds for optimism, with initial indications that people are starting to change their behaviour, alongside positive results emerging from the GoGreener campaign. Yet the level of participation in energy-efficient behaviours remains low, even amongst the greenest of those surveyed.

5.11 There are further challenges that we need to understand better, such as how we address the 'rebound effect', whereby the money saved by implementing energy efficiency measures is spent on more energy or other items that contribute to climate change (see

Chapter 3);⁵⁹ and how we better understand social norms as a barrier to, and motivator of, change.

5.12 Two significant barriers to behaviour change - effort and cost - may provide opportunities to shape the context of people's choices and therefore their behaviour. Not only may there be scope to make some energy efficient behaviours easier to adopt, but there may also be areas where non-environmentally friendly energy intensive options can be made more difficult - so-called 'choice editing'. Similarly, and where appropriate, highlighting the potential cost-savings from using less energy may provide an effective means by which to 'sell' pro-environmental behaviours.

5.13 Scottish Government now needs to deepen its understanding of behaviour in order to influence attitudes and enable change. The next steps to this will include:

- Developing a programme of research and analysis on enabling behaviour change across government, and ensuring that policy development is taken forward with a clear understanding of attitudes and behaviours, including the attitude-action gap and social norms;
- Commissioning in-depth qualitative follow-up research into key aspects of SEABS'08; this is likely to consist of a suite of studies focusing on understanding behaviour change;
- Making SEABS'08 findings more widely accessible to academic/analytical study. The data is now available on open access as part of the UK Data Archive;⁶⁰ workshops will be organised to help data users analyse SEABS'08 findings for themselves.
- Drawing evidence from the energy projects that make up part of the Climate Challenge Fund.
- Reviewing the evidence on rebound effect and considering how we can build this into our policy thinking; work ongoing at the UK Energy Research Centre and at Strathclyde University will be particularly useful in this regard.
- Reviewing the evidence on fuel price elasticity and developing a better understanding of the relationship between fuel prices and energy efficient behaviours.
- Ensuring effective knowledge-exchange with the academic community, including the forthcoming ESRC Research Centre on Sustainable Behaviours.

Q 5: What other research do you think is required, with specific reference to energy efficiency and behaviour change?

Influencing Public Attitudes and Behaviours

5.14 SEABS'08 suggests that public awareness of environmental and energy consumption issues, while undoubtedly important, is less of an issue than translating awareness into action. There are many barriers to action, and the choices available to consumers can appear limited, not always enabling them to take the positive action they would wish. Changing public behaviours matters because significant benefits can accrue from large-scale action. This is both in terms of immediate impacts and helping to increase social acceptance of the need to change, and by stimulating markets to deliver more and better low-carbon solutions. There is a huge challenge involved in enabling and encouraging people in Scotland to make voluntary changes to their lifestyles which will significantly reduce emissions. We detail below the various campaigns and programmes that the Government has initiated to help people change their behaviours.

⁵⁹ See, e.g. www.eea.europa.eu/publications/state_of_environment_report_2007_1/chapter6.pdf.

⁶⁰ See www.data-archive.ac.uk/.

Public Sector

5.15 The Scottish Government is determined to play a leading role in global efforts to reduce emissions. As part of our drive to create a more sustainable Scotland, we intend to ensure that we lead by example and put our own house in order. As detailed in Chapter 9, the Permanent Secretary chairs two complementary high level groups to drive this work forward – the Internal High Level Group to look specifically at the Scottish Government's own environmental performance, including energy; and the External High Level Group to engage the wider public sector in the same goal. The overall aim of both groups is to ensure that the Scottish public sector leads by example and meets the highest standards in terms of its environmental performance (see Chapter 9).

5.16 In addition, under the Climate Change (Scotland) Act 2009, Scottish Ministers must publish a public engagement strategy no later than 31 December 2010. This will inform the public about the Act's targets of reducing Scotland's greenhouse gas emissions by at least 42% by 2020 and 80% by 2050, and encourage action to achieve the targets. It is being prepared to ensure that we approach this in an effective and co-ordinated way and will include a comprehensive framework for supporting behaviour change activity.

