



The Scottish Parliament
Pàrlamaid na h-Alba

RURAL AFFAIRS, CLIMATE CHANGE AND ENVIRONMENT COMMITTEE

AGENDA

24th Meeting, 2014 (Session 4)

Wednesday 1 October 2014

The Committee will meet at 10.00 am in the Adam Smith Room (CR5).

1. **Decision on taking business in private:** The Committee will decide whether to take item 5 in private.

2. **Subordinate legislation:** The Committee will take evidence on the Pollution Prevention and Control (Scotland) Amendment Regulations 2014 [draft] from—

Paul Wheelhouse, Minister for Environment and Climate Change, George Burgess, Deputy Director for Environmental Quality, and Rob Morris, SEPA Sponsorship and Pollution Reduction Team Leader, Scottish Government.

3. **Subordinate legislation:** Paul Wheelhouse (Minister for Environment and Climate Change) to move—S4M-10972—

That the Rural Affairs, Climate Change and Environment Committee recommends that the Pollution Prevention and Control (Scotland) Amendment Regulations 2014 [draft] be approved.

4. **Scotland's climate change targets:** The Committee will take evidence from—

Dr Ute Collier, Team Leader, Devolved Administrations, Committee on Climate Change;

Chris Wood-Gee, Vice Chair, Sustainable Scotland Network;

Gina Hanrahan, Climate and Energy Policy Officer, World Wildlife Foundation Scotland;

Jim Densham, Stop Climate Chaos Scotland;

Paula Charleson, Head of Environmental Strategy, Scottish Environment Protection Agency.

5. **Work programme:** The Committee will consider its work programme.

Lynn Tullis
Clerk to the Rural Affairs, Climate Change and Environment Committee
Room T3.40
The Scottish Parliament
Edinburgh
Tel: 0131 348 5240
Email: racce.committee@scottish.parliament.uk

The papers for this meeting are as follows—

Agenda item 2 and 3

Note by the Clerk RACCE/S4/14/24/1

Agenda item 4

Note by the Clerk RACCE/S4/14/24/2

Note by SPICe RACCE/S4/14/24/3

PRIVATE PAPER RACCE/S4/14/24/4
(P)

Agenda item 5

PRIVATE PAPER RACCE/S4/14/24/5
(P)

Subordinate legislation cover note for Pollution Prevention and Control (Scotland) Amendment Regulations 2014 [draft] SSI 2014/draft

Title of Instrument: Pollution Prevention and Control (Scotland) Amendment Regulations 2014 [draft] SSI 2014/draft

Type of Instrument: Affirmative

Laid Date: 25 June 2014

Circulated to Members: 26 September 2014

Meeting Date: 1 October 2014

Minister to attend the meeting: Yes

Drawn to the Parliament's attention by Subordinate Legislation Committee: No

Reporting Deadline: 9 October 2014

Purpose

1. These Regulations amend the Pollution Prevention and Control (Scotland) Regulations 2012 ("the principal Regulations").
2. They transpose Article 14(5) to (8) of Directive 2012/27/EU of the European Parliament and of the Council on energy efficiency ("the Energy Efficiency Directive"), and otherwise amend the principal Regulations.

Procedure

3. The draft Order was laid on 25 June 2014 and referred to the Rural Affairs, Climate Change and Environment Committee. The Order is subject to affirmative procedure (Rule 10.6). It is for the Rural Affairs, Climate Change and Environment Committee to recommend to the Parliament whether the Order should be approved. The Cabinet Secretary for Rural Affairs and the Environment has, by motion S4M-10972 (set out in the agenda), proposed that the Committee recommends the approval of the Order.

Delegated Powers and Law Reform Committee

4. The Delegated Powers and Law Reform Committee considered this instrument at its meeting on 5 August 2014 and agreed not to draw the instrument to the attention of the Parliament.

Action

5. The Committee must decide whether or not to agree to the motion, and then report to the Parliament accordingly, by 9 October 2014.

POLICY NOTE

The above instrument was made in exercise of the powers conferred by section 2 of, and Schedule 1 to, the Pollution Prevention and Control Act 1999 and all other powers enabling them to do so. It is subject to the affirmative procedure.

Policy Objective

The purpose of this instrument is to transpose Article 14 paragraphs (5) to (8) of European Directive 2012/27/EU (“The Energy Efficiency Directive”) through amendments to the Pollution Prevention and Control (Scotland) Regulations 2012 (“PPC Regulations”). The Energy Efficiency Directive (EED) establishes a common framework of measures, and lays down rules designed amongst other things to drive improvements in energy efficiency in industry.

The instrument provides for a cost-benefit analysis (CBA) to be carried out in relation to measures for promoting energy efficiency in heating and cooling when certain new or refurbished installations are permitted. The requirement for the CBA ensures that all operators of appropriate installations, or prospective installations, conduct the CBA which they may not have done so otherwise. This ensures that all opportunities for energy efficiency measures using high-efficiency cogeneration, recovering waste heat and connecting to a district heating and cooling network in new or substantially refurbished installations are identified and carried out.

In order to benefit business by having as much uniformity between Scots, English and Northern Ireland law as possible, the exemption thresholds and exclusions are also set out in the instrument in a manner that is consistent with other parts of the United Kingdom.

In addition to the transposition of Article 14 (5) to (8) of the EED, minor styling corrections of errors to the PPC Regulations have been dealt with.

The regulator, the Scottish Environment Protection Agency (SEPA), has been fully consulted on the transposition and minor corrections and helped to finalise the regulations.

Consultation

Within the Scottish Government, Heat Policy, Energy Consents, Legal, Planning and Analytical staff have been consulted to progress the transposition of the Directive via the PPC Regulations.

A Scottish Government public consultation was published on 22 January 2014 and closed on 16 April 2014 on the proposed mechanism, timescale and financial implications of transposing Article 14(5) to (8) of the EED. Scotland was the only part of the UK to conduct a full 12 week consultation. Thirteen responses were received. These came from businesses, as well as professional bodies and trade associations. A report analysing the consultation responses has been made available on the Scottish Government website¹.

¹ <http://www.scotland.gov.uk/Topics/Environment/waste-and-pollution/Pollution-1>

In addition to the consultation, the Scottish Government participated in SEPA's PPC Users Group meeting in February 2014, and two stakeholder events chaired by Resource Efficient Scotland in Glasgow and Perth in March and April 2014. The events were attended by trade associations, developers, operators and other representative bodies. Around seventy stakeholders and fifteen PPC User group members were in attendance.

The Scottish Government and SEPA participated in the UK Transposition Group for Article 14 of the EED with Department for Energy and Climate Change, the Department for Environment, Food and Rural Affairs and the Department for the Environment Northern Ireland and the Environment Agency and Natural Resources Wales to ensure a consistent approach to implementation across the UK.

Impact Assessments

No equality impact assessment has been prepared for this instrument as there are no equalities impact issues.

Financial Effects

A Final Business and Regulatory Impact Assessment is attached. An estimate of the potential number of activities affected by the requirements of Article 14(5)-(8) has been taken from data supplied by SEPA. This is based on the EU Emissions Trading Scheme ("EU-ETS") which has the same threshold as the EED in that installations exceeding a total thermal input of 20 megawatts are required to be registered.

Currently, there are 98 activities listed on EU-ETS and 50 of these are already permitted under the PPC Regulations. There has been approximately one new entry per year onto EU-ETS in Scotland for the last few years and a further 1-2 installations are estimated as being "substantially refurbished" and covered by Article 14(5) provisions. These low figures suggest minimal impact on business as a result of the transposition.

EXPLANATORY NOTE

As per '*purpose*' above, and including:

Regulation 7 further transposes Article 7 of Directive 2010/75 of the European Parliament and of the Council on industrial emissions (OJ L 334, 17.12.2010, p.17). It has the effect that SEPA must include in any new permit authorising the operation of a solvents installation a condition requiring the operator of the installation to notify SEPA of any incident or accident significantly affecting the environment.

Regulation 9 provides for it to be offence to carry out a substantial refurbishment on an installation to which new Schedule 1A of the principal Regulations applies except as authorised by a permit, and for penalties in that respect.

Regulation 10 inserts a new activity into Part B of Section 1.1 of Schedule 1 to the principal Regulations, namely the burning of any fuel in a combination of appliances with a total rated thermal input of more than 20 megawatts and less than 50 megawatts, which has the effect that the principal Regulations will apply to all the

types of combustion activity at installations as required by the Energy Efficiency Directive.

Regulation 11 and the Schedule insert a new Schedule 1A into the principal Regulations. The new Schedule applies to specified installations (paragraphs 1 to 3), provides for a cost-benefit analysis to be carried out for the purposes of the Energy Efficiency Directive (paragraphs 4 to 11), for conditions to be included in a permit where the cost-benefit analysis shows that waste heat from an installation can be utilised in accordance with that Directive (paragraphs 12 to 17), and for the definition of terms used in the new Schedule (paragraph 18).

Regulation 13 substitutes an amended paragraph 4(1) of Schedule 7 to the principal Regulations, and has the further effect that provisions on notification and advertisement of proposed variations in that paragraph do not apply where an application for variation if granted will not authorise a substantial change in operation (as defined in regulation 2(1) of the principal Regulations).

These Regulations also make miscellaneous changes to the principal Regulations to correct minor errors.

A Business and Regulatory Impact Assessment has been prepared, and placed in the Scottish Parliament Information Centre. A copy can be obtained from the Environmental Quality Division, Scottish Government, Victoria Quay, Edinburgh EH6 6QQ.

Scotland's climate change targets

Introduction

1. Following its consideration of the Scottish Government's Scotland's Second Report on Proposals and Policies (RPP2) in 2013 the Committee agreed, as part of its work programme, to take evidence from stakeholders and the Minister on the implementation of RPP2 and delivery of Scotland's climate change targets.
2. Further detailed information on the RPP2 process and Scotland's progress towards meeting its climate change targets is set out in the accompanying SPICe briefing paper.

Committee consideration

3. The Committee will hear from a selection of stakeholders seeking their views on the implementation of the RPP2 and the delivery of Scotland's climate change targets and will consider the latest Committee on Climate Change report and latest information from the Scottish Government regarding the 2012 target.
4. The Committee will then take evidence from the Minister for Environment and Climate Change at its meeting on 8 October 2014.
5. Written evidence submitted to the Committee can be found in Annex A—
 - *Page 2:* **Committee on Climate Change**
 - *Page 20:* **Professor David Reay**
 - *Page 22:* **RSPB Scotland**
 - *Page 24:* **Stop Climate Chaos Scotland**
 - *Page 28:* **WWF Scotland.**

Clerks

Rural Affairs, Climate Change and Environment Committee
26 September 2014

Written submission from the Committee on Climate Change***Committee on Climate Change July 2014 UK Progress Report to Parliament¹
Excerpts relating to Scotland from Chapter 8: Devolved administrations*****Introduction and key messages**

Scotland has an important role to play in achieving the UK's carbon budgets, accounting for 8.8% of UK emissions. Scotland has passed its own Climate Change Act and has legislated annual targets. Emissions have fallen across Scotland during the first carbon budget period, although its own targets have not been met and remain extremely challenging to achieve.

Scotland has (fully or partially) devolved powers in a number of areas relevant to carbon budgets, in particular buildings, energy efficiency, agriculture, forestry, and waste. It can also make a contribution to less devolved areas (such as renewable energy deployment) through the provision of additional incentives and its approach in areas such as planning consents.

Scotland, like the other administrations, is often leading the UK with innovative policies and effective implementation. In this report, we highlight a number of areas of good practice.

The key messages are:

- **Emissions:** From 2007 to 2012 emissions fell by 15% in Scotland, compared to a 12% reduction across the UK. The higher rate of reduction reflects the relative dominance of different sectors and the importance of individual power and industry installations at the devolved level.
- **Policies:** In some policy areas, the devolved administrations lead the UK, in particular in residential energy efficiency, waste and agriculture where there are devolved competencies:
 - *Energy efficiency and fuel poverty:* Unlike in England, Scotland and the other devolved administrations still operate tax-payer funded schemes to tackle fuel poverty in addition to the supplier obligations. These often focus on area-based delivery, working with local authorities.
 - *Waste:* Ambitious household waste recycling targets have been set in Scotland and Wales, however Scotland missed its first target for 2010/11 and is likely to have missed the 50% household recycling target for 2013 without a substantial improvement.
 - *Agriculture:* Like the rest of the UK, the Scotland places considerable

¹ <http://www.theccc.org.uk/publication/meeting-carbon-budgets-2014-progress-report-to-parliament/>

emphasis on a collaborative approach with the farming industry. In contrast to England, where the uptake of measures is also voluntary, Scotland has made it clear that it will introduce regulation if insufficient progress is made.

- **Further action:** Reduction targets remain challenging to achieve – stronger action will be required in key areas including improving energy efficiency, increasing low-carbon heat penetration, encouraging greater uptake of electric vehicles, and increasing the rate of tree planting.

