

Dadansoddi ar gyfer Polisi



Analysis for Policy

Ymchwil gymdeithasol
Social research

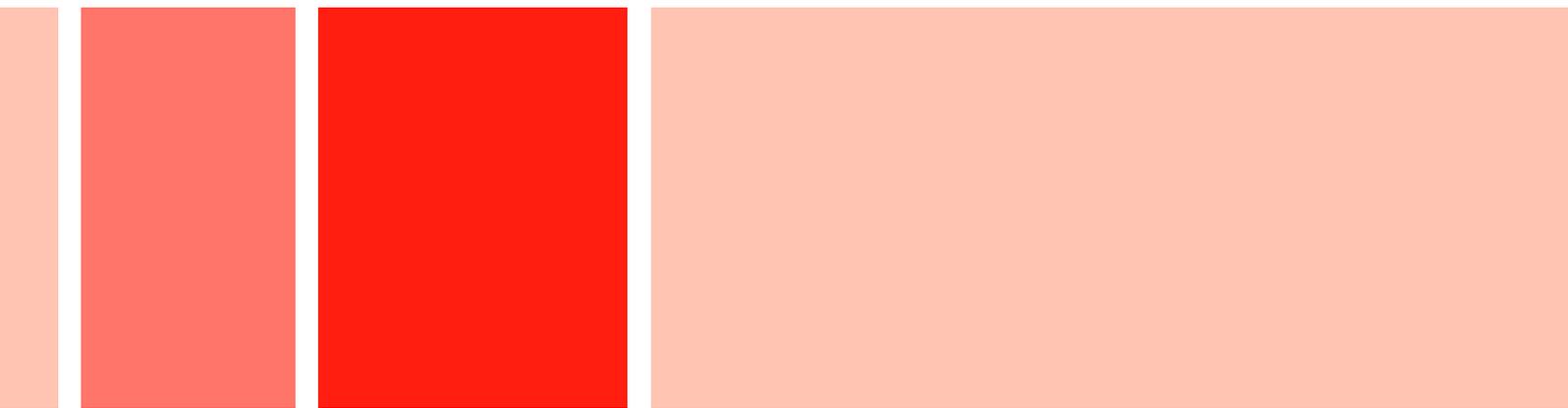
Rhif/Number: 14/2015



Llywodraeth Cymru
Welsh Government

www.cymru.gov.uk

Evaluation of the Nest energy efficiency scheme



Evaluation of the Nest energy efficiency scheme

Miller Research (UK) Ltd

Katy Marrin
Mair Smith
Heulwen Hudson
Nick Miller

Brook Lyndhurst Ltd

Jonathan Bain
Tim Knight

Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government

For further information please contact:

Kate Smith

Energy Efficiency and Fuel Poverty Branch

Welsh Government

Cathays Park

Cardiff

CF10 3NQ

Tel: 029 2082 3257

Email: kate.smith@wales.gsi.gov.uk

Welsh Government Social Research, 10 March 2015

ISBN 978-1-4734-3164-5

© Crown Copyright 2015



All content is available under the Open Government Licence v3.0 , except where otherwise stated.

<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Table of contents

Executive Summary	v
1. Introduction.....	1
2. Background and context.....	4
3. Methodology.....	11
4. Analysis of inputs and processes	15
5. Outputs, Outcomes and Impacts: advice service	33
6. Outputs, Outcomes and Impacts: household improvement service.....	43
7. Conclusions.....	64

Table of Figures

Figure 1 Overview of the Nest Scheme	2
Figure 2 Customer satisfaction with Nest processes relating to installation ...	29
Figure 3 Customers referred by Nest to third parties	34
Figure 4 Self-reported behaviours of advice beneficiaries prior to calling Nest	35
Figure 5 Customer actions as a result of Nest advice.....	37
Figure 6 Customer behaviour change as a result of Nest advice.....	38
Figure 7 Self-reported actions taken by beneficiaries as a result of referral to a third party.....	42
Figure 8 Map showing household improvement measures delivered	45
Figure 9 SAP rating following installation of measures, average from April 2011 to 30th September 2014.....	45
Figure 10 Self-reported behaviours of customers prior to receiving Nest household improvement measures	47
Figure 11 Impacts of home improvements as reported by beneficiaries	58
Figure 12 Reported behaviour change as a result of installation	59

Table of Tables

Table 1 Awareness raising – sources of information.....	26
Table 2 Number of measures installed per household and whether residence was rural or urban – April 2011-September 2014	44
Table 3 Customer care performance	52
Table 4 Return on Investment of Interventions April 2011 – September 2014	60

Glossary of acronyms

BEC –	Benefits Entitlement Check
BG –	British Gas
CAB –	Citizens Advice Bureau
CDM –	(Nest) Contract Development Manager
CERT –	Carbon Emissions Reduction Target
CESP –	Carbon Energy Saving Programme
ECO -	Energy Companies Obligation
ESAS -	Energy Saving Advice Service
EST –	Energy Saving Trust
EWD -	Excess Winter Deaths
FIT -	Feed in Tariff
HEES -	Home Energy Efficiency Scheme
NHS –	National Health Service
PCM –	(Nest) Personal Customer Manager
PDM –	(Nest) Partnership Development Manager
SAP -	Standard Assessment Procedure
SME –	Small to medium sized enterprise
WHD –	Warm Homes Discount
WHQS -	Welsh Housing Quality Standard

Glossary of terms used in evaluation

Advice beneficiary – a person or household who received advice through Nest but not household improvements through the scheme.

Care and Repair – national charitable body championing the housing needs of older people and providing services and advice to Care and Repair agencies across Wales.

Delivery team – the team involved directly in delivery of the Nest scheme as part of BG or EST i.e. PDMs, customer facing teams, assessors and installers.

ECO – Energy Company Obligation and energy efficiency programme that places a legal obligation on larger energy suppliers to deliver energy efficiency measures to domestic energy users.

Scheme management team – those involved in the management of the scheme including, BG and EST and members of Welsh Government.

External stakeholder – stakeholders involved in the scheme but not directly involved as part of BG or EST i.e. those involved in referral to the scheme or with a vested interest in fuel poverty in Wales such as local authorities.

Fuel poverty - a household is in fuel poverty if they spend 10 per cent or more of their income on energy costs, including Housing Benefit, Income Support or Mortgage Interest or council tax benefits [definition in Wales].

Home improvement – the package of installations offered through the Nest scheme i.e. Insulation, a new boiler or radiators.

Home improvement beneficiary – a person or household that received a package of Nest home improvement measures.

Nest beneficiary - a person or household who received household improvement measures or advice from the Nest scheme. Differentiated between those who received advice only and those who received household improvements.

SME installers – SME businesses contracted to carry out the installation of Nest household improvements at a local level.

Standard Assessment Procedure (SAP) Rating - Government tool for assessing the energy performance of properties. High SAP ratings correspond with better energy efficiency performance of a dwelling (an A-rated dwelling has the highest performance).

Third party – Organisations which refer households to the Nest scheme. Applicants to Nest are also signposted or referred to third parties.

Third party beneficiary – household who has received advice or a measure through a third party they were referred to when calling the Nest.

Vulnerable households – households containing older people, children, those with long-term, chronic illnesses or disabilities.

Whole house approach – Funding the energy efficiency measures which are most appropriate to specific properties, including but not limited to draught proofing, insulation and radiators and boilers.

Executive Summary

- i. Nest is the Welsh Government's demand led scheme designed to tackle fuel poverty in Wales. The scheme offers a package of free home energy improvement measures to households who are in receipt of a means tested benefit and who live in a very energy inefficient home, with a SAP rating of F or G. Nest also provides advice on saving energy, money management, fuel tariffs, benefit entitlement checks and referral to alternative schemes to all householders in Wales.

