

The Welsh Government's Warm Homes Programme

Report of the Auditor General for Wales

November 2021



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Key messages

Context

- 1 This report looks at the Welsh Government's management of the current iteration of the Warm Homes Programme (the Programme). The Programme comprises the Nest and Arbed schemes that have been a key part of the Welsh Government's strategic ambitions to reduce and ultimately eradicate fuel poverty. This report follows from our 2019 report on Fuel Poverty which gave a broad overview of the Welsh Government's ambitions and progress at that point.
- 2 This report looks specifically at the Welsh Government's most recent contractual arrangements with its appointed Scheme Managers to improve the energy performance of individual homes. It also considers the Welsh Government's quality assurance arrangements. **Appendix 1** describes our audit approach and methods. **Appendix 2** provides more detail about the Nest and Arbed schemes.
- 3 The Welsh Government published its new fuel poverty plan in March 2021. The current Warm Homes Programme is coming to an end over the next two to five years. The Arbed scheme ended in early November 2021. The Welsh Government has reiterated its commitment to tackling fuel poverty and decarbonising homes in the Programme for Government 2021 to 2026. It is currently considering how the Programme will operate in future. We have focused this report on the key issues and lessons for the Welsh Government to take forward into the next iteration of the Programme.

Overall conclusion

- 4 The Welsh Government has several issues to resolve as it transitions to the next iteration of its Warm Homes Programme. The types of heating systems offered to households will need to shift to newer and greener technologies. But this is likely to come at an additional cost. The Welsh Government will also need to be clearer about the core purpose of Nest and consider the continued viability of the area-based approach used by the Arbed scheme given its under-delivery. Whatever the future of the Warm Homes Programme looks like, contracts will need to be tightened and oversight strengthened to ensure value for money.

Key findings

- 5 Given its ambitions to achieve net-zero carbon emissions, the Welsh Government will need to rethink the energy efficiency measures offered. Both schemes rely heavily on installing fossil fuel heating, particularly gas boilers. New, efficient boilers may produce less carbon than older ones but are not the most environmentally effective option. However, the main alternatives cost more. Without a substantial increase in funding, fewer properties would benefit from the Programme as the cost per home would increase.
- 6 The Welsh Government will need to be clearer about the core purpose of any successor scheme to Nest and who it intends to help. The scheme has shifted from its original purpose of tackling fuel poverty in the round. It has increasingly focussed on replacing broken or inefficient boilers for people on means tested benefits. The way the scheme has evolved means some funds are being prioritised to people who may not be fuel poor.
- 7 In any replacement, the Welsh Government will also need to review the viability of the area-based approach used by the Arbed scheme, given under-delivery. The scheme experienced significant delays and considerably fewer fuel poor households received support than the Welsh Government wanted. While COVID-19 was a factor, the scheme was some way behind targets before the pandemic hit. The scheme aimed to target clusters of very energy inefficient homes in deprived areas. However, it is not clear how many such clusters still exist.
- 8 The Welsh Government made changes to the Arbed contract to speed up delivery, but this had limited impact. The Welsh Government decommitted £7.5 million of European Structural Funds due to Arbed being unable to spend its budget. The Welsh Government was unable to shift its funding to the Nest scheme as the provider did not have capacity to increase delivery.
- 9 Future contracts need to be tightened to seek greater consistency on costs and incentivise better value for money. In letting both the Nest and Arbed contracts, only limited benchmarking was undertaken. There are significant differences in how much the two Scheme Managers charge the Welsh Government to supply and fit the same energy efficiency measures. There are also risks to value for money from the way the contracts specify what work contractors need to do to get paid. In particular, contractors can potentially claim full fixed payments for lighting or water measures when only installing a few light bulbs or aerators on taps as part of a wider package of energy efficiency measures.

- 10 Future schemes would benefit from increased scrutiny of delivery, closer monitoring of contract compliance (in particular, checking that disaster recovery plans are in place at the start of the contract rather than confirming much later on) and better management information. The Welsh Government's oversight of the Programme has been hampered by gaps in, and inaccuracy of, management information.
- 11 Under previous iterations of the programme, there had been problems with poor quality installations causing damage to people's homes. The Welsh Government learnt lessons and hired an independent company to do checks on installations as well as verifying performance data. Until recently there has been a backlog of inspections to check the quality of installations. Although the COVID-19 pandemic has contributed to the delays the backlog had built up before this. Also, some other elements of the quality assurance and audit function have not been fully delivered to date.



The Welsh Government's Warm Homes Programme is a key part of efforts to tackle fuel poverty among some of our most vulnerable citizens. The recent surge in energy prices as we approach the cold winter months only serves to emphasise the importance of such support.

Future schemes will need to be greener, clearer and more tightly managed. The big challenge facing the Welsh Government is how it balances its climate change ambitions, while also supporting the most vulnerable fuel poor households that have traditionally relied on less expensive, but higher carbon emitting, gas heating to warm their homes.

Adrian Crompton
Auditor General for Wales



Key facts

144,504

The estimated number of households in Wales at risk of being in fuel poverty¹



155,000

The estimated number of households in Wales that are fuel poor²

Nest 81% Arbed 94%

The percentage of households getting a new main heating system installed that receive a gas boiler (October 2018 to March 2021 for Arbed and April 2018 to March 2021 for Nest)

£7.5

million

EU funding decommitted from Arbed due to under-delivery



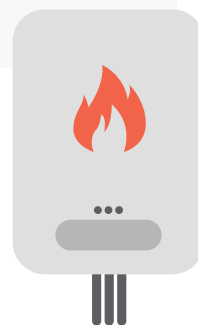
£46 million

Original budget for Arbed for the period May 2018 to May 2021

£90

million

Budget for Nest for the period April 2018 to March 2023



16,042

Number of homes that received free energy efficiency measures in the Programme between April 2018 and March 2021



3 November 2021

When Arbed scheme ended



31 March 2023

When the current Nest Scheme ends³

Notes:

1 Welsh Government, Tackling Fuel Poverty 2021 to 2035, March 2021. This is measured as any household that would have to spend between 8% and 10% of their income on maintaining a satisfactory heating regime.

2 Welsh Government, Fuel poverty estimates for Wales, 2018: revised, December 2019. This is measured as any household that would have to spend more than 10% of their income on maintaining a satisfactory heating regime. Any household having to spend more than 20% is defined as being in severe fuel poverty.

3 With option to extend up to the end of March 2026.



Recommendations

Our recommendations should be read and considered alongside the recommendations in our 2019 report on fuel poverty, especially those that related to the funding and eligibility for the Arbed and Nest schemes.

