

Call for Evidence - Welsh Carbon Budgets

The Environment (Wales) Act received Royal Assent in March 2016. It sets a 2050 target to reduce emissions by at least 80% and provides the legislative framework for establishing a carbon budgeting approach in Wales.

The Act requires that before the end of 2018, Welsh Ministers must set in regulation interim emissions targets for 2020, 2030 and 2040, together with 5-year carbon budgets for the periods 2016-2020 and 2021-2025.

The Committee on Climate Change has been asked by the Welsh Government to provide advice on these emissions targets and is seeking evidence to help with that task.

The Committee will provide advice in two stages:

- Stage 1: Advice on carbon accounting and design of Welsh carbon budgets/targets (March 2017)
- Stage 2: Advice on the level of ambition embodied within the targets and budgets and sectors in which there are particular opportunities to decarbonise (October 2017)

This Call for Evidence focuses on the first of these stages. Responses to this Call will help inform the Committee's advice to the Welsh Government, to be published in March 2017. This Call contains questions relevant to the Act, including the emissions accounting framework, scope of the targets and role for emissions trading.

Our subsequent advice on the level of the targets and budgets will be the focus of a second Call for Evidence later in 2017. **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: [INSERT LINK](#)

a. Form of emissions targets and carbon accounting framework

The Environment (Wales) Act requires interim targets to be set for 2020, 2030 and 2040, as a percentage reduction against baseline (essentially 1990) emissions. It also requires carbon budgets to be set as a maximum amount of emissions produced in Wales over a 5-year period (initially 2016-2020 and 2021-2025).

When targets are set, they are done so on the basis of the latest understanding of climate science and the best estimates of recent and historical emissions. However, over time methodological changes are made to how emissions under the greenhouse gas inventory are estimated, in order to improve the quality of these estimates.

The revisions to the emissions estimates reflect an updated understanding of actual levels of emissions, and therefore of their contribution to climate change. These revisions affect both recent and historical estimates of emissions, and can make targets harder or easier to meet without reflecting actual progress in reducing emissions.

Budgets set on an absolute basis, specifying the allowed quantity of emissions, retain a link to the underlying climate science regarding the extent to which they affect the climate. However, they would be more vulnerable to changes in inventory estimation practices, potentially making budgets much harder or easier to meet.

An alternative approach would be to base budgets on percentage reductions relative to the base year (1990). These would be less affected by such revisions, as estimates of current emissions and those in the base year would, in general, move in the same direction. However, budgets on a percentage basis are less strongly linked to the absolute level of emissions, which are the fundamental driver of climate change.

Question 1: Is it better for carbon budgets be set on percentage or absolute terms, given that the interim targets are set as percentages?

ANSWER: As climate targets are set for the UK as a whole and UK budgets are set on an absolute basis it would be more appropriate to align Welsh carbon budgets with the UK budgets and also set these on absolute terms.

Question 2: What else can be done to make targets resilient to future revisions to the greenhouse gas inventory?

ANSWER: Clarity is needed on the underlying assumptions used in setting the initial targets together with any basis under which they could be revised going forwards.

b. Role for emissions trading and implications for the competitiveness of Welsh industry

There are various different ways to account for emissions under domestic climate targets. The primary questions relate to their interaction with wider frameworks for emissions reduction. In the case of Wales, this means interaction with the EU emissions trading system (EU ETS) and UK carbon budgets.

There are two main ways of accounting for emissions:

- **‘Gross’ basis.** Emissions could be accounted for on a ‘gross’ basis, with actual emissions counting towards the targets for all sectors, as with the existing target to reduce Welsh emissions by 40% by

2020. This would reward action to reduce emissions in sectors covered by the EU ETS (the ‘traded sector’), for example through reducing the carbon-intensity of electricity generation or from reduced emissions at Welsh carbon-intensive industrial facilities (whether from improvements in carbon intensity or reduced output).

- **‘Net’ basis.** Accounting for emissions on a ‘net’ basis, as under the UK carbon budgets, also counts actual emissions for sectors outside the EU ETS (the ‘non-traded sector’). However, the traded sector would be reflected in the Welsh Account as a cap reflecting Wales’s share of the overall EU ETS cap. This means that investment in low-carbon power generation – or other emissions reduction in the traded sector – would not directly affect the level of emissions accounted within the Welsh Account. From a carbon budgeting perspective, a ‘net’ approach effectively fixes the EU ETS contribution to the targets and removes the variability from the EU-ETS sector.

Policy levers available to the Welsh Government currently have very limited influence on the level of emissions from EU ETS installations.

Emissions in Wales (on a gross basis) have fallen 18% since 1990. However, since 2009 they have risen 1% per year largely due to average rises in emissions from power and industry. Industry emissions account for a much larger share of total emissions in Wales than other areas of the UK with 34% from the sector (compared to 22% at a UK-wide level). Power emissions account for 28% of total. Both of these sectors are largely traded in the EU ETS and therefore the split between traded and non-traded emissions is significant in Wales, with 56% of total emissions covered by the EU ETS.

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

For those sectors where emissions are accounted for on a gross basis, there is the potential to make up shortfalls in emissions reduction by buying international ‘offset credits’ (i.e. resulting from overseas action to reduce emissions) to make up the difference. This could provide additional flexibility in how nearer-term targets are met. Credit purchase could imply costs to the Welsh Government and would need to be procured through a programme that meets a required standard.