Emission trends

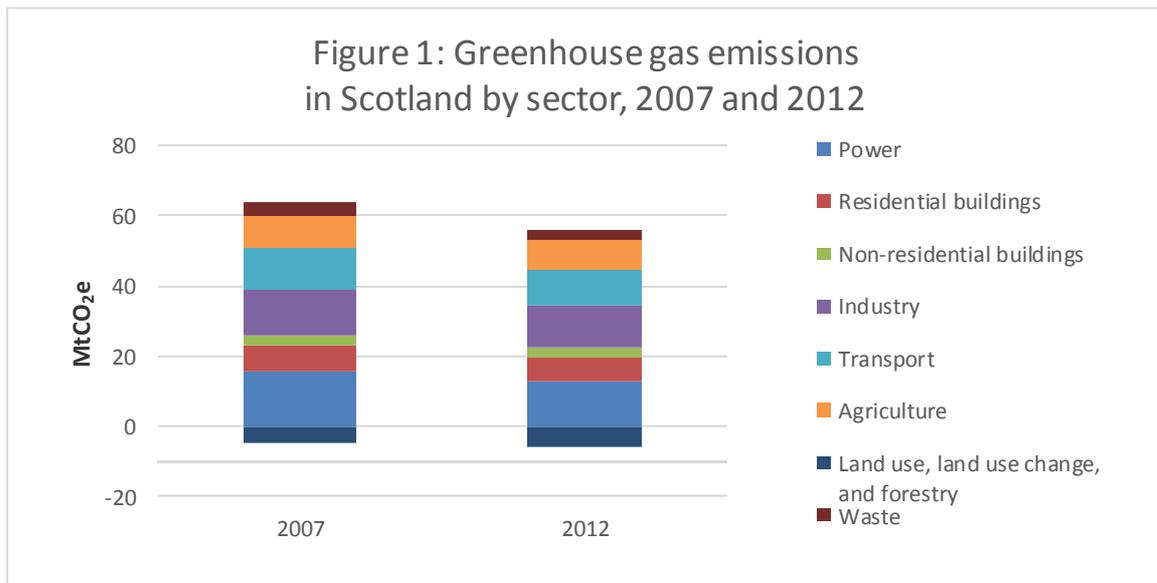
The latest data available for Scotland is for 2012, so we focus on analysis of emission trends from 2007 to 2012 (i.e. from the last year before the first carbon budget to the last year of the budget). We also consider contextual information for 2013 (temperature, macroeconomic and EU ETS data) to give an indication of likely changes.

(a) Latest emissions data

In Scotland, total emissions fell by 15% to 50.5 MtCO₂e from 2007 to 2012 (Figure 1), compared to a 12% reduction at the UK level. There were some fluctuations within this period, with emissions rising in 2010 and 2012 due to the impact of colder weather. Scotland missed its legislated target in 2012. However, revisions to the inventory since targets were set in 2010 makes achieving the annual targets more challenging, as these were set on an absolute basis.

- There were strong falls in emissions from the waste (24%) and power (19%) sectors over the first carbon budget period, while the emissions sink from land use, land use change and forestry (LULUCF) increased by 23% to 5.7 MtCO₂e (i.e. LULUCF made an increased contribution to emission reductions).
- In 2012, emissions rose by 1.3%, with the largest increases from residential (11.1%) and non-residential (5.2%) buildings. This reflected colder than average temperatures in 2012. In contrast, emissions from waste fell by 5.3% and there was a 2.6% decline in emissions from industry in 2012.
- Scotland's targets are set on a net basis – taking gross emissions (including international aviation and shipping) and then adjusting to take account of trading in the EU ETS. For 2012, the Scottish target was 53.23 MtCO₂e compared to a Net Scottish Emissions Account of 55.67 MtCO₂e. As a result, Scotland missed its legislated annual target for the third successive year.

However, revisions to the greenhouse gas inventory continue to make achieving the legislated targets increasingly challenging. The recent revisions to the inventory added 1.2 MtCO₂e to Scotland's estimated emissions in 2011 and at least that much in every year going back to 1990.



Source: NAEI (2014)

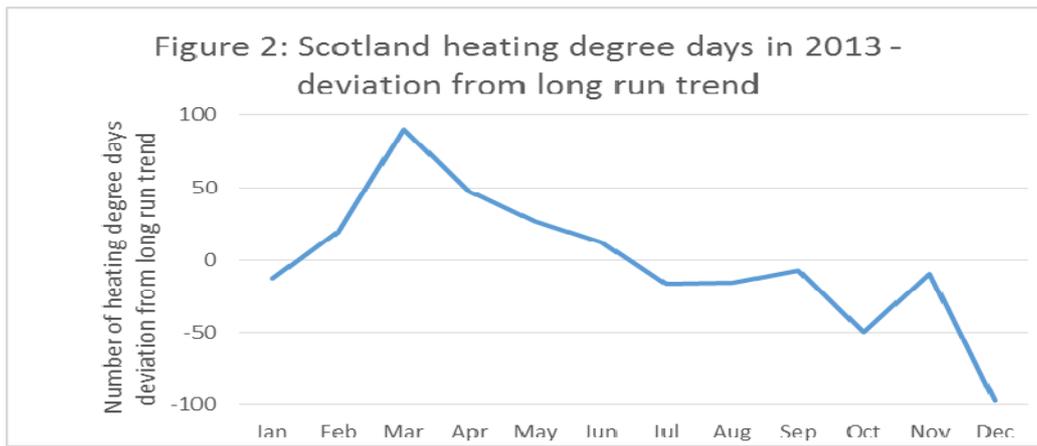
Notes: Emissions are presented here before accounting for trading in the EU ETS, and do not include emissions from international aviation and shipping.

(b) Change in emissions in 2013

In 2013, UK emissions fell by 2%, driven by an 8% fall in emissions from the power sector. This reduction in the carbon intensity of electricity contributed to falling emissions across other sectors, including buildings and industry, although direct emissions from these sectors rose.

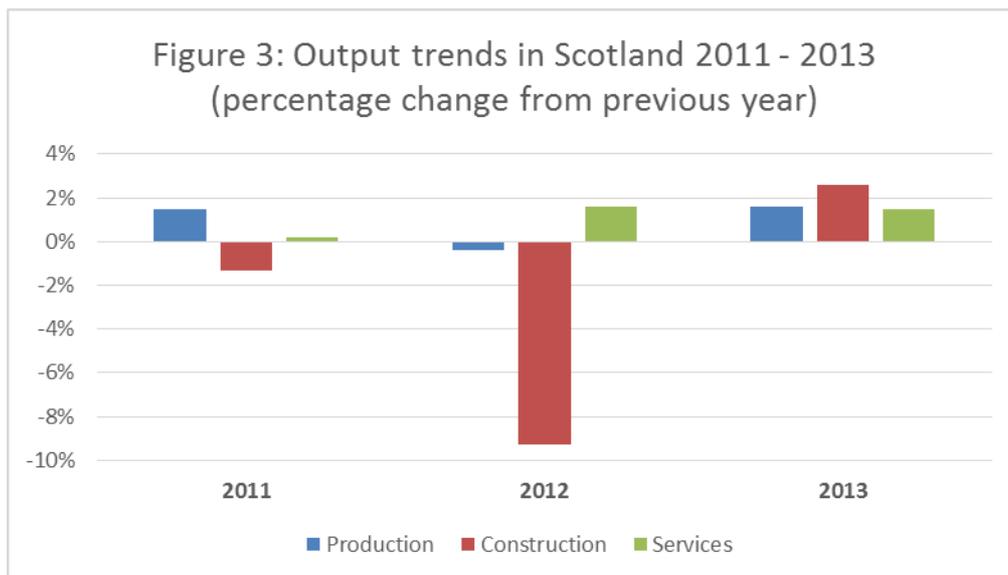
Temperatures at the beginning of 2013 were below the long-term average, leading to a slight increase in the number of heating days for Scotland (Figure 2). At the UK level, this led to a 3% increase in gas consumption and a similar increase in heating demand will have been seen in Scotland.

The latest economic data for Scotland show that GVA increased by 1.6% in 2013, the fastest annual rise since before the recession in 2007. Within this, production and services output increased by around 2% and construction output rose by 3% (Figure 3).



Source: Vesma.com (2014).

Notes: Heating degree days (HDDs) are calculated relative to a baseline temperature, typically 15.5°C, which is the outside temperature above which a building does not require heating. One HDD is the number of degrees centigrade deviation from the base temperature of the actual temperature on a given day (e.g. if the temperature was 5.5°C for one day the number of HDD would be 10). The long run trend is 1971-2000. Points above 0 reflect colder than average temperatures, and points below indicate higher than average temperatures.



Source: Scottish Government

In previous years, we have looked at the changes in emissions from the EU ETS to give an indication of trends in emissions at Scotland’s level. However, changes in the scope of the EU ETS in 2013 mean that it is not possible to compare the installation-level data for 2013 with previous years to obtain a picture for Scotland.

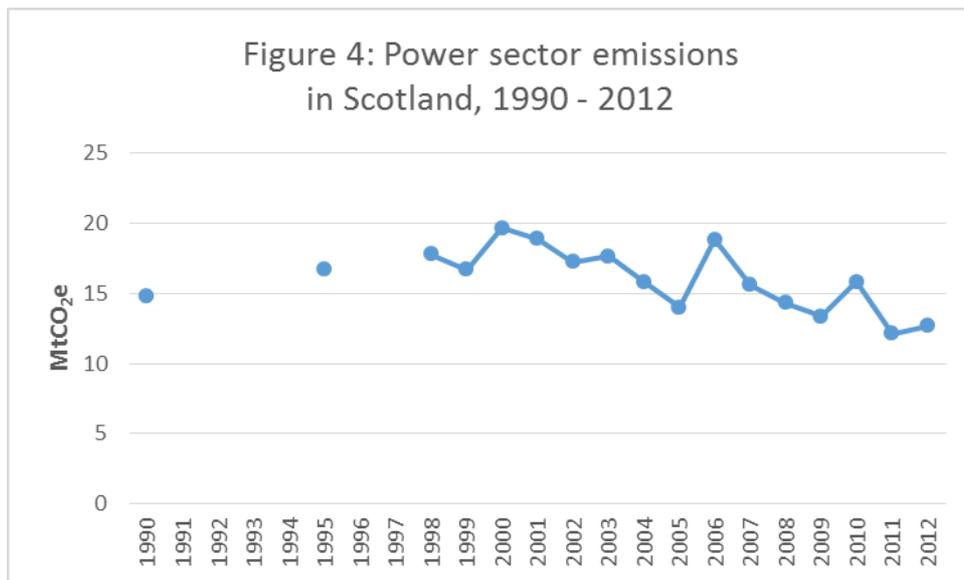
Data for Scotland for the generation of electricity by source will not be available until later in 2014, but data on renewables shows that the amount of electricity generated from renewable sources increased in Scotland in 2013. At UK level, overall electricity generation fell by 0.5% and if a similar trend is seen for Scotland, the proportion of generation from renewables will have increased in 2013.

Taken together, these data, coupled with the UK trends, suggest that emissions are likely to have fallen in Scotland in 2013.

Power sector

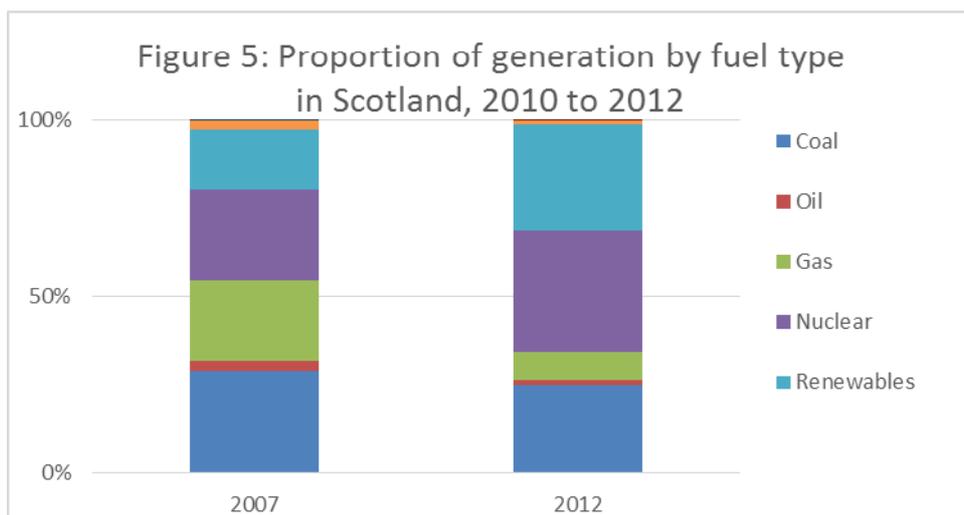
(a) Emissions trends

Power sector emissions fell in Scotland over the first carbon budget period (2008-2012) (Figure 4). This reflects changes in the fuel mix over this period (Figure 5).



Source: NAEI (2014)

Notes: No inventory data are available for devolved administrations for 1991-1994 or 1996-1997.



