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Environment, Climate Change and Land Reform Committee

Report on the Draft Climate Change Plan - the Draft Third Report on Policies and Proposals 2017-2032



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Environment, Climate Change and Land Reform Committee

Remit: To consider and report on matters falling within the responsibility of the Cabinet Secretary for Environment, Climate Change and Land Reform.



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Executive Summary

1. The Environment, Climate Change and Land Reform Committee (the Committee) welcomes the opportunity to scrutinise the draft Climate Change Plan, the third report on policies and proposals, in collaboration with the Economy, Jobs and Fair Work Committee, the Local Government and Communities Committee and the Rural Economy and Connectivity Committee. Bringing together the expertise of the four Committees enhances the scrutiny of the draft Plan and supports mainstreaming of climate change issues throughout the work of the Scottish Parliament.
2. The Scottish Government's approach to developing the draft Climate Change Plan has differed from that used to create previous reports on policies and proposals. The Scottish Government consultation process involved hosting Climate Conversations with members of the public and sector based workshops for stakeholders, as well as a stakeholder event on the draft Plan as a whole. While the Committee welcomes the intention to conduct a wide ranging engagement process, the Committee considers this was not executed sufficiently far in advance to inform the Plan or give stakeholders confidence in the process. The Committee expects the Scottish Government to engage further with stakeholders and seek advice from the Committee on Climate Change (CCC) when finalising the Plan. Information on this further engagement should be included in the final Plan.
3. The Committee believes the Scottish Government's approach of consulting on the draft Energy Strategy, in tandem with the parliamentary scrutiny process of the draft Climate Change Plan, whilst unavoidable, was unhelpful and did not afford Parliament the opportunity to consider fully developed proposals within the draft Plan. The final Plan should state explicitly how the results of the draft Energy Strategy consultation have contributed to the Plan and it should clarify the relationship between the Plan and all other relevant national strategies.
4. The Scottish Government has used a modelling framework, the TIMES Model, to inform the development of the draft Plan and create "carbon envelopes"; budgets within which sectors must contain their carbon emissions. While broadly welcoming the principle of a "whole system" approach, the Committee does not consider the TIMES Model and the development of the carbon envelopes to have been sufficiently structured, formalised or consistent to deliver this.
5. There is a lack of clarity and transparency in the draft Plan surrounding the information that was fed into and produced by the TIMES Model which has meant that the Committee has been constrained in its ability to fully scrutinise and express confidence in the policies and proposals which have been advocated. In particular, the development of the carbon envelopes for

each sector has been inconsistent, and agriculture and transport, the sectors which have made least progress in cutting emissions, are not being asked to make the significant leaps anticipated by the CCC and stakeholders. The emission reductions expected of each sector should be equally challenging. The Committee recommends the Scottish Government revise the carbon envelopes for transport and agriculture to show greater ambition.

6. The Committee is concerned that the method of development of the carbon envelopes is inconsistent. A number of sectors, including transport, agriculture, waste and land use, have been modelled outwith the TIMES framework. The TIMES Model also does not consider wider benefits. The draft Plan is unclear on the extent to which abatement potential has influenced the inclusion of policies. The Committee considers a formalised and consistent approach to these issues should be included in the final Plan.
7. The Committee considers it is unclear in the draft Plan whether assumptions such as the development and implementation of carbon capture and storage are supported by alternatives should the assumptions which have been made prove to be unfounded. The final Plan should set out an alternative “Plan B”.
8. Although behaviour change has been considered and included in the draft Plan, its application in policies and proposals is omitted or inconsistent. This should be addressed in the final Plan.
9. There is an apparent reliance across sectors on technological interventions. Parts of the draft Plan are heavily reliant on the development of technologies which will require infrastructural changes and market development. However, the Committee does not feel there is sufficient information on the planning and development required to achieve this.
10. The Committee believes the final Climate Change Plan should be accompanied by information on the output of an additional TIMES Model run which emphasises alternative car traffic growth assumptions and with a greater emphasis on modal shift.
11. Although a monitoring and evaluation framework is described in the draft Plan, the Committee considers this should be the foundation of policy making and is concerned that eight years after the enactment of legislation on reducing carbon emissions, this is not yet in place. The Committee does not consider the suite of policies and proposals as currently presented are capable of SMART analysis and proposes that the Scottish Government include further specific and consistent information across all policies and proposals in the final Climate Change Plan and ensure there is clarity in the pathways to delivery.

12. The Committee welcomes Scottish Government intentions to provide regular reports on progress towards meeting climate change targets and has accepted the invitation from the Cabinet Secretary for Environment, Climate Change and Land Reform to provide views on how these should be established and subjected to scrutiny in the Scottish Parliament.
13. On the issue of waste, the Committee supports the Scottish Government commitment to explore how producer responsibility schemes can be made more effective. The Committee recognises the extent of the contribution which must be made by the further development of the circular economy and recommends the final Climate Change Plan include detailed information on the contribution of this to the policies and proposals in the waste sector.
14. The Committee is delighted to see such ambitious targets for peatland restoration and welcomes the wider benefits including water quality, biodiversity and employment.
15. The Committee is surprised by the apparent reversal of the policy commitment during the Parliamentary scrutiny period to make soil testing compulsory and is concerned by the timing and manner in which this emerged. The seemingly changed policy position contradicts evidence from the CCC, stakeholders and the Cabinet Secretary for Environment, Climate Change and Land Reform. The Committee recommends soil testing be made compulsory for improved land and included in the final Plan.
16. The Committee recommends that further guidance and assistance is needed across the public sector to address the barriers to, and support for, strong climate change leadership.
17. The Committee recommends the final Climate Change Plan contain policies and proposals on blue carbon.
18. The Committee plans to review the final Climate Change Plan. It notes it has been Scottish Government practice to present the final Plan prior to the summer recess of the parliamentary year. However, given the issues identified by the stakeholders and the various committees, it encourages the Scottish Government to prioritise consideration of matters raised by the scrutiny process over working to any deadline.
19. The Committee looks forward to scrutinising the forthcoming Climate Change Bill, which it hopes will extend the period available to the Scottish Parliament for consideration of future reports on policies and proposals. The Committee also seeks a commitment from the Scottish Government that any relevant changes to climate change legislation are reflected in an updated Plan.

Geàrr-chunntas

20. Tha Comataidh Àrainneachd, Atharrachadh Cliomaid agus Ath-leasachadh Fearainn (a' Chomataidh) a' cur fàilte air a' chothrom a bhith a' sgrùdadh an dreachd de Phlana Atharrachadh Cliomaid, an treas aithisg air poileasaidhean is molaidhean, ann an co-obrachadh le Comataidh an Eaconomaidh, Obraichean agus Obair Chothromach, Comataidh Riaghaltas Ionadail is Coimhearsnachdan agus Comataidh an Eaconomaidh Dùthchail is Ceangalachd. Le bhith a' toirt ealantas nan ceithir comataidhean còmhla, thathar a' meudachadh na h-ìre de sgrùdadh air dreachd a' phlana agus a' cur ri àbhaisteachadh nan cùisean atharrachadh cliomaid ann an obair Pàrlamaid na h-Alba.
21. Chleachd Riaghaltas na h-Alba dòigh-obrach eadar-dhealaichte gus dreachd de Phlana Atharrachadh Cliomaid a chruthachadh, an coimeas ris na rinneadh airson nan aithisgean air poileasaidhean is molaidhean a chaidh a chruthachadh ron seo. Mar phàirt den chùrsa co-chomhairleachaidh a rinneadh le Riaghaltas na h-Alba, chuireadh air dòigh "Conaltraidhean Cliomaid" leis a' phoball agus bùithtean-obrach airson nan com-pàirtichean ann an diofar raointean, a bharrachd air tachartas airson nam com-pàirtichean air dreachd a' Phlana gu h-iomlan. Fhad 's a tha a' Chomataidh a' cur fàilte air an rùn seo airson conaltradh farsaing, tha a' Chomataidh den bheachd nach deach seo a dhèanamh ann an deagh àm gu bhith a' biadhachadh a-steach don Phlana no gu bhith a' toirt misneachd do chom-pàirtichean anns a' phròiseas. Tha a' Chomataidh an dùil gum bi Riaghaltas na h-Alba a' dèanamh barrachd conaltraidh le com-pàirtichean agus a' sireadh comhairle bho Chomataidh air Atharrachadh Cliomaid airson am Plana a chrìochnachadh. Bu chòir gum bi fiosrachadh air a' chonaltradh a bharrachd seo anns a' Phlana dheireannach.
22. Tha a' Chomataidh a' creidsinn nach robh e cuideachail, fiù 's ged a bha e do-sheachanta, gun robh Riaghaltas na h-Alba a' toirt air adhart co-chomhairleachadh air dreachd na Ro-innleachd Lùtha an co-rèir ris a' chùrsa sgrùdaidh phàrlamaideach airson an dreachd de Phlana Atharrachadh Cliomaid, oir cha robh an cothrom ann a bhith a' sgrùdadh mholaidhean a bha làn-leasaichte ann an dreachd a' Phlana. Bu chòir don Phlana dheireannach a ràdh mar a bha toraidhean bhon cho-chomhairleachadh air dreachd na Ro-innleachd Lùtha a' cur ris a' Phlana, agus bu chòir dha a dhèanamh soilleir an dàimh eadar am Plana agus na ro-innleachdan nàiseanta buinteannach.
23. Chleachd Riaghaltas na h-Alba frèam stèidhichte air a' mhodail "TIMES" gus dreachd a' Phlana a leasachadh, far a bheilear a' cruthachadh "cèisean càrboin" (*carbon envelopes*), no buidseatan airson brùchdaidhean càrboin airson nan raointean eadar-dhealaichte. Fhad 's a tha a' Chomataidh a' cur fàilte air a' phrionnsabal gun dèiligear "ris an t-siostam gu h-iomlan", tha a' Chomataidh den bheachd nach robh structair gu leòr anns a' mhodal TIMES no ann an leasachadh nan cèisean càrboin, nach robh iad air am foirmeileachadh

gu leòr agus nach robh iad cunbhalach gu leòr gus an t-amas seo a libhrigeadh.

24. Tha dìth soilleireachd is trìd-shoilleireachadh ann an dreachd a' Phlana a thaobh an fhiosrachaidh a chaidh a bhiadhadh a-steach don mhodal TIMES, agus tha seo a' ciallachadh gun deach a' Chomataidh a bhacadh bho bhith a' dèanamh làn-sgrùdadh air, agus a bhith misneachail air, na poileasaidhean is molaidhean a chuireadh air adhart. Gu sònraichte, tha leasachadh nan cèisean càrboin airson gach raon air a bhith neo-chunbhalach, agus chan eilear ag iarraidh air àiteachas agus còmhhdail—na raointean a rinn an t-adhartas as lugha a thaobh brùchdaidhean càrboin a ghearradh—a bhith a' dèanamh nan ceuman mòra air adhart air an robh Comataidh air Atharrachadh Clìomaid agus com-pàirtichean eile an dùil. Bu chòir do na lùghdachaidhean ann am brùchdaidhean càrboin a thathar an dùil bho gach raon a bhith a cheart cho dùbhlach. Tha a' Chomataidh a' moladh gum bu chòir do Riaghaltas na h-Alba na cèisean càrboin airson còmhhdail agus àiteachas ath-nuadhachadh gus miann adhartais nas àirde a shealltainn.
25. Tha iomagain air a' Chomataidh nach robh cunbhalachd anns an dòigh san deach na cèisean càrboin a leasachadh. Airson grunn raointean, leithid còmhhdail, àiteachas, sgudal agus cleachdadh fearainn, bhathar a' cleachdadh mhodalan taobh a-muigh frèam a' mhodail TIMES. Cuideachd, chan eil am modal TIMES a' toirt aire air buannachdan nas fharsaing. Tha dreachd a' Phlana neo-shoilleir air dè a' bhuaidh a bha aig comas lùghdachaidh (*abatement policy*) a thaobh nam poileasaidhean a chaidh a thoirt a-steach don Phlana. Tha a' Chomataidh den bheachd gum bu chòir gum bi dòigh-obrach foirmeil agus cunbhalach airson nan cùisean seo anns a' Phlana dheireannach.
26. Tha a' Chomataidh den bheachd gu bheil e neo-shoilleir ann an dreachd a' Phlana, a thaobh nam barailean air glacadh agus stòrachadh càrboin (CCS) agus an tèid an teicneòlas seo a leasachadh agus a chur an gnìomh, am biodh roghainnean eile ann nam fàsadh e soilleir gun robh na barailean seo gun stèidh. Bu chòir don Phlana dheireannach a chur air adhart roghainn eile mar “Phlana B”.
27. Ged a tha dreachd a' Phlana a' dèiligeadh ri mar a dh'fhaodas dòigh-giùlain a bhith air atharrachadh, tha an dòigh sa bheilear a' cur an gnìomh anns na poileasaidhean is molaidhean neo-chunbhalach no air fhàgail a-mach buileach. Bu chòir don Phlana dheireannach dèiligeadh ri seo.
28. Anns na raointean eadar-dhealaichte, thathar a' cur earbsa, a rèir coltais, ann an eadar-theachdan teicneòlach. Ann am pàirtean de dhreachd a' Phlana, tha earbsa mhòr air leasachadh teicneòlasan a bhios ag iarraidh atharrachaidhean bun-structair no leasachadh a' mhargaid. Chan eil a' Chomataidh a' faireachdainn, ge-tà, gu bheil fiosrachadh gu leòr air an ìre de phlanadh is leasachadh a bhios riatanach gus seo a choileanadh

29. Tha a' Chomataidh a' creidsinn gum bu chòir don dreachd dheireannaich de Phlana Atharrachadh Cliomaid a bhith a' toirt fiosrachaidh air na toraidhean a thig bhon mhodail TIMES far a bheilear a' cleachdadh bharailean eadar-dhealaichte a thaobh fàs trafaig chàraichean agus a' cur barrachd cuideim air cleachdadh mhodhan eile airson còmhhdail.
30. Ged a tha frèam airson sgrùdadh is measadh a' nochdadh ann an dreachd a' Phlana, tha a' Chomataidh den bheachd gum bu chòir gum bi seo mar stèidh airson poileasaidh a dhèanamh, agus tha iomagain air a' Chomataidh nach eil seo ann an àite ochd bliadhnaichean an dèidh do reachdas a chur an gnìomh air brùchdaidhean càrboin a ghearradh. Tha a' Chomataidh den bheachd nach gabhadh anailis SMART a dhèanamh air a' mheasgachadh de phoileasaidhean is molaidhean a thathar a' nochdadh aig an ìre sa, agus tha a' Chomataidh a' moladh gum bu chòir do Riaghaltas na h-Alba fiosrachadh a bharrachd—fiosrachadh sònraichte agus cunbhalach—air na poileasaidhean is molaidhean uile a chur anns an dreachd dheireannaich de Phlana Atharrachadh Cliomaid agus a dhèanamh cinnteach gu bheil an dòigh san tèid cùisean a libhrigeadh soilleir.
31. Tha a' Chomataidh a' cur fàilte air an rùn aig Riaghaltas na h-Alba a bhith a' toirt aithisgean bitheanta air an adhartas a thaobh targaidean atharrachadh cliomaid a choileanadh, agus tha a' Chomataidh a' gabhail ri cuireadh bho Rùnaire a' Chaibineit airson Àrainneachd, Atharrachadh Cliomaid agus Ath-leasachadh Fearainn gu bhith a' toirt bheachdan air mar a bu chòir dhaibh a bhith air an stèidheachadh agus air an cur fo phrosbaig sgrùdaidh ann am Pàrlamaid na h-Alba.
32. A thaobh sgudail, tha a' Chomataidh a' toirt taic do ghealltanasan Riaghaltas na h-Alba gu bhith a' beachdachadh air mar a thèid aig sgeamaichean dleastanas an luchd-dèanamh a bhith air an dèanamh nas èifeachdaiche. Tha a' Chomataidh ag aithneachadh gum feum tabhartas a bharrachd a thighinn bho leasachadh an eaconamaidh chearclaich, agus tha a' Chomataidh a' moladh gum bu chòir gum bi anns an dreachd dheireannaich de Phlana Atharrachadh Cliomaid fiosrachadh mionaideach air mar a bhios seo a' cur ris na poileasaidhean is molaidhean anns an raon sgudail.
33. Tha a' Chomataidh air a dòigh gu bheil targaidean ann a tha cho miannach air adhartas airson ath-nuadhachadh fearann mònach, agus tha a' Chomataidh a' cur fàilte air na buannachdan nas fharsainghe a thig bho seo, leithid càileachd an uisge, bith-iomadachd agus cosnadh.
34. Ann am beachd na Comataidh, tha e iongantach gu bheil, a rèir coltais, car tuathal ann an gealltanas poileasaidh, a rinneadh rè àm an sgrùdaidh phàrlamaidich, gum biodh deuchainn ùrach air a dhèanamh riatanach, agus tha iomagain air a' Chomataidh a thaobh an ama agus an dòigh san do thachair seo. Tha an t-atharrachadh poileasaidh seo, mas fhìor, a' dol an aghaidh na fianaise bho Chomataidh air Atharrachadh Cliomaid, bho chom-pàirtichean

agus bho Rùnaire a' Chaibineit airson Àrainneachd, Atharrachadh Cliomaid agus Ath-leasachadh Fearainn. Tha a' Chomataidh a' moladh gum bu chòir gum bi deuchainn ùrach a bhith do-sheachanta airson fearainn leasaichte, agus bu chòir don mholadh seo a nochdadh anns a' Phlana dheireannach.

35. Tha a' Chomataidh a' moladh gum bu chòir gum bi barrachd stiùireadh agus cuideachadh ann air feadh an raoin phoblaich gu bhith a' dèiligeadh ris na cnap-starraidhean agus gu bhith a' toirt taic do cheannardas làidir air atharrachadh cliomaid.
36. Tha a' Chomataidh a' moladh gum bu chòir gum bi poileasaidhean is molaidhean air "càrbon gorm" anns an dreachd dheireannaich de Phlana Atharrachadh Cliomaid.
37. Tha planaichean aig a' Chomataidh a bhith ag ath-sgrùdadh an dreachd dheireannaich de Phlana Atharrachadh Cliomaid. Tha a' Chomataidh a' toirt fa-near gum b' e cleachdadh Riaghaltas na h-Alba a bhith a' cur air adhart am Plana deireannach ro fhosadh an t-samhraidh sa bhliadhna phàrlamaidich. Mar thoradh air na cùisean a chaidh a chomharrachadh le com-pàirtichean agus na comataidhean eadar-dhealaichte, tha a' Chomataidh a' brosnachadh Riaghaltas na h-Alba gu bhith a' toirt prìomhachas do bheachdachadh air na cùisean a chaidh a thogail rè cùrsa an sgrùdaidh an àite a bhith ag obair dìreach gu ceann-ama.
38. Tha a' Chomataidh a' dèanamh fiughair ri sgrùdadh a dhèanamh air a' Bhile Atharrachadh Cliomaid a tha ri thighinn, agus tha a' Chomataidh an dòchas gum bi am Bile a' sìneadh a-mach an ùine a tha ri fhaotainn airson Pàrlamaid na h-Alba a bheachdachadh air aithisgean air poileasaidhean is molaidhean anns an àm ri teachd. Tha a' Chomataidh cuideachd a' sireadh gealltanais bho Riaghaltas na h-Alba gum bi atharrachadh sam bith do reachdas atharrachadh cliomaid air an ath-chomharrachadh ann an dreachd ùr den Phlana.

Introduction

Foreword

39. The Environment, Climate Change and Land Reform Committee welcomes the opportunity to scrutinise the Scottish Government's draft Climate Change Plan (the third report on policies and proposals or RPP3). The Committee recognises Scotland's ambitious and world-leading efforts in the quest to reduce carbon emissions and curtail the pace of climate change. The Climate Change (Scotland) Act 2009 was an innovative step in this process and the Committee is pleased to be working to achieve the aims of this ground breaking legislation.
40. The ongoing Scottish Government commitment to tackling climate change is welcome and the Committee recognises efforts made to date, resulting in news that Scotland achieved its climate change targets for the 2014 accounting year last year¹ and the Government has sought updated advice from the Committee on Climate Change (CCC) to inform a more challenging 2020 emissions reduction goal. The Scottish Parliament has an important role in scrutinising this draft Climate Change Plan to ensure plans to reduce emissions are as strong and robust as possible. To that end, four Committees have collaborated to assess the draft Plan, emphasising the importance placed on this responsibility by the Committees of the Scottish Parliament.
41. The comments and recommendations within this report are made with the intention of seeking to ensure the final Climate Change Plan is as transparent, clear and robust as possible and can be successfully delivered. The Committee will continue to take an active role in the scrutiny of the final plan and related documents, including the monitoring and evaluation framework.
42. The Committee is grateful for the engagement and contribution of the many stakeholders who submitted evidence within a challenging timeframe. This evidence has been critical in informing the Committee's thinking.

Background

Climate Change (Scotland) Act 2009

43. The Climate Change (Scotland) Act 2009² (the Act) was passed by the Scottish Parliament in June 2009. This provides a statutory framework to

¹ Scottish Government (2016) [The Scottish Greenhouse Gas Emissions Annual Target Report for 2014](#)

² [Climate Change \(Scotland\) Act 2009](#)

reduce emissions of greenhouse gases in Scotland by setting the following targets—

- Interim target of 42% reduction (from 1990 levels) by 2020³ with the power for this target to be varied based on expert advice;
 - 80% reduction (from 1990 levels) by 2050.
44. To help ensure the delivery of these targets, the Act also requires the Scottish Ministers to set annual targets for Scottish emissions from 2010 to 2050.

First report on proposals and policies (RPP1)

45. Under section 35 of the Act, a statutory report on proposals and policies (RPP1) was required, setting out how the Scottish Government intended to meet its climate change targets from 2010-2022, including a target of 42% reduction by 2020. A draft report (RPP1) was laid in November 2010 and was subject to a 60-day period for parliamentary consideration. The draft RPP was structured around a number of chapters covering energy supply, homes and communities, business and the public sector, transport, rural land use and waste. Proposals and policies for meeting annual climate change emission reduction targets were identified for each chapter.

Parliamentary consideration of the draft RPP1

46. The draft RPP1 was considered by the Transport, Infrastructure and Climate Change (TICC) Committee, which had responsibility for scrutinising climate change matters in Session 3. The TICC Committee consulted with a number of other Committees on the draft RPP1. However, the timescale for considering and reporting was extremely challenging. The time for consideration was contracted further for those committees reporting to the TICC Committee, resulting in the Rural Affairs and Environment (RAE) Committee declining to engage in the scrutiny process. The TICC Committee appended the report of the Economy, Energy and Tourism (EET) Committee to its report but had little time to review or comment on this. In considering the draft RPP1 there was some duplication and overlap in evidence to committees and in stakeholder engagement.
47. The final Scottish Government report (RPP1)⁴, incorporating changes as a result of parliamentary scrutiny, was laid in March 2011.

³ On 25 May 2016, the First Minister [confirmed legislation will be introduced](#) to increase this target to reflect ambitions developed at the United Nations Framework Convention on Climate Change 21st session of the Conference of the Parties (COP21) in October 2015. The Cabinet Secretary for Environment, Climate Change and Land Reform has [written](#) to the Committee on Climate Change seeking renewed advice on the 2020 interim target.

Second report on proposals and policies (RPP2)

48. The draft second report on proposals and policies (RPP2) was published on 30 January 2013 and focused on how the climate change targets for 2013-2027 could be achieved. Policies and proposals were presented in a sectoral format and detailed information included in technical annexes.

Parliamentary consideration of the draft RPP2

49. In seeking to apply the lessons learned in scrutinising the draft RPP1 and to further strengthen the mainstreaming of climate change scrutiny, the Parliamentary committees with an interest in the draft RPP2 adopted a coordinated approach to scrutiny of the draft RPP2. Four parliamentary committees considered and reported on the draft report: the Rural Affairs, Climate Change and Environment Committee; the Economy, Energy and Tourism Committee, the Infrastructure and Capital Investment Committee, and; the Local Government and Regeneration Committee.
50. The final Scottish Government report (RPP2)⁵, incorporating changes as a result of parliamentary scrutiny, was published on 27 June 2013.

Draft Climate Change Plan (Draft third Report on Policies and Proposals, also known as RPP3)

Focus and scope of the draft Climate Change Plan (RPP3)

51. The draft third report on policies and proposals⁶ was published on 19 January 2017 following a Ministerial Statement⁷ from the Cabinet Secretary for Environment, Climate Change and Land Reform in the Scottish Parliament. It focuses on how the climate change targets for the period 2017-2032 can be achieved. In addition, it includes an assessment of the progress towards implementing policies and proposals in respect of the targets set out in the RPP2.

⁴ Scottish Government (2011) [Low Carbon Scotland: Meeting the Emissions Reductions Targets 2010-2022: The Report on Proposals and Policies](http://www.gov.scot/Topics/Environment/climatechange/scotlands-action/lowcarbon/rpp). This forms part of a set of publications by the Scottish Government which can be found on the Scottish Government's website at:

<http://www.gov.scot/Topics/Environment/climatechange/scotlands-action/lowcarbon/rpp>

⁵ Scottish Government (2013) [Low Carbon Scotland - Meeting our Emissions Reduction Targets 2013-2027](http://www.gov.scot/Topics/Environment/climatechange/scotlands-action/lowcarbon/meetingthetargets). This forms part of a set of publications by the Scottish Government which can be found on the Scottish Government's website at: <http://www.gov.scot/Topics/Environment/climatechange/scotlands-action/lowcarbon/meetingthetargets>

⁶ Scottish Government (2017) [Draft Climate Change Plan: The third report on policies and proposals 2017 - 2032](http://www.gov.scot/Topics/Environment/climatechange/scotlands-action/lowcarbon/meetingthetargets)

⁷ Scottish Parliament, [Official Report](http://www.parliament.scot/OfficialReport/OfficialReport), 19 January 2017, Col 52

Parliamentary procedure for consideration of the draft Climate Change Plan

52. Parliament has a period of 60 days, from the date of laying (20 January 2017⁸), in which to consider the draft Climate Change Plan (of which a minimum of 30 must be days on which the Parliament is not dissolved or in recess). It is open to any Committee to consider relevant aspects of the draft Climate Change Plan (RPP3) and report to Parliament, after which there will be a debate in the Chamber.
53. The Scottish Government will publish a final Climate Change Plan and before laying the final document before Parliament, Scottish Ministers are required to have regard to—
- any representations on the draft report made to them;
 - any resolution relating to the draft report passed by the Parliament; and
 - any report relating to the draft report published by any Parliamentary Committee.
54. The final Climate Change Plan must identify the changes (if any) that have been made in response to such representations, resolutions or reports and the reasons for those changes.

Approach to scrutiny of the draft Climate Change Plan

A co-ordinated parliamentary approach

55. Building on the experience of collaborative scrutiny of the RPP2, four Committees agreed a joint approach to reviewing the draft Climate Change Plan (RPP3). They were—
- [Economy, Jobs and Fair Work Committee](#)
 - [Environment, Climate Change and Land Reform Committee](#)
 - [Local Government and Communities Committee](#)
 - [Rural Economy and Connectivity Committee](#)
56. The Convener of the Environment, Climate Change and Land Reform Committee wrote to the Conveners of the Economy, Jobs and Fair Work Committee⁹, Local Government and Communities Committee¹⁰ and the

⁸ Scottish Parliament, [Business Bulletin](#), Other, New Documents, Monday 23 January 2017 (the document was published on 19 January 2017 but not formally laid until 20 January 2017).

⁹ [Letter](#) to the Economy, Jobs and Fair Work Committee on Scottish Parliament Scrutiny of the Draft Climate Change Plan (RPP3), 30 September 2016

¹⁰ [Letter](#) to the Local Government and Communities Committee on Scottish Parliament Scrutiny of the Draft Climate Change Plan (RPP3), 30 September 2016

Rural Economy and Connectivity Committee¹¹ to propose the adoption of a collaborative approach. The Committee received a formal response¹² from the Rural Economy and Connectivity Committee indicating it was content to proceed as proposed.

57. The approach agreed was—

- each subject committee would take the lead in scrutinising policies and proposals within its remit;
- participating committees would issue a joint call for views and would work as collaboratively as possible in relation to stakeholder communications, engagement and on media work;
- to maximise the time available for scrutiny each committee would take evidence and report separately to Parliament on issues within their remit;
- committees would seek to lodge a motion in the names of the conveners of all committees who reported on the draft RPP3 for the Chamber debate.

Subjects and themes

58. The Committees agreed to scrutinise areas of the draft Plan aligned to their remits. These were—

- **Economy, Jobs and Fair Work Committee** – Electricity generation, reducing energy demand, renewable energy (renewable electricity and renewable heat) and interconnection and grid issues and fuel poverty;
- **Environment, Climate Change and Land Reform Committee** – Overview, development of RPP3, climate change governance, (including monitoring and evaluation), water, public sector, resource use, land use (including peatlands and land use by the public sector) and behaviour change;
- **Local Government and Communities Committee** – Local government, planning and housing;
- **Rural Economy and Connectivity** – Rural affairs, agriculture, forestry, and transport.

