

SUMMARY OF KEY POINTS AND QUESTIONS FROM THE CONSULTATION BY CHAPTER

Energy is recognised in the Scottish Government's Economic Strategy as a key sector with high growth potential and the capacity to boost productivity. It is also recognised in the Government's Energy Key Sector Report as a source of international competitive advantage. Its use underpins activity across all sectors - business, domestic and public, but it is also responsible for the major share of our greenhouse gas emissions, which contribute to climate change. Energy efficiency and productivity - maximising the output from a given set of energy inputs - offer a way to resolve the apparent tension between the goals of economic growth and environmental sustainability by reining in energy consumption without limiting growth.

Although energy efficiency has been part of energy policy since the 1970s, the convergence of issues concerning climate change, energy scarcity and global population growth demands a more radical change in our patterns of energy use in the years to come. It means that energy efficiency needs to become a priority across all Scottish Government work, complementing Scotland's other energy-related strengths and working across areas such as housing, transport and business to help the Government achieve its Purpose of sustainable economic growth.

The Scottish Energy Efficiency Action Plan will fulfil one of the ten pledges on energy policy that Scottish Ministers announced in February 2009. Pledge 7, which promises to 'implement measures to improve Scotland's energy use through the Energy Efficiency Action Plan', is reaffirmed in the Climate Change (Scotland) Act. This commits the Scottish Government to prepare and publish a plan for a) promoting energy efficiency; and b) improving the energy efficiency of living accommodation.

This consultation on the Energy Efficiency Action Plan will make a significant contribution to fulfilling these commitments. It is the first key document to follow the publication of the Climate Change (Scotland) Act, and the main interim document before the Scottish Government's Report on Proposals and Policies in Summer 2010, which will set out how we intend to meet our statutory emission targets. A Strategic Environmental Assessment is being carried out in parallel in order that we can publish the final Energy Efficiency Action Plan in early 2010.

This Energy Efficiency consultation document is not a draft copy of the Action Plan itself, but rather a comprehensive discussion of the issues that will need to be considered in that plan. It sets out a comprehensive approach to energy efficiency by the Scottish Government and the public sector in Scotland, focusing on its impact on energy and economic development, housing and transport, and on the role it can play in delivering climate change targets. It poses a series of questions to inform the final action plan, to be prepared in early 2010. It is intended to initiate debate, and there will be opportunity for stakeholders to feed in further material during the consultation period. It is proposed that the Energy Efficiency Action Plan, when published in early 2010, will be much shorter.

The following is a list of the summary points that can be found at the beginning of each chapter of the consultation paper, followed by the consultation questions that appear in those chapters. We would encourage you to read the full chapters before submitting responses to questions. It would be helpful if you could refer to particular sections and paragraphs in any detailed discussion.

Summary of Key Points and Questions by chapter

Chapter 1: Introduction and Strategic Context

- Sustainable energy is both an environmental imperative and an economic opportunity. Although energy efficiency has been part of energy policy since the 1970s, the convergence of issues concerning climate change, energy scarcity and global population growth demands: i) a more radical change in our patterns of energy use in the years to come; and ii) that all areas of government take energy efficiency into consideration in their policy development.
- Energy efficiency and productivity - maximising the output from a given set of energy inputs - offers a way to resolve the apparent tension between the goals of economic growth and environmental sustainability by reining in energy consumption without limiting economic growth.
- It is far more cost-effective to act now against climate change through energy efficiency and reducing emissions, than later to pay the costs of inaction. We need to encourage substantial investment in initiatives which focus on maximising the efficiency of energy use and reducing energy consumption.
- Scottish business can benefit by innovating and creating new products and markets for energy efficient products, processes and services.
- Encouraging and assisting householders to improve the energy performance of their homes and to avoid wasting energy helps them to enjoy continued and improving standards of living.
- The Energy Efficiency Action Plan will be the key mechanism for articulating energy efficiency action across the whole of Scottish Government.

