

Decarbonisation of Housing

Engagement findings

October 2022

As part of the Climate Change, Environment, and Infrastructure Committee's inquiry into *Decarbonising the private housing sector*, the Citizen Engagement Team interviewed private landlords and homeowners from across Wales. This paper communicates the findings of those interviews.

Engagement

The Citizens Engagement Team conducted a series of 14 depth interviews during August and September 2022. The objective of the interviews was to gather the views of private landlords and homeowners, to further understand the real and perceived barriers to retrofitting their properties with energy efficiency measures.

Participants

Eight homeowners and six private landlords were interviewed. Participants lived in or rented properties ranging from 200 to 20 years old. Participants came from Torfaen, Conway, Cardiff, Monmouthshire, and Powys.

Participants presented a variety of lived-experience. This included people that work in the building and construction industries; people that have extended their property; and people that have converted their properties.

Thank you to everyone who contributed to the programme of engagement.



Methodology

Interviews were held over the phone, face to face, and on Microsoft Teams. Participants chose the mode of interview most convenient for them. The format of engagement was largely comparable between sessions but varied slightly to meet participants' needs and facilitate an organic, qualitative conversation.

The following questions were asked:

- a. What do you think are the barriers to retrofitting privately owned properties with energy efficiency measures?
- b. What support needs to be made available to overcome the barriers?
- c. What is your opinion on how future schemes could influence and/or incentivise homeowners and private sector landlords to retrofit their properties?
- d. Do you think that the cost of living crisis is/will have an impact on private landlords and homeowners when considering retrofitting their properties with energy efficiency measures?

Participants agreed that the cost of living crisis is the most significant barrier facing landlords and homeowners when considering whether to retrofit their property with energy efficiency measures.

Responses to question e) have been included separately in Section 2: Cost of living

Summary of recommendations

Participants suggested several ideas that they feel will help remove the barriers to retrofitting privately owned properties with energy efficiency measures. Participants also suggested ideas for a more national approach to energy efficiency.

Recommendation 1. An impartial 'one-stop-shop' for information at a national level, which also supplies a local list of trusted installers and facilitates an online forum for homeowners and landlords.

Recommendation 2. Embedding tailor-made advice for individual properties at the start of any building works or upon request through an impartial central information service.

Recommendation 3. A 'country of origin' stamp to be visible on all building materials before purchasing to enable people to reduce their carbon footprint.

Recommendation 4. Financial incentives for private homeowners to retrofit their property with energy efficiency measures, including a reduction or pause in council tax payments or financial support toward the cost.

Recommendation 5. Grants, interest-free loans, and/or subsidies for all landlords and homeowners to retrofit their properties with energy efficiency measures.

Recommendation 6. To enable landlords to claim back the tax on energy efficiency building measures carried out on their rental properties.

Recommendation 7. Welsh Government landlord training to include information and guidance on retrofitting properties with energy efficiency methods.

Recommendation 8. Welsh Government landlord training to encourage landlords to see the business benefits of retrofitting their properties with energy efficiency methods.

Recommendation 9. Research and development into the effectiveness and longevity of heritage materials and methods to support the ageing Welsh housing stock.

Recommendation 10. Develop communal heating systems that supply heat to a number of properties from a common heat source or boiler.

Recommendation 11. Re-nationalise energy assets and re-invest profits to decarbonise the Welsh housing stock and lower energy bills.

Recommendation 12. Wales to generate renewable energy through marine technology.

1. Barriers to retrofitting privately owned properties with energy efficiency measures

Cost

1. All participants agreed that, once the cost of living crisis passes, general cost is the most significant barrier to retrofitting privately owned properties with energy efficiency measures.

Cost is most certainly the biggest barrier. The heating system that is recommended now is the air source heat pumps, well the cost of those is just horrendous. They're about five times more expensive than the most efficient gas boilers at the moment. So there's no way I could afford that for my tenant or myself.

We considered new windows. Some of the windows had blown and the double glazing wasn't great. All of a sudden you're talking £10,000 to £13,000. So we replaced one or two because we simply couldn't afford it.

