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Llywodraeth Cymru  
Welsh Government

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Welsh Government

## Consultation Document

### Energy Efficiency – Call for Evidence

Interested organisations and individuals are invited to contribute to the development of a new Energy Efficiency Strategy for Wales.

Date of issue: **16 October 2014**

Action required: Responses by **8 January 2015**

## Overview

The purpose of this call for evidence is to seek the views of stakeholders on a potential vision for energy efficiency in Wales and options for the way forward. The questions are therefore often open-ended and broad.

## How to respond

You are invited to complete the following questionnaire in order to have your say about the future of energy efficiency in Wales. You may wish to answer some, or all, of the questions posed.

The questionnaire can be completed by an individual, group or organisation. Where possible please give reasons for your answers to help us understand your views in full. Additional information, evidence and research can be included with your response. Please submit this along with your completed questionnaire. Please take time to complete the personal details section at the end of the form. This will assist with the analysis of the call for evidence.

The questionnaire can be completed either electronically or as a hard copy.

The consultation document and response forms are available on the Welsh Government's website at: [www.wales.gov.uk/consultations](http://www.wales.gov.uk/consultations)

## Further information and related documents

Large print, Braille and alternative language versions of this document are available on request.

## Contact details

Completed questionnaires should be returned to:

Energy Efficiency  
People and Environment Division  
Welsh Government  
Cathays Park  
Cardiff  
CF10 3NQ

email: [FuelPovertyandEnergyEfficiency@wales.gsi.gov.uk](mailto:FuelPovertyandEnergyEfficiency@wales.gsi.gov.uk)

## Data protection

### How the views and information you give us will be used

Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about. It may also be seen by other Welsh Government staff to help them plan future consultations.

The Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. This helps to show that the consultation was carried out properly. If you do not want your name or address published, please tell us this in writing when you send your response. We will then blank them out.

Names or addresses we blank out might still get published later, though we do not think this would happen very often. The Freedom of Information Act 2000 and the Environmental Information Regulations 2004 allow the public to ask to see information held by many public bodies, including the Welsh Government. This includes information which has not been published. However, the law also allows us to withhold information in some circumstances. If anyone asks to see information we have withheld, we will have to decide whether to release it or not. If someone has asked for their name and address not to be published, that is an important fact we would take into account. However, there might sometimes be important reasons why we would have to reveal someone's name and address, even though they have asked for them not to be published. We would get in touch with the person and ask their views before we finally decided to reveal the information.

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## 1.0 Introduction

**In this section we set out the reasons for accelerating the delivery of a more energy efficient Wales.**

Improving energy efficiency in Wales is a major challenge, but the opportunity is immense.

We are keen to address this challenge and set out actions to be taken forward. Power to take action on energy efficiency is not fully devolved to Wales, so our role is limited to the promotion of energy efficiency. Our current energy efficiency support includes Nest and Arbed, advice to businesses through Business Wales, advice through the new Resource Efficient Wales service, public sector loans through Salix and Invest 2 Save, amongst others. In addition, Wales has access to UK wide action through initiatives such as the Green Deal and the Energy Company Obligation. So we are building upon considerable efforts to date, although the regulation of energy efficiency remains with the UK Government. We now propose to develop a new strategy that considers not just Welsh Government's role in driving this agenda but also the role of other organisations, businesses and householders. As a first step we are calling for evidence.

Energy efficiency will contribute to:

- reducing greenhouse gas emissions and helping to deliver our Climate Change Strategy;
- reducing fuel poverty and helping to deliver our Fuel Poverty Strategy
- creating jobs and business opportunities by investing in Green Growth through local energy efficiency supply chains;
- improving the energy performance of buildings in Wales, raising the overall quality of the building stock and reducing energy costs;
- the regeneration of communities in Wales, both through improvement in the fabric of buildings and through the creation of jobs and business opportunities that will lead to more cohesive, sustainable communities;
- the delivery of our wider Welsh Government energy policy, complementing the aspirations of Energy Wales: A Low Carbon Transition;

Delivering improved energy efficiency is also important for the Welsh Government legislative programme, particularly the Future Generation's Bill.