Scottish Government's GoGreener Campaign

5.17 The Scottish Government's GoGreener communications campaign encourages individuals to become more sustainable by supporting them to take steps to improve the frequency and intensity of environmentally-responsible behaviour.⁶¹ The aim is to change the culture by challenging damaging behaviours and normalising so-called 'green' behaviours. It is intended to complement other government and wider action, such as the Eco-Schools programme and work to build sustainable development into the Curriculum for Excellence (see below). It also aims to bring together and build on the work of a variety of public, voluntary and private sector organisations seeking to communicate environmental messages to the public. These include the Energy Saving Trust's Energy Saving Scotland Advice Centre Network, which has expanded the provision of advice on a wide range of sustainable energy measures, including energy efficiency, microgeneration and sustainable transport.

5.18 The GoGreener campaign revolves around 10 greener steps which the public are encouraged to sign up to and which act as a doorway to information that will grow their understanding and help them further reduce their environmental impact. The campaign is very much action-focused as a way of leading to better awareness and attitudinal change. The longer-term objective is to change and embed greener behaviours in everyday lives by reinforcing messages about behaviours through feedback to people participating in the campaign and by making appropriate links to related campaigns and organisations. This will develop a common lexicon which communicators can draw on in order to present more consistent and therefore persuasive messages to the public and others about the benefits of such behaviours.

5.19 The Go Greener approach recognises and responds to current public concerns about rising energy and fuel costs by highlighting simple actions that will help reduce people's environmental impact and save money at the same time. As of July 2009, over 12,000 people had signed up online to support the ten steps, with the campaign yielding positive results in terms of awareness and intent to change behaviour. The Scottish Government will continue to develop the campaign through a range of media in order to increase its reach and support increasing numbers of people in Scotland to take steps to change their behaviours in ways that will help reduce energy consumption and emissions. It is important

⁶¹ See www.infoscotland.com/gogreener/CCC_FirstPage.jsp.

to note that while saving water, reducing waste and recycling are normally considered to be sustainability issues, these activities can result in significant reductions in energy consumption (see Chapter 10).

Box 5.2 GoGreener Campaign Steps

- Recycle household waste using locally-provided facilities
- Turn the tap off when brushing your teeth
- Switch to energy saving lightbulbs
- Leave the car at home and walk, cycle, use public transport or car share at least once a week instead
- Use rechargeable instead of disposable batteries
- Reuse carrier bags when you shop
- Buy more seasonal and unpackaged food
- Hang your washing up to dry rather than use a tumble dryer
- Organise or volunteer in an environmental project in your local community
- Avoid flying when you can and pay back the environmental impact of any flights you have to take

Energy Saving Trust

5.20 The Energy Saving Trust (EST) primarily engages with householders and small and medium sized businesses (SMEs).⁶² Its core mission is to engage with, empower and support people to make positive changes to reduce carbon emissions from their homes and the ways in which they travel. Its work is thus specifically focused on translating awareness into action and is complementary to campaigns such as GoGreener.

5.21 EST promotes energy and carbon saving behaviour by providing advice, information and support to large numbers of people in Scotland via telephone, email, the web and in person, and through appropriate retail and marketing channels. The latter include TV, radio and poster campaigns, as well as social networks, word-of-mouth and local and online communities. EST's work in Scotland is funded by the Scottish Government.

5.22 EST advice and support covers energy efficiency, small-scale renewables and personal transport. It aims to influence both day-to-day activities and behaviours and one-off decisions. Daily activities include driving, switching off lights and appliances, closing curtains at dusk, and turning down the heating thermostat. One-off decisions include purchasing energy-efficient goods and services, for example insulation, buying the most energy-efficient electrical goods, or choosing a fuel-efficient car. EST operates the widely-used Energy Saving Recommended logo scheme in order to assist purchasers in identifying the most energy-efficient products and services.