If there's no benefit to me personally and it's not reducing my heating bills then it's not in my interest. I'd love to have an eco-friendly house for all of my tenants, but it comes down to cost.

2. Participants also spoke of the barriers they face in deciding which energy efficiency methods to purchase when considering the budget they had available.

We had great big voids underneath the wooden floorboards which we could fill with concrete, it could be done quickly and cheaply. We stripped out all of the radiators and put in underfloor heating throughout, with concrete filling the void. That was far more affordable and cost-effective than a £20,000 finance package to put solar panels on the roof.

We've put in a new boiler and foil-backed insulation, which was £60 a board instead of £40 a board. We could afford that increase in price so that was fine. But then it all starts adding up. I had to think about whether we could still have the solar panels on the house. The roof was old and needed re-roofing. Then I'd have to think about the start-up cost of the panels, the maintenance, and everything else. It would have been around £40,000. So I had to scrap the idea, which was a massive shame.

3. Landlords illustrated the cost-to-benefit barrier they consider.

Considering the tax I pay, and the mortgage I pay without any tax relief, the money I actually get back from the rental is quite low. I operate as a private limited company and so I'm also paying corporation tax. So where I might be charging for example £1000 a month, I actually only get about £500 after taxes etc. and then I have to keep that for a rainy day in case I have repairs. This month I had £600 worth of repairs on one particular property. I've got to make a profit.

- 4.** Many participants argued that placing the financial responsibility for decarbonising the private housing stock solely on the private landlord and homeowner is a barrier to decarbonising the housing stock, rendering it unachievable.

It's clear that the government want to be seen trying to make everyone carbon neutral, but they have got absolutely no idea how to achieve it without homeowners picking up the bill. Which, by the way, we're already picking up the bill for everything else.

Incentives and subsidies

- 5.** Participants considered how homeowners and landlords could be incentivised and subsidised to encourage them in decarbonising their properties. Some participants felt that a lack of Government financial support is a barrier to achieving the decarbonisation objective.

The only way I would consider retrofitting my rental property is if I could recoup some of the funds. Being a landlord is about being a business.

Any initiatives where there's been a requirement to upgrade buildings, there's always been government support. So after the second world war, there was massive government support to upgrade buildings. If the Government really want us to upgrade buildings to be energy efficient then they need to have a comprehensive policy and not just target easy wins, such as homeowners or putting pressure on landlords.

- 6.** However, participants were concerned that subsidies would not be effective or available to them.

Means testing models are 20-30 years out of date! They've got no idea what it costs.

In the properties that I rent, when I renovated them I kept the old boilers as they were still up to standard, but they're not great. Had there been a

scheme to help with say 50% of the cost, then I would have put in new boilers. I know that there are schemes out there but I don't think they're available to me.

- 7.** Some participants were concerned that regulation would be created to force homeowners and landlords to decarbonise their properties.

You can't force people to retrofit their property. If someone is living in a house that, when they bought it or when it was built, matched all existing building regs, you can't turn around and move the goalposts and force people to meet new requirements. You will end up with people not being able to pay.

As a landlord, I would find it very difficult if there was a stick and no carrot. If you said to me 'your boilers have to be of a certain standard by 2025', I would work it out, but I think some landlords might find it difficult because they won't have the money to do it. But if landlords aren't pushed to change, would we change?

Accessing information

- 8.** Some participants agreed that information about retrofitting properties is available. However, all participants agreed that the information is not easy to find.

I know all the information is out there but because it's not all in one place it's very difficult to make decisions in the end. I didn't easily come across the information.

- 9.** Participants went on to illustrate the barrier faced in understanding the information available and applying that information to individual properties.

...it all has to line up with what you know, what you can afford, what type of house you've got, and what you can do to that house. There are so many problems to overcome, and the problems are individual to you and your house.

Unless you've got a very specific skill set and have experience in building you might struggle to understand what's available to you and what would work for your property. There's not enough support out there to help people understand the options available to them.

- 10.** Landlords agreed that more could be done to inform them of retrofitting methods, particularly considering the existing training.

There's no information out there about the energy efficiency things I could do. I've never been approached as a landlord with information on it. As a landlord I have to take part in the Welsh Government landlord training course, we have to do exams and make sure our properties have everything they need, like alarms and so on. But I don't know much more than putting in energy-efficient bulbs.