Source: DECC (2013)

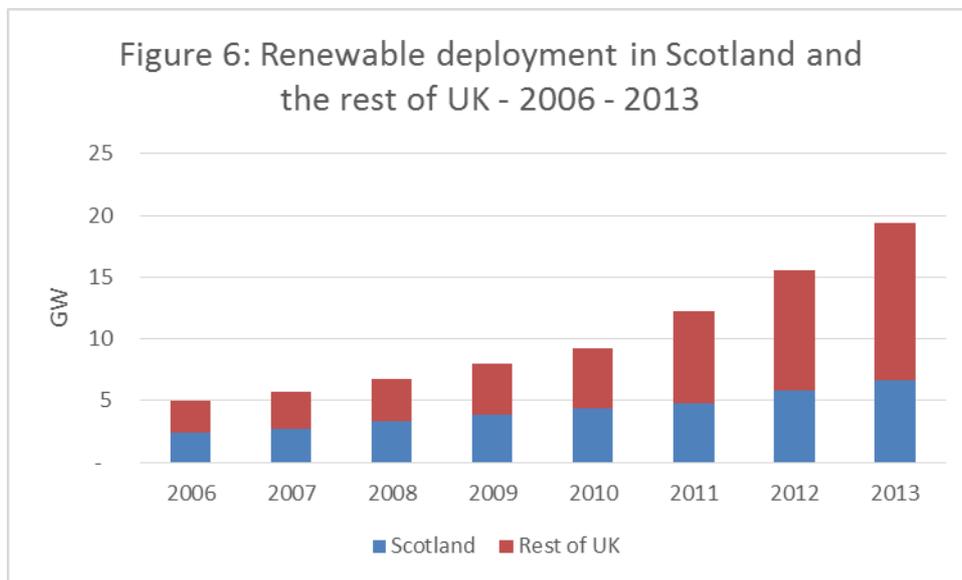
In Scotland, emissions from the power sector declined by 19% over the first carbon budget period, although there was some variation between individual years. This reflected a change in the fuel mix of generation, as overall generation increased by

3%. Renewable generation increased by 79% (to 14.8 TWh in 2012) and nuclear generation by 38% over the period. In contrast, generation from coal fell by 11%.

At the UK level, emissions fell by 11% in the power sector over the first carbon budget period (2008-2012), reflecting a fall in demand for electricity and a reduction in the carbon-intensity of electricity supply. Scotland saw slightly stronger falls in emissions than at the UK level. However, as discussed this highlights the impact of individual installations at the Scotland level, with the closure of one plant able to significantly affect the overall picture...6: Proportion of generation by fuel type in Scotland, Wales and Northern Ireland (2007 and

(b) Progress and policy on renewables

There has been ongoing progress in the deployment of renewables across Scotland (Figure 6), which now accounts for 34% of UK renewable capacity.



Source: DECC (2013)

The Scottish Government has set a target for the equivalent of at least 100% of gross electricity consumption to be delivered from renewables by 2020. Analysis by the Scottish Government suggests that this is likely to require an increase in capacity from 6.6 GW in 2013 to between 14 and 16 GW.

Over the first budget period, the installed capacity of renewables in Scotland increased from 2.7 GW at the end of 2007 to 5.8 GW in 2012. This 3.1 GW increase compared to an increase of 10 GW at the UK level (from 5.7 GW to 15.5 GW). In Scotland, renewable installed capacity continued to increase in 2013, rising by 14% (0.7 GW), to take total installed capacity to 6.6 GW.

This is equivalent to 34% of the UK's installed capacity, while Scotland only accounts for 9% of UK electricity consumption. Regional generation by fuel data is only available for Scotland to 2012. In Scotland in 2012, compared to 2011:

- Overall generation of electricity in Scotland fell by 3.9%

- Coal generation increased by 1.6 TWh (14%)
- Gas generation more than halved to just 4 TWh
- Generation from renewable sources increased by 1 TWh (7.5%), although hydro generation fell by 9%.

There is currently 6.6 GW of renewables capacity in Scotland which has been approved or is awaiting construction, the vast majority of which is onshore and offshore wind. In addition, there is a further 7 GW of capacity in the planning process. Assuming half of this capacity currently in the planning process goes ahead, consistent with past success rates, it should be possible for the Scottish Government’s estimated capacity requirement to be achieved by 2020.

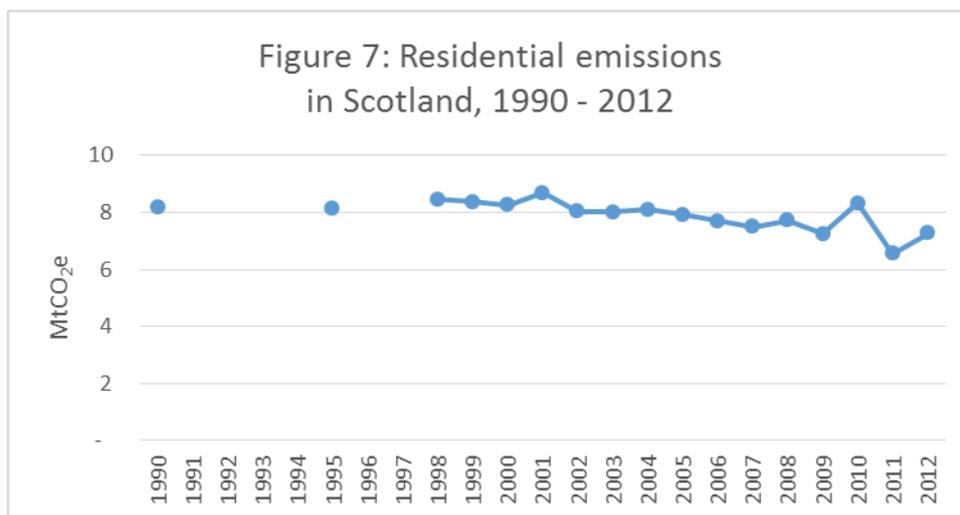
Buildings

(a) Emissions from residential buildings

Direct residential emissions declined across Scotland between 2007 and 2012, although there were fluctuations within this period (Figure 7). Trends were fairly similar to the overall UK trend. These largely reflected increased demand for heating during colder than average years (2008, 2010 and 2012).

Emissions from residential buildings declined by 3% over the first carbon budget period, compared to 6% for the UK. Emissions from the sector, which took a 14% share of emissions in Scotland in 2012, were 11% lower than 1990 levels.

The energy efficiency of buildings has played an important role in reducing emissions across the UK. Scotland has developed its own policies to improve residential energy efficiency, to which we now turn.



Source: NAEI (2014)

Notes: No inventory data are available for devolved administrations for 1991-1994 or 1996-1997.

(b) Policy progress

The main energy efficiency schemes, the Green Deal and the Energy Company Obligation (ECO) are GB-wide² but Scotland has devolved powers to develop its own additional schemes. Notwithstanding the overall reduction in measures delivered under the ECO compared to its predecessor schemes, Scotland has seen a higher proportion of measures installed than its share of the housing stock (Table 1):

Table 1: Provisional number of ECO measures obligation in Scotland (and proportion of GB total), to March 2014				
	Carbon Saving Target (CSO)	Carbon Savings Community (CSCO)	Affordable Warmth (HHCRO)	Total Number of ECO measures delivered
Scotland (9% GB housing stock)	43,314 (13%)	10,753 (9%)	34,609 (11%)	88,676 (11%)
Source: DECC (2014) Note: Households can have more than one measure installed and a number of different measures installed under different ECO obligations.				

The first phase of the Green Homes Cashback scheme in Scotland finished in March 2014, and under the scheme, 36,000 vouchers were issued. By the end of May 2014, 11,000 of these had been paid, with a value of £7.8 million, following the installation of measures. More than 80% of the cashback vouchers were for easy measures such as condensing boilers, loft insulation, LED light bulbs and heating controls. The Scottish Government has recently announced an additional £15 million of funding for 2014/15 for a further phase of the scheme. Households can claim up to £7,300 (compared to £1,200 under the first phase) for measures which have been recommended in a Green Deal Assessment Report.

Scotland has been successful in leveraging funding from ECO, taking a higher share of the measures than their housing stock and providing a substantial amount of funding to encourage the uptake of the Green Deal.

(c) Fuel poverty

Improving the energy efficiency of the housing stock is particularly important in Scotland, as levels of fuel poverty are comparatively high. The Scottish fuel poverty rate was 26% in 2011, and increased to 27% in 2012 (compared to 14% in England and 29% in Wales).

² The Eco covers England, Scotland and Wales but not Northern Ireland.

Scotland continues to use the 10% definition,³ rather than the Low Income High Cost (LIHC) measure recently adopted in England. Fuel poverty is a partially devolved issue, with each devolved administration having their own targets, although Scotland is covered by the fuel poverty-focused elements of the ECO (the Affordable Warmth Scheme).

The Scottish Government has a target to end fuel poverty in Scotland by 2016, a significant challenge. In addition to the fuel poverty-focused measures in the ECO, there are Scottish Government funded measures under the Home Energy Efficiency Programmes for Scotland (HEEPS) which was launched in April 2013. In 2014/15, there is £60 million available for HEEPS schemes. In addition, funding is available to support renewable energy projects for fuel poor homes.

- Area-based schemes are delivered by local authorities and prioritise fuel poor areas, providing a range of insulation measures. £60 million has been allocated to local authorities for 2014/15.
- The Energy Assistance Scheme is focused on the most vulnerable and poor households which were previously eligible for heating and insulation measures, but who would otherwise miss out under the Affordable Warmth Scheme. There is £16 million available for 2014/15.
- Rural off-gas grid households can access the £50 million Warm Homes Fund, which provides grants and loans to support renewable energy projects (including district heating) in fuel-poor communities.

Fuel poverty remains a significant problem across the UK, partly due to the housing stock characteristics. However, the Fuel Poverty Monitor 2014 report⁴ from National Energy Action (NEA) showed that in 2013/14, there were substantial differences in the level of resources aimed at energy efficiency programmes across England and the devolved administrations (excluding ECO). In England the investment was £3.52 per domestic electricity customer, in Scotland £36.48, in Wales £31.31 and in Northern Ireland £27.55. The figures from the NEA do not include any contributions from the ECO but Scotland has been successful leveraging funding in this area as well.

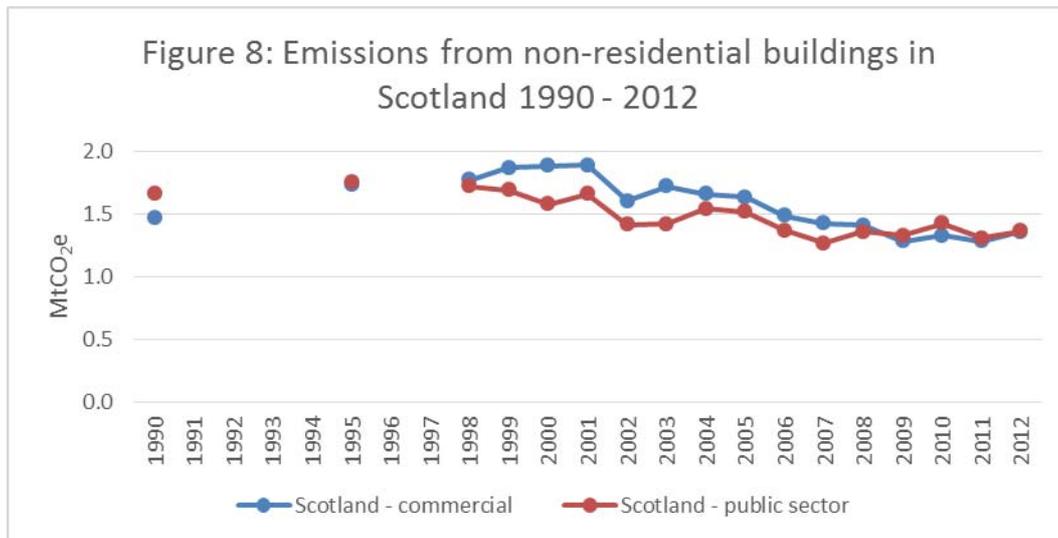
(d) Emissions from non-residential buildings

In Scotland emissions from non-residential buildings rose by 1% over the first carbon budget period, with emissions from commercial buildings declining by almost 5% and those from the public sector increasing by almost 8% (Figure

³ A household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain an adequate level of warmth (typically defined as 21 degrees for the main living area and 18 degrees for other occupied rooms). Under the LIHC definition, a household is considered to be fuel poor if they have required fuel costs that are above average (the national median level) and were they to spend that amount, they would be left with a residual income below the official poverty line.

⁴[http://www.nea.org.uk/Resources/NEA/Publications/2013/Fuel%20poverty%20monitor%20014%20\(WEBSITE%20COPY\).pdf](http://www.nea.org.uk/Resources/NEA/Publications/2013/Fuel%20poverty%20monitor%20014%20(WEBSITE%20COPY).pdf)

8). The non-residential buildings sector is one of the smallest, accounting for just 5% of total emissions in 2012.



Source: NAEI (2014)

(e) Low-carbon heat

The Renewable Heat Incentive (RHI) is GB-wide, and provides payments to those who generate and use renewable energy to heat their buildings.

- The first phase of the RHI focuses on the industrial and commercial sectors. By March 2014, the scheme had supported around 700 MW of installed capacity, of which 19% is in Scotland. This is a greater proportion than would be expected based on its 8% GVA share.
- The second phase of the scheme covers additional technologies and was extended to the residential sector several years later than originally planned in April 2014.
- Prior to the launch of the domestic RHI scheme, residential installations qualified for support under the Renewable Heat Premium Payment (RHPP). As at the end of March 2014, the scheme had supported around 130 MW of installed capacity, of which 15% is in Scotland. Again, this is a higher proportion than would be expected from its 9% share of the GB housing stock.

