Sustainability Committee

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Sustainability Committee Inquiry Into Carbon Reduction in Wales : Rural Land Use Management and Carbon Reduction

Introduction

NFU Cymru represents 15,000 members in Wales and is pleased to be able to present written evidence as part of the National Assembly for Wales' Sustainability Committee's enquiry into Carbon Reduction in Wales. Agriculture is an important industry in Wales, providing direct employment for over 57,000 people as well as supporting the numerous jobs of those people who work in ancillary industries. The sector recognises the contribution that it makes to Wales' carbon emissions and also the role that it has to play in reducing these emissions.

Question - Is the proposed 3 per cent annual reduction target by 2011 'in areas of devolved competence' sufficient to enable Wales to make its full contribution to meeting UK-wide targets? If not what targets should be put in place ?

1. It is difficult to say whether the 3 per cent annual reduction target will be sufficient to enable Wales to make its contribution to UK-wide targets. Whilst there is clearly some scope within areas of devolved competence for contributing to UK wide targets, it is worth remembering that figures produced by the Environment Agency indicate that only 39% of Welsh emissions are within areas of devolved competence[1]. Many areas lie outside the competence of the National Assembly, this includes energy policy which is largely retained by the UK Government.

Question - Should the emission reduction target be based on Welsh consumption, or production, or both (i.e. should it take in to consideration the carbon dioxide generated in Wales (production), or the carbon dioxide emissions that Wales' residents are responsible for, regardless of their source (consumption))?

2. Wales has traditionally been a net exporter of energy, and according to figures from the Department for Business, Enterprise and Regulatory Reform Wales generates 9% of the UK's electricity needs whilst consuming only 6.7% of the UK's electricity[2]. Our status as a net exporter of electricity reflects unfavourably in our per capita emissions figures.

3. It would in our view make more sense (and also be fairer) for Wales' emissions reduction target to be based upon actual Welsh consumption rather than Welsh production, as to do otherwise would have the effect of unfairly attributing emissions associated with the production of electricity which is exported and consumed elsewhere in the UK, to Wales.

4. Wales does still produce a lot of energy intensive products such as steel which are exported elsewhere within the UK and indeed across the world. Accounting for these 'embedded' emissions is likely to be enormously complicated.

5. A move to consumption based figures would in our view probably be more equitable, we would caution that switching to consumption based figures should not be viewed as a quick and easy way of 'reducing' emissions.

Question - What particular challenges do rural land managers in Wales face in reducing carbon dioxide emissions from their activities, and how can these challenges be overcome?

6. Before addressing this issue it is important to place Wales' carbon dioxide emissions from rural land use in to some sort of context. According to the 2005 Greenhouse Gas Inventory, the share of Wales' carbon dioxide emissions attributed to rural land use is approximately 1.2%, this compares to the energy industry with approximately 44%, the manufacturing and construction industries with around 25% and the transport sector with around 16.5% of carbon emissions[3].

7. Soils in Wales are estimated to contain over 400 mega tonnes (Mt) of stored carbon[4]. It is important both to the sector and to Wales overall to ensure that this carbon remains sequestered in the soil, whilst at the same time the agricultural industry continues to play its role in reducing overall carbon emissions.

8. Carbon emissions associated with land use activities primarily relate to carbon dioxide emitted as soils are cultivated and fossil fuels are burnt. Cultivation of land and the use of fossil fuels are likely to continue to play an important role in agriculture for the foreseeable future. There is however scope for replacing the use of fossil fuels in the short to medium term not only for heating and electrical generation, but also by using bio-diesel or bio-diesel blends as fuel for machinery such as tractors.

9. Ensuring the most efficient agricultural practices will play an important role in keeping carbon emissions to a minimum. We would also advocate increased use of renewable technologies on farm in order to reduce the sector's carbon footprint, for example the use of microgeneration technologies such as farm-scale wind turbines, as well as other technologies such as anaerobic digestion and the sustainable production and use of energy crops all have a role to play in reducing the environmental impact of agriculture, as well as contributing to the energy security of communities. NFU Cymru welcomes the Environment Agency's recent decision to alter the waste status of anaerobic digestate made from farm-based inputs, allowing farmers to spread the digestate waste (which is a valuable fertiliser) without the need for a waste management permit or exemption.