Recommendations

Strategic and policy alignment

- R1** For future schemes, the Welsh Government should review the energy efficiency measures that are available to ensure they align with its ambitions to reduce carbon emissions and ensure the cost implications of switching to greener measures are fully budgeted for.
- R2** The Welsh Government should clarify the core purpose of the Nest or any successor scheme and whether it is about replacing broken boilers for poorer households or providing wider support to those most at risk of being in fuel poverty.
- R3** The Welsh Government should review whether the area-based delivery approach used by the Arbed scheme remains viable or needs significant amending given under-delivery.
- R4** The Welsh Government should ensure under future iterations of the Warm Homes Programme that contracts are flexible enough to shift funding and capacity between schemes to maximise the overall delivery of the Programme.

Recommendations

Contracting arrangements

- R5** Before developing the next iteration of the Warm Homes Programme, the Welsh Government should carry out a full review of the lessons learnt from management of the current contracts and develop a clear plan for applying those lessons in the next iteration. Based on our review, we expect those lessons to include the need to:
- carry out appropriate benchmarking between bidders and to the current market costs of energy efficiency measures to ensure consistency in pricing and obtain value for money;
 - be clear on the expectations of Scheme Managers in relation to the industry standard specifications for the installation of energy efficiency improvement measures;
 - ensure that Scheme Managers provide their disaster recovery plans as required by the contracts;
 - more closely monitor performance with more complete and accurate management information; and
 - obtain more timely and comprehensive support from its independent external quality assurance arrangements.



Strategy and policy alignment

01

1. In future, the Warm Homes Programme will need to be greener and have a clearer purpose

- 1.1 This part of the report looks at the key choices the Welsh Government will need to make about the overall shape of the next iteration of the Programme. In particular, it looks at some of the challenges of balancing different social justice aspirations and ambitions to radically reduce carbon emissions across Wales, and the effectiveness of an area-based approach to delivery.

The Welsh Government will need to rethink the measures offered given its ambitions for reducing carbon emissions

- 1.2 The Nest and Arbed schemes are designed to lower energy bills for households most likely to be in fuel poverty by installing energy efficiency measures, including new heating systems where appropriate, in the least energy efficient homes. The Welsh Government contracts out the management of the schemes to its 'Scheme Managers'. For Arbed this is Arbed am Byth and for Nest this is British Gas¹.
- 1.3 Arbed was an area-based scheme which started in 2009. Initially, the Welsh Government intended the current iteration of scheme to run from May 2018 to May 2021, with a total budget of £46 million and an option to extend the contract for up to a further two years. It extended the scheme until November 2021 but the contract has now ended (**paragraph 1.31**). The Welsh Government decided not to extend the contract further and is working through contract closedown arrangements with the Scheme Manager. It has not decided what, if anything, will replace the scheme. Nest is a demand-led scheme which started in 2011. The current iteration of the scheme started in April 2018 and runs initially until March 2023, with a total budget of £90 million.
- 1.4 **Exhibit 1** sets out the eligibility criteria for both schemes. In our 2019 report on fuel poverty, we identified that there were lots of fuel poor households who do not qualify for Nest and may not live in an area covered by Arbed. One particular challenge is that almost half of fuel poor households live in band D rated properties, which are not normally eligible for Nest and were not the primary target of the Arbed scheme. Also, more than two-thirds of fuel poor households are not on means-tested benefits so do not qualify for Nest, with the exception of those with particular health conditions who are also on a low income.

1 For Nest, there is also an energy advice line, which manages referrals into the scheme as well as providing advice. This service is sub-contracted to the Energy Saving Trust. We have not focussed on this aspect of the Nest service as part of this audit.

Exhibit 1: Eligibility criteria for the Nest and Arbed schemes

Scheme	Eligibility criteria ¹
Nest	<p>Households must be receiving means-tested benefits and have an Energy Performance Certificate (EPC)² rating of E, F or G.</p> <p>or</p> <p>Households have a member with a chronic respiratory, circulatory or mental health condition, fall within the low-income thresholds which vary by household type, and have an EPC rating of D, E, F or G.</p>
Arbed	<p>All households in an area targeted by the Scheme Manager were potentially eligible for support. The contract did not preclude social housing from receiving support. However, neither the Welsh Government nor the Scheme Manager expected social housing to be targeted. It was a Welsh Government requirement that necessary investment by social landlords (housing associations and local authorities) was not replaced by the funding through the scheme.</p> <p>The Scheme Manager was required to target deprived areas with clusters of homes with EPC ratings of E, F or G.</p>

Notes:

- 1 For Nest, we have focussed on the eligibility for energy efficiency measures. There is also an energy efficiency advice line, funded through Nest and managed by the Energy Savings Trust, which anybody can ring to get advice.
- 2 The UK government's recommended system for measuring the energy efficiency rating of residential dwellings is called the Standard Assessment Procedure (SAP). It uses an overall score of 1-120, with 1 indicating the less energy efficient and 120 being the highest. SAP scores are then banded to give an Energy Performance Certificate (EPC) rating A-G, A being the highest and G the lowest.

Source: Welsh Government

- 1.5 Both Scheme Managers can install an identical range of measures in households as part of an energy efficiency improvement package². These could be a single measure or a combination of measures. The measures available vary widely in cost and the energy efficiency improvement they can generate.

- 2 The energy efficiency measures range from relatively low-cost measures which produce smaller energy efficiency improvements such as low energy lightbulbs up to high-cost measures such as replacement central heating systems which can generate more substantial improvements. An assessment is carried out to recommend the energy efficiency measures which are most likely to improve the overall energy efficiency of the house. For the Arbed scheme, the assessment was carried out by an independent assessor. For the Nest scheme, it is carried out by a British Gas employee.

- 1.6 The Arbed scheme has installed a wider range of measures than Nest. Between April 2018 and March 2021, Nest installed measures in 12,934 homes, of which 12,863 (99%) received a new heating system. 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. In comparison, Nest did not install any solar panels and installed loft insulation in 827 (6%) properties.
- 1.7 The Scheme Managers can install one main heating system per household as part of the energy efficiency improvement package. Under both schemes, where a main heating system is installed, it has primarily been one that runs on fossil fuel, in most cases natural gas (**Exhibit 2**).

Exhibit 2: main heating systems installed by Nest and Arbed by fuel type

Type	Nest scheme		Arbed scheme	
	Number	%	Number	%
Natural gas	10,408	80.9	1,976	94.3
Oil	1,565	12.2	75	3.5
Electric	583	4.5	35	1.6
Liquified petroleum gas	260	2.0	9	0.4
Air source heat pumps	3	0.0	0	0.0
Solid fuel	44	0.3	0	0.0
Total	12,863	100	2,095	100

Notes:

1 Figures for Arbed are from October 2018 to March 2021 as delivery only began in October 2018. Figures for Nest are from April 2018 to March 2021.