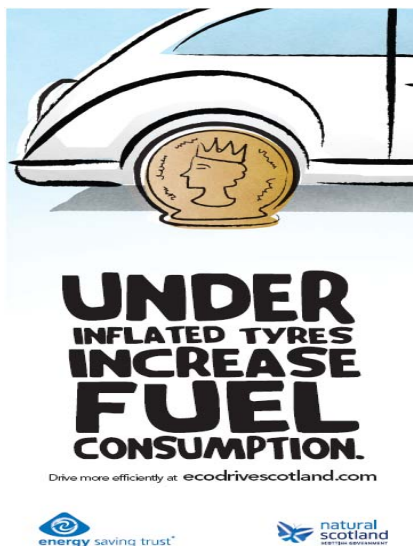
5.23 EST advice is seen as independent and trustworthy, which enhances its ability to engage consumers. Its telephone, email and personal advice is provided through the network of five Energy Saving Scotland advice centres (ESSacs) and through outreach activity. The ESSacs, managed by EST and run by delivery organisations with local knowledge, were launched in June 2008 and will advise 320,000 clients in 2009-10. Other marketing messages, through the internet and media, aim both to provide key messages at the right time and place to influence decisions and to guide people to the advice services. All of this is supported by extensive consumer insight obtained from client feedback and specific consumer research. EST has a dedicated evaluation team and can demonstrate significant carbon savings per customer as a result of the advice and support it gives.

5.24 The ESSacs have an important "one-stop-shop" role, acting as a single point through which people can access a wide variety of advice and services; if centre advisers cannot supply what the customer needs directly they will refer them on to others who can. This

⁶² See www.energysavingtrust.org.uk.

simplifies the customer journey and makes it easier for people to receive the help they need to save energy, money and carbon. The Scottish Government has recognised the usefulness of the one-stop-shop approach by choosing to deliver the Energy Assistance Package for the fuel poor and the area-based Home Insulation Scheme through the ESSac network (see Chapter 6).

Box 5.3 Eco-Drive Scotland: a national EST campaign



The three-year Eco-Drive Scotland campaign aims to reach one million motorists across Scotland and to influence them to save fuel and carbon by promoting the adoption of simple driving techniques. It focuses on commuters, aiming to reach 78% of all car based commuters. In order to reach drivers most effectively, key messages are provided on outdoor bill boards, radio, and at garages. There are also outreach events in which the public can use eco-driving simulators in city-centre shopping centres and some smaller local supermarkets.

Follow-up research has found that the campaign has had a highly significant impact. It has reached 1.2 million people and, of these, 9% have changed their behaviour; most are driving at slower speeds and changing gear at lower revs.

This garage forecourt window poster is an example of one of the Eco-drive messages.

Community Engagement and Action - The Climate Challenge Fund

5.25 While the GoGreener campaign supports and encourages individual behaviour change, the Government is also working to support, stimulate and share knowledge of meaningful action being taken at the community level across Scotland.

Box 5.4 Climate Challenge Fund case studies

Colston Milton Parish Church, Glasgow

This Sustainable Community Building project aims to conduct a feasibility study on building Scotland's greenest community centre - an ambitious building that will be carbon neutral and made exclusively from recycled materials. Once completed, it will function as a community café, meeting rooms and social space.

Climate Challenge Funding worth £42,809 for 2008-2009 was made available in two stages - for a feasibility study, then the actual build. By years two and three when the new buildings are in place, this project will have the potential to reduce carbon emissions by 100 tonnes per year. Its legacy will be an entirely sustainable building that benefits the community in many ways, including by saving an estimated £7,000 in heating bills per year.

Going Carbon Neutral Stirling (GCNS)

Supported since 2008 by the Scottish Government Climate Challenge Fund and the Big Lottery Fund, Going Carbon Neutral Stirling staff help groups across Stirling to create their own carbon-reduction plan, consisting of weekly and monthly carbon cutting actions that everyone can achieve, together, starting with easy actions first. For the first three years, GCNS will visit each group regularly to provide support, advice and practical help, slotting carbon reduction into everyone's daily routine. In addition, GCNS will work with the local council and businesses to help ensure that being low-carbon, as an individual and community in Stirling, is easier, cheaper and more popular.

