

Cynulliad Cenedlaethol Cymru Pwyllgor Amgylchedd a Chynaliadwyedd	National Assembly for Wales Environment and Sustainability Committee
Dyfodol Ynni Craffach i Gymru?	A Smarter Energy Future for Wales?
Ymateb gan Bywyd Gwyllt y Byd Cymru (Saesneg yn unig)	Response from World Wildlife Fund Wales
SEFW 25	SEFW 25



Cynulliad
Cenedlaethol
Cymru

National
Assembly for
Wales



WWF Cymru
Tŷ Baltig
Sgwâr Mount Stuart
Caerdydd CF10 5FH
Ffôn: xxxxxxxxxxxxxxxx
cymru@wwf.org.uk
wwf.org.uk/cymru

Baltic House
Mount Stuart Square
Cardiff CF10 5FH
Tel: xxxxxxxxxxxxxxxx
wales@wwf.org.uk
wwf.org.uk/wales

Submission to NAW Consultation: A Smarter Energy Future for Wales?

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WWF Cymru will focus its response to the Committee's questions on energy efficiency of existing housing stock and reduction in emissions from the residential sector. The main basis of our evidence is research we have recently commissioned EST to undertake in this area "Progress towards residential energy reduction targets in Wales' July 2015 which is provided alongside this evidence.

We are currently developing a summary of this report which we will use for public engagement and suggested recommendations for policy in this area. We however would like to share the full report with the Committee on a confidential basis until the summary is available. Content from the report will be in our evidence provided below.

Improving energy efficiency has long been advocated as a way to increase the productivity and sustainability of society, primarily through the delivery of energy saving refurbishments of the housing stock. The impact of energy efficiency measures can go far beyond energy savings, and energy efficiency improvements can be an important contributor to economic growth and social development¹.

WWF Cymru therefore consider a comprehensive strategy capable of delivering home refurbishment at the scale needed to address emission reduction targets as a cornerstone programme for implementation of WFG Act and as essential to a future programme for government.

We expect an important strategy which cross-cuts a number of Welsh Government priorities to include considerable evidence base and a comprehensive delivery plan. WWF Cymru considers current WG consultation in this area to not provide this and will be recommending changes in our submission to that consultation which closes on 9th September.

In addition to lack of evidence in current WG consultations there is no publically available comprehensive picture of impact of energy efficiency (both Welsh Government and UK Government) measures in Wales. WWF Cymru considers this lack of evidence as a

¹ Spreading the Net: the Multiple Benefits of Energy Efficiency: IEA
http://www.iea.org/publications/insights/ee_improvements.pdf

considerable barrier to understanding of current situation of housing stock in Wales and the effective delivery of a robust programme.

In absence of this and to help inform WWF Cymru's understanding and contribute to the discussions we commissioned EST undertake this analysis which has produced a report 'Progress towards residential energy reduction targets in Wales' July 2015.

The purpose of the study was evaluate the impact of both the Welsh and UK governments programmes aiming to improve the energy efficiency of the housing stock and the ongoing activity required in order to achieve 2020 targets. This involves quantifying the total level of energy efficiency activity which has taken place in the Welsh housing stock since the last detailed property survey in 2008, and calculating the emissions reduction this has achieved. The study has then modelled a number of policy scenarios to 2020, showing the emissions reduction potential of each and therefore the activity required for 2020 target emission levels to be met.

The analysis does include an estimation of the total costs of these refurbishments but scope of analysis does not provide the potential economic impact of refurb in gross terms across the lifetime of the capital spend or impact on fuel poverty in Wales. This is mainly because there is a lack of data in Wales to enable this analysis.

Programme impact

Our modelling indicates that, between 2007 and 2014, energy efficiency programmes in Wales prevented the release of around 2.0 MtCO_{2e}. The programme responsible for both the greatest number of energy efficiency installations and the greatest carbon reduction was the Carbon Emissions Reduction Target (CERT), a UK government programme which ran from 2008-2012. However, whilst CERT accounted for over 70% of installations, our modelling suggests it was responsible for only 39% of the emissions reduction; other, smaller scale policies have had a much bigger impact on a per-measure basis. In particular, the Feed-in Tariff has contributed almost a third of the emissions reduction, despite accounting for only 5% of total installs.

The Welsh Government schemes Nest and Arbed, combined, accounted for 8% of the emissions reduction. Cumulatively, they have prevented the release of 0.17MtCO_{2e} between 2007-2015. The remaining 92% of policy-based emissions reduction, 1.85 MtCO_{2e}, is attributable to schemes led by the UK government.

Meeting the 2020 targets

Our modelling indicates that progress towards the Welsh Government's climate change targets is mixed. To date, the residential sector is on-target for its 3% year-on-year reduction commitment, leaving the sector well placed to achieve the 2020 target even with minimal ongoing action. However, future progress towards this 2020 goal is heavily dependent on grid decarbonisation. In our scenario 1 (no uptake of energy efficiency measures post-2014), 73% of the reduction in emissions seen between 2014 and 2020 is due to grid decarbonisation. Since electricity generation is outside of the Welsh Government's devolved powers, this high dependence on decarbonisation leaves progress towards the target vulnerable to processes outside Welsh Government's control. To reduce this vulnerability, Welsh Government must focus greater efforts on reducing energy consumption, rather than relying on reduced carbon intensity of the energy itself. Reducing consumption will require ongoing action to continue improving the housing stock's energy efficiency.