59. The Committees agreed to focus their scrutiny on four key questions—

- progress to date in cutting emissions within the sector/sectors of interest and implementing the proposals and policies set out in the RPP2;

¹¹ [Letter](#) to the Rural Economy and Connectivity Committee on Scottish Parliament Scrutiny of the Draft Climate Change Plan (RPP3), 30 September 2016

¹² [Letter](#) from the Rural Economy and Connectivity Committee on Committee Consideration of Draft Climate Change Plan (RPP3), 6 October 2016

- the scale of reductions proposed within their sector/s and appropriateness and effectiveness of the proposals and policies within the draft RPP3 for meeting the annual emissions targets and contributing towards the 2020 and 2050 targets;
- the appropriateness of the timescales over which the proposals and policies within the draft RPP3 are expected to take effect;
- the extent to which the proposals and policies reflect considerations about behaviour change and opportunities to secure wider benefits (e.g. environmental, financial and health) from specific interventions in particular sectors.

60. The Committee welcomes the opportunity to work collaboratively with colleagues across the Parliament in scrutinising the draft Plan and in mainstreaming the consideration of climate change issues. The Committee thanks its colleagues from the Economy, Jobs and Fair Work Committee, the Local Government and Communities Committee and the Rural Economy and Connectivity Committee for their support and diligent consideration of the sectors relating to their remits.

Evidence

61. Given the interest of other committees, and to avoid duplication or gaps in the scrutiny of the draft Climate Change Plan, a joint call for evidence¹³ was issued on 19 January 2017 with a deadline for submissions of 10 February 2017. Notification of the intended call for evidence was shared with stakeholders in advance to assist with preparations and in a bid to secure as many responses as possible.
62. The Environment, Climate Change and Land Reform Committee received 76 written submissions. Details can be found at **Annexe B**.

Oral Evidence

63. The Committee agreed to hold several oral evidence sessions to gather further views on the draft Climate Change Plan. Five stakeholder sessions were held over three meetings, before the Committee took evidence from the Cabinet Secretary for Environment, Climate Change and Land Reform on the draft Plan.

19 January 2017 Draft Climate Change Plan published and the call for evidence launched

24 January 2017¹⁴ Evidence from Scottish Government officials on the overview of the draft Plan, development and structure of the

¹³ [Joint Call for Evidence](#)

¹⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017

plan, and climate change governance (including monitoring and evaluation) - the Official Report of this meeting is [available here](#).

- 31 January 2017¹⁵** Evidence from stakeholders on development and structure of the draft Climate Change Plan, overall ambition of the plan, behavioural change and climate change governance (including monitoring and evaluation issues) - the Official Report of this meeting is [available here](#).
- 7 February 2017¹⁶** Evidence from stakeholders on development and structure of the draft Climate Change Plan, overall ambition of the plan, behavioural change and climate change governance resource use, the water industry, public sector, peatlands and land use – the Official Report of the meeting is [available here](#).
- 10 February 2017** Call for evidence closed
- 21 February 2017¹⁷** Evidence from the Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham, on the overview of the draft Climate Change Plan, evidence heard to date and the proposed Climate Change Bill – the Official Report of the meeting is [available here](#).
64. Extracts of the minutes of all meetings at which the draft Climate Change Plan was considered can be found at **Annexe A**. Links to the Official Reports of the relevant meetings can be found at **Annexe B**, along with links to all the written submissions.

65. The Committee thanks all those who gave evidence to the Committee on the draft Climate Change Plan, both in person and from a distance, and is especially grateful for the adherence to tight parliamentary timescales and deadlines.
66. The Committee is also grateful to Scottish Government officials who provided briefings on the development of the draft Plan both in writing¹⁸ and in person, ahead of the publication of the draft Plan and who provided additional information during the scrutiny process.

¹⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017

¹⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017

¹⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017

¹⁸ Scottish Government (2017) [A Scottish TIMES Model: an overview](#)

Briefing on the draft Climate Change Plan

67. The Scottish Parliament information Centre (SPICe) published a briefing¹⁹ on the draft Climate Change Plan on 30 January 2017.
68. Prior to the publication of the draft Climate Change Plan, the Scottish Government provided the Committee with several briefings relating to the development of the plan—
 - a. Scottish Government approach to the development of plan²⁰
 - b. TIMES Model (the framework used to develop the plan)²¹
 - c. Behaviours and the ISM (Individual, Social, Material) tool²²
 - d. Climate conversations (engagement with stakeholders)²³

Committee stakeholder engagement

69. The Committee agreed its approach to engagement and scrutiny in September 2016.²⁴ This broad strategy supports planning of all its inquiries.
70. Being mindful of the combined effort required by the people and institutions of Scotland to reduce carbon emissions, the Committee sought to secure wide participation in its work in scrutinising the draft Climate Change Plan, while recognising the tight timescales in which it could consider external contributions.
71. To achieve this the Committee—
 - a. Contacted stakeholders in advance of the publication of the draft Plan, outlining its approach to scrutiny and notifying them of the brevity of the forthcoming call for evidence, allowing time to prepare;
 - b. Contacted stakeholders identified as potential witnesses, notifying them of the Committee's intended approach, again maximising their ability to attend and to prepare to give evidence;

¹⁹ Scottish Parliament Information Centre (2017) [Draft Climate Change Plan and Scotland's Climate Change Targets](#). SPICe Briefing SB 17/07.

²⁰ Scottish Government (2016) Briefing to the Environment, Climate Change and Land Reform Committee: [Scottish Government approach to the development of the plan](#)

²¹ Scottish Government (2016) Briefing to the Environment, Climate Change and Land Reform Committee: [TIMES Model](#)

²² Scottish Government (2016) Briefing to the Environment, Climate Change and Land Reform Committee: [Behaviours and the ISM \(Individual, Social, Material\) tool](#)

²³ Scottish Government (2016) Briefing to the Environment, Climate Change and Land Reform Committee: [Climate conversations \(engagement with stakeholders\)](#)

²⁴ Environment, Climate Change and Land Reform Committee, [Approach to Engagement and Scrutiny](#), September 2016

- c. Promoted the call for evidence via—
 - i. A coordinated social media campaign to promote the call for evidence with all four committees scrutinising the draft Plan;
 - ii. A joint press release outlining the work of the Committees on the draft Plan to highlight the call for evidence;
 - iii. A video²⁵ of the Convener introducing the call for evidence;
- d. Hosted a youth engagement event, primarily concerned with wider engagement with the Committee, but focused on climate change issues;
- e. Asked its Twitter followers what they would ask the Cabinet Secretary on the draft Climate Change Plan ahead of its evidence session with her, which was tweeted live.



**Figure 1 - Environment, Climate Change and Land Reform Committee Youth Engagement Event
24 January 2017**

²⁵ [Call for Evidence - Convener Video](#) 19 January 2017

Overview of the Draft Climate Change Plan and climate change governance

72. The following sections consider the draft Climate Change Plan as a whole and look at the extent to which it operates as a robust, transparent and accessible plan which is capable of being “owned”²⁶ by the people and institutions of Scotland. In general, the Committee believes—
- a. By referring to the report as the draft Climate Change Plan, a step change in the status and use of the document is being established. However, the content and structure of the document, as well as the policies and proposals it contains, often lack the detail required for this to be considered a “plan”, capable of being following by all organisations, bodies and individuals who will be required to act in order to ensure successful delivery. The Committee has sought to identify where additional information or detail would be helpful, for scrutiny, delivery, monitoring and evaluation.
 - b. The use of the TIMES Model represents an effort to secure a methodical, strategic approach which seeks to reduce silo thinking and secure multiple benefits across the whole of the economy. The Model seeks to achieve the least cost approach to delivering climate change objectives. However, there are issues with the use of the TIMES Model.
 - c. There is a lack of detail, for example relating to the constraints deployed during the modelling process, the actual or relative significance (in emissions) of policy outcomes and policies and proposals described. The draft Plan also lacks detail of specific measures that were considered and disregarded for example for political, economic or social reasons. This hampers the ability to robustly scrutinise the Plan.
 - d. There is inconsistency in the language used in the draft Plan to describe the policies and proposals, and in particular how SMART the policies and proposals are. In some areas the plan deals in the general, using suggestive, indefinite phrasing, rather than categorical language.²⁷ For example, to achieve a policy of “Promoting greater flexibility in the electricity sector”, a delivery

²⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 169 – 15.4.14

²⁷ An example being the agriculture sector and the Committee [raised this issue](#) with Scottish Government officials on 24 January 2017.

route of “working with industry to help them identify and develop viable business models to realise storage solutions and identify barriers for storage” is proposed. In the Transport sector, a policy to “negotiate stretching emissions standards for new cars” is proposed with a delivery route of working “with the EU and the UK Government to press for strong future emissions standards beyond those currently in place”.

- e. Policies and proposals are helpfully presented in tabular format, although the Committee has suggestions as to how these tables could be expanded. The identification of policies and proposals in tabular form is an improvement on the presentation of information in the RPP2, allowing for easier comparison of information in the future. This has been welcomed by stakeholders such as Sustainable Scotland Network.²⁸
 - f. There are several consultations on subjects such as energy and planning either running concurrently with the Parliamentary scrutiny timetable or due for publication in 2017. The Committee would welcome further clarity on how the results of these will impact on delivery of the final Climate Change Plan.
 - g. All documents relating to the draft Plan should have been published at the same time, in the same place, to allow optimal time for consideration (including the Strategic Environmental Assessment (27 January 2017) and the Element Energy Research²⁹ (31 January 2017)).
73. The following sections will expand on these observations in relation to specific chapters of the draft Plan.
74. Throughout this report, the Committee has made a series of recommendations, comprehensive summaries of which are provided at the end of each chapter of the report.

²⁸ SSN, [Written Submission](#)

²⁹ Scottish Government (2017) [Greenhouse Gas Emissions Reduction Potential in the Scottish Transport Sector From Recent Advances in Transport Fuels and Fuel Technologies](#) – 31 January 2017

Consultation

75. In its briefing to the Committee on stakeholder engagement prior to the publication of the plan, the Scottish Government stated—

“The Scottish Government values the input of stakeholders in developing plans to reduce emissions in Scotland and we are committed to the development of the Climate Change Plan being a wide participative process.”³⁰

76. However, in evidence from stakeholders and reflected in the content of the draft Climate Change Plan, it appears ambitions for wide consultation were constrained by the resource deployed and the length of time taken to establish the operation of the TIMES Model. It also appears the process of consulting with stakeholders is incomplete.³¹
77. Minutes of the Climate Change Delivery Board meeting on 27 August 2015 suggest a workstream of “phased national engagement and conversation on climate change” was in place for RPP3.³² The draft Plan states 178 people took part in 20 conversations across the country. While laudable, the Committee questions whether this level of participation matches the Scottish Government’s stated intention of ensuring the development of the plan was a “wide participative process”. Organisations such as 2050 Scotland’s Youth Climate Group stated—

“While we appreciate the direction that the Government has taken on public engagement, we do not feel that the scale of ambition and action is commensurate with what is required. We see that greater public engagement is necessary for understanding the approaches needed to guide behaviours in the direction of sustainability.”³³

78. The Committee recognises the Cabinet Secretary’s commitment to “further and deeper engagement”³⁴ in the development of the final Climate Change Plan and believes this to be essential given the volume of detailed submissions received by the Committee.³⁵ The Committee recommends the Scottish Government engage further with stakeholders and the Committee on Climate Change in finalising the Plan.

³⁰ Scottish Government (2017) [Climate Conversations](#)

³¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 25

³² Scottish Government, Climate Change Delivery Board, [Minutes of Meeting](#), 27 August 2015

³³ 2050 Scotland’s Youth Climate Group, [Written Submission](#)

³⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 42

³⁵ Written Evidence received by the Committee can be found [here](#).

79. The Committee recommends that with future reports on policies and proposals the Scottish Government undertake formal consultation with a published list of stakeholders following each future run of the TIMES Model to gather wider opinions on the suggestions and options presented by the conclusions of the run in advance of the next iteration.

Climate Conversations

80. The Scottish Government hosted a series of Climate Conversations during the development of the plan and the main findings of these are listed in the document.³⁶ While it is positive these discussions have taken place, the Committee requests information on whether any of the specific comments have been incorporated in the draft Plan.
81. Witness evidence suggested that their input had little influence on the draft Plan. For example, according to the key findings so far, public transport was a popular theme raised by participants in Climate Conversations and there was “strong support for improvements to the public transport network”.³⁷ However, at its meeting on 31 January, Dr Rachel Howell of the University of Edinburgh told the Committee—

” “One of the findings from the climate conversations was that people are very keen on improving public transport. The Government has work to do to explain that doing that is part of changing the whole transport system.”³⁸

82. She also stated—

” “The targets for some sectors, such as transport, are quite weak, because there is not enough use of behaviour change ideas and too much of a focus on technological solutions in the plan.”³⁹

83. This is one example of where there appears to be a disconnect between results of Climate Conversations and the content of the Plan.
84. The Committee notes materials⁴⁰ have been produced to allow groups to run their own Climate Conversations and send the results of this to the Scottish Government. Such initiatives are welcome, however there is no information as to how this opportunity is being promoted, if the submissions

³⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 27

³⁷ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 166

³⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 13

³⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 3

⁴⁰ Scottish Government resources on Climate Conversations and the Scotland 2030 project can be accessed here:
<http://www.gov.scot/Topics/Environment/climatechange/lowcarbonbehaviours/publicengagement>

are published and whether returns will contribute to the final Climate Change Plan. The Committee also notes there is no detail on evaluation of whether this resource is successful in engaging people in the issue of climate change. The Committee was given an example of students looking to host an event but finding the questions in the pack were not relevant to them.⁴¹

85. In evidence to the Committee, Dr Rachel Howell of the University of Edinburgh said Climate Conversations needed to take place as part of other local engagement efforts, integrating climate change into work that was already taking place and engaging people, rather than the other way round.⁴²

86. The Committee recommends the Scottish Government consider how it can best secure deeper, more meaningful and comprehensive involvement of stakeholders and the public in future reports on policies and proposals, including through utilisation of the tools and evaluation around the Climate Conversations.

87. The Committee recommends the final Climate Change Plan include further detail on how the Climate Conversations held in advance of the publication of the draft Plan have contributed directly to policy development.

Consultation with key stakeholders

88. Stakeholder input into the development of the draft Plan appears to have been mixed and to have fallen short of original ambitions.⁴³ The draft Plan outlines various events which have taken place, but does not state how the findings from these have impacted on the draft Plan. A “major cross-sector stakeholder engagement event” was held on 8 December 2016⁴⁴ but the Committee was concerned to hear⁴⁵ from Richard Dixon of Friends of the Earth Scotland the timing of the event prevented the ideas and suggestions proposed by participants (which are not detailed in the draft Plan) from being included in a meaningful way.
89. Chris Stark, Director of Energy and Climate Change, Scottish Government, said—

” “A legitimate criticism of the plan is about the extent to which each sector has been consulted in the same way. For example, we could

⁴¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 26

⁴² Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 29

⁴³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 2

⁴⁴ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 168

⁴⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 2

contrast our engagement with the renewables sector—we engage with it regularly and have a clear understanding of its needs and how it will play a role in the system—with our engagement with a very disparate sector such as the services sector. Throughout the preparation of the plan, there has been engagement with all the industrial or commercial sectors in the economy, but the extent to which we have been able to do that varies immensely according to the policy package and the strength of existing relationships.”⁴⁶

90. He added there remains much work to be done on this and the Committee would welcome confirmation in the final Climate Change Plan as to how this has been progressed.

Public sector

91. In correspondence to the members of the Public Sector Climate Leaders Forum informing them of the decision to disband the group, former Minister for Environment, Climate Change and Land Reform Aileen McLeod wrote—

” “I am also committed to ensuring that the public sector is effectively engaged in the development of the Third Report on Proposals and Policies (RPP3), a key deliverable for the Scottish Government and sector leaders in 2016.”⁴⁷

92. Throughout evidence to the Committee, both orally and in writing, stakeholders were keen to emphasise the need for partnerships and joined up working. Andy Kerr of the Edinburgh Centre for Carbon Innovation referenced the need for partnership working to deliver on ambitions throughout his evidence to the Committee on 31 January 2017 and the Scottish Environment Protection Agency’s (SEPA) written submission emphasised the importance of this.⁴⁸
93. The public sector organisations questioned by the Committee at its meeting on 7 February 2017 said they had been involved in consultation on the draft Climate Change Plan, with SEPA noting “sessions were held with us – certainly on the outputs from the TIMES Model”.⁴⁹ Matthew Bell of the Committee on Climate Change (CCC) posed questions on the extent of detail provided to public sector bodies as organisations accountable for delivering parts of the draft Plan, and how they would be held to account.⁵⁰

⁴⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 25

⁴⁷ [Letter](#) from Aileen McLeod, former MSP and former Minister for Environment, Climate Change and Land Reform, Public Sector Climate Leaders Forum, 3 February 2017

⁴⁸ SEPA, [Written Submission](#)

⁴⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 37

⁵⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 10

He also noted⁵¹ the CCC had not been consulted on the inputs and outputs of the TIMES Model during the development of the draft Plan.

94. It appears there has been some public sector involvement in considering the information provided by the TIMES Model at each stage, but this has not been comprehensive.

95. The Committee recommends the Scottish Government considers how it can ensure all sectors are engaged to the same degree in the preparation of future reports on policies and proposals.

Voluntary sector

96. The Committee received mixed reports of contributions to the development of the draft Climate Change Plan.
97. In written evidence, Stop Climate Chaos Scotland⁵² welcomed the opportunity members had to contribute to the development of the draft Plan and were cited⁵³ as an organisation which had contributed to the development of the carbon envelopes. Detail on the organisation's involvement and whether other organisations were consulted on the TIMES Model runs is lacking.
98. However, Richard Dixon of Friends of the Earth Scotland said—

” “Initially there was a big plan to have public consultation and major engagement with stakeholders, but almost none of that happened. One big stakeholder event was held in December, but most things had already been decided by then. The amount of effort that has had to go into the TIMES model has held up a number of things.”⁵⁴

99. The Committee recommends the final Climate Change Plan include information on plans to allow stakeholders, including the Committee on Climate Change, access to iterations of the TIMES Model to allow them to run scenarios through the framework.

Young people

100. The Committee was pleased to hear⁵⁵ of the specific involvement of young people in each of the Climate Conversations and in stakeholder events on

⁵¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 3

⁵² Stop Climate Chaos Scotland, [Written Submission](#)

⁵³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 4

⁵⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 2

⁵⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 24

the draft Plan. Stakeholders emphasised⁵⁶ the vital role young people should play in considering the agenda on climate change and their suggestions as to how this could be achieved. The Committee highlights these discussions to the Scottish Government and hopes they will be helpful in considering future engagement with young people.

Scottish Government consultations and publications

101. In scrutinising the draft Climate Change Plan, the Committee is aware of concurrent consultations which are worthy of note.

Draft Energy Strategy

102. The consultation on the draft Energy Strategy⁵⁷ will run until 30 May 2017. Given the ambition outlined in the draft Climate Change Plan on decarbonisation of the electricity sector, it is unclear how policies and proposals being published for public consultation at the same time as a statutory Parliamentary process will interact with the delivery of the final Climate Change Plan. While the Committee understands it would not have been possible to complete the draft Energy Strategy consultation in advance of the publication of the draft Climate Change Plan, it would welcome clarification of how the draft Energy Strategy, along with other finalised strategies and the consultation on the forthcoming Climate Change Bill, will impact on the delivery of the final Plan going forward. It is also not clear whether the results of the consultation on the draft Energy Strategy will contribute to the final Climate Change Plan and the Committee seeks clarification of this.
103. Further difficulties are posed by the fact the Strategic Environmental Assessment, the results of which are contained in the Environmental Report, for both the draft Climate Change Plan and the draft Energy Strategy is contained in one document, also open to public consultation, but to different deadlines. The deadline for comment on the draft Climate Change Plan is 20 March 2017, which is the last day of the 60-day period, meaning Parliament will not have a chance to consider the results of this as part of the draft Climate Change Plan. The draft Plan states—

“Comments on the Environmental Report in relation to the draft Climate Change Plan should be submitted within the 60-day parliamentary process so that they can be taken into account.”⁵⁸

104. The fact is however, they cannot be taken into account by the Scottish Parliament during the 60-day process. The Committee makes it clear

⁵⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 26

⁵⁷ Scottish Government (2017) [Draft Scottish Energy Strategy: The Future of Energy in Scotland](#)

⁵⁸ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 25

comments on the Environmental Report submitted to the Scottish Government have not been considered by the Committee as part of the scrutiny process of the draft Climate Change Plan. Comment on the appropriateness of a 60-day timetable for consideration of the draft Plan has been made in the **Looking Ahead: Final Climate Change Plan: Timing of Publication** section of this report.

Scottish planning system

105. The draft Plan notes the publication of a consultation on the future of the Scottish Planning System with a deadline of 4 April 2017 for responses. The Committee asked⁵⁹ Scottish Government officials about this review at the meeting of the Committee on 24 January 2017 and was told⁶⁰ by Chris Stark, Director of Energy and Climate Change, Scottish Government—

“It is immensely important to get the strategic objectives right at the outset and let the planning regime reflect them. The plan puts us in that space. As my Scottish Government planning colleagues plan for NPF4, and as part of the planning review, I hope that the strategic objectives that we have set out for the whole economy will play a much bigger role in the way in which we view the planning regime.”

106. The consultation document⁶¹ notes the next National Planning Framework will bring together strategies including the Climate Change Plan, which is welcome. However, stakeholders such as SOLACE⁶² noted the draft Climate Change Plan lacked detail on what would be required regarding planning to deliver policies on energy efficiency, highlighting the disjointed nature of the development and publication of the strategies.

107. The Committee recommends the Scottish Government reflects upon the challenges posed to Parliamentary scrutiny of running a consultation on the future of sectors within the draft Climate Change Plan in tandem with Parliamentary consideration of the draft Plan. In so far as the electoral cycle permits, consultations should be timetabled to inform the draft plans, avoiding parallel consultation and facilitating better alignment between these and parliamentary scrutiny of reports on policies and proposals.

108. The Committee recommends the final Climate Change Plan state explicitly how the results of the draft Energy Strategy consultation will contribute to the final Plan.

⁵⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 Jan, Col 28

⁶⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 Jan, Col 28

⁶¹ Scottish Government (2017) [People, Places and Planning: A Consultation on the Future of the Scottish Planning System](#)

⁶² SOLACE, [Written Submission](#)

109. The Committee recommends the Scottish Government make the relationship between the Climate Change Plan and other strategies, such as the National Planning Framework, the Infrastructure Investment Plan and the Land Use Strategy, more explicit.

Consultation - summary of recommendations

110. The Committee recognises the Cabinet Secretary's commitment to "further and deeper engagement"⁶³ in the development of the final Climate Change Plan and believes this to be essential given the volume of detailed submissions received by the Committee.⁶⁴ The Committee recommends the Scottish Government engage further with stakeholders and the Committee on Climate Change in finalising the Plan.

111. The Committee recommends—

- that with future reports on policies and proposals the Scottish Government undertake formal consultation with a published list of stakeholders following each future run of the TIMES Model to gather wider opinions on the suggestions and options presented by the conclusions of the run in advance of the next iteration.
- the Scottish Government consider how it can best secure deeper, more meaningful and comprehensive involvement of stakeholders and the public in future reports on policies and proposals, including through utilisation of the tools and evaluation around the Climate Conversations.
- the final Climate Change Plan include further detail on how the Climate Conversations held in advance of the publication of the draft Plan have contributed directly to policy development.
- the Scottish Government considers how it can ensure all sectors are engaged to the same degree in the preparation of future reports on policies and proposals.
- the final Climate Change Plan include information on plans to allow stakeholders, including the Committee on Climate Change, access to iterations of the TIMES Model to allow them to run scenarios through the framework.

⁶³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 42

⁶⁴ Written Evidence received by the Committee can be found [here](#).

- the Scottish Government reflects upon the challenges posed to Parliamentary scrutiny of running a consultation on the future of sectors within the draft Climate Change Plan in tandem with Parliamentary consideration of the draft Plan. In so far as the electoral cycle permits, consultations should be timetabled to inform the draft plans, avoiding parallel consultation and facilitating better alignment between these and parliamentary scrutiny of reports on policies and proposals.
- the final Climate Change Plan state explicitly how the results of the draft Energy Strategy consultation will contribute to the final Plan.
- recommends the Scottish Government make the relationship between the Climate Change Plan and other strategies, such as the National Planning Framework, the Infrastructure Investment Plan and the Land Use Strategy, more explicit.

Development of the draft Climate Change Plan - the approach

The TIMES Model

112. In developing the draft Climate Change Plan, the Scottish Government has used a modelling framework called the TIMES Model, described in the foreword to the draft Plan as “an international standard for modelling of greenhouse gas emission reductions and energy issues”.⁶⁵ The model has been “calibrated with Scottish data and sector intelligence”⁶⁶ and helped the Scottish Government “decide how best to reduce emissions across the whole economy, using a pathway broken down into carbon envelopes, or budgets, for each major sector. Each sector’s carbon needs are now interlinked in the modelling.”⁶⁷
113. The Scottish Government inputs a series of data and constraints into the Model, which then shows the best way to achieve pre-agreed emissions reductions for each year across each sector for the least “societal”⁶⁸ cost. The model contains “thousands of variables capturing existing and future technologies and processes”.⁶⁹ In October 2016, the Cabinet Secretary described the model as “extraordinarily useful”.⁷⁰
114. The Scottish Government provided an oral briefing for Members of the Scottish Parliament in advance of the publication of the draft Plan on the TIMES Model. This was a useful preparation for scrutiny and the Committee is grateful for this advance detail from the Scottish Government. The Committee subsequently received additional written information⁷¹ on the carbon envelope for each sector.

The TIMES Model - recommendations

115. The Committee welcomes the briefing materials and presentation provided by the Scottish Government on the TIMES Model in advance of parliamentary scrutiny of the draft Climate Change Plan. The Committee considers such advance engagement to be essential to assisting Committees prepare. The Committee recommends the Scottish Government provides information relevant to the consideration of the document, such a

⁶⁵ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 1

⁶⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 1

⁶⁷ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 1

⁶⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 4

⁶⁹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 151

⁷⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 14

⁷¹ Scottish Government (2017) [Scope of TIMES Modelling](#), 6 March 2017

methodology and structure, to the Committees of the Scottish Parliament, no later than the October recess of a preceding year.

TIMES – The right model

116. The use of the TIMES Model has been broadly welcomed by stakeholders, due to its systematic and comprehensive approach. It was described as bringing a “degree of rigour, cross-sectoral analysis and coherence”⁷² to the development of the draft Climate Change Plan. Evidence to the Committee, both in advance of and following the publication of the draft Plan highlighted advantages associated with the use of the Model, particularly the flexibility⁷³ afforded by the use of the model in terms of adjusting to changing circumstances and updating the whole approach accordingly.

117. However, the draft Climate Change Plan makes little reference as to why the TIMES Model was adopted over other such approaches to identifying carbon emission reductions. It is noted that the use of this model is consistent with the model being used at a UK level, meaning there are cost savings. However, there is a lack of information on why this model was chosen as opposed to models being used by other key players, particularly the Committee on Climate Change (CCC). The Committee has identified a number of implications associated with the use of the TIMES Model which inhibit thorough scrutiny of the draft Plan—

- The CCC does not use the TIMES Model in its analysis and forecasting work;
- Use of TIMES prevents direct read across from RPP2 to the draft Plan, posing challenges to those seeking to clearly identify progress.