- ii. An independent evaluation of the scheme was commissioned in 2014 to assess whether or not it had met its objectives and to assess the extent to which the scheme had reached households most in need, resulted in energy savings for householders and provided value for money. Evidence for the evaluation was gathered through qualitative interviews with those involved in managing, delivering and benefiting from the scheme and from two large scale quantitative surveys of those benefiting from Nest and third party advice and household improvement packages. The qualitative research was conducted from June-October 2014 and the quantitative research conducted in September 2014.

Management of the scheme and customer experience

- iii. The management and governance of the scheme were generally praised by all those involved and recognised as strengths of the scheme. Both qualitative interviews with beneficiaries and scheme monitoring data indicate a low level of complaints and high levels of customer satisfaction. Interviews with beneficiaries and third parties highlighted some concerns that the application process is not consistently accessible for certain groups (such as those with sight and hearing difficulties or mental health problems). It was also suggested that marketing and particularly the targeting of socially excluded groups could be improved.

Did the scheme reach the most vulnerable households?

- iv. The survey results suggest that the households who have received Nest home improvements were very much in need of support and could not have accessed support elsewhere. Whilst the evidence suggests that the scheme has been successful in reaching older people and those with limiting illnesses, scheme monitoring data contradicts perceptions that the targeting of rural houses has improved over the course of the scheme.
- v. The quantitative data further indicate that many of those who were ineligible for household improvements were forced to make similar choices about heating to those who were deemed eligible. Whilst the scheme has reached some households in need, there is a risk that others equally in need, have been unable to access the support they need as they failed to meet all of the qualifying criteria.
- vi. Given numerous suggestions for changes to the eligibility criteria, the implications of each potential amendment were considered. Whilst widening of each criteria would be desirable, in the context of limited funding, each would have different implications in terms of value for money, including the number of measures able to be implemented and number of households able to be supported.

Did the scheme realise benefits for the householder?

- vii. Just over half of those surveyed who received advice from Nest reported being better able to heat their home whilst this was considerably higher (at 89 per cent) for those who received an installation. The most meaningful and widely stated impacts of the scheme have been increased confidence in, and reduced concern about, heating homes as a result of both measures and advice received by households. For some households this extended to health improvements. Whilst some reported benefiting from energy savings, new systems and increased efficiency have enabled others to use heating and hot water where they could not before.

Did the scheme achieve value for money for Welsh Government?

- viii. Based on scheme monitoring data, we can calculate the overall saving accruing to beneficiary households over the period of the scheme to date as totalling £7.48m. Given an overall investment of £58,023,822, this equates to a benefit to cost ratio of 1.29, meaning that the Welsh economy achieves a return of £1.29 back for each £1 spent. Alternatively, this could be seen as having a 7.75 year payback period, or an annual rate of return of 12.9 per cent. Additional economic benefits have been leveraged through signposting to third parties for benefits checks and other schemes and contracting of delivery arrangements to agencies in Wales.

Key Findings

Nest has:

- **been funded to a value of approximately £58m** between April 2011 and September 2014;
- **provided advice and support to over 61,000 households** to help them heat their homes more affordably;
- **referred or signposted over 20,000 households** to third parties for a variety of purposes e.g. money and debt advice, to assess eligibility for Winter Homes Discount or Green Deal;
- **provided over 15,000 households with a package of free home energy improvement measures**, increasing the SAP rating of 94% of properties to a rating of E or above (from F/G);
- **leveraged an additional £4.2m of ECO funding** into Wales;
- **successfully targeted those in fuel poverty** (consistently over 80% of those enquiring who provided data for monitoring purposes were recorded as being in fuel poverty);
- **provided good customer service** (a survey of beneficiaries who had received an installation indicated 93% were satisfied with the overall experience of the process);
- **led to a variety of outcomes through advice provision** (59 per cent of those surveyed who had received advice stated that they acted on it, including installing new heating controls, insulation and upgrading their boiler as well as changing their behaviour in order to heat their home more efficiently and reduce their bills);
- **increased confidence in and reduced concern about heating homes** (89% of those who received an installation reported being better able to heat

their home);

- **supported 46 SMEs, creating a total of 83 apprenticeships, trainees and jobs** over the length of the scheme;
- **accrued annual energy savings of £7.48m in total** over the course of the scheme.

Areas for improvement:

- the application process is not consistently accessible for certain groups, such as those with sight and hearing difficulties, disabilities or mental health problems;
- while the scheme has reached some households in need, there is a risk that others equally in need have been unable to access the support they need as they do not meet all of the qualifying criteria;
- while there is widespread support and praise for the aim of the scheme to offer a 'whole house approach', the majority of households have received only a single measure;
- advice provision alone has been less effective than improvements in achieving outcomes relating to fuel poverty;
- the marketing and targeting of the scheme to socially excluded groups could be improved.

1. Introduction

Purpose of the evaluation

1.1 In 2014 Miller Research, in partnership with Brook Lyndhurst and GfK, were appointed by Welsh Government to carry out an independent evaluation of the Nest energy efficiency scheme. The purpose of the evaluation was to assess the extent to which the scheme has met its objectives and further, to provide evidence of its impact and effectiveness. This evaluation therefore assessed the extent to which the scheme:

- Provided an excellent customer experience throughout the process;
- Reached households most in need;
- Resulted in energy savings for householder(s); and
- Provided value for money for the Welsh Government.

1.2 The evaluation also considered areas for improvement for the remainder of the scheme as well as the need and basis for any future Welsh Government funding and fuel poverty schemes.

Background to Nest

1.3 The Nest energy efficiency scheme was established in 2011 as the Welsh Government's flagship scheme to tackle fuel poverty for the subsequent five years. The scheme provides access to advice and support for households to help them reduce their energy bills, whilst offering free energy efficiency improvement packages to low income households and those most in need.

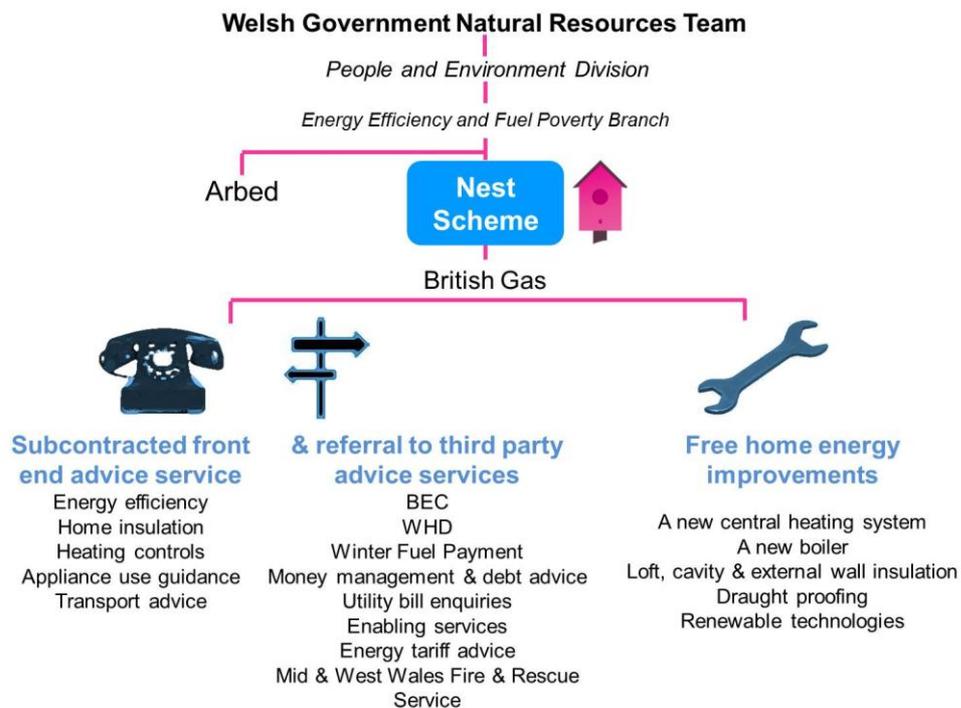
1.4 The original objectives of the scheme, as stated in the services agreement in 2011 were to:

- Remove as many households as economically practical from fuel poverty or, as a minimum, mitigate the risk of fuel poverty in line with policy objectives;
- Improve the energy performance of the poorest housing stock;
- Provide a package of advice to householders, either directly or via referrals to relevant organisations; and

- Grow SMEs in Wales, expanding small business activity in new technologies, providing training and generating local skilled jobs throughout Wales, through the procurement of an economic and sustainable contract.