Accessing impartial information

11. Participants agreed that the information given by companies selling energy-saving products is generally not trustworthy due to the company's objective of selling its product.

There needs to be transparency. I don't want a salesman coming to my door telling me his product is the best thing ever. I want real independent advice and real transparent information.

I'm a retired trading standards officer. I had to enforce consumer legislation and deal with complaints about shoddy workmanship. In my opinion, you can't normally get independent and impartial advice from traders...because they want the job and want to get money from you. I don't know of any agencies that give impartial advice on home improvements. It's always traders that come out to give you advice but there's obviously vested interest in getting the business that could make the advice not impartial.

12. Participants went on to illustrate the need for reliable and independent information to understand actual energy savings and make financial decisions.

If I knew that I could put solar panels on the roof and it would save me x amount of money, I'd probably do it. But there's no knowledge to prove that. I don't know anything about it, more than a salesperson would tell me. Nobody independent tells you anything

The trustworthiness of information is a big barrier. Had I not worked for a bank, financing solar panel loans, I would have gone straight to solar panel companies to come and give me quotes. I might have ended up with a big finance package for panels that don't really suit my house.

Workforce barriers

Lack of expertise

I work in the building industry and, with the exclusion of improving your loft insulation, updating your Windows, or insulating the walls, general builders certainly aren't aware of retrofit products.

13. Nearly all participants spoke of a lack of expertise within the building industry. Most participants agreed that general builders, on the whole, don't have the necessary industry knowledge to advise on retrofitting properties.

There's not enough understanding about the methods out there. The builder who did our extension had no knowledge at all about energy efficiency retrofitting, none at all. And I don't know of any builders who have that knowledge.

Lack of workforce

14. Almost all participants think that the workforce needed to retrofit rental properties and private homes across Wales is not available.

Building companies at the moment are already flat out. They can't fit you in for anything. If you want extensions and loft conversions, then there are waiting lists of up to 9 months. As all of these building companies are already snowed under, I wonder where the government is going to find companies to come in and retrofit what amounts to millions of properties. You don't have the workforce here to do it. It would probably take decades.

To be able to do all the houses in Wales, this job is huge. This is akin to literally training an army.

One size does not fit all: The right methods and materials for the right property

15. Participants described how energy efficiency methods for one building, location, homeowner, or landlord may be different from another even if the property is similar.

A lot of solar panels perform poorly because of really basic things like seagulls nesting under the panels and knocking them out of place or people living in bungalows with big trees in their gardens restricting the sunlight.

16. Participants felt that not having certainty that a specific method would work for their property was a barrier.

I worked for a bank on a solar panel project. I analysed whether solar panels were affordable and if they paid for themselves over a certain amount of time. So for a finance package over ten years, how much energy did they generate over those ten years and was the customer in a position where they were generating their own money? Probably about two-thirds did, which isn't a great percentage.

- 17.** Some participants gave examples of ineffective methods and materials being suggested or used, illustrating the barrier faced when understanding the right approach for a property.

About 15 years ago there was a scheme where they went around and pumped polystyrene beads into the cavity walls of terraced houses. The cavity walls aren't capped at the top, when they pumped it in it just flew out the top, so you've Beddau swimming in polystyrene beads! Then you needed a whole new industry to remove the beads from all the houses because it was causing damp. That cavity was there for a purpose, it does something, it was an air barrier

Ageing housing stock

Modern methods are fine in a modern building, but if you've got stone walls modern methods won't work.

- 18.** Some participants think that the best methods and materials are not always used when retrofitting the ageing Welsh housing stock to ensure longevity.

I can't get my head around the attitude of people who think "well, it'll be ok for 10 or 20 years", I don't want to pass that mess down to my children. There's a saying, "wise men plant oak trees they know they'll never sit in the shade of".

- 19.** Many participants feel that this is a barrier to retrofitting private properties, as poorly chosen methods can result in damage to the property which then requires remedial work.