2 Figures do not add up to 100% due to rounding.

Source: Audit Wales analysis of Welsh Government data

- 1.8 The heavy reliance on fossil fuel boiler replacement is not sustainable. While replacing a gas boiler with a more efficient one delivers some carbon savings, even an efficient fossil fuel boiler generates significant amounts of carbon. The Welsh Government is aware that the contribution of the schemes to carbon reduction is limited but it is unable to fully measure the precise impacts due to problems with the quality of the data **(paragraph 2.16)**.
- 1.9 The Welsh Government has committed to net-zero carbon emissions by 2050 with an interim target to reduce carbon emissions by 63% in Wales by 2030. The UK government has set out its intentions to phase out all gas boiler installations by 2030. The Future Generations Commissioner recently recommended³ a ban on new fossil fuel heating for all homes by no later than 2030.
- 1.10 It is therefore clear that the next phase of the programme will need to be a transitional one that shifts from gas boilers to greener technologies. This is likely to mean more use of measures such as air source heat pumps which have only been installed three times (all on the Nest scheme) between April 2018 and March 2021 **(Exhibit 2)**.
- 1.11 There is a significant cost implication from shifting to these technologies. While increased demand may lead to reduced prices, air source heat pumps currently cost around three to five times⁴ more than a gas boiler. Therefore, if used more widely, fewer homes would be able to receive support unless additional funding is made available or costs reduce significantly. The Future Generations Commissioner has called for a doubling of Welsh Government expenditure on the Warm Homes Programme as part of a wider investment in retrofitting homes across Wales⁵. However, even that level of increased funding could see fewer households helped in future than is currently the case. The Commissioner suggests that further funding to tackle fuel poverty should be made available by the UK government.
- 1.12 Any future schemes which shift the focus towards the use of greener technologies may face a challenge in convincing householders to accept alternatives to traditional heating systems. Some behaviour change will also be required for the public to familiarise themselves with using new technologies.

3 Future Generations Commissioner for Wales, A Fit for the Future Programme for Government, May 2021

4 Analysis of the average price of an air source heat pump supplied by both Scheme Managers compared to the average price of a gas boiler.

5 Future Generations Commissioner, Homes Fit for the Future: The Retrofit Challenge, July 2021

The Welsh Government needs to be clearer about the core purpose of Nest or any successor scheme and who it intends to help

- 1.13 By restricting eligibility to the most energy inefficient homes, the Welsh Government aimed to ensure that the Nest scheme focused its limited resources on those most at risk of being in fuel poverty. However, the Welsh Government has decided that the Scheme Manager should interpret the energy efficiency rating of a house in a way that allows more people to qualify for support, potentially including many who were not fuel poor.
- 1.14 To assess if a household is eligible for support through Nest, the Scheme Manager carries out an assessment of the existing overall energy efficiency of a property. Where a household has a broken boiler, it is not fixed (**paragraph 2.11**). The Scheme Manager, in effect, assumes the house is being heated by electric heaters⁶. As a result, the energy performance rating of the home will drop significantly compared to the rating before the boiler broke. This means that households that were not eligible when their boiler was working, because the energy efficiency rating of their house was D or above, become eligible for a new boiler. The Welsh Government was not able to tell us how many households got a new boiler in these circumstances.
- 1.15 By providing a new boiler for poorer households that have no hot water or heating, the Welsh Government is prioritising a social justice aim. However, helping poorer households with broken boilers was never the core aim of Nest. The scheme was designed to reduce and mitigate the effects of fuel poverty.
- 1.16 There is a risk that the shift towards focussing on boiler replacements diverts efforts from actively trying to reach out to fuel poor households. Most people experiencing fuel poverty will not have a broken boiler and therefore do not have an urgent need to seek support from Nest. With sufficient demand from people with broken boilers to meet scheme targets, there is little incentive for the Welsh Government and the Scheme Manager to seek out these fuel poor households.
- 1.17 There is also a risk that people do not have equitable access to the scheme because of the way it has evolved. Some people with broken boilers who live in a more efficient home and who read the eligibility criteria may reasonably believe they are not eligible.

6 Industry software used by Scheme Managers when assessing the EPC rating of a boiler allows one of only two choices, either the boiler is working or not working. If the latter option is selected, the software assumes the home is electrically heated.

- 1.18 The approach to interpreting the energy efficiency rating has also had a significant impact on the reported outcomes of the scheme. It has meant that households who were not in fuel poverty before their boiler broke became classed as being fuel poor due to the downgraded energy performance rating. They were therefore counted as being taken out of fuel poverty by the scheme. It also meant that the baseline rating for the energy efficiency of the home was artificially deflated, meaning the reported 'before and after' energy efficiency gains and carbon reduction from the intervention were significantly overstated. This situation helps explain why, in our 2019 report on fuel poverty we found that Nest was reporting far higher energy efficiency improvements than other similar programmes.
- 1.19 At the Welsh Government's request, in April 2021 the Scheme Manager changed the methodology for reporting the impact of installations so that the reported benefits will be more accurate and in line with how the Arbed Scheme Manager is reporting its uplift. This will mean that if a household's boiler is not working, the Scheme Manager will assess the starting EPC of a household based on what it was before the boiler broke down. While this change has been made in relation to reporting energy efficiency uplifts, eligibility for the scheme will still be based on the downgraded EPC rating.
- 1.20 In replacing the Nest scheme in future, we think that the Welsh Government needs to be clearer as to the core purpose of the scheme. In particular, it needs to be clear as to what problem it is seeking to solve: whether it is a scheme to tackle fuel poverty or a scheme to replace broken boilers for people on low incomes. It may be that the Welsh Government will need two distinct approaches, with distinct criteria, marketing and performance measures if it wants to address both of these problems.

The Welsh Government needs to consider the future viability of Arbed's area-based approach given under-delivery

The restrictions of the area-based approach mean Arbed struggled to identify the households it was supposed to benefit

- 1.21 In our previous work on fuel poverty, we highlighted that the current Arbed scheme had encountered a significant underspend in the first year of the contract. We recommended that the Welsh Government should fully explore the reasons behind the underspend to establish if there were fundamental issues with the area-based approach. Under-delivery continued in years two and three of the contract resulting in fewer homes being supported than intended (**paragraph 1.27**).