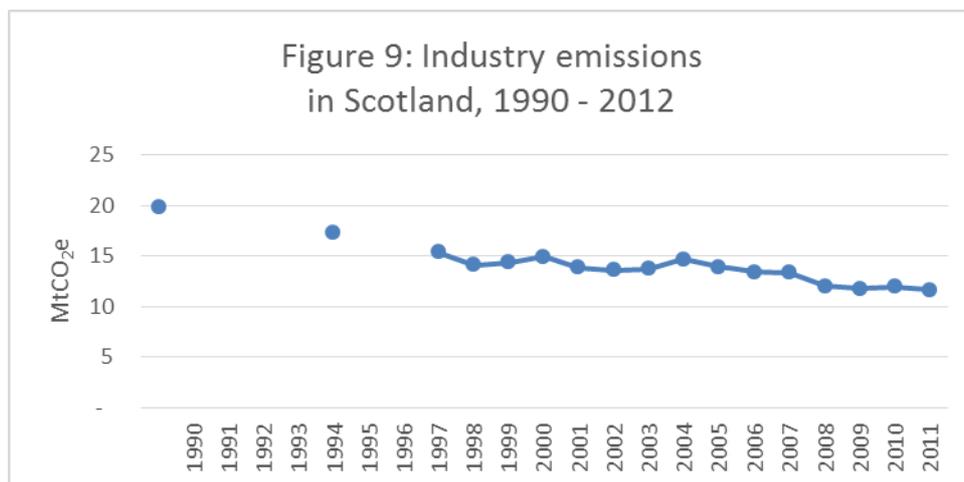
In addition to the GB-wide policies, Scotland has its own policies to encourage the uptake of low-carbon heat. The Scottish Government’s target is to source 11% of heat demand from renewable sources by 2020, and to have a largely decarbonised heat sector by 2050. Its draft heat generation policy document included a target for district heating, currently expected to be 1.5 TWh of heat by 2020. In addition, the Scottish Government is committed to connect up to 40,000 more homes to heat networks by 2020. Funding includes:

- the District Heating Loan Fund provides loans of up to £400,000 per project for low-carbon and renewable technologies. There is a further £8 million of funding for the scheme between 2014 and 2016;
- the £50 million Warm Homes Fund provides funding for renewable energy projects to support communities in fuel poverty; and
- the Home Energy Scotland Renewables Loan scheme provides interest free loans up to £10,000 for renewable heat installations for owner occupiers.

To support the development of low-carbon heat, funding under both RHI schemes should be committed until 2020, with a commitment made to its continued existence post-2020. Measures should be introduced to contain funding costs and reduce delivery risks through addressing financial and non-financial barriers to uptake of low-carbon heat. Consideration should be given to targeting part of the RHI funding to cost-effective investment for fuel poor households. The additional funding in Scotland available for low-carbon heat should encourage investment, but progress against the 2020 heat target needs to be monitored.

Industry

Emissions from industry declined across Scotland from 2007 to 2012 (Figure 9). As at the UK level, this was largely due to the impact of the recession, which reduced output and disproportionately hit the more energy-intensive sectors (e.g. iron and steel).



Source: NAEI (2014)

In Scotland, emissions from industry fell by 13% over the first carbon budget period. Emissions from the sector accounted for 23% of Scottish emissions in 2012.

There are a number of policies for reducing emissions from industry, which largely operate at the UK/EU level. These include EU ETS, CRC Energy Efficiency Scheme, Climate Change Levy and Climate Change Agreements (CCAs) and the Renewable Heat Incentive (RHI).

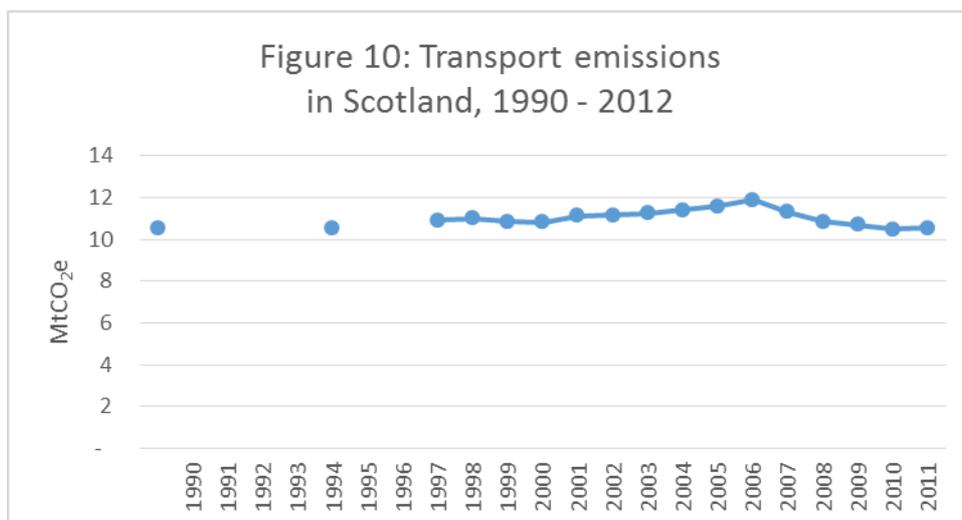
Scotland offers interest-free loans for SMEs (small and medium-sized enterprise) for energy efficiency or resource efficiency projects. The Resource Efficient Scotland advice service was launched in April 2013 to provide support to businesses, third sector and public sector organisations to reduce costs through implementing resource efficiencies in energy, raw materials, water and waste management. Interest-free loans are available to SMEs from £1,000 to £100,000 for resource efficiency projects. They also offer loans for renewable energy projects, with an interest rate of 5% for businesses signing up for Feed-In-Tariffs (FiTs) or the Renewable Heat Incentive (RHI).

The Green Investment Bank announced in June 2014 that £2 million of funding would be made available to SMEs in the UK to provide loans for energy efficiency projects. Initial loans are in progress for lighting and small-scale-biomass projects. Whilst this scheme is UK wide, it is important to note that SMEs in the devolved administrations can access additional funding for energy efficiency projects.

Transport

(a) Emissions trends

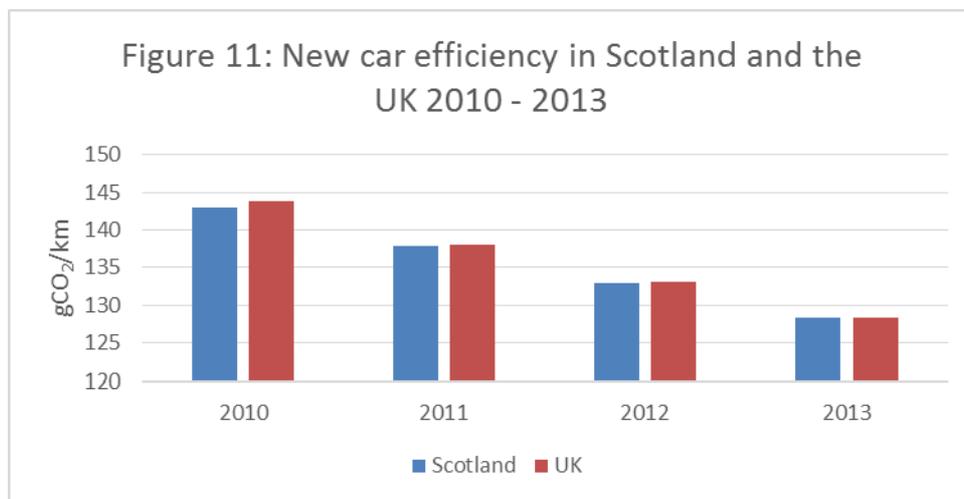
Transport emissions fell in Scotland by 11% over the period, although they were broadly unchanged from 1990 levels. Transport emissions in Scotland accounted for 21% of Scottish emissions, broadly in line with the UK figure (20%) (Figure 10). Scotland has a higher share of emissions from rural driving at 49% compared with 40% across the UK as a whole.



Source: NAEI (2014)

The reduction in emissions from the transport sector reflects an increase in new car efficiency and a reduction in annual vehicle kms. In Scotland, overall road traffic fell by 2.7% over the first budget period. Heavy goods vehicles saw the strongest reduction in kms travelled (11.3%), whilst cars saw a decline of 2.2%.

The efficiency of new cars is driven by EU legislation, however, there has been some variation in progress towards achieving the EU's 2020 target of 95 gCO₂/km in 2020 (Figure 11). Average new car efficiency in Scotland improved by 17.6% between 2007 and 2012 and a further 3.5% in 2013. However, at 128.3 gCO₂/km in 2013, average new car efficiency in Scotland is lower than in both Wales and Northern Ireland, but in line with the UK average.



Source: The Society of Motor Manufacturers and Traders (2014)

(b) Progress developing electric vehicle markets

There has been an increase in electric vehicle sales at the UK level since 2010, although this is from a low base and has been largely driven by sales in England which represented 90% of the total UK market in 2013. Sales of electric vehicles in Scotland accounted for 6% of UK sales in 2013, with Wales and Northern Ireland each taking a 2% share. Scotland's share is lower than the proportion of overall vehicle sales of 9%. The UK Government has made £500 million of additional funding available at a UK level for ultra-low emission vehicles (ULEVs) for 2015 to 2020.

Scotland has made progress developing infrastructure and markets for electric vehicles, following on from Plugged in Places funding from DfT. At the end of September 2013, there were approximately 300 charging points across Scotland and a further 200 in non-public locations. As part of the ChargePlace Scotland scheme, funding is available from the Energy Saving Trust for 100% of the cost of installing a home charge point and there is also funding for private organisations to install charge points. Transport Scotland has been

awarded £600,000 of funding for 2014/15 to install rapid charge points at 50 mile intervals along Scotland's primary road network. In 2014/15, an additional £2m funding has been allocated for electric vehicle charging which is expected to fund up to 300 charging points, taking the total to 1,200.

At the UK level and for the devolved administrations, significant barriers, both financial and non-financial to the mass uptake of electric vehicles remain. These barriers can be addressed through a combination of innovative financing; further investment in charging infrastructure; changed planning rules to facilitate widespread on-street charging; and car manufacturers engaging consumers through innovative marketing strategies.

(c) Changing travel behaviour

Scotland has various policies in place to change travel behaviour, encouraging the use of alternative modes of transport and promoting walking and cycling. Following the evaluation of the Smarter Choices, Smarter Places pilot programme in Scotland, £5 million of funding has been announced for 2015/16 for the behavioural change aspects of the programme to be rolled out across Scotland. It will be focused on locally designed initiatives, including travel planning, and the aim is to attract match funding. In addition, £7 million of funding has been allocated for 2014/15 for walking and cycling infrastructure, and, again, the Scottish Government is hoping to attract match funding to take the total amount available to £14 million.

These policies and action plans can help Scotland to encourage the use of more sustainable methods of transport such as walking and cycling, but the infrastructure needs to be in place for these to be successful.

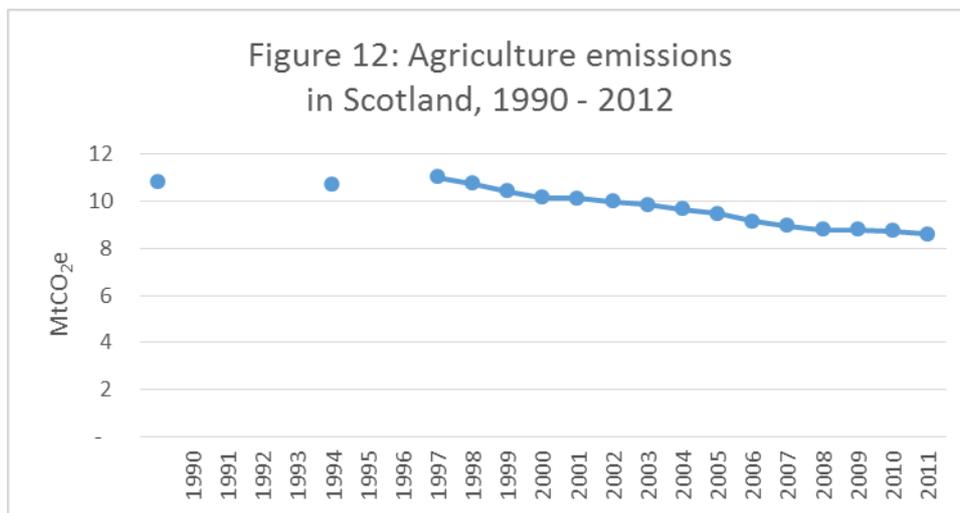
Agriculture and land use

(a) Agriculture emissions

Emissions from agriculture in Scotland declined by 6% between 2007 and 2012 (Figure 12), and were 20% lower than in 1990. Agriculture in Scotland is relatively more important than in the UK as a whole, with emissions from the sector in Scotland taking a 17% share of the total in 2012, compared to 10% at the UK level.

Agricultural policy is a devolved matter. As in the rest of the UK, Scotland places considerable emphasis on a collaborative approach with the farming industry. In Scotland, the *Farming For a Better Climate* initiative was launched in 2009, and is designed to encourage voluntary uptake of measures through the provision of information about win-win actions in five key action areas: using energy and fuels efficiently; developing renewable energy; locking carbon into soils and vegetation; optimising application of fertilisers and manures; optimising livestock manage and the storage of waste.

- Given their cost-effectiveness, uptake for most of the measures is expected to increase by 50% and by 90% for nitrogen use efficiency (equivalent to 260 ktCO₂e of annual savings by 2020).
- As in England, the uptake of these measures is voluntary, but should sufficient progress not be made to increase the efficiency of nitrogen fertiliser use, the Scottish Government has clearly stated its intention to introduce regulation.



Source: NAEI (2014)

Notes: No inventory data are available for devolved administrations for 1991-1994 or 1996-1997.

Action to date in Scotland as with the rest of the UK, is focused on using voluntary approaches, but it is important to note that Scotland has announced an intention to regulate if progress is below expectations.

(b) Forestry and land use emissions

The size of the carbon sink from the land use, land use change and forestry increased by 23% in Scotland between 2007 and 2012, reaching 5.7 MtCO₂e in 2012 (Figure 13). This is a significant increase from 1990, when the sink was just 0.8 MtCO₂e. This reflects the changing age profile of the trees and their ability to sequester carbon.

