

Equality and Social Justice Committee
Consultation: Fuel poverty and the Warm Homes Programme
From: National Energy Action (NEA) Cymru

1. Introduction

- 1.1 National Energy Action (NEA) is a national fuel poverty charity that wishes to see that everyone in Wales can afford to keep their homes warm and safe.¹ We welcome this opportunity to help inform the Committee's inquiry into fuel poverty and the Warm Homes Programme.
- 1.2 This is a critical time. It is estimated that there were 155,000 households living in fuel poverty in Wales in 2018, with a further 145,000 households being at risk of fuel poverty.² Since then, we have suffered a COVID-19 pandemic that has exacerbated existing inequalities and now face an 'energy price crisis' which has and will continue to see unprecedented rises in household energy bills.
- 1.3 In April 2022, NEA estimate that the cost of heating the average home is likely to have doubled in the last 18 months.³ If the price cap goes up in April by a further £400–£600 to take account of surging wholesale gas prices, we estimate that the overall number of households in fuel poverty in Wales could increase by 50% or more, compared to 2018 estimates. This will see unacceptable numbers of people face desperate, humiliating choices between heating, eating, or meeting other essential expenditure.
- 1.4 The next decade needs to be a decade of delivery. As well as needing to respond in the short-term to the scale of this crisis⁴, it will see a necessary focus on decarbonising heat in homes and delivering a fair, affordable, and just transition for current and future generations.
- 1.5 Whilst welcome, current schemes are insufficient to address the scale of fuel poverty in Wales, let alone decarbonise homes. With the Welsh Government currently consulting on the next iteration of its Warm Homes Programme, now is a vital moment to consider how far the current Programme has taken us, and going forward take the opportunity to provide guaranteed support for the 'worst first' – i.e. those on the lowest incomes in the least efficient homes – improving the lives of fuel poor households as we decarbonise and upgrade the energy efficiency of their homes.

2. Why is domestic energy efficiency important?

- 2.1 Our homes play a vital role in our everyday lives. Wales has the oldest and least thermally efficient building stock compared to other UK nations and northerly European countries. As expected, older dwellings in Wales have poor energy performance and lower indoor temperatures compared to those more recently built.⁵ This disproportionately affects poorer households in Wales; many of whom find themselves trapped in the most inefficient homes, to the detriment of their health and wellbeing.
- 2.2 Poor energy efficiency is a key driver of fuel poverty and more than 80% of fuel poor households in Wales live in inefficient homes⁶; higher than in any other UK nation. This overlap has left many of the poorest Welsh households more exposed to soaring energy prices. Without addressing

needless energy waste in our homes, we will continue to waste millions of pounds each year as heat escapes through leaky walls, roofs, floors, and ceilings.

2.3 The resulting impact of poor-quality housing on health services is acute, costing the NHS in Wales approximately £95m every year. Conversely, Public Health Wales estimate that for every £1 spent on improving warmth in vulnerable households, this results in £4 of health benefits, and there could be close to 40% fewer hospital admissions for some cold-related illnesses in those with upgraded homes.⁷ The average annual saving for bringing a home up to a reasonable level of energy efficiency is potentially life-changing, cutting bills by over £300 every year and over £1,000 for the poorest households in the least efficient homes. By focusing early efforts on the ‘worst first’, these significant savings (which are increasing as energy prices rise) accrue over a longer period, at the same time as taking early action to significantly reduce carbon emissions, generate jobs, and economic growth.

2.4 To this end, we welcome the current opportunities for social housing tenants under the Optimised Retrofit Programme (ORP) and next version of the Welsh Housing Quality Standard (WHQS). However, private renters and owner occupiers make up the overwhelming majority (87%) of the fuel poor population in Wales.⁸ The real litmus test for them in respect to progressing towards our fuel poverty and climate change targets will be the Welsh Government’s future iteration of its Warm Homes Programme, and we believe there are several lessons that can be learnt from the current schemes.

3. What are the main lessons learned from the Welsh Government’s current Warm Homes Programme and how can these lessons help shape the next iteration to ensure it better supports those living in, or at risk of, fuel poverty?