- 1.22 The Welsh Government has not formally reviewed whether the area-based approach has caused fundamental problems with delivery of Arbed, but has commissioned an overall evaluation of the scheme due in early 2022. There were some other factors that contributed to delays, including Storm Dennis in February 2020 and the COVID-19 pandemic during which the Scheme Manager paused all work for around four months. Nonetheless, the Welsh Government acknowledges that the area-based approach to tackling fuel poverty could have been a significant contributory factor.
- 1.23 The area-based approach requires the Scheme Manager to work with local authorities to identify geographical clusters of properties most likely to be in fuel poverty. They consider a range of datasets including levels of deprivation and the overall energy performance rating of properties.
- 1.24 At the start of the contract in May 2018, the Welsh Government wanted the Scheme Manager to target properties with the poorest energy efficiency (EPC ratings of E, F and G) and also achieve an energy efficiency uplift to an EPC C or above. The Welsh Government required the Scheme Manager to achieve an uplift to EPC C from EPC E, F or G in 80% of all homes supported. However, in practice the Scheme struggled to find clusters of properties that met the criteria for being in a deprived area, have an EPC rating of E, F or G and are capable of being improved to a rating of C within the spending cap. Between May 2018 and September 2019 only 9% of the homes receiving energy efficiency measures were improved to an EPC rating of C or above from an E, F or G rated starting point. However, the situation improved after this (**paragraph 1.29**).
- 1.25 Part of the problem was a lack of up-to-date data on the energy efficiency of homes in Wales. The Scheme Manager initially identified potential clusters of properties with EPC ratings of E, F or G by using UK government data, which shows the EPC rating of houses primarily from when they were last sold. However, before carrying out any work at a property, the Scheme Manager was required to carry out their own home energy assessment to obtain the current EPC rating. At this point, many homes initially identified were found to have higher energy efficiency ratings due to improvements that had already been made. More broadly, because of the lack of an up-to-date EPC on many properties it was also unclear how many clusters of properties with EPC ratings of E, F or G still exist across Wales.

The Welsh Government tried to improve delivery by amending the Arbed contract but the scheme still under-delivered and benefited from less EU funding than planned

- 1.26 We recommended in our previous report on fuel poverty that if there were fundamental issues with the area-based approach, the Welsh Government should look at options for changing the funding balance between Nest and Arbed. However, the Welsh Government has not shifted funding to Nest because Nest was unable to increase the number of properties it supported within existing capacity.
- 1.27 To try and improve delivery for Arbed, the Welsh Government reprofiled the delivery targets. The scheme got off to a slow start and the Welsh Government reprofiled the target for year one, with the shortfall to be made up in years two and three. However, following further reprofiling of the targets it became increasingly clear to the Welsh Government that Arbed would be unable to make up the lost ground. In December 2019, the Welsh Government agreed a change to the contract with the Scheme Manager. This reduced the expectations placed on the Scheme Manager in two ways:
- the number of properties to be targeted over the life of the contract was reduced by 825 from 6,325 to 5,500, with a corresponding reduction to the management fees payable to the Scheme Manager; and
 - the target in relation to EPC ratings was replaced with a sliding scale of ambitions (**Exhibit 3**).
- 1.28 While the Scheme Manager still had to try and target E, F, G properties and improve them to a C, they were no longer held to account against the 80% target (**paragraph 1.24**), which the Welsh Government now considers to have been over-optimistic. However, the Scheme Manager still had to try and provide support to at least 51% of properties that have an EPC rating of E, F or G. There was a significant difference in the level of expected improvement to a home's energy efficiency between the top and bottom of the sliding scale. The further down the scale the improvement is, the lower the value for money and the smaller the benefit for the homeowner.

Exhibit 3: revised ambitions for Arbed delivery, from December 2019

The Scheme Manager will focus scheme delivery primarily, to the worst performing properties (G/F/E) within the chosen area by the following steps in order of prioritisation:

- a Target eligible EPC G/F/E rated properties where they may be improved to an EPC C-rating, with cost-effective and appropriate measures.
- b Target eligible EPC G/F/E rated properties where they may be improved by at least one EPC band (up to a C rating), with cost-effective and appropriate measures.
- c Target eligible EPC G/F/E rated properties where partnership funding is available and the property may be improved by at least ten SAP points, with cost-effective and appropriate measures.
- d Target eligible EPC D rated properties where they may be improved by one EPC band with cost-effective and appropriate measures.
- e Target eligible EPC D rated properties where they may be improved by at least ten SAP points, with cost-effective and appropriate measures and constitute a minority of properties treated within the relevant Arbed scheme¹.
- f Consider properties which do not fall into any of the above categories to be eligible for the Arbed scheme only where the Scheme Manager receives the Client's instruction prior to treatment.

Note:

1 In this context, reference to the Arbed scheme relates to a geographical area being targeted and not the scheme as a whole.

Source: Welsh Government Contract Change Notice

1.29 Between October 2019 and March 2021, the proportion of properties that received energy efficiency measures and improved from an EPC starting rating of E, F or G to a C or above increased from 9% to 21% compared with the period April 2018 to September 2019. However, the overall proportion of homes achieving the uplift from EPC E, F or G was still significantly below the initial 80% target.

1.30 Meanwhile, the change to the contract had limited impact on Arbed's overall delivery. When the contract was changed in December 2019 the Welsh Government did not set a revised target for 2019-20. However, it did set a revised target of 1,700 for 2020-21 (Exhibit 4). This meant that in order to meet the overall revised target of 5,500 households, Arbed would have had to install measures in 3,655 homes during 2019-20. As at December 2019, Arbed had supported fewer than 2,000 households. We remain unclear why the Welsh Government thought that Arbed would deliver so much activity in the final months of the financial year. By the end of March 2021, the Scheme Manager was still 43% (2,378 properties) short of the revised contractual target of 5,500 properties.

Exhibit 4: homes provided with energy efficiency measures through the Arbed scheme, May 2018 to March 2021

Year	Initial target	Revised annual target after contract change notice in December 2019	Actual delivery	% under target (initial or revised where applicable)
2018-2019 ¹	1,397	N/A	145	90%
2019-2020	2,679	N/A ²	1,945	27%
2020-2021	2,249	1,700	1,032	39%
Overall Target	6,325	5,500	3,112	43%

Notes:

1 2018-19 only includes 11 months as the contract started in May 2018, although Arbed did not begin delivery until October 2018.

2 No formal target was set for the 2019-20 year but the default would have been 3,655 based on the overall revised delivery target of 5,500 minus the 2020-21 target of 1,700 and the 145 delivered in 2018-19.

Source: Welsh Government

- 1.31 In November 2020, the Welsh Government extended the Arbed contract by six months, to November 2021 from its initial end date of May 2021. The contract has now ended. The Welsh Government intended that the extension, combined with the earlier changes to the contract, would allow the Scheme Manager to get as close to the revised overall delivery target as possible. The Scheme Manager aimed to provide support to as many properties as it could during the extended contract period, while continuing to manage the impact of the COVID-19 pandemic.
- 1.32 As of 31 August 2021, approximately 3,704 properties had been supported. With only two months left of the contract, this suggested⁷ that the Scheme Manager would still not meet the revised delivery target by some distance at the end of the extended contract period. Figures for beyond 31 August were not available at the time of drafting this report.
- 1.33 The Arbed scheme has been supported in part by an allocation of EU funding; £22.8 million capital and £0.4 million revenue⁸. As of April 2021, the Welsh Government had only drawn down £6.6 million of capital EU funding. In April 2021, the Welsh Government decided to de-commit £7.5 million of the EU funding as a result of the reduced activity.
- 1.34 The final outturn position on the Arbed scheme costs and the balance of domestic and EU funding is still to be confirmed. The Welsh Government expects to spend around £19.5 million of its original £23 million domestic budget and to draw down just over £15 million of EU funding. The Welsh Government is confident it can claim the remaining £8.7 million of EU funding retrospectively in part for completed Arbed projects that were initially funded wholly by the Welsh Government.

