Committee on Climate Change

Independent advice to Government on building a low-carbon economy

Scottish Climate Change Bill – Call for Evidence

The Scottish Government has committed to introducing a new Scottish Climate Change Bill. Recognising progress in Scotland and the Paris Agreement, this will include an ambitious new target of reducing emissions by more than 50% on a gross basis against 1990 levels by 2020. In early 2017 the Government plans to publish a new Climate Change Plan and a new Energy Strategy, which together will set out their low-carbon infrastructure priorities.

The Committee on Climate Change has been asked by the Scottish Government to provide advice on how the new Bill may look and is seeking evidence to help with that task.

Scotland's current Climate Change Act sets a long-term target to reduce emissions of greenhouse gases by at least 80% in 2050 relative to 1990, with an interim target to reduce emissions by 42% in 2020.[1] Secondary legislation has also set a series of annual emission reduction targets for 2010 to 2032.

Since the Act was passed, the Scottish Government has failed to meet annual targets for 2010 to 2013, but met the 2014 target by a wide margin with reductions of 45.8% since 1990 – outperforming the level of the 2020 interim target. [2]

The measure of Scottish emissions under the existing Act has been subject to considerable variability over this period, masking underlying progress in reducing emissions. This has been due to revisions to the Scottish greenhouse gas inventory and changes in the EU Emissions Trading System (EU ETS) that affect the Scottish share of emissions in some years, together with variations in annual temperatures. The changes in the emissions inventory reflect improvements in scientific understanding which led to changes in the methodology for estimating emissions. Such improvements are welcome but they have made the existing annual targets, which are set on an absolute basis, more difficult to achieve. The fact that targets in 2010 to 2013 have been missed is largely due to these revisions. **The deadline for responses is 12 noon on 1 February 2017.** For information about how to submit your response to this call for evidence, see: https://www.theccc.org.uk/2016/12/14/call-for-evidence-scottish-climate-change-bill/

QUESTION PROFORMA

QUESTIONS

a. Appropriate level of future emissions ("targets")

A new Scottish Climate Change Act would likely be passed in 2019 and so there will not be much time for new policies to affect progress towards a 2020 target. There is scope for the new Act to include further interim targets between 2020 and 2050 (e.g. for 2030 and 2040).

In previous work for Scotland[1] we have developed a "High ambition" scenario for Scotland, through which it would be possible for Scotland to achieve a 47% reduction by 2020, on a net basis, outperforming the current 42% target.

On a gross basis our High Ambition scenario identifies a possible reduction of 57% in 2020 relative to 1990 emission levels (from emissions in 2014 that were 39.5% below 1990). This includes abatement from all sectors of the economy, with the largest abatement from the continuing decarbonisation of the power sector and increased abatement in transport.

The current 2050 target in Scotland, for a reduction of at least 80%, is based on a global path that keeps central (i.e. 50% likelihood) estimates of global temperature rise close to 2°C. The Paris Agreement contains a set of new long-term aims to limit warming, which are more ambitious that previous UN agreements. The Agreement aims to keep the global temperature rise to well below 2°C, pursuing efforts to limit it to 1.5°C. To achieve this, the Agreement aims to balance sources and sinks of greenhouse gases in the second half of the century (i.e. net zero global emissions by 2050-2100).

The CCC published a report on the implications for UK climate ambition on the 13th October.[2] This concluded that it is not appropriate to set new UK-wide emissions targets now, but agreed with the intention to set a new UK target in future that reflects the global aim of reaching net zero emissions. To be credible, such a target needs to be evidence-based, accompanied by strong policies to deliver existing nearer-term targets and a strategy to develop greenhouse gas removals. The five-yearly cycle of pledges and reviews created by the Paris Agreement provides regular opportunities to consider increasing ambition.

The Scottish context differs from that of the UK, both in terms of the existing legislation and in terms of the policy landscape. The different target mechanisms within the 2009 Scottish Act have proven to be more sensitive to inventory revisions, as set out above. Scottish Ministers have made statements regarding their wish to remain at the forefront of global ambition,[3] and have committed to a new Bill in response to the Paris Agreement.

The Climate Change (Scotland) Act 2009 allows for annual targets (i.e. those currently set for each year to 2032) and the interim target (for 2020) to be amended, within certain limits, via secondary legislation. By contrast, the long-term target for an emissions reduction of at least 80% by 2050 cannot be amended, and no further long-term targets can be added.