1.5 The scheme contract is managed by British Gas (BG), who subcontract the front end service (first point of contact and advice package element of the scheme) to the Energy Saving Trust (EST). The front end service foremost assess households against the scheme's criteria and where considered eligible, customers are transferred to BG who carry out whole house assessments, coordinate the installation of, and subsequently inspect, energy efficiency improvement packages provided to eligible households. The front end service also act as the scheme's broad advice centre and, in addition to providing advice themselves, refer individuals to third parties who offer advice on energy efficiency, finance and services such as benefit entitlement checks (see Figure 1 for a diagram of the scheme structure).

Figure 1 Overview of the Nest Scheme



1.6 A primary objective of Nest is to improve the energy performance of housing stock, targeting the groups at the highest risk of fuel poverty. The scheme consequently targets the most inefficient properties (SAP rating F and G) and households on the lowest incomes (means tested benefits¹). The aim is to maximise energy reduction in units and costs of energy whilst providing the greatest value for money. Funding for intervention measures is capped at £8,000 for on-grid² and £12,000 for off-grid properties, with household assessors required to recommend the most cost effective package of measures which will improve the SAP rating of a house to reach the C band where possible.

¹ Income Support, Council Tax Reduction Scheme (with exception of single person 25% reduction), Housing benefit, Income based jobseeker's allowance, State Pension Credit, Income related employment and support allowance, Working Tax credit (household income below £16,010 a year), Child Tax credit (household income below £16,010 a year), Universal credit

² i.e. Connected to mains gas.

2. Background and context

2.1 This chapter sets the context for the research, summarising the issue, and examining Welsh Government policy and support measures for tackling fuel poverty, including reference to existing schemes in Wales and the UK.

Fuel Poverty

2.2 Fuel poverty is determined by a number of key factors which include:

- Household fuel requirement (which is determined by the energy efficiency of the dwelling, external factors, household composition and behaviour etc.);
- Household income; and
- Price of fuel.

2.3 The definition of fuel poverty in Wales is that:

*'A household is in fuel poverty if they spend 10% or more of their income, including Housing Benefit, Income Support Mortgage Interest or council tax benefits on energy costs.'*³

2.4 The Wales Fuel Poverty Projection Tool estimated that in 2012, 30 per cent of households (equivalent to 386,000 households) in Wales were spending more than 10 per cent of their income on fuel use to heat their home to an adequate standard of warmth⁴. This is greater than the proportion for England (14 per cent) but similar to the proportion for Scotland (27 per cent)⁵. The large number of rural and 'hard to treat' homes is one of the main factors for the higher levels of fuel poverty in Wales⁶.

2.5 Fuel poverty is of particular concern for vulnerable households including: low income households; households with children under the age of 16;

³ <http://gov.wales/topics/environmentcountryside/energy/fuelpoverty/?lang=en>

⁴ Welsh Government (2013) Wales Fuel Poverty Projection Tool – 2011 and 2012 report

⁵ Department of Energy and Climate Change (2014) Annual Report on Fuel Poverty Statistics

⁶ Department of Energy and Climate Change (2013) Annual Report on Fuel Poverty Statistics, p19

people with disabilities or suffering from long-term illness; and older people. It is also especially severe in rural areas, due to a reliance on expensive fuels for off-gas homes⁷ and the prevalence of 'hard to treat' homes, which are defined as dwellings that cannot accommodate 'staple' or cost effective energy efficiency measures e.g. off-gas and solid wall properties⁸. Single person households have a higher risk of being in fuel poverty because fuel costs tend to be a bigger burden, relative to incomes, than for larger households⁹.

2.6 The impacts of fuel poverty are far ranging, particularly on health. It is a contributory factor in, and estimated to account for 10 per cent of, Excess Winter Deaths (EWDs)¹⁰, particularly for older people, and a report by Age UK in 2009 calculated that the annual cost of cold homes to the NHS in England was £1.36 billion¹¹, not including the associated cost to social care services. Fuel poverty in the UK is increasing according to the National Energy Action's Fuel Poverty Monitor 2013-14¹² and, with fuel prices predicted to continue to rise for the foreseeable future; this trend appears set to continue. Although it is too early to assess the impacts of Welfare Reform on fuel poverty, there are concerns about the potential impacts for fuel poor households, including the ability to budget on monthly payments¹³ and some households being entitled to less support than they currently receive¹⁴ including vulnerable groups such as disabled¹⁵ and low income families¹⁶.

⁷ Faculty of Public Health (2006) Fuel Poverty and Health

⁸ BRE (2008) Energy Analysis Focus Report: A study of Hard to Treat Homes using the English House Condition Survey, Part 1: Dwelling and Household Characteristics of Hard to Treat Homes

⁹ Palmer, G., MacInnes, T and Kenway, P. (2008) Cold and Poor: An analysis of the link between fuel poverty and low income, New Policy Institute

¹⁰ Hills, J. (2012) Getting the measure on fuel poverty: Final Report of the Fuel Poverty

¹¹ Age UK (2009) The Cost of Cold: Why we need to protect the health of older people in winter

¹² National Energy Action (2014) National Fuel Poverty Monitor 2013-14

¹³ Joseph Rowntree Foundation (2014) The impact of Welfare Reform on social landlords and tenants

¹⁴ Department for Work and Pensions (2011) Welfare Reform Bill Universal Credit: Equality impact assessment

¹⁵ Disability Rights UK, Citizens Advice and The Children's Society (2012) Holes in the safety net: The impact of Universal Credit on disabled people and their families.

Policy context

2.7 The Welsh Government has a legal duty under the UK's Warm Homes and Energy Conservation Act 2000 to do everything reasonably practicable to eliminate fuel poverty. The Welsh Government Fuel Poverty Strategy (2010) reinforces this with the target that, as far as is reasonably practicable, no household in Wales will be living in fuel poverty by 2018.

2.8 The Welsh Government's Fuel Poverty Strategy provides a framework for tackling the main factors affecting fuel poverty. These include:

- **Building a strong referral network** including energy saving advice providers, local support agencies, local authorities, third sector organisations, health and social services, energy companies and the Welsh Government;
- **Stakeholder co-operation**, recognising that effective fuel poverty action requires the co-operation of a wide range of stakeholders e.g. Welsh Government, local government, UK Government, RSLs and housing associations, NHS, CAB;
- **Income maximisation** measures to ensure that vulnerable households are able to heat their homes through support from the benefits system, employment support etc;
- **Helping people pay less for energy** through wholesale energy prices, tariffs, type of fuel used and access to renewable energy;
- **Improving household energy performance** by changing consumer behaviour and improving the energy performance of homes.