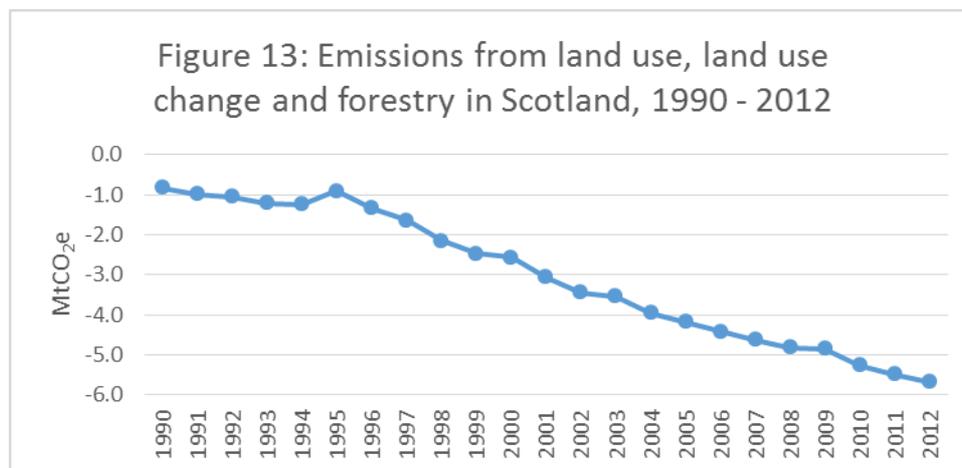
Scotland has ambitious targets to increase the rates of forest planting. The Second Report on Proposals and Policies⁵ included a policy to increase the afforestation rate to 10,000 hectares per year, creating 100,000 hectares by 2020. As yet, this annual afforestation rate has not been achieved. In 2012, around 9,000 hectares of new forest were planted, but the rate of afforestation declined to 7,000 hectares in 2013. This decline was due to poor weather conditions early in the year which made it difficult to plant in many areas of

⁵ RPP2: <http://www.scotland.gov.uk/Resource/0042/00426134.pdf>

Scotland. The afforestation rate increased again in 2014, to 8,300 hectares, but rates will have to rise substantially if 100,000 hectares are to be planted by 2020.

The LULUCF inventory only includes emissions from lowland peat, and emissions related to upland peat use due primarily to historic drainage practices and to restoration of peat (e.g. rewetting and vegetating) are currently excluded. However, the IPCC has finalised the methodology for capturing the changes in emissions, focusing on the rewetting and restoration of peat land since 1990. Inclusion in the inventory by member states is voluntary.

Peatlands cover approximately 20% of Scotland's land area and account for 60% of the UK's peatlands. Historically many of these peatlands have been damaged or drained, but there has been little drainage over the past two decades. Scotland's National Peatland Plan is currently out for consultation and the Scottish Government is looking to restore at least 10,000 hectares of peatland by 2015. RPP2 proposes an accelerated rate of restoration, targeting up to 21,000 hectares per year. Around £1.5 million of funding was committed for funding peatland restoration between 2012 and 2015, and an additional £15 million was announced in 2013 for 2014/15 and 2015/16. The Scottish Government intends to include peatland restoration activity within Scottish emissions accounting in future.

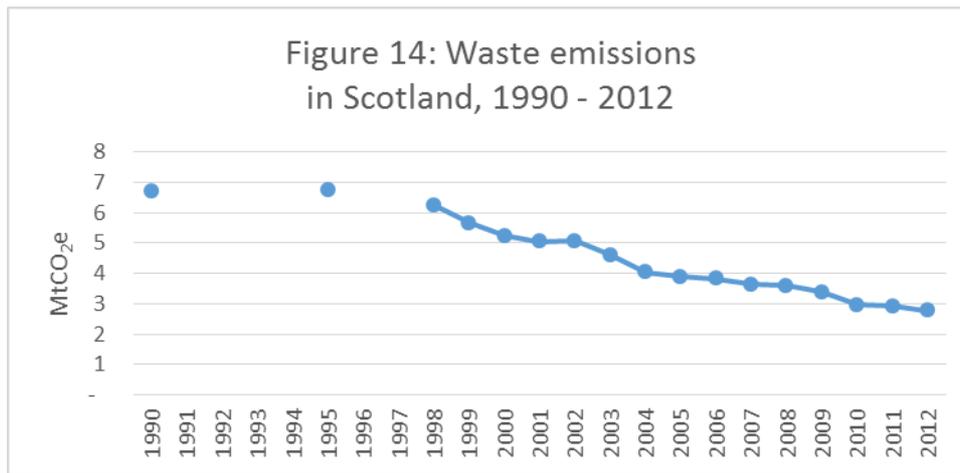


Source: NAEI (2014)

Waste

(a) Emissions trends

Over the first budget period, emissions from waste in Scotland fell by 24%, reaching 2.8 MtCO₂e in 2012 (Figure 14). Emissions, which accounted for 5% of Scotland's total in 2012, were also 59% lower than in 1990.

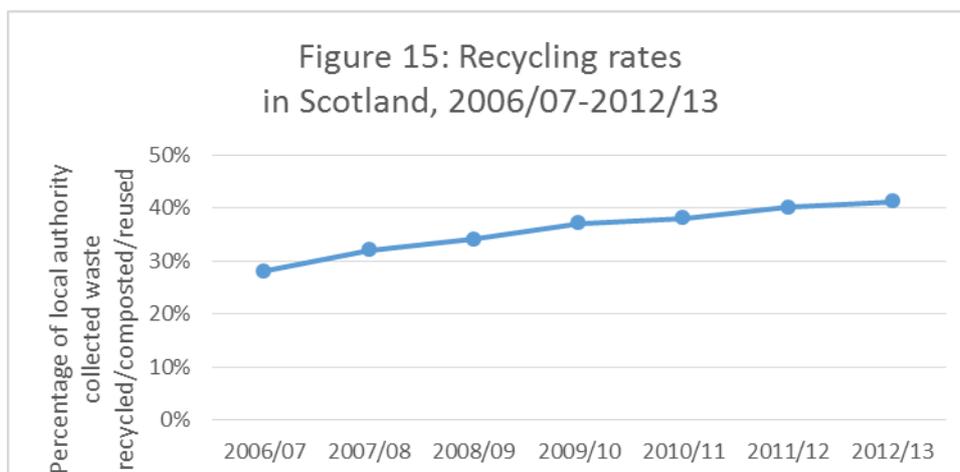


Source: NAEI (2014)

Recycling rates in Scotland have been improving in recent years (Figure 15), with around 40% of municipal waste sent for recycling/composted/reused. The Zero Waste Plan sets a number of targets for the waste management sector:

- 70% of household waste to be recycled/composted/reused by 2025, with interim targets for 2013 (50%) and 2020 (60%);
- Reducing the proportion of total waste sent to landfill to a maximum of 5% of all waste by 2025; and
- Recycling 70% of all waste (including commercial and industrial waste) by 2025.

The Zero Waste Plan is supported by the Waste (Scotland) Regulations which were passed in May 2012, and include a ban for various material to landfill from 2014 and for separate waste collection services to be offered (dry recyclables, food waste) to households and businesses.



Source: Defra, SEPA, Environment Agency Wales, and the Northern Ireland Executive

In addition, the *Safeguarding Scotland's Resources – Blueprint For A More Resource Efficient and Circular Economy* report, published in 2013, develops a waste prevention plan as required in the EU Waste Framework Directive. The report contains targets of reducing waste arisings by 7% by 2017 against a 2011 baseline; and by 15% by 2025.

Progress towards the targets in Scotland has been mixed:

- Scotland missed its first Zero Waste Plan target, with only 38% of household waste being composted, recycling or reused in 2010/11. This increased slightly in both 2011 and 2012, to 40% and 41%, respectively, but this needs to increase substantially in 2013 to meet the second target of 50% in 2013; and
- In terms of reducing waste sent to landfill, the proportion of total waste arising sent to landfill fell from 43% in 2004 to 27% in 2010. However, the proportion increased markedly to 35% in 2011, although this was a result of changes to the calculation methods for commercial and industrial waste. Total waste arisings in Scotland fell by 22% in 2011, but the proportion sent to landfill increased by 3%.

Waste data for Scotland for 2012 has not yet been published.

Summary

Emissions fell in Scotland between 2007 and 2012, although it failed to meet its 2011/12 target and future targets will be very challenging to achieve.

In a number of policy areas, Scotland has set more challenging targets than the UK and has allocated funding in addition to that available for GB-wide policies. This is particularly evident in areas such as residential energy efficiency and fuel poverty, waste and agriculture which are devolved competencies.

- **Energy efficiency and fuel poverty:** Unlike England, Scotland and the other devolved administrations still operate tax-payer funded schemes to tackle fuel poverty in addition to the supplier obligations. These often focus on area-based delivery and work with local authorities.
- **Waste:** Ambitious household waste recycling targets have been set in Scotland, however the first target for 2010/11 was missed and the 50% target for 2013 is also likely to have been missed.
- **Agriculture:** Like the rest of the UK, Scotland places considerable emphasis on a collaborative approach with the farming industry. In contrast to England, where the uptake of measures is also voluntary, Scotland has made it clear that it will introduce regulation if insufficient progress is made.

However, Scottish targets remain challenging to achieve. Stronger action will be required in key areas including energy efficiency programmes, increasing

low-carbon heat penetration, encouraging greater uptake of electric vehicles, increasing the rate of tree planting and ensuring that their waste targets are met.

Written submission from Professor David Reay

Thank you for inviting me to provide evidence to the above session. I have summarised below some key areas (agriculture, forestry, climate and transboundary impacts) that, in my view, require further consideration and discussion based on my own expertise, RPP2, RACCE's own 2013 report on RPP2, and the CCC's 2014 Progress Report. Please let me know if there are any queries.

RPP2 and Meeting Annual, 2020 and 2050 Targets for Scotland

- The ambitious nature of emission reduction targets in Scotland inevitably makes them difficult to achieve. The revision of the Scottish emissions inventory has clearly made achieving these targets all the more challenging.
- I agree with the RACCE view that continuation of an EU target of 20% (rather than 30%) will make it very unlikely that Scotland's emission reduction targets will be met via existing policies.
- The RPP2 is welcome in terms of its ambition to bridge the above gap with new proposals for domestic emissions reductions across all sectors. However, the 'proposed' nature of many the actions in RPP2, and the uncertainty as to just how much emission reduction they will actually achieve, means that achieving Scotland's targets under an 'EU 20%' regime via RPP2 relies on some rather optimistic assumptions.

Agriculture, Forestry, Climate and Transboundary Impacts

- Responsible for approx. 20% of Scotland's GHG emissions, agriculture is a key sector that will be crucial in determining overall emissions between now and 2050. The 'Farming for a Better Climate' programme is welcome and has already provided some useful exemplars. However, the hoped-for widespread uptake of management strategies such as greatly increased nitrogen use efficiency, reduced ruminant methane emissions, and improved soil carbon management is optimistic.
- For nitrogen use efficiency in arable agriculture for instance, the expectation that this will improve wholly via voluntary action by farmers risks overlooking the true time and financial costs (the opportunity costs) associated with actions such as precision fertiliser application and whole farm nitrogen budgets.
- Most importantly, in my view, Scottish agriculture does not exist in a market vacuum. Changes in commodity, fertiliser and equipment prices regionally and globally can drive rapid change in land use practice in Scotland. For example, sustained hikes in wheat prices caused by

supply failures elsewhere in the world (e.g. by severe weather) are likely to drive changes in land use and management much more powerfully than voluntary emission reduction schemes where the short-term return on investment is less obvious.

- Related to the above, and more important for 2027 and beyond, are the major drivers of increased food demand globally, and shifts towards more meat and dairy-intensive diets. These macro trends will inevitably have an impact on commodity prices and agricultural production in Scotland too, with the potential for a resurgence in Scottish livestock agriculture and for further expansion of the total agricultural land use area. Such expansions could boost overall CH₄, N₂O and CO₂ emissions to an extent that cancels out the per hectare or per tonne commodity emissions reductions achieved by the 'Farming for a Better Climate' programme and the initiatives therein.
- Much longer term (post-2040) more consideration must also be given to the impacts of climate change on Scottish agriculture and emissions from this sector. Improvements in land class (esp. in E. Scotland) are likely to alter the commercial viability of some crop types, and so impact on land management practices and associated emissions.
- The internal and external drivers of land use change and management in Scotland as mentioned above have similarly important implications for the forestry sector and the expansion of Scottish tree planting to 10,000ha per year. Again the opportunity cost of such land conversion needs to be fully explored in terms of the sustained return on investment for landowners. If 'the market' very strongly incentivises land use change back to agriculture in the future then the carbon benefits of current afforestation may be rapidly eroded.
- Longer term (post-2040) for forestry, the vulnerability of this carbon sink and stock to impacts such as disease (e.g. ash dieback) and direct climate change also needs to be accounted for so as to avoid the risk of large swathes of forest (and the carbon sink and stock it represents) being lost.
- Finally, as oft mentioned, the large uncertainties in current estimates of GHG fluxes in the LULUCF sector remain a major hurdle to robust estimation of current emissions and projections for the future. With the large envelope of uncertainty for key areas, such as soil N₂O fluxes and peatland CO₂ exchange, relying on interventions in these areas for large emissions reductions risks an outcome were the true emissions reductions are much less than was hoped. The GHG platform and similar initiatives are an excellent way to improve these estimates and more robustly project emissions with various interventions. However, at the current time and with current uncertainties, it would be prudent to assume that improvements in emission factors will not in themselves mean large reductions in reported emissions for the LULUCF sector in Scotland.