⁷ This figure was provisional at the time of drafting. The Welsh Government estimated up to a further 350 properties had received support but the Scheme Manager had not invoiced the Welsh Government.

⁸ The majority of the £0.4 million revenue grant is used to cover some of the Welsh Government management of the Arbed scheme. The Welsh Government had drawn down approximately £0.2 million to April 2021.



Contracting arrangements

02

2. Contracts with providers and oversight by officials need strengthening to ensure value for money

2.1 This part of the report looks at the Welsh Government's overall management of the contracting arrangements for the Nest and Arbed schemes in their current forms. In particular, it looks at how future contracts could be clearer and how oversight of the contracts and quality assurance arrangements can be strengthened.

Future contracts need to be tightened to align costs and set out expectations of contractors to incentivise better value for money

Benchmarking of energy efficiency measure costs

2.2 The energy efficiency measures both schemes can install are identical and must be fitted to the same safety standards. However, the actual products supplied and fitted may differ. While we would not necessarily expect the prices to be the same, there are some significant differences in what the Welsh Government pays the two Scheme Managers to supply and fit the same energy efficiency measures in predefined property types. At the extreme, there is a price difference of over £6,000 for the same measure. The Welsh Government has not carried out any work to explore the reasons for these variations to satisfy itself that it is getting value for money. **Exhibit 5** provides an overview of how the prices varied between Scheme Managers.

Exhibit 5: variation in Scheme Managers' prices for supply of energy efficiency measures

Price variation	Count	Scale of price variation
Measures where the Arbed Scheme Manager's pricing was more expensive for each property type	31	£1 to £4,542
Measures where the Nest Scheme Manager's pricing was more expensive for each property type	14	£10 to £5,753
Measures where the highest cost Scheme Manager pricing for each property type was varied	8	£1 to £6,300

Note: the seven pre-defined property types are 1930s valleys house, 1970s high rise flat, 1950s onward low-medium high rise flat, pre-1930 semi-detached double fronted house, traditional cavity wall property post-1945, rural detached cottage and park home.

Source: Audit Wales analysis of Welsh Government data

- 2.3 When tendering for Scheme Managers, the Welsh Government invited interested bidders to provide prices for the supply and fitting of an identical and wide range of energy efficiency measures in each predefined property type. The Welsh Government compared costs between tender bids for each of the schemes. However, the comparison was limited due to the small number of bids received⁹. The Welsh Government did not compare the prices offered in the tender bids to market costs to obtain a broader understanding of their reasonableness.
- 2.4 As the Welsh Government awarded the Arbed contract later than the Nest contract, there was also an opportunity to compare costs between the bids submitted for the Arbed contract and the contract that had been already let for Nest. However, the Welsh Government did not do so.
- 2.5 The contract includes a profit-sharing arrangement. The Scheme Managers will share 50:50 any annual profits from either scheme over 6%. The Welsh Government received £848,000 in profit share from the Nest Scheme Manager for the 2019-20 financial year and a similar amount is anticipated to be paid to the Welsh Government for 2020-21. The Welsh Government received £393,000 in profit share from the Arbed Scheme Manager for 2019-20, with no profit share anticipated for 2020-21.

Use of lighting and water measures

- 2.6 Scheme Managers can install lighting measures and water measures, for which they get a fixed fee under the contract. The measures have been installed under both schemes but more under the Arbed scheme. The measures on their own provide relatively small improvements in the overall energy efficiency of a household but form part of a wider energy efficiency improvement package. When installing lighting measures, the Scheme Managers must undertake detailed safety checks¹⁰.

⁹ Two bidders submitted tenders for each scheme.

¹⁰ A competent person, as defined by industry standards, must first carry out a series of safety checks on the existing electrical circuits and potentially carry out upgrading works in accordance with the relevant industry standard.

- 2.7 We considered concerns that had been raised with the Auditor General stating that the Arbed Scheme Manager was able to claim full payment from the Welsh Government for lighting and water measures where sub-contractors install lightbulbs or aerators on taps, which is only a few minutes work¹¹. The Welsh Government initially told us that the contract prevented the Scheme Manager from claiming the full contract price for installing lighting and water measures unless they upgraded at least 80% of all lights and 100% of all water outlets. However, the way the contract is written does in fact allow Scheme Managers to claim full payment for installing one or two lightbulbs or aerators if doing so takes the house to the 80% or 100% target¹².
- 2.8 The Welsh Government provided a breakdown of the number of lightbulbs fitted in homes through the Arbed scheme as part of a wider package of energy efficiency measures (**Exhibit 6**). It shows there had been 49 instances where just one lightbulb was fitted and 73 where two were fitted. Just over half of the households benefitting from this measure received seven or more low energy lightbulbs. The Welsh Government told us that the Scheme Manager had given assurance that contractors had undertaken the full range of safety checks. However, the Welsh Government, has not sought any documentary evidence to this effect from the Scheme Manager.

11 Aerators reduce the amount of water used, which reduces energy consumption. For properties on water meters this may result in reduced bills.

12 The contract requires that lighting measures are installed to an industry standard. The Welsh Government contacted its technical experts, the Building Research Establishment (BRE) to clarify interpretation of the standard. Any light fittings not already fitted with low energy lighting must be upgraded to meet the 80% rule.

Exhibit 6: households receiving lighting measures through Arbed as part of a wider package of energy efficiency measures, October 2018 to March 2021

Number of light bulbs fitted	Number of households	% of households
1	49	3.6%
2	73	5.3%
3	119	8.7%
4	136	9.9%
5	113	8.2%
6	132	9.6%
7+	751	54.7%
Total	1,373	100%

Note: there were 1,729 instances where lighting measures were used under the Arbed scheme. However, in 356 of those instances, the Scheme Manager reported to the Welsh Government that the data was not kept on the number of individual lightbulbs installed.

Source: Welsh Government

2.9 Water measures had been installed a total of 1,597 times to March 2020 under the Arbed scheme. The type of water measures varies depending on whether the home has a combi-boiler. If it does, then a single device is fitted to the boiler, with no aerators fitted to the taps. The majority of water measures were installed in households with a combi-boiler¹³. For properties that did not have a combi-boiler installed, Scheme Managers could fit aerators to taps. However, we were unable to establish whether there were instances where only one or two aerators were fitted to take the house to the 100% upgrade target.

¹³ In 2018-19, combi-save devices were fitted 99 times and aerators 29 times and in 2019-20, combi-save devices were fitted 1,288 times and aerators 181 times.

