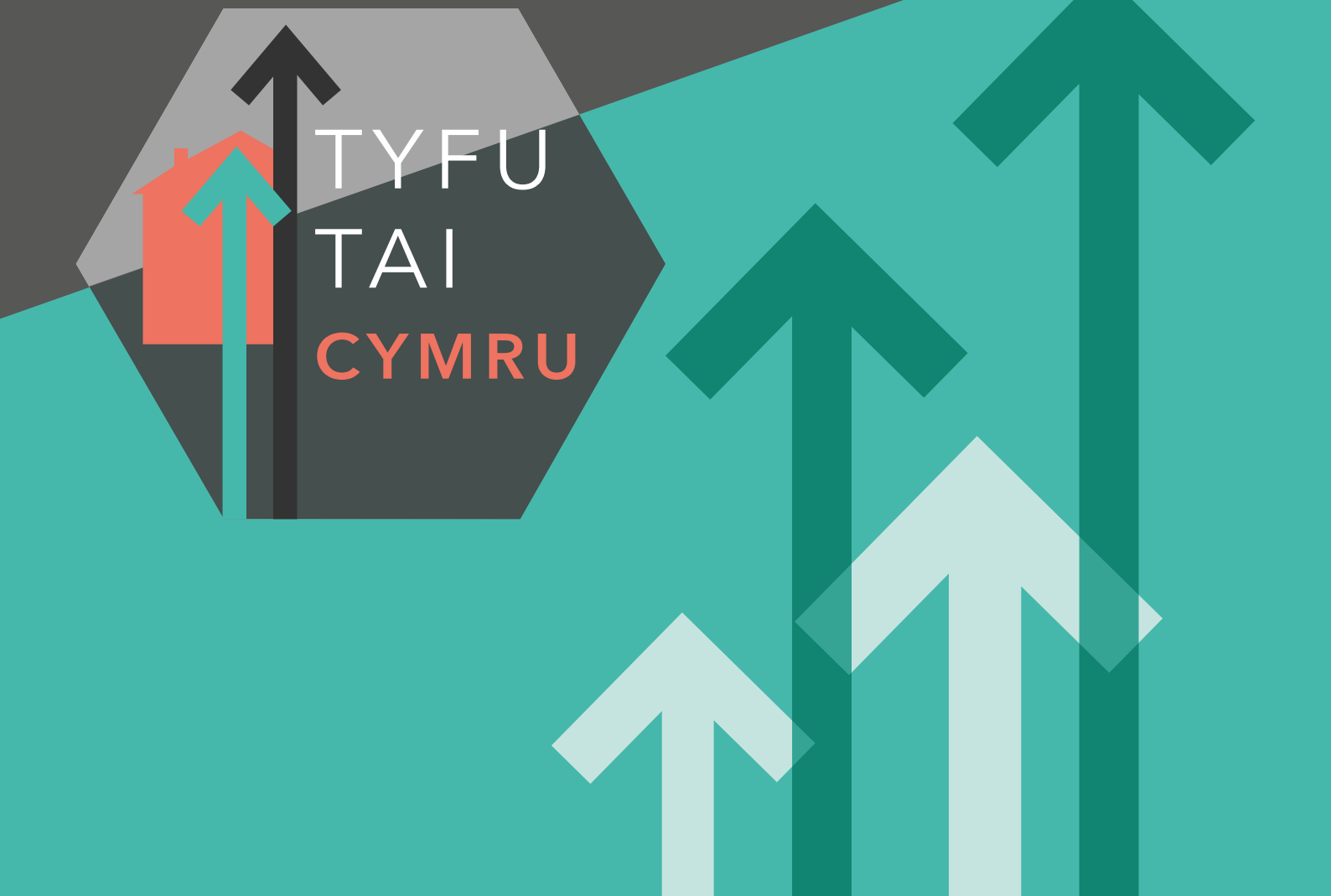
Chartered Institute of Housing Cymru

Decarbonising Wales' Private Rented Sector

Tackling the energy crisis to meet net-zero

July 2022



Executive Summary

Delivered by Sustainable Collective, Severn Wye Energy Agency and Sero, this report examines the technical and behavioural solutions needed to meet the targets for the decarbonisation and fuel poverty reduction of the Private Rented Sector's (PRS) in Wales; how landlords and tenants perceive these solutions; suitable advice, finance, and delivery models; and policy changes and market solutions needed at Local, Welsh and UK government levels. This research involved a literature review, policy analysis, 8 semi-structured interviews, and decarbonisation scenarios for key PRS house types.

Sustainable Design Collective

sero

severn wye

Headline Messages

- Welsh Government should develop a long-term strategy for energy efficiency, fuel poverty and decarbonisation of the private rented sector (PRS) and integrate with broader objectives surrounding housing quality, fire safety and landlord licensing
- Welsh Government should engage with landlords and tenants in this process, including communicating the benefits of the programme alongside tailored support, advice, funding, and delivery via local 'One-Stop-Shops'
- New regulations and standards are needed to drive the uptake of energy efficiency in the PRS, and in meeting net zero objectives. This will require increased resource and better enforcement, especially for Local Authorities
- Increased grant funding and new forms of financing are needed. The affordability crisis means fuel poverty funding should increase significantly, alongside new property linked financing and tax incentives for landlords
- A massive retrofit skills drive is needed, requiring public investment in new apprenticeships and a Welsh supply chain for low carbon technologies
- Decarbonisation of the PRS will require low carbon heat, especially via heat pumps, requiring government to create a level playing field, encouraging new business models, policy changes and a subsidy regime to drive down costs

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Context

32% of Welsh homes were built before 1919, with just 6% built in the last 35 years. With an average Energy Performance Certificate (EPC) of "D", Wales requires the highest investment to reach EPC "C" and has the lowest household income in the UK. In April 2022, energy prices increased by 54% a with further 32% increase expected in October. While in 2020, 20% of the Welsh PRS lived in "fuel poverty", Welsh Government expect this to rise to >45% in 2022, with 98% (217,700) of low-income households in fuel poverty and 91,700 (41%) in severe fuel poverty. From October, EPC "E" properties expect to be paying £3,853/year in energy bills, while G rated will pay £7,098/year – an unprecedented affordability crisis.

PRS housing represents 16% of the stock and is the worst performing tenure. The PRS' poor energy efficiency is partly explained by the "split incentive"– where landlords don't receive the cost and comfort benefits from energy efficiency investments. Consequently, Minimum Energy Efficiency Standards (MEES) now require rental properties in the PRS to have a minimum EPC of "E", although this remains poorly enforced. Both the UK and Welsh Government are targeting EPC "C" for all homes by 2030/35, with the total cost of meeting EPC "C" in the PRS to be estimated at £846m in Wales alone.

Alongside existing policies, and assuming the current Warm Homes Programme is continued through the 2020s, this leaves an 89% funding shortfall for meeting EPC "C" in the Welsh PRS rising to 98% for the 2050 net-zero targets. Consequently, most funding will need to come from landlords and other forms of private financing.

Decarbonisation Scenarios

We developed decarbonisation scenarios for four main PRS house types. This showed a large variance in the cost and benefits of meeting these targets, suggesting fixed cost of compliance thresholds would be problematic, and new forms of financing are needed.

	2-bed flat	3-bed terrace	3-bed semi	4-bed detached
EPC "C"	£7,650	£7,240	£11,550	>£34,450
Net-zero in 2035	£8,990	£20,444	£30,510	£45,980
Net-zero in 2022	£19,346	£28,714	£36,240	£59,165
Bill savings: Invasive fabric	£375/a	£712/a	£922/a	£351/a
Bill savings: + solar & battery	£443/a	£1,110/a	£1,538/a	£3,219/a
Heat Pump reduces CO_2	n/a	51%	47%	46%

Challenges for uptake

Our interviews and workshop identified the following core challenges to the PRS uptake of retrofit measures and in meeting net-zero and fuel poverty targets.

Tenant and landlord engagement

- A lack of targeted information & advice for both landlords and tenants
- Low trust and communication between landlords, tenants and letting agents drives disengagement

Installer and supply chain coordination

- Skills and foundational economy: an additional 12,710 contractors are needed in Wales by 2025, rising to 24,025 with indirect jobs
- Technical, legal, and quality standards often lacking or poorly enforced
- Current total ownership cost of air source heat pump (ASHP) are 55-73% higher than gas boilers.