Chapter 2: Current Trends in Energy Usage

- There are conflicting trends in household energy use. An aging population, increasing numbers of households, increased single-person living, and growing demand for electrical appliances result in increases in demand, while improvements in housing stock reduce it.
- Overall electricity consumption in Scotland is relatively static, reflecting recent improvements in energy efficiency. However, transport use is rising, in particular vehicle kilometres travelled and diesel consumption in road transport.
- There has been an overall reduction in emissions since 1990, but much more needs to be done to meet the Climate Change (Scotland) Act targets.
- Data on energy trends in Scotland is patchy. Currently the most up-to-date way to estimate energy trends is to use disaggregated UK data.

Chapter 3: Barriers to Improving Energy Efficiency and Reducing Energy Consumption

- Some households and organisations are failing to invest in cost-effective energy efficiency measures and to capture the savings that these offer.
- While housing stock has become more energy efficient, more needs to be done. Take-up of energy efficiency measures has been disappointing despite successive campaigns, and behaviours have actually become more energy-intensive.
- There are numerous structural barriers to improving energy efficiency and reducing energy consumption. There are also issues of motivation and behaviour.
- When energy efficiency measures are implemented, the full potential energy savings are not always realised due to the rebound effect, whereby, for example, people spend the financial or carbon savings made on other goods or services that require energy input.

Chapter 4: Energy Efficiency Targets & Issues around Data Monitoring

- This chapter explains how targets for energy efficiency will support and complement the general targets set out in the Climate Change (Scotland) Act.
- The Scottish Government intends, through the process of developing and revising its Energy Efficiency Action Plan, to be able to provide a clear routemap for energy efficiency and a clear picture of the key changes that will be needed.
- Energy efficiency contributes to both our emission reduction and fuel poverty objectives. Energy efficiency and emissions reduction policies need to take account of the complex relationships and trade-offs between the drivers of reducing emissions, reducing energy consumption, and eradicating fuel poverty.
- Given the lower delivery of Britain-wide programmes in Scotland, there is a significant challenge in ensuring that savings equivalent to those in the UK are achieved in Scotland.
- Scottish energy efficiency targets could be based on energy savings to be achieved through specific government policies and programmes. This would not take into account potential growth in consumption in other areas and so total energy use may not decrease by exactly the same amount. An alternative target would be an absolute end-use consumption reduction target.
- The Scottish Government is currently undergoing significant work to be able to improve the monitoring of the annual, interim and 2050 greenhouse gas emission targets. We will aim to ensure that this activity also allows for monitoring of part of our energy efficiency targets.
- As we further assess the options to meet our greenhouse gas emissions reduction targets, we will need to consider the cost-effectiveness of achieving these through energy efficiency and low- and zero-carbon technologies, alongside other positive and negative impacts.
- In the current absence of sufficient data, we set out what sectoral targets would be if based on a share of overall UK energy saving targets as derived from analysis of individual policy measures and their treatment in the 2007 UK Energy Efficiency Action Plan and allocated to the various sectors in Scotland.
- We would welcome views on how to improve these targets.

Q 1: Should Scotland's energy efficiency target be based, as discussed, on energy savings achieved or total consumption? Or are there alternative ways in which a target should be set and monitored? If so, what would be the benefits of such an approach?

Q 2: What should be the basis for the energy efficiency target? For example, should any "energy savings achieved" target take into account UK ambition and programmes? If so, how ambitious should Scotland be in its energy efficiency targets compared to the UK?

Q 3: What approach do you consider we should take to setting out how different sectors will contribute to our target? What further evidence should be collected and assessed?

Q 4: What evidence do you have to suggest that the different levels of saving identified in the broad sectoral indications may or may not be achievable?

Chapter 5: Changing Attitudes and Behaviours

- 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.

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

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?