Written submission from RSPB Scotland⁶

Implementation of RPP2 and delivery of Scotland's climate change targets

Key issues

- In order to achieve Climate Change Act targets, RPP2 proposals must be made into policies and implemented.
- We want to see peatland restoration activity happening in 2014 and 2015 to ensure existing commitments are met and promised funding is spent.
- Government must work to introduce compulsory nitrogen efficiency measures to all farmers at the earliest opportunity.
- Meeting the 2020 100% renewable electricity target must be done in harmony with the environment.

RSPB Scotland welcomes the opportunity to submit comments to the Committee on the RPP2 and the delivery of Scotland's climate change targets. RSPB Scotland is also a member of Stop Climate Chaos Scotland (SCCS) and endorses the written evidence submitted by them. Like SCCS, we believe that, despite missing the last 3 annual targets there is an opportunity to turn things around and meet future targets set under the Scottish Climate Change Act. It is essential that Scotland meets its existing commitments and continues to lead by example. As a first step to making this happen we recommend that RPP2 proposals are converted to policies and that all policies in the RPP2 are implemented to the agreed timetable. We also draw the Committee to specific concerns with and recommendations for progress in the Land Use Sector and Energy Sector measures, as follows:

Land Use

We welcome the new climate measures announced in June of 2014 by the Scottish Government. This included a requirement for **nutrient management planning** by some farmers as part of the Greening requirement of the CAP. We note that this requirement will only apply to grassland farmers and not force them to change any farming practices or force them to adopt fertiliser reduction measures. Fertiliser reduction and efficiency measures on farm are one of the most effective measures for reducing GHG emissions in the agriculture sector. We want to see Government build on this Greening requirement so that this type of planning and a requirement to employ fertiliser

⁶ RSPB Scotland is part of the RSPB, which speaks out for birds and wildlife, tackles the problems that threaten our environment and promotes the conservation of wild birds and their habitats. We are supported by nearly 90,000 members in Scotland, with a strong membership base in rural areas as well as in towns and cities. We have practical experience of managing terrestrial, aquatic and coastal habitats for conservation, farming, forestry and other enterprises. We undertake biological and economic research to underpin our policy analysis and advocacy.

reduction measures is brought into regulation for all farmers by 2018 at the latest – as in the timetable for the proposal in the RPP2.

Farming for a Better Climate remains a weak measure as it relies on voluntary uptake. In addition, the RSPB Scotland remains concerned that this initiative is not monitored in a way which allows evaluation and attribution of its GHG reduction benefits.

Peatland restoration

RSPB Scotland is disappointed at the rate of progress with implementation on the ground of Government commitment to restore peatlands and its promised funding. The £15m budgeted for peatland restoration in 2014 and 2015 has not been spent and increasingly looks like it will be spent through the Rural Development Programme (SRDP) with its limited and restricted measures. SNH's Scotland's National Peatland Plan does not define a mechanism for action and looks unable to drive forward or lead restoration in the immediate future. The clear RPP2 proposed target for 21,000ha peatland restoration per year must become a policy target (as a minimum), in order to drive commitment.

Land use conflicts over the use of peatlands between restoration needs, forestry, wind energy and indeed horticulture, need to be resolved.

Tree planting rates are not reaching the RPP2 target of 10,000ha per yr. 8,300ha were planted in 2013 although we welcome that the majority are broadleaved trees rather than non-native conifers.

Coastal habitats

We want RACCE, the Scottish Government and other policymakers to recognise the value of Scotland's intertidal habitats around our soft coastlines for mitigating climate change. Much of this type of habitat, which has been lost in the past due to land reclamation for agriculture and development, are increasingly being needed as a tool in the armoury against climate change and as a buffer against sea level rise and storm events. These habitats can protect homes and business against coastal flooding as well as providing a number of other benefits.

Energy

Scotland is making good progress towards the 2020 100% target for renewable electricity generation, however, maintaining the investment needed to hit the target remains a challenge. A further key challenge will be to meet the target in harmony with the environment. The spatial framework for onshore wind introduced in new Scottish Planning Policy, which gives significant protection to designated Natura sites and priority peatland habitat, is a welcome step, but we need to see that translated into practice. Offshore wind is a key issue with large potential gains in terms of emissions reductions but significant risks given uncertainties about impacts.

Whilst peatland restoration is an important policy objective, there is also a need to prioritise and raise the profile of the protection of peatland from development. Wind farm developers are not routinely avoiding advancing proposals on areas of deep peat – where carbon losses can undermine benefits of renewable energy. RSPB Scotland supports SEPA's position that there is scope to significantly reduce emissions resulting from disturbance and drainage of peat, through more sensitive siting of wind farm proposals. We recommend a stronger approach to siting infrastructure on deep peat, and extending the requirement for carbon impact assessment to all sizes of development (not just s.36 applications) and to other types of development in addition to wind farms, such as open cast coal extraction.

Meeting the decarbonisation target in RPP2 is heavily reliant on successful demonstration of Carbon Capture and Storage technology by 2020 and a tripling of capacity by 2027 – alongside a policy of maintaining 2.5GW of thermal baseload capacity. RSPB Scotland has significant concerns that under this policy, meeting emissions reductions targets is dependent on the demonstration of untested technology. It has not been demonstrated that targets cannot be met, and energy security also achieved through a diverse mix of renewables and minimal thermal capacity. We strongly recommend that a 'CCS not viable' scenario is incorporated into Scottish government policies, which identifies credible options for meeting decarbonisation targets with minimal CCS.

Written submission from Stop Climate Chaos Scotland

Introduction

Stop Climate Chaos Scotland welcomes this opportunity to provide evidence to the Committee on the Second Report on Proposals and Policies (RPP2). We also welcome the Committee's continued scrutiny of this important report to ensure the Climate Change (Scotland) Act 2009 is implemented.

The importance of the RPP2 and its ongoing scrutiny cannot be overstated, since it is the only blueprint Scotland has for how our climate targets will be achieved.

Summary of recommendations

- Bring forward proposals to help address gap due to missed targets
- Greater effort on renewable heat and transport as indicated necessary by the UK Committee on Climate Change (UKCCC)
- Greater funding on energy efficiency as requested by UKCCC
- Address assumptions in RPP2 which are unlikely to occur e.g. EU 2020 target
- Amend RPP2 to account for change in emissions inventory so it remains relevant

Global context

Global greenhouse gas emissions continue to rise and are now 61% higher than they were in 1990 (the baseline year)⁷. At the same time, global temperatures are increasing⁸ and climate impacts are being felt across the world.

Earlier this month, world leaders met at the UN Climate Summit in New York to discuss the road forward for tackling climate change. Renewed political ambition is required if global temperatures are to stabilise and be brought under control. To coincide with this summit, hundreds of thousands of people across the world took part in 'People's Marches' to voice their concern about climate change. As part of this global day of action, over 2,000 people marched in Edinburgh on 21st September 2014, demonstrating considerable public concern in Scotland about climate change.

Scottish context

Scotland has committed to strong action on climate change and that commitment, across the Scottish political spectrum and all sectors of society, has been widely commended. Earlier this month, Stop Climate Chaos Scotland launched a new video, *Scotland's Climate Action Story*⁹, to inform policymakers in other countries about that ambition. The Scottish Government has also undertaken work to promote the Scottish climate example to other countries¹⁰.

Therefore it is imperative that Scotland's climate commitments are delivered, including meeting all annual emissions targets set under the Scottish Climate Change Act. With the Scottish climate example being highlighted to other countries as one that should be followed by others, we cannot afford to fail.

As the Committee will be aware, Scotland has missed all annual emissions targets so far. While this may in part be attributed to improved carbon accounting, had more policy effort taken place in the five years since the Act was passed, the likelihood of this happening would have significantly reduced. It is also important to note that the emissions targets in the early years were very small reductions and future targets will be increasingly challenging to meet.

We also note that carbon accounting will continue to evolve and it is essential that this does not prevent us from hitting future emissions targets. Changes to the emissions inventory are a positive improvement, as it gives a more accurate picture of emissions levels across the time period.

⁷ www.wmo.int/pages/mediacentre/news/index_en.html#globalcarbonbudget

⁸ www.wmo.int/pages/mediacentre/news/RecordheatinAugustJune-August.html

⁹ www.stopclimatechaos.org/campaigns/scotlands-climate-action-story

¹⁰ <http://bit.ly/ZetCht>

Stop Climate Chaos Scotland welcomed the additional policies announced by the Scottish Government in June 2014. These are good first step to addressing the most recent missed target, but considerably more effort to translate proposals to policies will be needed to get us back on track to meet all future targets.

Importance of RPP2

It is essential that RPP2 – as the only blueprint for how Scotland will achieve its climate targets - remains useful and relevant. Parliamentary Committees, the Climate Change Delivery Board and the new Cabinet Sub-Committee on Climate Change, as well as civil society, must be able to monitor progress and take timely action to ensure all future targets are achieved.

As could be expected a year after the report was published, aspects of RPP2 are already dated e.g. the assumption that the EU will increase its 2020 climate target to a 30% reduction. It is now increasingly clear that this will not happen and this has a significant impact on Scotland meeting its own targets. The EU is currently debating a 2030 emissions target, which will be agreed this autumn in Brussels¹¹.

As the Committee highlighted in its report on the draft RPP2 in 2013:

'It is clear from the draft Second Report on Proposals and Policies (RPP2) that there is only one combination of circumstances that will allow Scotland to meet each of its annual targets from 2013 until 2027. This requires implementation of all the proposals and policies in the draft RPP2, together with a shift in the EU wide emissions reduction target from the current target of 20%, to a target of 30%, as was envisaged when the 2009 Act was passed...

*The Committee is therefore concerned that further annual targets, as set out in the 2009 Act, will be missed and recommends the Scottish Government ensure all proposals and policies outlined in the draft RPP2 are implemented.'*¹²

The RPP2 should be updated to reflect current plans to meet legally-binding targets given that the EU policy shift will not now take place in the assumed timeframe. Every proposal and policy identified in the RPP2 must be implemented fully as the Committee recommended last year. The Scottish Government's Climate Change Delivery Board's Checkpoint Report identifies areas of potential abatement shortfall¹³.

In addition, to ensure the RPP2 remains relevant and useful, it should be updated to reflect the changing greenhouse gas inventory, as well as new policies announced to address the missed 2012 target.

¹¹ http://ec.europa.eu/clima/policies/2030/index_en.htm

¹² <http://bit.ly/1umAFkP>

¹³ <http://scotland.gov.uk/Resource/0045/00451990.pdf>

To address previous missed targets and remain in line with Scotland's legislated cumulative budget, further additional policy effort must be put in place if future targets are to be met. The most straightforward way to do this would be to bring forward action to turn proposals in RPP2 into concrete policies at an earlier date.

Financing proposals and policies to reduce emissions

In order that the Committee and other relevant bodies can track and appropriately respond to developments in reducing emissions, there must be a clear and transparent read-across between what is set out in the RPP2 and in annual Scottish Government Budgets. Without this, it is difficult, if not impossible, to say with any certainty whether proposals and policies are 'on track'.

As the Committee highlighted in its Budget and Spending Review scrutiny in 2011:

*'the Scottish Government needs to improve the presentation of both its proposals and policies documents (the RPP), and its budget documents, to make clearer who is responsible for delivering which proposals and policies, and to enable a clearer read-across between the documents. Tracking Scottish Government spending on climate change policies needs to be made clearer and more transparent.'*¹⁴

More needs to be done to fulfil the spirit of this recommendation, so there is a clear read across between RPP2 policies and budget lines.

The CCC has called for additional policy effort and more funding from the Scottish Government in energy efficiency to tackle both emissions and rising rates of fuel poverty. The CCC highlights renewable heat as an area requiring further effort: 'the current pipeline for renewable heat needs to be developed if the 2020 target is to be achieved'¹⁵.

The CCC has also identified emissions from transport as being of 'particular importance for the achievement of Scottish targets and highlights'¹⁶. Given that, as we highlighted when the draft was being scrutinized, the RPP2 does not contain a single Scottish policy on transport, it is essential that transport proposals are committed to and funded, at an earlier date than proposed, to address this particularly important sector.

Conclusion

There is still an opportunity to turn things around and meet future targets set under the Scottish Climate Change Act. It is essential that this happens, not only to deliver on the legislation, but also to reassure those watching the

¹⁴ www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/45089.aspx

¹⁵ www.theccc.org.uk/wp-content/uploads/2014/03/1871_CCC_Scots_Report_bookmarked.pdf

¹⁶ *ibid*

Scottish example from other countries that ambitious climate action is desirable and achievable.

This is a crucial time for climate action and Scotland could play a positive role in increasing global ambition. It is essential that all proposals and policies in the RPP2 are implemented at least to the agreed timetable. In addition, to address previous missed targets and remain in line with Scotland's legislated cumulative budget, additional effort must be put in place over and above what is set out in RPP2, if future targets are to be met.

Written evidence from WWF Scotland

WWF Scotland welcomes the Rural Affairs, Climate Change and Environment Committee's ongoing scrutiny of the RPP2. In this evidence we highlight the need for intensified policy effort to hit future targets.

How are we delivering against the Climate Change Act?

Missing the first three annual targets means our overall cumulative emissions are already over 5 million tonnes higher than they should be. While the Scottish Government has made welcome moves to introduce some new policies, it now needs to significantly increase policy effort to get back on track to meeting future targets and ensure we don't exceed the cumulative emissions budget to 2050 set out by the UK Committee on Climate Change (CCC).¹⁷

How can we get back on track?