Funding and Finance

- Solving energy crisis & fuel poverty lacks sufficient funding
- Tenants don't request improvements, as are fearful of rent increases
- Split incentives mean landlords under invest
- Low value homes <£162k unlikely to recoup costs of meeting EPC "C" in value uplift

Regulation and enforcement

- Policy uncertainty is holding back landlord action
- Poorly enforced regulation: only <6% of councils across are currently enforcing MEES
- EPC's not fit for decarbonisation drive
- Lack of eviction protection for tenants

Policy recommendations

To overcome these challenges, we propose 13 policy recommendations for Local, Welsh and UK government.

Welsh Government

1. Welsh Government should set a National Retrofit Strategy with a long-term vision for the PRS and other tenures
2. Welsh Government should engage landlords and tenants on this journey allowing them to co-create how programmes are designed in their local areas
3. Welsh Government should reform the Warm Homes Programme and double funding to ~£732m for 2020s, targeted at the worst properties and those in extreme fuel poverty
4. Welsh Government should resource the Development Bank of Wales to trial Property Linked Financing for the PRS, using either energy bills or council tax as a repayment channel
5. Welsh Government should develop a plan to deliver:
    - Whole house retrofit plans for all homes
    - Record and track progress via Building Renovation Passports
    - Adopt smart EPCs and measure energy savings
6. Wales should resource and train a Welsh supply chain, allocating an increased £2-3m/year for training and apprenticeships
7. To meet zero carbon targets, create certainty and drive innovation, Wales should ban new fossil fuel heating by 2030

Local Government

8. Local Authorities should resource and enforce existing MEES Legislation
9. Local Authorities should create One Stop Shops as a key delivery model for PRS - requiring £33m for the entire Welsh retrofit programme
10. Local Authorities should integrate funding Streams, Nest, Arbed & ECO into a single delivery model

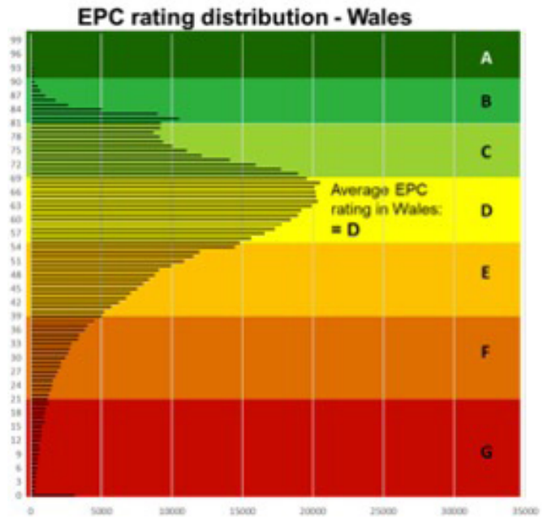
UK Government

11. UK govt should tighten MEES to EPC "C" in PRS 2025-2028
12. UK treasury should reintroduce the Landlord Energy Savings Allowance (LESA), with £1,500 of tax relief
13. To make heat pumps economically viable, UK government should commit to level playing field trade terms by:
    - Requiring suppliers to offer Smart Heat Tariffs
    - Removing environmental levies from electricity bills and place in general taxation
    - Creating a subsidy/ industrial policy regime to drive down install costs by 30%

With these measures we estimate the total cost of ASHP ownership would be between only 1% higher and 24% lower than the fossil alternatives.

Introduction

Wales has among the oldest and least efficient housing in Western Europe, with 32% built before 1919[i], and just 6% in the last 35 years when energy performance codes were introduced. Most older homes are solid walled and have single glazed windows and doors. While most now have central heating, a large share has older inefficient boilers, with outdated or limited controls. This contributes to Wales requiring the most investment to reach Energy Performance Certificate (EPC) "C" of any UK region, ~ £1,450 per capita[ii] . Wales also has the lowest gross disposable household income (GDHI) of the 12 UK regions at £15,754 per capita[iii] . These factors combine to make Wales' housing decarbonisation goals among the most important and challenging in the UK and perhaps the whole of Western Europe. While new homes will play a role, existing homes must provide >80% carbon savings to meet 2050 net-zero targets[iv] . As shown the average home in Wales has an EPC score of 61 or an EPC "D".

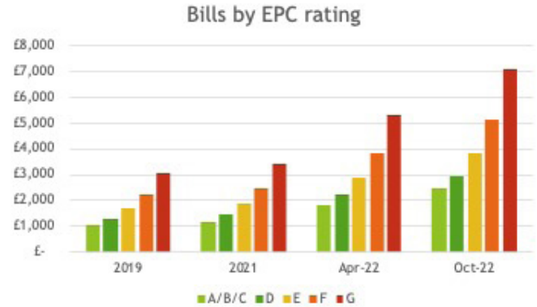


Welsh private rented sector (PRS) housing has grown significantly in recent decades, now at 16% of the stock and is expected to further increase. In 2020 it was estimated that 20% of the PRS live in "fuel poverty" – defined in Wales as households expending more than 10% of income to maintain a satisfactory heating regime. This compared to only 11% of owner occupiers and 9% of social housing tenants, while 43% of homes in EPC Bands "F" and "G" are fuel poor compared to only 5% in bands "B" to "C"[v]. It is further expected that the COVID-19 pandemic and the 2022 energy price crisis will drive hundreds of thousands more into fuel poverty.

The PRS's poor energy efficiency is partly explained by the "split incentive" where landlords are unlikely to capture energy efficiency measures' cost and comfort benefits. In contrast, tenants receiving these benefits are unlikely to contribute to capital costs. In addition, various studies have identified reticence among tenants in requesting energy efficiency improvements for fear of rent rises or eviction.

2022 energy and cost of living crisis

On the 1st of April 2022, Ofgem increased the domestic energy price cap by 54% - due to sustained increases in the wholesale price of gas. This means that households on default direct debit tariffs will see an energy bill increase of £693, with prepayment customers experiencing an increase of £708. Cornwall Insight[vii] estimates the price cap will increase a further 32% in October. As shown below EPC "E" (18% of Welsh stock) rated properties expect to be paying £3,853/year from the autumn, while G rated (2.4% of Welsh stock) will pay £7,098/year.



This comes amid a once in a generation "cost of living crisis", with the consumer price index (CPI) inflation expected to reach 9% in 2022 and Universal Credit set to rise by only 3.1% - a real term cut for those on the lowest incomes. The Welsh Government[viii] estimate that up to 45% (614,000) of Welsh households could be in fuel poverty following April's price cap increase alone. Further, an astonishing 98% (217,700) of low-income households are predicted to be in fuel poverty and 91,700 (41%) in severe fuel poverty, effectively wiping out a decade of gains from the Welsh Government's Warm Homes Programme. PRS tenants tend to live in the worst quality housing, and there is significant evidence that many Welsh PRS homes are still failing to meet current MEES requirements for EPC "E".

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Why this study is needed

Despite the Chancellor's 2022 windfall tax announcement, these factors will likely create a perfect storm for those on low incomes in the PRS in the coming years, resulting in tens of thousands of cold and damp related deaths. Alongside this immediate cost-of-living crisis, Welsh Government has committed to reducing carbon emissions to net-zero by 2050, alongside the Well-being of Future Generations Act 2015 pledges. Energy used in homes represents around 20% of Wales' carbon emissions and the Committee on Climate Change (CCC) estimates meeting net-zero will require all rented homes to achieve EPC "C" by 2028, with a ban on new gas boilers no later than 2033. Meeting these aims will require substantial "retrofit" of energy efficiency, low carbon heating and renewable energy systems to the PRS housing stock in Wales, alongside a range of demand-side and behavioural measures.

However, progress in reducing emissions and increasing energy efficiency in buildings has lagged other sectors; especially in the PRS, which faces unique barriers including the landlord-tenant split incentive, challenges in engaging tenants and landlords in retrofit programmes and the high rates of turnover in the sector. This combination of factors necessitates new research to examine how policymakers and the wider industry can address these critical issues, to chart a path forward for the PRS in 2022 and beyond. This paper will therefore examine the following key issues:

- The technical and behavioural solutions required to meet decarbonisation and fuel poverty targets across different housing types
- How landlords and tenants perceive these solutions and their benefits or disruption
- The advice, finance, and delivery models most suitable to support landlords and tenants in the adoption of these solutions
- Policy changes and market solutions needed at Local, Welsh and UK government levels

The project was led by Sustainable Design Collective (SDC) and a consortium of specialist organisations over several key phases.