2.9 Fuel poverty is a priority area for Welsh Government and forms a key part of strategies for tackling poverty, addressing climate change, supporting older people and housing improvements. The level of fuel

¹⁶ Save the Children (2012) Ending Child Poverty: Ensuring Universal Credit supports working mums

poverty is also a key indicator used to monitor the outcomes of tackling poverty in the Programme for Government in Wales.

Support and measures for tackling fuel poverty

2.10 Given the number of factors which contribute to fuel poverty, tackling the issue requires a multifaceted approach involving a package of measures. Appendix I provides an overview of measures currently being used or considered in the UK to tackle the three main factors affecting fuel poverty. Based on analysis of fuel poverty schemes in England, the Hills Review¹⁷ suggests that low-cost insulation and gas heating systems are among the most cost-effective in terms of increasing household Standard Assessment Procedure (SAP) ratings and reducing energy bills, together addressing the problems of those most in need (i.e. low income households in low SAP rated properties). However in Wales over 20 per cent of houses are 'off-gas' (using other heating fuels e.g. heating oil or solid fuel)¹⁸. In conjunction with the high number of solid wall houses (estimated at 32 per cent)¹⁹, particularly in rural areas, this means low cost insulation and heating is often not a viable option.

2.11 Recent fuel poverty support schemes have taken both a demand-led (e.g. Nest) and area-based approach (e.g. Arbed), both with advantages and disadvantages in terms of effectiveness of targeting. Community-based approaches can overlook older people who are asset rich but cash poor, householders in negative equity and rural households within seemingly affluent areas. At-risk groups can vary significantly from one area to another e.g. lone parents with dependent children in one area; whilst in another it may be elderly owner occupiers in hard to treat, off-

¹⁷ Hills, J. (2012) Getting the measure on fuel poverty: Final Report of the Fuel Poverty Review

¹⁸ Consumer Focus (2011) Off-gas consumers: Information on households without mains gas heating. The report used the 2008 Living in Wales data to calculate the number of off-gas homes.

¹⁹ Centre for Sustainable Energy (2006) Targeting energy efficiency resources in Wales. The report use the 2004 Living in Wales data to calculate the number of solid wall properties.

gas properties²⁰. This suggests that alongside national schemes, local flexibility and strategies are also important for tackling fuel poverty. Demand-led approaches, even with strict eligibility criteria can also fail to target those in fuel poverty because targeting the most vulnerable households can be a very complex task. The use of proxy indicators, such as means tested benefits, as eligibility criteria can also result in mis-targeting (non-fuel poor households being eligible whilst other fuel poor households are not)²¹.

2.12 Eligibility criteria for Nest is narrowly targeted to focus support on those most in need, targeting households with extreme low incomes occupying the lowest energy performing housing. Successful targeting requires a robust evidence base and data matching from a variety of sources (e.g. Department of Work and Pensions data on housing quality as well as data and knowledge held by local authorities) to ensure that both communities and individuals are targeted effectively²².

Fuel Poverty Support Schemes in Wales and UK

2.13 The following section outlines the context of fuel poverty support schemes which operate alongside Nest, both within Wales and the UK.

Support Schemes in Wales

2.14 Responding to actions set out in the Welsh Government Fuel Poverty Strategy in 2010, Nest was established in April 2011 to replace the **Home Energy Efficiency Scheme (HEES)**. Nest addresses some of the key issues identified post-HEES, for example better co-ordination and accessibility of advice, ensuring all organisations involved can refer users to the full range of advice and support, providing a trusted source of advice for householders and adopting a whole-house approach. By focusing on hard to treat homes, Nest is designed to differ from other

²⁰ Local Government Association (2013) Tackling fuel poverty through local leadership

²¹ Hills, J. (2012) Getting the measure on fuel poverty: Final Report of the Fuel Poverty Review

²² Joseph Rowntree Foundation (2011) Time to reconsider UK energy and fuel poverty policies?

schemes, such as CERT and CESP. According to the scheme's annual report, Nest eligibility criteria have been more effective in identifying and supporting fuel poor households (less than 30 per cent of households helped under HEES were estimated to be in fuel poverty).

2.15 **Arbed**, established in 2009, is an area-based scheme providing targeted investment to improve the energy performance of homes within communities in the most deprived areas of Wales. Phase One of the scheme funded measures in 7500 homes. Phase Two aims to improve the energy efficiency of a minimum of 4800 existing homes.

2.16 Energy efficiency improvements in social housing are also encouraged through the **Welsh Housing Quality Standard (WHQS)** which requires all social landlords to improve their housing stock to an acceptable level by 2020. Other support may be available from local authorities, for example, in 2008-2009 a scheme to help First Time Buyers was piloted in a number of Renewal Areas.

UK support schemes

2.17 In the design of the schemes described above, Welsh Government strives to ensure that schemes complement as opposed to compete with a wider set of UK support schemes, as discussed in the following section.

2.18 The **Energy Companies Obligation (ECO)**, administered by Ofgem, is a UK Government obligation requiring major energy suppliers to deliver carbon savings through energy efficiency improvements. ECO can be used alongside the Green Deal to help households living in fuel poverty to install energy-efficiency measures in their homes. ECO requires energy suppliers with more than 250,000 domestic customers to meet a number of obligations. ECO funds are distributed by energy suppliers to customers or by organisations working together through pre-approved

arrangements such as Green Deal providers. Nest was successful in leveraging ECO funding of nearly £3.9 million in 2013-14.

2.19 **Resource Efficient Wales** is a service funded by Welsh Government providing access to advice and support on using resources (energy, materials and water) more efficiently. The service integrates the varied programmes that currently exist and offers targeted support for domestic, business, community, third and public sector audiences. Domestic customers are provided with information and referred to Nest or the **Energy Saving Advice Service (ESAS)** where applicable. ESAS provides free, impartial telephone advice on energy-saving measures and reducing fuel bills to householders in England and Wales. The service includes advice on Green Deal and ECO schemes. Customers who do not meet the eligibility criteria for a package of Nest measures and who are not interested in the referrals offered by Nest are redirected to ESAS for further support, where this is appropriate.

2.20 Other payments helping to reduce fuel poverty include the **Warm Homes Discount (WHD)**, the **Cold Weather Payment**, the **Winter Fuel Payment** and the **National Concessionary Fuel Scheme**. More than 2,000 Nest customers were referred to their energy supplier for the WHD. Nest received confirmation from three energy suppliers showing that collectively over 11 per cent qualified for the discount, with total savings of £32,670. Subsidies for some energy generation schemes, to protect homes against future rises in energy costs, include the **Feed-in Tariff** and the **Domestic Renewable Heat Incentive**. There are other energy efficiency schemes such as the **Green Deal** private finance initiative, backed by the UK Government, which offers householders access to a number of energy saving options through a payment plan. However, it has been acknowledged that Green Deal may, in fact, fail to tackle fuel poverty²³.

²³ Localise West Midlands (2011) Solving Fuel Poverty – opportunities from Green Deal and Localisation

3 Methodology

- 3.1 This chapter outlines the evaluation methodology which combined analysis of existing scheme monitoring data with primary research. Qualitative research took place from June to October 2014 whilst the quantitative surveys operated between 8th and 26th September 2014.

Qualitative Research

Contextual review

- 3.2 A review of policy, allied support schemes and existing research was undertaken in order to assess need for the scheme, links to other lines of support and potential contribution to wider policy aims.

Workshop with scheme management staff

- 3.3 A workshop was held with six members of the BG team responsible for the management of the contract. Discussions focused on the scheme aims, processes, challenges and outcomes.