118. The following sections consider each of these issues.

The Committee on Climate Change modelling framework

119. The Committee on Climate Change (CCC) does not use the same model for its assessment and predictions for Scottish progress on greenhouse gas emissions. As the independent advisors to the Scottish and UK Governments on climate change targets and progress, it would seem logical for systems used by each organisation to complement one another so as to provide opportunity for monitoring and evaluation, as well as direct comparison. Matthew Bell of the CCC told the Committee—

” “We recognise that having the Scottish Government use one set of indicators while we use a different set and perhaps somebody else uses a third set is a bit confusing. Ideally, we would all have one set of indicators

⁷² Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 5

⁷³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 16

that we agreed was the right set, and we could then have a debate about the same things. However, we would certainly come up with a set of indicators if we thought that those in the final plan were not clear enough.”⁷⁴

120. Although monitoring and evaluation will be addressed later in this report with specific reference to coordination with the CCC, it is raised in this context as the draft Climate Change Plan does not justify the use of the TIMES Model over other frameworks or possibilities.
121. The CCC’s Matthew Bell recognised that its role is to provide advice and it is for the Scottish Government to develop the policies it wishes to pursue.⁷⁵ However, the Committee is concerned the ability to clearly link the recommendations of the CCC and the policies and proposals of the Scottish Government is jeopardised by the use of different models. The Scottish Government also emphasised⁷⁶ it had relied on what the TIMES Model had suggested by way of action, rather than the CCC recommendations (although the CCC acknowledged the draft Plan arrived at “the same place” as its scenarios)⁷⁷. The Scottish Government also suggested there was strength in the divergence of approach as it provided a “valuable double check”.⁷⁸ Concerns were raised with the Committee on this approach such as—
- a. The activity expected by the CCC scenarios to achieve low carbon heat solutions focuses greater efforts over the period between now and the mid-2020s, whereas the plan proposes lower activity over this period followed by a sharp increase from 18% in 2025 to 80% by 2032;⁷⁹
 - b. Friends of the Earth Scotland⁸⁰ noted there was no detail on where the policy of 40% of new car sales being low emission vehicles by 2030 originated, when the CCC recommended 65%. In evidence to the Committee, Cabinet Secretary for Environment, Climate Change and Land Reform said⁸¹ the Scottish Government was being more conservative in its estimates and the worst outcome of this would be increased emission reduction.
 - c. The CCC noted differences between what it has envisaged for both transport and agriculture, and on the latter the Cabinet

⁷⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 14

⁷⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 6

⁷⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 29

⁷⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 2

⁷⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 29

⁷⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 11

⁸⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 10

⁸¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 25

Secretary said the “line” of the CCC had not been followed, and added: “We could not have simply gone with the straightforward approach, because it would not have given us the result that we wanted.”⁸² She described in detail the development of the carbon envelope for the agriculture sector.

122. Matthew Bell also stated the CCC had not seen the inputs to the TIMES Model and did not know whether its scenarios had been run for comparison.⁸³

Comparisons with previous RPP

123. There is also scant comparison of the advantages of using this model over the frameworks used to produce RPP1 and RPP2, meaning the lack of read across from one report to another has not been justified. The Annexe on the TIMES Model in the draft Plan does describe the limitations of the approach used for the previous RPPs and states—

” “The key limitation with this approach was that, while sectors could consider where they individually felt they could best save carbon, they could not see how the costs of their efforts compared on a consistent basis with other sectors and what the wider system impacts might be of the package of policies and proposals as a whole.”⁸⁴

124. The Committee asked the Cabinet Secretary about the contrasts between the two approaches and was told how the TIMES Model combined with decision making, accommodating a “bottom up and top down” approach to policy making.⁸⁵
125. While the Committee believes it is the right approach to consider the impacts of policy making in one area on the carbon emissions in another and to formulate a plan based on an overall picture, the TIMES Model goes so far in this respect that accounting for the impact of a change in one area becomes “impossible”.⁸⁶ The Committee questioned⁸⁷ the Cabinet Secretary for Environment, Climate Change and Land Reform on this in October 2016, with specific reference to the policy of reducing air passenger duty and sought further clarification in subsequent correspondence.⁸⁸ The Cabinet Secretary said—

⁸² Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 4

⁸³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 3

⁸⁴ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 152

⁸⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 9

⁸⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 17

⁸⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2017, Col 16

⁸⁸ [Letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Progress Towards Reducing Scotland’s Greenhouse Gas Emissions Targets, 30 November 2016

” “The point that I was trying to make is that we cannot necessarily point to A and B and say, “Those two things are inextricably linked and, because we’ve made a decision on A, we’ve had to make a decision on B.” It may not be a specific decision on B. We might say, “We’ve made a decision on A, which means that B, C, D, E and F will all have to step up a little.”⁸⁹

TIMES – The Right Model – recommendations

126. The Committee recommends the Scottish Government include details of the analysis (where it is available) undertaken of alternative modelling approaches (including the framework in place for RPP1 and 2 and the system used by the Committee on Climate Change), showing the advantages and disadvantages of each, and demonstrate the justification for choosing the TIMES Model in the final Climate Change Plan.

TIMES – Development of the carbon envelopes

127. The TIMES Model allows the Scottish Government to—

” “...decide how best to reduce emissions across the whole economy, using a pathway broken down into carbon envelopes, or budgets, for each major sector. Each sector’s carbon needs are now interlinked in the modelling.”⁹⁰

128. The carbon envelopes for each sector are included in the Plan, however little detail as to how these have been developed is included in either the Plan or in supporting documentation.

129. The section of the draft Plan on Climate Conversations states as one of the main findings “People want a transparent and consistent approach to climate change across Government”⁹¹. It is hard to marry this finding from the consultative work undertaken with the approach to the development of the carbon envelopes.

130. This poses challenges for both the committees of the Scottish Parliament and stakeholders in scrutinising the policies and proposals in the Plan as—

- The carbon envelopes for each sector are not equally challenging;
- Different modelling frameworks have been used to develop the carbon envelopes for the transport, agriculture and waste sectors;

⁸⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2017, Col 16

⁹⁰ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 1

⁹¹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 27

- There is a lack of clarity about how the sizes of the carbon envelopes for each sector are a result of the outcome of the TIMES Model or internal Scottish Government negotiation;
- The TIMES Model cannot accommodate wider benefits;
- The TIMES Model does not provide details on the costs of specific policies or proposals;
- The constraints placed on the TIMES Model can result in bursts of activity at specific points in time and the Committee heard that sudden requirements for deployment of intricate technologies appears to be an “artefact” of the use of the Model⁹²;
- The consequences of under or over-performance in one sector for the other sectors are not clear in the draft Plan;
- Unlike previous reports on policies and proposals, abatement figures have not been included for each policy and proposal due, the Committee was told, to the limits of the TIMES Model in producing this data.

131. The following sections will consider each of these issues.

Unequally challenging carbon envelopes

132. The savings required to be achieved from each sector are not consistent in their level of challenge. Agriculture and transport have been the least effective sectors in reducing greenhouse gas emissions to date and have very low targets in terms of further reductions as compared to other sectors.

133. Stakeholders repeatedly told the Committee they had anticipated and would like to see more required of these sectors and use of the TIMES Model (plus additional modelling frameworks) meant there was inequity across the sectors.

134. At the Committee’s meeting of 13 September, Lord Deben said—

” “You have been very successful in facing up to the questions from the power sector. There is less opportunity there because of the success, so transport and agriculture very clearly become the next areas to make demands of, and both are difficult.”⁹³

⁹² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 5

⁹³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 13 September 2016, Col 3

135. However, the draft Plan anticipates drastic action from the electricity sector, and smaller advances from the worst performing sectors by comparison. The graphs of anticipated abatement are re-produced here by way of comparison—

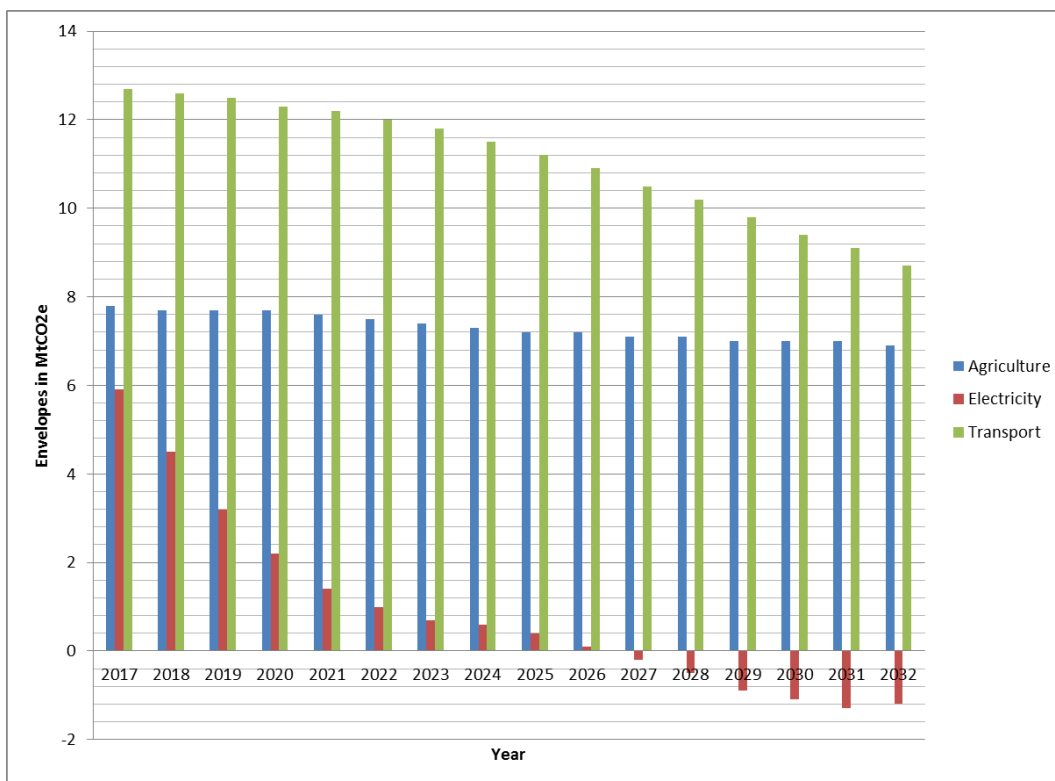


Figure 2 - Graph showing the Pathways to 2032 (envelopes in MtCO2e)

136. John Ireland, Deputy Director of Decarbonisation, Scottish Government, said in evidence to the Committee—

“The great advantage of the TIMES model is that it allows us to look at the societal cost of pushing hard. One of the clear outcomes of running TIMES was that we know that it is more difficult and expensive to reduce emissions in some sectors than it is in others. The fact that the electricity generation sector is almost decarbonised points to the low societal cost of decarbonisation of that sector in comparison with the high societal cost of similar decarbonisation in agriculture.”⁹⁴

137. The Cabinet Secretary for Environment, Climate Change and Land Reform told the Committee the carbon envelope for agriculture had been made more challenging⁹⁵ as the draft Plan was developed. However without

⁹⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 5

⁹⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 3

detailed information to support this view the Committee cannot assess whether the carbon envelope became more challenging.

138. . The Cabinet Secretary emphasised the need to create “balance”—

“We have to take account of the impact of all this and ensure that there are not consequences that none of us would wish to see.”⁹⁶

139. The Committee welcomes the holistic, whole system approach and the system for checking no unintended consequences arose.

140. However, it is concerned at the lack of detail provided in the draft Plan as to the decision making and policy development process which supplements the output of the model. In failing to provide the detailed information on the constraints placed on each TIMES Model run, the Scottish Government has made it more difficult for the Committee, and stakeholders to consider whether there were other consequences, or approaches which may have been preferable.

141. The Committee recommends the Scottish Government give further, urgent consideration as to how carbon envelopes across the final Plan could be made equally challenging.

Different modelling frameworks for different sectors

142. The TIMES Model was also not used to inform the development of the carbon envelope for all sectors, with the transport, agriculture, waste and land use sectors using different models to establish their carbon envelopes which were then incorporated into the draft Plan. On transport, the draft Plan states research⁹⁷ by Element Energy had been used to develop the envelope, while the agriculture “emissions profile was calculated exogenously⁹⁸ following discussion with sector experts and mapped into Scottish TIMES”.⁹⁹ It was confirmed to the Committee in writing, following the evidence session with the Cabinet Secretary, that the carbon envelope for waste had also been developed externally from the Model.¹⁰⁰ This raises questions as to the effectiveness of the TIMES Model approach, including identifying least cost economy wide options, if the emission envelopes for two of the largest emission sectors, and the waste and land use sector,

⁹⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 3

⁹⁷ Transport Scotland (2017) [Greenhouse Gas Emissions Reduction Potential in the Scottish Transport Sector From Recent Advances in Transport Fuels and Fuel Technologies](#)

⁹⁸ Externally – See <https://en.oxforddictionaries.com/definition/exogenous>

⁹⁹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 158

¹⁰⁰ Scottish Government (2017) [TIMES Model Waste Briefing](#)

have been pre-determined and therefore are not subject to the TIMES approach to identifying the most cost effective economy-wide pathways.

143. On 6 March 2017, the Committee received further briefing¹⁰¹ on the extent to which the TIMES Model had informed the development of the emissions pathways across the draft Plan.
144. However, given the late timing of receipt of the clarification of how waste was treated which had been sought by the Committee, it was impossible for the Committee to carry out scrutiny and to fully consider this in its report. This clarification also revealed the Land Use sector (in addition to agriculture) had also been modelled externally.
145. The Committee considers receiving such significant briefings following the conclusion of its evidence taking to be very unhelpful. Furthermore, it believes that information of material importance to its consideration of the draft Plan should have been contained in the Plan itself.

146. The Committee recommends the Scottish Government ensures the extent to which the TIMES Model and related external models were used for each sector is made clear in the final Plan.

147. It is unclear why these different modelling frameworks were used and what the impact of using these has been, specifically whether there is a causal link between this and the vast difference between what these sectors are expected to achieve and the carbon envelopes for the other sectors. What factors have driven this difference in approach and what role did “decisions on intersectoral trade offs”¹⁰² play?

Agriculture

148. The Committee on Climate Change (CCC) noted¹⁰³ in its 2016 progress report there has been little reduction from the agriculture sector and more will need to be done to achieve this.
149. The first briefing¹⁰⁴ provided by the Scottish Government on the TIMES runs states with respect to agriculture—

¹⁰¹ Scottish Government (2017) [Scope of TIMES Modelling](#)

¹⁰² Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 161

¹⁰³ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016

¹⁰⁴ Scottish Government (2017) [TIMES Model Constraints Briefing - 1](#)

” “A review of the Marginal Abatement Cost Curve for Agriculture (which measures the cost of additional reductions in emissions in the sector) identified the need to ensure measures comply with regulatory requirements, such as restrictions on GMO and Health and Safety legislation. As a result, non-energy agriculture (primarily biological) emissions were calculated off model.”

150. It is not clear to the Committee whether this means—

- TIMES is not capable of considering Health and Safety requirements (which has implications for all other sectors);
- GMO (genetically modified organisms) and Health and Safety legislation requirements produced unappealing results so a decision was taken to use a different modelling system.

151. The Cabinet Secretary told the Committee—

” “An assessment was made on the marginal abatement cost curve, which is about the extent to which, as one attempts to abate, the gains reduce until they are really very small. We had to look at that aspect. The approach was not planned to be used as a model for calculating emissions, because it describes measures at farm level, which cannot be delivered through policy—agriculture is a particular area—and because some measures would be undesirable for reasons to do with health and safety and other aspects of farming.”¹⁰⁵

152. The second briefing¹⁰⁶ on constraints on the TIMES Model states that in October 2016—

” “A revised trajectory for agriculture was incorporated following extensive review by sector experts to better reflect achievable abatement within the sector.”

153. This raises several issues—

- The draft Plan does not include detail of the experts involved in the review of the agriculture emissions profile that was added into the TIMES Model;
- The draft Plan does not include detail of whether the carbon envelopes for other sectors were informed by expert advice.

154. The Committee considers there has been an inconsistency in the process and recommends the final Climate Change Plan should include a list of the

¹⁰⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 4

¹⁰⁶ Scottish Government (2017) [TIMES Model Constraints Briefing - 2](#)

sector experts involved in reviewing the initial emissions trajectory for agriculture and the development of the carbon envelope for the sector and provide information on the changes made as a result of that advice to ensure transparency.

155. The Committee recommends experts consulted on other sectors of the draft Plan should also be listed in the final document, along with how advice provided impacted on the development of policies and proposals.

156. As the TIMES Model is considered to be a “whole system” framework, it is hard to see why one sector should be singled out on the basis of “farm level”. For example, it raises questions as to what difference there is between “farm level” and “individual small business level” or “household level” when considering recycling and waste disposal behaviours the draft Plan seeks to achieve.

157. The Committee posed questions¹⁰⁷ to the Cabinet Secretary on why a sectoral approach was taken for the specific cases of agriculture and transport, and was told it was connected with the marginal abatement curve and the need to begin with a position rooted in reality. The Committee is concerned that this suggests a lack of aspiration and, as the reality is agriculture and transport are not making sufficient progress, a lack of assessment of whether the status quo is good enough.

158. The Committee is concerned the draft Plan’s goals for the agriculture sector do not meet the ambitions of the CCC or stakeholders, and therefore the Committee questions whether this is related to creating the carbon envelope outwith the TIMES Model framework. The Cabinet Secretary said—

“Analysis by agriculture officials concluded that we could get fairly reasonable emissions reductions through policy interventions.”¹⁰⁸

159. The Committee does not believe that the weight of the challenges posed by climate change can be met by “fairly reasonable” emissions reductions from any sector.

160. The Committee recommends the Scottish Government consider how it could achieve ambitious, rather than “reasonable”, emissions reductions in the agriculture sector as recommended by the Committee on Climate Change and include policies and proposals reflecting this in the final Plan.

¹⁰⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 7

¹⁰⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 4

Transport

161. Richard Dixon of Friends of the Earth Scotland described TIMES inability to consider transport to the Committee—

“The initial plan was for the TIMES model to include its own transport model, so that it would be able to suggest sophisticated transport choices. However, because of time and complexity, that did not prove possible. It now takes input from Transport Scotland’s transport model, which means that the level of sophistication of the policy analysis is up to Transport Scotland—and it does not look like that analysis is very sophisticated. What has been fed in is that, up to 2035, road kilometres driven will increase by about 23 per cent; however, over the past decade, they have increased only by about 4 per cent, so the assumption that has been made is already a very big one.”¹⁰⁹

162. The modelling underpinning the draft Plan is contained within the Element Energy research¹¹⁰ published by Transport Scotland, after the publication of the draft Climate Change Plan, and shows an anticipated rise demand for use in all classes, aside from buses, with a 27% increase in cars by 2035, 26% increase in vans and 25% increase in trucks over the same period.

163. In evidence to the Rural Economy and Connectivity Committee on the development of the carbon envelope for transport, Humza Yousaf, Minister for Transport and the Islands said the increase in road kilometres was a forecast, rather than a target¹¹¹, and suggested interventions outlined in the draft Plan could reduce this assumption.

164. On development of the transport envelope outwith the TIMES Model, the Cabinet Secretary for Environment, Climate Change and Land Reform stated—

“What we and Transport Scotland have used to look at transport is research from Element Energy, which was published just after the publication of the draft climate change plan and is available for people to look at. It provided more detail than TIMES, and because the projections for emissions reductions were broadly consistent with the output from TIMES, that research is what has been adopted.”

165. A logical conclusion to draw from this is again that a different model was used to achieve a different result, again compromising the strength of the whole system approach and supporting the view there is a lack of action proposed in the transport and agricultural sectors of the draft Plan. This is

¹⁰⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 13

¹¹⁰ Transport Scotland (2017) [Greenhouse Gas Emissions Reduction Potential in the Scottish Transport Sector From Recent Advances in Transport Fuels and Fuel Technologies](#)

¹¹¹ Rural Economy and Connectivity Committee, [Official Report](#), 22 February 2017, Col 37

further exacerbated by evidence from the Committee on Climate Change (CCC).

166. In evidence to the Committee, Matthew Bell of the CCC said—

” “A big source of transport emissions is not passenger vehicles but lorries, heavy goods vehicles and vans.”¹¹²

167. He was asked about projected vehicle miles in 2030 and in subsequent evidence¹¹³, Matthew Bell stated—

” “Our scenarios are based on similar levels of overall change in vehicle kilometres (i.e. around 25% between 2015 and 2035) but the modelling that we have used suggests a different breakdown of that across different types of transport compared to the breakdown that underpins the CCP. Our modelling suggests less growth in passenger vehicle and HGV kilometres driven but more growth in vans (to get to around 25% overall) compared to the work in the Scottish Government’s scenarios (which has higher growth in passenger car kilometres, and correspondingly lower growth in other categories).”

168. Richard Dixon of Friends of the Earth Scotland added—

” “According to the information that we were shown at the stakeholder event in December about the starting assumptions going into the TIMES model—including the 23 per cent increase in car kilometres that I mentioned—the figure for buses was absolutely static; there was no change at all. Moreover, trains, walking and cycling did not appear on the chart, so there seems to have been no thinking about them.”¹¹⁴

169. In evidence to the Committee, the Cabinet Secretary for Environment, Climate Change and Land Reform said—

” “I think that my point was that the increase in transport demand is driven by the economy, not by commuters. As a result, the balance is much more in the direction of commercial transport than the kind of personal transport that people automatically think about in relation to managing transport demand.”

170. The Committee then highlighted the alignment between the position of the Cabinet Secretary and the CCC, despite the latter’s position that individual passenger vehicle transport had been overestimated—

¹¹² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 8

¹¹³ Committee on Climate Change, [Written Submission](#)

¹¹⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 14

” **Mark Ruskell:** what you are suggesting is similar to what the UKCCC has suggested in its modelling, and that does not seem to have been reflected in the baseline chosen to be fed into the TIMES model.

” **Roseanna Cunningham:** That is because we are using the work that has been done by Element Energy to ensure that the best possible information goes into the model for Scotland.

” **Mark Ruskell:** Okay. I think that it would be useful to get clarification on why the modelling that you have put forward for the TIMES model, from the Element Energy report, differs from that produced by the UKCCC. It seems that you are on the same page with regard to not wanting to overestimate passenger vehicle numbers but, on the face of it, you have overestimated those numbers—unless, of course, there is a very good reason for that in the modelling that is not transparent to the committee.”

171. The Committee proposes this clarity be included in the final Climate Change Plan.

172. The Committee recommends the final Climate Change Plan include clarification as to the reason why the traffic growth assumptions used in the Element Energy research to inform the plan differ from the assumptions that the Cabinet Secretary for Environment, Climate Change and Land Reform referred to and the CCC have used in their own analysis.

173. The Committee recommends the Scottish Government should increase the extent of the carbon reduction envelopes for both transport and agriculture, and adopt more challenging policies and proposals for each, which should incorporate, and be informed by, the behavioural change research it has undertaken.

Waste

174. The Annexes to the draft Climate Change Plan includes details of how the TIMES Model operates and the baseline information which was fed into the model. Data sources are provided for each sector, with the exception of waste. The Committee was provided with information on the constraints placed on the TIMES Model throughout the development of the draft Plan which stated—

” **BASELINE DATA:** Initial review of input data with sectoral policy teams concluded that the model structure should be altered to allow waste emissions to be separately identified from industrial emissions.

” **MODELLING IMPROVEMENTS & POLICY ISSUES:** Modelled **landfill** emissions incorporated as an exogenous [external] input into TIMES. The

use of waste for energy inputs into other processes was also restricted to reflect policies to reduce waste and increase recycling.”

175. From this, it is not apparent which parts of the waste envelope were modelled within TIMES and which were not, and the Committee sought further detail. The Committee was told during the drafting of this report that—

” “The waste trajectory was modelled exogenously and entered as an input into the model. This is consistent with the approach adopted in the Agriculture and Transport sectors.”¹¹⁵

176. The Committee considers the timing and manner in which this information was disclosed to be unhelpful to the Parliamentary scrutiny process. It was disappointed to learn that another sector had not been modelled within the TIMES framework and it was further frustrated that this detail is not explicitly laid out in the draft Plan.

177. The Committee strongly believes that all sectors should be considered consistently within the same model framework. The Committee is of the view that making exceptions may compromise the integrity of whole system operation of the TIMES Model by placing an undue burden on those sectors which were included in the Model.

178. However, while the Committee would wish to see all sectors considered consistently in the final Plan the Committee recognises the process of developing the Plan using the TIMES Model is advanced. As a minimum, in the final Plan the Scottish Government should provide further information explaining the reasons why the particular emission envelopes were arrived at, the range of policy outcomes that were considered and dismissed, the reason for this and clear information on the expected emissions impact associated with each policy and proposal, both considered and eventually included.

179. In future the Committee recommends all sectors, policies and proposals are consistently considered within the same model framework and the detail on the development of these be equally extensive.

Transparency of development of the carbon envelopes

180. The general lack of detail in the Plan on how policies will be achieved and on the policy constraints placed on the TIMES Model creates problems in assessing whether the envelopes have been developed on the basis of policies and their likely success, or were pre-agreed and the subject of

¹¹⁵ Scottish Government (2017) [TIMES Model Waste Briefing](#)

negotiation within the Scottish Government. The process of running TIMES is shown graphically, the final stage being “decisions on intersectoral trade offs”¹¹⁶, a stage in the process described in evidence to the Committee as a “key weakness”¹¹⁷.

181. The Cabinet Secretary for Environment, Climate Change and Land Reform was asked¹¹⁸ directly about the “trade offs” associated with carbon envelopes. Rather than provide specific examples of where trade-offs had been made and how they impacted the final version of the draft Plan, she listed considerations in such discussions such as economic factors, carbon leakage, social justice and co-benefits without confirming their relevance to a progression of individual policies. The Committee would consider it helpful were such information to be included in the final Plan. She also asserted to the Committee the agriculture carbon envelope had become more challenging throughout the development of the draft Climate Change Plan.¹¹⁹

182. The Committee is concerned that there is no transparency around these decisions, despite the appetite for disclosure¹²⁰ uncovered by the Scottish Government engagement work. In evidence to the Committee, Chris Stark, Director of Energy and Climate Change in the Scottish Government, said there had been consensus on the parameters of each carbon envelope, adding this had been the result of a collective decision making process. He said—

” “The position has been collectively agreed by the various cabinet secretaries.”¹²¹

183. John Ireland, Deputy Director of Decarbonisation, Scottish Government, noted—

” “The TIMES model was our key driver in determining envelopes. The cabinet secretary took the information to the Cabinet sub-committee for discussion, and the sub-committee took the TIMES runs and balanced them against deliverability issues, social welfare issues such as fuel poverty, and the need to maintain economic growth. As the Cabinet sub-committee discussions proceeded, and there was modification of the initial TIMES run, that moved us towards a proposal for a Cabinet discussion.”

¹¹⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 161

¹¹⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 4

¹¹⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 1

¹¹⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 3

¹²⁰ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 27

¹²¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 5

184. Although the Committee sought detail of the discussions which had led to modifications in each TIMES run, this was not provided to an extent which allows the Committee to follow what was produced by the TIMES Model and discarded.
185. Prior to the publication of the draft Plan, the Convener of the Environment, Climate Change and Land Reform Committee suggested¹²² it would be helpful for the Plan to contain detail of “what has been looked at and discarded and to have an understanding of why those things have been discarded” with regard to policies to change behaviours. This was also raised¹²³ with the Committee with regard to the Strategic Environmental Assessment¹²⁴, further flagged as an area in which the Committee would take an interest. Despite this, such information has not been included in the draft Plan or in the information sought by the Committee on the audits of the TIMES runs. As the basis of development of the carbon envelopes includes discussions and decisions to which the Committee has not been made privy, scrutiny becomes challenging and it is difficult to present an informed view.
186. The Committee has previously found it difficult¹²⁵ to understand the discussions and decisions which have taken place within the Scottish Government on policies which will affect carbon emissions and on what basis these decisions are made, and this continues to be the case. Although it is clear the TIMES Model supports collective decision making in a comprehensive manner, what is not known is the extent to which the advice produced from a run of the TIMES Model has been overridden by “the priorities of each of the cabinet secretaries”.¹²⁶
187. The fact the TIMES Model has not been consistently applied to inform the emission envelopes across sectors and that the emission envelopes for several sectors making the least progress in reducing emissions have not been derived from the TIMES process, and the anticipated reductions from these sectors are lower than other sectors is a cause of concern to the Committee.

188. The Committee recommends the final Plan clarifies for each sector the extent to which the size of the carbon envelopes are based on abatement

¹²² Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 12

¹²³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 18

¹²⁴ Scottish Government (2017) [Draft Climate Change Plan: The Draft Third Report on Policies and Proposals 2017-2032 Draft Scottish Energy Strategy: The Future of Energy in Scotland Strategic Environmental Assessment Environmental Report](#)

¹²⁵ [Letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Progress Towards Reducing Scotland’s Greenhouse Gas Emissions Targets, 30 November 2016

¹²⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 4

data or are a reflection of other factors such as Scottish Government internal negotiation and clearly states where trade-offs have been made.

Accommodation of wider benefits

189. The TIMES Model starts from the perspective of the economy, which considering the urgency required to address climate change and the multitude of other benefits to be derived from action in this area (such as the eradication of fuel poverty, health improvement and increased biodiversity), causes the Committee to conclude TIMES should have been formally supplemented with a structured and consistent approach to considering wider benefits or formed just part of a policy making package which took a wider view.

190. Matthew Bell of the Committee on Climate Change (CCC) said—

“The TIMES model is a very good, transparent and rigorous framework for considering a certain set of questions. However, in coming up with a plan, we need to take advantage of a wider range of evidence.”¹²⁷

191. For example, it is unclear whether other factors such as health were ranked equally with the economy in the modelling process. The Committee considers that this may have secured greater efficiencies as well as maintaining prosperity.

192. Using air quality (consistently raised with the Committee during its evidence taking sessions) or active travel as examples, as they are highlighted in the Annexe D on stakeholder engagement in developing the draft Plan¹²⁸, the Committee questions whether analysis has been undertaken of the economic advantages to be gained through better health and the corresponding increased productivity of the population? Can the TIMES model accommodate such thinking? Such questions were posed in evidence¹²⁹ to the Committee in advance of the publication of the draft Plan and during oral evidence¹³⁰ and raised with the Scottish Government as part of the oral evidence taking process.