[1] https://www.theccc.org.uk/publication/scottish-emissions-targets-2028-2032-the-high-ambition-pathway-towards-a-low-carbon-economy/
[2] https://www.theccc.org.uk/publication/uk-action-following-paris/
[3] For example, http://news.gov.scot/speeches-and-briefings/first-minister-address-to-seanad

Introductory comments on the proposal for a Climate Change Bill – WWF Scotland

WWF Scotland welcomes the opportunity to comment on the proposal for a Climate Change Bill.

We think the proposed Climate Bill should deliver a number of key outcomes, detailed in answers below.

1. Legislative foundations for stronger policy effort
2. A change to gross accounting (territorial emissions)
3. A 2020 target consistent with existing ambition, translated for gross emissions (i.e. a target equivalent to a 56% reduction, expressed in $MtCO_2e$)
4. A net zero GHG target for 2050
5. Accounting adjusted for temperature and baseline revisions
6. Secure collective responsibility for delivery across Ministerial portfolios

As the CCC has repeatedly identified in its annual reports, there is a clear imperative for additional policy action to meet existing future climate change targets. **The proposed Bill must not divert the Scottish Government's focus and resources from short and medium term policy design and delivery, which will lay the foundations for reaching future targets, howsoever defined.**

Indeed, it would be a huge missed opportunity if the proposed Climate Change Bill was not used to put in place some of those necessary new emission-reducing policies. It is worth noting that the Scottish Government and Parliament used the Climate Change Scotland (2009) Act to legislate for a wide range of measures, including powers to regulate for energy efficiency, powers to put in place a charge on single-use plastic bags, and targets for renewable electricity and heat. Having amassed a body of advice over previous years, we hope that the CCC can use its advice to the Scottish Government on this Climate Change Bill to suggest emission-reducing measures that require legislation and that could be included in the Bill.

Some examples of initial policy ideas that could be included in the proposed Bill include:

- Overall: A statutory footing for the Scottish Government's proposed 50% renewable energy target for 2030.
- Transport: A requirement to phase out fossil fuelled vehicles by the mid-2020s, with a full ban on the purchase of new such vehicles by 2030.
- Transport: Make use of new Scottish Parliament powers, to set new reduced national speed

limits for trunk roads (60mph), other main roads (50mph) and urban roads (20mph) to optimise eco-driving

- Transport: Enabling legislation for Local Authorities to establish workplace parking levies
- Transport: A more stringent requirement on Local Authorities to introduce Low Emissions Zones.
- Energy Efficiency: A statutory footing for Scotland's energy efficiency programme, including a delivery objective for the programme of supporting almost all homes to reach at least an EPC band 'C' by 2025 (with a small exception for the relatively small number of cases where this would not be feasible).
- Energy efficiency: A requirement for Ministers to introduce a phased plan for tightening building regulation, on a trajectory to zero carbon by 2020.
- Reporting and Monitoring: Expand the existing requirement to assess the direct carbon impacts of the Scottish Government's budget to include indirect or lifecycle emissions and require scrutiny of the budget's full carbon impact by an independent expert panel to ensure consistency with the proposed Bill.
- Reporting and Monitoring: The Bill should require the Scottish Government to publish an update to its monitoring and evaluation framework for the Climate Change Plan on an annual basis.
- Reporting and Monitoring: At a minimum, relevant Ministers should be required to deliver annual statements to Parliament, including individual reports laid before Parliament, explaining the extent of emissions reduction and policy implementation in their sectors versus the anticipated pathway in the Climate Change Plan.
- Governance: Establish, on a statutory footing, a Low Carbon Infrastructure Commission responsible for ensuring alignment between capital budgets and the requirements of the legislation and to advise on projects to be taken forward.

Question 1: To what extent is there scope to increase emission reductions now to meet a more ambitious 2020 target? (Please provide evidence where relevant.)

ANSWER:

CCC analysis has shown that taking the same steady trajectory of ambition through to 2020 created by the annual absolute targets already set by the Scottish Parliament, and translating these for territorial

accounting results in a reduction of 56% by 2020[4], and that this is achievable in the 'high ambition scenario'. This requires broadly the same policy effort as before, rather than significantly increased ambition as the question implies.