We know of a builder who does remedial work on houses in the South Wales Valleys. He literally spends his life undoing all the damage that's been done. I think about all of the houses that were rendered about 30 years ago, just sprayed in cement. There are going to be a lot of problems starting to show up.

New homes under 20 or 30 years old have a cavity, use a vapour barrier, and Kingspan. and that's fine. But that isn't the case in most of Wales. Water gets behind the cement render and can't escape. You'll never stop the ingress of water, it will find its way in so you have to give it a way out.

20. Most participants agreed that successful decarbonisation requires a more holistic understanding of housing stock and more carefully considered methods and materials to suit the age of the property.

What we've got in Wales, to my knowledge, especially in the valleys, are a lot of old houses. They're built from stone and initially had lime mortar in them. Unless you use the right methods for insulating solid walls, you will do more damage than good. So, if you want to insulate every home in Wales you have to look at heritage methods if you don't want to damage the buildings. Because most people are essentially living in heritage buildings.

Lack of trust

21. Several participants said that a lack of trust, in relation to information and policy implementation, is a barrier for them when considering retrofitting their property with energy efficiency measures.

The biggest barrier, as a landlord or homeowner, is trust. That's the big one. I wouldn't trust a word anyone said, I wouldn't trust any of the government leaders. They all say x,y,z and a,b,c comes out of the envelope. I don't think any landlord would trust a word the government said unless a check fell onto the doormat

2. Cost of living

If there was the tiniest glimmer of hope that people could have retrofitted their homes then the Cost of Lockdown Crisis smashes that into dust.

22. Participants felt that the cost of living crisis is the most significant barrier to retrofitting properties with energy efficiency measures. They described their fears for their financial security.

People want to make their homes energy efficient. They want to pay less for their energy. We all live on this planet and want to look after it. But you've got to deal with first things first. If you can't afford to keep your house warm or pay your food bills, how is retrofitting ever going to be a priority?

The cost of living crisis will devastate any kind of energy efficiency programmes or policies. I don't think it would matter to anyone because of what's on their doorstep right now.

23. Participants illustrated the anger they feel at the situation and the idea of financing a decarbonisation project on their property at this time

The government is living in a dreamland if they think they can rely on people's social conscience! Homeowners are struggling to do anything for themselves, there's no spare cash. It's not going to happen.

Everyone is worried about how they are going to feed themselves and take care of their children's future. It's not about how I achieve a touchy-feely policy for the government out of my pocket.

This will hit working people the hardest. The people who have a couple of hundred pounds left at the end of the month, who won't get any help from anyone. So to think the government will say "now we want you to look at retrofitting your house", I don't think so.

24. Some participants described the choices they will consider to ensure that they can continue to pay their bills.

I'm going to have to find money or change my lifestyle so that I can heat my house to the same level as I've done in the past. I can either do a lifestyle change and take the money I spend elsewhere to meet the cost of the higher bills or I can decide not to heat my house to the same level. But I'm 70 years

old so I don't really want to think about the second alternative, I want to keep my house heated as it has always been.

Increase in cost of labour and materials

25. Participants described how the increase in the cost of labour and materials, due to the cost of living crisis, is a further significant barrier to retrofitting a property.

I've recently renovated two of my properties, one property in May 2022 and one that I finished in May 2021. It probably cost 25% more for this year because of the cost of living increase.

Building products are generally two or three times the price of what they were two or three years ago. If parts, labour, and everything else keep increasing, then it doesn't matter what scheme is put in place because you can add 20% onto the original cost that the scheme was going to initially cover.

3. Overcoming the barriers to retrofitting privately owned properties with energy efficiency measures?

Participants suggested several ideas that they feel will help remove the barriers to retrofitting privately owned properties with energy efficiency measures. Participants also suggested ideas for a more national approach to energy efficiency.

Access to relevant, impartial, and timely information

Recommendation 1. An impartial 'one-stop-shop' for information at a national level, which also supplies a local list of trusted installers and facilitates an online forum for homeowners and landlords.

It would be useful to have an advice or helpline for people where an expert was at the end of the phone to advise on what is currently available and how to go about this type of work. It could point people in the right direction to tradesmen and companies in their areas who can do the work. There are lots of accreditation schemes in the home improvement industry. But advice from a trade association who can give impartial advice about the traders who can do the work might be helpful.