## 1.1 The need

Energy efficiency benefits households and businesses in Wales, by saving them money by reducing energy security risks and by supporting more sustainable lifestyles. At scale, it is the most cost-effective intervention to support the move to a low carbon energy system.

### Energy Hierarchy

Energy Wales: A Low Carbon Transition describes our ambition to make the long-term transition to a low carbon energy system. It recognises three major challenges that make this transition urgent: the need to mitigate climate change, the impact of rising energy costs, and the future risks of energy security. Tackling these problems requires co-ordinated action at all levels in Wales, with the Welsh Government playing our part; it also requires a more interconnected UK and European energy system. We must maximise the benefits from spending public money on energy.

The energy hierarchy (figure 1) shows that reducing energy demand and energy efficiency are the best starting points. Energy efficiency actions reduce energy demand and enable us to use energy wisely. Maximising energy savings and energy efficiency will be essential to the feasibility of increasing reliance on low carbon sources of energy.

Reducing our demand for energy and increasing energy efficiency at the point of use means that less energy needs to be generated, and it is therefore easier to meet demand using low carbon sources of energy. This in turn will lower the need to generate energy (both electricity and heat) from fossil fuels, thereby lowering our carbon emissions.

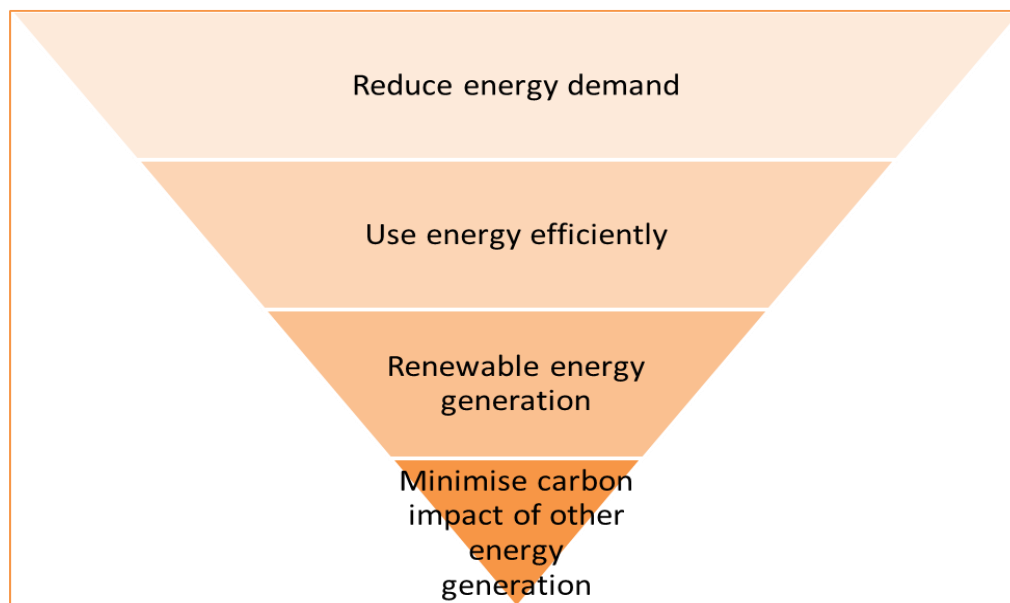


Figure 1: The Energy Hierarchy

## **Energy Security**

Energy efficiency reduces the absolute amount of energy that needs to be generated, which, combined with low carbon energy from the sustainable use of Wales' natural resources, improves energy security. This is of importance to consumers and businesses, who are less likely to face energy supply cuts, and it has wider strategic importance for the ability of the UK as a whole to reduce the amount of energy that it has to import from outside its borders.

## **Energy costs**

The price of energy impacts on the ability of people to heat their homes affordably, and it reduces the competitiveness of Welsh businesses in global markets. Inefficient buildings use more energy than they need to, which leads to consumers and businesses paying for this waste.

In short, we believe that the multiple benefits to Wales from improving energy efficiency are substantial. This is why action is so important.