193. It was stated the model cannot accommodate “non-carbon”¹³¹ benefits, and while extensive research has been published on these, the application of this as part of a “judgement process”.¹³² Although the wider benefits to be

¹²⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 5

¹²⁸ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 169

¹²⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 20 September 2016, Col

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¹³⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 16

¹³¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 11

¹³² Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 11

achieved did not have a formal role in the operation of the TIMES Model, the Committee was told they were in the minds of decision makers as each TIMES run was executed (each time modifying the constraints). The Committee considers there is potential for TIMES to be supplemented on a more formal basis with further detail and stakeholders told the Committee work was needed on this.¹³³ For example, the Sustainable Scotland Network¹³⁴ submission called for horizontal and vertical incorporation of the final Climate Change Plan in public sector delivery, and for better incorporation of wider benefits associated with urban trees and greenspaces.

194. While the Committee considers the use of the TIMES Model to be a potential advance in climate change policy making, it is concerned by the limitations of the framework in considering wider benefits and believes these could be mitigated by the creation of a more formal structure supplementing the use of the Model. While the “top down” approach has progressed, there is still work to do on the “bottom up” to ensure considerations such as behaviour change and wider benefits have equal status with the outputs of TIMES. The Committee recommends a formalised approach is adopted to consider wider benefits.

Budget

195. In response to questioning following her Ministerial Statement on the Draft Climate Change Plan, the Cabinet Secretary for Environment, Climate Change and Land Reform stated the “cost relative to gross domestic product for the whole of Scotland, and it comes in at about 2 per cent of GDP”.¹³⁵ It is unclear whether costs and budget lines associated with each policy and proposal are not included as a result of the use of TIMES. The inclusion of the corresponding budget for each policy and proposal (for the Scottish Government and public agencies involved) would be helpful.

196. However, the Committee was heartened to hear in evidence¹³⁶ that the Scottish Government considers it reasonable to set out what is required to reduce carbon emissions and for budget to be allocated accordingly in the future, rather than the opposite way round.

197. The Committee noted the scale of ambition was ambiguous if clear financial figures were not applied to policies which involved funding a particular project or scheme. It understands the entire cost of a policy may come from various budgetary lines due to the whole system nature of the development.

¹³³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 16

¹³⁴ Sustainable Scotland Network, [Written Submission](#)

¹³⁵ Scottish Parliament, [Official Report](#), 19 January 2017, Col 56

¹³⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 13

However, Chris Stark, Director of Energy and Climate Change, Scottish Government, said “Where we are clear on how a policy will work, we are clear on the costs of that policy”.¹³⁷ The Committee suggests this clarity could be shared through the final Climate Change Plan.

198. The Committee recommends the final Climate Change Plan include the proposed funding available for policies and proposals where a fund, grants or loan scheme has been proposed.

199. The Committee recommends further budget information should be provided in the final Climate Change Plan and the clarity advocated by Chris Stark¹³⁸ on the cost of policies be included in the final document.

Rate of action

200. The role of the TIMES Model in the sudden pace of action required was raised with the Committee by stakeholders¹³⁹ and the Committee on Climate Change (CCC).¹⁴⁰

201. Matthew Bell said in evidence to the Committee—

“Modelling in the Scottish plan seems to have held low-carbon heat very constant between now and the mid-2020s and ramped it up all of a sudden. I go back to what I said earlier. That sort of thing is an artefact of a model that implicitly does the type of learning between now and 2025 that I talked about and then decides the technology that we can really ramp up quickly. In the real world, our understanding of the broader evidence is that we need to put in place programmes that will create that understanding as well as saving carbon between now and the mid-2020s in each of the three areas such that we can ramp up.”

202. In response to questioning on the subject, the Cabinet Secretary for Environment, Climate Change and Land Reform, commented on process behind adoption of new technologies and said—

“When something new appears, it is very expensive because demand for it does not necessarily exist. Only a small number of people adopt it because it is very expensive. The general term for those people is “early adopters”. The technology will then begin to spread out a bit further as more people buy it, and there will be a point at which its price will fall so

¹³⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 13

¹³⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 13

¹³⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 17

¹⁴⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 5

markedly that its uptake will go up quite significantly. That can happen quite quickly; it will not necessarily be spread out over a very long time.”¹⁴¹

203. In response to further questioning on assumptions about the rate of change made for sector such as heat, which would require significant infrastructural development to achieve, the Cabinet Secretary emphasised the reliance on CCC advice and future uncertainties surrounding the use of the gas network.
204. While recognising the Cabinet Secretary’s analysis of the adoption of new technologies and the pace at which this may happen, the Committee is concerned that some of these will require much more advance planning in order to ensure the infrastructure required is in place and the markets and manufacturers are ready for introduction. The Committee would welcome a level of detail on this not currently included in the draft Plan.

205. The Committee recommends the final Climate Change Plan include greater detail on planning for the implementation of policies or technologies which will require significant infrastructural changes and market development, and the steps to be taken by researchers, manufacturers, public and private organisations and the Scottish Government in advance of the introduction of new technologies on which parts of the draft Plan are heavily reliant.

Land Use Strategy

206. In evidence to the Committee, witnesses and the Cabinet Secretary for Environment, Climate Change and Land Reform confirmed the TIMES Model was not capable of accommodating the holistic approach contained in the Land Use Strategy. While this issue is fully explored in the **Sectors: Land Use and Peatlands: Land Use Strategy** section of the report, it is included here to highlight the fact the TIMES Model is not capable of considering a key requirement of the Climate Change (Scotland) Act 2009.

Consequence of performance of one sector on the other sectors

207. It was unclear to the Committee from the foreword of the draft Plan whether progress or lack thereof in an area of the economy would have a knock-on effect in other sectors. The foreword to the draft Plan states:

” “If one sector over or under performs against our expectations, we can now model the knock-on impact on emissions savings required from other sectors of the economy in the future.”¹⁴²

¹⁴¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 10

¹⁴² Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 1

208. This point was raised with both the Scottish Government officials¹⁴³ and the Cabinet Secretary for Environment, Climate Change and Land Reform.¹⁴⁴

209. John Ireland, Deputy Director of Decarbonisation, Scottish Government, suggested this depended at what point in the progress of the report an assessment was made. This is now known to be annually, as the draft Plan proposes an annual monitoring summary report, yet the response was very unclear as to whether an underperforming sector could be bolstered by good work in other areas.

210. The Cabinet Secretary said—

” “If we thought that a particular sector was underperforming—or rather, overperforming—it is not likely that we would say that someone else was off the hook. We have looked across the board at what we are expecting. Over-performance could be a bonus, rather than being used as an offset.”¹⁴⁵

211. The Cabinet Secretary further told the Committee—

” “I guess that there will be times when we discover that some areas are not performing as we had anticipated, but that is where the monitoring comes in to ensure that performance is brought up, rather than offset. That is how we would prefer to do it.”

212. The Committee welcomed this clarification but would welcome confirmation in the final Climate Change Plan that over performance in one area will not simply become “part of the mix”¹⁴⁶ when future TIMES Model runs are executed as part of monitoring and refinement work.

213. The Committee previously sought details¹⁴⁷ from the Cabinet Secretary for Environment, Climate Change and Land Reform on how the TIMES Model accommodated policy inputs which were known to increase emissions, such as a decrease in air passenger duty (APD), and whether it showed where the effects of this were across the other sectors. From the response¹⁴⁸ and subsequent evidence¹⁴⁹, it appeared it was not possible to identify using the TIMES Model where the effects are, and the level of the effect, when a particular constraint is applied. It is difficult to then assess whether this is an appropriate course of action. This issue is addressed in the **TIMES – Policies, Proposals and Assumptions: Abatement**

¹⁴³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 2

¹⁴⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 2

¹⁴⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 2

¹⁴⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2017, Col 16

¹⁴⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2017, Col 16

¹⁴⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 17

¹⁴⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 17

Figures. However, it is raised in this context to highlight the Committee's view on the need for clarity on this in the final Climate Change Plan.

214. The Committee recommends the clarity articulated by the Cabinet Secretary that over or under performance in a sector will not impact on the carbon envelopes or expectations of other sectors should be provided in the final Climate Change Plan.
215. The Committee recommends the final Climate Change Plan should make it clear how performance will be measured and how successes in some areas will not allow struggling sectors to reduce their efforts at future TIMES Model runs.
216. The Committee recommends the Scottish Government address the lack of transparency over the development of the carbon envelopes for each sector in the final Climate Change Plan, including explicitly stating which sectors, either wholly or in part, were considered outwith TIMES Model.

Independent review of TIMES

217. The Committee recommends an independent assessment of the use of the TIMES Model in a Scottish context be commissioned following the publication of the final Climate Change Plan and the results should form part of the development of the next report on policies and proposals.

TIMES – Development of the carbon envelopes - summary of recommendations

218. The Committee recommends the Scottish Government give further, urgent consideration as to how carbon envelopes across the final Plan could be made equally challenging.
219. The Committee recommends the Scottish Government ensures the extent to which the TIMES Model and related external models were used for each sector is made clear in the final Plan.
220. The Committee considers there has been an inconsistency in the process and recommends the final Climate Change Plan should include a list of the sector experts involved in reviewing the initial emissions trajectory for agriculture and the development of the carbon envelope for the sector and provide information on the changes made as a result of that advice to ensure transparency.
221. The Committee recommends sector experts consulted on other sectors of the draft Plan should also be listed in the final document, along with how advice provided impacted on the development of policies and proposals.

222. The Committee recommends the Scottish Government consider how it could achieve ambitious, rather than “reasonable”, emissions reductions in the agriculture sector as recommended by the Committee on Climate Change and include policies and proposals reflecting this in the final Plan.
223. The Committee recommends the final Climate Change Plan include clarification as to the reason why the traffic growth assumptions used in the Element Energy research to inform the draft Plan differ from the assumptions that the Cabinet Secretary for Environment, Climate Change and Land Reform referred to and the CCC have used in their own analysis.
224. The Committee recommends the Scottish Government should increase the extent of the carbon reduction envelopes for both transport and agriculture, and adopt more challenging policies and proposals for each, which should incorporate, and be informed by, the behavioural change research it has undertaken.
225. The Committee strongly believes that all sectors should be considered consistently within the same model framework. The Committee is of the view that making exceptions may compromise the integrity of whole system operation of the TIMES Model by placing an undue burden on those sectors which were included in the Model.
226. However, while the Committee would wish to see all sectors considered consistently in the final Plan the Committee recognises the process of developing the Plan using the TIMES Model is advanced. As a minimum, in the final Plan the Scottish Government should provide further information explaining the reasons why the particular emission envelopes were arrived at, the range of policy outcomes that were considered and dismissed, the reason for this and clear information on the expected emissions impact associated with each policy and proposal, both considered and eventually included.
227. In future the Committee recommends all sectors, policies and proposals are consistently considered within the same model framework and the detail on the development of these be equally extensive.
228. The Committee recommends the final Plan clarifies for each sector the extent to which the size of the carbon envelopes are based on abatement data or are a reflection of other factors such as Scottish Government internal negotiation and clearly states where trade-offs have been made.
229. While the Committee considers the use of the TIMES Model to be a potential advance in climate change policy making, it is concerned by the limitations of the framework in considering wider benefits and believes these could be mitigated by the creation of a more formal structure supplementing the use of the Model. While the “top down” approach has progressed, there

is still work to do on the “bottom up” to ensure considerations such as behaviour change and wider benefits have equal status with the outputs of TIMES. The Committee recommends a formalised approach is adopted to consider wider benefits.

230. The Committee recommends the final Climate Change Plan include the proposed funding available for policies and proposals where a fund, grants or loan scheme has been proposed.
231. The Committee recommends further budget information should be provided in the final Climate Change Plan and the clarity advocated by Chris Stark¹⁵⁰ on the cost of policies be included in the final document.
232. The Committee recommends the final Climate Change Plan include greater detail on planning for the implementation of policies or technologies which will require significant infrastructural changes and market development and the steps to be taken by researchers, manufacturers, public and private organisations and the Scottish Government in advance of the introduction of new technologies on which parts of the draft Plan are heavily reliant.
233. The Committee recommends the clarity articulated by the Cabinet Secretary that over or under performance in a sector will not impact on the carbon envelopes or expectations of other sectors should be provided in the final Climate Change Plan.
234. The Committee recommends the final Climate Change Plan should make it clear how performance will be measured and how successes in some areas will not allow struggling sectors to reduce their efforts at future TIMES Model runs.
235. The Committee recommends the Scottish Government address the lack of transparency over the development of the carbon envelopes for each sector in the final Climate Change Plan, including explicitly stating which sectors, either wholly or in part, were considered outwith TIMES Model.
236. The Committee recommends an independent assessment of the use of the TIMES Model in a Scottish context be commissioned following the publication of the final Climate Change Plan and the results should form part of the development of the next report on policies and proposals.

¹⁵⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 13

TIMES - Policies, proposals and assumptions

Abatement figures

237. The draft Plan provides abatement data (expressed as million tonnes of carbon dioxide equivalent or MtCO₂e), by year, for each sector over the period 2017-2032. The draft Plan does not provide disaggregated data on the emission reductions associated with each policy outcome, policy or proposal within each sector.
238. The Committee seeks clarity on whether the TIMES model attributes quantifiable information on the abatement associated with policy measures or policy outcomes within each sector. If this total is not available, how is the overall total arrived at?
239. Unlike previous reports on policies and proposals, abatement figures have not been included for each policy and proposal due to the limits of the TIMES Model in producing this data. Scottish Government officials suggested such figures are less useful in the context of using the TIMES Model because the point of the model is to understand the operation of the system as a whole.
240. However, abatement figures are presented for each carbon envelope, but not for individual policies. The draft Plan states—

” “Attributing abatement to any one sector is problematic when considering the whole energy system. For instance, does a reduction in electricity demand in one sector equate to abatement for that sector or for the electricity generation sector? Similarly does an increase in electric vehicles result in emissions abatement from transport, an increase in demand from the generation sector or a reduction in emissions from refineries? TIMES addresses this challenge by taking a system-wide view.”

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241. The draft Plan also includes the following on verification—

” “In the absence of abatement numbers, the verification of the projected emissions consequences of a particular policy or proposal will be provided by the results of the monitoring framework and the greenhouse gas inventory. The monitoring framework will thus describe if the policy outcome has occurred (from the policy package) as projected and the

¹⁵¹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 22

inventory has to show if overall emissions have reduced for the relevant sector as anticipated.”¹⁵²

242. In a written answer, the Cabinet Secretary stated—

” “In the draft Plan, instead of abatement numbers, the verification of the projected emissions of a particular policy or proposal will be provided by the delivery of the policy outcomes – real life changes on the ground, such as penetration of low emission vehicles.”¹⁵³

243. Fabrice Leveque of WWF Scotland noted the lack of abatement figures made the link between policy outcomes and policies weak, stating—

” “It is hard to add up all the policies to see whether they equal the policy outcome and, in turn, whether that outcome matches the envelope for each sector. That is a big problem with the plan’s credibility.”¹⁵⁴

244. Richard Dixon of Friends of the Earth Scotland said—

” “Clearly, the TIMES model has added up all the numbers to produce the overall graphs and numbers, but we are not being shown the numbers that attach to each policy. As has been suggested, that makes it hard for us to interrogate whether the numbers are credible; we might look at them and think that they are too small or too big and too ambitious.”

245. The monitoring framework for the draft Climate Change Plan is not included in the document, making it hard to assess whether it will achieve verification of the emissions consequences. Detailed commentary on this point is provided in the section on **Monitoring and Evaluation** later in this report.

246. However, it is referenced here in the context of the claim the approach which omits abatement detail is “stronger, and more transparent”¹⁵⁵ than the approach used for the previous RPPs. The Committee cannot confidently agree as it has no way of scrutinising this due to the lack of detail provided for the creation of policies and delivery routes (see below), and the absence of the monitoring framework describing assessment of each action point.

247. Furthermore, abatement figures for each sector have been provided in the draft Climate Change Plan and it would be sensible to assume the policies and proposals in each sector had figures attached in order to add up to the

¹⁵² Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 22

¹⁵³ Official Report, Written Answers, 15 February 2017, [S5W - 06879](#)

¹⁵⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 4

¹⁵⁵ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 22

totals suggested for each sector or the overall total suggested across the system.

248. However, in evidence to the Committee John Ireland, Deputy Director of Decarbonisation, Scottish Government, stated—

” “When TIMES is being used, that data does not exist.”¹⁵⁶

249. However, further commentary contradicted this statement. For example, John Ireland said some data existed in relation to transport and the Cabinet Secretary later undertook to provide this information for peatlands and forestry.¹⁵⁷ She stated doing so would be “complex”. The Cabinet Secretary also said in evidence to the Committee—

” “However, although behaviour change is important, the truth is that it will not offer anywhere near the same amount of abatement as advances in vehicle technology can. That is just a fact.”¹⁵⁸

250. The Committee asks that the evidence behind this be included in the final Climate Change Plan.

251. This statement suggests figures exist for both the abatement anticipated in the draft Plan from behaviour change interventions and from the penetration of low emission vehicles, the subject of the discussion in which John Ireland, Deputy Director of Decarbonisation, Scottish Government, suggested the data did not exist.

252. It is unclear to the Committee whether abatement information across the piece cannot be quantified or just has not yet been quantified because it is difficult to do so.

253. John Ireland further stated in evidence to the Committee—

” “That is a very different way of thinking; it is not that we are dodging the issue. If we have a set of policies that produce the outcome of a certain level of penetration of electric vehicles, that will contribute to emissions reductions. The TIMES model is the validating mechanism for making sure that all those things add up.”

254. There are two issues with this approach—

- The raw data of inputs and outputs to the TIMES Models, the audits requested by the Committee, are not available for public scrutiny so cannot be validated. The

¹⁵⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 7

¹⁵⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 38

¹⁵⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 24

Committee was consistently told the TIMES Model did the sums, but it once again requests publication of the constraints and raw data fed into the TIMES Model;

- The “contribution” to emissions reductions of the penetration of electric vehicles cannot be assessed according to the Scottish Government so the “level” of reduction is not “certain”.

255. The Committee recommends each policy outcome, policy and proposal should contain information on the emissions reductions in MtCO₂e they are expected to achieve. The lack of abatement figures makes it difficult to assess the gravity of the consequences associated with a lack of progress or huge leaps in delivery of one particular policy or the significance of securing progress towards implementing a proposal. The Committee recommends that, accepting it is difficult to ascertain, this information is a vital measure of the success of a policy and should be included in the final Climate Change Plan.

Constraints

256. The draft Climate Change Plan explains in detail the initial data which was fed into the TIMES Model to establish a “base year”, the starting point used by the model. It goes on to note this was followed by engagement with sector experts and government officials, before each sector was presented with its final carbon envelope. In this section, the process of scrutinising these steps will be considered.
257. The draft Climate Change Plan describes the process of developing the draft Plan using the TIMES Model, noting at each stages where constraints were placed on the model. While the baseline data used is listed, constraints and the subsequent results at each run are not.
258. Stakeholders, such as WWF¹⁵⁹, noted the importance of knowledge of the constraints used in order to scrutinise the draft Plan, while others such as Friends of the Earth Scotland described the omitted information as “frustrating”.¹⁶⁰
259. In evidence to the Committee, Scottish Government officials described the process of running scenarios through the TIMES Model and analysing the results. The Committee was told the audits of the constraints used at each stage were available and could be published.¹⁶¹ It later provided sectoral¹⁶² and chronological¹⁶³ briefings on the development of the carbon envelopes,

¹⁵⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 5

¹⁶⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 6

¹⁶¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 10

¹⁶² Scottish Government (2017), [TIMES Model Constraints \(Sectoral\)](#), 28 February 2017

¹⁶³ Scottish Government (2017), [TIMES Model Constraints \(Chronological\)](#), 28 February 2017

which while helpful, did not represent the level of detail anticipated by the Committee or the audit information which was withheld. Throughout its evidence session with Scottish Government officials, the Committee was provided with helpful information about precisely what had been modelled, for example on aviation.¹⁶⁴ However, the fulfilment of the commitment to provide the audits of constraints was less detailed than the original offer suggested. The Committee would have appreciated lists, and associated results, of the type of detailed policy Scottish Government officials provided in person. It would increase the Committee's confidence in the final Climate Change Plan were this information publically available.

260. The Committee's role is to scrutinise the draft Climate Change Plan and to ascertain whether the policies and proposals, as well as the overall governance of the issue, are sufficiently robust to achieve emissions reductions. In evidence to the Committee, the Cabinet Secretary suggested the Committee could not be provided with raw data on different outcomes from different TIMES Model runs because—

“We could do a run that does two or three of those things at the same time. I am not sure, however, that that would get us very much further forward. All it would do is present the committee with an even bigger headache because it would have to work out which of the plans was most realistic. In a sense, we have done that. The RPP is the most realistic plan.”¹⁶⁵

261. The Committee's role is to determine whether this draft Plan is realistic, but without the data requested or field of comparison, it cannot determine whether this is, or is not, *the most realistic Plan*.

262. The Committee recommends the Scottish Government publish the audits (the inputs, constraints, assumptions and results) of each TIMES Model run in full, including the data used to ascertain the cost to the system of removing carbon capture and storage, in the final Climate Change Plan.

Assumptions

Assumptions – Bioenergy and Carbon Capture and Storage

263. The draft Plan bases much of the strategy to decarbonise the electricity sector on the successful implementation of bioenergy with carbon capture and storage (CCS).

¹⁶⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 18

¹⁶⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 20

264. In the Electricity Sector, Policy Outcome 2 includes a policy of “Encouraging the demonstration and commercialisation of Carbon Capture and Storage in Scotland”¹⁶⁶.

265. While the Committee is supportive of the objectives relating to the successful implementation of carbon capture and storage it recognises that there are significant assumptions in achieving this and it is unclear what will happen if this is not achieved.

266. When asked in January 2017, Colin MacBean of the Scottish Government was able to quickly identify the system costs of not securing CCS as £3.5 billion.

” “We have run a model without carbon capture and storage for the power sector, and the implication of that is that the system cost rises significantly, by around **£3.5 billion**.”¹⁶⁷

267. In February 2017, he said—

” “As we have said previously, we looked at model runs without CCS. Exactly as the cabinet secretary said, it is possible to achieve the climate change targets without CCS, but it becomes significantly more expensive. Taking CCS capability away from the power sector, for example, was raising our system costs by around **£6.5 billion**. For that reason, we kept CCS in the mix; it is part of our low-cost solution.”¹⁶⁸

268. Although the Scottish Government has subsequently confirmed to the Committee the initial figure is the correct one¹⁶⁹, two matters arise from this—

- The Committee considers the cost to be significant were the implementation of CCS to be unsuccessful;
- The TIMES Model has been run without this assumption, but has not been run without involvement in the European Emissions Trading Scheme¹⁷⁰ (ETS)(See the **Assumptions – Policy Making at a UK and European (EU) level** section of this report), suggesting not all assumptions have been tested to allow for Plan B scenarios to be developed.

¹⁶⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 45

¹⁶⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 15

¹⁶⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 15

¹⁶⁹ Letter from Colin MacBean, Scottish Government, [Clarification of Evidence on CCS](#), 6 March 2017

¹⁷⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 13

269. Aside from these issues, stakeholders questioned whether the timescales indicated for securing negative emissions from the electricity sector through the operation of bioenergy and CCS were realistic.¹⁷¹ The UK Committee on Climate Change (CCC) noted that—

” “The Scottish plan appears to have BECCS coming in in around 2027, which is earlier than in our scenarios and very quick, given where David Stewart suggested that we are today. In fleshing out the draft and coming up with the final plan, the Scottish Government needs to consider whether the next decade is a realistic time period in which to get something up and running that involves not just the carbon capture and storage technology but the negative emissions technology, given the levers that the Scottish Government has and the decisions that might need to be made at a UK or even a European level.”¹⁷²

270. Andy Kerr of the Edinburgh Centre for Carbon Innovation similarly suggested that

” “One of my big concerns about the assumptions relates to the electricity sector. The assumption there is that, by 2027, we will have negative emissions, which implies that we will have biomass, or bio-energy, that is being both carbon captured and stored within 10 years. That is an incredible assumption.”¹⁷³

271. WWF Scotland questioned whether the rate of action was necessary when there are other actions which could be taken in sectors such as agriculture and transport where very little is expected.¹⁷⁴

272. The Cabinet Secretary for Environment, Climate Change and Land Reform sought to assuage the fears of the Committee and stakeholders in this area and detailed¹⁷⁵ her discussions and interactions with the UK Government which suggested confidence was justified in this area.

273. Chris Stark, Director of Energy and Climate Change, Scottish Government was also positive about the credibility of the inclusion of CCS in the draft Plan and said—

” “I think that it is an optimistic view, but then again I am optimistic.”¹⁷⁶

¹⁷¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 7

¹⁷² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 7

¹⁷³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 9

¹⁷⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 9

¹⁷⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 13

¹⁷⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 15

274. The Committee does not have the evidence to enable it to concur with the view of the Scottish Government regarding the credibility of CCS in the draft Plan and recommends it would be helpful for the final Plan to include further evidence and data (where available) on why the Plan is so reliant on this.

Assumptions - Policy making at a UK and European Union (EU) level

275. The level of policy making which will determine it accompanies each policy in the draft Climate Change Plan. For many of these, UK and EU policy are cited as being influential on the success of the particular policy.

Outcome of the referendum on the UK's membership of the European Union

276. With regard to how the outcome of the referendum on the UK's membership of the European Union would affect the development of targets and the draft Climate Change Plan, the Cabinet Secretary said "We are proceeding as if the timetable that we have at the moment is the one that will prevail"¹⁷⁷. In subsequent correspondence¹⁷⁸, the Committee sought details of discussions which had taken place at an EU level to mitigate this uncertainty and in developing the draft Climate Change Plan. However, the responding letter¹⁷⁹ did not address this point, and there is no detail in the draft Climate Change Plan on whether policies have been informed by discussions with counterparts in Europe.

277. While recognising the level of uncertainty surrounding the issue at a UK level, the Committee acknowledges stakeholder concerns¹⁸⁰ at the number of policies which are considered to be influenced by EU policy and the lack of accompanying detail on what will happen in the event of the UK leaving the EU.

278. Previous evidence from the Cabinet Secretary suggests that although there is still much uncertainty surrounding the UK's future relationship with Europe, the Scottish Government still maintains the ability to act. The Committee will continue to engage with the Scottish Government on these issues as the situation develops.

¹⁷⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 5

¹⁷⁸ [Letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Progress Towards Reducing Scotland's Greenhouse Gas Emissions Targets, 30 November 2016

¹⁷⁹ [Letter](#) from the Cabinet Secretary for Environment, Climate Change and Land Reform on Progress Towards Reducing Scotland's Greenhouse Gas Emissions, 16 December 2017

¹⁸⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 7

European Emissions Trading Scheme

279. In October 2016, the Cabinet Secretary for Environment, Climate Change and Land Reform told the Committee it was vital to “glean some information” on how the EU Emissions Trading Scheme (ETS) would proceed, adding “We are trying to assess the areas where we rely on EU legislation to support targets, and we are going to have to take account of that as far as possible. However, I suspect that the current uncertainty is going to play out for a little bit longer”¹⁸¹. The draft Climate Change Plan details how the ETS has been dealt with by the TIMES Model and states in a footnote—

” “The impact of the UK’s exit from the European Union on the role of emissions trading is not factored into the draft Plan, since the UK Government has not yet commenced negotiations with the EU, and has not yet taken a position on the UK’s future relationship with the EU Emissions Trading System. The EU ETS remains a fundamental part of UK and Scottish climate change legislation. Powers exist under the Climate Change Act 2008, to create emissions trading schemes in the UK.”¹⁸²

280. The draft Plan also notes—

” “The EU ETS is, however, expected to continue to contribute to Scotland’s emission reductions post-2020. This approach is consistent with that taken in RPP2.”¹⁸³

281. In evidence to the Committee, Matthew Bell of the Committee on Climate Change cited this as an important area of EU policy which would have to be considered in the future with regard to climate policy making.¹⁸⁴

282. The Cabinet Secretary for Environment, Climate Change and Land Reform underlined the assumption of continued involvement in the ETS in her responses to questions on the subject.¹⁸⁵

Negotiations on vehicle emissions at an EU Level

283. A further example of this offered by Matthew Bell was negotiations on vehicle emissions¹⁸⁶ as the draft Plan includes a policy of—

¹⁸¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 4

¹⁸² Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 20

¹⁸³ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 20

¹⁸⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 7

¹⁸⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 13

¹⁸⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 7

” “With the EU and UK, negotiate stretching emission standards for new cars (and vans) beyond 2020 (and 2021).”¹⁸⁷

Research required to execute the draft Plan and Membership of the European Union

284. The issue of implications of the result of the referendum on the UK’s membership of the European Union was raised¹⁸⁸ in connection with the technologies and associated research inherent in the successful delivery of the Plan. Chris Stark, Director of Energy and Climate Change, Scottish Government said—

” “We have not made a specific assessment in that area—although I plan to do so—but we have considered our interaction with the European institutions and what would happen if some of the existing rules or legislation were not to be there. We have been doing our homework. Once we are clearer on how some of those issues will pan out, the Scottish Government will have a clearer position.