3.1 NEA has consistently championed and supported the Warm Homes Programme (the Programme). To date, Nest and Arbed have made some very welcome improvements to the lives of fuel poor households in Wales. However, based on evidence from various stakeholders – including that provided via the Fifth Senedd’s Climate Change, Environment and Rural Affairs (CCERA) Committee’s inquiry into fuel poverty in 2019, recent evidence from Audit Wales, and anecdotal feedback from our partners – there are several lessons that ought to be addressed in the next iteration of the Programme. We group these under six key themes: namely, Scale, Targeting and Eligibility, Measures, Accessibility, Delivery Mechanisms, and Monitoring and Reporting.

Scale

3.2 Since the Programme’s launch in 2009, more than £394m has been invested, improving the energy efficiency of more than 67,100 owner occupier and private rented sector households.⁹ In 2018, when the Welsh Government published its latest fuel poverty estimates, improvements in energy efficiency were credited with having reduced estimated levels of fuel poverty in Wales, helping outweigh higher fuel prices alongside increased incomes.¹⁰

3.3 However, it has since been widely acknowledged – including by Welsh Government – that the investment and scale of the Programme has not been sufficient to meet need or targets.

- 3.4 In 2019, the Bevan Foundation stated “to eradicate fuel poverty in a decade, the Welsh Government needed to assist approximately 33,000 households a year out of fuel poverty. Between 2010 and 2019 a total of 55,056 households – i.e. equivalent to 6,000 households a year – received home energy efficiency improvements through Nest and Arbed...This was just 20 per cent of the number needed.”¹¹
- 3.5 Sadly, the level of need is much greater now; not least as the twin challenges of soaring energy prices and falling incomes have become especially acute. If the Welsh Government is to meet its 2035 targets, dramatically reducing fuel poverty and eradicating severe fuel poverty as far as reasonably practicable¹², it must be prepared to scale up its future Warm Homes Programme and increase investment.
- 3.6 The likely scale of fuel poverty in 2022 will require a much larger number of households per year be lifted out of fuel poverty in comparison to what the current Programme has achieved. Even by 2018 estimates, the former Minister stated the number of homes benefiting from investment will need to be more than doubled.¹³
- 3.7 In view of this, NEA supports the Future Generations Commissioner for Wales recent calls on the Welsh Government to double fuel poverty funding to £732m by 2030 and supplement with grants for people on low incomes which would be available from UK Government’s national infrastructure funding.¹⁴
- 3.8 NEA and other key stakeholders, including the Fuel Poverty Coalition Cymru, also called on the Welsh Government to introduce interim fuel poverty targets based on the energy efficiency of fuel poor homes. Regrettably, neither these nor any other interim targets were adopted when the Welsh Government set out its recent *Tackling Fuel Poverty Plan*. This is despite a legal duty on the Welsh Government to put in place these key milestones towards the 2035 objectives (as per paragraph 3.5 above).

Targeting and Eligibility

- 3.9 NEA supports the Warm Homes Programme’s intentions to help the ‘worst first’ – i.e. those on the lowest incomes, living in the least efficient homes. We were pleased to see this principle made explicit in the Welsh Government’s latest Fuel Poverty Plan and reiterated within the Net Zero Wales Plan.
- 3.10 To this end, we welcome the expansion of Nest eligibility criteria beyond exclusively those in receipt of means-tested benefits, to also target support at those on a relative low-income suffering with health conditions exacerbated by the cold under the Nest Scheme Health Conditions pilot. As per the most recent estimates, the majority (69%) of those in fuel poverty in Wales in 2018 were not in receipt of means-tested benefits.¹⁵
- 3.11 However, there are mixed views about Nest and Arbed’s impact on reducing fuel poverty and serious questions have been raised as to how effective the schemes have been in targeting those living in fuel poverty and in greatest need of support.
- 3.12 As noted in CCERA Committee inquiry¹⁶, the schemes have undoubtedly led to improvements in home energy efficiency, and this should make households less likely to be in fuel poverty. However, it is hard to be certain about the precise impact of the schemes. In the past, it appears

neither scheme routinely checked whether households were in fuel poverty before or after the intervention.¹⁷