Chapter 6: Making Scotland's Homes more Energy Efficient – Strategic Issues

- The key drivers for improving the energy efficiency of housing are to reduce greenhouse gas emissions, reduce the cost of household fuel bills, and reduce fuel poverty.
- Around 29% of all energy consumed and 30% of all greenhouse gas emissions in Scotland derive from the domestic sector through heating of homes and water, cooking, lighting, and running household and home entertainment appliances.
- For new homes, the 2007 Sullivan Report recommended staged improvements in Building Regulations towards zero-carbon new buildings. The 2010 Regulations are currently under consultation. Further reviews will be undertaken for 2013 and 2016.
- Although the existing housing stock has improved since 1990, a step-change is required to achieve significant reductions in energy demand. Loft and cavity wall insulation are most cost-effective. Virtually all lofts and cavities need to be insulated to current recommended levels as soon as possible.
- There are significant opportunities to increase energy efficiency and reduce emissions by upgrading or converting heating systems, improving electrical products, changing habits, and installing other insulation products, draught proofing, glazing and microgeneration technologies. There is broad consensus that virtually all dwellings will be affected, that millions of measures are required, and the total capital cost will be high, though resulting in savings in fuel bills.
- It is important to consider the impact of climate change on the design and location of new housing and the maintenance and improvement of the existing housing stock.
- Scottish households, like households throughout Great Britain, pay for GB-wide energy efficiency programmes such as CERT and CESP through fuel bills and need to receive

the full benefit of these schemes. We have called for a separate co-ordinating body in Scotland for CERT and CESP.

- We acknowledge that any increase in the level of CERT-type activity will increase energy prices. Governments need to implement an accompanying strategy to minimise the impacts on households that are vulnerable to fuel poverty.
- A range of Scottish Government supported programmes 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.
- Energy efficiency measures will require substantial up-front investment in housing stock. While greater savings are expected from fuel bills over time, these will be recouped over a variable number of years, and some households may see less savings than others. Due to the significant sums involved, it is assumed that those who are able to pay will invest or borrow to undertake work.

Q 8: Do you agree that these are the key concerns for Scottish Government to consider when developing action on energy efficiency in housing?

Q 9: What do you think are the key issues that the Scottish Government should consider in the design and location of new housing and the maintenance and improvement of the existing housing stock to ensure that they are adapted to future climatic conditions?

Q 10: With regard to traditional and historic buildings as defined in footnote 40, what do you think are the most important energy efficiency issues?

Q 11: What is the right balance in funding between Government, landlords and individual households?

Q 12: Taking into account the scale of the challenge and behaviour issues, and the work set out in this chapter and Chapter 7 (housing regulation), what other policies should be taken forward to meet our climate change objectives in respect of housing?

Q 13: If Scottish Government were to prioritise the expansion of any individual existing programme, which should that be, and why?

**Chapter 7: Making Scotland's Existing Homes more Energy Efficient – the Role of the Regulatory Standards for Housing
Options for the Private Rented Sector
Future Options for the Home Energy Conservation Act**

- This chapter builds on the strategic options for improving the energy efficiency of housing by looking in more detail at the role of regulatory requirements.
- Many owners and landlords have already taken steps to improve the energy efficiency of their homes. However, despite the advantages of this in terms of warmer homes, reduced emissions and lower fuel bills, many others have not yet done so.
- The Climate Change (Scotland) Act 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.
- This consultation will assist the Scottish Government in forming its statement on how the powers will be used by starting to explore the form regulation might take and in what circumstances and timescales it should be applied.
- A number of mechanisms need to be in place before regulatory standards can be set and enforced. These include: a process for assessing the energy performance of the homes to which the standards are to be applied; agreement on the type and nature of improvements that the owner is required to carry out; arrangements for advising and/or assisting owners with carrying out improvements; a process for confirming the work

has been carried out; and a process for placing sanctions on those that fail to undertake the required assessments and/or improvements.