## **1.2 Multiple Benefits**

### **Climate Change**

Reducing emissions from energy used in homes, businesses and public sector buildings will contribute to delivering our Climate Change Strategy and associated emission reduction targets.

Greenhouse gas emissions from direct energy and electricity use in existing housing and businesses in Wales account for approximately half of the emissions included in the Welsh Government's target to reduce greenhouse gas emissions by three per cent per year in areas of devolved competence. Promoting energy efficiency is a critical component of achieving this target and generally encompasses many of the most cost-effective greenhouse gas reduction measures.

The residential sector is responsible for 22% of the emissions covered by the Welsh Government's 3% target; it showed a 16.5% decrease in emissions for 2011 data. Further action is needed if we are to meet our more challenging 40% reduction in emissions by 2020.

The Welsh Report of the UK Climate Change Risk Assessment also highlights a number of risks relating to the built environment sector over the coming decades that are linked to energy efficiency including:

- **Overheating of buildings** – The effects of heat in the urban environment are likely to become increasingly important as temperatures rise, including both the environment within buildings and the wider urban environment.

- **Increase in energy demand for cooling** – It is likely that there would be an additional requirement for energy in the summer for cooling, although this is likely to still be less than the capacity needed for winter heating demand by the 2050s.

### **Fuel poverty**

The Welsh Government regards a household as being in fuel poverty if, in order to maintain a satisfactory heating regime, it would be required to spend more than 10 per cent of its income (including Housing Benefit, Income Support for Mortgage Interest or council tax benefits) on all household fuel use.

There are three factors that influence whether a household will be in fuel poverty: household income, energy prices and the energy efficiency of the home.

Fuel poverty estimates for 2012 indicate that 386,000 (30 per cent) of all households in Wales were fuel poor. This is an increase of 54,000 households since 2008, when it was estimated that 332,000 (26 per cent) of all households in Wales were fuel poor. The increase in the number of fuel poor households since 2008 has resulted from significant increases in energy prices during the period along with falling or flat lining incomes.

The Welsh Government has a statutory obligation to eradicate fuel poverty<sup>1</sup>, as far as is reasonably practicable, in all households in Wales by 2018. We have limited powers to tackle low income and energy prices, making eradicating fuel poverty a real challenge, but where we can make a difference is through improving the energy efficiency of homes in Wales and we are doing this through our energy efficiency programme.

Improving the energy efficiency of the homes of low income households matters, not just because we want to reduce household energy use and energy bills, but because living in a cold home has a negative impact on people's health and well being. We know that cold homes can lead to increases in respiratory illnesses and the risk of heart attack and stroke, as well as contributing to excess winter deaths. In addition, worrying about paying energy bills can increase levels of stress and mental illness. We also know that some people will cut back on food or other essentials in order to pay their energy bills, which further impacts on their general health. This all leads to poorer health outcomes for low income households and increases pressure on health and social care resources.

The negative impacts of fuel poverty and living in a cold home are wider than health and well being; they can also impact on educational attainment when children lack a quiet, warm place at home to study, or have higher levels of absence due to illness. They can increase social exclusion when people are

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<sup>1</sup> Statutory targets for eradicating fuel poverty in Wales were published in 2003, in the Welsh Government's **A Fuel Poverty Commitment for Wales**, as required by the Warm Homes and Energy Conservation Act 2000.

reluctant to invite friends to their home because it's cold or damp, and there are wider impacts on the economy through increased days lost to sickness and reduced disposable household income that might otherwise be spent in the local economy.

## **Economic Benefits – Green Growth**

### **Saving energy is saving money**

Economic savings can be made when energy is saved and that leads to lower energy bills. Savings to the economy can be made depending on the extent to which monetary savings are circulated back to it and the extent to which investments in energy efficient technologies give impulse to the local economy. Determining the impacts through the economy is a rather complex issue. To our knowledge, there is no European-wide study available investigating the macro-economic benefits of European-wide energy efficiency measures in detail. Neither is there a Wales-wide study.