Boiler repairs

- 2.10 Scheme Managers can repair A or B rated boilers up to a cost of £250. However, neither Scheme Manager has repaired any boilers to date. The Welsh Government was unable to provide us with information on how many boilers could have been fixed but were instead replaced and the additional costs being incurred. Nor could it provide us with detailed information on the age of boilers being replaced by Scheme Managers. The Welsh Government told us that Scheme Managers had provided assurance that they had not replaced any boilers less than three years old.
- 2.11 The Welsh Government told us that Scheme Managers do not repair boilers under the schemes¹⁴ because a household can only receive support under either scheme once. While initial repairs would be covered by a warranty if a boiler were to breakdown for a different reason, the householder may be left without heating and hot water, and unable to get further support.
- 2.12 Replacing boilers potentially offers poorer value for money than repairing them. This is a particular issue where the goal is to avoid leaving households without heat and hot water even though they may not be fuel poor (**paragraph 1.15**). Where replacing boilers costs more than repairing them, there is inevitably less overall funding available to support other householders. However, the merits of repairing fossil fuel boilers will also increasingly need to be balanced against the potential carbon reduction benefits of replacing them with a greener, alternative technology.
- 2.13 The Welsh Government told us that it has considered encouraging Scheme Managers to repair more boilers. However, it has decided that the longer-term benefits for a household of having a new system that is less likely to break outweigh the potential cost savings. Officials also noted that, during the winter, people on low incomes have been able to apply to the Discretionary Assistance Fund for a grant of up to £120 to repair a broken boiler.

¹⁴ The Arbed Scheme Manager told us that it had repaired some boilers but had not charged the Welsh Government for these repairs.

Future contracts would benefit from increased scrutiny of delivery and better management information



Performance monitoring




- 2.14 The Arbed and Nest contracts have various Key Performance Indicators (**Appendix 2**). Several of the indicators measure whether beneficiaries are receiving a quality service and are used to calculate performance related payments to the Scheme Managers¹⁵. Other indicators monitor whether the schemes are achieving their overall objectives in reducing fuel poverty and delivering environmental and community benefits.
- 2.15 Several issues relating to KPI data have hindered the Welsh Government's oversight (**Exhibit 7**). The Welsh Government has not always been alert to these issues or acted quickly to resolve them. The Welsh Government has independent quality assurance arrangements in place to verify the accuracy of Scheme Managers' Service Level Agreement (SLA)¹⁶ and KPI reporting. However, work in this area has not been completed in line with the contract (**paragraph 2.26**).

15 There is also a provision in the contracts for the Welsh Government to apply Service Penalty Payments to Scheme Managers should invoices, data or reports be submitted late or service levels not be achieved. No penalty payments have been applied to date.

16 In addition to Key Performance Indicators the contract has a number of Service Level Agreements that must be adhered to in relation to timescales.

Exhibit 7: overview of issues with Key Performance Indicators for Arbed and Nest

Key Performance indicator area	Issue identified
<p>Quality of installations</p> 	<p>For both schemes, the Scheme Managers are required to record the proportion of installations carried out without the need for any remedial action to meet industry standards. The Welsh Government's independent quality assurer (paragraph 2.19) reviews a sample of installations to verify that no remedial work was needed. Scheme Managers get performance related payments based on this information.</p> <p>The Welsh Government initially made the performance related payments to Nest based on the information provided by the Scheme Manager. However, the Welsh Government considered that the system being used by Nest to determine whether the installation had required remedial works was not robust. The Welsh Government and the Scheme Manager agreed to use the data recorded by the independent quality assurer instead but allowed the Nest Scheme Manager to challenge this where there were differences. The revised process came into force from October 2020. The Nest Scheme Manager had not retained historic records so the change of process could not be applied retrospectively to check whether the performance related payments to Nest were correct.</p>
<p>Household financial savings</p> 	<p>Household financial savings obtained through the Nest scheme were inaccurately reported by the Scheme Manager during 2018-19 in its annual report as it was using an out-of-date methodology.</p>

Key Performance indicator area	Issue identified
Householder complaints 	<p>For both schemes, the Scheme Managers record information about complaints they have received from householders who have received support.</p> <p>The Welsh Government has been contacted by some householders who were not satisfied with the way that the Nest Scheme Manager was dealing with their complaints relating to installations. The Welsh Government has developed an additional KPI to monitor complaints made to the Welsh Government about the Nest Scheme Manager's response to householders' concerns.</p>
Overall energy efficiency improvements 	<p>Until April 2021, the methodology used by the Nest Scheme Manager to measure the overall energy efficiency improvements being achieved was different to the one used by the Arbed Scheme Manager. The methodology used by Nest was the same as that used to calculate eligibility (paragraph 1.18) which over-estimates the overall energy inefficiency of a household.</p>
Environmental benefits 	<p>Carbon reductions obtained through the Nest scheme were inaccurately reported by the Scheme Manager during 2018-19 in its annual report as it was using an out-of-date methodology (paragraph 1.18).</p> <p>The figures supplied by the Arbed Scheme Manager on the average estimated reduction in modelled units of energy required to run the home were projected three yearly figures rather than actual annual figures as required.</p> <p>Based on the figures reported for the first two years of the current Arbed contract and part of the third year, the scheme was not on course to deliver the targeted reduction in carbon.</p> <p>The Welsh Government confirmed this initial target was too ambitious and cannot realistically be achieved, but it does not intend to change the KPI so the Scheme Manager will not achieve it by the end of the contract.</p>

- 2.16 Key to oversight of any contract is accessible and good quality management information to inform decision-making and assess performance. In our view there is scope to improve the management information that the Welsh Government gets from Scheme Managers. On several occasions during our fieldwork, information we expected would be readily accessible as part of the Welsh Government's monitoring was either not available, difficult to obtain or not complete. For example:
- we were unable to obtain a high-level count of the number of times each energy efficiency measure had been installed in a simple format. Both Scheme Managers had different recording systems which required us to carry out significant data manipulation.
 - no information was available on the number of broken boilers that could have been repaired (**paragraph 2.10**).
 - the Welsh Government was unable to easily provide us with a full history of the reprofiling of the delivery and spending targets for Arbed (**paragraph 1.27**).

Compliance with contractual requirements

- 2.17 The contracts with Scheme Managers contain provisions designed to ensure a robust and quality service and overall value for money. In some instances, the Welsh Government has not done enough to ensure that the Scheme Managers had complied with contract requirements. In particular, neither Scheme Manager had submitted a disaster recovery plan within 15 days of their contract becoming effective as required and the Welsh Government did not initially request them¹⁷. The Nest Scheme Manager only provided their disaster recovery plan in May 2020 and the Arbed Scheme Manager submitted its plan in August 2021 at the request of the Welsh Government.
- 2.18 The contracts also require Scheme Managers to ensure sub-contractors do not offer additional private work to householders and prohibit the Scheme Managers and sub-contractors from offering additional warranty products. Both the Nest and Arbed Scheme Managers have arrangements in place to make sub-contractors aware of these rules. However, prompted by our work, the Welsh Government required the Arbed Scheme Manager to have signed agreements in place with sub-contractors. The Welsh Government intended for these agreements to reiterate that sub-contractors be made aware they must not offer additional measures or warranties. We have not reviewed this process as part of our work.