- 3.13 While Nest now does so, the way it has evolved in recent years suggests funds are being prioritised to people who may not be fuel poor.¹⁸ Audit Wales' recent findings also arguably cast doubt on the reliability of some of Nest's reported outcomes, including figures counting those taken out of fuel poverty, previous 'before and after' energy efficiency gains, and targeting.
- 3.14 In recent years, most households that received an energy efficiency package through Nest were not living in fuel poverty: 57% in 2018-19, 63.7% in 2019-20, and 49.6% in 2020-21.¹⁹ Further, Audit Wales has found the scheme has arguably shifted from its original purpose of tackling fuel poverty in the round, increasingly becoming a boiler-replacement scheme. The way the Welsh Government decided the Scheme Manager should assess and interpret the energy efficiency of a home has artificially downgraded EPCs and allowed more people to qualify for support, potentially including many who were not living in fuel poverty. This has also meant reported 'before and after' energy efficiency gains and carbon reduction from the intervention were "significantly overstated".²⁰
- 3.15 In respect to Arbed, it is unclear what impact the scheme has had in lifting households out of fuel poverty, based on publicly available information and analysis. Arbed's latest annual report does not appear to state how many supported households were fuel poor before or after the intervention.²¹
- 3.16 In the next iteration of the Programme, NEA believes it is imperative the Welsh Government focuses the schemes on lifting households out of fuel poverty, supporting the 'worst first' – i.e. those on the lowest incomes, in the least efficient homes. The Programme should be designed to include low-income households living in, or at risk of, fuel poverty even if they do not receive means-tested benefits.
- 3.17 Further, it will be important for the next iteration of the Programme to align with the next phase of the Energy Company Obligation (ECO), which is due to run from April 2022 until March 2026. This too is intended to have a focus on improving the least efficient homes occupied by low income and vulnerable households (making larger and more complete improvements to them) and NEA welcomes this.

Measures

- 3.18 Unfortunately, the evolution of the Warm Homes Programme has also meant that it has increasingly fallen short of its original intended 'whole-house' approach. The vast majority of energy efficiency measures installed under Nest have been replacement boilers. In 2019-20, 93.8% of installed measures were boiler replacements and central heating installations; with just 6.2% for standard insulation. In 2020-21, this figure rose to 94.4% for boiler replacements and central heating installations; with just 5.6% for standard insulation, comprising of 5.5% loft insulation and 0.1% draughtproofing.²²
- 3.19 Clearly, this is to the detriment of other meaningful, fabric upgrades, including for example cavity or solid wall insulation, which would provide long-term benefits and provide a permanent solution to lower bills by reducing demand through energy efficiency measures. We are concerned by this and the Scheme Manager's response to the CCERA Committee's inquiry

suggests insulation measures were seen as “additional” and “secondary” measures, limited by the cap thresholds set by the Welsh Government.²³