At the moment, we have mostly looked at the body of European law. I know that my colleagues elsewhere in the Scottish Government have considered the interaction with the innovation funding and other European funding programmes, and the interaction on energy and climate issues is big. We have begun an assessment of the implications of Brexit, but we have not written that into the draft plan. I expect that to happen—that will be the team’s next task.”¹⁸⁹

285. The Committee believes the results of this assessment must be contained in the final Climate Change Plan.

Negotiations with the UK Government

286. There are also instances in the draft Plan where the policy is to negotiate with the UK Government¹⁹⁰ to achieve a desired outcome. However, there is no information provided on what will happen if specific outcomes are not achieved and what the back-up plan will be.
287. It is unclear how the Scottish Government has taken account of the UK Government’s forthcoming emissions reduction plan and any policies therein which may impact on the draft Plan or represent an opportunity for efficiencies around the UK.

¹⁸⁷ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 73

¹⁸⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 19

¹⁸⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 20

¹⁹⁰ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – examples on page 68 (negotiate stretching emissions standards for new cars with the EU and UK) and 69 (negotiate an emissions standard for heavy goods vehicles from 2025).

288. The Committee recommends the final draft of the Climate Change Plan includes an alternative (Plan B) option for those policies where the EU and the UK policy making will carry significant weight. Given the concerns raised particularly about the bioenergy and CCS assumptions the Committee recommends that a Plan B option that does not rely on this technology in the timescale anticipated is developed. It further recommends that this Plan B option should set out what can be done within domestic efforts to achieve the policy outcomes.
289. The Committee emphasises the need for information to be provided on discussions which have taken place at an EU and UK level in the development of the final Climate Change Plan, future targets and the anticipated Climate Change Bill and recommends the Scottish Government include specific details on this in the final Plan.

Assumptions – Other

290. Throughout the draft Plan, it is clear assumptions have been made as starting points for policy making. For example, increased car use¹⁹¹, leading to the conclusion these should be electric.¹⁹² However, these are not explicitly labelled or described in the draft Plan and the Committee considers it would be useful for these to be detailed.

TIMES – Policies, proposals and assumptions – summary of recommendations

291. The Committee recommends each policy outcome, policy and proposal should contain information on the emissions reductions in MtCO₂e they are expected to achieve. The lack of abatement figures makes it difficult to assess the gravity of the consequences associated with a lack of progress or huge leaps in delivery of one particular policy or the significance of securing progress towards implementing a proposal. The Committee recommends that, accepting it is difficult to ascertain, this information is a vital measure of the success of a policy and should be included in the final Climate Change Plan.
292. The Committee recommends the Scottish Government publish the audits (the inputs, constraints, assumptions and results) of each TIMES Model run in full, including the data used to ascertain the cost to the system of removing carbon capture and storage, in the final Climate Change Plan.
293. While the Committee is supportive of the objectives relating to the successful implementation of carbon capture and storage it recognises that

¹⁹¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 14

¹⁹² Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 2

there are significant assumptions in achieving this and it is unclear what will happen if this is not achieved.

294. The Committee does not have the evidence to enable it to concur with the view of the Scottish Government regarding the credibility of CCS in the draft Plan and recommends it would be helpful for the final Plan to include further evidence and data (where available) on why the Plan is so reliant on this.
295. Previous evidence from the Cabinet Secretary suggests that although there is still much uncertainty surrounding the UK's future relationship with Europe, the Scottish Government still maintains the ability to act. The Committee will continue to engage with the Scottish Government on these issues as the situation develops.
296. The Committee recommends the final draft of the Climate Change Plan includes an alternative (Plan B) option for those policies where the EU and the UK policy making will carry significant weight. Given the concerns raised particularly about the bioenergy and CCS assumptions the Committee recommends that a Plan B option that does not rely on this technology in the timescale anticipated is developed. It further recommends that this Plan B option should set out what can be done within domestic efforts to achieve the policy outcomes.
297. The Committee emphasises the need for information to be provided on discussions which have taken place at an EU and UK level in the development of the final Climate Change Plan, future targets and the anticipated Climate Change Bill and recommends the Scottish Government include specific details on this in the final Plan.

Behaviour change

298. The chair of the Committee on Climate Change (CCC), Lord Deben, emphasised the importance of behavioural science to the Committee at its meeting on 13 September 2016 and Lord Deben said: “If I were your committee, I would press the Scottish Government to look more closely at behavioural science”¹⁹³.

ISM Model

299. The Committee questioned the Cabinet Secretary for Environment, Climate Change and Land Reform on 25 October and was told¹⁹⁴—

” “Work is being done with policy makers and key stakeholders using the individual, social and material—or ISM—tool, which involves facilitated workshops that take account of the behavioural aspects of the climate change plan policies.”¹⁹⁵

300. The Cabinet Secretary added: “What I can say is that a summary of the work that we are doing will be published alongside the draft plans, so you will see some of the specific work that is being done on behavioural change. You might find that interesting.”¹⁹⁶

301. The draft Climate Change Plan contains a section in Annexe B on the use of the Individual, Social and Material (ISM) tool and notes ISM workshops were hosted¹⁹⁷ to consider behaviours. The Committee welcomes the publication of this information along with the draft Climate Change Plan. However, the Committee notes the following challenges in relation to scrutinising this area of the draft Plan—

- The lack of information on how the results of the workshops have contributed to the policies and proposals contained within the draft Plan;
- There is an emphasis on individual choice, rather than on creating the conditions which will produce unconscious and instinctive behaviours.

Results of the workshops in the plan

302. It is unclear how the workshops and the resulting data have contributed to the draft Plan as this is not provided. As the Cabinet Secretary predicted, the Committee would find it interesting and helpful to see what arose from

¹⁹³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 13 September 2016, Col 8

¹⁹⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 23

¹⁹⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 11

¹⁹⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 11

¹⁹⁷ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 163

each of the ISM Model workshops. It would also be useful if each policy and proposal contained an indication of the impact of these workshops. The Committee heard the use of ISM was welcome but it had not been applied well and ambitions for behaviour change were weak¹⁹⁸ throughout the draft Plan.

303. A dichotomy exists between the stated aims and intentions in the Annexe on the ISM model and how this work has translated into the Plan. For example, a list of the ideas and solutions generated by the workshop on housing is provided¹⁹⁹ including suggestions on the ease of use of heating controls. Similarly, John Ireland, Deputy Director of Decarbonisation, Scottish Government, said—

“We can invest in new heating systems, but individuals might have difficulty in using them or might use them in ways that do not achieve the energy efficiency or carbon reduction that is wanted.”²⁰⁰

304. However, Dr Rachel Howell of the University of Edinburgh noted the disconnect²⁰¹ between these and what is included in the draft Plan in the Residential Section. She emphasised lack of policy to reduce heat demand, car use, air travel demand and meat/dairy consumption in the plan, again demonstrating the disconnect.

Emphasis on individual choice

305. There is an emphasis in the policies and proposals in the plan on individual choice.
306. Stakeholders suggested there appears to be a presumption that individuals will make choices based on wanting to prevent climate change, rather than on the other factors which will affect their decision making, despite Scottish Government assertions that the issue should be viewed in a holistic way.²⁰² Dr Rachel Howell²⁰³ and Richard Dixon on Friends of the Earth Scotland²⁰⁴ described this in detail to the Committee at its meeting on 31 January 2017 in relation to car use, noting there was a lack of policies in the plan (such as work place parking levies) which were cheap and would discourage car use.

¹⁹⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 3

¹⁹⁹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 165

²⁰⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 26

²⁰¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 20

²⁰² Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 27

²⁰³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 11

²⁰⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 12

307. Dr Howell said people make decisions based on their current circumstances, and not on “alternative universe”²⁰⁵ good intentions of tackling climate change. However, policy making seems to be at odds with this approach.

308. In June 2016, the Cabinet Secretary told²⁰⁶ the Committee—

“I am not going to run away from the challenge of persuading people that they should not have constant and immediate resort to their cars. That is a harder argument to make with individuals who are very keen on the broad approach but less keen when it comes to them personally. There are areas in which I suspect that the message might be a little more difficult to get across, but get it across we must. That will be part of what we do going forward.”

309. However, at its meeting on 25 October 2016, the Cabinet Secretary was asked about how the Government could change attitudes with regard to travel and to encourage use of alternatives to private car use. The response was concerned with investment in the rail network, accompanied by an observance that “it will be extremely difficult to get people away from car use”²⁰⁷. In February 2017, the Cabinet Secretary said—

“One could argue that that means switching away from using any cars, even electric vehicles. Is that where we want to be? In the short to medium term, those two actions will help to reduce transport emissions but, in the longer term, are we realistically going to get people to not have even electric vehicles? I do not know if the committee would look at that as being realistic.”²⁰⁸

310. If reducing the number of journeys taken by car is the ultimate goal, it has been argued that this cannot be done by adjusting or even improving other choices alone as people will not make decisions, such as opting to use public transport, based on wanting to improve the climate. Instead, the problematic choices must be addressed at the source. By way of example, the draft Climate Change Plan makes assumptions about increased car use and promotes switching to electric vehicles, rather than attempting to make private car use less attractive.²⁰⁹ It attempts to accommodate this in a more climate friendly manner rather than accept that use of private vehicles needs to reduce (even if difficult) and propose policies which would make it an inconvenient option. The Cabinet Secretary for Environment, Climate Change and Land Reform provided an example²¹⁰ of the closure of the

²⁰⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 18

²⁰⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 28 June 2016, Col 9

²⁰⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 15

²⁰⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 19

²⁰⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 2

²¹⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 16

Forth Road Bridge in winter 2015 forcing car users to consider alternative forms of transport, demonstrating drastic, bold and ambitious action may be the easiest route to reduced resort to private vehicles.

311. Although acknowledging it is difficult to dissuade people from using vehicles, the Committee agrees with the Cabinet Secretary this is an area which must be tackled and welcomes the suggestions from stakeholders as to how this could be achieved. The Cabinet Secretary previously told the Committee “The transport Minister will need to address precisely how we can achieve that shift”²¹¹ in the draft Climate Change Plan, and the Committee considers this should be included in the final Plan.
312. Stakeholders also highlighted how quickly difficult policy decisions affecting behaviours can become accepted. Dr Rachel Howell said—

” “The other important point to make is that there is a difference between policies being unacceptable before they are introduced and being accepted afterwards. The perfect example of that is the London congestion charge. If we were to look at a graph of attitudes towards it, we would see that before it was brought in, the majority of people were against it. As soon as it was brought in, the levels in the graph swapped over: the charge was accepted, although it had not been acceptable. I think that policies like the ones that we are discussing are likely to show that kind of pattern”²¹²

313. She later added—

” “If we make car use a lot less attractive and a lot more difficult, that will change people’s behaviours. They might not like it to begin with, but there will be a lot of co-benefits that they will like.”²¹³

314. The behaviour changes effected by the smoking ban and mandatory seat belt use were discussed as further examples.²¹⁴

315. The Committee recommends the science of behaviour change be better reflected in the policies included in the final Climate Change Plan, including on the specific examples raised with this Committee on modal shift.

316. The Committee recommends a run of the TIMES Model is produced to supplement the final Climate Change Plan which emphasises alternative car traffic growth assumptions and greater emphasis on modal shift.

²¹¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 16

²¹² Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col

²¹³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 21

²¹⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 9

317. The Committee recommends the final Climate Change Plan should include detail of “precisely” how modal shift can be achieved, with particular emphasis on the role of policies to influence behaviour change.

Comprehensiveness of the behaviour change workshops

318. The Plan also states—

” “We will test the ISM approach later in 2017 as a potential way to engage the public on policies and policy development.”²¹⁵

319. There is also a stated intention to host a further workshops based on the workshop which took place on housing, details of which are included in the Plan.²¹⁶ It is unclear to the Committee how the findings of these workshops will influence policy and there are no timescales provided as to whether these will influence the final Climate Change Plan or forthcoming legislation. It also unclear as to whether workshops took place on each sector²¹⁷ included in the draft Plan, raising questions as to the comprehensiveness of the approach.

320. The Committee recommends each policy and proposal in the final Climate Change Plan should contain detail of how data on behaviour change has contributed to its development and that greater emphasis should be placed on this important area, as suggested by the Committee on Climate Change.

321. The Committee recommends that ISM information is used more consistently throughout the final Plan and emphasis is given to creating the conditions that support behavioural change.

Technology

322. A consistent message to the Committees undertaking scrutiny of the draft Climate Change Plan has been a reliance on technology, rather than behaviour change, to reduce carbon emissions.

323. In 2016, the Committee heard from Professor Sue Roaf, who in the context of housing, said—

²¹⁵ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 27

²¹⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 165

²¹⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 24

” “Scotland should lead the world in seeking a new generation of approaches to find solutions that do not require more and more machines, more and more products and more and more energy use.”²¹⁸

324. In evidence to the Committee, Colin MacBean, Head of Energy and Climate Change Analysis, Scottish Government, told the Committee—

” “Where we are pushing forward low-carbon electricity, the model forces us to build the technologies to supply that electricity and we are checking that the transmission system is capable of dealing with those flows, so that we do not have at the back of our minds the unanswered question about what happens when we electrify transport or how far we can electrify heat before we start to run into large unexpected costs. That is why we have been able for the first time to put an overall value to society on the whole package of measures, which is the figure that you will have seen referenced in the briefing and the document itself, at around 2 per cent of cumulative gross domestic product, running forward.”²¹⁹

325. Andy Kerr of the Edinburgh Centre for Climate Change said²²⁰—

” “I think that it is inevitable that the type of modelling framework that we are discussing ends up looking like a technocratic approach. If we as a country are going to deliver 60 per cent-plus emissions reductions by 2030 and onwards, we cannot do that just by using technologies and a top-down Scottish Government approach. We have to build much more effective partnerships with cities, businesses and so on. That is what is missing: partnerships with the stakeholders who are going to deliver the measures. We will pick up on some of the issues around behaviour change later.”

326. WWF Scotland also noted that the rate of change required in some policy areas which relied on technology, such as heat, did not provide developers with consistent, gradual growth in the markets²²¹ and Andy Kerr of the Edinburgh Centre for Carbon Innovation highlighted the rate of change which market forces already had to accommodate.²²² The organisation also advocated²²³ a three-pronged approach to behaviour change – information, incentives and regulation, with the latter representing the hardest area to make progress in and therefore where focus should be aimed. Jo Green of

²¹⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 20 September 2016, Col 37

²¹⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 9

²²⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 5

²²¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 17

²²² Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 22

²²³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 22

SEPA provided an example of where regulation (fixed penalties) had been instrumental in meeting recycling targets.²²⁴

327. The Cabinet Secretary for Environment, Climate Change and Land Reform also gave weight to the importance of technological advances but said the Government had adopted a more conservative estimate as to the adoption of new technologies with regard to low carbon vehicles than the Committee on Climate Change.²²⁵

Education

328. The Committee previously commented on the role of education in both mitigation²²⁶ and adaptation²²⁷ to climate change. The Committee received written submissions highlighting the significant role of education in behaviour change, sentiments which the Committee concurs with.

329. The Committee notes that tackling climate change is currently embedded within Curriculum for Excellence and believes the impact of this on behaviour change should be monitored and evaluated.

Behaviour change – summary of recommendations

330. The Committee recommends the science of behaviour change be better reflected in the policies included in the final Climate Change Plan, including on the specific examples raised with this Committee on modal shift.
331. The Committee recommends a run of the TIMES Model is produced to supplement the final Climate Change Plan which emphasises alternative car traffic growth assumptions and greater emphasis on modal shift.
332. The Committee recommends the final Climate Change Plan should include detail of “precisely” how modal shift can be achieved, with particular emphasis on the role of policies to influence behaviour change.
333. The Committee recommends each policy and proposal in the final Climate Change Plan should contain detail of how data on behaviour change has contributed to its development and that greater emphasis should be placed on this important area, as suggested by the Committee on Climate Change.

²²⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 20

²²⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 24

²²⁶ [Letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Progress Towards Reducing Scotland’s Greenhouse Gas Emissions, 30 November 2017

²²⁷ [Letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Scotland’s Climate Change Adaptation Programme – Committee on Climate Change Independent Assessment, 9 December 2016

334. The Committee recommends that ISM information is used more consistently throughout the final Plan and emphasis is given to creating the conditions that support behavioural change.

335. The Committee notes that tackling climate change is currently embedded within Curriculum for Excellence and believes the impact of this on behaviour change should be monitored and evaluated.

Additional benefits

336. The draft Climate Change Plan has benefitted in development from additional research into the wider benefits to society associated with reduced carbon emissions. Each section of the draft Plan contains reference to the wider benefits anticipated to derive from the successful delivery of the policies and proposals. The Committee was pleased to hear²²⁸ of the Scottish Government's concern to take into account wider, non-carbon, benefits of the actions proposed by the draft Plan, and understanding the TIMES Model could not accommodate these, commissioned additional evidence for consideration at each TIMES run.

337. Three research studies have been produced focussing on different sectors—

- a. Evidence Review of the potential Wider Impacts of Climate Change Mitigation Options: Agriculture, Forestry, Land Use and Waste sectors²²⁹
- b. Evidence Review of the Potential Wider Impacts of Climate Change Mitigation Options: Built Environment Sector²³⁰
- c. Evidence Review of the Potential Wider Impacts of Climate Change Mitigation Options: Transport sector²³¹

338. In evidence, the Scottish Government emphasised there was no formal cost benefit analysis undertaken of wider effects and the **TIMES – Development of the Carbon Envelopes: Accommodation of wider benefits** section of this report provides further commentary on how these could have been accounted for.

²²⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 11

²²⁹ Scottish Government (2017) [Evidence Review of the potential Wider Impacts of Climate Change Mitigation Options: Agriculture, Forestry, Land Use and Waste sectors](#)

²³⁰ Scottish Government (2017) [Evidence Review of the potential Wider Impacts of Climate Change Mitigation Options: Agriculture, Forestry, Land Use and Waste sectors](#)

²³¹ Scottish Government (2017) [Evidence Review of the Potential Wider Impacts of Climate Change Mitigation Options: Built Environment Sector](#)

Monitoring and evaluation

339. The draft Climate Change Plan outlines the framework which will be used for monitoring and evaluation of the policies and proposals contained in the draft Plan which is a welcome inclusion. The information contained in the framework has been described to the Committee as “building blocks”²³² and “well thought out”²³³, although the lack of detail was also acknowledged.²³⁴
340. However, the Committee is disappointed this section of the Plan is not yet fully developed and there has been limited opportunity for the Committee to scrutinise how effective this will be. It has been eight years since the Climate Change (Scotland) Act was passed, this is the third report on policies and proposals (RPP), and the Committee considers this important area should have been at the heart of policy and proposal development, not an additional element yet to be confirmed.
341. The lack of regard to the importance of transparent monitoring and progress evaluation is evident in some of the policies and delivery routes contained within the draft Plan and from the scant detail provided in some sections on progress since RPP2.

Framework of monitoring and evaluation

342. While signalling positive intentions for the future, the draft Climate Change Plan does not contain sufficient detail on the monitoring and evaluation framework to allow the Committee to scrutinise policies and proposals in the context of how they will be measured.
343. The Committee has taken a keen interest in the issue of monitoring and evaluation of policies and proposals to help achieve carbon emission targets.
344. In November 2016, it wrote²³⁵ to the Cabinet Secretary outlining its views on the Committee on Climate Change’s progress report²³⁶ on reducing Scotland’s greenhouse gas emissions, noting the importance of the recommendation on evaluation and monitoring and emphasising its expectation the draft Plan would include an integrated monitoring framework. It wrote—

” “We expect the draft Climate Change Plan to include an evaluation of progress to date and set out a clear and detailed evaluation and monitoring

²³² Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 5

²³³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 7

²³⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 2

²³⁵ [Letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Progress Towards Reducing Scotland’s Greenhouse Gas Emissions, 30 November 2017

²³⁶ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016

framework to ensure that implementation of the plan can be tracked and assessed on an ongoing basis and individual policies and proposals adjusted and developed as necessary.”

345. In later correspondence²³⁷ on the CCC Adaptation Sub Committee independent assessment of Scotland’s Climate Change Adaptation Programme, the Committee wrote—

” “The Committee looks forward to the publication of the draft Climate Change Plan and to seeing how the Scottish Government intends to address the important and urgently required system of establishing, monitoring and evaluating progress towards meeting Scotland’s greenhouse gas emissions targets and adaption to climate change and has previously highlighted its expectations in this area.”²³⁸

346. The Committee’s expectations of this chapter of the report were clear and these expectations were not without foundation.

347. In June 2013, the Scottish Government published a response²³⁹ to the Scottish Parliamentary Committee’s reports on the draft RPP2 which outlined where recommendations had been considered and included in the final RPP2. It stated—

” “We are also revising our current risk register and developing a new monitoring system that will include the use of milestones against which to evaluate and measure progress on delivery of the policies and proposals.”

348. The Committee is unclear about the extent to which this work is complete and if or how it informed the development of the draft Climate Change Plan. John Ireland, Deputy Director of Decarbonisation, Scottish Government emphasised²⁴⁰ the resource applied to development of the framework, including a secondment over a period of “months”, yet Mr Ireland told the Committee—

” “It is very much a work in progress, but we have been clear that it needs to be bedded into the policy development process.”

²³⁷ [Letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Scotland’s Climate Change Adaptation Programme – Committee on Climate Change Independent Assessment, 9 December 2016

²³⁸ Referring to the [letter](#) to the Cabinet Secretary for Environment, Climate Change and Land Reform on Progress Towards Reducing Scotland’s Greenhouse Gas Emissions, 30 November 2017

²³⁹ Scottish Government (2013) [Low Carbon Scotland: Meeting the Emissions Reduction Targets 2013-2027: The Second Report on Proposals and Policies – Written Statement Laid Before the Scottish Parliament Pursuant to Section 35 of the Climate Change \(Scotland\) Act 2009](#) – Accessed 22 January 2017

²⁴⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 21

349. The Committee understands that this is still a “work in progress”. However, the Committee is of the view that a period of 8 years is more than ample to have developed and tested a monitoring and evaluation framework and have this “bedded into the policy development process”.
350. It appears from evidence²⁴¹ from the Cabinet Secretary that the starting point for development of the draft Plan was the use TIMES Model and not how future action would be measured.
351. Furthermore, the Committee heard that the information developed by TIMES does not provide details of the emissions impact of each policy in the draft Plan and therefore the relative impact on the overall goal of reducing emissions.²⁴²
352. The Committee considers this issue to be of vital importance to the successful delivery of the Climate Change Plan and takes its role in scrutinising this seriously. To that end, the Committee anticipates seeking further progress updates from the Scottish Government and seeks a commitment from the Scottish Government that the Committee will have an opportunity to assess the draft framework in advance of the publication of the final Climate Change Plan.
353. The Committee acknowledges this is a work in progress but has concerns about the progress.

354. The draft Climate Change Plan does not include the detail on the monitoring and evaluation framework the Committee expected to be included. The Committee notes the Scottish Government’s intention to publish an update on the monitoring framework alongside the final Climate Change Plan. The Committee recommends the Scottish Government publish this update in advance of the publication of the final Plan, to allow this to be scrutinised by the Committee. This update should signal how the Scottish Government will respond to the Committee’s recommendations as to the information the Committee considers should accompany each policy and proposal (see the **Structure of the Final Climate Change Plan - embedding monitoring and evaluation across policies and proposals** section of this report).

355. The Committee also seeks a commitment from the Scottish Government that it will have the opportunity to review the draft monitoring framework prior to the publication of the final Climate Change Plan.

²⁴¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 5

²⁴² Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 4

Terminology for planning, monitoring and evaluation

356. The draft Plan includes a definition of terminology used for what it seeks to achieve. However, the terminology does not necessarily match what is generally understood by those terms and obfuscates the fact there is no measurable data in the policy and proposals framework.

357. The table below is provided to demonstrate this point—

Terminology used in the draft Plan ²⁴³	Policy Outcome	Policy	Policy Development Milestone	Proposal
Definition in the draft plan ²⁴⁴	A policy outcome is a measure of change on the ground, resulting from a policy or combination of related policies.	A policy is a committed course of action which has been wholly decided upon, and to which a policy outcome can be attributed to with a reasonable level of confidence.	A policy development milestone is a government action which is needed to progress or develop a final policy that will reduce emissions in a particular sector.	A proposal is a suggested course of action or exploratory action, the details of which might change as this course of action is explored further.
Example provided in the draft plan ²⁴⁵	An example policy outcome from land use would be the commitment to support an increase in the annual rate of peatland restoration from 10,000 hectares to 20,000 hectares per year.	The land use policies of providing sufficient finance to fund at least 20,000 hectares of peatland restoration per year from 2018/19, and to provide training in peatland restoration, both contribute to the realisation of the policy outcome of 20,000 hectares of peatland restoration per annum.	For example, a commitment to consult on the introduction of emission reducing regulations would be considered a policy development milestone. It is not possible to confidently attribute any contribution to policy outcomes from a policy development milestone, although it is a committed course of action indicating a clear intention.	It is not possible to confidently attribute the realisation of a policy outcome to a proposal until it is converted to a policy.

²⁴³ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 6

²⁴⁴ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 6

²⁴⁵ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 6

358. Whereas, if this contained data capable of being monitored it might have read—

Policy – “increase in the annual rate of peatland restoration from 10,000 hectares to 20,000 hectares per year.” ²⁴⁶		
Policy Outcome	Policy Output	Actions
Reduction in carbon emissions of X% or x MtCO ₂ e from peatland restoration	The land use policies of providing sufficient finance to fund at least 20,000 hectares of peatland restoration per year from 2018/19, and to provide training in peatland restoration, both contribute to the realisation of the policy outcome of 20,000 hectares of peatland restoration per annum. ²⁴⁷	This column would contain the content of the delivery routes such as SNH to provide funding through the Peatland Action Programme.

359. The text highlighted in red donates the measurable information which is currently omitted in the draft Plan (although subsequently provided to the Committee by the Cabinet Secretary²⁴⁸) and relates to the assertions made earlier in this report about the omission of abatement data (see the **TIMES – Policies, Proposals and Assumptions: Abatement figures** section of this report).

Advice of the Committee on Climate Change (CCC)

360. The Committee on Climate Change (CCC) was also clear in its progress report²⁴⁹ on reducing emissions in Scotland published in September 2016 that a robust system of monitoring and evaluation was expected from the draft Climate Change Plan. Indeed, it was the first recommendation in the report. It states—

“We strongly recommend that for the Climate Change Plan the Scottish Government create a set of indicators to assess their progress. In the

²⁴⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 6

²⁴⁷ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 6

²⁴⁸ Letter from the Cabinet Secretary for Environment, Climate Change and Land Reform on [Additional Details Following the Committee Meeting on 21 February](#), 3 March 2017

²⁴⁹ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016

absence of specific, measurable, achievable, relevant and time-bound ("SMART") indicators in the Climate Change Plan, we will develop our own set of indicators in the 2017 Progress report against which we will monitor progress in reducing emissions."²⁵⁰

361. In evidence, Matthew Bell of the CCC discussed the difference between Committee's expectations for the level of action required from the transport and agriculture sectors and in doing so raised a number of monitoring questions—

” “It is clearly for the Government to decide the balance of effort across the different sectors and which policies to develop. If the plans for transport are going to be less ambitious, we want to see more of an understanding developing during the 60-day consultation and when the final plan comes out about how we can be sure that we are going to be able to meet the overall 66 per cent ambition for 2032.

Similarly, in agriculture, if there is going to be more of a softly-softly approach that involves the sharing of best practice, how can we be confident that it will make the overall contribution that it needs to make? What is the options analysis and what is the risk analysis in the event that agriculture is not progressing as quickly as needed? What will happen then?”²⁵¹

362. The monitoring and evaluation framework proposed by the draft Climate Change Plan is based on 6 principles.

363. The third of these suggests—

” “Over time we will develop policies that are SMART (Specific, Measurable, Attainable, Realistic and Time limited) to allow them to be monitored.”

364. Several issues arise from this—

- a. In the absence of monitoring framework, the CCC has stated it will develop its own. It would seem strange for the body providing independent advice on emissions reductions and the Scottish Government to be using different frameworks to evaluate progress (see the **TIMES – The Right Model: The Committee on Climate Change Modelling Framework** section of this report for further detail).

