

LCH 08

Ymateb gan : Yr Ymddiriedolaeth Arbed Ynni  
Evidence from : Energy Saving Trust

Energy Saving Trust is pleased to submit evidence to the Climate Change, Environment and Rural Affairs Committee as part of its inquiry into low carbon housing in Wales.

Energy Saving Trust is the leading, impartial sustainable energy organisation. We work on behalf of governments and businesses across the UK providing services in the area of data, assurance, grant and loan administration, consumer engagement and advice.

In Wales, Energy Saving Trust delivers the Welsh Government's Local Energy/Ynni Lleol community renewable energy scheme and, as a sub-contractor to British Gas, delivers the advice and customer engagement services for the fuel poverty Nest scheme.

For BEIS, the Energy Saving Trust delivers the telephone-based Energy Saving Advice Service in England and Wales. We also undertake other research and awareness-raising work for the department on a project-by-project basis.

In Scotland, the Energy Saving Trust is a principal delivery partner of the Scottish Government for home energy. We run comprehensive local and national advice and support programmes.

Public engagement on energy is at the heart of our work. Energy Saving Trust has a unique relationship with the public around energy saving and renewable energy and our response reflects that.

## Introduction

Due to the Energy Saving Trust's extensive experience working with the public and private sector on sustainable energy issues, we believe we have useful insights to share with the Committee. We have responded to the detailed questions below however due to their breadth we have kept our answers at a relatively high level. We would be happy to provide further detail to the committee on any aspect of our response.

Housing has a crucial role to play in transitioning to a low carbon economy, not only in terms of the emissions the residential sector generates but also because the home is one

of the primary points of interaction that individuals have with energy use. We strongly believe that a successful transition to a low carbon economy requires housing at its heart.

### **Key points of our submission**

Decarbonising energy requires involvement from a wide range of actors but the role of national government cannot be understated. Solutions to decarbonise home energy need to be locally tailored but with high level political support. The Welsh Government therefore has a vital role to play in developing ambitious and credible policy strategies and governance frameworks.

Welsh Government is perfectly placed to provide strategic direction and ambition on low carbon housing. There needs to be a long term, high level commitment to improving the state of the Welsh housing stock. Tackling fuel poverty needs to be a high priority but a comprehensive approach to improving energy performance across all sectors (social housing, private rented, owner occupier) and abilities to pay is needed longer term. Different push-pull levers are needed for the different sectors that will need to be designed and implemented with extensive consultation with those affected. We suggest the following specific priorities:

- Introducing stringent new build standards to future proof the housing stock is a vital first step to address built environment emissions. The zero carbon homes policy saw widespread support across industry and the third sector and its axing was widely criticised. The first step should be setting out a robust definition, suited to the Welsh housing market.
- Building on the Nest and Arbed programmes, Welsh Government should seek to put in place a more extensive programme of support for home energy efficiency improvements. There are useful learnings from the Scottish Government's energy efficiency programmes which include an array of complementary incentives and support services.
- Regulation is a vital part of the policy mix and the Welsh Government should be looking at where it can strengthen energy efficiency standards that are already in place, for instance relating to the upcoming private rented sector minimum energy efficiency standards, which, as they are currently designed will not have the desired impact.

## What role can housing play in Wales' low carbon transition, including the potential positive impacts on greenhouse gas emissions?

We would highlight the findings of the Committee on Climate Change (CCC) in this regard, in particular its 2017 progress report<sup>1</sup>. As the committee will be aware, Welsh emissions have dropped by 20% between 1990 and 2015 compared to a UK-wide drop of 38%. This means that Wales is not on track to meet its non-statutory 2020 40% emissions reduction target nor is its current progress in line with the 2050 emissions reduction target set through the Environment (Wales) Act.