However, the Committee’s position is that we should plan now for the 2050 target at UK level to be met through domestic action, given that emissions credits may be unavailable or expensive.¹ Nearer-term reliance on offset credits would be inappropriate if it meant that domestic action is insufficient and is not on track to meet the 2050 target.

¹ CCC (2015) *The fifth carbon budget – The next step towards a low-carbon economy*,
<https://www.theccc.org.uk/publication/the-fifth-carbon-budget-the-next-step-towards-a-low-carbon-economy/>

Question 3: What is the role of the EU ETS or other trading schemes in contributing to Welsh emission reductions and could this differ between sectors (power, industry)?

ANSWER: Emissions trading ensures reductions are made in a cost effective and efficient way, while other support mechanisms (for example renewables support under RO and CfDs) have been important in delivering investment in new technologies the cost of carbon should be reflected in investment decisions and a strong emissions trading system is important. A consistent approach to carbon pricing across Europe (and potentially moving to global schemes) means that the UK will be able to compete on a level playing field with other EU Member States. It is important that Welsh budgets are set on the same basis as UK budgets and that individual sectors are operating on a level playing field with other installations in the UK and EU.

Question 4: Given that UK carbon budgets cover all of Wales's emissions and are set on a net basis, does this influence how accounting should be approached for Welsh climate targets?

ANSWER: Yes. Welsh climate targets should be set on the same basis as UK climate targets. While there is value in reporting emissions as both gross or net emissions it is important to consider whether there is ultimately any overall reduction in global emissions. Setting targets on a gross basis would mean that any reductions in Welsh emissions would not necessarily count at a UK or global level.

Question 5: Given the UK context, should the design of Welsh targets and budgets reflect devolved competence?

ANSWER: Design of overarching Welsh targets and budgets should reflect UK targets but there may be areas where it is appropriate to take into account what can be achieved in particular sectors in Wales and therefore whether additional targets reflecting devolved competence could be set. For example, emissions from domestic heating could be an area where it would be appropriate to have a Welsh target. It may be more appropriate to consider this in conjunction with the UK's forthcoming emission reduction plan.

Question 6: Are there any competitiveness implications for current traded sector business (e.g. industry) in having gross emissions targets in Wales, and if so how could they be minimised?

ANSWER: yes. The EU ETS will ensure emissions reductions are delivered in a cost effective and efficient way. If industry is required to meet additional targets at a regional level it will impose additional and unnecessary costs. For example if a participant delivers all cost effective reductions but needs to purchase emissions allowances to cover its emissions that will mean emissions have been reduced elsewhere. Setting additional targets for installations in Wales (through gross emissions targets) would mean that the installation could need to go beyond cost effective reductions leading to higher cost (and potentially making an installation less competitive than others within Europe). While this would reduce reported emissions in Wales, emissions elsewhere would increase leading to no net benefit for global emissions.

What could be explored is how the UK targets are shared between devolved administrations and what proportion should be allocated as Wales' share of the overall UK cap. For example, free allocations could be allocated by installation but there are a number of options for calculating Wales share of the cap from auctioned allowances.

Question 7: What is the role for purchase of international offset credits to supplement action to meet Welsh emissions targets?

ANSWER: Wales should follow the overall UK approach on the purchase of international credits, to prevent different levels of emissions reductions reporting at local, national and international level.

c. Scope of emissions targets

The Welsh Government has asked the Committee whether or not emissions from Wales's share of international aviation and international shipping (IAS) emissions should be included within the targets and budgets.

Under the Climate Change Act at UK level, IAS emissions are currently outside the scope of the 5-year carbon budgets, but are taken into account in their setting. The Committee's approach has been to include IAS emissions within the scope of the target to reduce emissions by at least 80% by 2050, and examine what levels of reductions are required in the other sectors in order to meet this target. This has been part of the analytical work that has gone into recommending the first five UK carbon budgets, which to date have all been legislated in line with CCC advice.

The Committee has previously set out a principle that IAS emissions should be included within the scope of UK carbon budgets if it is practical to do so. On this basis, alongside our recommendation on the level of the fifth carbon budget, the Committee recommended that the scope of UK carbon budgets be expanded to include international shipping.² However, the UK Government rejected this aspect of our recommendations.

Inclusion of international aviation within carbon budgets is complicated by carbon accounting regulations relating to their inclusion with the European emissions trading system. As UK carbon budgets are accounted for on a net basis and the EU ETS covers flights within Europe but not those outside (i.e. only a subset of international flights), we recommended that inclusion of international aviation is not currently practical. However, it could be included were the basis of carbon accounting to be gross (i.e. actual) emissions, by using estimates of fuel sales.

Question 8: In principle, should international shipping be included within Welsh emissions targets, and if so are there any practical difficulties with doing so?

ANSWER: Again this should reflect overall UK targets and accounting.

Question 9: In principle, should international aviation be included within Welsh emissions targets, and if so are there any practical difficulties with doing so?

² CCC (2015) *The fifth carbon budget – The next step towards a low-carbon economy*,
<https://www.theccc.org.uk/publication/the-fifth-carbon-budget-the-next-step-towards-a-low-carbon-economy/>

ANSWER: This should reflect overall UK targets and accounting.