5.26 The Climate Challenge Fund, worth £27.4 million over three years (2008-2011), is designed to enable communities to come forward with their own solutions to make a

significant reduction in carbon emissions.⁶³ Projects can involve a wide range of actions, as demonstrated by the two case studies in Box 5.4, with communities seeking to change attitudes and take real action. They contribute to energy demand reduction insofar as they might include using less energy in people's homes or workplaces, walking and cycling more, or supporting local sustainable food production. More than 150 communities have received funding so far to develop new skills, promote climate-friendly ideas and advice, and develop lower-carbon community facilities. CO₂ reduction must be at the heart of every proposal and the community at the centre of the decision making. Sharing knowledge and learning about what works is a key principle behind the Fund's operation, and research to underpin this is currently being prepared.

Education

5.27 Learning has a key role in helping us to reduce energy demand and build a sustainable Scotland. For this, we will need successful learners and responsible, confident individuals who are able to rise to the challenges, evaluate the issues, make informed choices, solve problems and adapt to changing circumstances. Clearly, the subject matter taught plays a key role in this, as do lessons in citizenship and leadership. However, environmentally-friendly and energy efficient community facilities, schools, colleges and university buildings increase teachers' and students' understanding of energy efficiency and help them to act on their knowledge in their wider lives beyond the campus. In addition, research that universities and research centres take forward will undoubtedly increase our understanding of how behaviour change can be enabled across society. Much of the following relates to sustainable education development, and we would encourage the emphasis of energy efficiency as a key element within this.

Community Learning and Development

5.28 Community Learning and Development puts learning at the heart of communities and enables people to gain skills and confidence so they can influence change in their communities. In the context of energy efficient behaviours, it aims to build the capacity of communities to take action to change their own circumstances and to address global concerns; to integrate the question of a sustainable future into community-based adult learning, and to involve young people in these issues. To this end, CLD staff work closely with schools on these issues, for example through family learning and youth work in schools initiatives.

5.29 In January 2009, the Conference on Education for Sustainable Development identified Community Learning and Development as a potential way to support communities to become more involved in sustainable development projects. To this end, in February 2009, Scottish Government joined with the Sustainable Development Commission and Community Development Alliance Scotland (CDAS) to deliver a conference on *Learning to Work Together For Our Future: How Community Learning and Development can help us achieve a sustainable future*. This conference helped clarify the role that CLD already plays in sustainable development, presented some good examples of existing projects, and encouraged more projects to recognise their wider learning role.

Further and Higher Education

5.30 The Scottish Funding Council (SFC), which has responsibility for funding further and higher education in Scotland, has included sustainable development as one of five strategic

⁶³ See www.infoscotland.com/climatechallengefund.

themes underpinning its new Corporate Plan.⁶⁴ The Plan highlights the SFC's commitment to promote good practice in sustainability and the sustainable use of resources, and to support the UN Decade of Education for Sustainable Development. More specifically, the SFC aims to support the development of improved and sustainable estates for colleges and universities as autonomous bodies, including energy efficiency, and will support teaching and research programmes which contribute to improved sustainability. In its most recent annual assessment of the Scottish Government's progress on sustainable development (November 2008), the Sustainable Development Commission noted the 'considerable progress' which the SFC is making.

5.31 Colleges and Universities make valuable contributions to education for sustainable development in areas such as course content, research, estate development and management, and student action. The SFC has already issued guidance on sustainable estates (2005 and 2008), and there are a number of flagship estates projects, such as the Queen Margaret University in Edinburgh, John Wheatley College and Carnegie College. Experience and findings from these projects are being documented and shared through post-occupancy evaluation. The SFC has also introduced BREEAM excellence⁶⁵ as a condition of grant for new college estates projects. Some estates developments highlight both the importance of low-carbon and energy efficient building and the key role of institutions in maintaining sustainable communities. Some also develop the interplay between estates management, institutional ethos, and the development of students' sustainability awareness.