The Energy Saving Trust is clear that reducing emissions in homes by supporting the retrofit of existing buildings and mandating high energy performance standards for new buildings is a vital part of tackling climate change. Residential buildings directly account for 8% of total Welsh emissions (more once you incorporate emissions from the power sector associated with buildings' energy use) however due to the constraints and limitations in reducing emissions in other sectors (e.g. heavy industry, agriculture) some sectors, like buildings, have deliver greater reductions. Emissions from buildings are 32% lower than 1990 levels<sup>2</sup> meaning the sector's progress has been better than the Welsh average. However we would highlight the importance of addressing building, in particular residential building, energy efficiency as there are significant, but often under reported, benefits associated with making home energy improvements. This was explored most prominently in the International Energy Agency's report on the multiple benefits of energy efficiency<sup>3</sup> which identified a long list of benefits, including: health and wellbeing, jobs and growth, energy security, fuel poverty alleviation, local air quality and positive impacts on public budgets. Developing a vibrant low carbon economy delivers significant economic benefits. The ONS finds that there are an estimated 243,000 people employed in low carbon and renewable energy (LCRE) in the UK in 2015, generating a turnover of over £45bn<sup>4</sup>. In Wales, the LCRE economy employed around 11,000 FTE employees in 2015, generating around £1.7bn in turnover. We were encouraged that these multiple benefits featured prominently in the Welsh Government's 2016 energy efficiency strategy.

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<sup>1</sup> <https://www.theccc.org.uk/publication/2017-report-to-parliament-meeting-carbon-budgets-closing-the-policy-gap/>

<sup>2</sup> <https://www.theccc.org.uk/wp-content/uploads/2017/04/Welsh-Carbon-Targets-Committee-on-Climate-Change-April-2017.pdf>

<sup>3</sup> <https://www.iea.org/publications/freepublications/publication/capturing-the-multiple-benefits-of-energy-efficiency.html>

<sup>4</sup> <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2015results>

## The development and availability of technology needed for highly energy efficient housing

As the committee will be aware, decarbonising heat and addressing home energy efficiency are increasingly being looked at as part of the same challenge. Looking at either heat or energy efficiency on its own fails to capture the interdependence between the two. This finding is reinforced in a recent Energy Research Partnership report<sup>5</sup> that the Energy Saving Trust supported: regardless of the route to decarbonise heat (e.g. dominated by hydrogen or heat pumps or heat networks or mixes), improving the energy efficiency of the building stock is beneficial. Energy efficiency is identified as the “no-regret” option, i.e. large scale demand reduction is compatible with any option to decarbonise heat. This is very much in line with the ‘energy efficiency first’ principle whereby energy efficiency is the first fuel, the cheapest energy and lowest carbon energy being the energy that is not used. This is also aligned with the Welsh Government’s energy hierarchy where demand reduction is the first priority, followed by energy efficiency. As such when thinking about the technology needed for highly energy efficient housing we must also consider heating technologies.

We understand that the Department for Business, Energy and Industrial Strategy (BEIS) is currently developing a heat strategy. Whilst we are unclear what the coverage of this strategy will be, in all likelihood it will cover Wales to some degree. A GB or UK-wide strategy, by necessity, can only go into so much detail and policy strategies need to be tailored to local circumstances, for instance to allow for the fact that Wales has a high proportion of off gas grid properties<sup>6</sup>. If it is not already doing so, Welsh Government should be working closely with BEIS to ensure that the heat strategy is consistent with decarbonising heat and improving home energy efficiency in Wales as well as identifying key opportunities for Welsh Government to add value. Beyond that we believe that the Welsh Government should seek to develop its own heat strategy and combine it with an updated energy efficiency strategy. A combined heat and energy efficiency strategy is important to recognise the intertwined nature of these two areas, as argued in the paragraph above. This recommendation echoes that of the CCC in its 2017 progress report for Wales to develop its own heat strategy.

To ensure that a heat and energy efficiency strategy is tailored to local requirements, building an understanding of the current state of the Welsh housing stock will be vital. We understand that the Welsh Government is currently working on its Housing Conditions Evidence Programme which it expects to publish in autumn 2018. We fully support this

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<sup>5</sup> [http://erpuk.org/wp-content/uploads/2017/10/ERP\\_heat\\_transition-Oct-2017.pdf](http://erpuk.org/wp-content/uploads/2017/10/ERP_heat_transition-Oct-2017.pdf)

<sup>6</sup> <https://www.nongasmap.org.uk/>

piece of work and believe that robust and reliable data on the state of the housing stock is essential to deliver effective heat and energy efficiency improvement programmes. Further activities that could be considered include developing a heat map, similar to DECC's heat map for England<sup>7</sup> that combined with the housing stock data could improve targeting.