Methodology

Quantitative modelling

Sero Homes undertook an energy modelling study to explore the technical and financial challenges of decarbonising the Welsh PRS, and the impact of an intermediate MEES at EPC "C" in 2025-28. This involved the following approach:

- A decarbonisation pathway for 4 common PRS housing archetypes: 3-bed semi-detached; 3-bed terraced; 2-bed apartment; 4-bed detached
- An optimised decarbonisation scenario for the entire Welsh PRS (CAPEX, £ savings, CO_2)
- Sensitivity analysis of electricity costs, time of use (TOU) tariffs and grid carbon factors

Qualitative interviews

After reviewing their past energy efficiency programmes, Severn Wye undertook qualitative semi-structured interviews with landlords, tenants, and members of the retrofit supply chain about their experience of low carbon renovation work, government policies and other non-technical aspects such as smart controls and alternative energy tariffs. This included: 4 landlords and 4 tenants and was supplemented with 19 interviews undertaken by researchers at the University of Sussex with retrofit experts, landlords and tenants focused on the PRS in 2021-2022.

Stakeholder workshop

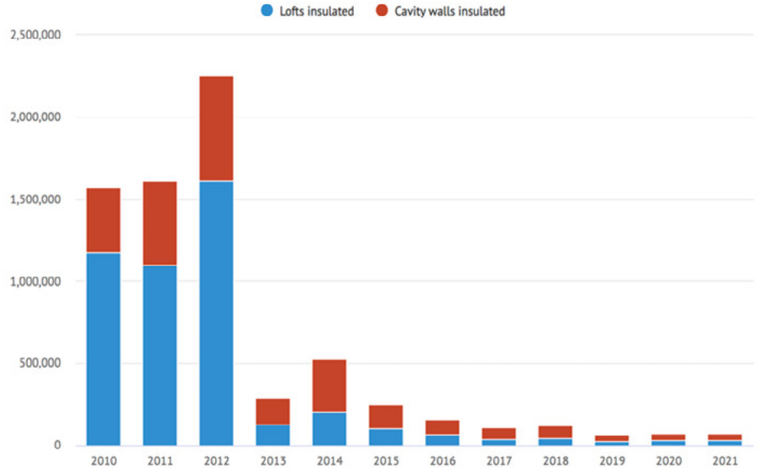
On 18th May 2022 we ran an engagement workshop with key stakeholders, including housing and Welsh Government. policy professionals, industry, trade bodies, and other key actors working in the housing and retrofit field in Wales. The workshop was focused on developing policy solutions to the following issues:

- Household and landlord engagement
- Installer and supply chain coordination
- Funding and finance
- Regulation and enforcement

Retrofit policy and the PRS

UK energy efficiency policy and the PRS

Historically, progress on improving energy efficiency has been led by the 'supplier obligations' imposing energy and carbon saving targets on energy suppliers. The largest – the Carbon Emissions Reduction Target (CERT) – ran from 2008-2012 and is expected to deliver lifetime energy savings, equivalent to annual European gas production - mostly from loft and cavity wall insulation. However, as shown in the figure below, the installation of energy efficiency measures has collapsed in the last decade, with various policies curtailed or scrapped under the Westminster coalition and Conservative governments. While the UK Government's 2017 Clean Growth Strategy included a target for all homes to reach EPC band "C" by 2035 and all fuel poor homes by 2030, there are currently insufficient policies in place to meet even these modest aims.



Source: Climate Change Committee 2021. Chart by Tom Prater for Carbon Brief using Highcharts.

The Energy Company Obligation (ECO) 3 is now the main funding source for fuel poverty reduction in Great Britain, providing around £640m/ year, while ECO4 (2022-2026) increase to £1bn/year. Combining these two schemes will deliver ~£296m for improving Welsh homes at EPC "E", "F" or "G" through the 2020s (although evidence suggests Wales does not capitalise on its share[1] of around £32 million a year).

Studies also show that, past energy efficiency programs have been poorly targeted at the PRS and landlords, who often lack access to the appropriate information, skilled contractors and the financial resources needed to complete the work[ix]. Other policies such as the Landlord Energy Saving Allowance (LESA) - (allowing landlords to claim back tax against energy efficiency measures) have since been scrapped.

The Minimum Energy Efficiency Standards (MEES) came into force for new tenancies on 1st April 2018, and all existing tenancies from April 2020; requiring rental properties in the PRS to have a minimum EPC (EPC) rating of "E". It is now unlawful to rent a property below an E rating unless there is an applicable exemption, or the cost of the measures exceeds £3,500 (incl VAT). However, there is significant evidence that the MEES are currently poorly enforced, due to a lack of resources in Local Authorities.

The UK Government is now consulting on proposals for MEES of EPC "C" for new tenancies by 2025 and all private rented housing in England and Wales from 2028. The consultation outlines an average cost of £4,700 per home to meet EPC "C", with a maximum spend likely capped at £10,000. Given that ~50% of Welsh fuel poor households are in EPC band "E" or worse, we can expect a higher average spend of at least £7,500 for the 36,000 PRS homes in fuel poverty, costing an expected £270m. Indeed, recent work by the Future Generations Commissioner (FGC) anticipates the total cost of meeting EPC "C" in the PRS to be £846m in Wales alone.

[1]There is currently no specific allocation of ECO funding for Wales, nor any targets for Wales in ECO

Wales level policy

Housing policy and fuel poverty reduction is devolved to Wales. The Warm Homes and Energy Conservation Act 2000 required Welsh Government to ensure, as far as reasonably practicable, people in Wales do not live in fuel poverty. Indeed, until recently fuel poverty reduction in Wales was viewed as a success story. Between 2001 and 2009, more than 108,000 homes were given energy efficiency measures under the Home Energy Efficiency Scheme. In 2011 this was replaced by the Warm Homes Programme (WHP), which provided over £366m to 61,400 homes in Wales and advice and support to more than 144,800 people.

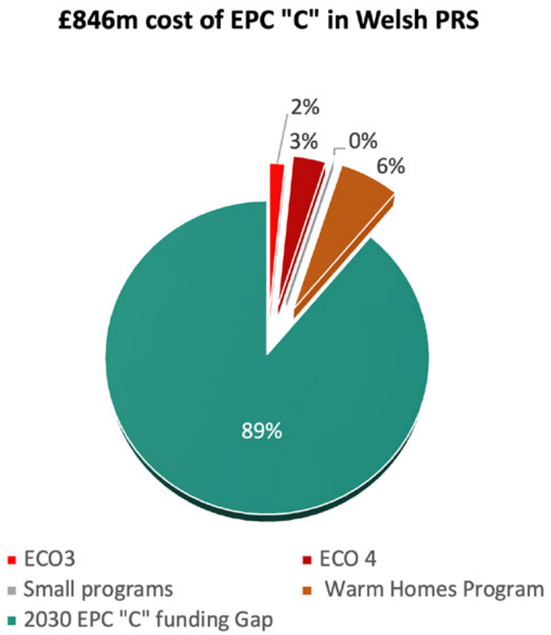
The WHP is comprised of two schemes. Nest, which provides advice and free home energy efficiency improvements to eligible households across Wales; and Arbed, which provides free home energy efficiency improvements in areas most likely to be affected by fuel poverty. A 2021 report by Audit Wales[xi] highlights recent under delivery of the area based Arbed programme resulting in the EU de-committing £7.5m of funding including inconsistencies in its cost of delivery, examples of low-quality installations and limited quality assurance. The report also emphasised that the programmes had delivered few true energy efficiency measures, with 99% of Nest and 67% of Arbed customers receiving a new heating system, of which 95.1% and 98.2% were fossil fuel boilers respectively. Effectively acting as boiler subsidy schemes, these programmes, provide limited future protection to fossil fuel price increases and in addressing the climate crisis.

The Housing (Wales) Act 2014 obliges landlords and agents to have a Rent Smart Wales licence. Rent Smart Wales aims to ensure landlords are informed and compliant about their rights and obligations, including specific regulations for Houses of Multiple Occupation (HMO) and the minimum standards required to let domestic property under the Homes (Fitness for Human Habitation) Act 2018.

The Welsh Government's Optimised Retrofit Programme (ORP) will also see more than 1,370 social homes made more energy efficient, and using the lessons learnt from these 'pathway homes', ORP" will create the digital tools required to enable the decarbonisation of homes across Wales, to develop effective, practical pathways to take a home to its lowest achievable carbon footprint. The Welsh Government had originally committed £19.5m of funding for the ORP but in its recent 2022/23 budget announced further funding of £72m rising to £92m in 2023 and 2024.

Funding gap for net-zero

The average cost of meeting EPC "C" is estimated to be around £4,700 per home, or at least £864m for the 180,00 PRS properties in Wales. As shown in the figure below, assuming the existing £366m WHP is continued through the 2020s, this leaves an 89% funding shortfall for meeting EPC "C" in the Welsh PRS. When considering the cost of net-zero – expected to be at least £22,000 per property, this gap increases to 98%. Consequently, we expect most future funding will need to come from either landlords or other forms of financing.