5.32 Most of Scotland's universities and colleges, as autonomous bodies, have already signed up to the Universities and Colleges Climate Commitment for Scotland (UCCCfS). This innovative framework was introduced in 2008 in preparation for the UK-wide carbon reduction target that will come into play 2010 (see Chapter 8). It is a voluntary commitment, funded by the SFC and led by the Environmental Association of Universities and Colleges (EAUC). It has received formal support from the Cabinet Secretary. It will see signatories publish a five-year climate action plan that includes measurable targets and timescales to achieve a significant reduction in emissions from business operations. The EAUC has produced a mapping of resources to help institutions reduce their carbon emissions and will be monitoring progress on action plans. Principals of 35 Scottish further and higher education institutions had signed the Commitment by the end of January 2009.

5.33 In addition, there have been a number of approaches to embedding education for sustainable development (ESD) in university and college courses, including:

- Courses that teach environmental and sustainability issues (see Box 5.5 for examples) or offer generic awareness modules to all students. Such modules, usually optional and offered to first-year students at several Scottish universities, are popular and fit with the broad basis of the early years of the Scottish degree.
- In October 2008, the SFC and NUS held a conference to celebrate student contributions to the UN Decade of Education. As a follow up, the SFC is funding a student carbon reduction project at NUS Scotland called 'Student Footprints'
- Locating an awareness of sustainable development within every discipline. This approach is potentially very powerful, but the relevance of sustainability to disciplines varies, and success will depend on the interest and ability of teaching staff to meet the challenge.

⁶⁴ See also the skills section of Chapter 12. This chapter details how universities and colleges can exercise influence on attitudes through formal and informal learning, and through the way they conduct their operations. Chapter 12 focuses on specific skills for work in energy efficiency and related sectors.

⁶⁵ BRE Environmental Assessment Method - the world's longest standing and most widely used environmental assessment method for buildings.

- Inter-disciplinary approaches, with Departments coming together to engage with a topic or set of resources from different perspectives. An HE Academy study found strong support for the value of inter-disciplinary approaches to sustainable development, but varying views on how to define the topic or the desired learning outcomes.
- ConstructionSkills has developed a 'Putting a price on Sustainability' workshop in partnership with Herriot Watt University. This aims to promote solutions to energy efficiency and promote non cognate entry into the industry.
- A strong vehicle for delivering sustainable development education in colleges is the concept of citizenship. In Scotland's colleges this is understood as a broad cross-curricular issue, rather than a discrete subject area. Examples of how ESD is being integrated into college and university courses can be found in Box 5.5.

Box 5.5 Examples of education in sustainable development in Scottish university and college courses

St Andrews University: MA/MSc honours degree in sustainable development, involving eight different departments and allowing students to specialize in areas such as environmental or management issues.

University of Aberdeen: Master's courses in: Law and Sustainable Development; Ecology and Environmental Sustainability; Environmental Microbiology; and Sustainable Rural Development.

UHI Millennium institute: Undergraduate courses in: Sustainability Studies; Sustainable Rural Development; Sustainable Construction; Sustainable Forest Management; and Environment & Heritage Studies. Postgraduate courses in: Managing Sustainable Rural Development; Managing Sustainable Mountain Development.

Napier University: Undergraduate courses in: Sustaining People, Planet & Profit; Renewable Energy & Sustainability; Sustainable Development; Sustainable Design. Postgraduate courses in: Creativity, Innovation & Sustainability; Creativity to Sustainability; Sustainable Project Design.

Stow College: has developed CPD units in 'promoting sustainability' and worked with John Wheatley College to develop the new unit, 'Contributing to sustainability in your community'.

Inverness College: The School of Construction and Forestry has worked in partnership with Highlands and Islands Enterprise Community Energy Company and kit manufacturers to design and deliver Micro-Renewable Installer Programmes to workers within the plumbing, electrical and heating industries. During the 3.5 day programme, learners engage in a variety of theory and practical activities, gaining valuable vocational and employability skills and accreditation.

Several generic *Scottish Qualification Authority (SQA)* units have sustainable development as the main focus and are available for inclusion in the programmes of recognised awards.