¹⁷ The Arbed contract was effective from 1 May 2018 and the Nest contract was effective from 1 April 2018.

Any new arrangements will need more timely and comprehensive support from independent external quality assurance and audit arrangements

2.19 In earlier iterations of the Warm Homes Programme, where there was no quality assurance regime in place, poor quality installations by some sub-contractors caused long-term damage to some homes¹⁸. To guard against similar problems in the current iteration of the Programme, the Welsh Government awarded a three-year Quality Assurance and Audit contract in July 2018 to an independent quality assurer¹⁹.

2.20 Broadly, there are three aspects of the quality assurance and audit work:

- installation audit work: checking a sample of installations to verify that measures have been installed in line with industry standards. This work includes checking that the most appropriate energy efficiency measures are recommended prior to installations. It also includes checks during the installation process and after installation.
- review of Nest advice and support telephone service: checking that customer eligibility is accurately recorded and advice is high quality.
- validation of performance information: providing assurance over aspects of performance, such as accuracy of KPI data produced by the Scheme Managers.

2.21 The contract also allows the Welsh Government to request that the quality assurers undertake ad-hoc audits for an additional fee, to quality assure any other element of the Nest and Arbed schemes. To date, the Welsh Government has not requested any additional audit work under this provision.

Installation audit work

2.22 Until March 2021, the installation audit work was behind schedule. As at January 2020, there were 536 overdue inspections for the Nest and Arbed schemes combined. The Welsh Government and the quality assurers identified several factors contributing to the delay including staff capacity with the quality assurers and difficulties getting timely and complete information from Scheme Managers for some installations. In January 2020, at the Welsh Government's request, the quality assurers prepared a service improvement plan to address the backlog. The plan set out arrangements to ensure the backlog would be addressed by September 2020.

¹⁸ These problems related mainly to external wall insulation. At the time of our fieldwork, this type of measure had not been used in the current iteration of the Programme but we understood it would be used for at least one property in summer 2021.

¹⁹ Pennington Choices Limited.

- 2.23 Due to the pandemic, there were periods when the quality assurers were unable to visit homes to inspect installation of measures as planned²⁰. However, quality assessors introduced 'desktop' audits in July 2020 based on photographic evidence of installations rather than on-site visits. This approach allowed the Welsh Government to obtain some assurances over installation work. As a result, the installation audit work backlog was cleared by March 2021.
- 2.24 While the desktop approach has been beneficial in recovering the backlog and the reason for adopting them during the pandemic is clear, desktop audits are not as robust as physical on-site inspections. The quality assurers are gradually moving back into doing on-site work but are still also using desktop audits. The ratio of desktop to on-site audits varies by month to month.

Validation of performance information

- 2.25 The quality assurers are also required to audit the accuracy of the Scheme Managers' reporting against Key Performance Indicators and Service Level Agreements annually. If the quality assurers were to identify that the Scheme Managers' data is incorrect for any of the KPIs which are performance pay related, the Welsh Government can recover payments (**paragraph 2.15**).
- 2.26 The quality assurers have not completed audits of the accuracy of SLA and KPI data annually. As a result, the Welsh Government has not known whether it needed to recover any payments. The quality assurer completed its first KPI and SLA audit of Nest in July 2021. It made a number of recommendations, none of which required the Welsh Government to recover funding. The Welsh Government expected the quality assurer would also complete its first KPI and SLA audit for Arbed in July 2021. The Welsh Government received a draft audit report in September 2021.

Future arrangements

- 2.27 In January 2021, the Welsh Government extended the contract with the quality assurers for a further 12 months until July 2022. Over this period, and in any equivalent future arrangements, the Welsh Government will need to ensure it gets more timely support from its quality assurance arrangements. This will allow the Welsh Government to quickly rectify any problems with the quality of installations and with the quality of reporting on which contractual payments depend.

²⁰ For the Nest scheme this was December 2020 and February and March 2021. For the Arbed scheme this was July, August and October 2020.



Appendices

1. Audit approach and methods

2. About the Warm Homes Programme

1. Audit approach and methods

Audit approach

We focused on the Welsh Government's management of contracts for making energy efficiency improvements to homes through the current iteration of its Warm Homes Programme (the Programme). This report does not consider the overall value for money of the Warm Homes Programme.

The work followed on from our 2019 report on Fuel Poverty²¹, which was a high-level overview of the Welsh Government's ambitions for fuel poverty and progress at that point. We made several recommendations on key issues for the Welsh Government to consider as it consulted on and finalised its new Fuel Poverty Plan²².

To inform our work we also considered the following:





- Correspondence received by the Auditor General which raised concerns regarding the value for money and contract management of the Arbed scheme.
- An April 2020 report by the National Assembly for Wales Climate Change, Environment and Rural Affairs Committee into Fuel Poverty in Wales.
- The scope of a Welsh Government commissioned independent review of the Arbed scheme (due for publication later in early 2022).
- The impact that the COVID-19 pandemic has had on the Programme.

We did not set out to review the Welsh Government's overall response to our previous recommendations. However, where those recommendations directly related to contract management of the Programme, we have commented on them in this report.

21 Auditor General for Wales, Fuel Poverty, October 2019

22 Welsh Government, Tackling fuel poverty 2021-2035, March 2021

Audit methods



<p>Document review</p> 	<p>We reviewed a large amount of documentation, including, for example, minutes from meetings, tender specifications, contractual documents and Ministerial briefings.</p>
<p>Semi-structured Interviews</p> 	<p>We interviewed Welsh Government officials involved in the management of the Programme. We also interviewed representatives from Pennington Choices Limited, the Welsh Government's independent quality assurer for the Programme. We engaged with the Nest and Arbed Scheme Managers as part of our clearance process in advance of publication.</p>
<p>Data analysis</p> 	<p>We reviewed available expenditure and installation data for the Nest and Arbed schemes. We also analysed the pricing data provided by the Scheme Managers for installing energy efficiency measures under the contracts.</p>
<p>Feedback sessions</p> 	<p>We met Welsh Government officials to ask follow-up questions regarding the data and documentation we had received. We also used these feedback sessions to test our emerging findings.</p>



2. About the Warm Homes Programme


The Welsh Government's Warm Homes Programme comprises two separate schemes designed to tackle fuel poverty by improving home energy efficiency (**Exhibit 8**). Both schemes provide a range of free home energy efficiency improvements and free and impartial advice and support to help householders reduce their energy bills.

The Arbed schemes and Nest schemes started in 2009 and 2011 respectively. The current iteration of the Nest scheme started in April 2018 and is due to end in March 2023 with the option for the Welsh Government to extend for up to a further three years. The current iteration of the Arbed scheme ran from May 2018 to May 2021 with an option for the Welsh Government to extend up to May 2023. However, the contract ended on 3 November 2021.