We therefore recommend that the Scottish Government set a new headline target for achievement by 2020 (set on an absolute basis, in MtCO2e) that is broadly equivalent to the ambition of the existing 2020 annual target, but takes account of the gross accounting methodology, Longannet's closure and progress to date. From looking at previous CCC outputs, we expect this to result in a target of 37.5Mt equivalent to 56% under a gross accounting scheme, which can be considered broadly equivalent in effort terms to the existing 2020 annual target and would 'translate' the necessary steady progress in reducing emissions to a new gross emissions accounting situation. A target of anything less than a 56% equivalent for 2020 would represent a watering down of the ambition of the 2009 Act.

We consider that the high ambition scenario is achievable provided existing policies deliver and some are strengthened. The closure of the Longannet coal power station (in April 2016), which accounts for a significant portion of Scotland's emissions, will put Scotland on a near 50% reduction in gross emissions by 2017[5]. If emissions in all other sectors continue to fall at the rate[6] seen over the past five years, gross emissions reduction by 2020 could be of the order of 56%. This will require that policies in the waste and forestry sectors continue to deliver, and would require strengthening of energy efficiency and heat policies to avoid colder than average winters pushing emissions up.

We also note significant policy recommendations by the CCC that have yet to be implemented by the Scottish Government that could be implemented before 2020. For example in homes, adopting clear minimum energy efficiency standards for the private sector, moving away from the current voluntary approach to reducing emissions from agriculture, introducing district heat regulation to drive take up, and supporting a clear package of measures to enhance EV penetration.

A recent report for WWF Scotland, Friends of the Earth Scotland and RSPB Scotland, *The Energy of Scotland: Heating, Moving and Powering our Lives from Now to 2030*, based on analysis by Ricardo Energy and Environment,[7] identifies a 50% renewable energy target for Scotland as the lowest cost, highest benefit option to deliver on climate targets. Alongside longer-term policy change, it identifies a series of early interventions that could help to reduce emissions before 2020. These include the regulation of minimum energy efficiency standards in the private sector to drive retrofit action in the

[4] https://www.theccc.org.uk/wp-content/uploads/2016/03/Scottish-Emissions-Targets-2028-2032.pdf

[5] Power sector emissions in 2014: 9.7 MTCO2e; coal generation accounted for 75%; NAEIA (2014) Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990 – 2014; Scottish Government (2016) Energy in Scotland

[6] Emissions in all other sectors (non-energy supply) fell, on average, by 3% per year between 2009 and 2014

[7] http://assets.wwf.org.uk/downloads/ricardo_energy_report_web.pdf

housing stock; regulation to support to the growth of district heat networks; and setting a clear date of the phase out of petrol and diesel vehicles, which could help to change purchasing decisions at an early point.

Question 2: To what extent do you support further interim targets between 2020 and 2050 (e.g. for 2030 and 2040)?

ANSWER:

We support interim targets, given iconic status by being set in primary legislation, for 2030 and 2040, but they should be set on an absolute basis in MtCO2e.

Scotland already has existing annual targets through to 2032, set by ministerial order, with the reporting cycle and annual report to Parliament providing ongoing focus and pressure on the Scottish Government to ensure that action on climate change remains an ongoing priority. Part of the value of annual targets is that they provide regular milestones for which to aim.

However, the interim target for 2020, set in primary legislation by the Climate Change (Scotland) Act 2009, has gained iconic status, providing particular focus for political action and aiding public understanding of Scotland's overall progress. There is a continued role for interim targets, but they should be set on an absolute basis in MtCO2e (i.e. measured in the same way as annual targets), so as to avoid an ongoing disconnect between annual targets and interim targets as a result of inventory and other changes. This would aid public understanding of progress and give a clearer picture of the extent to which policy is driving emissions reduction.

Question 3: What are the opportunities to reduce emissions to 2050 that go beyond our High Ambition scenario, including opportunities for greenhouse gas removal? (Please provide evidence where relevant.)

As the CCC has acknowledged, the High Ambition Scenario set out in its March 2016 advice is "not an upper bound." There is potential to go beyond it in a number of areas.