Qualitative interviews

- 3.4 Appendix II provides a breakdown of qualitative interviews, the majority of which were carried out by telephone. Interviews were semi-structured in order to gather the required information, whilst leaving the opportunity for wider discussion of unanticipated issues (topic guides provided in Appendix IV).
- 3.5 Interviews with 13 members of the **scheme management and delivery teams** focused on process, marketing and engagement, relationships between each team and the customer journey. **External stakeholders** interviewed comprised 12 representatives of fuel poverty interest groups and third party organisations such as Communities First, Macmillan Cancer and Age Connect. Interviews covered the context of fuel poverty in Wales, involvement with Nest and the referral process where relevant.
- 3.6 Interviews were conducted with 24 **beneficiaries** residing in four local authority areas (Blaenau Gwent, Denbighshire, Rhondda Cynon Taf and

Swansea). These areas were selected in order to target households in both rural and urban areas and those with high²⁴ and low uptake²⁵ of the scheme. Half of all interviews were undertaken in person with the researcher accompanying an assessor on inspections (in September²⁶, within two weeks of installation). Further interviews were carried out by telephone with households who had received installations between 2012 and 2014. These form the basis of case studies contained in sections 5, 6 and Appendix VII (all names used are pseudonyms).

Quantitative

Review of scheme monitoring data

3.7 Analysis of secondary data collected by Nest was used to inform and complement primary data collected.

Telephone survey of advice and guidance beneficiaries

3.8 A quantitative telephone survey was carried out with 1000 individuals who had received advice and guidance through the scheme, both directly through the Nest scheme and as a result of a referral to a third party. Those who were able to recall being referred to a third party (377) were asked three additional questions which enquired about the referral process and subsequent outcomes. A pilot of 50 interviews was carried out but no significant changes were implemented so these responses were included in the main analysis. A description of the sampling method is provided in Appendix III. Survey scripts are included in Appendix V.

Telephone survey of household improvement beneficiaries (HIBs)

3.9 A quantitative telephone survey was carried out with a further 600 households, drawn from a sample of 9506 households who had received

²⁴ Rhondda Cynon Taf, Swansea, Denbighshire

²⁵ Blaenau Gwent

²⁶ A caveat of the research is that, since these beneficiaries had called Nest in summer, the large majority were applying because of a lack of hot water as opposed to heating, often due to the recent failure of their boiler rather than long term inefficiency of their property.

a home improvement package e.g. installation of a new boiler or insulation. Quotas were set to ensure a greater proportion of 2013-14 HIB sample were interviewed, as these were considered to be more likely to remember the installation process.

Limitations of the methodology

3.10 Findings generated using qualitative methods should be considered as indicative rather than statistically robust. Where possible, we have tried to give an indication of the extent to which there was agreement or disagreement between participants on the issues being reported. Due to the timescale available for the evaluation, the fieldwork with beneficiaries was undertaken in August and September. As a result, those interviewed qualitatively were beneficiaries who had received a measure over the summer months. This meant that beneficiaries were required to recall their experiences from several months previously when commenting about fuel poverty in winter.

3.11 The timing of the evaluation also meant that analysis of the most recent scheme monitoring data could only consider half the budget year (from April to September 2014). Therefore the latest data covers only the summer months. According to the scheme management team, this period is not representative of the full year due to seasonal differences in the uptake of the scheme. It is therefore difficult to assess progress against KPIs for the current budget year.

3.12 The evaluation heavily relied on beneficiaries self-reporting outcomes and impacts of the support they had received. Self-reported data can have its limitations as: participants may not give accurate responses, either because they cannot remember or because they feel under pressure to respond in a certain way (social desirability bias). Even where an individual attempts to respond honestly, they may misunderstand or misinterpret a question and as with any sample survey, participation in the survey was not compulsory, respondents

were inherently self-selecting. The sample therefore excludes those who either could not be contacted or were unwilling to give up their time to participate. This may bias the findings if people who were unavailable had different views or experiences to those who were available (this would be expected to be the case e.g. where recipients who were working may have had different experiences to those who were unemployed, economically inactive or retired) or if people were less willing to participate in the survey because their experience of the process was relatively poor.

4 Analysis of inputs and processes

This chapter examines the views of the scheme management and delivery teams and external stakeholders on the rationale, finance, management and processes of the scheme including marketing, customer journey and referral. It is predominantly based on evidence from qualitative interviews but is supported by survey data where appropriate and referenced. Findings from the qualitative interviews provide valuable insights and more detailed views from smaller numbers of respondents. Due to the smaller number of people interviewed they are not necessarily generalisable. For further information on methodology please refer to Chapter 3.

Scheme Logic

Rationale for Nest

4.1 The scheme management team, external stakeholders and the delivery team in general felt there was a strong rationale for Nest for the following reasons:

- The need for a replacement scheme following HEES;
- The high proportion of low SAP rated houses in Wales, particularly 'hard to treat' homes in rural areas;
- Escalating debt problems and the need for anything to support low income households to reduce their costs;
- A need to include households in receipt of working tax and child credits who previously may have missed out on fuel poverty schemes;
- The need for a scheme to cover the limitations of the other support available.

4.2 However there were some queries regarding the evidence base for Nest. Although the scheme had been designed on the best available evidence, external stakeholders suggested that data on the quality of Welsh housing stock and levels of fuel poverty in Wales needed to be improved

and updated in order to fully understand the scale of fuel poverty in Wales and therefore improve the design and targeting of Nest.

“One of the biggest issues is the quality of evidence on fuel poverty. Fuel Poverty data is based on projections using 2008 Living in Wales Survey which is out of date and not comparable to the housing quality data available in England and Scotland.”

External stakeholder

Existing market failure and fit with other fuel poverty schemes

- 4.3 Evidence suggested that Nest was becoming more trusted and ‘mainstream’ amongst stakeholders and referral partners working with target groups in Wales. Nest was considered to be more accessible than other schemes, and was commended for offering a ‘whole house’ approach.
- 4.4 When considering the role of Nest amongst other schemes, most stakeholders and the scheme management team were clear of where Arbed and Nest complement each other, particularly in terms of targeting dispersed rural households. References were made to Green Deal when discussing Nest but interviewees were clear that it was sufficiently distinct from Nest because it had limitations for fuel poor households and was a financing scheme rather than grant scheme.
- 4.5 However, there was a belief amongst external stakeholders and members of the delivery team that there was a lack of understanding as to how the UK ECO scheme and Nest complemented each other, with some perceptions that the schemes are in competition. Those with an understanding of both schemes suggested that the main difference between the two was that Nest offers a more holistic ‘whole house’ approach than ECO, which provides boiler replacement rather than renewable energy installations or energy efficiency measures.
- 4.6 There was some evidence that the range and complexity of the support available for energy efficiency or boiler replacements was having an adverse effect on consumers. For example, an external stakeholder interviewee reported recording a high number of ‘boiler scams’ in early

2014 and had launched a campaign in May to raise awareness of the genuine schemes available. It was felt that part of the reason for the increase in fraudulent schemes was the confusion felt by consumers. In one case, Nest had been implicated in a misunderstanding regarding a scheme:

“There was an instance where residents got what they thought was a free survey but had to pay and Nest somehow got implicated, despite it not being anything to do with Nest.”

Delivery Team Member

- 4.7 An external stakeholder proposed the amalgamation of Welsh Government schemes or development of a coordinated approach to marketing so that the intricacies and differences of the schemes were more obvious to both beneficiaries and professionals. It was also suggested that this could allow customers to make better choices in order to get the most from the funding available.

Scheme design

- 4.8 The management of the scheme by BG, working together with the front end advice service was generally perceived as positive, particularly in terms of gaining public trust. However, some members of the scheme management team questioned whether it would have worked more effectively with a number of targeted projects under the Nest banner, for example one targeting rural households and another looking at the specific requirements of the private rented sector.
- 4.9 According to the delivery team, partners had initial reservations about the eligibility criteria of the scheme because it was more complex than previous schemes; however they are now supportive of the improved targeting. The aim of Nest to offer a package of measures through the ‘whole house’ approach was strongly supported by stakeholders, the scheme management and delivery teams.