Exhibit 8: description of the Nest and the Arbed schemes

Nest		Arbed
<p>Purely funded by the Welsh Government</p>	<p>How is it funded?</p> 	<p>Funded by the Welsh Government and the European Regional Development Fund.</p>
<p>Managed by British Gas</p> <p>Advice and support telephone line</p> <p>Free advice and support to help people improve the energy efficiency of their homes. Delivered by the Energy Saving Trust as a sub-contractor to British Gas¹.</p> <p>Home Energy Efficiency Improvement Service (HEEIS)</p> <p>A demand led package of free energy efficiency measures for eligible households to help reduce their home energy bills.</p> <p>All installation works are delivered by sub-contractors appointed by the Scheme Manager.</p> <p>Measures may include a new boiler, central heating system, loft insulation, cavity wall insulation, external wall insulation or newer technologies such as air source heat pumps.</p>	<p>What does it do?</p> 	<p>Managed by Arbed am Byth.</p> <p>Provided a package of free energy efficiency measures to eligible households to help reduce their home energy bills which also included free, impartial advice and support to help customers reduce their energy bills.</p> <p>Measures may include a new boiler, central heating system, loft insulation, cavity wall insulation, external wall insulation or newer technologies such as air source heat pumps.</p> <p>All installation works were delivered by sub-contractors appointed by the Scheme Manager.</p>

Nest		Arbed
<p>The advice and support line is available to all households in Wales.</p> <p>In order to receive free energy efficiency measures via HEEIS, households must be privately rented or owned and amongst the most energy inefficient.</p> <p>Households must also be receiving means tested benefits and have an EPC³ rating of E, F or G.</p> <p>or</p> <p>Households must have a member with a health condition, low income and have an EPC rating of D, E, F or G.</p>	<p>Who is eligible?</p> 	<p>Eligible households were required to be within targeted geographical areas identified as being most likely to include people living in fuel poverty and can include social housing². The Scheme Manager considered a range of factors to identify areas to target including levels of deprivation and analysis of property energy efficiency rating data published by the UK government.</p> <p>Households must have had an EPC rating of E, F or G. Households with an EPC rating of D or above were also eligible but must be kept to a minimum.</p>
<p>The Welsh Government carries out a check to confirm that the householder is claiming qualifying benefits. After an initial telephone assessment an energy assessor who works for British Gas carries out an Energy Performance Report. This is for reference purposes only and is not lodged with the UK government.</p>	<p>How is eligibility assessed?</p> 	<p>After geographical areas were identified and interested households confirmed they wished to receive support, an independent qualified energy assessor carried out an energy assessment and created an Energy Performance Certificate (EPC). This was then formally lodged with UK government.</p>

Nest		Arbed
Up to £5,000 or £8,000 per household for households connected to the gas network or £8,000 or £12,000 for households not connected to the gas network ⁴ .	How much is spent per household? 	Up to £5,000 or £8,000 per household for households connected to the gas network or £8,000 or £12,000 for households not connected to the gas network ⁴ .

Notes:

1 We have not considered this aspect of the Nest service as part of this audit.

2 Although the scheme could include support for social housing, neither the Welsh Government nor the Scheme Manager expected social housing to be targeted and it was a Welsh Government requirement that necessary investment by social landlords (housing associations and local authorities) was not replaced by funding through the scheme.




3 The UK government's recommended system for measuring the energy efficiency rating of residential dwellings is called the Standard Assessment Procedure (SAP). It uses an overall score of 1-120, with 1 indicating the less energy efficient and 120 being the highest. SAP scores are then banded to give an Energy Performance Certificate (EPC) rating A-G, A being the highest and G the lowest.




4 For properties that were EPC E, the maximum expenditure was £5,000 for properties on the mains gas grid and £8,000 for those off the mains gas network. For properties that were EPC F or G the maximum expenditure was £8,000 for properties on the mains gas network and £12,000 for those off the mains gas network.



Source: Audit Wales analysis

The Welsh Government set several Key Performance Indicators for the Scheme Managers (**Exhibit 9**). **Paragraph 2.28** in the main report highlights how several issues relating to Key Performance Indicator data have hindered the Welsh Government's oversight of performance. Due to these issues, we have not reported on performance against the KPIs beyond the number of supported households.

Exhibit 9: original Key Performance Indicators for the Nest and the Arbed schemes

Indicator	Nest		Arbed	
	Description	Annual Target	Description	Annual Target
Customer satisfaction 	Call handling, advice and referral service ¹	95% or more	Householder in-home advice service ¹	95% or more
	Home Energy Efficiency Improvement Service ¹		Completion of installations ¹	
Customer complaints 	Call handling, advice and referral service ¹	3% or less	In-home energy advice assistance ¹	3% or less
	Home Energy Efficiency Improvement Service ¹		Work in installing the allocated measures in a householder's dwelling ¹	
Timescales 	Number of days between initial customer contact and completion of installation works ¹	45 Working Days or less	No indicator	

Quality 	Number of installations achieving service provider's first-time pass on inspection ¹	98% or more	Number of installations achieving service provider's first-time pass on inspection ¹	98% or more
	Number of installations achieving the quality standard following independent monitoring	100%	Number of installations achieving the quality standard following independent monitoring	100%
Number of households supported 	Number of unique households receiving advice and support	15,000	Number of unique households receiving advice and support	6,325 by the end of the contract ²
	Number of households receiving a free package of energy efficiency measures	4,100	Number of households receiving a free package of energy efficiency measures	6,325 by the end of the contract ²
Performance in relation to reducing fuel poverty 	Reduction in modelled energy costs because of measures installed and in-home advice provided	Average £425 per dwelling	Reduction in modelled energy costs as a result of measures installed and in-home advice provided	Average £425 per dwelling
	Increase in EPC rating from G/F/E to D or above	80% increase to EPC D or above	Increase in EPC rating from G/F/E to C or above	80% increase to EPC C or above ³

Environmental benefits 	Average reduction in modelled units of energy required to run the home	15,000 mega joules or more	Average reduction in modelled units of energy required to run the home	15,000 mega joules or more
	Total estimated reduction in carbon impact	14,760 tonnes of CO ₂ or more	Total estimated reduction in carbon impact	22,700 tonnes CO ₂ or more by the end of the contract
Economic / community benefits 	Number of new jobs, apprenticeships, training and work experience opportunities created	40 for the lifetime of the scheme	No indicator	
	Proportion of installations to be completed annually by Small and Medium-Sized Enterprises (SMEs)	100%	Proportion of installation to be completed annually by SMEs	100%, of which 90% must be Welsh SMEs

Notes:

1 Denotes KPI involves a performance payment.

2 Changed to 5,500 after a contract change in December 2019 (**paragraph 1.27**)

3 Target removed after a contract change in December 2019 (**paragraph 1.27**)

Source: Welsh Government



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