To go further and ensure that the right technologies are available to develop highly efficient housing in Wales we would point to some of the programmes in place in Scotland, such as the Local Energy Challenge Fund<sup>8</sup>/Rural Energy Challenge Fund<sup>9</sup>, the District Heating Loan Fund<sup>10</sup> or the Home Energy Scotland Loan<sup>11</sup>. These schemes support an array of new, innovative low carbon initiatives and help build up the local supply chains for low carbon technologies. The projects supported range from community energy programmes, district heating projects to individual home energy efficiency improvements.

As the Committee will know, the Welsh Government supports local energy projects through the Local Energy/Ynni Lleol programme<sup>12</sup>. This provides a comprehensive support programme including development officer expertise and funding to encourage and develop renewable energy schemes that offer multiple community benefits.

### **What changes are needed to ensure that existing housing stock is as energy efficient as it can be?**

This is a wide-ranging question and one that is very difficult to answer comprehensively. We will therefore only attempt to address what we see as the most important issues for the existing stock. We would be happy to provide further information to the committee on request. The main points we would make are:

- Solutions for existing stock are very different to those for new build
- A variety of complementary measures/schemes are needed as part of a stable, long term and credible policy framework including:
  - A robust regulatory regime, particularly important for the private rented sector, accompanied with appropriate communication and engagement activities
  - Sustained and well-funded interventions to tackle fuel poverty

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<sup>7</sup> <http://nationalheatmap.cse.org.uk/>

<sup>8</sup> <https://www.localenergy.scot/funding/local-energy-challenge-fund/>

<sup>9</sup> <https://www.localenergy.scot/funding/rural-energy-challenge-fund/>

<sup>10</sup> <http://www.energysavingtrust.org.uk/scotland/grants-loans/district-heating-loan>

<sup>11</sup> <http://www.energysavingtrust.org.uk/scotland/grants-loans/home-energy-scotland-loan>

<sup>12</sup> <http://localenergy.gov.wales/en/>

- A range of incentives for the so-called ‘able to pay’ sector which also encourage householders to take up private sector finance.
- The Welsh Government can, and should, play a leadership role when it comes to low energy housing, as pledged in the energy efficiency strategy
- Ensuring that national and local actors have access to good quality data on the state of the housing stock is important to deliver retrofit programmes effectively

The first thing that we would note is that solutions for the existing stock are very different from new build homes. The policy levers for new build are comparatively simple as building regulations can be modified with relative ease. This is not to understate the work that must be undertaken to design effective standards. In contrast, retrofitting nearly all 1.4 million existing dwellings<sup>13</sup> in Wales will require a much broader range of policies and tools. The Welsh Government’s commitment to energy efficiency in its 2016 document was very welcome however we are not confident that the actions outlined will deliver the transformation of the building stock that is required. A greater level of ambition is needed backed up with a robust set of policy levers. Delivering a transformation of the existing housing stock is a significant challenge that will require high level political support, sustained action and support for local actors responsible for delivery.

The Energy Saving Trust believes a variety of different tools, combining incentives, zero interest loans or pay-as-you-save mechanisms, for instance, are needed. The UK Government’s over-reliance on the flagship Green Deal programme demonstrates the political and economic risks of putting all your eggs in one basket. Devolution has a very important role to play and we believe that the Welsh Government should be pushing for greater powers on energy efficiency to allow it to develop an ambitious set of policies to transform the built environment. We would point to the policy framework that the Scottish Government has put in place as a good example of this: having set energy efficiency as an infrastructure programme, Scottish Government is currently setting up Scotland’s Energy Efficiency Programme (SEEP) – a 15–20 year programme to transform the energy efficiency and heating of Scotland’s buildings, backed with around £500m of funding over the next 3–4 years. SEEP will encompass incentives, standards and regulations, supply chain, advice and information, consumer protection and monitoring and evaluation. It will build on existing programmes, which include zero interest loans, cashback schemes and, in some areas, equity release programmes and the infrastructure provided by Home Energy Scotland which provides a ‘single point of contact’ or ‘one stop shop’ for all households in Scotland including people struggling with energy bills. Home

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<sup>13</sup> <https://statswales.gov.wales/Catalogue/Housing/Dwelling-Stock-Estimates/dwellingstockestimates-by-year-tenure>

Energy Scotland – managed by the Energy Saving Trust – provides trusted, independent, impartial advice tailored to an individual’s personal circumstances and their actual home.