For instance, with respect to heat decarbonisation, our recent report by Ricardo Energy and Environment Report, *The Energy of Scotland*, which uses the MARKAL model, foresaw faster progress than the CCC High Ambition Scenario, delivering 1m domestic hybrid heat pumps by 2030, or 28% fully

electric heat pumps, more than the 18% rate envisaged by the CCC. In the non-domestic sector, the modelling foresaw 70% renewable heat penetration by 2030, significantly higher than the CCC. The Scottish Government's own TIMES modelling for 2030 has led them to set considerably more ambitious goals for heat decarbonisation than the CCC, including a goal of 80% low carbon heat penetration in homes and 94% low carbon heat penetration in non-domestic buildings, though the policy pathway towards this aim is not set out and could be reliant on repurposing the gas grid for hydrogen from 2025. On district heating, the Ricardo modelling indicated 4.4TWh being achievable by 2030, with the majority in domestic sector, higher than the CCC's 2.6TWh, which falls mainly in the non-domestic sector. This relies on clear and early regulation of the district heating sector to drive take up.

The *Energy of Scotland* report envisaged a faster improvement in fabric energy efficiency than the CCC, with a 20% fall in energy use overall and a 30% fall in homes by 2030. While the CCC envisages all lofts and cavity walls insulated by 2030, delivering these measures by 2025 is feasible and necessary to tackle fuel poverty alongside emissions. WWF Scotland, together with the Existing Homes Alliance and over 50 civic organisations, has long supported a target of EPC C by 2025, delivering 9000 new jobs, cutting an average of £400 from energy bills and helping to pull 750,000 Scottish Homes out of fuel poverty.[8] The Scottish Energy Efficiency Programme should set this as a goal, underpinned by adequate funding, regulation and other incentives.

Question 4: Should the 2050 target be more ambitious than the existing level of 'at least 80%'?

ANSWER: Questions 4 and 5 answered together.

The forthcoming Bill must reflect the Paris Agreement, by raising ambition beyond the current level of 'at least 80%' by 2050 and set a clear target for Scotland to reach net zero by 2050.

Scotland's existing 2050 target of 'at least 80%' is designed to contribute to a global path aimed at keeping global average temperature to around 2°C. However, the Paris Agreement has committed parties to limit warming to "*well below* 2°C above pre-industrial levels" and to "pursue efforts to *limit the temperature increase to* 1.5°C above pre-industrial levels". The Agreement also incorporates a goal of emissions neutrality or "balance" between emissions sources and removals by "second half of this century, on the basis of equity..."[9]. This implies that Scotland and other developed country parties will have to go significantly further than the 'at least 80%' goal by 2050, which was always envisaged as the

[8] http://existinghomesalliancescotland.co.uk/wp-content/uploads/2015/10/EXHAS_jointstatement_Oct15.pdf
[9] http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf

minimum level of effort required under the 2009 Act.

We note that the CCC's recent report on UK action after Paris identifies an appropriate timescale for the UK of net zero CO2 emissions between 2045 and 2065, with net zero GHG emissions between 2060 and 2090, using the same rationale as the existing Act (equal per capita emissions). In the absence of Scotland-specific advice and considering the need to implement the Paris agreement based on science and equity, Scotland should set a net zero GHG target towards the earlier part of this range, no later than 2050.

The CCC advice to the UK recognises that it is technically feasible to reduce GHG emissions by around 90% and to achieve net CO2 emissions of close to zero by 2050 by maximising deployment of options identified in the Fifth Carbon Budget. It also identified that 'net zero may be possible with breakthrough reductions in hard-to-reduce sectors and if a range of further greenhouse gas removal technologies can be deployed.'

Although the CCC has advised the UK to avoid changing targets now[10], the different political context in Scotland and the opportunity presented by the new Bill means that there is a strong case for setting a net zero target now. Scotland has always positioned itself as a global leader on climate change and a champion of climate justice, recognising its historic responsibility for climate change and its rapid progress in reducing emissions since 1990. Setting a target for net zero would cement Scotland's place among the vanguard, following similar commitments by Sweden and Norway. While scenarios for net zero will mean revising existing targets, this will provide greater impetus to develop solutions and explore policy options that put us on a steeper downward trajectory. Indeed, the Committee has identified that a cost effective pathway to existing targets will need to see deployment at scale by 2030 for key measures that enable net zero (e.g. carbon capture and storage, electric vehicles, low-carbon heat) which could enable deeper reductions in later years if action is ramped up quickly.

Irrespective of what long-term targets are set in the Bill, the Scottish Government must remain focussed on short and medium term policy delivery. This will enable targets in the 2020s and 2030s to be met and provide foundations for technologies to reach net zero.

Question 5: Should there be a target for net-zero emissions for Scotland, and if so for when and on what basis?