- 3.20 While a wider set of measures have been installed under Arbed compared to Nest, insulation appears still to have made up the minority. Between October 2018 and March 2021, Arbed installed measures in 3,108 homes, of which 2,095 (67%) received a new heating system, with 1,777 (57%) homes receiving solar panels and 415 (13%) receiving loft insulation.²⁴
- 3.21 Concerningly, the lack of fabric measures has also meant that while the Programme covers all geographic areas in Wales, the schemes have reportedly failed to address the specific challenges associated with tackling rural fuel poverty. Wales has a high proportion of rural households and a large proportion of inefficient, solid-wall homes, with higher numbers in rural areas.
- 3.22 Nest and Arbed have spending caps in place for the amount spent on individual properties. Although these caps are set higher for off-gas properties, more common in rural areas, anecdotal evidence from partners, including Citizens Advice, indicates households in need in off-gas homes with solid walls have often been unable to get the insulation required for their property because of the costs involved.
- 3.23 In 2019-20, only 0.5% of off-gas measures installed through Nest were for insulation, suggesting that fewer than 10 off-gas households may have received solid wall insulation, despite 65,000 households with solid uninsulated walls being in fuel poverty in 2018 (i.e. 21%, the highest rate of fuel poverty among all types of wall and insulation).²⁵ One way to ensure that rural, solid wall properties receive the attention they need through the Programme is to have a solid wall minimum, akin to that found in the GB-wide ECO scheme. More generous cost caps for grants may also be needed. The English Home Upgrade Grant (HUG) scheme allows grants of up to £25,000 to upgrade the least efficient rural properties, for example.
- 3.24 In our view, it is imperative that the next iteration of the Programme takes a multi-measure, ‘fabric first’ approach, in line with the overarching policy goals of the Fuel Poverty Plan and Net Zero Wales Plan. This will invariably mean a need to increase the financial cap thresholds to allow for measures not previously included or often installed.
- 3.25 As recommended by the former CCERA Committee, the next iteration should also include a bespoke programme of support aimed at addressing the distinct challenges faced in rural areas, with appropriate levels of funding that take account of the more complex and costly measures required to address rural fuel poverty.²⁶

Accessibility

- 3.26 It is also imperative that the future Programme is accessible to all those in need of its support.
- 3.27 This will mean ensuring that measures are fully funded and require no financial contributions from fuel poor households. As recommended, the Programme should also routinely meet the cost of ancillary and enabling works that have otherwise hitherto often prevented households from receiving energy efficiency improvements²⁷. These should include:

- Rewiring – To make changes to a home, it must sometimes be rewired for safety reasons. This can cost thousands of pounds.
- Servicing and maintenance – Grant funding provided through many available schemes do not cover the costs of annual servicing and maintenance. If these costs cannot be met by the household, there is an increased risk of the heating system developing a problem.
- Upgrading the electricity network – In some cases, when a householder decides to install a heat pump as their main heating source, their connection to the electricity grid may not be sufficient to support such equipment. NEA is aware of some occasions where the network has demanded that the household provides a financial contribution towards the cost of the upgrade before it takes place, which can be prohibitive.
- Redecorating and paintwork. Some installations will result in a home needing redecoration to restore it to its previous state.

3.28 Further, the delivery of measures should be promoted and delivered alongside independent, holistic advice and support, providing direct advice and assistance to vulnerable households in, or at risk of, fuel poverty on improving home energy efficiency, maximising incomes, and managing/reducing energy costs, and accessing the broader support available in the energy market, such as the Warm Home Discount.

Delivery Mechanisms

3.29 NEA has previously championed the merits of an area-based scheme targeting clusters of inefficient homes in deprived areas, running alongside a demand-led based scheme. We are aware that Arbed has now closed and prior to this, experienced significant delays and under-delivery issues, meaning considerably fewer households received support than intended.²⁸

3.30 However, a continuing area-based approach for part of the Programme should have considerable merits, including:

- Economies of scale – As targeting is on an area basis, local installers can do work street by street, rather than pepper-potting across areas. This reduces costs and ensures money can go further.
- Neighbourhood impact – Area-based targeting can increase the number of households that are interested in making improvements. Households are more likely to take up the offer of energy efficiency improvements if their neighbours are also visibly taking up the offer themselves.
- Economic benefits – Concentrating the energy savings in a discrete area could lead to more significant localised economic benefits. As energy costs reduce, spending power increases, meaning potential boosts for local economies that cannot be achieved if only a small number of homes are improved in a local area.

3.31 NEA understands that Welsh Government has commissioned an overall evaluation of Arbed, due in early 2022. It is important that lessons are learnt, and such evidence is brought to bear by the Welsh Government as part of its consultation for the next iteration of the Programme.

Monitoring and Reporting

3.32 Finally, more broadly, the CCERA Committee's inquiry highlighted serious concerns over the lack of a robust monitoring and evaluation framework.²⁹ Without this, it is impossible to evaluate

whether the schemes are effectively reducing fuel poverty, which is fundamental given the Programme is the Welsh Government's key delivery mechanism to tackling fuel poverty in Wales.