It must also be recognised that incentives alone will not necessarily drive demand. To be truly effective incentives need to be considered as part of a wide range of policies, including regulation. Effective regulation needs to be in place both to act as a backstop and to ensure that all tenures are adequately covered.

As the committee will be aware, in April 2018 minimum energy efficiency standards requiring rented properties to be at least an EPC band E to be let will come into force in England and Wales. We strongly support these regulations however are very concerned that as they currently stand many, if not most, landlords will be able to avoid making improvements through the no upfront cost exemption. This is whereby landlords of the least energy efficient, coldest homes are exempt from making energy efficiency improvements if they cannot access 100% funding from government or other third parties to pay for the costs of the necessary improvements. This loophole is very disappointing, the Energy Saving Trust believes that landlords of the least energy efficient homes should be required to invest their own money to bring these homes up to a decent standard. We support the idea of a cost-cap: landlords of F and G banded homes should be required to invest up to a £5,000 to improving their property. Where the costs of the necessary energy efficiency improvements are higher than the cap, then landlords should be able to look for financing support from government.

Research undertaken by Shelter Scotland<sup>14</sup> found that nearly 80% of Scottish renters wish their home was more energy efficient yet 60% feel powerless to take action and are unable to “vote with their feet”. The research finds that 85% of all adults and 91% of private renters support introducing minimum energy efficiency standards for the private rented sector.

Whilst we appreciate that the Welsh Government is not in a position to directly modify the PRS standards we believe that it should lobby the Department for Business, Energy and Industrial Strategy to implement a £5,000 cost cap. The Clean Growth Strategy recognises that these regulations are not fit-for-purpose and commits to review how they work but it is uncertain whether this will result in them being suitably strengthened. Longer term it will also be important to ramp up these standards and we very much welcomed the UK Government’s commitment to ensure that private rented homes reach an EPC band C by

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[https://scotland.shelter.org.uk/\\_data/assets/pdf\\_file/0007/1391398/SG\\_Consultation\\_on\\_Energy\\_Efficiency\\_the\\_VIEWS\\_of\\_Private\\_Tenants.pdf/\\_nocache](https://scotland.shelter.org.uk/_data/assets/pdf_file/0007/1391398/SG_Consultation_on_Energy_Efficiency_the_VIEWS_of_Private_Tenants.pdf/_nocache)

2030. Again it will be important that this ambitious commitment actually results in strong regulatory action.

Energy Saving Trust will continue to work with Government to ensure that the regulations are sufficiently strengthened however if the end result is not adequate we believe that the Welsh Government should look at implementing its own standards. This would undoubtedly require Welsh Government to obtain greater powers on energy efficiency. This would be important both in terms of ensuring that existing regulations are effective in Wales and that there is a robust long term trajectory to improve the energy efficiency of the PRS. The landlord registration and licensing framework that is in place in Wales will facilitate communication with landlords about energy efficiency standards as well as enforcement. The register is an important asset and one that we believe will prove instrumental in the coming years in improving the state of the private rented sector.

As highlighted in the section above, good quality data on the housing stock is vital to design successful interventions. We would like to highlight the work undertaken by our colleagues in Scotland, who, on behalf of Scottish Government, make address level data available to local authorities to help them deliver improved home energy interventions<sup>15</sup>.

### **Whether it is possible and feasible to deliver low carbon, energy positive, affordable housing at scale in Wales and, if so, how this can be achieved?**

We believe that other respondents are better placed than the Energy Saving Trust to answer this question. We would simply highlight the work being undertaken by Energiesprong<sup>16</sup> to refurbish homes to net-zero energy level at scale through an industrialised, off site production process. Paying for these high level retrofit involves bringing together funding from two sources: social housing investment asset and management funds and from the energy bill savings achieved as part of the building retrofit. It is important that rent and service charge regulations work with the Energiesprong model to allow social housing providers to recoup the energy bill savings.