[10] https://www.theccc.org.uk/publication/uk-action-following-paris/

ANSWER: See answer to question 4 above.

Question 6: If it is not currently appropriate to set a target for net-zero and/or to adopt a more ambitious 2050 target, should provision be made within the new Bill to do so at a later date?

ANSWER:

N/A

b. Duration and form of future carbon targets (one year or multi-year, absolute or percentage)

Scottish targets for 2020 and 2050 are currently set as percentage reductions from a 1990 baseline. Annual targets have been set on an absolute ($MtCO_2e$) basis.

Annual targets allow for continued assessment of progress and provide greater certainty as to the magnitude of emission reductions that need to be made at any given time. However the ability to meet them can be affected by annual fluctuations in emissions caused by weather or unforeseen factors, while the delay in greenhouse gas inventory data for Scotland means that progress against targets is assessed two years after the target year.

Multi-year targets, such as five-year budgets under the UK-wide Climate Change Act, provide greater smoothing of these annual fluctuations, while allowing for monitoring of progress towards longer-term emission reduction targets.

Targets on an absolute basis allow for assessment towards total cumulative emissions; however, revisions to the greenhouse gas inventory can make them harder or easier to meet without reflecting actual progress in reducing emissions. This can be more pronounced in Scotland, which as compared with the UK as a whole has a much higher share of emissions from agriculture and land use, in which most revisions occur.

Percentage reductions would be less affected by these revisions, but targets on a percentage basis are less strongly linked to the best scientific estimates of the absolute level of emissions, which are the fundamental driver of climate change.

When the current 2009 Act was set annual absolute targets and interim percentage targets aligned. However, subsequent revisions to the greenhouse gas inventory have 'shifted' the baseline and led to these targets diverging from each other, potentially creating confusion and a loss of transparency.

Question 7: Should Scottish targets be set on an annual basis or covering multiple years? If on an annual basis, what can be done to minimise the impact of confounding short-term factors (e.g. weather) on meeting them?

ANSWER:

Targets should continue to be set on an annual basis. This is a key strength and defining feature of the existing Scottish Act.

The requirements in the 2009 Act for annual targets, and for the Minister to report on an annual basis to the Parliament, has helped to maintain a consistent political focus on the issue of climate change and provided regular opportunities for formal scrutiny. This has helped drive continued progress towards reducing emissions. Annual targets have also enabled regular 'red flagging' of areas where under-delivery is happening, providing focus for the introduction of new policies to get back on track for example, in June 2015 the Minister[11] announced the Government's intention to make energy efficiency a national infrastructure priority and a number of other new measures (e.g. additional funding for peatland restoration). Similarly a package of measures was announced[12] by Government in June 2014, in response to the missed target, including the establishment of a cabinet sub-committee on climate change.

If anything, WWF Scotland is disappointed that the Scottish Government have not made more use of this annual opportunity – for example the Scottish Government has not yet (as far as we are aware) followed the duties imposed under section 36 of the Climate Act and produced a report on additional policies and proposals in response to a missed target. This is one area where the existing Climate Act could be strengthened to ensure that this existing duty is followed by Ministers in the event a missed annual target occurs to require a remedial report on policies and proposals within a year of a missed

[1111] http://news.gov.scot/news/climate-change-action-heats-up

[12] http://news.gov.scot/news/new-cabinet-committee-to-keep-climate-targets-on-track

target result rather than 'as soon as is reasonable practicable".

We recommend adjusting the targets for weather and baseline revisions to minimise the impact of confounding short-term factors (see answer to Q9 below).

Question 8: Should targets be set on percentage or absolute terms?

ANSWER:

Targets should continue to be set on absolute terms, as total cumulative emissions are the ultimate determinant of the pace of warming. However, target accounting could be adjusted for baseline revisions (as per the CCC 2016 annual report) to help mitigate the effect of inventory changes (see Q. 9 below).

Given the scientific and moral importance attached to cumulative emissions, targets need to continue to reflect Scotland's cumulative emissions budget. It is important to note that Scotland's historical (1990-2015) cumulative emissions are now higher than they were at the time the Climate Change (2009) Act was passed, as inventory revisions have brought to light then unknown emissions.

Question 9: What else can be done to make targets resilient to future revisions to the emissions inventory?