- In order to minimise costs, it will be important to implement regulation so that it does not drive out investment under the UK Government's CERT scheme. The Scottish Government is pressing for future supplier obligations to be designed in a way that is compatible with the regulations of devolved administrations.
- Fuel poverty and energy efficiency policies mean that many more low income households enjoy better insulated homes than in the past. However, there may still be a considerable number of low income households affected by regulatory requirements for the energy efficiency of housing who may require support.
- The Scottish Government wishes to increase energy efficiency in all housing, including the private rented sector. Privately rented housing is much more likely to be rated "poor" than social rented or owner-occupied properties, with around one in six privately rented properties rated poor. We include discussion on options to improve energy performance in the private rented sector.
- The Home Energy Conservation Act 1995 (HECA) has been in place for over ten years, and it seems appropriate to consult on its future in Scotland. This will enable us to assess whether the arrangements for HECA remain fit for purpose in the context of the new relationship with local government, set out in the Concordat, and the powers and duties contained within the Climate Change (Scotland) Act.

Q 14: What research and/or consultation needs to be undertaken to determine whether or not the existing Energy Report/EPC regime would be sufficient to provide a basis for regulation?

Q 15: Should energy efficiency standards be applied to all homes, or should the option of targeting regulatory requirements be considered?

Q 16: What are your views on which types of homes and/or neighbourhoods should be targeted?

Q 17: What are your views on which energy efficiency standards should be applied?

Q 18: How regularly should these standards be reviewed?

Q 19: What are your views on the kind of organisation that should manage the enforcement of the standards?

Q 20: What are your views on when regulation should be introduced?

Q 21: Should SG seek to introduce regulation in a way that maximises CERT investment?

Q 22: What support should be provided to low income and/or vulnerable households to enable them to meet the required standards?

Q 23: Should Scottish Ministers seek to regulate to raise energy efficiency standards in the private rented sector ahead of other tenures, or should it introduce requirements that cover all tenures at the same time?

Q 24: Should any regulation of energy efficiency standards in the private rented sector be tackled through the mechanism of the Repairing Standard, or through the broad enabling powers introduced in the Climate Change (Scotland) Act?

Q 25: If the Repairing Standard is used to regulate energy efficiency standards in the private rented sector, should this be done:

- a) by adding the energy efficiency criteria of the Scottish Housing Quality Standard to it;
- b) by adding the energy efficiency criteria of the Scottish Core Standards for Accredited Landlords to it; or
- c) by some other means?

Q 26: Do local councils consider HECA to be important in ensuring that the energy efficiency of all housing stock is a priority for the council?

Q 27: Does the information gathered under the HECA process make a significant contribution to planning local activity on energy efficiency?

Q 28: Should HECA remain as a distinct duty on local councils or should it be incorporated within local housing strategies with local action on energy efficiency reflected, as appropriate, within Single Outcome Agreements?

Q 29: If HECA is retained, what steps, if any, should be taken to improve its effectiveness?

Chapter 8 – Energy Efficiency in Non domestic Buildings and Processes

- There is a very large range of non-domestic buildings, from offices, retail and hospitality businesses to energy intensive industrial plant. The proportion of energy use covered by the building regulations compared to 'process' energy and energy used for equipment varies significantly. For some businesses, much greater energy saving potential lies in improving the efficiency of equipment and plant than their buildings. This variety means it is more difficult to calculate the opportunities for energy saving in this sector than in the domestic sector.
- Increasing energy costs are a significant business risk and affect both the direct energy costs for business and the cost of materials bought in. However, energy consumption is not on all management agendas.
- The Carbon Trust provides technical energy efficiency advice to larger and energy intensive businesses. It will undertake around 150 site surveys in 2009/10 for business sector clients, saving in the region of 100,000 lifetime tonnes of CO₂ and 20-25,000 tCO₂ annually.
- Many short payback energy efficiency opportunities have already been implemented by Scottish industry, but a range of highly cost-effective measures remain.
- The UK and international regulatory environment increasingly requires business to reduce its energy consumption and hence CO₂ emissions. The amount of regulation will increase as targets for CO₂ emissions reductions become more challenging. New policies will be accompanied by the need for business to measure and report on energy consumption and to put in place plans for energy reduction.
- The Scottish Government has issued draft planning guidance in relation to thermal power stations. This includes how applicants should consider the issue of waste heat usage.