Decarbonisation scenarios

Key measures & interventions

Improving energy efficiency and reducing carbon emissions requires both technical retrofit measures and other non-technical interventions. In our decarbonisation scenarios, we first introduce the lower cost low hanging fruit, before more invasive fabric measures and finally renewable energy systems, listed below.

Low hanging fruit

- Reduce boiler flow temp [Free]
- Loft insulation [£600-£955]
- Efficient lighting [£150-£400]
- Intelligent energy system (IES) [£500-£2000]

Invasive fabric measures

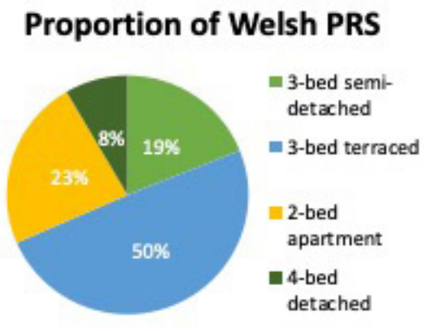
- Decentralised ventilation [£500]
- Internal Wall Insulation (IWI) [£5,000-10,000]
- External Wall Insulation (EWI) [£10,000-£20,000]
- Efficient Windows & Doors [£3,000-£10,000]

Renewables

- Air Source Heat Pump (ASHP) [£5,000-£15,000]
- Solar PV [£2,000-£6,000]
- Li-ion Batteries [£5,000]

Household archetypes

Our energy modelling scenario was based on a sample of four common house types which characterise the Welsh PRS. Each scenario was developed from an energy model of a real Welsh property, with improvements modelled sequentially over time. Our aim was to show the diversity of property ages, construction, and heating system types to showcase the different routes to decarbonisation.



2 bed Flat – electric heating

The first archetype was a 2-bed apartment (~54m2), built in the 1990s. The property has an insulated cavity wall construction, direct electric heating (Economy 7), a starting SAP score of 59, EPC "D" a Fabric Energy Efficiency Score (FEES) of 84.51 kWh/m2/a and produces ~2403kg/CO_2/a. Flats represent approximately 22%[xii] of dwellings in the Welsh PRS. Over three phases, the 2-bed flat first had an IES installed with low energy lighting, then decentralised ventilation, draft proofing and EWI, to meet EPC C. The home is not suitable for an ASHP so instead had its resistive heating system upgraded before the PV and battery to meet a net-zero specification in the final phase.

3 bed Terrace – Gas boiler

The second archetype is a 3-bed terrace (~76m2), built in the 1900s. The property has an un-insulated solid wall construction, a gas combi boiler, a starting SAP score of 61, EPC "D" a FEES score of 192.49 kWh/m2/a and produces ~3265kg/CO_2/a. Terraces represent approximately 47% of dwellings in the Welsh PRS. Over three phases, the 3-bed terrace first had an IES installed with loft insulation, then, draft proofing and IWI, to meet EPC C, with new doors and windows installed in the same phase. The home then had an ASHP, and cylinder installed before the PV and battery to meet a net-zero specification in the final phase.

3 bed Semi-detached – Gas Boiler

The third archetype is a 3-bed semi-detached (~80m2), built in the mid-20th Century. The property has a cavity wall construction, a gas combi boiler, a starting SAP score of 61, EPC "D" a FEES score of 151.57 kWh/m2/ and produces ~4346kg/CO_2/a. Semi-detached homes represent approximately 18% of dwellings in the Welsh PRS. Over three phases, the 3-bed semi first had an IES installed with low energy lighting and loft insulation, then, draft proofing and EWI, to meet EPC C, with new doors and windows installed in the same phase. The home then had an ASHP, and cylinder installed before the PV and battery to meet a net-zero specification in the final phase.

4 bed Detached – Oil heating

The fourth archetype is a 4-bed detached (~117m^2), built in the mid-20th Century. The property has a cavity wall construction, an oil boiler, a starting SAP score of 41, EPC "E" a FEES score of 162 kWh/m2/ and produces ~11062kg/CO_2/a. Detached homes represent approximately 8% of dwellings in the Welsh PRS. Over three phases, the 4 bed Detached first had an IES installed with low energy lighting and loft insulation, then, draft proofing and EWI, and new doors and windows installed in the same phase. Due to the oil boiler, the home required an ASHP, and cylinder installed to meet EPC C before the PV and battery to meet a net-zero specification in the final phase.

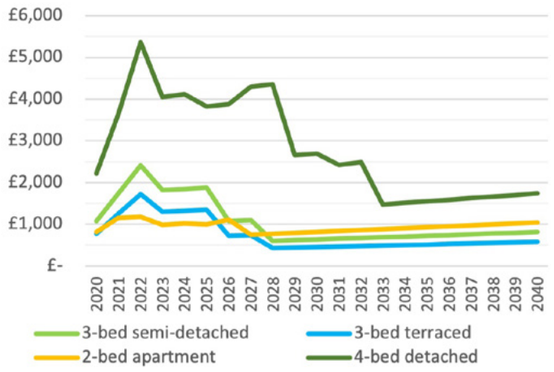
	2 bed Flat		3 bed Terrace		3 bed Semi-Detached		4 bed Detached	
								
Measure	**Cost**	**EPC**	**Cost**	**EPC**	**Cost**	**EPC**	**Cost**	**EPC**
IES Installation	£500	D	£500	D	£500	D	£2,500	E
Low Energy Lighting	£150	D	£240	D			£400	E
Loft Insulation			£600	D	£650	D	£650	E
Decentralised ventilation	£500	D	£500	D			£500	D
Draft proofing	£400	D	£400	D	£400	D	£400	E
EWI	£6,100	C			£10,000	C	£20,000	D
IWI			£5,000	C				
Doors & Windows	£3,000	C	£5,000	C	£8,000	C	£10,000	D
Heater replacement	£1,240	C						
ASHP			£6,010	C	£8,770	D	£11,530	B
Cylinder			£2,190	C	£2,190	D		
Battery Storage	£5,000	C	£5,000	C			£5,000	C
PV Panels	£2,456	B	£3,274	B	£5,730	B	£8,185	C

Scenario impacts

The impacts of these measures on energy bills, CO_2 emissions and the capital cost for each house type is shown below.

Energy Bills

The impact on energy bills[2] varied significantly between house types. While some annual savings[3] resulted from low hanging fruit measures such as loft insulation and LED lighting (£105, 3-bed semi; £82, 3-bed terrace; £59, 2-bed flat, £351, 4-bed detached) major savings resulted from the inclusion of invasive fabric measures such as solid wall insulation and new windows and doors (£922, 3-bed semi; £712, 3-bed terrace; £375, 2-bed flat, £351, 4-bed detached). Following the installation of the ASHP, PV and batteries, annual (2033) bills would be £1,538 lower for the 3-bed semi, £1,110 lower for the 3-bed terrace £443 lower for the 2-bed flat and £3,219 for the 4-bed detached, representing a cumulative £39,603, £28,720, £12,144, and £70,637 of respective savings by 2050.

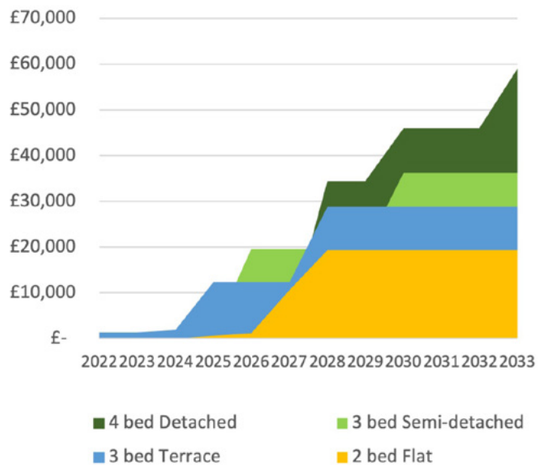


Carbon footprint

Acknowledging expected reductions in grid CO_2 emissions, we observe modest reductions in CO_2 from the low hanging fruit and invasive fabric measures. However, when adding the ASHP this yielded a 47% reduction from the baseline in the 3-bed semi, 51% in the 3-bed terrace and 46% in the 4-bed detached reduction in CO_2 emissions. Finally, the introduction of PV panels results in reductions of 91% in the 4-bed detached (2033), 60% in the 2-bed flat (2028), 91% in the 3-bed terrace (2033) while the 3-bed semi (2030), achieves negative emissions with a 103% reduction.