I asked to subscribe to a landlord's forum, the council told me that the forum hadn't been active for about four or five years. I thought the forum was a great idea, somewhere where landlords can talk to each other about their ideas and find out about schemes. But that doesn't seem to be available anymore. It's an idea that might be worth pursuing.

Recommendation 2. Embedding tailor-made advice for individual properties at the start of any building works or upon request through an impartial central information service.

I would have liked to have seen information whey back at the start of the process. When you apply for planning permission, get architects' plans drawn up, and your project or house is being designed, there should be some kind of responsibility for them to tell you about the things you should consider in terms of energy efficiency.

I'm not for people with clipboards coming onto your renovation, but we need each individual building to be assessed before any work starts, to let the homeowner know what can be done with their building and give them the pros and cons of all the techniques and methods. So people can know the best approach for their building.

I would have liked some independent advice and information to talk about my options. Even if it was a cost of £50 to be sent an energy efficiency report for your house. Having something in place that says "you have to do this if you want your property to be as energy efficient as possible" would have been helpful. Even if I wasn't happy with the guidance it would have been helpful to know what I needed to do.

Recommendation 3. A 'country of origin' stamp to be visible on all building materials before purchasing to enable people to reduce their carbon footprint.

The one thing that I was very aware of is that there was no information about where the materials were sourced from. For example, wall tiles, when you look into it they were all made in Italy or Spain. But there was no labelling to help me choose whether I wanted to reduce my carbon footprint or not by buying locally made materials. I could only find out where material came from when I looked at the boxes after they were delivered. It's a bit late then.

Effective financial support for all

Recommendation 4. Financial incentives for private homeowners to retrofit their property with energy efficiency measures, including a reduction or pause in council tax payments or financial support toward the cost

If I were to be optimistic I would say that if you wanted to carry out this work, you would need a partial financial commitment from the government, 50/50 for example. Or 5 years off paying your council tax. It's that sort of level of paying people back that's needed.

Recommendation 5. Grants, interest-free loans, and/or subsidies for all landlords and homeowners to retrofit their properties with energy saving measures.

I would have considered an air source heat pump if there had been a grant available. When the work is five or six times the cost of the alternative, there's

no way I would have even thought about it. But if a grant brought the cost down to 30-50% more than the alternative I would have considered it.

The boilers in my properties are all less than 10 years old. There will be a point when they need replacing. When that time comes I could be putting in more efficient boilers. But landlords and homeowners will go for the lower-cost boiler, the boiler that their budget allows. That's not necessarily the more efficient boiler. So maybe we need a scheme to help everyone when they need to replace their boilers or windows, to afford the most energy efficient option.

Recommendation 6. To enable landlords to claim back the tax on energy efficiency building measures carried out on their rental properties.

Maybe if there was an incentive off the taxman I might reconsider. Because, years ago, whatever you spent on your property you could get back through tax.

The way that the government can get private landlords to put energy efficient heating and solar panels, and so on, in their rental properties is by offsetting through tax so that you get the money back from the taxman.

Engaging and informing landlords

Recommendation 7. Welsh Government landlord training to include information and guidance on retrofitting properties with energy efficiency methods.

The landlord training is said to take 7 hours, and there are refreshers. This is an opportunity to share information with landlords. The training is invaluable and you have to do it to operate legally. So if Welsh Government have this in place, then use it to share information and let landlords know about the hidden benefits of retrofitting.

Recommendation 8. Welsh Government landlord training to encourage landlords to see the business benefits of retrofitting their properties with energy efficiency methods.

Maybe we need to frame the benefits of retrofitting to landlords differently and show them how it would benefit them. At the beginning of this interview, I said that there was no benefit to me in retrofitting my property. But thinking about it now, wouldn't it be great to say, here's a property for rent with no energy bills! Tenants could produce their own energy through solar panels on

the roof. I've not thought of it like that before. It would be a good selling point. I'll definitely look into that. I would never have thought about this as an opportunity if I hadn't been talking to you.