Q 30: Given this information, is there a case for Government to introduce legislation to require business compliance? For example, should there be a minimum criteria required for energy efficiency based on a sub-sector approach to drive a greater up-take of energy efficiency measures?

Q 31: Consideration is being given to the potential role for operational ratings. Should sub-metering be considered for existing non-domestic buildings which are part of a large campus? Or will financial drivers such as the introduction of the Carbon Reduction Commitment be sufficient?

Q 32: How could the Scottish Government improve its understanding of industrial energy end-use consumption in Scotland?

Q 33: What is the role for Scottish Government in regulating the industrial sector to drive a greater up-take of energy efficiency?

Q 34 What more could the Scottish Government, its agencies and the wider public sector be doing to drive a greater up-take of energy efficiency in the SME sector and in non-domestic buildings and processes?

Q 35 What steps could be taken by the Scottish Government to encourage the use of waste industrial heat?

Chapter 9: The Public Sector

- While the public sector only accounts for around 2% of Scotland's greenhouse gas emissions, it can make a significant contribution to energy savings through its large estate, the many suppliers it utilises, the large number of staff it employs, and by demonstrating the principles of sustainable design to all its users.
- Audit Scotland has already made a number of recommendations to the Scottish Government and the wider public sector in its report, *Improving Energy Efficiency in the Public Sector*. These include that clear guidance is made available on what energy efficiency action is required, that monitoring and reporting of the sector's energy performance is improved, and that good energy efficiency practice is disseminated across the sector.
- Many Scottish large public sector organisations will be included in the UK-wide Carbon Reduction Commitment (CRC), to be introduced in April 2010.
- The Scottish Government funds the Carbon Trust to provide energy efficiency and change management advice to larger public bodies and further education institutions through the public sector stream of its Carbon Management Programme.
- The Scottish Government has established the Leading By Example initiative to raise the environmental performance of the public sector, including its energy use.
- As part of the initiative, it is looking at the scope for greater standardisation of reporting on environmental performance – including on energy efficiency – and the use of monitoring and reporting tools such as the e-PIMS (electronic Property Management Information Service) used for the Scottish Government's own estate and NHS Scotland's eMART (Environmental Monitoring and Reporting Tool).
- 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. Energy efficiency must become an essential element of public sector investment plans.

Q 36: Should the Scottish Government use regulation to ensure public bodies undertake energy efficiency measures and place greater emphasis on energy efficiency in their policies?

Q 37: Should energy efficiency targets be set for the public sector as a whole or for individual organisations?

Q 38: Should training on the procurement of energy efficient, low-carbon buildings be rolled out across the public sector?

Q 39: Should energy saving advice be rolled out to staff in all large public sector organisations?

If so, should that advice include only general energy saving information, or should more job-specific advice be developed for staff whose role impacts upon energy consumption on a more significant level (e.g. planners, procurement officers)?

Q 40: Should the Scottish Government introduce greater standardisation of how energy performance is measured and reported across the wider public sector, including the possibility of mandating particular monitoring and reporting tool(s) that enable comparability while meeting the specific needs of particular organisations?

Q 41: Should the Scottish Government seek commitment from all public sector bodies to report energy efficiency progress at their regular board meetings?

Q 42: In your view, what should a follow-up to the Carbon Management Programme include?

Q 43: Which delivery route would be most suitable for energy saving advice to the smallest public sector bodies? The Carbon Trust (through Carbon Management Lite), EST or some other mechanism?

Q 44: How should public sector bodies be funded to deliver energy efficiency improvements? Should organisations wishing to invest in energy saving measures provide co-funding?

Q 45: What more should the Scottish Government and the public sector as a whole do to meet Audit Scotland's concerns? (e.g. so that clear guidance is provided on energy efficiency action required of the public sector, that monitoring and reporting is improved and that energy efficiency best practice is disseminated across the sector)?