Capital investment

The capital investment involved several phases of upgrades for each home. These costs were based on current prices. To reach EPC "C" the 2-bed flat required a cumulative £7,650 investment, the 3-bed terrace £7,240, the 3-bed semi £11,550 and the detached 4- bed >£34,450. Assuming a fully decarbonised grid by 2035, meeting net-zero would cost £8,990 for the 2-bed flat, £20,444 for the 3-bed terrace, £30,510 for the 3-bed semi and £45,980 for the 4-bed detached. Meeting net-zero before that date would require PV at £2,456-8,185 and the option of a £5,000 battery to maximise consumption of PV.



[2]Our modelling included recent and projected price rises and then a return to the background trend of 3% gas and 4% electricity price inflation respectively

[3]These savings are derived from a baseline of a 'do nothing' home based on projected energy prices

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Challenges and Solutions

A survey by Northumbria University[xiii] identified three "major deterrents" for landlords to investing in energy efficiency: 'high upfront costs' (67%), 'tenants seem perfectly happy with current energy efficiency' (47%) and 'no personal benefit to making improvements' (40%). Increased thermal comfort for tenants' (47%), 'Improved home marketability' (37%), and 'reduced home running costs' (33%) were given as the three main drivers.

In this section we draw on our interviews and stakeholder workshop to evaluate four areas essential to delivering the retrofit agenda in the Welsh PRS: tenant and landlord engagement; installer and supply chain coordination; funding and finance; and regulation and enforcement, before proposing solutions to overcoming these challenges.

Challenges for tenant and landlord engagement

We found three major issues for engaging landlords and tenants in the retrofit agenda: lack of information & advice, low trust & communication, and policy uncertainty.

Lack of information & advice

A key finding was that both landlords and tenants struggled to get good advice and support in improving energy performance:

> *"I don't know. Am I relieved? I went down that route. I don't know. I don't know whether I took the right decision or not…it would be really handy if there were companies who were…advising…what's needed"- Landlord 3*

Many workshop participants felt, unlike owner occupiers, few energy advice programmes are targeted at the PRS. When tenants had raised issues relating to energy saving measures, a landlord's go-to contractor often had limited knowledge of appropriate measures:

> *"when they send the handyman round, he's a bit sort of…clueless, honestly."– Tenant 2*

Tenants often felt that managing agents were disinterested in their concerns or requests for support in addressing energy issues:

> *"Everything else was through the letting agents, and they weren't that responsive to most things… the impression I got was they wanted the easiest life." – Tenant 1*

Low trust & communication

Another major factor in the lack of engagement was poor or nonexistent communication between landlords and tenants:

> *"One is that we have no relationship with the landlord at all." - Tenant 1*

> *"And so sometimes if she can't get hold of me quick enough, then she'll go through the council and they'll deal with it" – Landlord 2*

> *"But yeah, just communication is probably the big key to it all, and then support." - Tenant 1*

There was also much evidence of a breakdown in trust between landlords and tenants, with tenants fearful of rent increases, evictions or landlords abusing their power:

> *"So I think [landlords] can, almost, Impose any conditions that they want, and they know that they'll still get a a tenant at the end of the day." – Tenant 3*

> *"the new landlady wanted to almost double the rent. So we then moved out" – Tenant 1*

However, while tenants were fearful of asking for improvements, landlords were also concerned with causing disruption for tenants:

> *"They might mind the disruption … because it would obviously take time and they'd have to move out for a couple of weeks "– Landlord 1*

> *"It's bad enough to get the carpets cleaned and getting the decorator in there"– Landlord 4*

Opportunities for tenant and landlord engagement

Develop long-term decarbonisation plan

Recent work by the Future Generations Commissioner and Construction Leadership Council[xiv] outlines how Wales and the wider UK should develop and implement a National Retrofit Strategy which sets out a long-term plan for the nation's homes to 2030 and beyond. This plan should include long term decarbonisation targets, engage the public in a 'shared national endeavour' and put an end to the uncertainty for landlords to drive investment and innovation.

> *"If you know if there's loads of us doing it then I would feel more comfortable in that situation."- Landlord 3*

These views were shared in the workshop, with the caveat that any plan must be accompanied by a widespread communications strategy, using different forms of media and engagement to bring the public on the journey.

Local 'One Stop-Shops'

'One-stop-shop' area-based delivery models are increasingly seen as an integrated solution to the challenges of engaging households, providing: advice, energy audits, financing and delivering quality assured retrofits. As shown in the figure below, this simplifies the customer journey, while focusing on a specific area or customer segment. While our workshop participants felt that this should be multi-tenure, there were recommendations for how specific actors should support a One-Stop-Shop for the Welsh PRS.

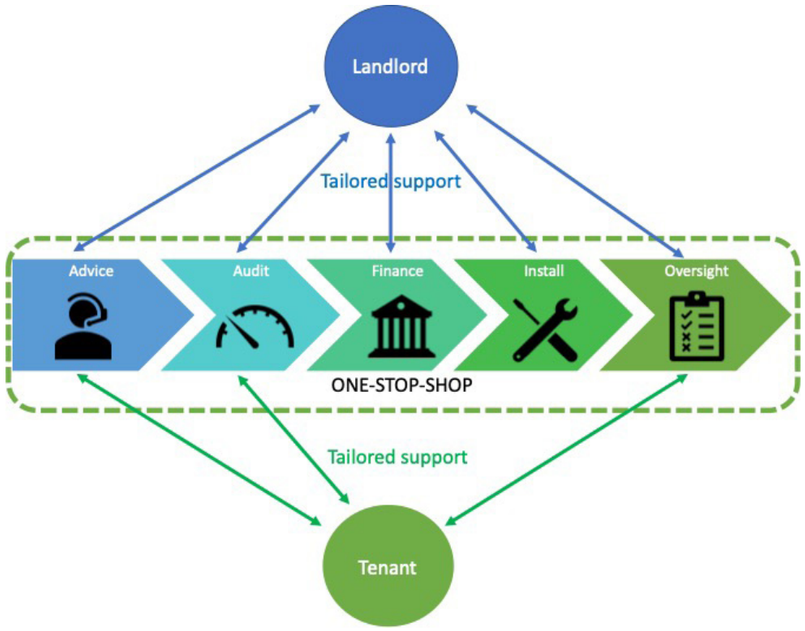
Local Authorities: remain among the most trusted organisations in communities. When asked about who should deliver a retrofit programme, many landlords and tenants we interviewed saw a key, coordinating role for local authorities.

> *"if they've got a streamlined system with a dedicated installation engineers that are trusted by the Council, then I won't have to go along…with a load of cowboys."- Landlord 2*

Rent Smart Wales: The Welsh Parliament Equality and Social Justice Committee recommend that Rent Smart Wales should become a key "conduit for engagement with the PRS on energy efficiency and smart metering alongside identifying opportunities for partnership working". Our workshop identified a specific role for them in supporting MEES enforcement and coordinating between different local authority departments such as Environmental Health and Trading Standards, to target underperforming homes.

Community Energy Organisations: such as Severn Wye were also seen as a key actor and a potential point of referral. Many of these actors have decades of experience in supporting both landlords and tenants to access advice, government grants and installation schemes. Workshop participants felt any future One-Stop-Shop should integrate with these existing networks rather than replacing them, with increased central and local government funding for this role.

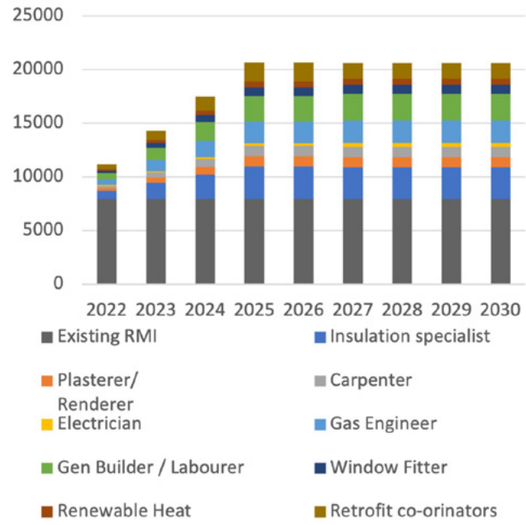
Letting and Management Agents: were seen as a core actor who are currently contributing little to this agenda. Our workshop participants saw an expanded role for them including better communication of EPC's, MEES and future regulations. Equally, it was suggested manging agents should, in future, be incentivised and eventually forced to consider energy efficiency improvements during void periods.