3.33 Since then, we note Audit Wales has reported significant concerns with Welsh Government's monitoring and contracting arrangements, concluding that contracts will need to be tightened and oversight strengthened in the next iteration.³⁰ NEA, too, would expect these issues to be addressed in any future iteration of the Programme and recommends that strong, formal arrangements are also put in place for the management of any redress issues when they arise and how they will be remedied for householders.

4. How can private sector landlords be encouraged to tackle fuel poverty amongst tenants?

4.1 The minimum standard for the energy efficiency of a privately rented property in England and Wales is currently set at EPC E. The UK Government has consulted on raising this minimum standard to EPC C by 2028, with landlords having to spend a minimum of an as yet undetermined amount to reach the standard. Such a change in standards would be a positive step in ensuring that the private rented sector is adequately tackling fuel poverty.

4.2 However, regulations are only part of the picture. Regulations must be enforced and the duty under MEES is placed on local authorities to do so. Local authorities should have plans in place, as part of their own fuel poverty and net zero strategies, for how they will adequately police these important regulations.

4.3 Additionally, it is proportionate to allow private landlords to access some of the available funding, alongside meeting their regulatory obligations, in order to ensure that they upgrade their properties as far as is possible. In England, for example, the HUG scheme allows a £5,000 subsidy to private landlords on the condition that they also contribute a further 50% of the subsidy. Such funding allowances in the next iteration of the Warm Homes Programme would result in a suitable level of encouragement, provided new stretching regulations are in place for privately rented properties to reach EPC C by 2028 by the UK Government. This was a commitment first made within the 2017 Clean Growth Strategy but is still to be implemented by the UK Government.

5. How can the Welsh Government ensure that the next iteration of the Warm Homes Programme better aligns with its efforts to decarbonise Welsh housing?

5.1 It is recognised that warm and safe homes can and need to be at the heart of a fair and affordable transition to net zero. Without programmes to transform the homes of those on the lowest incomes living in the least efficient properties, and to provide clean heating technologies, we will fail at both. As stated earlier in this response, the next Programme should take a **'worst first'** approach. In doing so, fuel poor households will see reduced bills and carbon emissions, making a significant contribution to efforts to decarbonise Welsh housing.

5.2 NEA and Energy Action Scotland's Fuel Poverty Monitor 2021/22³¹ investigated these issues extensively and found that in order to decarbonise heat for fuel poor households effectively, a number of things must be achieved.

- 5.3 There must be **adequate funding** to meet the problem. In line with the recent calls of the Future Generations Commissioner for Wales, NEA recommends that £325m is committed to 2025 to upgrade the energy efficiency of fuel poor homes.
- 5.4 In line with Welsh Government's Fuel Poverty Plan and Net Zero Wales Plan, NEA recommends that this funding should be spent on a **'fabric first'** basis, working on the energy efficiency of the built environment to get homes 'Net Zero ready' before, or at the same time as, making changes to the heating in a home. This will ensure that whatever the heating type, savings can be made for the householder. In order to do this effectively, cost caps must be sufficient to make material upgrades, including allowing for solid wall insulation to be installed where appropriate. Additional support should be provided for rural households, commensurate with the additional barriers they face to decarbonise.
- 5.5 The Programme must be delivered with **adequate advice and awareness-raising**. Advice should be available for those who cannot access the internet (via a telephone or face-to-face service) and tailored advice on decarbonising homes will likely need to be improved significantly. We recommend the Welsh Government investigate ways in which advice specifically for decarbonising homes can be improved and included in national skills initiatives.
- 5.6 There must also be trust from households that the changes that are made to their homes will be of **good quality, underpinned by access to sufficient redress**. This can be achieved using the PAS 2035 Standard within the next iteration of the Programme and come with a requirement to provide redress to households if and when installations do not meet the required standards.
- 5.7 Lastly, to ensure confidence, there must be **transparency** in government plans. We recommend that there must be regular reporting of how policies impact on consumer bills and a commitment from the Welsh Government that there are impact assessments undertaken for all policy decisions at a more granular level, to better understand the distributional impacts of policy change.