Chapter 10 – Cross-cutting issues relating to the Build Environment

- A number of issues apply across the built environment, including district heating, planning, microgeneration, water efficiency and waste.
- District heating has evolved significantly - networks are now highly efficient, with sophisticated heating controls. A number of local studies have identified significant opportunities for energy savings from district heating. Equivalent work needs to be carried out to investigating likely opportunities in other areas.
- The source of heat for a network will affect its energy efficiency and reduction in greenhouse gas emissions: waste industrial heat or biomass-fired combined heat and power (CHP) are likely to offset the most greenhouse gas emissions.
- While district heating and CHP are supported by a number of policies, this has not resulted in the level of deployment for which there is potential. A number of interventions may assist, including financial support for up-front costs, support through land-use planning with positive encouragement for heat mapping by local authorities, and support to local authorities in establishing ESCOs to develop district heating schemes.
- Planning can play a key role in achieving the energy efficiency targets to be set in the Energy Efficiency Action Plan. In particular, permitted development, positive planning policies relating to design and orientation of buildings, microgeneration, and district heating are relevant. Strategic and local development plans can proactively consider energy infrastructure, travel modes and distances travelled, reducing the upfront costs and resource to achieve energy efficiency targets.
- The most cost-effective energy efficiency measures alone will not achieve our emissions reduction targets. Microgeneration must also play a role.
- A number of Scottish Government initiatives already support microgeneration (and larger-scale renewable energy technologies), including the Energy Saving Scotland Home Renewables and the Community and Renewable Energy Scheme (CARES). The Climate Change (Scotland) Act requires Ministers to bring forward permitted development rights for domestic air-source heat pumps and micro-wind turbines within six months of this section of the Act coming into force.
- From April 2010, the UK Department of Energy and Climate Change (DECC) will be introducing Feed-In Tariffs (FITs) for electricity generators under 5 MW.
- Two aspects of water efficiency affect energy consumption: the energy used to produce drinking water and to treat it; and how much energy is used to heat the water we use in our homes and businesses. The Scottish Government will consider the impact of water efficiency regulation in building standards and take this into account

when reviewing the building standards in 2013. We have also funded a pilot water advice service, the first of its kind in Europe.

- The Scottish Government recently launched its consultation on the National Waste Management Plan. It works to the principle of zero waste - eliminating the unnecessary use of raw materials, re-using products where possible, and recovering value from products when they reach the end of their lives, either through recycling, composting or energy recovery. Eliminating the use of raw materials and reusing our unwanted goods can reduce energy use and associated greenhouse gas emissions from products.

Q 46: Given the powers available to Scottish Government, which actions should we focus on to support the deployment of low-carbon district heating?

Q 47: What actions should other key stakeholders, such as local authorities and industry, be encouraged to focus on to support low-carbon district heating. How should Scottish Government help to achieve this?

Q 48: How can Scottish Government best support this activity? Are there partner organisations which can assist?

Q 49: With the introduction of cash-back schemes, should Scottish Government support for small scale low- and zero-carbon technologies be adjusted? If so, how?

Chapter 11: Changing how we use our Transport System

- Transport is a major contributor to Scottish energy demand and greenhouse gas emissions.
- It is crucial that we improve the energy efficiency of our transport system, through the introduction of new technologies, improving the fuel efficiency of fossil fuelled vehicles and actively reducing the absolute levels of fuel consumed.
- We need to better manage the demand for travel, and to encourage change in attitudes to travel if the resultant efficiency savings are not to be lost through additional journeys or the purchase of additional vehicles.
- In addition, we need to encourage people to walk, cycle and use public transport more often.

Q 50: What more can we do to encourage people to reduce the amount of travel, e.g. through behavioural change or modal shift in their daily lives?

Q 51: What partnerships do we need to create to enable build more sustainable infrastructure and networks and develop new technologies and fuels, e.g. with the transport industry, manufacturers and business users?