4.10 One of the key benefits of Nest over other schemes, according to the scheme management team, was that funding can be levered from other sources, which can benefit the customer. However, some management team members who were interviewed felt that Nest had not always made the most of working in partnership with other schemes such as ECO or other local initiatives, to ensure that people were getting a full package of measures. ECO and other insulation schemes had, in some cases, improved the SAP rating of households to just above the threshold, with the result that they were unable to benefit from the whole house approach that Nest offered. This was perceived to be a missed opportunity for such households.

Inputs

Financial resources/funding

4.11 The Nest Scheme has been funded to a value of approximately £58m between April 2011 and September 2014. Management and performance fees accounted for some 15 per cent of the total, at £8.64m.

4.12 According to Nest, the scheme leveraged an additional £4.2m of ECO funding into Wales, for re-investment in Nest, of which £3.9m was during the 2013/14 scheme year.

Eligibility criteria and cap per household

4.13 There are three sets of eligibility criteria that households must fulfil in order to receive Nest home improvements:

- Receipt of means tested benefits: this includes JSA, Tax Credits, Pension Credits,
- Living in an F or G SAP-rated dwelling, and
- Ownership or private rent of the property.

4.14 These criteria, in addition to the cap on spending per household, determine the way in which funding is distributed. Responses on this

topic from management, delivery teams and stakeholders revealed strong opinions and numerous suggestions for future change.

- 4.15 In general, stakeholders and the scheme management team felt that the scheme had been much more effective in targeting people who were likely to be in fuel poverty than the previous HEES scheme. However stakeholder and delivery team interviewees highlighted some disadvantages in using means tested benefits as an eligibility criteria and proxy for households in fuel poverty.
- 4.16 Most often referred to was the exclusion of those not in receipt of means tested benefits; mainly the working poor and pensioners with very little or no savings, but who do not receive pension credits. Some stakeholders argued that because many support schemes aimed at tackling poverty used means tested benefits as eligibility criteria, those who were not in receipt of benefits, but nonetheless suffering from poverty, were 'falling through the gaps' between a number of schemes. This prompted suggestions for improved targeting based upon household income, although it was acknowledged that this would be difficult to assess compared with the current approach.
- 4.17 In terms of targeting vulnerable households, suggestions were made for extending entitlement to those who require heating for health reasons, for example the criteria used in the Health Through Warmth scheme run by Npower. It was felt that older people aged 80+, and people with severe disabilities who may not be on appropriate benefits could still have a high level of need but currently be ineligible for Nest home improvements.
- 4.18 Some felt that the criteria required greater flexibility and opportunities to allow those who are not on means tested benefits, and therefore ineligible, to receive support from Nest with the addition of a small financial contribution. Some suggestions were made to align eligibility for Nest with other schemes such as the Home Heating Cost Reduction

Obligation element of ECO so that more households could benefit from both. According to a member of the scheme management team, only 44 per cent of Nest customers are also eligible for ECO because of the difference in eligibility criteria.

4.19 Although it was acknowledged that only including households with F or G SAP rated properties was appropriate at the scheme's inception, it was widely agreed amongst delivery and scheme management team interviewees that these eligibility criteria may need to be revised.

4.20 There was a general perception amongst interviewees that the number of F and G rated properties was reducing and, according to the delivery team, the scheme was reaching 'saturation point' making it difficult to gain referrals. British Gas data drawn from the Living in Wales Survey suggests a total of 32,000 fuel poor households on means tested benefits living in private sector F and G rated properties in Wales in 2008, thereby implying a market penetration of 75 per cent to date.

4.21 There was a belief within the delivery team that many households with SAP rated properties above F or G were also likely to be in fuel poverty – a perception that is confirmed by data from the Living in Wales Survey²⁷. Members of the delivery team, scheme management team and stakeholders suggested widening the criteria to include E rated properties if possible, which they believed could have a greater impact on fulfilling broader fuel poverty objectives. Some suggested relaxing the criteria to include those currently on the 'borderline'. Furthermore, the delivery team had noticed that households in urban areas are unlikely to be eligible unless their boiler has broken down. This led to concerns that

²⁷ Living in Wales Survey 2008, analysed by BRE. Data shows that more than twice as many fuel poor households lie in the D and E SAP Bands than in F and G. accounting for 210,000 households in 2008 and for 63% of all fuel poor households in Wales. <http://gov.wales/docs/caecd/research/110321fuel.pdf> Appendix D.

Nest could become a boiler replacement service rather than adopting the 'whole house approach'.

During the delivery of the scheme, additional guidance was set for people living in the private rented sector. The criteria now require applications from tenants whose landlord has already had three properties improved under the scheme, to be submitted to Welsh Government for a decision. This followed reports of multiple applications from some private sector landlords as a means of upgrading their housing rental stock at no cost to themselves. As a result, members of the delivery team felt that tenants in private rented accommodation could be unfairly excluded from the scheme.

4.22 Members of the management and delivery team considered the £8,000 spend cap per household to be sufficient for on-grid urban properties. It was suggested that this could even be reduced in some cases, because the average cost for on-grid property improvements had actually been less in most cases. Data from British Gas confirms this, with an average on-grid intervention cost of around £2,500.

4.23 Capping levels were intended to offer a degree of flexibility and not require rigorous enforcement. However during the first year, the delivery team found that the capping levels were routinely exceeded, and since then they have been more rigorously enforced.

4.24 There was strong consensus from assessors that the capping level of £12,000 for off-grid properties is rarely enough to pay for the kind of 'whole-house' package that Nest intends to deliver. In practice, it was argued that the capping level is too low due to the high cost of heating sources (e.g. solid fuel or biomass heating costing at least £7,000 to £9,000) when installed in combination with loft and cavity wall insulation. In addition stakeholders, delivery team members and installers suggested that in order to maximise both the short and long term benefits of a new heating system, many rural properties required external wall insulation and other measures not offered by Nest, such as

double glazing, which would increase the total cost to around £20,000 per property.

“In the short-term people are undoubtedly happier and warmer because they have a new boiler, but what will happen in 15 years’ time when all those boilers break? The problem will continue. The house will have deteriorated further and energy will be more expensive. Nest needs to take a whole-house approach to have longer-term benefits.” **Member of scheme management team**

“it’s very frustrating to see a brand new boiler going into a house which is so poorly insulated and maybe has the windows falling off” **Member of scheme management team**

4.25 While interviewees expressed the desire to increase the capping levels to achieve better long-term solutions, they acknowledged the trade-off that this could have on the scheme’s ability to reach the number of people required. Implications of changes to each set of criteria are outlined in Appendix VIII.

4.26 A small number of stakeholders and delivery team members felt that Nest had missed out on the opportunity to deliver a truly holistic and long-term approach by omitting new and renewable technologies due to their initial expense.

“They have failed to get multiple measures and new renewables/new technologies into many properties because they are still so expensive. Even though the price is dropping for these new technologies they are still a lot more than a gas boiler.” **Delivery Team Member**

Processes

Project management and governance

4.27 There was a fairly consistent message from interviewees performing different roles within the scheme that Nest is being rigorously and robustly managed. Customer-facing staff within BG and the Nest front-end advice service were positive about the direction, protocols and targets of the scheme. SME installers also felt the management and

monitoring systems in place for Nest were very rigorous. Mostly this was seen as positive and contributed to the high quality of customer service Nest delivered.