10. The main challenges associated with the use of the renewable technologies, (and thus to this important strand of reducing Wales' land use carbon emissions) probably relate to the planning regime and also public perception. Some technologies such as anaerobic digestion also require considerable set up capital, and this of course presents a considerable challenge. Farmers and rural land managers often find themselves at the end of weak grid connections, something which presents potential difficulties for those wishing to export electricity to the National Grid.

11. The total emissions from the land use sector are offset to some extent by carbon removal and storage through the planting and management of forestry, resulting in a net removal of carbon from the atmosphere.

12. Rising energy prices combined with rising environmental awareness have led to significant energy savings in recent years, through accelerated uptake of energy efficiency and a range of renewable energy technologies there is potential for agriculture to ultimately become carbon neutral.

Question - To what extent has the Welsh Assembly government been successful in utilising the powers available to it in order to reduce carbon dioxide emissions from rural land use?

13. It is difficult to gain a clear picture of how the WAG's powers might influence emissions simply because levers that government might be able to pull in order to exert influence over carbon emissions lie partly with WAG, partly with the UK government and partly with the EC. Powers are accruing to the National Assembly under schedule 5 of the Government of Wales Act 2006, but the process of drawing down these powers has proven to be convoluted and protracted.

Question - What opportunities does the Welsh Assembly Government have to help rural land managers, a) reduce their carbon dioxide emissions, b) better manage the storage of carbon within the land

14. Generally speaking, it is not possible to have agricultural production without giving rise to carbon emissions. However, agriculture is also uniquely placed to act as a carbon sink, this contrasts with transport or industrial activities which are major CO_2 emitters.

15. In Wales our farming systems are still very dependent on extensive grazing.

The soils which support such grazing are important carbon sinks. Carbon is introduced to soil through photosynthesis, with a significant proportion of that carbon retained in the soil for some time through roots or decomposing plant residue. Increasing the photosynthetic fixing of carbon and slowing down the oxidation of stored carbon will add to carbon reserves

16. The intensity and timing of grazing has an effect upon the removal, growth and flora of grassland, thereby affecting the amount of carbon accumulation in soils. Soil carbon content under optimally grazed lands is often greater than under ungrazed land. The maintenance of pasture-based systems (such as those that we have in Wales) is therefore important in the process of mitigating climate change.

17. In terms of how the Welsh Assembly Government might be able to help, steps such as bringing in a more sympathetic planning regime which could help the sector reduce its carbon emissions through farm-scale renewable technologies would be of benefit. We would also ask that the Welsh Assembly Government keeps an open mind on all new technologies that may offer potential ways of ameliorating the carbon footprint of the land use sector, this should include any GM technologies that may come onstream in future.

Question - Could alternative targeting of Welsh Assembly Government financial resources lead to greater carbon dioxide emissions reductions within the context of rural land use than are currently being achieved? If so, where could additional resources lead to the greatest impact? (Please provide detail to support your evidence)

18. The Welsh Assembly Government is currently reviewing agri-environmental schemes delivered under the auspices of Axis 2 of the Rural Development Plan. The Axis 2 Review will examine ways of improving carbon management within the land use sector[5].

Question - How can land managers in rural areas contribute towards the Welsh Assembly Government's 3% reduction targets and how much reduction in CO_2 in Wales could realistically be achieved through improved land management?

19. There is scope for land managers to contribute towards the WAGs 3% reduction target, although it is difficult to quantify exactly how much of a reduction might be realistically attainable. The most obvious examples are through the use of on farm renewable technology as has been mentioned previously and also the role of Wales' land use sector in carbon sequestration.

20. How much carbon reduction can be achieved by the land based sector will ultimately depend on a number of drivers including

economic factors, as well as public, legislative and planning attitudes.

References

[1]http://www.assemblywales.org/cr-lu8.pdf

[2] http://www.berr.gov.uk/files/file43902.pdf

[3] Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990-2005

[4] ECOSSE Report - Estimating Carbon in Organic Soils, Sequestration and Emissions

[5]http://www".wales.gov.uk"/"consultations"/"environment"/"reviewoflandmanagementaxis2cons/?lang=en "-