Chapter 12: Enterprise and Skills

Part 1: Innovation, Investment and Opportunity

Part 2: Developing Skills and Jobs in Energy Efficiency

- Energy efficiency is rising up the agenda quickly and will continue to do so. It will offer ever greater markets, both at home and abroad, driven by cost and climate change considerations, and the demands of an increasingly aware society and consumers.
- In their drive to reduce emissions, countries across the world need not only to reduce their energy use, but to find new ways of doing things across all sectors. This presents Scotland with a clear business opportunity, both to help industry and people save energy, and to become a world leader in new markets, designing and building or manufacturing energy efficient goods and services, modules and homes.

- The step-change in levels of innovation required to respond to climate change will necessitate a culture of support for creativity, ideas and experimentation. This is about both new products or services, and becoming more innovative in our systems of transportation, buildings, energy, water, and operations and processes, i.e. the ways in which we produce and consume goods.
- Significant potential exists in making materials and basic manufacturing processes more energy efficient.
- There will be a key role for low carbon research, development and deployment, driven forward by both the Energy Efficiency Action Plan and the Government's Renewables Action Plan, Climate Change Delivery Plan, forthcoming Carbon Capture & Storage Roadmap, and Marine Roadmap.
- In order to satisfy the growing energy efficiency agenda, it will be important to get the right quantities of the right skills in the right places in the short term. Current jobs will need to be upgraded, and new jobs and economic activities will be created in sectors where there is opportunity to develop and gain competitive advantage. It is possible that tens-of-thousands of new direct and indirect jobs could be sustained in sectors with high potential environmental impacts, including energy efficiency. For example, in order to take forward the two-year Home Insulation Scheme, we will need to increase the scope of knowledge, skills and confidence to deal with requirements for loft, cavity wall and solid wall insulation.
- However, there is no skills group with explicit responsibility for energy efficiency. The Renewable Energy Skills Group (RESG) was set up in response to an increasing awareness that the predicted growth of the renewable energy sector may not be matched by a parallel growth in adequately trained personnel. Some of the results of its work could be applied to energy efficiency.
- There is also a need to ensure there are enough trained and accredited operatives to cope with microgeneration installations in new-build housing and the major retrofit programme for existing housing to meet Scottish Government targets.

Q 52: Is the Scottish Government doing enough to help the wider business community in Scotland to focus on changing how energy is used, and in identifying appropriate and effective energy efficiency measures?

Q 53: On what opportunities should business focus its efforts on, e.g. finding and using less energy intensive materials and developing low carbon processes?

Q 54: What more could the Scottish Government do to help drive innovation and to promote technology investment and opportunity across the extended supply-chain and business community in Scotland?

Q 55: Is there adequate support for energy-efficiency related R&D and the commercialisation of energy efficient technologies? How should this be provided?

Q 56: What could be done to support energy efficiency in the Corporate Social Responsibility agenda in Scotland?

Q 57: What needs to be done to promote the role of ESCOs and Energy Performance Contracting in Scotland?

Q 58: Do we need industrial networks which mirror those of the academic research centres? How should they be set up to deal best with the challenges which affect a large number of stakeholders?

Q 59: How can we ensure Scotland has the skilled workforce needed for the transition to a low carbon economy?

Q 60: Are the actions outlined the right ones at this stage?

Chapter 13: Key Partners and Responsibilities

- Achieving our ambitious energy efficiency targets will require action from across society, including central and local government, business and industry, communities and individuals.
- The public sector is well placed to lead on energy efficiency and to consider it in all its policies, programmes, legislation and on its own estate.
- Companies should recognise the business sense of energy efficiency and can also influence their supply chain, as well as the behaviour of consumers, through choosing to use or sell more energy efficient goods.
- Communities and the third sector should take advantage of energy saving measures in the projects they implement and can also raise awareness of energy efficiency among individuals.
- Individuals should play their part in meeting targets by taking advantage of government incentives and adopting more energy efficient behaviour.

Q 61: Is this a fair balance of activity across society?

Q 62: Are there other partners who should share responsibility for delivering energy efficiency improvements?

Chapter 14: Conclusions and Next Steps

- 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.

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?