²⁵⁰ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016 – Page 8

²⁵¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 6

- b. Policies and proposals in the draft Climate Change Plan are not SMART.
 - c. The Scottish Government's interpretation of SMART criteria is inconsistent, with the R being stated to represent "realistic" in the above quote and "repeatable"²⁵² at a later point in the document.
 - d. If SMART policies are to be developed "over time" what is the status of the policies in the previous RPPs and the draft Climate Change Plan? How have they been monitored to date and why is this detail not included in the draft Climate Change Plan? How will they be monitored until the point at which a monitoring framework is in place? Will the baseline data used to monitor these start from the point of publication of the final Climate Change Plan or the point at which the monitoring framework is concluded? It is also not clear which time period is being referred to, and while the draft Plan indicates the monitoring framework will be in place in 2018, it does not explicitly state that policies will have SMART indicators attached by then. The Committee makes recommendations on this point in the section of this report on **Monitoring and Evaluation – Summary of Recommendations**.
365. In evidence to the Committee, John Ireland, Deputy Director of Decarbonisation, Scottish Government, said the CCC report had been one of the starting points in the development of the carbon envelopes, adding—
- ” “The UKCCC gave its advice, and we had conversations on how to use the TIMES model and on the distinction between TIMES and the CCC’s approach. However, the CCC did not see the final plan before it was published because of the Cabinet process behind that.”²⁵³
366. The CCC suggested future policy requirements to meet the Scottish Government’s annual targets and with regard to agriculture said the following would be required—
- ” “Stronger policy framework for agriculture emission reduction which aims to achieve cost-effective measures. This should include clear objectives, ways to monitor progress and how reductions will be achieved using the results from Scottish specific research where possible.”²⁵⁴

²⁵² Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 31

²⁵³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 6

²⁵⁴ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016 – page 12

367. It also stated the RPP3 needed to include a “detailed plan with clear objectives based on emission reductions identified in our High Ambition Scenario for Scotland”.²⁵⁵
368. Stakeholders such as WWF Scotland²⁵⁶ were critical of the loose language and lack of SMART information provided for each policy and proposal in the draft Climate Change Plan.
369. In evidence to the Committee, Cabinet Secretary for Environment, Climate Change and Land Reform said with regard to the divergence of approach in monitoring systems—

” “As you know, we regularly engage with the Committee on Climate Change. We have had recent discussions with it on how we can ensure that the plan’s monitoring framework has read-across with its monitoring approach, and we are currently having a conversation to try to even out some of that. I think that the Committee on Climate Change is open to new ways of doing that. If our monitoring framework works really well, it is not beyond the bounds of possibility that it will use that as an example for others to follow. We are talking to the Committee on Climate Change about how we can ensure that that read-across works. Let us put it this way: it would not be helpful for us if it did not.”²⁵⁷

Progress Reporting

370. The draft Plan notes an intention to “publish annual summary monitoring reports”.²⁵⁸ This is extremely welcome and the Committee looks forward to reviewing these reports. It also greatly appreciates the opportunity of involvement in the development of those reports afforded²⁵⁹ by the Scottish Government and to that end, offers preliminary thoughts on requirements of progress reports.

Status

371. Friends of the Earth Scotland posed a series of questions²⁶⁰ as to the status of the report and its method of publication in evidence to the Committee. The Committee considers the role of the Scottish Parliament, including the Committee system, in assessing these reports to be important and is ambitious this will be seen as a “fundamental”²⁶¹ part of Committees’

²⁵⁵ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016 – page 79

²⁵⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 15

²⁵⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 23

²⁵⁸ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – Page 32

²⁵⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 22

²⁶⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 25

²⁶¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 25

work in the future, an idea met with support from stakeholders including the Committee on Climate Change who said a role for the Scottish Parliament would “be a very good way of providing some checks and balances in the system”.²⁶²

Timing

372. The Committee considers the timing of these to be important and there are several factors to be considered—

- a. Timing of the publication of the annual Committee on Climate Change (CCC) progress report on progress towards reducing Scotland’s greenhouse gas emissions targets;
- b. Public Sector reporting: [Over time the on-going reporting work of the public sector will become more aligned with the implementation of the Climate Change Plan;](#)
- c. The publication of the draft budget;
- d. The Annual Energy Statement proposed in the draft Energy Strategy.

373. The Committee was delighted to hear future climate change information published alongside the budget will be aligned with the content of the Climate Change Plan²⁶³ to ease assessment of progress. In sharing this undertaking, the Scottish Government also noted the concerns of the Committee at the timing of the publication of this information and stressed the need for the inclusion of aligned Climate Change Plan data to have no impact on the timing of this document. Like the RPP process, the budget scrutiny timescales are tight and the Committee requires all relevant information to be published at the same time as the draft budget.

374. The Committee is also concerned that budgetary certainty will be required throughout the lifespan of policies and proposals, and considers it would be helpful if the final Climate Change Plan and future budgets were aligned, including direct reference to the funding which will be available for policies and proposals to tackle climate change.

375. The Committee recognises the challenges around this but would welcome further discussion with the Scottish Government on issues of timing of publication of the annual summary monitoring reports and the alignment of these with other key documents such as the draft budget, proposed annual

²⁶² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 14

²⁶³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 14

energy statement and obligations under the Climate Change (Scotland) Act 2009.

Content

376. The Committee has noted the lack of detail contained in the draft Plan on the inputs to the TIMES Model and how this affects the ability of scrutiny and monitoring. Fabrice Leveque of WWF Scotland told the Committee—

“The information in the climate change plan is currently so vague that it would be very hard to come back to it in a year’s time and track what progress had been made.”²⁶⁴

377. The Committee considers it important for ease of scrutiny that the annual summary monitoring reports follow the format of the final Climate Change Plan (taking into account the amendments suggested in this report – see **Structure of the final Climate Change Plan**).

378. The annual summary monitoring reports should include—

- a. Chapters dedicated to each sector included in the draft Climate Change Plan, including progress towards each policy outcome, on the implementation of each policy and in the development of proposals into policies.
- b. Updates on further work the Scottish Government has indicated it will undertake in relation to the draft Climate Change Plan—
 - i. Further ISM workshops
 - ii. Stakeholder engagement
 - iii. Construction and application of a monitoring and evaluation framework
 - iv. Work on understanding behaviour change and applying this to the policies and proposals contained within the Plan

Format

379. For ease of comparison, the Committee considers progress reports should follow the format contained in the final Climate Change Plan. The Committee has made several recommendations on this in the **Structure of**

²⁶⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 6

the Final Climate Change Plan - embedding monitoring and evaluation across policies and proposals section of this report.

Governance Body

380. The draft Climate Change Plan states—

“We will set up a governance body to oversee and respond to the monitoring and implementation of the Climate Change Plan. It will have an important role in ensuring the Scottish Government and its partners are able to respond to the results of the monitoring framework, applying the learning from the suite of indicators to ensure quality improvement in policy action and rigorous scrutiny of implementation. This body will provide advice to the Scottish Cabinet on a regular basis.”

381. While this appears to be a welcome and positive step, the Committee is once again limited in its ability to welcome such an approach due to the lack of detail. In evidence to the Committee, Scottish Government officials suggested this had not yet “worked that through”²⁶⁵ and the Cabinet Secretary was yet to consider how the body would operate.

382. Evidence from stakeholders²⁶⁶ highlighted a series of uncertainties on the operation of this body. The Committee considers there are several questions to be answered in the final Climate Change Plan on the establishment of a governance body and proposes the process of working through consider—

- a. How will it be structured?
- b. Who will it report to?
- c. Will it be independent of Government (as envisaged by the Committee on Climate Change²⁶⁷)?
- d. How will the Membership be comprised?
- e. What role will the body play in monitoring and evaluation?
- f. Is it intended this body will be established to finalise the monitoring and evaluation framework?
- g. Will it report and how will it do so?

²⁶⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 23

²⁶⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 23

²⁶⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 14

- h. How will it interact with the Cabinet Sub-Committee on Climate Change and what will be the latter's role in monitoring and evaluation?
- i. If its role is to ensure Government and partners are able to respond to results of the monitoring framework and provide advice, how will this interact with the CCC?
- j. What will its role be with regard to wider engagement?²⁶⁸

Previous governance structures

383. In evidence to the Committee, the Scottish Government highlighted the wealth of experience to draw on in establishing the governance body. There is a body, the Climate Change Delivery Board (formerly the Emissions Reduction Programme Board²⁶⁹ which is described in RPP2 as having “responsibility for monitoring Scottish Government progress on climate change mitigation and adaptation”²⁷⁰) and it is not clear as to the status of this in light of the inclusion of a new group in the draft Plan.
384. The latest minutes²⁷¹ of the Board are from 9 November 2015 and note a meeting will take place in early 2016. Further documentation is not available and Richard Dixon noted in evidence to the Committee referenced the “internal group ... has not met for a long time”.²⁷² Scottish Government officials described this board in the past tense.²⁷³
385. The draft Climate Change Plan also makes reference to the Scottish Government's work with public sector leadership networks on climate change action including the Scottish Leaders Forum. The Scottish Leaders Forum has taken on the role of considering climate change across the public sector from the ashes of the Public Sector Climate Leaders Forum (PSCLF), with the Cabinet Secretary for Environment, Climate Change and Land Reform assuring the Committee in June 2016 this meant the Scottish Government “are not taking our eye off that ball”²⁷⁴. The PSCLF was disbanded²⁷⁵ in February 2016 and the Environment, Climate Change and Land Reform Committee sought information on how the Scottish Leaders Forum would take this issue of climate change forward. The Committee was told the “one of the strands for collaborative working under discussion

²⁶⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 24
²⁶⁹ <http://www.gov.scot/Topics/Environment/climatechange/scotlands-action/EmissionReduction>

²⁷⁰ Scottish Government (2013) [Low Carbon Scotland - Meeting our Emissions Reduction Targets 2013-2027](#).

²⁷¹ Scottish Government Climate Change Delivery Board, [Minutes of Meeting](#), 9 November 2015

²⁷² Environment, Climate Change and Land Reform, [Official Report](#), 31 January 2017, Col 25

²⁷³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 23

²⁷⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 28 June 2016, Col 9

²⁷⁵ [Letter](#) from Aileen McLeod, former MSP and former Minister for Environment, Climate Change and Land Reform, Public Sector Climate Leaders Forum, 3 February 2017

is climate change and officials leading this work have indicated they would be happy to update the Committee as those discussions progress”²⁷⁶ The Committee was also told the Scottish Government had asked the Scottish Leaders Forum to “look at this at their next meeting, due to be held in December”²⁷⁷. The Committee has not received the update promised and is still in the dark as to how climate change is being considered at a senior level across the public services.

386. The Committee is concerned at the lack of information, both publically available or delivered to the Committee as per the commitment above, on the work of the Scottish Leaders Forum with regard to climate change.

387. The Committee strongly recommends the final Climate Change Plan include the precise detail on the operation of the Governance body, including responses to the questions posed in this report (para 382). This will be critical to ensure the Scottish Parliament can have confidence in the final Plan and the system of governance proposed.

Structure of the final Climate Change Plan – embedding monitoring and evaluation across policies and proposals

388. Throughout its consideration of the draft Plan, the Committee has consistently been told of a lack of detail and limited information. This constrains the ability of the Committee and stakeholders to penetrate the policies and proposals contained in the draft Plan and to assess whether they are sufficient to meet stated objectives. The Committee considers the final Climate Change Plan should be produced in a format similar to the draft Plan and contain, for each policy and proposal, the following detail—

- Public Sector Partners – how will they be held to account?²⁷⁸
- Starting assumptions
- Associated costs or level of funding suggested and associated budget lines
- Risks – what could prevent this from happening (as suggested by Matthew Bell of the Committee on Climate Change)²⁷⁹?
- Mitigation – what plans are in place to address these in advance?
- Plan B – if it doesn’t work/materialise, what will the Scottish Government do or task others with instead?

²⁷⁶ [Letter](#) from the Scottish Government on the Scottish Leaders Forum, 1 December 2016

²⁷⁷ [Letter](#) from the Cabinet Secretary for Environment, Climate Change and Land Reform on Reducing Scotland’s Greenhouse Gas Emissions Targets, 16 December 2016

²⁷⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 10

²⁷⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 10

- What are the quantifiable carbon emissions to be saved by this policy in MtCO₂e (these should add up to the totals)? When will that be monitored?
- What are the wider benefits beyond the economy?
- What are the milestones and their accompanying timescales/deadlines?
- What are the wider benefits and data on improvements expected from this policy?
- SMART analysis – is this specific, measurable, achievable, relevant and time bound? In other words, does it contain the recommended information detailed above?

389. An example of the headers proposed for each policy contributing to a policy outcome is provided below—

Policy	EU, UK or Scottish Policy	Public Sector Partners	Assumptions or constraints	Costs	Delivery Route	Timescales	Risks	Mitigation	Plan B	Abatement	Carbon emission Savings	on improvements	Wider Benefits and data	SMART
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390. The annual monitoring summary reports should include the same information, along with—

- Starting assumptions – are these still valid?
- Associated costs or level of funding indicated – is this still valid estimate? What has been spent to date?
- Risks – have these materialised? Any new risks?
- Mitigation – how successful was action to mitigate risk? How will any new risks be mitigated?
- Plan B – Is this required? At what point will this be known?
- Quantifiable carbon emissions to be saved in MtCO₂e - details of progress? Percentages? If little progress is being made, to what extent is this important?
- Milestones and their accompanying timescales/deadlines – Has the milestone been achieved? If not, what action will be taken to ensure this does not impact on progress overall and assessment of severity.
- Wider benefits beyond the economy – are these being achieved? To what extent? Is more action required? Evidence based analysis of what is happening?

- 391. The Committee recommends each policy and delivery route contain detail, supported by evidence or data, to show precisely how it will be achieved.
- 392. The Committee recommends the final Climate Change Plan include the detail outlined in this report, drawing on commentary from each section, for each policy and proposal.

Progress since RPP2

- 393. Inconsistent information is provided in each sector's chapter of the draft Plan with regard to progress since RPP2. The Committee heard these discrepancies were a result of the process of compilation of the draft Plan and pleased there is an intention to "beef up"²⁸⁰ these sections.
- 394. The Committee would consider it helpful if tables on progress since RPP3 in the final Climate Change Plan consistently included—
 - a. Targets included in RPP2
 - b. Progress towards meeting those
 - c. Mitigating action if required
- 395. The table²⁸¹ included in the Forestry section on progress on RPP2 policies is an excellent example, noting the target, what had been achieved and how the Scottish Government has responded to the missed target and an assessment of future delivery. It would be helpful if all tables included the same specific information.

- 396. The Committee recommends the sections on progress since RPP2 should be consistent and follow the structure detailed in this report.

Monitoring and evaluation – summary of recommendations

- 397. The draft Climate Change Plan does not include the detail on the monitoring and evaluation framework the Committee expected to be included. The Committee notes the Scottish Government's intention to publish an update on the monitoring framework alongside the final Climate Change Plan. The Committee recommends the Scottish Government publish this update in advance of the publication of the final Plan, to allow this to be scrutinised by the Committee. This update should signal how the Scottish Government will

²⁸⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 20

²⁸¹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) - Page 130

respond to the Committee's recommendations as to the information the Committee considers should accompany each policy and proposal (see the **Structure of the Final Climate Change Plan - embedding monitoring and evaluation across policies and proposals** section of this report).

398. The Committee also seeks a commitment from the Scottish Government that it will have the opportunity to review the draft monitoring framework prior to the publication of the final Climate Change Plan.
399. The Committee would welcome further discussion with the Scottish Government on issues of timing of publication of the annual summary monitoring reports and the alignment of these with other key documents such as the draft budget, proposed annual energy statement and obligations under the Climate Change (Scotland) Act 2009.
400. For ease of comparison, the Committee considers progress reports should follow the format contained in the final Climate Change Plan. The Committee has made several recommendations on this in the Structure of the **Final Climate Change Plan - embedding monitoring and evaluation across policies and proposals** section of this report.
401. The Committee strongly recommends the final Climate Change Plan include the precise detail on the operation of the Governance body, including responses to the questions posed in this report (para 382). This will be critical to ensure the Scottish Parliament can have confidence in the final Plan and the system of governance proposed.
402. The Committee recommends each policy and delivery route contain detail, supported by evidence or data, to show precisely how it will be achieved.
403. The Committee recommends the final Climate Change Plan include the detail outlined in this report, drawing on commentary from each section, for each policy and proposal.
404. The Committee recommends the sections on progress since RPP2 should be consistent and follow the structure detailed in this report.

Sectors

405. In addition to scrutinising the overview of the draft Climate Change Plan, the Environment, Climate Change and Land Reform Committee considered elements of the draft Plan which fell directly within its remit. These were—
- a. Waste
 - b. Peatland and Land Use (in the Land Use, Land Use Change and Forestry Sector)
 - c. Public Sector
406. The public sector elements of the Committee’s scrutiny drew on information from various chapters of the draft Plan, which are being considered by other committees. The Committee’s considerations of the governance of climate change also touched on issues within the remits of other committees. As such, the comment on these areas in this report is not intended to represent a comprehensive analysis of the policies and proposals. Rather, these sections contain comment on the overarching issues such as monitoring and evaluation, behaviour change and development of the carbon envelopes associated with these specific sectors. For each sector, the relevant Committee scrutinising the detail of this chapter has been identified.

Waste

407. Since the publication of the RPP2, the Scottish Government has published “Making Things Last: A Circular Economy Strategy for Scotland”.²⁸²
408. In evidence to the Committee, Fabrice Leveque of WWF Scotland suggested the link between the carbon envelopes and the policy outcomes was “strong” but the link between the policy outcomes and the policies was much weaker. He asserted the development process of the draft Plan had led to a “missed opportunity” and said—

 “It is disappointing that the climate change plan was launched with no new policy.”²⁸³

409. The waste section of the report is an example of this. The draft Climate Change Plan draws heavily on the stated intentions in this strategy to inform policies and proposals, just as the RPP2 relied on the Zero Waste Strategy.

²⁸² Scottish Government (2016) [Making Things Last: A Circular Economy Strategy for Scotland](#)

²⁸³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 4

410. This section of the report focuses on each of the policies and proposals in the draft Climate Change Plan with regard to waste.

Policy Outcome	Policies which will contribute	Policy Development Milestones	Proposals which will contribute
Reduction in waste sent to landfill	Delivery of our suite of waste reduction, recycling and landfill diversion targets and regulation up to 2025. • Target to recycle 70% of all waste by 2025. • Target to reduce food waste by 33% by 2025. • Ending landfilling of biodegradable municipal waste by 2020 and reducing all waste sent to landfill to 5% by 2025. • Reduce waste and establish a more circular economy, where goods and materials are kept in use for longer.		Post 2025 framework for further waste reduction, management and circular economy policies and indicators
Reduction in emissions from closed landfill sites	• Landfill gas capture on closed sites.	12 sites supported by 2022	None

411. There were mixed stakeholder views when it came to the appropriateness of the policies and proposals contained in the draft Plan to achieving the policy outcomes. While Zero Waste Scotland suggested progress was being made in the area of waste reduction and that policies such as the

food waste reduction target were ambitious, they were “well in play”.²⁸⁴ Jo Green of SEPA described requirements of the organisation as “clear”.²⁸⁵ Jamie Pitcairn of Ricardo²⁸⁶ raised several of the issues contained in the overview section of this report with regard to waste, such as monitoring and the ambitious nature of the anticipated rate of change. Chris Wood-Gee of the Sustainable Scotland Network said commitment from the public to make advances was critical and emphasised the importance of understanding behavioural change issues in this respect.²⁸⁷

Policy Outcome 1 - Reduction in waste sent to landfill

412. The policy to deliver this outcome is a suite of measures contained across strategies such as the Zero Waste Strategy²⁸⁸ and the circular economy strategy.²⁸⁹
413. The public sector partners identified include Scottish Enterprise, but not Highlands and Islands Enterprise although the draft Plan makes reference to the work required of the enterprise agencies. The Committee considers this omission from the list of enterprise agencies to be crucial, given the community remit of the organisation and the stated delivery route of “support for business, local authority and community action”²⁹⁰ and the review of current exemptions for rural food waste recycling²⁹¹ as recommended by the Committee on Climate Change.²⁹² It would be helpful if the final Climate Change Plan could clarify why Highlands and Islands Enterprise is not considered a delivery partner for these policies.

Recycle 70% of all waste by 2025

414. The target to recycle all waste by 2025 is contained in the Zero Waste Strategy.²⁹³ The delivery route notes the duties placed on local authorities, waste management companies and other businesses under the Waste (Scotland) Regulations 2012.²⁹⁴
415. The Committee questioned whether there could be conflicts between the targets in the draft Plan and other waste or recycling targets, particularly on

²⁸⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 17

²⁸⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 17

²⁸⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 18

²⁸⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 18

²⁸⁸ Scottish Government (2010) [Zero Waste Strategy](#)

²⁸⁹ Scottish Government (2016) [Making Things Last: A Circular Economy Strategy for Scotland](#)

²⁹⁰ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 117

²⁹¹ Scottish Government, [Written Submission](#)

²⁹² Committee on Climate Change (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016 – Page 94

²⁹³ Scottish Government (2010) [Zero Waste Strategy](#)

²⁹⁴ [The Waste \(Scotland\) Regulations 2012](#)

energy from waste. The Committee was provided with evidence²⁹⁵ showing the circular economy assumptions and approaches taken by the Scottish Government with regard to energy from waste.

416. Colin MacBean of the Scottish Government noted²⁹⁶ how the suggestions produced by the TIMES Model in early runs conflicted with previously established policies or statements of intent, and were restricted from the options available to the model. Jamie Pitcairn of Ricardo stated²⁹⁷ the lack of detail on the intelligence fed into the model made it hard to comment on this but suggested potential conflicts between recycling and energy from waste production should be monitored. Iain Gulland of Zero Waste Scotland highlighted the need for a balance to be struck.²⁹⁸ He added it would be an issue if local authorities found themselves in a position of being contracted to provide the same materials for recycling and energy from waste.²⁹⁹
417. Both Bruce Reekie³⁰⁰ of Perth and Kinross Council and Jo Green of SEPA³⁰¹ expressed the view that the emphasis should be on recycling materials. Stakeholders were later asked about anaerobic digestion³⁰² and the Committee heard of the need for there to be a mix of materials used, infrastructure, monitoring of impact, and the need for inventive use of biomaterials around the economy.
418. The Cabinet Secretary stated³⁰³ on the issue of a “switch of biodegradable waste from landfill to energy-from-waste facilities”³⁰⁴ that this was a matter for SEPA but the priority was to keep biodegradable waste out of landfill.
419. The Committee also explored the role of local authorities and whether budgets were sufficient to maintain the rate of momentum required.
420. Perth and Kinross Council’s Bruce Reekie said³⁰⁵ the local authority expected to be hitting the 70% target for recycling by 2025 and in order to do so would look at treatments for waste prior to being sent to landfill. He also noted the use of smaller kerbside bins for household waste. He later addressed the issue of flatlining recycling rates which he said was as a result of slowing down of the rate of change due to the “low hanging fruit having already been captured by the big roll outs”.³⁰⁶

²⁹⁵ Scottish Government, [Written Submission](#)

²⁹⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 33

²⁹⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 24

²⁹⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 24

²⁹⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 24

³⁰⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 25

³⁰¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 25

³⁰² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 33

³⁰³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 32

³⁰⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 32

³⁰⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 23

³⁰⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 27

421. The Committee discussed³⁰⁷ the issue of a slowing down of progress on local authority household recycling rates with the Cabinet Secretary for Environment, Climate Change and Land Reform and the role of the Household Recycling Charter, which 24 out of 32 local authorities have signed, and the single collecting system.

Reduce Food Waste by 33% by 2025

422. Among the priorities in the circular economy strategy³⁰⁸ was the introduction of a target to reduce food waste by 33% by 2025, a policy included in the draft Plan. A target baseline was published³⁰⁹ in November 2016 and the draft Plan states a “package of actions will be developed with stakeholders in the first half of 2017”³¹⁰. The draft Plan also states “The Good Food Nation Bill will provide a legislative vehicle for statutory interventions if required”.³¹¹
423. The Committee asked whether the policies and proposals included in the draft Plan were sufficient to meet the targets, Iain Gulland of Zero Waste Scotland³¹² described the challenges of engaging the public and partner organisations in this agenda and securing behaviour change. He also described the “long way to go” in order to meet the targets and indicated this was currently being monitored.
424. The circular economy strategy, published in February 2016, also stated the Scottish Government would consult on whether to make this target voluntary or binding. In December 2016, the Committee was advised³¹³ the Scottish Government were not in a position to provide details of the consultation³¹⁴ but would update the Committee on progress in this area. While the “package of actions”³¹⁵ highlighted in the draft Plan sounds positive, it is unclear whether this constitutes the consultation on statutory targets for food waste.
425. The Cabinet Secretary for Environment, Climate Change and Land Reform articulated³¹⁶ her confidence in the 33% target being achieved in evidence to the Committee. In response to further questioning on the trajectory

³⁰⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 34

³⁰⁸ Scottish Government (2016) [Making Things Last: A Circular Economy Strategy for Scotland](#)

³⁰⁹ Zero Waste Scotland (2017) [How much food waste is there in Scotland](#)

³¹⁰ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 118

³¹¹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 118

³¹² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 19

³¹³ [Letter](#) from the Cabinet Secretary for Environment, Climate Change and Land Reform on Reducing Scotland's Greenhouse Gas Emissions Targets, 16 December 2016

³¹⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 22

³¹⁵ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 118

³¹⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 30

towards this target since 2013, she said the target was “stretching” before detailing steps which will be taken to achieve it. She said—

” “Cross-sectoral workshops are on-going. Once we have concluded those, the next step will be a formal consultation on a set of actions to meet the target. That will be done later this year and which could include legislative measures for inclusion in the good food nation bill. We are also committed to consulting on whether the target should be aspirational or statutory. It is fair to say that this is the year in which some of the things that the committee is looking for will be developed.”³¹⁷

426. The Scottish Government also confirmed³¹⁸ that the exemptions for food waste collections in rural areas are under review as recommended by the Committee on Climate Change. The Cabinet Secretary provided further details³¹⁹ on progress in this area to the Committee in oral evidence, noting these exemptions were being reviewed in light of catching large urban areas within current parameters and that it was for local authorities to determine appropriate plans for council areas.

427. The Committee recommends that the Scottish Government give further consideration to the CCC recommendation that efforts to support recycling and food waste collections in rural and island communities should be strengthened.

428. The Committee recommends the draft Climate Change Plan make clear the timescales for a consultation on whether the target for food waste recycling will be mandatory.

Ending landfilling of biodegradable municipal waste by 2020 and reducing all waste sent to landfill by 5% by 2025

429. In evidence to the Committee, Jamie Pitcairn of Ricardo said—

” “Getting food waste out of landfill is probably the biggest contribution that the waste sector can make to reducing greenhouse gas emissions.”³²⁰

430. He said Scotland was at a good stage in the development of this policy and the process for implementation. However, he called for detail of what would happen between now and 2020-2021 to effect this policy.

431. The delivery route for this policy is an example of where a lack of SMART action makes it hard to scrutinise. It states—

³¹⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 31

³¹⁸ Scottish Government, [Written Submission](#)

³¹⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 33

³²⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 21

” “We will work with SEPA and Zero Waste Scotland to continue to improve the way that we provide and present information on the anticipated capacity requirements for future alternative waste infrastructure, for use by planning authorities and industry – helping ensure the capacity of waste infrastructure developed is appropriate.”³²¹

432. Given concerns raised by stakeholders about the challenges associated with meeting the target to end landfilling of biodegradable municipal waste by 2020 the Committee recommends the Scottish Government provide further detail about the actions they are putting in place to achieve this while ensuring that this does not result in an increase in this waste being treated in energy from waste facilities.

Action to reduce waste and establish a more circular economy, where goods and materials are kept in use for longer

433. In evidence to the Committee, the benefits of a more circular economy were discussed at length³²². The Cabinet Secretary also highlighted ongoing work on producer responsibility and referred to Scottish Government commitments to explore how existing producer responsibility schemes could be reformed and to develop new schemes for tyres, mattresses and furniture.³²³

434. The Committee welcomes the publication last year of the circular economy strategy³²⁴ and keenly anticipates the expected legislation in this area.

435. The Committee supports the Scottish Government commitments to exploring how producer responsibility schemes can be made more effective and developing new schemes for tyres, mattresses and furniture, and would like to be kept updated on progress on this work.

436. The Committee recognises the extent of the contribution which must be made by the further development of circular economy and recommends the final Climate Change Plan include detailed information on the contribution of this to the policies and proposals in the waste sector.

³²¹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 118

³²² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 28

³²³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 35

³²⁴ Scottish Government (2016) [Making Things Last: A Circular Economy Strategy for Scotland](#)

Policy Outcome 1 over time

437. The Committee would welcome more information in the final Climate Change Plan on how the timescales associated with this policy will be achieved.

Policy Outcome 2 – Reduction in emissions from closed landfill sites

438. The delivery route states a forward work programme of projects will be developed. There is no detail on what will happen post 2021 in the timeline.