Challenges for Installer and supply chain coordination

Skills & foundational economy

A core challenge identified by our interviews and workshop attendees was the retrofit skills gap. Research by Retrofitworks and NEF[xvi] suggests that delivering the retrofit agenda to all tenures requires a doubling of the existing renovation maintenance and improvement (RMI) industry - an additional 12,710 skilled contractors in Wales. When adding indirect jobs this means an additional 24,025 Welsh workers by 2025.



Technical, legal, and quality standards

Several interviewees described issues with the quality and appropriateness of past energy efficiency programmes and a general lack of knowledge in the supply chain about appropriate measures. There were also concerns about the technical challenges of wall insulation:

> *"I hear mixed reports about cavity wall insulation, about how effective it is" – Landlord 2*

Indeed, the Cavity Insulation Guarantee Agency, CIGA[xvii], indicates there have been just over 2,000 claims from damage issues caused by ingress of driving rain to inappropriate properties. Further, our interviewees expressed concerns about the extensive and disruptive nature of solid wall insulation:

> *"Well, you'll have to put insulation on the outside or the inside, wouldn't you? But it's quite a mammoth sort of task" – Landlord 4*

> *"internal insulation would be a lot more disruptive for us" – Tenant 1*

There were also examples where EWI would be unviable due to heritage and conservation issues:

> *"You could clad it with something but the conservation department would have a hissy fit… The conservation officer told me that "My job is to protect this house from people like you""– Landlord 1*

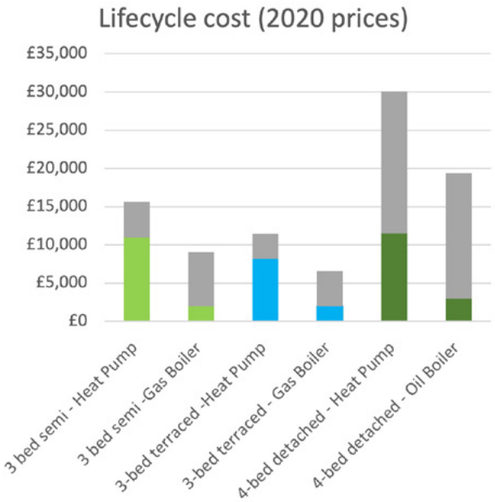
Equally heat pumps were seen as a challenge where there were space constraints:

> *"I couldn't do air source which might have been the way that I would have gone. Because I can't put anything out the side of the building" - Landlord 3*

Heat pump costs

Recent research by the Regulatory Assistance Project[xviii] highlights the current cost challenges for installing heat pumps. Due to high install costs ~£10,000 and the relatively high cost of electricity (~£0.2/kWh) compared to gas (~£0.04/kWh) the total cost of ownership under current market conditions is 55-73% higher for ASHP, as shown in the figure below (capital costs are shown as colours, while operational costs are grey).

> *"I mean obviously it's very expensive, much more expensive than replacing a highly efficient gas boiler." – Landlord 2*



Opportunities for Installer and supply chain coordination

Working with existing PRS supply chain

Our interviews found that many landlords already have a trusted network of installers who they go to for maintenance issues:

> *"I'd probably ask a trusted builder and try and get some information out of them and then proceed from there I guess" – Landlord 2*

> *"Got a friend that's a plumber. And so, he always does our work"– Landlord 4*

This suggests that future schemes should look to work with these existing contacts and tradespeople and, where possible, to develop skills and trust on the back of existing relationships.

Upskilling a new workforce & local supply chain

Several mini projects are currently being delivered as part of the Optimised Retrofit Programme to identify existing skills gaps within the retrofit industry and help develop a framework for upskilling and re-training existing professionals. The project will also develop training provision for young people through further education provision and industry training and promote this as an exciting career path to those not yet to enter the industry.

Construction Excellence Wales are also engaging, raising awareness, and understanding of decarbonisation to a targeted audience of Welsh construction sector, SME's and clients. The workshop participants further proposed a series of recommendations for increasing skills for retrofit in Wales:

- Increase funding for retrofit apprenticeships in Wales
- Ensure local procurement of council retrofit contracts
- Create Further Education links with Trade Associations
- Promote Retrofit Designer & Coordinator as a Higher Education pathway
- Contractors should be incentivised to offer on the job training to 'green apprentices' and employ trainees once they have qualified
- Larger manufacturers and contractors should sponsor modules or competitions in school / college / uni to draw in best new people

Welsh Government should further encourage academic and Industry collaboration in the design and production of green products in Wales. For example, Octopus Energy have invested £10m in the UK's first heat pump R&D & training centre, where they aim to reduce the average install cost of an ASHP to £5,000. Welsh Government should seek to develop similar initiatives to insource supply chains for low carbon manufacturing.

Retrofit Coordinators to improve quality

Delivering multi-measure 'whole-house' retrofits must consider the requirements of the entire building, both from a technical and occupants' perspective. Retrofit Coordinators are specialist impartial, project managers, who ensure that all elements of domestic retrofit are properly managed and coordinated, and that a cohesive retrofit plan is designed and implemented. Since 2021 all ECO funded retrofit projects must now be overseen by a TrustMark approved Retrofit Coordinator. Our workshop participants therefore discussed that in future all PRS retrofit projects involving 'major works' should be overseen by a Retrofit Coordinator.

Smart heat tariffs

The available evidence shows that by automatically running heat pumps flexibly on a time-varying tariff, savings of up to 50% can be achieved with minimal need for the household to manage the heat pump's operation. Sero's modelling suggests that through smart operation an ASHP could save £189/year in the 3-bed semi-detached, £140/year in the 3-bed semi and £661 in the four-bed detached. These findings suggest all households should be offered competitive smart heat tariffs when adopting heat pumps, ideally where heat pump cost optimisation was undertaken by the supplier.

Funding and finance challenges

Energy crisis & fuel poverty

Our interviews were largely conducted before the recent energy price increases. However, they confirmed that affordability was already a concern for all four tenants we interviewed:

> *"I mean it, it has been a worry. Our gas bills have gone up quite significantly" - Tenant 4*

> *"we tended to .. not heat it as much because we knew that a lot is just going out the window and out the doors…concentrate on the on the bedrooms and just trying to keep the heat in there" - Tenant 1*

Further, several highlighted how this led to underheating and issues of condensation and damp:

> *"basically there's no insulation so that it's really cool in the summer, which is great. It's also freezing in winter, which is less great. - Tenant 2*

> *"we always had a towel by each window that we so we mopped up the condensation" - Tenant 1*

> *"There is in one of the bedrooms, is quite damp and there's obviously been that way for a while because there are a damp catching devices in there."- Tenant 3*

In 2017-18, the total number of dwellings with any Category 1 hazard - defined as 'poor housing' - in Wales was estimated 18% of the stock. If remedial works were undertaken 'to mitigate these hazards', it is estimated that this would save the NHS £95 million per year. We further expect these issues to be even more acute during the heating season of 2022/23.

Rent increases

Several landlords outlined how they would increase rent if required to make ~£10,000 energy efficiency investments by MEES regulations, with this expectation shared by the tenants:

> *"you know when the guy in the flat moves out, then perhaps I would stick another £100 on per month" – Landlord 3"*

> *"Well, that's what would end up happening, wouldn't it? You know, every other landlord would be doing the same" -Landlord 4*

> *"My problem with [leaving the retrofit investment to landlords] is that the price would go up and then it would never go down" – Tenant 2*

Split incentives

As expected, a key reason for the reticence to invest was the financial split incetive between the landlord and tenant:

> *"We don't tend to bother [adding more insuation], you know, it was obviously someone else is paying the heating bill." – Landlord 4*

> *"OK, but if I were to keep the rent slightly lower. Then the person in the flat wouldn't be footing that bill. I would be footing the bill because it's me taking this eco step."*

> *"in terms of our justification …we were kind of saying "look, we don't want to spend more on energy than we really have to" which probably wasn't high on his list of priorities" – Tenant 2*

Low value homes

A further challenge is the relative cost of installing retrofit measures, where the cost of measures may exceed 10% of the property's value. The Building Back Britain Commission[xx] identifies a 'critical price threshold' of ~£162,000, where the cost of making energy efficiency improvements to the property become 'financially unviable' as these costs exceed the likely house price gain.

We expect that there are 100,000s of these homes in Wales, and a high proportion in the PRS with Blaenau Gwent (£113,473), Merthyr Tydfil (£135,016), Rhondda Cynon Taf (£141,916) and Neath Port Talbot (£155,531) all having average house prices below this threshold.