4.28 In terms of governance, the main client-contractor relationship between the Welsh Government and BG was seen by representatives of both sides to be strong, open and trusting – to the extent that it was described by some interviewees as a potential exemplar for other projects. The combination of formalised governance arrangements (in the form of regular meetings and reviews) and less formalised, more frequent contact between Welsh Government and BG was seen to be effective. Furthermore, there were broader discussions about options for the longer term development of Nest, which were felt to be valuable.

4.29 The only negative comments on governance concerned the subcontractor arrangements between BG and the front-end service provider (EST) early on in the scheme. There were some initial concerns about the capacity of EST to manage a sufficient volume of applications and about the effectiveness of the marketing. It was suggested by representatives of the Welsh Government that BG may have initially been slow to assume responsibility for addressing these issues with EST. Over time it was felt the role of BG in this respect had been clarified and that they were now administering the sub-contract as intended.

Internal relationships and communication

4.30 The main client-contractor relationship between the Welsh Government and BG was understood to be strong by both sides. The management-level relationship between BG and EST was also felt to have developed and improved since initial performance issues had been resolved. The assessment of interviewees from both organisations and from the Welsh Government was that the relationship was now functioning effectively.

- 4.31 Communication between different teams within BG and EST, and with SME installers, was also generally felt to be good and this was reflected in the positive comments of beneficiaries about the customer journey.
- 4.32 In terms of communication between front-end telephone advisors and PCMs, the exchange of client details from the former to the latter is largely automated. This was seen to be effective in communicating basic information about clients although, according to PCMs, other potentially useful information was not always being entered into the system by front-end telephone advisors. This included information about any communication issues a client may have and/or whether a third party was making the Nest application on their behalf. PCMs said they were generally able to establish these details when they tried to contact the client and work around them but that having these details in advance would enable them to save time and perform their role more efficiently.
- 4.33 In terms of communication between PCMs and others at BG (assessors and CDMs), the latter felt they were being given adequate information about clients. It was however suggested that high staff turn-over within the PCM team sometimes meant the assessors were not always sure who to contact within the team if they needed something to be clarified. Installers were positive about the relationship and communications they had with CDMs and generally felt the feedback they received from CDMs through regular performance reviews was “fair” and balanced, in that they were given positive comments as well as constructive criticism.

Monitoring and evaluation

- 4.34 The current monitoring and evaluation systems within Nest were felt to be effective and extensive. It was recognised that Nest was collecting a wide range of data and there was a consistently high degree of confidence in its veracity. This data is actively being used by the Welsh Government and Nest to regularly assess performance and inform decisions about the operation of the scheme.

4.35 A couple of interviewees felt that the current scheme monitoring and evaluation systems could be expanded further. An identified gap in monitoring data concerned the impact of the advice and/or installations on the behaviours of beneficiaries. Data on this is not currently captured for Nest, which was seen to limit the extent to which the full impacts of the scheme could be assessed.

Marketing

4.36 The Nest marketing team cited key challenges contended with, including the “complex” and “noisy” household improvement funding market Nest operates within. Trust was also seen as being critical to customers’ acceptance and engagement with Nest. To address these challenges, the marketing approach aimed to target individuals with messages from multiple sources and ‘trusted individuals’.

4.37 The Nest scheme was marketed through a range of channels, including campaigns in collaboration with local authorities using targeted direct mail, the attendance of PDMs at events and all main forms of media. Marketing was also heavily supported by third parties, such as charities raising awareness of Nest among their customers and through PDMs promoting Nest at third party events.

4.38 Data from the beneficiary survey shows that people were most likely to hear about the Nest scheme through word of mouth (40 per cent of respondents overall), followed by the Nest website (12 per cent), an advice service (10 per cent) and newspapers (7 per cent). A total of 28 per cent of respondents could not recall where they first heard about the scheme. As Table 1 shows, awareness of the scheme by those with a limiting illness or disability largely reflected that of all respondents. Meanwhile, rural beneficiaries were slightly more likely to have heard

about Nest through word of mouth (43 per cent) than were urban beneficiaries (37 per cent)²⁸.

Table 1 Awareness raising – sources of information

	Percentages	
	All Respondents	Limiting Illness or Disability
Website	12	11
Newspaper	7	8
Radio	2	1
TV	5	7
Leaflet	7	7
Word of Mouth	40	35
Advice Service	10	11
An event	1	1
Other / Don't know	28	32

Source: Quantitative survey. Base: 1001. *Multi-coded question: respondents could choose more than one answer*

Effectiveness of targeting

4.39 WG interviewees felt that the scheme had targeted people in fuel poverty more effectively than the previous HEES scheme. A recent effort to target rural properties was quoted as having had a positive impact on increasing measures installed in rural properties. Some of the scheme management team and external stakeholders felt that Nest had been most effective in targeting those on pension credit. One interviewee suggested that this may have been due to Care and Repair operating as a third party whilst another suggested that pensioners had time available, which other groups may have lacked, to navigate through the Nest application process.

²⁸ Statistically significant: $p < 0.01$

4.40 The scheme management team and external stakeholders also cited a concern that it was very difficult for certain groups (such as the deaf, blind, disabled, illiterate and those with mental health disorders) not only to hear about the scheme but also to apply as the application has to be processed over a phone and required detailed information from the individual.

“There are 37 questions to check if someone is eligible. Some don’t want to answer all these, or speak on the phone for 20 minutes. There is no phone system for the deaf and hard of hearing; the only way for these is via the internet, but the same people are often not connected. They have to come through Nest, they have to do the questions – it seems a bit inflexible.” **Delivery team member**

4.41 Other members of the delivery team expressed the fear that Nest might not be reaching some of the most socially excluded groups who may not engage with media or events through which Nest is marketed or access services provided by other partners such as Local Authorities or third party stakeholders.

Success of marketing

4.42 Overall, scheme management and delivery team interviewees felt that the marketing of Nest had improved recently, some referring to the high numbers of referrals achieved. The marketing approach had been adjusted over the course of the scheme, learning from the results of previous marketing activity. Detailed scheme monitoring was seen as important in supporting this process. Improvements cited included more focused and accurate targeting of direct mailing, increased engagement of third party stakeholders, and adjustment of the wording of marketing materials to avoid inadvertently raising expectations of eligibility to Nest and what it could offer. Under the new marketing plan activities were also being delivered sequentially to better manage call volumes and assess their effectiveness.

4.43 However, there were some reservations with the marketing approach. Several stakeholders and an installer suggested they believed marketing and awareness of the scheme had decreased recently. Whilst some stakeholders praised the variety of channels and marketing in collaboration with local authorities, many more were critical of the “roadshow” events, arguing they were ineffective, poorly attended and only targeted those already engaged with referral partners.