Our targets are becoming increasingly challenging to deliver. The Scottish Government therefore needs to accelerate the development of proposals into policies, make sure the RPP2 is fully funded in the budget process, and identify new policies that will deliver win-wins for Scotland. In particular, WWF would like to see more funding for energy efficiency, more focus on renewable heat and new commitments to manage road transport demand.

How can we strengthen the RPP2?

The Scottish Government needs to correct for the revised emissions inventory, which is making the targets harder to deliver, and for some outdated assumptions in the RPP2. For instance, as the EU won't move to a 30% climate target by 2020, every single Scottish annual target to 2020 is at risk. The Scottish Government must set out a plan to strengthen the RPP2 to address any shortcomings.

¹⁷ See <http://www.theccc.org.uk/publication/letter-scotland-advised-to-cut-emissions-by-3-5-each-year-from-2020-to-2050-31-january-2011/>

Are we achieving adequate progress across all sectors?

The Scottish Government needs to replicate its strong progress on renewable electricity with more effort on transport, renewable heat, and energy efficiency, as the CCC has indicated. This is essential to hit climate, fuel poverty and other sectoral targets.¹⁸ What's crucial is that we see real, economy-wide momentum from the Government to realise the opportunities a low carbon Scotland provides, including warmer homes, reduced fuel poverty, more efficient agriculture, cleaner air and reduced pressure on the NHS.

What is the wider climate context?

The IPCC's Fifth Assessment Report in 2013/14 unequivocally found that climate change is real, is human-caused and is already happening on every continent and in every ocean.¹⁹ The hundreds of thousands of people around the world who marched on 21st September 2014 at the People's Climate Marches, including over 2,000 in Edinburgh, have recognised this and want action. The world's leaders are listening and met this week at the UN Climate Summit in New York to chart a path forward.

We know from a series of recent high profile economic reviews - from the Global Commission's *New Climate Economy* report, to a major UK report by Cambridge Econometrics²⁰ - that climate action actually leads to a stronger economy than a high carbon 'business as usual' approach. In a greener Scotland we can look forward to a stronger economy, more jobs, higher household income, better human welfare and less pressure on the NHS.

How is Scotland delivering against the Climate Change Act?

WWF was very disappointed to learn of the third missed annual target (2012) in June 2014 and that emissions had actually increased from 2011.

What counts in scientific terms is not just that we hit our 2020 or 2050 percentage goals – it's that we stick to the pathway towards them in order to keep within our fair share of a global carbon budget to 2050 advised by the Committee on Climate Change (CCC) of 1250 million tonnes CO₂e.

Otherwise, each year's excess emissions are accumulating in the atmosphere and contributing to a greater risk of dangerous climate change.

¹⁸ <http://www.theccc.org.uk/publication/reducing-emissions-in-scotland-2014-progress-report/>. For instance, the CCC has flagged that the current pipeline of renewable heat projects won't deliver the 2020 renewable heat target.

¹⁹ <http://www.ipcc.ch/report/ar5/index.shtml>

²⁰ Led by former Mexican President, Felipe Calderon and advised by Lord Stern, <http://newclimateeconomy.report/>; See also *The Economics of Climate Change Policy* at: http://assets.wwf.org.uk/downloads/wwf_climate_economics_summary_a4_web.pdf?_ga=1.100172698.542084774.1394123155; and http://assets.wwf.org.uk/downloads/wwf_cambridge_report_lr.pdf?_ga=1.263733768.54208474.1394123155

Changing carbon accounting inventories have certainly made the targets harder to deliver. This is likely to continue in future as accounting is refined. ***We need to insulate ourselves from this vulnerability by increasing efforts now to hit future targets.*** This would also help to assert greater control over yearly weather changes and wider economic shifts, which still have too much influence on our ability to hit targets.

The cross-sectoral package of measures recently announced by the Climate Minister was a welcome recognition that more could be done to hit targets and to seize the opportunities to deliver better, warmer homes, greener agriculture and more active travel. These were important first steps that must be built on by Government to ensure that Scotland can get firmly back on track, and we hope the new Cabinet Sub Committee on Climate Change will help to generate momentum.

How can we get back on track?

In summer 2015, we will hear whether Scotland has hit the 2013 target. The first three targets were, perhaps, the easier ones. ***The targets from 2013 onwards require a major step change in ambition.*** For instance, there is a gap of around 8 million tonnes between Scotland's 2012 reported emissions and its 2013 target, which is undeniably challenging. From 2014, the legislation rightly demands that targets tighten by around a million tonnes per year. The Scottish Government has stated it is on track to the 42% 2020 target, but it's essential that Scotland's fixed annual targets are also on track to keep within the CCC's advice on Scotland's cumulative budget.

Unless we change the way in which the RPP2 currently backloads policy effort to the post-2020 period,²¹ we will continue to miss early targets, a concern shared by both RACCE and ICI committees in their original scrutiny of the draft RPP2. This is likely to erode a sense of the achievability of our unanimously supported Act.

The Act requires the Climate Minister to publish a report explaining the 2012 missed target by 31 October 2014 and indicate how the Scottish Government plans to compensate for this. This should be the opportunity to:

- show a renewed effort to develop proposals into policies;
- identify new win-win interventions not already in the RPP2 to close gaps.

The forthcoming Scottish budget is also an opportunity to fund the kinds of measures (such as energy efficiency) that will enable us to meet our climate obligations and ensure Scotland reaps the full benefits of being a resource efficient low carbon economy. ***We encourage all parties to place climate change at the heart of their approach to the budget scrutiny process and ensure that the RPP2 is fully funded.***

²¹ For instance, in transport the RPP2 provides for a 7,261 ktCO₂e reduction in emissions to 2020 and a 20,678 ktCO₂e reduction from 2021 to 2027.

How can we strengthen the RPP2?

The RPP2 is inevitably a snapshot in time, reflecting a series of assumptions. Many of these assumptions remain valid but some are now outdated and need amending, if they are not to undermine overall deliverability of the Act. For instance, it assumes that:

- The EU will move to a 30% climate target by 2020 (rather than the current 20%). This ramp up in ambition is effectively off the table. ***Without the EU moving to 30%, Scotland is set to miss all but one target to 2020, even if all proposals become policies.***
- Longannet will close by 2020, which is by no means guaranteed and remains a commercial decision for Scottish Power.
- Large amounts of Carbon Capture and Storage will be commercialised and fitted to fossil fuel plants – a risky assumption as the current slow pace of the CCS competition indicates.

Crucially, the RPP2 does not reflect the emissions inventory revisions in the last two years that have added additional emissions and opened up bigger gaps to future targets.

WWF is keen to see the RPP2 as a live document that flexes and improves according to the performance of policies, the development of proposals and technological advances. It is clear, for instance, that the changing inventory over the last two years requires at minimum a refresh of the tables (p235 – p240) in the RPP2, as well as new policies to compensate for missed targets, if the document is to remain a live blueprint for hitting targets and a useful basis for Parliamentary scrutiny of Government climate policy.

We welcome the publication of the Climate Change Delivery Board's Check Point Report, which monitors progress under the RPP2. It is critical this is used by Parliament, the Delivery Board and the new Cabinet Sub-Committee on Climate Change to red flag underperforming policies and highlight areas where additional effort is required (for instance on building regulations). WWF would like to work with the Government and Parliament to ensure that the RPP2 is delivered in a clear, transparent and constantly improving way.

Are we achieving adequate progress across all sectors?

We welcome the very strong progress on renewable electricity in Scotland. We need to see similar momentum in areas such as low carbon transport, energy efficiency and renewable heat.²² Transport emissions have stagnated at 1990 levels and space and hot water heating still accounts for approximately half of Scottish emissions. These sectors were singled out for more effort in the CCC's most recent report on Scotland.

The package of policies announced in June is an important first step in accelerating cross-sectoral ambition and shows that where there is a will there is a way. However, WWF believes there is more to do to exert meaningful control over emissions in the building and transport sectors and to deliver the full benefits of the Act.

Energy Efficiency: The CCC has highlighted the fall off in retrofit activity associated with ECO (the Energy Companies Obligation) and the Green Deal in both its recent 2014 progress reports on Scotland and the UK. Recent changes to ECO have reduced overall carbon ambition and are likely to reduce rates of solid wall insulation, an issue of particular importance in Scottish hard to treat homes. The CCC has called for additional policy effort and more funding from the Scottish Government in energy efficiency to tackle both emissions and rising rates of fuel poverty. This call has been supported and amplified in recent evidence to the EET committee from the Existing Homes Alliance.²³ We would like to see the Government substantially increase its funding commitment so all stakeholders can be confident at least £300m will be spent in Scotland in 2015/16. This should be complemented by minimum standards in the private residential sector at the earliest opportunity.

Transport: The additional funding for Smarter Choices, Smarter Places announced in June is welcome. This programme must continue to be scaled up and made available in households and businesses to encourage a shift to more sustainable transport options. However, with Scottish Transport predicting that emissions are set to increase from transport, WWF believes more effort is needed to bring forward 'top down' road demand management measures hinted at in the RPP2 in the period post-2020. We encourage the Committee to discuss the possibilities for transport demand management interventions with the Minister.

²² See the WWF/Scottish Renewables briefing on renewable heat at: http://assets.wwf.org.uk/downloads/wwf_sr_heat_briefing_final.pdf?_ga=1.25207097.542084774.1394123155 and the WWF briefing on minimum standards, renewable heat and travel planning at: http://assets.wwf.org.uk/downloads/wwf_building_a_low_carbon_scotland_2_.pdf?_ga=1.65515050.542084774.1394123155

²³ http://www.scottish.parliament.uk/S4_EconomyEnergyandTourismCommittee/Inquiries/Existing_Homes_Alliance.pdf



Scotland's climate change targets

Climate Change (Scotland) Act 2009

This paper provides an overview of Scotland's Second Report on Proposals and Policies (RPP2) and Scotland's progress in reducing climate emissions.

[The Climate Change \(Scotland\) Act](#) (the Act) sets emission reduction targets for 2020 and 2050 of 42% and 80% respectively. The Act also requires that annual targets, consistent with the 2020 and 2050 targets, are set out by Order. Unlike the 2020 and 2050 targets the annual targets are set as actual numbers i.e. the tonnage by which emissions must be reduced. The annual targets have to be set in batches. Two batches have already been set:

- 2010–2022;
- 2023–2027;

Further batches must be set as follows:

- 2028–2032, no later than 31 October 2016;
- 2033–2037, no later than 31 October 2021;
- 2038–2042, no later than 31 October 2026;
- 2043–2047, no later than 31 October 2031;
- 2048–2050, no later than 31 October 2036.

After setting each batch of annual targets, section 35 of the Act requires Ministers to produce a report outlining specific proposals and policies (RPP) for meeting those targets, and describing how these proposals and policies contribute to the 2020 and 2050 targets.

A 'policy' is defined as "a course of action which has already been wholly or largely decided upon". A 'proposal' is defined as a "suggested course of action, the details of which might change as this course of action is explored further."

Low Carbon Scotland - Report on Proposals and Policies

The First Report on Proposals and Policies (RPP1) [Low Carbon Scotland: Meeting the Emissions Reduction Targets 2010-2022](#) was published on March 14 2011. The [Draft](#) Second Report on Proposals and Policies (RPP2) was laid before the Scottish Parliament on 29th January 2013.

The 60-day period for Parliamentary consideration ran from 29 January, 2013 to 29 March, 2013. During this period, four Parliamentary subject committees took evidence on the draft report, and the following reports were published on 22nd March 2013:

- [Rural Affairs, Climate Change and Environment Committee](#)
- [Economy, Energy and Tourism Committee](#)
- [Infrastructure and Capital Investment Committee](#)
- [Local Government and Regeneration Committee](#)

A [Parliamentary debate](#) on the draft RPP2 and Committee recommendations took place on 26 March, 2013. On 27 June 2013, the Scottish Government published the Second Report on Proposals and Policies (RPP2) [Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027](#).

RPP2 is structured to reflect the following key emission sectors:

- [Energy](#)
- [Homes and Communities](#)
- [Business, Industry and the Public Sector](#)
- [Transport](#)
- [Waste and Resource Efficiency](#)
- [Rural Land Use](#)

An [Annex](#) provides an estimate of the annual emission reductions for each policy and proposal between 2013 and 2027 and projections of Scotland's overall emissions compared to annual emission targets.

Different emission reduction projections set out in RPP2 also reflect two EU climate target scenarios:

- the EU maintaining a 20% climate change target for 2020
- the EU adopting a more ambitious climate change target of a 30% cut by 2020.

A 30% EU emissions target would result in a reduction in the amount of emissions released through the EU Emissions Trading Scheme (ETS). The EU ETS is designed to try and ensure emissions are reduced, across the most polluting installations, where it is cheapest for this to happen. Under the ETS a limit is set on the amount of greenhouse gases that can be emitted by factories, power plants and installations in Europe. Within the limit companies can receive or buy emission allowances and trade them as needed. Emissions from installations covered by the EU ETS are referred to as the "traded sector". An increase in the EU climate target would result in a reduction in emissions from the traded sector

As things stand the EU emission target for 2020 remains at 20%. RPP2 noted that:

“..stalling international climate change negotiations have so far limited further progress in Europe and constrained the contribution that the so-called ‘traded sector’ is making to cutting emissions in Scotland.”