> *"I appreciate that the government has not got a bottomless pit. I know that. But I just think there's so many people who don't have the money to spend on [retrofit]." – Landlord 3*

Funding and finance opportunities

Reforms to Warm Homes Programme

The Welsh Parliament Equality and Social Justice Committee[xxi] recently recommended Welsh Government should learn the lessons of the Audit Wales report and set out how it intends to ensure that the next iteration of the Warm Homes Programme is bigger in scale, smarter in who it targets and greener in its interventions. Indeed, recent research suggests that Welsh fuel poverty funding must double to ~£732m for the remainder of the 2020s, with this investment front loaded.

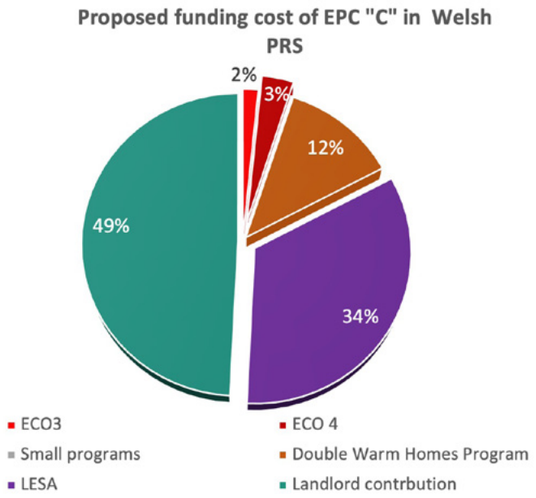
Tax incentives

Our interviews highlighted how few incentives currently exist for landlords to upgrade their properties:

> *"at the moment as a landlord you can offset almost nothing on your tax return and if at least you could get that bit tax free or I don't know, just offset it. That would be great." – Landlord 3*

Various 'fiscal incentives' were discsussed during our workshop, included expanded VAT reductions and variable Stamp Duty. However, a targeted option for the PRS would be to re-instigate the Landlord Energy Savings Allowance (LESA), that provided up to £1,500 of tax relief, prior to it scrappage in 2015.

Assuming full uptake the impact of these two policies on the EPC "C" target in the PRS is shown below.



Value uplift and Green Mortgages

There is emerging evidence that a property's energy performance can result in either a 'green premium' or a 'brown discount'. Although isolating this impact is difficult, a study for the Danish Energy Agency[xxii] suggests each EPC level of improvement from G-A is worth between €5,400-7,400 to an average property. These effects, combined with the lower running costs are driving the development of Green Mortgage products which allow for greater borrowing and have lower interest rates. Indeed, our interviews highlighted how these products could be appealing to landlords:

> *"I would borrow the money myself. Increase my mortgage "– Landlord 1*

> *"I need to talk to estate agents and see whether any of this actually improves the sale value of the property and if it does, that gives us the other option, that re-mortgaging the property, if it's worth slightly more having been updated to those energy efficiency levels" – Landlord 2*

Property linked finance

The challenges of the split incentive provide a further rationale for 'property linked finance' to address the split incentive by first; allowing the debt to remain with the property during a change of tenure or ownership; and second use a channel repaid by the occupant rather than the building owner. There are two common variants: On Bill Finance (OBF) and On Tax Finance (OTF) which use the energy bill or council tax repayment channel respectively.

Our interviews suggested that landlords were prepared to share the cost of deeper retrofit and would be receptive to this type of financing model:

> *"I suppose I'd have to speak to the tenant and say, listen, it's gonna cost quite a lot. And you know, we're gonna have to share this between us somehow." – Landlord 3*

Both the tenants and landlords we spoke to prefer the idea of using Council Tax as it could be linked to exemptions and delivered by LAs through a One-Stop Shop:

> *"If you're on a limited income, then probably you don't even pay council tax or get a reduced rate. So that's probably like the most progressive option" – Tenannt 1*

> *"It be great if they could send letters out to landlords and say, did you know that, … if you make your house more energy efficient, perhaps they could, … lower the tax band for people who've got a really … energy efficient house" – Landlord 3*

Participants also felt that landlords should not be able to shift the entire cost of meeting future MEES targets onto tenants and that minimum contributions should be required.

Regulation and enforcement challenges

Policy uncertainty

Both landlords and tenants mentioned how the uncertain and inconsistent policy environment and a lack of funding was holding back action:

> *"I would be interested in improving the thermal efficiency of those properties. But you know, we would also be looking to see if there are government grants or ways to make it more affordable" – Landlord 2*

> *"I think that if the government were truly committed to the climate goals and then they would make it a priority and they would allocate funding for this"– Tenant 4*

It was generally felt that a long-term plan with eventual regulatory 'sticks' would be required:

> *"So they need to say this needs to be done because we have our targets to meet and and people aren't gonna do it unless …They're forced to do it…, otherwise it's not gonna happen" – Tenant 4*

Poorly enforced regulations

There is much evidence[xxiii] that the existing MEES at EPC "E" are poorly enforced, with only <6% of councils across England and Wales taking enforcement action against landlords. Our workshop discussions suggested this was largely due to a lack of resourcing and confused responsibility between different LA departments, often meaning landlords were unaware of their obligations:

> *"I'm not very up to speed, but clearly the regulations are tightening…and I need to be forewarned and forearmed and understanding what needs to be done in order to make sure that the dwellings comply" – Landlord 1*

> *"the Council would surely tell me when they had the EPC cause that was done last year? they'd say whether ohh, that's sub-standard you need to do and they wouldn't let me get away with it for a moment? – Landlord 2*

EPC's not fit for purpose

There was also much discussion in the workshop about how EPCs were a poorly suited to meeting the retrofit challenge. These issues centred around the following key issues:

- EPC letter (A-G) does not reflect the carbon emissions of the home
- EPCs tend to be very inaccurate and not reflective of the dwelling's actual consumption
- The energy saving information and cost estimates on EPCs is generic and not based on tailored advice
- Landlords can currently apply to be excluded from national EPC register, even though EPCs contain no personal data

In general, there was also a lack of visibility of the EPC, with several tenants unsure of they had one despite it being a legal requirement:

> *"But no, I don't remember everything ever seeing an EPC for any of the properties." – Tenant 1*

Complex and overlapping regulatory environment

A consitent issue raised during both the interviews and workshops was the complex and overlapping regulatory environment for PRS landlords. 75% of landlords are non-professional or accidental landlords[xxiv], who are often time poor and are poorly informed about the range of obligations they face.

> *"You have to have information. [It's] probably there and I haven't found it. I'm not aware of it is the answer." – Landlord 3*

There were concerns that if not implemented with greater support, new energy efficiency and decarbonisation regulations could exacerbate this picture and lead to further disengagement and non-compliance.

Regulation and enforcement opportunities

Gas safety check -> boiler turndown

A little-known fact is that most boilers do not operate at their stated efficiency. A recent report by the Heating and Hot Water Council (HHIC)[xxv] found that households can save around 6-8% on their gas bill just by turning down the heating flow temperature on their condensing combi boiler- not turning down the thermostat. Our workshop identified the annual Gas Safety Certificate check as an ideal opportunity for a heating engineer to advise households on reducing the boiler flow temperature.

Smart EPCS and Building Rennovation Passports

The Optimised Retrofit Programme, supported by Welsh Government aims to create and refine the tools required to roll out the large-scale decarbonisation of homes across Wales. This aligns with the Green Finance Institute's work on creating a standard for Building Renovation Passports[xxvi]: digital tools containing a logbook of energy-efficiency works to date on a property and a roadmap of the next steps to net-zero, and recent work on Smart EPCs[xxvii].

Resource, enforce and strengthen MEES

A first step must be to resource and enforce the existing MEES regulations, before they are strengthened. Our workshop identified a potential coordinating role for Rent Smart Wales, alongside Environmental Health and Trading Standard's teams. While existing MEES enforcement required additional resources, workshop participants advised that this would require only an additional £500,000/ year in Welsh LAs. Participants also discussed recent research by the Centre for Sustainable Energy into best practice MEES enforcement, which could be drawn upon.