Progress towards the 40% residential target has been much slower. Since ‘source’ emissions from the residential sector are predominantly due to heating, achieving the target will require investment both in methods to reduce heating demand (for example, through insulation) and to reduce the carbon intensity of heating fuels (for example, using renewable heating sources). Our scenarios indicate that significant action in these areas will be required between 2015 and 2020 if this target is to be met. Even under a scenario modelling 100% uptake of cavity wall insulation, loft insulation, draught proofing, condensing boilers and solid wall insulation source emissions are reduced only to 3.53 MtCO_{2e}; this is still 0.52 MtCO_{2e} above the 40% target level.

Achieving the target will therefore also require uptake of renewable heating. We modelled three scenarios incorporating renewable heat. The most viable scenario which could achieve the target was a scenario which requires: 100% uptake of cavity wall insulation, loft insulation, draught proofing and condensing boilers; 25% uptake of solid wall insulation; and uptake of renewable heat into 25% of homes. In total, this would require installation of over 2.2 million energy efficiency measures, at a cost of around £5.2 to £9.3 billion.

Delivery of measures

We appreciate the scale and the cost of this work is extremely challenging but we do not think Welsh Government should shy away for recognising the scale of change needed. Getting buy- in for stakeholders to address the huge challenge collectively needs a comprehensive and transparent outline of the problem. Recognising this challenge is the only way to match the ambitious rhetoric Welsh Government has set itself through commitments to sustainable development and emission reduction targets and WFG Act and Environment Bill.

There are a number of ways we are exploring financing and delivery of these programmes.

Arbed was financed through use of infrastructure stream, recognised in the Wales Infrastructure Investment Plan. WWF Cymru considers this a smart way of financing energy efficiency measures and recommends that future programmes are also funded this way – via a long-term national infrastructure project. This should be backed up with a commitment to a multi-billion pound capital investment programme, leveraging private funding, and the kind of clarity, purpose and focus given to other major infrastructure projects in Wales.

The programme would provide grant funding for the fuel poor, low interest loans and other incentives for those able to pay, and draw on other private funding streams. To ensure that the predicted emissions savings from measures are delivered, householders should be supported to reduce their energy use as an integral part of the programme.

There is no updated version of economic and social impacts of such a programme , particularly in improving the worst performing houses in Wales and the impact that will have on fuel poverty. This is due to no household conditions data in Wales since 2008. In absence of this, the assessment WWF Cymru undertook in 2011 and 2012 on cutting emissions in Welsh homes², presents the general principles and assessments we would like to undertake if there were data available. In particular the possibility of bringing fuel poor homes up an energy efficiency standard and whether this would meet the scale of measures needed to meet the emission reduction targets.

Commit to and deliver a Renewable Heat Programme

² http://assets.wwf.org.uk/downloads/housing_report_english_summary_.pdf
http://assets.wwf.org.uk/downloads/cutting_carbon_emissions_in_welsh_homes.pdf

Our analysis demonstrates the importance of developing a renewable heat programme for Wales. This is currently an area that does not receive much recognition in the energy debate therefore we recommend that a renewable heat strategy and programme is developed which compliments the energy efficient installations.

Enhancing the take up of low carbon heat would help to reduce reliance on volatile fossil fuels, such as gas and oil, which have been the biggest driver of consumer energy bill increases in recent years and account for 60% of domestic bills. This would have consumer and energy security benefits, particularly as North Sea reserves dwindle. It would also help to create new, skilled jobs. WWF UK have produced a report on Renewable Heat which demonstrates the direction of travel for Wales³.

Environment Bill

We see Section 2 of Environment Bill as potentially a very positive robust governance structure which will provide mechanisms enable government to address the scale of challenge. The proposed 'report on policies and procedures' (RPP) in the Bill needs to provide the in depth level of analysis of emissions reduction needed and the measures that will deliver it. Energy efficiency measures from residential sector will need to play a significant part of this. However delay in production of this report till 2018 means an unsatisfactory delay to robust plan for Welsh Government considering the level of action needed by 2020 to meet its commitment of emissions reduction of 40%. We therefore recommend that RPP is produced sooner.

The more in depth analysis and route map we are recommending in the Welsh Government energy efficiency strategy will support this work. We would have serious concerns Welsh Government if delayed commitment to substantial energy efficiency programmes until the RPP. Hope that it will be a key feature in the next programme for government.

The Scottish Government has recently committed to a programme of energy efficiency measures. We are currently exploring a comparison between this commitment and Welsh Government's.

New Build

Building regulations are the primary tool for determining the energy efficiency of new and existing building stock. WWF Cymru regrets the huge missed opportunity presented by the edecision to improve the energy efficiency of new homes by only 8% in 2013. Details on our concerns our outlined in a blog on this issue⁴.

For more information, please contact: 

³ http://assets.wwf.org.uk/downloads/wwf_heat_report_summary_web.pdf

⁴ <https://blogs.wwf.org.uk/blog/climate-energy/new-housing-energy-plans-are-a-wasted-opportunity/>