According to the emissions projections set out in RPP2 the only scenario that results in the annual emission targets being met every year between 2013 and 2020 requires that all policies and proposals will be implemented and that the EU adopts a 30% reduction target.

According to a recent climate and energy [framework](#) the Commission are now advocating a 40% reduction in EU emissions by 2030.

RPP3 is due to be published in draft in 2016 and will follow Parliamentary approval of emission targets for 2028-2032.

Scotland’s emissions since 1990

Figure 1 shows how Scotland’s greenhouse gas emissions have changed since 1990. In summary:

- total emissions of greenhouse gases¹ in Scotland fell by 29.9 per cent between 1990 and 2012
- achievement of Scotland’s emission targets is measured against the Net Scottish Emissions Account (NSEA)². Scotland’s emissions were 26.4 per cent lower in 2012 than in 1990
- emissions in 2012 emissions were 0.8 per cent greater than they were in 2011

¹ Measured as a basket of the following six greenhouse gases – carbon dioxide, methane, nitrous oxides, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride.

² The NSEA accounts for greenhouse emissions from sources in Scotland, Scotland’s share of emissions from international aviation and shipping and the effect of any sales or purchases of emissions under the ETS.

Figure 1. Changes in Scotland’s total greenhouse gas emissions between 1990 and 2012.

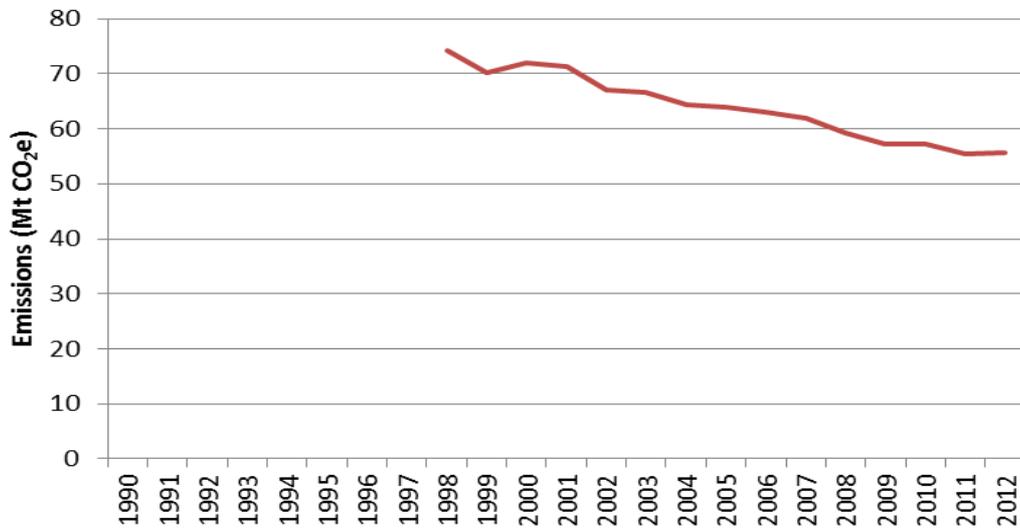
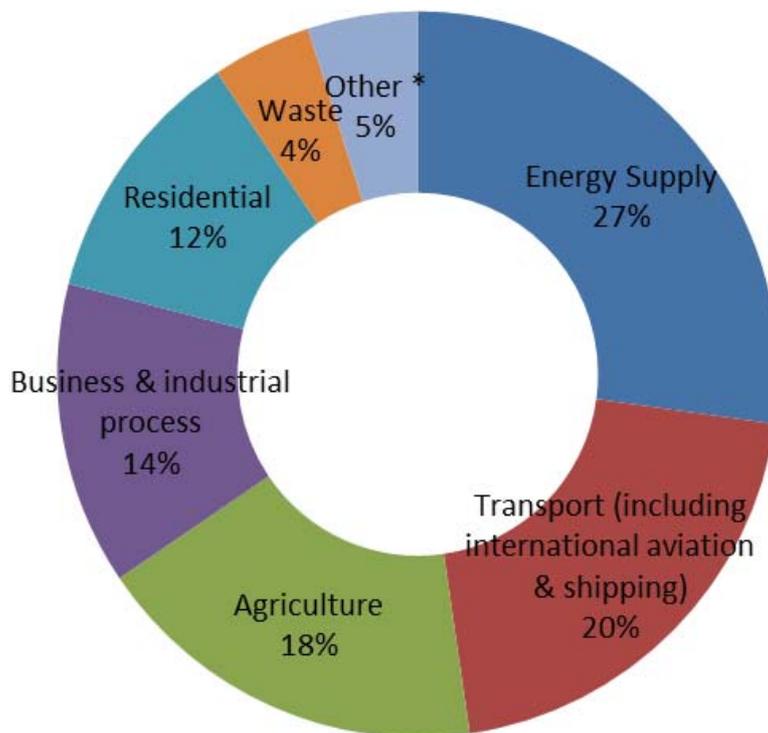


Figure 2 highlights Scotland’s greenhouse gas emissions by sector. In 2012 the single biggest sources of emissions in Scotland were energy supply, agriculture and related land use, and transport. In 2012 9.9 Mt CO₂e more emissions were removed from the atmosphere from forestry than released into it.

Figure 2 Scotland’s greenhouse gas emissions by sector (2012)

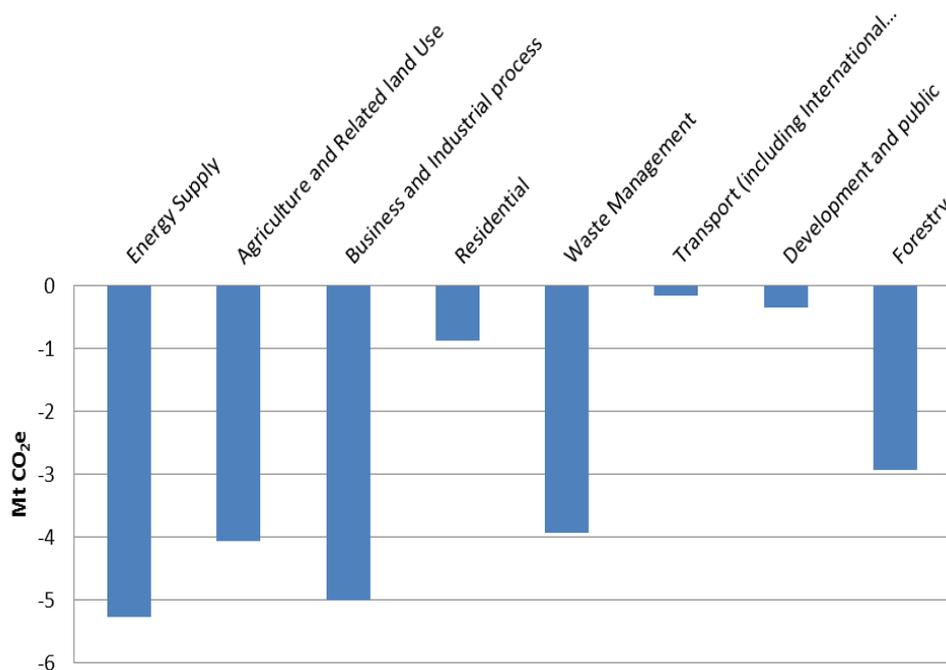


* fuel use in public sector buildings and emissions from the development of settlements

Figure 3 compares emission reductions by sector in Scotland since 1990. In summary:

- emissions in the waste management sector have reduced by 58.6 per cent
- emissions from businesses and industrial processes have reduced by 37 per cent
- emissions from agriculture and related land use have reduced by 26.7 per cent
- emissions in the transport sector have reduced by 1.2 per cent.

Figure 3. Changes in emissions by sector between 1990 and 2012



In their third [report](#) on Scotland’s progress in meeting emission reduction targets, published in March 2014, the UK Committee on Climate Change (CCC) concluded that:

“Scotland has made good progress in a number of key emitting sectors, namely renewable electricity, implementation of some home insulation measures, and fuel efficiency of new vehicles. However, challenges remain to achieve the stretching targets in these areas set out by the Scottish Government.”

The UK CCC identified that work was required in a range of areas including renewable electricity, renewable heat and loft, cavity and solid wall insulation and noted that

“In other areas, such as electric vehicles and smarter travel choices, there is a need to build on good progress achieved through pilot projects. It is likely that faster rates of progress are needed in business and industry, and agriculture; and increased tree planting rates and

peatland restoration rates are also required, together with increases in household recycling rates and reductions in waste sent to landfill.”

Scotland’s 2010, 2011 and 2012 greenhouse gas emissions targets

For each year in the period 2010-2050, Ministers must provide Parliament with a report on the annual target. The report must state whether the annual target for the year has been met, and if not it must explain why. Where a target has not been met Ministers must lay a report before the Scottish Parliament setting out proposals and policies to compensate for excess emissions in future years.

The official source of GHG emissions data that is used by the Scottish Government is the National Atmospheric Emissions Inventory (NAEI). The NAEI compiles estimates of emissions to the atmosphere from UK sources. This data is disaggregated and the Scottish estimates are published annually with approximately an 18 month time lag.

The Climate Change (Annual Targets) (Scotland) [Order](#) 2010 set out the annual targets (expressed as tonnes of carbon dioxide equivalent (tCO₂e)) for each year for the period 2010-2022. To date the Scottish Government have produced annual reports that relate to the 2010 and 2011 annual targets and published data on Scotland’s 2012 annual targets (the 2012 annual report to Parliament is expected to be published by the end of October 2014).

Based on [data](#) published by the Scottish Government in June 2012 Table 1 shows how Scotland’s emissions for 2010, 2011 and 2012 compare with the annual targets.

Table 1. Scotland’s climate emissions compared to annual targets 2010, 2011 and 2012 in million tonnes of carbon dioxide equivalent (Mt CO₂e)

	Annual target Mt CO ₂ e	Actual emissions Mt CO ₂ e	Emissions above target Mt CO ₂ e
2010	53.652	57.216	+3.56
2011	53.404	55.370	+1.97
2012	53.226	55.665	+2.44

The Scottish Government attribute these missed targets to a variety of factors including cold winters, data revisions and changes in methodology. The latter points are explored below.

Following the publication of the 2012 greenhouse gas statistics the Minister for Environment and Climate Change made a [statement](#) to the Scottish Parliament. In this statement the Minister set out a number of commitments including:

- the establishment of a Cabinet Sub-Committee on Climate Change
- publication of a monitoring framework for delivery of RPP2 policies and proposals on the Scottish Government website

- a £15 million funding package for 2014 to 2016 to help cut emissions from road transport

Data revisions and methodological changes

Each year the greenhouse gas inventories are updated to reflect improvements in science, data and modelling. Improvements include, for example, increased estimates of methane emissions from agriculture and landfills and increased emissions from industrial and commercial buildings.

The overall impact of revisions made to the inventory since 2008 is an increase in the emissions baseline from 70.2 Mt CO₂e (1990 – 2008 baseline) to 75.6 Mt CO₂e (1990 - 2012 baseline).

The annual targets were set as absolute limit values on emissions and were based on the 1990-2008 inventory. The overall impact of upward revisions to the inventory and associated baseline is that a larger reduction in emissions is required to achieve each annual target.

In March 2014 the UK [Committee on Climate Change](#) (CCC) suggested that the inventory revision will “will continue to make achievement of currently legislated targets more difficult.”

The CCC put forward the following two options to address this issue:

- adjust the annual targets; or
- secure additional emissions cuts beyond those set out as current and proposed policies.

Section 6 of the Climate Change (Scotland) Act does enable Scottish Ministers to make an order to modify the annual targets. The Act specifies that Scottish Ministers can only make an order to modify an annual target as a result of

- ‘(a) a modification of the interim target; or
- (b) another significant change to the basis on which the annual target was set.’

Meeting Scotland’s future climate targets

Scotland’s 2020 emissions target

As outlined earlier, Scotland’s target to reduce emissions by 42 per cent by 2020 is set as a reduction relative to the emissions baseline rather than an emissions tonnage figure. Using the most recent emissions inventory Scotland’s emissions would have to be no more than 43.842 Mt CO₂e in 2020 to achieve this target.

In 2012 Scotland's emissions were 55.665 Mt CO₂e, therefore a reduction of 11.823 Mt CO₂e will be required between 2012 and 2020 to meet the 42% target.

In his statement to the Scottish Parliament in June 2014 the Minister for Environment and Climate Change said that

“Having analysed the latest data, Parliament can be assured we are more than halfway towards our interim target of a 42% emissions reduction by 2020.”

Scotland's future annual targets

As noted above Scotland's annual targets are set as absolute limit values. Scotland's 2013 annual target is 47.976 Mt CO₂e. Scotland's emissions in 2012 were 55.665 and therefore a reduction of 7.689 Mt CO₂e will be required between 2012 and 2013 if the 2013 annual target is to be met.

In this context the emissions abatement attributed to policies and proposals in RPP2 for 2013 is 1.158 Mt CO₂e. Emission reductions are also expected to occur in the energy sector (traded emissions) between 2012 and 2013 however the scale of these reductions remain unclear.

In his statement to the Scottish Parliament in June 2014 the Minister for Environment and Climate Change stated that Scottish Ministers “remain fully committed to delivering Scotland's ambitious greenhouse gas emission targets.”

Dan Barlow
SPICe Research
26 September 2014

<p>Note: Committee briefing papers are provided by SPICe for the use of Scottish Parliament committees and clerking staff. They provide focused information or respond to specific questions or areas of interest to committees and are not intended to offer comprehensive coverage of a subject area.</p>