Progress Since RPP2

439. The Committee notes the inclusion of information on delivery of RPP2 and welcomes the positive progress made. It would be helpful if the final Climate Change Plan included a full list of the deliverables in the Zero Waste Plan with a progress report on each. From the data provided in the draft Climate Change Plan it is difficult to assess whether the progress made is sufficient. It also states “most legislative proposals from the Zero Waste Plan have come into effect”³²⁵ and it would be helpful if there was an indication of what had not yet been achieved.

Secondary benefits

440. The draft Plan notes there are employment benefits associated with waste as it moves up the hierarchy of processing.³²⁶ However, the Committee notes the lack of recent data in the evidence review and asked whether there were plans to commission further research in this area. The Committee proposes this could include job types and geographical location.
441. Iain Gulland of Zero Waste Scotland provided extensive comment for the Committee on the wider benefits to be derived from a move to a more circular economy.³²⁷

Waste – summary of recommendations

442. The Committee recommends that the Scottish Government give further consideration to the CCC recommendation that efforts to support recycling and food waste collections in rural and island communities should be strengthened.

³²⁵ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 120

³²⁶ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 170

³²⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 29

443. The Committee recommends the draft Climate Change Plan make clear the timescales for a consultation on whether the target for food waste recycling will be mandatory.
444. Given concerns raised by stakeholders about the challenges associated with meeting the target to end landfilling of biodegradable municipal waste by 2020 the Committee recommends the Scottish Government provide further detail about the actions they are putting in place to achieve this while ensuring that this does not result in an increase in this waste being treated in energy from waste facilities.
445. The Committee supports the Scottish Government commitments to exploring how producer responsibility schemes can be made more effective and developing new schemes for tyres, mattresses and furniture, and would like to be kept updated on progress on this work.
446. The Committee recognises the extent of the contribution which must be made by the further development of circular economy and recommends the final Climate Change Plan include detailed information on the contribution of this to the policies and proposals in the waste sector.

Land use and peatlands

Policy Outcome 1 - Support an increase in the annual rate of peatland restoration, from 10,000 hectares in 2017/18 to 20,000 hectares per year thereafter

Restoration Grants for eligible land managers

447. The Committee heard universal praise for the targets established in the draft Climate Change Plan on peatland restoration. The Committee previously heard³²⁸ restoration of 21,000 hectares per annum would result in an 8% reduction in Scotland's total greenhouse gas emissions, demonstrating the prize to be achieved from successful delivery of this policy. This higher target was advocated by the Scottish Wildlife Trust in evidence³²⁹ to the Committee.
448. Although stakeholders were in favour of the policy, in evidence the Committee was told of several challenges associated with delivery—
- Establishment of processes to ensure efficiency delivery of the policy,³³⁰

³²⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 20 September 2016, Col 29

³²⁹ Scottish Wildlife Trust, [Written Submission](#)

³³⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 44

- Identifying the right sites for prioritisation of restoration and support for land managers;³³¹
- Business confidence;³³²
- Lack of trained contractors or lack of contractors available at the right times³³³;
- Identification of non-public sector funding³³⁴ and the support required for the Peatland Code in this respect³³⁵;
- Long term planning³³⁶ and associated budgetary certainty required³³⁷;
- Challenges within the planning process;
- The need to protect restored peat from natural hazards such as deer and the funding associated with that (indeed, Scottish Natural Heritage called for “policies to prevent loss and damage”³³⁸);
- Monitoring is required³³⁹.

449. Opportunities arising from the policy were also identified—

- Job creation³⁴⁰ and skills development;
- Long term commitment to funding was required and could instil business confidence³⁴¹;
- Through the Peatland Action Programme, there is already a wealth of experience and knowledge available on which areas need restored and how to achieve that³⁴² and RSPB Scotland advocated this programme should be maintained;
- Wider benefits which contribute to the 2020 vision for biodiversity;
- Rewards should be available to land managers as well as farmers for public goods (biodiversity, improved water quality, carbon sequestration) associated with peatland restoration.³⁴³

450. Written evidence to the Committee further proposed—

³³¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 44

³³² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 44

³³³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 44

³³⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 46

³³⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 47

³³⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 46

³³⁷ Scottish Wildlife Trust, [Written Submission](#)

³³⁸ SNH, [Written Submission](#)

³³⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 47

³⁴⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 44

³⁴¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 44

³⁴² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 47

³⁴³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 47

” “The system of administration and distribution of grants should be administered by Peatland Action, not Scottish Natural Heritage.”³⁴⁴

451. From the draft Plan, it was not apparent which land managers would be eligible to receive grant funding and the Committee appreciated clarification from the Scottish Government that criteria were currently being finalised and that—

” “Eligibility will include all those who own or manage with landowner’s agreement peatland, which is defined as having peat deeper than 50 cm deep. The applicant does not need to own the land but must have the agreement of the land owner.”³⁴⁵

Scale of ambition

452. The level of grant funding available for peatland restoration is not specified in the draft Plan. The Committee believes the level of funding to be indicative of the level of ambition and proposes this information is included in the draft Plan. The Committee notes funding confirmed to the Committee by the Scottish Government in January 2017³⁴⁶ for peatland restoration work and considers this to be a welcome step. It would be useful if the final Climate Change Plan provides detail of how this funding will be continued and secured throughout the lifetime of the Climate Change Plan.

453. The Committee recommends the final Plan should include specific detail on the protection and continuation of funding for peatland restoration. The Committee also considers the detail provided by the Cabinet Secretary in correspondence³⁴⁷ on deer management and peatland restoration should be included in the final Climate Change Plan.

454. The Committee explored the issue of whether large or small scale projects would be prioritised and again welcomed the signalled intention to be “ambitious in the scale of activity that is undertaken”.³⁴⁸

455. Dr Emily Taylor of the Crichton Carbon Centre told the Committee smaller projects should be valued initially, by way of pilots which could be learned from and replicated across an estate³⁴⁹. She added—

³⁴⁴ RSPB, [Written Submission](#)

³⁴⁵ Scottish Government, [Written Submission](#)

³⁴⁶ [Letter](#) from the Cabinet Secretary for Environment, Climate Change and Land Reform on the Draft Budget 2017-18, 17 January 2017

³⁴⁷ [Letter](#) from the Cabinet Secretary for Environment, Climate Change and Land Reform on Additional Details Following the Committee Meeting on 21 February, 3 March 2017

³⁴⁸ Scottish Government, [Written Submission](#)

³⁴⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 47

” “There is definitely still a need for smaller test sites as an initial demonstration to others and to landowners. We can then build up to much larger projects. Increasingly, however, we are talking about catchment-scale restoration. There is now a huge appetite to look at peatlands not just for carbon reasons—water quality is now a big issue for fisheries interests and for those who are interested in water supplies and issues of acidification. That is bringing a lot of people together. For instance, fisheries trusts are getting more and more interested in peatland restoration. We are all aiming for landscape-scale restoration, but we need to be practical and realise that people still need to be persuaded that it will work for them, so we still need to value the smaller projects.”³⁵⁰

456. She further noted³⁵¹ the sites which should be prioritised were the “actively eroding sites” which would provide the “biggest carbon savings” but noted these would be the “most expensive areas to restore”. Both Dr Taylor and Jim Densham of the RSPB³⁵² noted the need for a mix of projects in order to progress towards targets. Dr Maggie Keegan of the Scottish Wildlife Trust said there were simple projects which could be initiated to restore or protect peatland, but these could be delivered through other schemes and that specialist assistance for land managers in the use of “sophisticated” methods focussed specifically on peatland should be prioritised.³⁵³

457. Witnesses also highlighted the importance of monitoring of progress to the Committee, noting the application of different techniques in different sites would produce results to a varying degree of success. Dr Taylor told³⁵⁴ the Committee of the challenges associated with accessing remote sites While Dr Keegan emphasised³⁵⁵ the importance of establishing value for money and accurate data to support future TIMES Model runs. Professor Smith also noted³⁵⁶ the importance of monitoring all peatland to ensure that restoration work was not prioritised to the detriment of maintaining existing non-degraded peatland.

458. The Committee recommends the final Plan must include detail on monitoring and protection issues, in relation to restored peatland and forestry as it would be counterproductive for restored carbon sinks to be damaged by other causes such as deer.

³⁵⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 46

³⁵¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 47

³⁵² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 47

³⁵³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 48

³⁵⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 48

³⁵⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 49

³⁵⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 49

Horticultural use of peat

459. There was consensus among witnesses that horticultural use of peat should be prohibited, with Professor Smith saying—

” “I think that that sort of activity is inconsistent with our climate targets. Just as the UK has moved to phase out coal, we ought, in my opinion, to have a plan to phase out the horticultural use of peats.”³⁵⁷

460. It was suggested consumer behaviours could drive this and interventions were required to ensure peat-free compost was the most attractive option. Professor Smith also stated³⁵⁸ peat compost should not be sold in Scotland, meaning there were also not carbon emissions associated with importing it from elsewhere.

461. Witnesses also described³⁵⁹ progress with regard to behaviour change and people’s interests in maintaining peatlands.

462. Cabinet Secretary for Environment, Climate Change and Land Reform said the focus of the draft Plan was on restoration and not maintenance or protection in response to questions on the horticultural uses of peat but undertook to consider how this could be achieved.³⁶⁰

463. The Committee recommends the Scottish Government explore the actions within its power to prevent fertilisers containing peat from being sold and used in Scotland.

Progress since RPP2

464. Over 10,000 hectares have been restored but a precise figure is not provided. This is over a four year period, when the RPP2 document assessed it would be possible to restore 20,000 hectares per year.

Overall ambition of the Land Use Sector

465. In oral evidence to the Committee, Dr Maggie Keegan of the Scottish Wildlife Trust stated the organisation welcomed policies on forestry, but said they would like the Land Use sector as a whole to have more ambition and for the emissions pathway to be reduced.³⁶¹ Professor Pete Smith noted the lack of data on how each land use type of the Land Use Sector would contribute to reducing emissions, saying—

³⁵⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 49

³⁵⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 50

³⁵⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 50

³⁶⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 39

³⁶¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 43

” “If I remember correctly, RPP2 listed each of the policies and proposals separately, and as far as transparency is concerned, I think that it would be easier for anyone to understand what has been proposed if the various aspects were disaggregated a little. That would allow us to see the relative contribution that forestry, peatlands and other types of land use were making to the overall targets.”³⁶²

466. Jim Densham of RSPB Scotland said—

” “The ambition for agriculture is disappointing. I found it useful to read in the Scottish Parliament information centre briefing that it would mean a 0.9 million tonne saving to 2032, but that is less than 1 per cent a year. In other words, it is a year-on-year reduction, and it is really not enough as far as that sector is concerned. We need to move more quickly in that respect.”³⁶³

Land Use Strategy

467. Several witnesses and submissions highlighted the omission of a prominent role for the Land Use Strategy³⁶⁴ from the text of the draft Plan. Anne Gray of Scottish Land and Estates said—

” “It is surprising that the land use strategy is not referred to in the draft climate change plan, as it came from the Climate Change (Scotland) Act 2009. That is an omission and the strategy should be in the plan.

There is a difficulty at the heart of the plan in that, historically, we have thought very sectorally. The land management sector and the Government think sectorally and everything is set up in a very sectoral way. A big behaviour change is required across the board to make us think in a more rounded and holistic way.”³⁶⁵

468. Professor Pete Smith concurred regarding the sectoral approach and said—

” “The TIMES model works on a sectoral basis. Lots of greenhouse gas accounting is done on a sectoral basis. That is why agriculture is separate from land use and from other aspects too.

The land use strategy tries to do the opposite and treats land use as an integrated whole. In terms of greenhouse gas accounting, since 2006, the Intergovernmental Panel on Climate Change’s revised guidelines for the

³⁶² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 43

³⁶³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 43

³⁶⁴ Scottish Government (2016) [Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021](#)

³⁶⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 54

land use sector have been bringing together agriculture, forestry and other land uses, so it seems sensible to treat the land as an integrated whole.

Parts of the report on agroforestry in the agricultural sector say that we need to plant more trees in agricultural landscapes. That is treated independently of the forestry aspects in the climate change plan, and there could be much better linkages. It would incentivise better landscape management if all those things were considered together in the same area.

It is to do with the sectoral breakdown in the TIMES model. The TIMES model is used to assess what the mitigation pathways are. We could still reintegrate the sectors afterwards and present them in an integrated way.”³⁶⁶

469. The Cabinet Secretary confirmed this sectoral approach in her evidence to the Committee.

470. Witnesses were questioned about competing carbon-reducing land uses which could impact on peatland such as reforestation or wind farm development and favoured prevention of other activities taking place on peatland. The role of the land use strategy was mentioned³⁶⁷ by Scottish Land and Estates in this respect.

471. The Committee previously asked the Cabinet Secretary for Environment, Climate Change and Land Reform about how the Climate Change Plan would address the issue of competing land uses in correspondence³⁶⁸ in December 2016.

472. In its correspondence, the Committee stated—

” “The Land Use Strategy, published in May 2016³⁶⁹, states a detailed reporting framework will be published by December 2016 and through the Land Use Strategy, the Scottish Government has also committed to a review of the Scottish Forestry Strategy. The Committee, once again, seeks detail of when this review will take place, and how it will impact on the draft Climate Change Plan.”

473. However, the strategy is not given a prominent role and a detailed reporting framework is neither published nor included in the draft Climate Change Plan.

³⁶⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 53

³⁶⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 53

³⁶⁸ [Letter](#) to Cabinet Secretary for Environment, Climate Change and Land Reform on Scotland's Climate Adaptation Programme – Committee on Climate Change Independent Assessment, 9 December 2016

³⁶⁹ Scottish Government (2016) [Getting the Best from Our Land: A Land Use Strategy for Scotland 2016-2021](#)

474. While the Committee welcomes the ambition to decarbonise the electricity generation sector and the goals for tree planting contained in the draft Plan, it would welcome further detail about how these aims can complement rather than hinder peatland restoration targets in the final Climate Change Plan.

475. The Committee recommends the final Climate Change Plan should include explicit confirmation that forestry and peatland restoration goals should not conflict, and that activities to meet tree planting targets cannot be carried out on peatlands.

476. The Committee recommends that the Scottish Government give further consideration to the relationship of the Land Use Strategy and Climate Change Plan and make specific reference to this in the final Plan.

Secondary benefits

477. The Committee was pleased to hear Scottish Water³⁷⁰ will be involved in future restoration projects and notes the importance and associated cost benefits of this policy to improved water quality.

Land use and peatlands – summary of recommendations

478. The Committee recommends the final Plan should include specific detail on the protection and continuation of funding for peatland restoration. The Committee also considers the detail provided by the Cabinet Secretary in correspondence³⁷¹ on deer management and peatland restoration should be included in the final Climate Change Plan.

479. The Committee recommends the final Plan must include detail on monitoring and protection issues, in relation to restored peatland and forestry as it would be counterproductive for restored carbon sinks to be damaged by other causes such as deer.

480. The Committee recommends the Scottish Government explore the actions within its power to prevent fertilisers containing peat from being sold and used in Scotland.

481. The Committee recommends the final Climate Change Plan should include explicit confirmation that forestry and peatland restoration goals should not conflict, and that activities to meet tree planting targets cannot be carried out on peatlands.

³⁷⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 35

³⁷¹ [Letter](#) from the Cabinet Secretary for Environment, Climate Change and Land Reform on Additional Details Following the Committee Meeting on 21 February, 3 March 2017

482. The Committee also recommends the final Climate Change Plan should disaggregate the land use emission pathway to provide information by land use type for example forestry and peatland.

483. The Committee recommends that the Scottish Government give further consideration to the relationship of the Land Use Strategy and Climate Change Plan and make specific reference to this in the final Plan.

Public Sector

484. The role of the public sector in reducing Scotland's carbon emissions is key and public sector partners are named as delivery agents throughout the draft Plan.

485. The Committee took evidence from public sector stakeholders on their role in the draft Plan. These focused on—

- Involvement in development (see Consultation with Key Stakeholders – Public Sector);
- Buildings;
- Role of the Public Sector in Delivery.

Public sector buildings – energy and efficiency

486. The Committee heard the draft Climate Change Plan is ambitious for the contribution of energy efficiency in public sector buildings.

487. In the Services Sector, the draft Plan requires the following outcomes—

- Policy outcome 1: Improvements to the fabric of Scotland's non-domestic buildings results in a 10% reduction in their heat demand by 2032
- Policy outcome 2: By 2032 94% of non-domestic buildings' heat is supplied using low carbon heat technologies⁵⁷

488. The Cabinet Secretary for Environment, Climate Change and Land Reform commented on the expectations of the public sector with regard to the energy efficiency of buildings. She said—

” “We are prioritising action on energy efficiency during the first half of the plan, to 2025, as well as continuing to support the deployment of changes that do not involve making the wrong decisions now.... That is a massive challenge, particularly given the delay between now and 2020 or 2021, while we wait for decisions on the potential for repurposing the grid, which

would be a big delivery change.... That is why we have done things in the way that we have done them: low, slow, and then a big change.”³⁷²

489. In response to questions on support available to the public sector in this regard, she highlighted the Non-Domestic Energy Efficiency Procurement Framework and Support Unit and Resource Efficient Scotland³⁷³. The Committee had previously heard good examples from Scottish Water³⁷⁴ and the Cabinet Secretary agreed³⁷⁵ there were innovative practices taking place and it was for each public body to develop solutions which worked in their business area.

490. The scale of the challenges was emphasised by public sector stakeholders such as Scottish Natural Heritage.³⁷⁶

Role of the public sector in delivery

491. Both SEPA and Perth and Kinross Council indicated they considered the role and remit for their organisation was clear within the draft Plan. However, in their written submission³⁷⁷ SOLACE highlighted concerns in relation to public sector delivery, specifically in understanding the relative significance of policies and proposals, particularly for local authorities and stated concerns in relation to the lack of information on projected costs which they considered to be vital for Local Authorities. Historic Buildings Scotland³⁷⁸ also considered that the role of the public sector needed to be stated in the Plan. Stirling Council suggested there was a need to align resources to deliver the Plan and a need to ensure the Plan was a good strategic fit with other public sector agendas.

492. In their written submission the NHS raised concerns in relation to the service sector and the proposed timescale for delivery of many of the policies and proposals.

Public sector leadership and reporting

493. Witnesses provided comment to the Committee on the leadership role the public sector could take on with regard to reducing emissions. Routes to this included through procurement.³⁷⁹ The Cabinet Secretary for Environment, Climate Change and Land Reform emphasised³⁸⁰ the

³⁷² Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 27

³⁷³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 28

³⁷⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 35

³⁷⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 28

³⁷⁶ SNH, [Written Submission](#)

³⁷⁷ SOLACE, [Written Submission](#)

³⁷⁸ Historic Buildings Scotland, [Written Submission](#)

³⁷⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 39

³⁸⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 27

contribution of the sustainable procurement duty and the reporting duty of public bodies in her response to questioning in this area.

494. Jo Green of SEPA told³⁸¹ the Committee of the organisation's regulatory role in securing compliance but, recognising this would not fully achieve ambitions, in using its extensive reach to influence and lead in the reduction of emissions.

495. In evidence to the Committee, Chris Stark, Director of Energy and Climate Change, Scottish Government, spoke³⁸² of the opportunity presented by the period of planning in both the draft Plan and the draft Energy Strategy to consider strategic coordination of work around the country in response to questions on whether budgetary pressures on local authorities would make it hard to maintain momentum in recycling. He discussed a desire for support for partnership with local authorities and the "multiplicity of approaches" around the country, including the idea of regional carbon envelopes, which was then expanded³⁸³ with stakeholders at a later meeting. COSLA also advocated regional solutions.³⁸⁴ Stakeholders were also asked³⁸⁵ about the sharing of good practice among local authorities and the responses were positive. The issue of best practice and regional implementation of climate change work was also raised in the context of wider public sector work at a later meeting.³⁸⁶

496. The Sustainable Scotland Network said in its written submission³⁸⁷—

” “The Climate Change Plan implicitly requires leadership across all sectors of society, and the embedding of climate change and carbon literacy across public sector leadership will be vital.”

497. It further called on the Scottish Government to—

” “Ensure that the Climate Change Plan is made an effective driver of public sector leadership; addressing the individual, social and material barriers that hamper leadership currently.”

498. In evidence to the Environment, Climate Change and Land Reform Committee, Andy Kerr of the Edinburgh Centre for Carbon Innovation provided the example of city deals as an opportunity for engagement with local communities and leadership from Scottish Government and city authorities.³⁸⁸ In response to Committee questioning in this area, the

³⁸¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 37

³⁸² Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 65

³⁸³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 28

³⁸⁴ [Letter](#) from COSLA on draft Climate Change Plan, 17 February, 2017

³⁸⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 33

³⁸⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 40

³⁸⁷ Sustainable Scotland Network, [Written Submission](#)

³⁸⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 28

Cabinet Secretary for Environment, Climate Change and Land Reform said³⁸⁹ strong leadership would be required from the public sector and noted the role of public sector reporting in this regard. Both she and the Sustainable Scotland Network³⁹⁰ indicated the first formal year of reporting had secured returns from most of the Scottish public sector with regard to public sector climate reporting.

499. There is a consensus on the need for robust leadership from the public sector in delivering climate change ambitions and it is a helpful improvement on the RPP2 that the draft Climate Change Plan indicates the public sector delivery partners which will be involved in executing each policy outcome.
500. The Committee concurs with the views heard on the role of the public sector and hopes the public sector reporting framework will provide a useful baseline and indicators on which to monitor success in this area, in which the Committee will maintain a keen interest.

Public sector - recommendations

501. The Committee considers the public sector is vital to the successful delivery of the Plan, however it questions the current capacity and commitment of some public sector organisations. The Committee considers that climate change leadership needs to be prioritised across the public sector. The Committee recommends the Scottish Government reflects on the calls for action to address the barriers to climate change leadership in the public sector and provides further information in the final Climate Change Plan on the action the Government is taking to support strong leadership on climate change across the public sector.

Agriculture (*Rural Economy and Connectivity Committee*)

502. As described above, the Rural Economy and Connectivity Committee has scrutinised the agriculture section of the draft Climate Change Plan. However, the Environment, Climate Change and Land Reform Committee took an interest in some elements of this sector in connection with previous work in scrutinising the 2016 progress report of the Committee on Climate Change. The Committee anticipated the publication of the draft Climate Change Plan in response to several queries sent to the Cabinet Secretary for Environment, Climate Change and Land Reform.

³⁸⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 29

³⁹⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 38

Farming for a Better Climate

503. In October 2014, the then Minister for Environment and Climate Change, Paul Wheelhouse MSP, wrote³⁹¹ to Session 4's Rural Affairs, Climate Change and Environment Committee to provide detail of the findings from the initial focus farms involved in the Farming for a Better Climate scheme, showing savings in both financial and carbon emissions terms.
504. In September 2016, the Committee on Climate Change (CCC) told³⁹² the Committee the scheme required better monitoring and evaluation, noting compulsion could not be considered if there was no evidence it was not working (although Scottish Government officials made it clear the voluntary approach was the chosen strategy³⁹³). The Equality Impact Assessment for Farming for a Better Climate states evaluation of this policy is difficult and indicates the Scottish Government had undertaken work to "identify and measure uptake of Farming for a Better Climate measures and potential associated emissions reduction. This research will provide a basis on which indicators for agriculture and related land use will be developed."³⁹⁴
505. The Committee's request for details of this research was not included in the response to this correspondence. The CCC noted in its 2016 progress report that there had been no progress from the Scottish Government to "Carry out a survey to establish whether there has been Farming for a Better Climate (FFBC) uptake beyond the Climate Change Focus Farms and what measures have worked".³⁹⁵ A written answer provided by the Cabinet Secretary for Environment, Climate Change and Land Reform contained information on discussions with the CCC on evaluation of the scheme in October 2016. It further revealed only 4% of farmers were currently engaged in the scheme.³⁹⁶ It appears to the Committee this poor take up of the scheme justifies a mandatory approach.
506. The draft Climate Change Plan proposes to increase funding for the communications work on Farming for a Better Climate and states the programme is currently being evaluated. Although cautious about the commitment to fund communications work on an unevaluated scheme, the Committee looks forward to the publication of this research and again emphasises the need for details on the timescales for this work due to its role in consideration of whether the scheme should be made compulsory.

³⁹¹ [Letter](#) from the former Minister for Environment and Climate Change, 30 October 2014

³⁹² Environment, Climate Change and Land Reform Committee, [Official Report](#), 13 September 2016, Col 19

Scottish Government, [Farming for a Better Climate Equality Impact Assessment](#)

³⁹³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 7

³⁹⁴ Scottish Government [Farming for a Better Climate Equality Impact Assessment](#)

³⁹⁵ Committee on Climate Change (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016 – Page 86

³⁹⁶ Official Report, Written Answers, 24 October 2016, [S5W-03176](#)

507. The Committee recommends the final Climate Change Plan include timescales for the evaluation work on the Farming for a Better Climate scheme.
508. The Committee recommends the final Climate Change Plan address the Committee on Climate Change recommendation “If the government continues with voluntary measures [it] must be clear how they will be judged and if found to not be working consider other options”.³⁹⁷

Compulsory soil testing on improved land

509. The Committee on Climate Change (CCC)³⁹⁸ recommended a mandatory approach be taken to soil testing on improved land and in October 2016, the Cabinet Secretary for Environment, Climate Change and Land Reform told the Committee compulsory soil testing would be included in the draft Climate Change Plan³⁹⁹ and she repeated⁴⁰⁰ this position in the Scottish Parliament during questions on her Ministerial Statement upon publication of the document.
510. The Committee believes soil testing to be an essential step to identify the changes in farming practices required to reduce emissions. The Committee has heard in previous evidence the voluntary approach, and lack of evaluation of this, was not producing the results required. The Committee therefore considered the inclusion of the policy of compulsory soil testing to be a necessary addition to the draft Plan.
511. Upon publication of the draft Plan, the word “compulsory” appeared only with reference to delivery since RPP2 and the language used around the policy was vague.⁴⁰¹ The Convener of the Environment, Climate Change and Land Reform Committee noted—

” “The language on the agriculture sector is interesting. It uses words and phrases such as “expect”, “encourage” and “work with”, but many of us might have wanted to see the word “require” in there. I hate to say that agriculture is getting off lightly... but the tone suggests that agriculture is getting an easy ride.”⁴⁰²

³⁹⁷ Committee on Climate Change (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016 – Page 12

³⁹⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 11

³⁹⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 25 October 2016, Col 20

⁴⁰⁰ Scottish Parliament, [Official Report](#), 19 January 2017, Col 60

⁴⁰¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 30

⁴⁰² Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 6

512. Subsequently, on 27 January 2017, the Committee wrote⁴⁰³ to the Cabinet Secretary for Rural Economy and Connectivity seeking confirmation the intention of the Climate Change Plan was to make soil testing compulsory by 2018 and requesting details of the previously confirmed consultation to follow the draft Climate Change Plan.

513. On 20 February 2017, the Committee received a response⁴⁰⁴ from the Cabinet Secretary for Rural Economy and Connectivity indicating soil testing would no longer be mandatory, instead reverting to a focus on the voluntary approach in order to secure coordination from the farming community. On 21 February 2017, contradicting her earlier statement in Parliament that compulsory soil testing would be included in the draft Plan, the Cabinet Secretary for Environment, Climate Change and Land Reform suggested it was premature to regulate without ascertaining the success of a voluntary position.⁴⁰⁵ The Committee wrote again to the Cabinet Secretary for Rural Economy and Connectivity on 21 February seeking confirmation of whether the policy would be reviewed in advance of 2023. At the meeting of the Rural Economy and Connectivity Committee on 22 February, the Cabinet Secretary confirmed⁴⁰⁶ he had no intention of reviewing the policy before this date. However, the Committee has not received confirmation in a response to its correspondence.

514. This raises several concerns for the Committee—

- Changes to policy (already confirmed in the Chamber of the Scottish Parliament) midway through the Parliamentary scrutiny process;
- The time taken for these changes to be fully explained and confirmed did not allow for thorough scrutiny with stakeholders;
- The change to the policy contradicts evidence heard by the Environment, Climate Change and Land Reform Committee with regard to encouraging behaviour change and securing action from stakeholders.

Support for compulsory soil testing

515. The Committee was told voluntary measures in agriculture were not likely to produce the results required⁴⁰⁷ and it is convinced of the need for soil testing on improved land to be compulsory.