5.34 There is an issue of whether the existing structures of departments and subject-based courses are well-suited to meeting the interdisciplinary challenges of education for sustainable development. The St Andrews University MA/MSc honours degree in sustainable development involves eight different departments. The Scottish Institute of Advanced Studies (IAS) represents a partnership between participating HEIs and other members of the policy making and implementation communities.⁶⁶ It aims to bring together people with very different backgrounds and expertise, and to run programmes on a multi-disciplinary basis which address issues that are of key concern now or will be in the future. Whilst this can cover many areas (e.g. climate change, privacy, nationhood, education, creativity), its aim to overcome discipline barriers is clearly appropriate to the cross-sectoral nature of energy efficiency. One of the Institute's first programmes was 'Transforming Attitudes to Energy Consumption and Supply', and this next season will run a programme on 'Delivering System Change: Governing Decarbonisation in Scotland'.⁶⁷

5.35 Programmes such as this may offer a way forward in cross-cutting areas such as energy efficiency. The IAS demonstrates how our use of networks to share academic

⁶⁶ See www.instituteforadvancedstudies.org.uk/AbouttheInstitute.aspx. The IAS is initially being hosted at the University of Strathclyde. Its goal is to become an independent, national institution for academics and non-academics across Scotland.

⁶⁷ See www.instituteforadvancedstudies.org.uk/Programmes/EnergyandSustainability.aspx; and www.instituteforadvancedstudies.org.uk/Programmes/GoverningDecarbonisation.aspx.

expertise, both with fellow university and college institutes and the business and government sectors, could play an important role in driving forward the subject area of this consultation.

5.36 An effective knowledge exchange between the university sector, government and business is crucial, and government is keen to maximise learning from what universities and UK research centres are doing. One example programme of research, funded through European Union Framework Seven, is GILDED (see Box 5.6). This works in partnership with four EU states to identify socio-economic, cultural and political changes which could bring about a reduction in carbon-intensive energy demand from households. The Scottish Government is keen to learn from GILDED and similar programmes of research into energy efficiency behaviours.

Box 5.6 The GILDED Project

GILDED (Governance, Infrastructure, Lifestyle Dynamics and Energy Demand) is a three year collaborative research project funded through European Union Framework Seven, running from December 2008-2011. It is led by the Macaulay Land Use Research Institute in Aberdeen, with partners in four other EU countries. Its overall goal is to identify socio-economic, cultural and political changes which could bring about a reduction in carbon-intensive energy demand from the household sector, in urban and rural communities across the EU. Each partner has a case study region (Aberdeen and Aberdeenshire for the Macaulay Institute). While technological innovations can reduce the energy requirement for specific household activities, without a commitment to cutting energy consumption, increases in energy efficiency may simply raise demand for energy-intensive products and services (the 'rebound effect' – see chapter 3). There is very little recent research on factors influencing household energy use, and particularly on household level energy consumption and lifestyle choices; most studies have asked individuals about their energy use and values, and then averaged these to represent the whole population. However, people usually make decisions as part of a household or family group, and in reference to their peers (friends, family, coworkers etc). It is more difficult, but also more important, to look at decision-making and energy consumption at household and group levels, in order to identify policies which are likely to be successful.

This research is being undertaken by a multidisciplinary team working together to:

- Establish stakeholder advisory groups in each case study region.
- Evaluate structural incentives for energy consumption in each case study region.
- Develop lifestyle profiles of each case study region.
- Undertake and assess an energy demand reduction initiative across the case study regions.
- Develop a computer model, using the agent-based simulation approach, to study household energy demand scenarios.
- Develop policy recommendations for reducing energy consumption at local, national and EU levels.

Schools

Sustainable Development Education

5.36 The Scottish Government's policy is to ensure that schools and education authorities provide opportunities for teaching Sustainable Development throughout the school curriculum. This includes opportunities for examining energy efficiency behaviours and attitudes to energy consumption, from heating classrooms to school travel plans.