### **Saving energy creates jobs**

Due to the labour-intensive and localised nature of most energy efficiency work, it is possible to create jobs locally. Jobs will be created in local installation and manufacturing, but will also benefit the transport, energy, and service sectors. Direct employment will be created in the manufacturing of equipment and materials including insulation and heating systems as well as installation and project management. Auditing, monitoring of energy use, efficiency rating, marketing and consultancy also all offer employment opportunities.

Some of the jobs that are created to enable energy efficiency improvement and energy savings will inevitably displace existing jobs in other sectors. Determining the exact level of displacement in sectors where product and service demand is reduced, or in other words, the net jobs that are gained in an emerging sector, is a highly complex issue.

### **Saving energy ensures Wales' long term competitiveness**

The absolute decoupling of economic growth from energy use could contribute to increasing the competitiveness and attractiveness of Welsh businesses. We want Wales to have a first-mover advantage and, in addition, reduce import and resource vulnerabilities.

The successful growth of the energy efficiency sector in Wales will lead to a skilled and highly specialised workforce in several sectors of our economy. This could have a positive, more indirect effect on our competitiveness in the manufacturing and services sectors as well as in research and development.

Reducing energy use in any industry cuts operational expenses, therefore it becomes increasingly important when competing in a global market against



countries whose energy (and labour) costs are relatively low compared to those in Wales.

Additionally, consumers are increasingly aware of the environmental impact of their behaviours. Companies that, as part of their business strategy, can deliver low-carbon and low-energy intensive products build competitive advantage and create added value.

The benefits of an energy efficient Wales would be manifold. Not only cost savings throughout businesses, households and the public sector, but increased resilience to economic and political shocks, stimulating innovation and the potential for job creation.

**Q1) – Potential impact**

**Do you have any evidence or experience you would like to share on the potential impact in Wales of energy efficiency on saving money and on supporting jobs and green growth?**

## 2.0 The Vision

**In this section we will be seeking your views on our proposed vision for energy efficiency in Wales.**

We want to ensure that Wales is in the best possible position to become a “Country of Excellence” for energy efficiency and a major exporter of energy efficiency technology and know-how.

The proposed vision for 2025:

**People, communities, businesses and other organisations recognise the benefits of energy efficiency and take action.**

**We have the supply chain that we need across Wales to deliver energy efficiency improvements to buildings, products and processes, and those businesses go on to grow and export their expertise and know how.**

**We have effective education and skills in place to deliver on the energy efficiency challenge, through from raising awareness in schools to a qualified and skilled workforce and investment in higher level skills to support R&D and innovation.**

**We support innovation in new energy efficiency products to deliver solutions in Wales; and our businesses benefit from the opportunities presented by the global challenge.**

**We have clear funding mechanisms, a sense of direction and a stable framework that is attractive to investors and consumers.**

**Q2) – Vision**

**Do you agree with the vision? If not, please explain your reasons.**

## 3.0 Action

**In this section we are seeking your views on actions to deliver each aspect of the Vision set out above.**

We have provisionally set out five key areas of action to ensure delivery of the vision:

- barriers,
- developing the supply chain,
- education and skills,
- innovation and
- finance.

We have not set out the detail of delivery of these policy aspirations at this call for evidence stage. We are keen to hear your views on the most appropriate and effective actions.

### 3.1 Key area for action 1: Barriers

#### Vision:

**People, communities, businesses and other organisations recognise the benefits of energy efficiency and take action.**

We recognise that energy efficiency is part of wider action on energy and climate change and that it is only part of the solution. At the level of a household, business or other organisation it goes hand in glove with demand side action and micro-generation. In communities, energy efficiency works along side generation and smarter local networks.

While the evidence suggests that there is significant potential for cost-effective investment in energy efficiency, this potential is not being realised in full. The existence of barriers to energy efficiency means that we see less investment in it than we ideally need in Wales. To realise our ambition, we need to address the barriers to energy efficiency.

It is possible to characterise these barriers in a number of different ways. They can be issues relating to an embryonic market, information provision and a lack of trust in it, misaligned or a lack of financial incentives, and behaviour barriers that mean energy efficiency is undervalued in comparison with other expenditure. These barriers are often inter-related and work together to reduce investment in energy efficiency. Solving any one barrier would not be enough on its own to realise the full potential for energy efficiency in Wales.