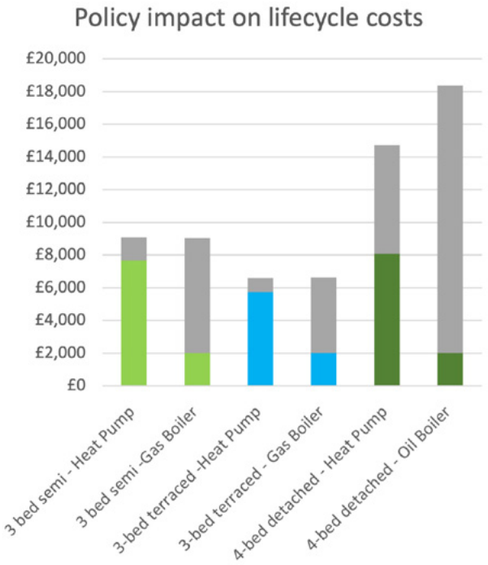
A key issue here is to support landlords in understanding their obligations. By providing a tailored regulatory advice service as part of the One-Stop-Shop, councils, and other actors such as Rent Smart Wales, would be key in delivering this support. Subsequently, strengthening MEES to EPC "C" is a core step in reducing fuel poverty and preparing homes for a heat pump rollout:

> *"If it was needed for legislation, we would comply, no question. If it wasn't, we'd be working out the sums between the rental income, the cost of that investment, reliability options, what it would do to the property, where it would go."- Landlord 2*

Level playing field for heat pumps

Residential electricity prices are currently around four/ five times higher than gas prices. This is in part driven by legacy policy costs with comprise around 23% of the average bill. Research[xxviii] by Public First suggests that by moving these policy costs into general taxation, the average fuel bill would decrease by £168 (-12%) per year by £178 a year for the fuel poor, reducing the running costs of heat pumps by a commensurate 23%. Indeed, Germany has recently announced a 43% reduction in these levies and plans an eventual phase out to drive the adoption of heat pumps and reduce bills.

When combining time of use smart heat tariffs, the removal of environmental levies from electricity bills and the impact of a subsidy/ industrial policy to drive down ASHP install costs by 30%, the total cost of ownership is between 1% higher and 24% lower for ASHP in our archetypes (capital costs are shown as colours, while operational costs are grey). Meaning heat pumps could soon cost the same or less than fossil boiler systems.



Ban fossil heat

Welsh Government have already banned fossil heat in new social housing, and from 2025 are looking to introduce same measure for new private developments. There is broad consensus that meeting climate target will eventually require a moratorium on new fossil fuel heat in existing homes. While the CCC have a hard backstop date of 2033, we believe this date should be set in Wales to 2030, in a similar manner to petrol and diesel cars.

Policy recommendations

Welsh Government

1. Develop a National Retrofit Strategy

Welsh government must develop a long-term plan for the decarbonisation of the housing stock and the evolution of the PRS, setting-out how the sector will achieve this in the context of other priorities e.g. fire safety, homelessness prevention and implementing the Renting Homes (Wales) Act. This should include setting targets and developing accountability within different government departments for meeting them.

2. Engage landlords and tenants on this journey

This plan must be inclusive and bring both landlords and tenants on this journey, allowing them to co-create how programmes are designed in their local areas. These recommendations should be incorporated into the local One-Stop-Shops outlined below. This should include an effective advice and communications strategy which raises awareness among the public, providing certainty and support to households and landlords and set the direction of travel.

3. Reform WHP & double funding

The WHP needs reform to focus away from fossil fuel boilers towards energy efficiency and low carbon heat, remove arbitrary cost caps per property, and better target homes in the PRS - requiring a doubling of past funding and integration with other funding sources to ~£732m for 2020s, urgently targeted at the worst properties and those in extreme fuel poverty.

4. Trial Property Linked Financing

The pervasive split incentive requires property linked financing which can integrate with other funding streams and enable sharing of costs and benefits between landlords and tenants on higher incomes. Recent research suggests the Development Bank of Wales would be ideally placed to trial models based on using both energy bills and council tax as a repayment channel, in conjunction with the other polices outlined here.

5. Building Renovation Passports & Smart EPC's

The ORP is highlighting how better data on the characteristics of the housing stock is an essential pre-requisite of a National Retrofit Strategy. We suggest the following sequential steps are taken.

- Develop whole house plan for every Welsh home
- Record and track progress via BRPs
- Adopt smart EPCs and measured energy savings

6. Resource and Train a Welsh Supply Chain

Delivering this agenda will require 12,710 skilled contractors in Wales alone. This will need a widespread skills drive involving increased funding for green apprentices as well as retraining for the existing ~8,000 RMI workforce. A range of measures will be needed, although we suggest Welsh Government should allocate an increased £2-3m/year for training.

7. Ban New Fossil Fuel Heating by 2030

We believe that a hard stop date of 2030 for new fossil fuel heating is needed. This will provide certainty to industry and drive investment and innovation, seen with the petrol and diesel ban.

Local Government

8. Resource & Enforce MEES Legislation

Local Authorities in Wales should immediately increase resourcing for MEES EPC "E" enforcement, adopting emerging best practice and coordinate between Rent Smart Wales, Environmental Health and Trading Standard's teams, developing an effective national MEES compliance and enforcement database and tools. We estimate these aims could be delivered across Wales for <£1m annually.

9. Develop Local One Stop Shops

Local authority led One-Stop-Shops are needed to provide an integrated and tailored offer to both landlords and tenants: providing advice, energy audits, financing and delivering quality assured retrofits. We recommend that Wales should aim to have a One-Stop-Shop in all 22 principal areas, and each should have a specific team focussed on the PRS and offer face to face and digital engagement to address different accessibility requirements. NEF[xxx] estimate these models require around £12m per 500,000 homes retrofitted, or £33m for the entire Welsh retrofit programme.

10. Integrate Funding Streams

Existing low-income funding streams are fragmented, creating piecemeal programmes and confusion for the public. We suggest integrating schemes such as ECO, Nest and Arbed and future 'able to pay financing' under a single offer to landlords, coordinated by the One-Stop-Shop.

UK Government

11. Regulate for EPC "C" in PRS

To improve standards the Welsh Government should urge the UK Government to increase MEES to EPC "C" for all tenancies by 2028 and, if unwilling to act, explore implementation of higher MEES standards in Wales only.

12. Create Fiscal Incentives for Landlords to Invest

Various 'fiscal incentives' may be needed, the UK government should re-instate the Landlord Energy Savings Allowance (LESA), that provided up to £1,500 of tax relief.

13. Level Playing Field for Heat Pumps

Heat pumps have the potential to create bill savings and have a lower cost of ownership than gas boilers, requiring the following policy changes:

- Removing environmental levies from electricity bills
- Require suppliers to offer time of use, smart heat tariffs
- Industrial policy to reduce ASHP install costs by 30%

With these measures we estimate the total cost of ASHP ownership would be between only 1% higher and 24% lower than the fossil alternatives.

Level	2022	2023	2024	2025	2026	2027	2028	2029	2030
Local Government	Resource & enforce existing MEES EPC "E" Pilots for Local One Stop Shop Delivery	Launch One Stop Shop Delivery Models across Wales Integrate Funding Streams across WHP, ECO & able to pay		Resource & enforce MEES EPC "C" -new tenancies One Stop Shop Delivery targeting MEES at C and PRS			Resource & enforce MEES EPC "C" -all tenancies One Stop Shop Delivery targeting MEES at C and PRS		
Welsh Government	Consult on National Retrofit Strategy Consult on reforms to Warm Homes Programme (WHP) Develop centralised MEES compliance database and best practice enforcement Consult on Building Renovation Passports and Smart EPC's	Launch National Retrofit Strategy Launch new WHP and Double Fuel poverty Funding Allocation Development Bank to Trial Property Linked Financing Roll out Whole House Plans & Building Renovation Passports Target training of 6355 new retrofit contractors	Development Bank to Launch Property Linked Financing Roll out Whole House Plans & Building Renovation Passports Target training of 9532 new retrofit contractors	Roll out Whole House Plans & Building Renovation Passports Target training of 12710 new retrofit contractors	Roll out Whole House Plans & Building Renovation Passports	Complete Roll out of Whole House Plans & Building Renovation Passports for every Welsh home			Ban on new fossil heating systems
UK Government	Publish results of MEES consultation and legislate new standards	Implement new LESA 2023-2030 Shift electricity levies into general taxation Require all energy suppliers to offer smart heat tariff		MEES EPC "C" New Tenancies				MEES EPC "C" All Tenancies	

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[i]Wales Advisory, Better Homes, Better Wales, Better World Decarbonising existing homes in Wales Report to Welsh Ministers from the Decarbonisation of Homes in Wales Advisory Group, 2019.

[ii]EEIG, Rebuilding for resilience, 2020.

[ii]ONS, Regional gross disposable household income, UK - Office for National Statistics, Off. Natl. Stat. (2019). https://www.ons.gov.uk/economy/regionalaccounts/grossdisposablehouseholdincome/bulletins/regionalgrossdisposablehouseholdincomegdhi/1997to2017 (accessed December 11, 2020).

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