Curriculum for Excellence

5.37 The Curriculum for Excellence, launched on 2 April 2009, is intended to promote a fresh culture across the whole of Scottish education and to ensure that all children and young people experience a broad general education across all curriculum areas.⁶⁸ Sustainable development education, and an understanding of energy impacts, are an intrinsic part of the Curriculum for Excellence. The Scottish Government's Schools Directorate has been working with Learning and Teaching Scotland (LTS) and other

⁶⁸ See Scottish Government, 'Building the Curriculum 3: A framework for learning and teaching', 2008 (<http://www.ltscotland.org.uk/curriculumforexcellence/buildingthecurriculum/guidance/btc3/index.asp>).

stakeholders to ensure that this is integrated into all areas of the curriculum. This supports the Government's aims of developing young people as responsible global citizens with a knowledge and understanding of the world and Scotland's place in it.

5.38 Central to this is developing an understanding of environmental issues, including climate change, and how we should lead sustainable lifestyles. Pupils are taught to be able to examine and evaluate complex environmental, scientific and technological issues, and to develop informed, ethical views on issues such as climate change, energy efficiency and renewable energy. Such learning can readily be addressed through a number of curriculum areas, including social studies and science, and can be linked with other inter-disciplinary areas including international and citizenship education.

Eco Schools

5.39 Scotland is a leading player in the international eco schools movement. The Eco Schools Scotland Programme is designed to encourage whole-school action for the environment.⁶⁹ It includes an accreditation scheme which recognises schools' commitment to continuously improving their environmental processes, including the use of energy. It also helps raise awareness of environmental and sustainable development issues through activities linked to curriculum subjects and areas. Under the scheme there are three levels of award, culminating in the Green Flag Award, which must be renewed every two years. A school is considered to be a permanent Eco-School once it has gained its fourth Green Flag.

5.40 Over 3,300 schools and pre-school centres are registered with the programme, including over 94% of all local authority schools in Scotland. The 800th Green Flag was awarded in May 2009 (up from around 460 in May 2007). The 1,000th Green Flag is expected to be awarded in 2010, with Scotland hosting the annual Eco-Schools International Conference in November 2010.

5.41 Schools' Global Footprint resources and training are available to help schools to examine, measure and take action to reduce their impact on the environment locally and globally.⁷⁰ Resources piloted in 17 primary and secondary schools in Aberdeen City, Aberdeenshire and North Lanarkshire are now being made available, with training, to all schools in Scotland.

5.42 Within this, the Scottish Government also supports the Local Footprints project to help schools across Scotland understand, assess and take action to reduce their footprint and impact on the environment.⁷¹ A school's footprint calculator has been developed focusing on energy, food, waste and water use in schools, with training and resources available to teachers across Scotland.

5.43 In conclusion, the Scottish Government is taking a range of actions to influence and support people at all levels of civil society to make positive behavioural changes in respect of energy efficiency and broader environmental behaviours. As a Government we are making efforts to lead by example and we will continuously review our own behaviours to ensure that they are meaningful and appropriate and to draw lessons from our experiences which can feed into the development of behavioural approaches and interventions.

5.44 However, we also need to consider more critically how we can enable communities, individuals, and businesses who want to behave more energy-efficiently to do so; equally, how we can encourage those who find energy efficient behaviours difficult or who are simply

⁶⁹ See www.ecoschoolsscotland.org/.

⁷⁰ See www.ltscotland.org.uk/sustainabledevelopment/findresources/globalfootprint/index.asp.

⁷¹ See www.localfootprints.org/documents/8171_LFQuizPages2.pdf.

not interested for whatever reason to take more positive action. Our forthcoming public engagement strategy, along with the work on behaviour change being taken forward by government analysts and academics, will need to reflect on how best to achieve this. Clearly, we can only move forward if we work in partnership across government, with business, with the third sector, and with communities, households and individuals. As this chapter has demonstrated, some of this work is already ongoing, but there is much still to do.

Q 6: What more do we need to do to change attitudes and influence behaviour?

Q 7: Various organisations, including EST and the Carbon Trust (which deals primarily with the business and public sectors, see chapters 8 and 9) are currently involved in public engagement. Should we seek to develop a single brand for all energy saving advice in Scotland? If so, why?