END

¹ National Energy Action (NEA) Cymru advocates to make warm homes a national priority, provides platforms for community-facing organisations to come together to share views and best practice, and works with partners to provide training and national qualifications to community-facing staff covering key issues associated with fuel poverty, fuel debt, affordable warmth and practical energy efficiency advice, and to directly support low-income and vulnerable households in need. See www.nea.org.uk.

² See *Fuel poverty estimates for Wales, 2018: revised*, The Welsh Government at <https://gov.wales/sites/default/files/statistics-and-research/2019-12/fuel-poverty-estimates-wales-2018.pdf> Note: The Welsh Government is expected to publish updated 'fuel poverty projections' in spring 2022.

³ See <https://www.nea.org.uk/energy-crisis>

⁴ See https://www.nea.org.uk/wp-content/uploads/2022/01/NEA-policy-briefing-supporting-vulnerable-energy-customers-this-winter-updated-110122_final_MC.pdf

⁵ See the Welsh Housing Conditions Survey, 2018: <https://gov.wales/sites/default/files/statistics-and-research/2019-10/welsh-housing-conditions-survey-energy-efficiency-dwellings-april-2017-march-2018-795.pdf>.

⁶ See <https://gov.wales/sites/default/files/statistics-and-research/2019-09/fuel-poverty-estimates-wales-2018-020.pdf>.

⁷ See *Making a Difference Housing and Health: A Case for Investment*, Public Health Wales at <https://phw.nhs.wales/files/housing-and-health-reports/a-case-for-investment-report> Note: Public Health Wales' report also highlights that every £1 spent on housing adaptations prior to hospital discharge results in £7.50 of cost savings for health and social care services.