**Q3) – Barriers to householders and communities**

**What do you think are the barriers to people recognising the benefits of energy efficiency and taking action? Do you have any suggestions for improving and extending household take up of energy efficiency? What are the current strengths and successes and how can they be developed further?**

**Q4) – Barriers to businesses**

**What do you think are the barriers to businesses recognising the benefits of energy efficiency and taking action? Do you have any suggestions for improving and extending business take up of energy efficiency? What are the current strengths and successes and how can they be developed further?**

**Q5) – Barriers to the public sector**

**What do you think are the barriers to the public sector recognising and acting to realise the benefits of energy efficiency? Do you have any suggestions for improving and extending public sector action on energy efficiency? What are the current strengths and successes and how can they be developed further?**

In responding to these questions please consider the potential role of both the Welsh Government and others.

### 3.2 Key area for action 2: Supply chain development

#### Vision:

**We have the supply chain that we need across Wales to deliver energy efficiency improvements to buildings, products and processes, and those businesses go on to grow and export their expertise and know how.**

Wales is rare in having an energy efficiency supply-chain, from manufacturing to installation, within its boundaries. Insulation measures and micro-generation technologies are made in Wales. We have a strong installer base in many parts of Wales that we have helped to grow.

#### **Q6) – Supply Chain**

**What are the strengths and weaknesses of the supply chain and how can we build on the strengths and tackle the weaknesses?**

In responding to this question please consider the role of wider stakeholders and businesses as well as potential action by the Welsh Government.

### 3.3 Key area for action 3: Skills and education

#### Vision:

**We have effective education and skills in place to deliver on the energy efficiency challenge, through from raising awareness in schools to a qualified and skilled workforce and investment in higher level skills to support R&D and innovation.**

A Skills Implementation Plan for Wales was published in July 2014. This has been developed to inform future action in relation to post-19 skills and employment policy. It aims to provide details of the actions to be undertaken by the Welsh Government working with employers, individuals, trade unions and delivery partners.

The plan sets out the policy actions required in order to develop a sustainable skills system for the future. It has the aim of supporting Wales to evolve into a highly skilled nation and to create the conditions that will allow businesses in Wales to grow and flourish. To achieve this aim we must have responsible action from government, employers, providers and individuals.

Our long-term outlook for the skills system in Wales focuses on:

- skills for jobs and growth
- skills that respond to local needs
- skills that employers value
- skills for employment

Our ambition remains to develop a skills system in Wales that supports our future competitiveness, helps us evolve into a highly skilled society as well as tackling poverty, and that is sustainable against the backdrop of ever scarcer resources. Our primary focus will continue to be on raising productivity, reducing barriers into work and supporting people into sustainable employment.

The full plan is available at

<http://wales.gov.uk/topics/educationandskills/skillsandtraining/policy-statement-on-skills/skills-implementation-plan/?lang=en>

This will guide our action in ensuring that we have the necessary education and skills in place to deliver on the energy efficiency challenge.

#### **Q7) – Skills and Education**

**What opportunities and barriers are there for skills and education to develop a qualified and skilled workforce in the field of energy efficiency?**

### 3.4 Key area for action 4: Innovation

#### Vision:

**We support innovation in new energy efficiency products to deliver solutions in Wales; and our businesses benefit from the opportunities presented by the global challenge.**

The recently published Innovation Wales Strategy identifies low carbon energy and environment as one of the four grand challenge areas where the greatest investment in innovation will occur. Specifically there are many opportunities for Wales in the field of energy where priorities in smart living, energy resource-efficiency and large scale energy have been identified. In addition we need to encourage all audiences; households, businesses and communities to make the use of the new innovative products and services that have the potential to transform the way that they consume energy.

Innovation in the field of energy efficiency offers the potential to:

- enable Welsh businesses to develop new products, technologies and services to exploit opportunities offered by a global energy efficiency market as well as the market in Wales, and to
- increase action and effectiveness on the part of all target audiences in Wales, by making use of the most innovative energy efficiency solutions.