⁴⁰³ [Letter](#) to the Cabinet Secretary for Rural Economy and Connectivity on Compulsory Soil Testing, 27 January 2017

⁴⁰⁴ [Letter](#) from the Cabinet Secretary for Rural Economy and Connectivity, Draft Climate Change Plan (RPP3) – agriculture and soil testing, 20 February 2017

⁴⁰⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 36

⁴⁰⁶ Rural Economy and Connectivity Committee, [Official Report](#), 22 February 2017, Col 16

⁴⁰⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 23

516. The CCC noted in its 2016 progress report⁴⁰⁸ that the “notable exception” to progress made by the Scottish Government on the recommendations of its 2015 report was agriculture and in evidence to the Committee Matthew Bell stated that voluntary approaches will only deliver so much before it reaches “a point at which it is too late to take the action that is needed”.⁴⁰⁹

517. He said—

” “On agriculture and soil testing, as you say, our recommendation was to move towards a mandatory system. For a number of years, we have had a voluntary approach in Scotland. That was appropriate for a time but, at some point, you have to assess whether the voluntary measures are being taken up at the rate that is required. Soil testing should have co-benefits for farmers in terms of saving money and the application of appropriate amounts of fertiliser, as well as reducing carbon. Therefore, it would seem appropriate to introduce standards for soil testing in a mandatory way. We have had a period in which there have been trials, the approach has been tested out and best practice has been developed, and now we can move to something that is a bit more robust. That was the genesis of our recommendation.”⁴¹⁰

518. In September 2016, the Committee took evidence from the CCC Adaptation Sub Committee which strongly advocated the need for prioritisation of soil quality to protect Scotland’s biodiversity from the impacts of climate change. The Adaptation Sub Committee also recommended further action to maintain soil quality and said an action plan should be published in advance of the next Scottish Climate Change Adaptation Programme. It further recommended the Scottish Government should be “establishing a scheme to monitor the health of agricultural soils and the uptake of soil conservation measures, and taking enforcement action where poor management practices are found”.⁴¹¹

519. Although the Committees of the Scottish Parliament have not had the opportunity to discuss the now confirmed approach to soil testing with stakeholders, the Committee heard evidence on the contrast between the “carrot and stick” approaches⁴¹². Jo Green of SEPA provided an example of where regulation (fixed penalties) had been instrumental in securing action from inactive stakeholders meeting recycling targets.

⁴⁰⁸ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016

⁴⁰⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 16

⁴¹⁰ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 11

⁴¹¹ Committee on Climate Change, [Scottish Climate Change Adaptation Programme: An Independent Assessment](#), 27 September 2016, Chapter 2, Natural Environment, Page 38

⁴¹² Environment, Climate Change and Land Reform Committee, [Official Report](#), 4 October 2016, Col 9

520. There were conflicting perspectives in the written evidence received by the Committee, with support for compulsory soil testing from the Soil Association Scotland⁴¹³, the Scottish Wildlife Trust⁴¹⁴ (who believe organic matter should be part of the test), and Royal Society for the Protection of Birds Scotland⁴¹⁵. However, the voluntary approach was advocated by the NFUS⁴¹⁶, Alastair Nairn⁴¹⁷, and the Scottish Tenant Farmers Association.⁴¹⁸ Several written responses, such as Scottish Natural Heritage⁴¹⁹, also suggested further information was required of farmers based on the results of soil testing. The Committee considers a voluntary approach to soil testing to be a missed opportunity. By failing to compel farmers to take steps to improve the quality of their soils at an early opportunity, the Scottish Government is re-enforcing the relatively unchallenging targets and contribution of the agriculture sector. Should it become apparent at the intended review point in 2023 that progress is not being made, it will be six years closer to the point at which emissions reductions of the intended scales have to be achieved and the effort required by farmers at that point will be even greater.

521. Compulsory soil testing is a vital stepping stone to changing behaviours and should be reinstated in the final Climate Change Plan along with detail on—

- The limit of the policy to improved land;
- Confirmation the policy will apply to all land managers, including farmers and crofters;
- plans for a phased roll-out to ensure the work load of analysis laboratories is manageable;
- Guidance and support available to farmers and crofters to carry this out, aligned with the advisory services, and to take emission reducing action based on the results.

522. The Committee considers transparency of the presentation of the draft Climate Change Plan to be essential to the Parliamentary scrutiny process. Apparent changes to soil testing policy and the external development of the waste carbon envelope were identified by the thorough and determined pursuit of both issues by the Committee. The Committee recommends the Scottish Government consider how future communications could more swiftly and efficiently aid the Parliamentary scrutiny process.

⁴¹³ Soil Association Scotland, [Written Submission](#)

⁴¹⁴ Scottish Wildlife Trust, [Written Submission](#)

⁴¹⁵ RPSB, [Written Submission](#)

⁴¹⁶ NFUS Scotland, [Written Submission](#)

⁴¹⁷ Alastair Nairn, [Written Submission](#)

⁴¹⁸ STFA, [Written Submission](#)

⁴¹⁹ SNH, [Written Submission](#)

523. The Committee remains convinced of the need for soil testing to be subject to regulation and recommends the policy of compulsory soil testing for improved land be reinstated in the final Climate Change Plan along with the detail recommended in this report.

Agriculture - summary of recommendations

524. The Committee recommends the final Climate Change Plan include timescales for the evaluation work on the Farming for a Better Climate scheme.

525. The Committee recommends the final Climate Change Plan address the CCC recommendation “If the government continues with voluntary measures [it] must be clear how they will be judged and if found to not be working consider other options”.⁴²⁰

526. The Committee considers transparency of the presentation of the draft Climate Change Plan to be essential to the Parliamentary scrutiny process. Apparent changes to soil testing policy and the external development of the waste carbon envelope were identified by the thorough and determined pursuit of both issues by the Committee. The Committee recommends the Scottish Government consider how future communications could more swiftly and efficiently aid the Parliamentary scrutiny process.

527. The Committee remains convinced of the need for soil testing to be subject to regulation and recommends the policy of compulsory soil testing for improved land be reinstated in the final Climate Change Plan along with the detail recommended in this report.

Transport (*Rural Economy and Connectivity Committee*)

528. The draft Climate Change Plan contains a policy development milestone—

“With local authorities and others, evaluate the scope for urban-wide low emission zones with a specific focus on CO2 emissions, as well as air pollution more generally.”⁴²¹

529. The Committee was interested in the issue of low emission zones and explored⁴²² this with the Cabinet Secretary for Environment, Climate

⁴²⁰ Committee on Climate Change. (2016), [Reducing emissions in Scotland – 2016 progress report](#), 13 September 2016 – Page 12

⁴²¹ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 – 2032](#) – page 68

⁴²² Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 16

Change and Land Reform, who said this was a matter for local authorities. She stated—

“I expect that there will be applications from local authorities to proceed with low-emission zones, and we would be glad to have discussions with any local authority. At the moment, no local authority has come forward with anything approaching a proposal. I hope that changes, because our expectation and our hope is that we will have the first zone in place before the end of 2018.”⁴²³

⁴²³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 16

Looking ahead

Future of the TIMES Model

530. The Committee heard the original Scottish Government ambition was to make the TIMES Model open source and establish an interactive online tool⁴²⁴ in which people could create their own Climate Change Plan. Although this appears not to have been possible in advance of the publication of the draft Climate Change Plan, the Committee considers this aspiration to have significant merit and hopes the idea will be retained and developed for future RPP creation.
531. The Committee also welcomes the Scottish Government's intention to share the TIMES Models with the academic community⁴²⁵ and to second the lead modeller to the ClimateXChange.⁴²⁶ This process of creating an open resource was also welcomed by the Committee on Climate Change.⁴²⁷ Stakeholders encouraged⁴²⁸ the Committee to maintain an interest in this and the Committee looks forward to hearing how this develops.
532. The Committee is interested in the future of the TIMES Model and how its use in developing the draft Climate Change Plan will be reviewed and assessed beyond the comment offered in this report.

533. The Committee proposes it would be helpful for the final Climate Change Plan to include detail of how the TIMES Model will be used in the monitoring and evaluation of the progress being made towards Scotland's goals for greenhouse gas emissions reductions, including any proposed stakeholder involvement in the use of the Model.

Final Climate Change Plan

534. It is the Committee's intention to consider the final Climate Change Plan when published. The following sections outline areas which the Committee believes should be included in the document.

⁴²⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 6

⁴²⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 10

⁴²⁶ Scottish Government (2017), [TIMES Model Constraints \(Sectoral\)](#), 28 February 2017

⁴²⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 4

⁴²⁸ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 6

Unconventional gas

535. The Cabinet Secretary had previously indicated fracking would be included in the draft Climate Change Plan. However, in her Ministerial Statement to Parliament upon publication she emphasised it was not included because it was not being done, an omission welcomed by stakeholders in evidence to the Committee.⁴²⁹ However, the Committee would welcome information in the draft Climate Change Plan on the expected source of gas incorporated into energy assumptions.

536. The Committee recommends the final Climate Change Plan should explicitly state the source of gas incorporated into energy sector assumptions to provide clarity and confidence for the Committee and stakeholders that unconventional gas will not form part of the delivery of the final Plan.

Blue carbon

537. The RPP2 contained a section⁴³⁰ on blue carbon, described as “carbon sequestration benefits of marine ecosystems such as salt marshes, seagrass beds, maerl beds and kelp forests.” The RPP2 indicated the research in this area was under developed but that the Scottish Government was working to establish further information on this area. It continued—

” “It is hoped that this will allow us to build a foundation from which it may be possible to develop policies and proposals for inclusion in the next RPP in order to contribute to the efforts necessary to meet Scotland’s annual greenhouse emissions reduction targets.”

538. However, the draft Climate Change Plan does not contain any information on blue carbon. The Committee received several representations (both in oral evidence⁴³¹ and written submissions) highlighting the significance of this and urging the Committee to recommend the issue be included, including at proposal level⁴³². The importance of blue carbon was raised with the Committee both in the context of its contribution to carbon sequestration, but also because the protective action would also promote biodiversity goals.⁴³³

⁴²⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 34

⁴³⁰ Scottish Government (2013) [Low Carbon Scotland - Meeting our Emissions Reduction Targets 2013-2027](#).

⁴³¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 55

⁴³² Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 57

⁴³³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 67

539. The Committee raised this with both Scottish Government officials⁴³⁴ and the Cabinet Secretary for Environment, Climate Change and Land Reform⁴³⁵, and heard the scientific data is still not mature enough to base firm policies and proposals on. The Cabinet Secretary also noted the recently published research from Scottish Natural Heritage (SNH) on the assessment of the blue carbon resources in Scotland's inshore Marine Protected Area Network.⁴³⁶ She said this report—

” “Came through too late to be considered for the draft plan, but we are now considering the latest report and the further research and survey opportunities that can be pursued and we will include an update of that work in the final climate change plan.”⁴³⁷

540. In a written submission to the Committee, SNH stated—

” “Further work is required to fully quantify the scale of the blue carbon resource in Scotland and to identify the distribution of the key stocks in order to ensure that they receive the necessary level of protection. A research framework should be developed to improve our understanding of the natural carbon capture and sequestration processes and the implications for these of climate change, which should be integrated with broader marine policy objectives.”⁴³⁸

541. The Committee welcomes this suggestion and believes the work required to achieve this should be detailed in the draft Climate Change Plan.

542. The Committee considers blue carbon to be an important issue and believes information on progress since RPP2 and proposed action should be included in the final Climate Change Plan. The recognition of the importance and the developments in peatland restoration in recent years is an example of how progress can be made and the Committee looks forward to similar leaps being achieved in blue carbon.

543. The Committee recommends the final Climate Change Plan reinstate a section on blue carbon, outlining progress in research since the RPP2 (including specific areas explored such as sea kelp) and indicating the severity of the gap between the current research and what will be required to secure policies and proposals in this area in the future.

⁴³⁴ Environment, Climate Change and Land Reform Committee, [Official Report](#), 24 January 2017, Col 36

⁴³⁵ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 41

⁴³⁶ Scottish Natural Heritage (2017) [Commissioned Report 957: Assessment of blue carbon resources in Scotland's inshore Marine Protected Area Network](#) 3 February 2017

⁴³⁷ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 41

⁴³⁸ Scottish Natural Heritage, [Written Submission](#)

Timing of publication

544. In evidence to the Committee, the Cabinet Secretary for Environment, Climate Change and Land Reform said it was her intention to confirm the publication date of the final Climate Change Plan “before the summer recess”.⁴³⁹ Previously, the final reports on policies and proposals have been published within two-three months of the conclusion of the parliamentary scrutiny.

545. With regard to timing on other matters, such as the Climate Change Bill consultation, the Committee believes publication of the final Climate Change Plan in advance of the consultation on the Bill is essential, to ensure clarity as to what is in the Plan when stakeholders are being asked for their views on future legislation.

546. The Committee notes previous reports on policies and proposals have been published ahead of the summer recess following the period of Parliamentary scrutiny of the draft reports and based on this, the Committee would have expected the final Climate Change Plan to be published within a similar timeframe. However, while the Committee considers the Scottish Government should take into account the recommendations developed throughout the scrutiny process, the Committee recommends publication of the final Plan should still take place within a reasonable timeframe and in advance of the consultation on the Climate Change Bill.

547. The Committee highlights its intention to consider the final Climate Change Plan when published.

548. The Committee has reflected on the process of considering the draft Climate Change Plan and considers there are ways in which the publication and format of this document could be improved to assist with scrutiny.

60-day scrutiny period

549. In 2014, the Rural Affairs, Climate Change and Environment Committee noted the restrictiveness of the 60-day deadline for completion of Parliamentary scrutiny, as set out in the 2009 Act, noting this could only be amended through primary legislation.⁴⁴⁰ Stakeholders, including the Committee on Climate Change⁴⁴¹, told the Environment, Climate Change

⁴³⁹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 42

⁴⁴⁰ Rural Affairs, Climate Change and Environment Committee, 2nd Report, 2013 (Session 4), [Report on Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027 The Draft Second Report on Proposals and Policies](#), Page 8, Para 41

⁴⁴¹ Environment, Climate Change and Land Reform Committee, [Official Report](#), 7 February 2017, Col 4

and Land Reform Committee it would be “sensible”⁴⁴² for this period to be extended to allow for further stakeholder engagement.⁴⁴³

550. The Committee recommends the Scottish Government review the time available for parliamentary scrutiny and use the opportunity afforded by the forthcoming Climate Change Bill to either remove the fixed period or extend the current 60-day restriction. The Committee would welcome further discussion with parliamentary committees and the Scottish Government on this issue in advance of the introduction of the forthcoming Climate Change Bill.

Budget

551. Several written submissions highlighted the issue of the budget, noting the lack of costs and associated budget lines, stating funding for climate change across the Scottish Government budget needed to be clearer.

552. The Committee has in the **Monitoring and Evaluation: Structure of the Final Climate Change Plan** commented on the need for each policy and proposal to include costed information. It also noted in the **Monitoring and Evaluation: Progress Reporting: Timing** section that publication of the draft budget was a key concern in producing annual monitoring summary reports.

553. The Committee considers the issue of climate change should be more firmly embedded in the draft budget and recommends the Scottish Government include detail of how this information will be included in future budgets in the final Climate Change Plan.

Accessibility

554. As highlighted in the **Sectors: Agriculture: compulsory soil testing: support for compulsory soil testing** and the **Development of the draft Climate Change Plan – the approach: TIMES – Development of the carbon envelopes: different modelling frameworks for different sectors** sections of this report, the Committee has on two occasions had to pursue information vital to the consideration of the draft Plan. The Committee considers this requirement would have been negated had the information and language in the original draft Plan been clearer, comprehensive and transparent surrounding what was included in the draft Plan and why certain decisions had been taken.

⁴⁴² Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 31

⁴⁴³ Environment, Climate Change and Land Reform Committee, [Official Report](#), 31 January 2017, Col 31

555. If it is the intention this Plan is to be capable of being “owned”⁴⁴⁴ by the people of Scotland, the Committee recommends the Scottish Government should consider accessibility issues and avoid elaborate or complicated language where plainer text would have sufficed in the final Climate Change Plan.

Climate Change Bill

556. In its Programme for Government⁴⁴⁵, the Scottish Government signalled its intentions to legislate to create new, more pressing climate change targets via new legislation. This is an extremely welcome move and emphasises the Scottish Government’s commitment to challenging Scotland to make further strides in carbon emission reductions. The Committee looks forward to scrutinising this Bill, once introduced.

557. The Committee also anticipates the final Climate Change Plan will be updated to reflect any progress made in the passage of the Bill. The Committee welcomes the assurances of the Cabinet Secretary in evidence to the Committee this update would be “mandated”.⁴⁴⁶

Looking Ahead – Summary of Recommendations

558. The Committee proposes it would be helpful for the final Climate Change Plan to include detail of how the TIMES Model will be used in the monitoring and evaluation of the progress being made towards Scotland’s goals for greenhouse gas emissions reductions, including any proposed stakeholder involvement in the use of the Model.

559. The Committee recommends the final Climate Change Plan should explicitly state the source of gas incorporated into energy sector assumptions to provide clarity and confidence for the Committee and stakeholders that unconventional gas will not form part of the delivery of the final Plan.

560. The Committee recommends the final Climate Change Plan reinstate a section on blue carbon, outlining progress in research since the RPP2 (including specific areas explored such as sea kelp) and indicating the severity of the gap between the current research and what will be required to secure policies and proposals in this area in the future.

⁴⁴⁴ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 169 – 15.4.14

⁴⁴⁵ Scottish Government (2016) [A Plan For Scotland: The Scottish Government's Programme For Scotland 2016-17](#)

⁴⁴⁶ Environment, Climate Change and Land Reform Committee, [Official Report](#), 21 February 2017, Col 43

561. The Committee notes previous reports on policies and proposals have been published ahead of the summer recess following the period of Parliamentary scrutiny of the draft reports and based on this, the Committee would have expected the final Climate Change Plan to be published within a similar timeframe. However, while the Committee considers the Scottish Government should take into account the recommendations developed throughout the scrutiny process, the Committee recommends publication of the final Plan should still take place within a reasonable timeframe and in advance of the consultation on the Climate Change Bill.
562. The Committee highlights its intention to consider the final Climate Change Plan when published.
563. The Committee recommends the Scottish Government review the time available for parliamentary scrutiny and use the opportunity afforded by the forthcoming Climate Change Bill to either remove the fixed period or extend the current 60-day restriction. The Committee would welcome further discussion with parliamentary committees and the Scottish Government on this issue in advance of the introduction of the forthcoming Climate Change Bill
564. The Committee considers the issue of climate change should be more firmly embedded in the draft budget and recommends the Scottish Government include detail of how this information will be included in future budgets in the final Climate Change Plan
565. If it is the intention this Plan is to be capable of being “owned”⁴⁴⁷ by the people of Scotland, the Committee recommends the Scottish Government should consider accessibility issues and avoid elaborate or complicated language where plainer text would have sufficed in the final Climate Change Plan.

⁴⁴⁷ Scottish Government (2017) [Draft Climate Change Plan: The Third Report on Policies and Proposals 2017 - 2032](#) – page 169 – 15.4.14

Annexe A

Extracts from the minutes of the Environment, Climate Change and Land Reform Committee

2nd Meeting, 2016 (Session 5), Tuesday 28 June 2016

1.Decision on taking business in private: The Committee agreed to take item 4 in private.

4.Work programme: The Committee agreed its initial work programme.

4th Meeting, 2016 (Session 5), Tuesday 13 September 2016

1.Decision on taking business in private: The Committee agreed to take item 5 in private.

5.Work programme (in private): The Committee agreed its approach to developing its work programme and this will be published on the Committee's website in due course.

5th Meeting, 2016 (Session 5), Tuesday 20 September 2016

1.Decision on taking business in private: The Committee agreed to take items 7, 8, 9 and 10 in private.

7.The draft Climate Change Plan (RPP3) (in private): The Committee agreed its approach to consideration of the draft Climate Change Plan (RPP3) and agreed to write to the Conveners of other Committees to advise them of the agreed approach of the Committee.

11th Meeting, 2016 (Session 5), Tuesday 15 November 2016

1.Decision on taking business in private: The Committee agreed to take items 3, 4, 5, 6 and 7 in private.

4.Draft climate change plan (RPP3) (in private): The Committee considered its approach to the inquiry.

12th Meeting, 2016 (Session 5), Tuesday 22 November 2016

1. Decision on taking business in private: The Committee agreed to take items 5, 6, 7, 8 and 9 in private.

8. Draft climate change plan (RPP3) (in private): The Committee agreed an updated approach to this work.

16th Meeting, 2016 (Session 5), Tuesday 20 December 2016

1. Decision on taking business in private: The Committee agreed to take items 4 and 5 in private.

5. Work programme (in private): The Committee considered its work programme and agreed—

To schedule an event for young people on Tuesday 24 January;

3rd Meeting, 2017 (Session 5), Tuesday 24 January 2017

1. Decision on taking business in private: The Committee agreed to take items 4 and 5 in private.

2. Draft Climate Change Plan (RPP3): The Committee took evidence from—

John Ireland, Deputy Director of Decarbonisation, Colin MacBean, Head of Energy and Climate Change Analysis, Chris Stark, Director of Energy and Climate Change, and Morag Williamson, Team Leader of Climate Change Plan Project Team, Scottish Government.

Maurice Golden declared an interest in relation to Zero Waste Scotland.

4. Draft Climate Change Plan (RPP3) (in private): The Committee considered evidence heard earlier in the meeting.

The Committee agreed to write to Fergus Ewing, Cabinet Secretary for Rural Economy and Connectivity for further details on the Scottish Government's soil testing policies.

4th Meeting, 2017 (Session 5), Tuesday 31 January 2017

1.Decision on taking business in private: The Committee agreed to take items 4, 5 and 6 in private. The Committee also agreed to consider any future consideration of evidence and draft reports on the draft Climate Change Plan and Deer Management in Scotland, as well as its draft response to the Commission for Parliamentary Reform, in private at future meetings.

2.Draft climate change plan (RPP3): The Committee took evidence from—

Richard Dixon, Director, Friends of the Earth Scotland;

Dr Rachel Howell, Lecturer in Sustainable Development, School of Social and Political Science, University of Edinburgh;

Andy Kerr, Executive Director, Edinburgh Centre for Carbon Innovation (ECCI), University of Edinburgh;

Fabrice Leveque, Climate and Energy Policy Officer, WWF Scotland.

4.Draft Climate Change Plan (RPP3) (in private): The Committee considered evidence heard earlier in the meeting.

5th Meeting, 2017 (Session 5), Tuesday 7 February 2017

2.Draft Climate Change Plan (RPP3): The Committee took evidence from—

Matthew Bell, Chief Executive, Committee on Climate Change (via video conference);

and then from—

Jo Green, Chief Officer, Performance and Innovation Portfolio, Scottish Environment Protection Agency;

Iain Gulland, Chief Executive Officer, Zero Waste Scotland;

Simon Parsons, Director of Strategic Customer Service Planning, Scottish Water;

Jamie Pitcairn, Director, Scotland, Ricardo;

Bruce Reekie, Waste Services and Community Greenspace Manager, Perth and Kinross Council;

Chris Wood-Gee, Chair, Sustainable Scotland Network;

and then from—

Jim Densham, Senior Land Use Policy Officer (Climate), Royal Society for the Protection of Birds;

Anne Gray, Senior Policy Officer (Land Use & Environment), Scottish Land and Estates;

Dr Maggie Keegan, Head of Policy, Scottish Wildlife Trust;

Pete Smith, Professor of Soils & Global Change, University of Aberdeen;

Dr Emily Taylor, Land Management Project Co-ordinator, Crichton Carbon Centre.

Maurice Golden declared an interest in relation to Zero Waste Scotland and the Chartered Institution of Wastes Management.

Mark Ruskell declared an interest as a Councillor on Stirling Council.

Finlay Carson declared an interest as a Councillor on Dumfries and Galloway Council.

4.Draft Climate Change Plan (RPP3) – Update to Approach to Engagement (in private): The Committee agreed its updated approach to engagement on the inquiry.

5.Draft Climate Change Plan (RPP3) (in private): The Committee considered evidence heard earlier in the meeting.

6th Meeting, 2017 (Session 5), Tuesday 21 February 2017

1.Draft climate change plan (RPP3): The Committee took evidence from— Roseanna Cunningham, Cabinet Secretary for Environment, Climate Change and Land Reform, John Ireland, Deputy Director of Decarbonisation, Morag Williamson, Team Leader of Climate Change Plan Project Team, Neil Ritchie, Head of Natural Assets and Flooding, and Colin MacBean, Head of Energy and Climate Change Analysis, Scottish Government.

Maurice Golden declared an interest in relation to Zero Waste Scotland and the Chartered Institution of Wastes Management.

Alexander Burnett declared an interest in renewables.

3.Draft Climate Change Plan (RPP3) (in private): The Committee considered evidence heard earlier in the meeting and the recent correspondence from the Cabinet Secretary for Rural Economy and Connectivity.

The Committee agreed to write to the Cabinet Secretary for Rural Economy and Connectivity seeking further clarification.

7th Meeting, 2017 (Session 5), Tuesday 28 February 2017

1.Draft climate change plan (RPP3) (in private): The Committee considered its draft report. Various changes were agreed to, and the Committee agreed to consider a revised draft, at its next meeting

8th Meeting, 2017 (Session 5), Tuesday 7 March 2017

1.Draft climate change plan (RPP3) (in private): The Committee continued its consideration of a draft report. Various changes were agreed to, and the report was agreed for publication.

Annexe B

List of written evidence

-  Stop Climate Chaos (pre-publication)
-  WWF Scotland (pre-publication)
-  Friends of the Earth Scotland
-  Alastair Nairn
-  NFU Scotland (submission to the Rural Economy and Connectivity Committee, copied to ECCLR)
-  Scottish Tenant Farmers Association (submission to the Rural Economy and Connectivity Committee, copied to ECCLR)
-  Royal Society for the Protection of Birds
-  Scottish Wildlife Trust
-  Scottish Water
-  Scottish Environment Protection Agency
-  Scottish Land and Estates
-  Scottish Government - response to questions from meeting 24 January 2017
-  Dr Emily Taylor, Crichton Carbon Centre
-  Sustainable Scotland Network
-  Angela Lamont
-  Stone Federation Great Britain
-  YouthLink Scotland
-  Professor Pete Smith
-  Moredun Research Institute
-  Glasgow University
-  SOLACE Scotland
-  Transform Scotland
-  BT Scotland
-  Paths for All
-  Historic Environment Scotland
-  Soil Association Scotland
-  Peter Batten
-  Food for Life Scotland
-  Royal Scottish Geographic Society
-  Craig Smeaton
-  Andrea Batchelor
-  The Environmental Association for Universities and Colleges Scotland
-  The Royal Town Planning Institute
-  Mike Callendar East Coast Organics LTD
-  Sustaining Dunbar
-  Scottish Managed Sustainable Health Network
-  Scottish Directors of Public Health
-  Dr Mark Winskell

-  [Energy UK](#)
-  [2020 Climate Group](#)
-  [Teresa Bray Changeworks Recycling](#)
-  [League Against Cruel Sports](#)
-  [Smart Energy GB](#)
-  [Richard Dryburgh Changeworks Recycling](#)
-  [Transition Black Isles](#)
-  [Highlands and Islands Enterprise](#)
-  [Stop Climate Chaos Scotland](#)
-  [Mineral Products Association](#)
-  [Centre for Knowledge Exchange and Impact](#)
-  [Centre of Expertise on Climate Change](#)
-  [IUCN UK Peatlands Programme](#)
-  [Scottish Renewables](#)
-  [Keep Scotland Beautiful](#)
-  [The Modern Masonry Alliance](#)
-  [Consumer Futures Unit Citizen Advice Scotland](#)
-  [Zero Waste Scotland](#)
-  [Additional submission Friends of the Earth Scotland](#)
-  [Just Transition Partnership](#)
-  [WWF Scotland](#)
-  [Supplementary submission from Scottish Land and Estates](#)
-  [Updated submission from Royal Society for the Protection of Birds](#)
-  [Stirling Council](#)
-  [Centre for Housing Research University of St Andrews](#)
-  [James Hutton Institute](#)
-  [NHSScotland Sustainability Steering Group](#)
-  [Homes for Scotland \(submission to the Local Government and Communities Committee, copied to ECCLR\)](#)
-  [Scottish Environment LINK](#)
-  [SCIAF](#)
-  [Stuart Haszeldine](#)
-  [Scotland's Rural College](#)
-  [Supplementary submission from SEPA](#)
-  [Supplementary submission from the Committee on Climate Change](#)
-  [Brian Shannan](#)
-  [2050 Scotland's Youth Climate Group](#)
-  [SNH](#)
-  [Supplementary Submission from SEPA 2](#)

Official Reports of Meetings

-  [24 January 2017 – Evidence from Scottish Government officials on the overview of the plan, development and structure of the plan, and climate change governance \(including monitoring and evaluation\)](#)

Environment, Climate Change and Land Reform Committee

Report on the Draft Climate Change Plan - the Draft Third Report on Policies and Proposals 2017-2032, 3rd Report, 2017 (Session 5)

-  31 January 2017 – Evidence from stakeholders on development and structure of the draft climate change plan, overall ambition of the plan, behavioural change and climate change governance (including monitoring and evaluation issues)
-  7 February 2017 – Evidence from stakeholders on development and structure of the draft climate change plan, overall ambition of the plan, behavioural change and climate change governance resource use, the water industry, public sector, peatlands and land use
-  21 February 2017 – Evidence from the Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham, on the overview of the draft Climate Change Plan, evidence heard to date and the proposed Climate Change Bill