ANSWER:

Moving to gross emissions accounting as proposed for the new Bill would in itself help to make the annual targets more resilient to inventory revisions associated with the allocation of ETS allowances (e.g. backloading, imperfect knowledge of Scotland's share of future caps at the time of target setting) and reflect more accurately what is happening on the ground.

In addition, we recommend that the Scottish Government's report on the annual target result should be presented as a figure that has been :

a) Adjusted for temperature and
b) Adjusted for baseline revisions

On the issue of weather, this mainly manifests itself in fluctuations in emissions from the housing stock,

due to the poor energy efficiency of much of Scotland's existing housing stock. As the climate change minister has previously pointed out, this vulnerability to Scotland's variable weather could be designed out with improved energy efficiency of homes:

"This is a regular vulnerability we are determined to design out, through tackling energy efficiency and decarbonisation of electricity and heat generation."
Paul Wheelhouse MSP, then Minister for Environment and Climate Change, 10th June 2014

Weather-adjusting the target reporting would make the targets more resilient to this annual fluctuation and would ensure that there is continued impetus to reduce emissions irrespective of annual variation.

On inventory revisions, these have made absolute targets harder or easier to deliver, depending on the year in question, and have generally had the effect of bringing the percentage based interim target closer. These ongoing changes have masked the real effects of actual policies in reducing emissions. Reporting against baseline-adjusted targets would help to smooth out these annual fluctuations and give a clearer sense of policy progress.

In the meantime, continuing and extending the publication of contextual materials as per the 2016 CCC Annual Progress Report would prove helpful. For example, for the most recent annual target result (2014), the CCC background information showed that a particularly warm winter had acted as a tailwind helping Scotland reduce its annual emissions, alongside changes to the inventory associated with the ETS and other revisions. Helpfully, the CCC background information also showed that even without these factors Scotland would have still met its annual target in 2014.[13]

Annual target reports should also be required to track the emissions intensity of the Scottish economy, which would make clear the extent to which policies, rather than major changes in economic output (e.g. a recession) are driving emissions reduction, providing additional useful contextual material.

[13] P17

c. Future accounting framework

The Scottish Government has committed to moving to a gross emissions accounting framework (i.e. actual emission reductions from all sectors of the economy will count towards the targets), as opposed to the net basis used in the 2009 Act.[1] A move to a gross framework aims to increase transparency around progress to targets in Scotland.

A change to gross accounting framework raises issues of;

- Whether there remains a role for credit purchase in such an accounting framework. The existing Act allows for credit purchase as a means to meet targets, although it also places further targets for "domestic effort" alone. To date, the Scottish Government has not purchased any such credits. Were it to do so, these would need to be procured through a programme that meets a required standard.
- How the role of emissions trading schemes (such as the EU ETS) should be reflected in such an accounting framework

Depending on the future relationship with the European Union, participation in the EU Emissions Trading System (EU ETS) may or may not continue.

Question 10: What is the role for credit purchase to supplement action to meet gross targets?

ANSWER:

Credit purchase could be included in the Bill but should be available only be as a last resort, once economically feasible domestic actions are exhausted, where there are strong additionality tests and based on clear standards.

Should the new Bill introduce more ambitious targets consistent with 1.5°C without clear technical pathways for reaching net zero or negative emissions domestically then there may be scope for credit purchase or trading if GHG removal options are developed globally. Alternatively, there may be scope for helping global 'net zero' be achieved through international assistance such as climate finance as identified by the CCC in its report on UK action following the Paris Agreement. However, given the uncertainties attached to future credit markets, decisions on credit use should be made far closer to the time, based on a robust assessment of the credibility of the credit market to ensure additionality, and assuming that credit purchase is additional to all economically feasible domestic action. It would be wise to assume that targets will have to be delivered domestically. The Bill should also introduce a cap on the use of credits, which the CCC should advise.

Question 11: How should the role of the EU ETS, or other trading schemes, be reflected in the emissions accounting framework used for reporting progress to targets?

ANSWER:

We support the proposed move to gross emissions accounting, as we believe it is an opportunity to provide a transparent account of actual year on year progress while remaining consistent with the principles of science and equity.

It would help to overcome the challenge of setting targets and preparing RPPs to meet them with imperfect knowledge about future ETS allocation, which is becoming worse as new elements are introduced such as 'backloading allowances.'

It would help to reduce the disconnect between Scotland's notional share of the ETS cap and actual emissions from Scotland's ETS sector, which has been significant in several years and will get more pronounced with the closure of Longannet and ongoing renewables deployment.