#### **Q8) – Innovation**

**What are the opportunities for innovation to help remove the barriers to improving our energy efficiency in Wales?**

### 3.5 Key area for action 5: Finance

#### Vision:

**We have clear funding mechanisms, a sense of direction and a stable framework that is attractive to investors and consumers.**

Energy efficiency in Wales is currently supported by initiatives targeted at domestic customers, businesses and public sector organisations. Some of this support is funded by the Welsh Government such as our energy efficiency programme, which includes Nest and Arbed, advice to businesses through Business Wales, advice through the new Resource Efficient Wales service, public sector loans through Salix and Invest 2 Save, amongst others. In addition, Wales has access to UK wide action through initiatives such as the Green Deal and the Energy Company Obligation.

The Welsh Government has shown commitment to energy efficiency by maintaining funding at a time of budget cuts. The Welsh Government has a role to increase the level of knowledge about financing mechanisms for energy efficiency beyond pure grant funding. There is a need for smarter use of public funds accompanied by a long-term, transparent and stable framework. Funding can be expanded by European and local authority co-funding and by attracting private capital. It is essential, therefore, that a vigorous market for energy efficiency improvements emerges and that public funds act to leverage private capital.

#### **Q9) – Finance**

**Are there any particular gaps in financing to support the take up of energy efficiency? Which financing models work best to address the energy efficiency needs in Wales for different target audiences?**

In responding to this question please consider the role of both the Welsh Government and others in financing investment in energy efficiency.



## 4.0 Next Steps

We are keen to talk to people and engage extensively in preparing this strategy. Responses to the call for evidence will be analysed and evaluated to help develop a draft energy efficiency strategy, which will be consulted upon in Spring 2015. The responses will also form an important part of the evidence base for energy efficiency in Wales.

We would be grateful for your general comments as well as responses to specific consultation questions. These will help to inform our final strategy, which we intend to publish late 2015.

### **Q10) – General**

**We have asked a number of specific questions. If you have any related issues that we have not specifically addressed, please use this space to report them:**

## **Catalogue of Questions**

**Q1) – Potential impact.** Do you have any evidence or experience you would like to share on the potential impact in Wales of energy efficiency on saving money and on supporting jobs and green growth?

**Q2) – Vision.** Do you agree with the vision? If not, please explain your reasons.

**Q3) – Barriers to householders and communities.** What do you think are the barriers to people recognising the benefits of energy efficiency and taking action? Do you have any suggestions for improving and extending household take up of energy efficiency? What are the current strengths and successes and how can they be developed further?

**Q4) – Barriers to businesses.** What do you think are the barriers to businesses recognising the benefits of energy efficiency and taking action? Do you have any suggestions for improving and extending business take up of energy efficiency? What are the current strengths and successes and how can they be developed further?

**Q5) – Barriers to the public sector.** What do you think are the barriers to the public sector recognising and acting to realise the benefits of energy efficiency? Do you have any suggestions for improving and extending public sector action on energy efficiency? What are the current strengths and successes and how can they be developed further?

**Q6) – Supply Chain.** What are the strengths and weaknesses of the supply chain and how can we build on the strengths and tackle the weaknesses?

**Q7) – Skills and Education.** What opportunities and barriers are there for skills and education to develop a qualified and skilled workforce in the field of energy efficiency?

**Q8) – Innovation.** What are the opportunities for innovation to help remove the barriers to improving our energy efficiency in Wales?

**Q9) – Finance.** Are there any particular gaps in financing to support the take up of energy efficiency? Which financing models work best to address the energy efficiency needs in Wales for different target audiences?

**Q10) – General.** We have asked a number of specific questions. If you have any related issues that we have not specifically addressed, please use this space to report them:

**Personal details**

**To help our analysis please let us know who completed this response form.**

*Contact details (Optional):*

**Please only supply if you are over the age of 18**

This response is from (name)

Please place a tick in the box next to the answer you wish to select ✓

**Are these views of:**

- An individual**
- A public organisation**
- A Group Discussion**
- SME**
- Industry**
- Community**
- Large Business**
- Other**

**Please state the titles of any additional information, evidence and research that you are submitting with your response.**