Information is fed to landlords but it should be more about ideas and the hidden benefits of retrofitting. This isn't just about spending money on solar panels. This is about a whole new way of treating your tenants and giving them the benefits so that they actually want to stay and rent from you for the next 20 years. The benefits to the landlord are that you have long-term tenants and so don't have the hassle of advertising, cleaning, losing months of rent whilst advertising etc. Those hidden benefits are really valuable and a think tank should really look into this for landlords.

Development of materials and methods for longevity

Recommendation 9. Research and development into the effectiveness and longevity of heritage materials and methods to support the ageing Welsh housing stock.

There needs to be more research into the different types of insulation and the outcomes of using different materials so that you know about the long-term results of using the different techniques and materials in different buildings. We retrofitted using cork. It's a cork panel stuck on with lime and diatomaceous earth render. On top of that, it's lime and hemp plastered. The point of lime is it's breathable. So the idea is that the lime in the wall is sacrificed not the stone. The lime is softer than the stone. Water vapour can ingress and egress.

I think we need to be looking at more natural materials. Hemp could be the solution to a lot of our problems. It grows fast, it can be used for fuel, building, paper, and so on. The government need to think about all the different methods and materials out there.

Communal heating systems

Recommendation 10. Develop communal heating systems that supply heat to a number of properties from a common heat source or boiler.

I'd been looking at the idea of a gasifier for months. Cwm Colliery used to gasify its coal. I phoned my Dad and asked what was the gas, he told me it was town gas. This technology is 150 years old. When they first started

supplying communal heating and energy supply to people, that's what it was. You had a local gasifier that would gasify coal or wood and it would supply a certain number of properties.

I believe that Germany leads the way with gasification. In Germany, they tend to live in multi-story, multi-generational housing. They'll have a 25 or up to 40-kilowatt gasifier in the basement that's pellet fed. They have a hopper on top and they fill the automated system with pellets that run an engine. You could have a local sub-station for your electricity at the end of the road, a local distribution. This would provide combined heat and power (CHP).

I rented a place in central London. It had a huge boiler underneath it and we didn't have to pay for our heating at all. My rent was a tiny bit higher, but when I moved to the next place, I had to start paying for heating and it was a big, big chunk of money.

Re-nationalise energy assets

Recommendation 11. Re-nationalise energy assets and re-invest profits to decarbonise the Welsh housing stock and lower energy bills.

It was a monumental mistake privatising everything because now we have no control. What should happen is that energy is re-nationalised. Then the subsidies that are paid into all of these companies, that end up in shareholders' pockets, can be diverted to energy bills so you've got a bit of spare cash and could retrofit your house.

Natural resources should be taken out of the hands of the private sector and be managed nationally. It's a public resource that has been mismanaged. There should be one national supplier. Also, in the supply chain, the extraction companies are making a huge amount of profit, but we're paying down the line for that. So it's not just about nationalising the delivery but about nationalising the extraction. If these big companies and their shareholders are making so much money out of it, why aren't we re-nationalising those products and using the products to change to more renewable energy and invest in infrastructure?

Wales to generate its energy

Recommendation 12. Wales to generate renewable energy through marine technology.

I recently had to research tidal energy. When I started looking into it, my blood would boil every time the news was on or I heard a politician or activist talking about being green. People only talk about wind turbines. We are virtually the Saudi Arabia of tidal energy. In the Severn, we have the second largest tidal rise and fall on the planet. We could almost feed ourselves with energy with tidal energy. Twice a day, every day, the tide would provide energy. Tidal is the answer and people seem to be wilfully ignorant of this.

If the government are asking questions about, how do we make Wales more carbon neutral? Then why did they shut down plans for a tidal lagoon in Swansea and a barrage across the Severn? It just doesn't make any sense.

You've got an estuary that's in the top ten largest tidal ranges in the world which would have provided clean and renewable energy. The initial budget was £11 billion, even if they went five or six times over budget it still comes under the £90 billion nuclear power station budget. The barrage would have paid for itself, generated completely clean energy, and had no nuclear risk. And it would have produced more energy than the nuclear reactor did by their initial projections. How do they shut a project like that down? Perhaps the Welsh government could explain to me why they turned down a tidal lagoon in Swansea?