It would help to provide a clear link between ETS sector policy development and emissions reductions.

It would Brexit-proof future targets and the accounting framework; all the more crucial now that continued participation in the EU-ETS is uncertain following the announcement that the UK will pull out of the single market.

Although the target should be measured on a gross basis, the accounting framework should still report on ETS and other trading schemes in parallel. Essentially, this would invert the current situation where the target is set on a net basis but contextual information on gross emissions is also provided in annual reports.

Question 12: Are there any competitiveness implications for current traded sector business (e.g. industry) to moving to gross targets in Scotland, and if so how could they be minimised?

ANSWER:

Moving to gross targets is a more flexible approach that does not *per se* require the traded sector to reduce emissions faster than the current ETS trajectory. The pace of decarbonisation for different sectors would become a policy decision for the Scottish Government within the overall target. **Should**

the Scottish Government require more effort from industry beyond that identified in the CCC's high abatement scenario it could choose to mitigate competitiveness concerns by incentivising this effort rather than increasing taxation or regulation.

Of course, the traded sector will continue to participate in the EU-ETS, as long as the UK remains in the EU-ETS, but this would be accounted for in parallel rather than counting towards Scotland's targets. Phase IV of the ETS will continue to allocate free allowances to sectors at risk of carbon leakage.

It is noteworthy that the current traded sector in Scotland has in fact reduced emissions faster than Scotland's share of the ETS cap would dictate, regardless of the fact that this did not historically count towards meeting Scotland's climate target and regardless of the weak carbon price signal that the ETS has historically provided.

d. Criteria for setting future targets

The current Climate Change Act includes target setting criteria which must be taken into account prior to targets being legislated. These are:

a. Scientific knowledge about climate change
b. Technology relevant to climate change
c. Economic circumstances, in particular the likely impact of targets on –
    - The Scottish economy
    - The competitiveness of particular sectors of the Scottish economy
    - Small and medium-sized enterprises
    - Jobs and employment opportunities
d. Fiscal circumstances, in particular the likely impact of targets on taxation, public spending and public borrowing
e. Social circumstances, in particular the likely impact of targets on those living in poorer or deprived communities
f. The likely impact of targets on those living in remote rural and island communities
g. Energy policy in particular the likely impact of the target on energy supplies, the renewable energy sector and the carbon and energy intensity of the Scottish economy
h. Environmental considerations and, in particular, the likely impact of the targets on biodiversity
i. European and international law and policy relating to climate change

Question 13: Are the current target setting criteria listed in the Act still appropriate? Are any missing?

ANSWER:

The current target setting criteria are still appropriate. However, we believe that an additional criterion on the likely impacts of targets on public health in Scotland should be taken into account.

The vast majority of energy and economic models which underpin climate policy design still struggle to quantify the multiple co-benefits associated with strong climate policy, as the New Climate Economy report identified.[14] Though the target setting criteria require some assessment- even if it is more qualitative- one area that remains under-examined is the multiple public health benefits of climate policy, e.g. reduced ill health associated with active travel, a well-insulated housing stock and lower urban air pollution from conventionally-fuelled vehicles. More evidence on health impacts as a result of their inclusion in target setting criteria could give this aspect greater weight in political decision making.

For example, improving the energy efficiency of Scotland's homes to reach a C standard by 2025 would have practical, preventative public health benefits, as spending time in a cold, damp house can aggravate conditions such as heart disease, strokes and flu and increase the risk of mental health problems.[15] And there's an increased risk of illness and death among older people, children and people with disabilities. It is estimated that this would reduce costs to the NHS by between £48m and £80m per annum for Scotland.[16]

[14] http://2014.newclimateeconomy.report/wp-content/uploads/2014/08/NCE_Chapter5_EconomicsOfChange.pdf. See also WWF-UK's report by Cambridge Econometrics on the Fifth Carbon Budget, which used a dynamic MDM-E3 model to quantify macroeconomic benefits. Cambridge Econometrics, The Economics of Climate Policy in UK (September 2014): http://www.camecon.com/Libraries/Downloadable_Files/WWF_Final_Report_1.sflb.ashx

[15] Fuel Poverty Evidence Review, Scottish Government http://www.gov.scot/resource/0039/00398798.pdf

[16] Economic impact of improving the energy efficiency of fuel poor households in Scotland, 2014, Consumer Futures Scotland