### **What are the barriers to delivering transformative change in house building in Wales?**

We believe that the barriers to low energy new homes are primarily supply side. Householders want warmer, comfier homes that are cheaper to heat and easier to use. Once the market starts providing low carbon new homes as standard we believe that consumer demand will be there. Regulation has a very important role to kick-start this process. Work the Zero Carbon Hub undertook in the build-up to the introduction of the

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<sup>15</sup> <http://www.energysavingtrust.org.uk/business/data-and-insight/housing-data-analysis>

<sup>16</sup> <http://www.energiesprong.uk/>



Zero Carbon Homes policy showed that the additional cost associated with more ambitious energy performance standards was small. When we updated these numbers earlier this year we found that there was only a 2.5%, 2.6% and 1.5% addition to the final purchase price for detached homes, semi-detached homes and flats, respectively from meeting the Zero Carbon homes standard.

### **What is the role of Ofgem and the national grid in enabling grid evolution to accommodate new types of housing, and what are the challenges presented by decentralised energy supply?**

We would only point out that the role of distribution network operators (DNOs) should not be forgotten. Their role in accommodating new types of housing needs to be incorporated.

### **Whether Wales has the requisite skills to facilitate and enable change in the housing sector**

No response.

### **What changes are needed to Building Regulations in Wales to accelerate progress towards 'near zero' energy standards and beyond?**

An important first part of this will be defining what is meant by 'near zero' energy standards. Various different definitions are used.

The nearly Zero Energy Building (nZEB) definition used in Article 2 of the Energy Performance in Buildings Directive (EPBD) is for buildings to have a very high energy performance with the nearly zero or very low amount of energy required to be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby<sup>17</sup>. This loose definition is designed to allow member states the flexibility to meet the nZEB requirement by the most appropriate means. It is not a viable definition on which to base building regulations however.

The more detailed Zero Carbon Homes policy – laid out by the UK Government to comply with Article 2 in England – sets out a Fabric Energy Efficiency Standard, a Carbon Compliance requirement and Allowable Solutions<sup>18</sup>.

We understand from the Cabinet Secretary's response<sup>19</sup> to recommendation five in the Smart Energy Future for Wales report that Part L (conservation of fuel and power) is being revised to ensure compliance with EPBD. Whilst this work is no doubt useful we would

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<sup>17</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:153:0013:0035:EN:PDF>

<sup>18</sup> <http://www.zerocarbonhub.org/zero-carbon-policy/zero-carbon-policy>

<sup>19</sup> <http://senedd.assembly.wales/documents/s57872/Welsh%20Government%20Response.pdf>

urge the Welsh Government not to limit itself to mere compliance with the 2020 EPBD target. Instead WG should be seeking to lead the way and implement ambitious '2050-ready' new build standards in recognition of the significant economic, environmental and health and wellbeing benefits.

The work undertaken by the Zero Carbon Hub is a very solid foundation upon which to build however there may be areas that Welsh Government wishes to tailor to national circumstances. One area that it will be important to consider will be the balance between carbon offset, renewable production and energy efficiency.

### **How communities can be planned and shaped to be more energy efficient and low carbon (including examples of good practice in Wales and further afield).**

We believe communities have a strong role to play in facilitating the transition to a low carbon future in Wales. There could be significant scope to incorporate community energy renewable projects in new developments and existing communities and we welcome the work the Welsh Government is doing through the Local Energy/Ynni Lleol programme. Community energy projects generate renewable electricity on-site, provide a source of revenue for community project, raise awareness of energy issues and boost community cohesion.

Further, we believe that communities need to be planned to prepare them for future changes in transport and heat demand. This means ensuring that there is adequate provision of public and private charging points as well as ensuring that there are suitable public transport and active travel options. Communities need to be planned so that as demand for transport and heating services changes communities can change too. This may require future-proofing electricity networks – as referenced in relation to the question on Ofgem and the National Grid.