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- ⁸ See *Fuel poverty estimates for Wales, 2018: revised*, The Welsh Government at <https://gov.wales/sites/default/files/statistics-and-research/2019-12/fuel-poverty-estimates-wales-2018.pdf>
- ⁹ See *Proposals for the next iteration of the Warm Homes Programme* at <https://gov.wales/proposals-next-iteration-warm-homes-programme>
- ¹⁰ See <https://gov.wales/fuel-poverty-estimates-wales-headline-results-2018>
- ¹¹ See *Fuel Poverty in Wales*, Climate Change, Environment and Rural Affairs Committee (2020) at <https://senedd.wales/laid%20documents/cr-ld13147/cr-ld13147-e.pdf>
- ¹² Under its *Tackling Fuel Poverty Plan 2021–2035*, the Welsh Government has set three targets, namely that by 2035: No households are estimated to be living in severe or persistent fuel poverty as far as reasonably practicable; Not more than 5% of households are estimated to be living in fuel poverty at any one time as far as reasonably practicable; and The number of all households ‘at risk’ of falling into fuel poverty will be more than halved based on the 2018 estimate. See <https://gov.wales/tackling-fuel-poverty-2021-2035-html#section-64048>
- ¹³ See *Fuel Poverty in Wales*, Climate Change, Environment and Rural Affairs Committee (2020) at <https://senedd.wales/laid%20documents/cr-ld13147/cr-ld13147-e.pdf>
- ¹⁴ See *Homes Fit for the Future: The Retrofit Challenge*, Future Generations Commissioner for Wales in partnership with New Economics Foundation. The report highlights that retrofit measures would eradicate fuel poverty and reduce needless energy costs, saving Welsh residents an average of £418 per year on their energy bills (a total of £8.3bn by 2040); not to mention significant environmental and health benefits, including generating a cost saving to the NHS of £4.4bn by 2040. The Commissioner calls on the Welsh Government and the UK Government to work together, funding the retrofit challenge using all financial levers available to them. Proposals include the Welsh Government doubling fuel poverty funding to £732m by 2030 and supplementing with grants for people on low incomes which would be available from UK Government’s national infrastructure funding (£2.6bn, plus £1bn allocation of the Shared Prosperity Fund). The report’s findings are summarised within an Executive Summary (<https://www.futuregenerations.wales/wp-content/uploads/2021/07/ENG-Exec-Summary-Financing-the-decarbonisation-of-housing-in-Wales.pdf>), supported by a Technical Summary (<https://www.futuregenerations.wales/wp-content/uploads/2021/07/ENG-Tech-Summary-Financing-the-decarbonisation-of-housing-in-Wales.pdf>) and a detailed report (<https://neweconomics.org/uploads/files/Financing-Wales-Housing-Decarbonisation.pdf>)
- ¹⁵ See *Fuel poverty estimates for Wales, 2018: revised*, The Welsh Government at <https://gov.wales/sites/default/files/statistics-and-research/2019-12/fuel-poverty-estimates-wales-2018.pdf>
- ¹⁶ See *Fuel Poverty in Wales*, Climate Change, Environment and Rural Affairs Committee (2020) at <https://senedd.wales/laid%20documents/cr-ld13147/cr-ld13147-e.pdf>
- ¹⁷ See *Fuel Poverty*, Wales Audit Office (2019) at <https://audit.wales/publication/fuel-poverty>
- ¹⁸ See *The Welsh Government’s Warm Homes Programme*, Audit Wales (2021) at <https://audit.wales/publication/welsh-governments-warm-homes-programme>
- ¹⁹ See Nest scheme annual reports available at <https://nest.gov.wales/en/about-nest>
- ²⁰ See *The Welsh Government’s Warm Homes Programme*, Audit Wales (2021) at <https://audit.wales/publication/welsh-governments-warm-homes-programme>
- ²¹ See *Arbed annual report 2019-20* at <https://www.arbedambyth.wales/eng/annual-report-2019-20.pdf>
- ²² See Nest scheme annual reports available at <https://nest.gov.wales/en/about-nest>
- ²³ Ibid
- ²⁴ See *The Welsh Government’s Warm Homes Programme*, Audit Wales (2021) at <https://audit.wales/publication/welsh-governments-warm-homes-programme>
- ²⁵ See Table 4.4.1 in *Fuel poverty estimates for Wales, 2018: revised*, The Welsh Government at <https://gov.wales/sites/default/files/statistics-and-research/2019-12/fuel-poverty-estimates-wales-2018.pdf>
- ²⁶ See Recommendation 18 in *Fuel Poverty in Wales*, Climate Change, Environment and Rural Affairs Committee (2020) at <https://senedd.wales/laid%20documents/cr-ld13147/cr-ld13147-e.pdf>
- ²⁷ See *Fuel Poverty in Wales*, Climate Change, Environment and Rural Affairs Committee (2020) at <https://senedd.wales/laid%20documents/cr-ld13147/cr-ld13147-e.pdf>
- ²⁸ These issues are documented in some detail in Audit Wales’ *The Welsh Government’s Warm Homes Programme* (2021) at <https://audit.wales/publication/welsh-governments-warm-homes-programme>. The report highlights that Arbed 3 continued to encounter significant problems beyond its first year of delivery in 2018-19 (where it had a significant underspend) and that Welsh Government made significant changes to the contract to try accelerate delivery, reprofiling and reducing targets both in terms of the number of homes to be supported as well as diluting the level of ambition regarding EPC ratings improvements.
- ²⁹ See *Fuel Poverty in Wales*, Climate Change, Environment and Rural Affairs Committee (2020) at <https://senedd.wales/laid%20documents/cr-ld13147/cr-ld13147-e.pdf>
- ³⁰ See *The Welsh Government’s Warm Homes Programme*, Audit Wales (2021) at <https://audit.wales/publication/welsh-governments-warm-homes-programme>. Issues appear to include steep differences in what the Welsh Government pays the two Scheme Managers to supply and fit the same energy efficiency measures in predefined property types,

contractual issues that have enabled Scheme Managers to claim full payment for lighting and water measures where sub-contractors install only one or two lightbulbs or aerators, and a lack of what should be readily available management information.

³¹ See *Fuel Poverty Monitor 2020/21*, NEA (2021) at https://www.nea.org.uk/wp-content/uploads/2021/11/0000_NEA_Fuel-Poverty-Report-and-Exec-Summary_v2.pdf