4.44 Additionally, there were concerns that many referrals came through word of mouth rather than as a direct result of marketing activity and suggestions that Nest was not as well marketed as other schemes (e.g. ECO). Another concern regarded the timing of marketing activity:

“People don’t start thinking about needing better heating until the weather starts to turn, however Nest really needs to be busy in the summer months to make sure that better heating and insulation is in place before the winter. The marketing plan should take this into account.” **Delivery team member**

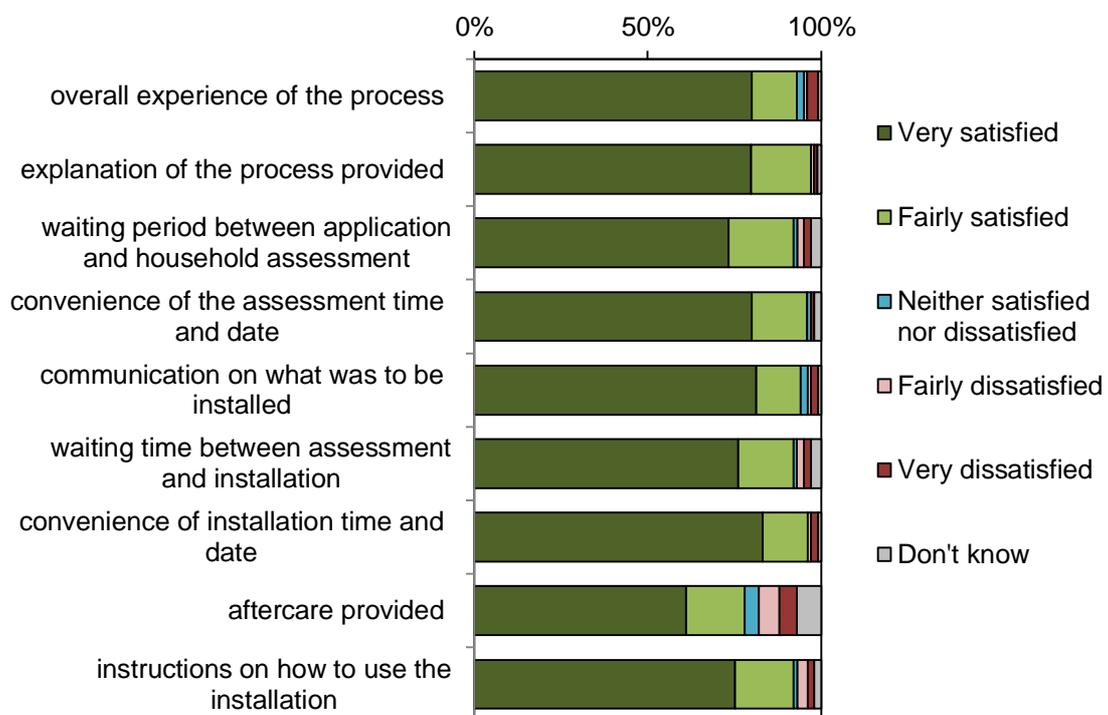
4.45 A further concern was that the scheme was misleading in its marketing of the household improvements available. It was said that certain measures originally marketed as being offered through the scheme, such as external wall insulation, were rarely delivered in practice due to the caps on funding available to households. This led one beneficiary interviewed to express disappointment that he was unable to receive the same measures as a neighbour due to the difference in cost of treating his property.

Customer journey

4.46 Most of the Nest beneficiaries interviewed were very satisfied with the customer journey. They felt informed at each stage, and had been provided with flexible options for aspects such as inspection visits and installation dates. This is reinforced by monitoring data, which indicates customer satisfaction has remained high throughout the scheme, consistently averaging above 97 per cent.

4.47 Of those surveyed who had received an installation (base: 600), 93 per cent were (either fairly or very) satisfied with their overall experience of the process. As shown by Figure 2, over 90 per cent of respondents who received an installation were fairly or very satisfied with each of the individual elements of the process, with the exception of the aftercare provided, although this still showed high levels of satisfaction with 61 per cent very satisfied and 17 per cent fairly satisfied. Overall, the survey results suggest that the majority of customers were very satisfied with each stage of the customer journey.

Figure 2 Customer satisfaction with Nest processes relating to installation



Source: Quantitative survey. Base: 600

4.48 In discussions with beneficiaries, the majority were also satisfied with the **application process**, although some found it more challenging and had required the support of a third party, such as a family member, to complete it [see case studies 5 and 6]. One Nest beneficiary with mental health issues described the process as “*not very nice*” and “*frustrating*”. They described being asked to provide various documents on several

occasions rather than all at once, and had to gain some of these from the landlord. Without the support of a family member he may not have been able to complete the process. As another example, an older person with hearing difficulties had also required assistance with their application.

4.49 Concerns were also noted by members of the delivery team. The number of questions and level of detail of information required were suggested to be off-putting for certain target groups. The delays caused when waiting for private landlords to provide documentation were also cited as, in some cases, leading to the application being closed after reaching the defined time limit. There were concerns that the process used to make applications could be challenging for some due to the lack of provision for the blind or deaf, and call centre staff not allowing sufficient time for elderly customers to reach their phone when making call-backs.

4.50 The majority of Nest beneficiaries commented positively on the **assessment process**, having been given advanced warning and convenient times for the assessment visit. A small minority of other beneficiaries and members of the delivery team however expressed concern that certain measures, such as external wall insulation (that were typically mentioned as improvement options at the assessment stage), were very rarely included in measures installed, raising expectations and on occasion leading to complaints.

4.51 In regards to the **installation process**, the majority of beneficiaries were very satisfied with the installation quality, customer service and timing. For half the budget year to September 2014, only 7 per cent of customers waited over 45 days for an installation, a significant decrease on previous years which stood at 23 per cent for 2012/13 and 35 per cent for 2013/14.

4.52 A minority of beneficiaries however were not fully satisfied with the installation, citing minor deviations from the installation plan, but typically these were insignificant issues and were rectified during the inspection process. A small number of other interviewees also referred to complaints about installers not being approachable or being insensitive to certain groups such as older people.

4.53 Fewer respondents were satisfied with the **aftercare** provided than with other aspects of the process, with 11 per cent dissatisfied to some extent. Of the 6 per cent who reported problems relating to their installation, a significant proportion referred to the absence of an inspection and delays or a lack of response when seeking to resolve complaints, factors which may have contributed to the dissatisfaction with aftercare. It is important to note however that a number of these customers were seeking to contact the installer directly and not the Nest team themselves.

Referral process to third party organisations

4.54 As part of their standard set of questions front-end service advisors asked customers about issues of relevance to certain third party partners, such as fire safety checks on behalf of the fire service. Dependent on the third party, households were either signposted and instructed to call a third party or, contact details of relevant individuals were passed on via phone or collated and sent to third parties on a regular basis.

4.55 The majority of third party stakeholder interviewees were happy with the management of referrals from Nest and stated that they received contact details of a good variety of individuals compared to those provided by other agencies.

Referral process from third party organisations

4.56 Customers were also referred from third party organisations to Nest.

Third party interviewees stated that they would welcome more information about their clients' applications to Nest, with some suggesting they would be more motivated to make referrals if they were aware of the eventual outcomes. The inability to track an application had also led some to bypass the Nest portal and refer individuals personally to the scheme instead²⁹.

4.57 It was argued that having access to information on the status of individual customer applications would allow third parties to provide more informed support to clients during their application and provide alternative support in the event that they were found ineligible for Nest.

²⁹ The portal has since been updated to allow users to track progress.

5 Outputs, Outcomes and Impacts: advice service

5.1 This chapter examines all sources of evidence (qualitative interviews, quantitative survey and scheme monitoring data) in order to assess the outputs and outcomes of the Nest advice and support service, including referral to third party services. Findings from the qualitative interviews provide valuable insights and more detailed views from smaller numbers of respondents. Due to the smaller number of people interviewed they are not necessarily generalisable. For further information on methodology please refer to chapter 3.

Outputs

Advice from Nest

5.2 In total, 29,698 households received advice from Nest only (i.e. not via a referral to any third party) over the course of the scheme to September 2014. The largest proportion of the advice provided related to energy efficiency (a total of 26,238 instances) followed by advice on transport (3,780) and water efficiency (711). The number of households receiving advice was 13,419 in the 2012/13 budget year, falling to 7,984 in 2013/14 and standing at 2,736 to September 2014³⁰.

5.3 It is important to note however, that in undertaking the quantitative survey, it became apparent that not all those recorded as having received advice remembered, or were aware that they had received it (see Appendix III). This is further discussed in 5.23.

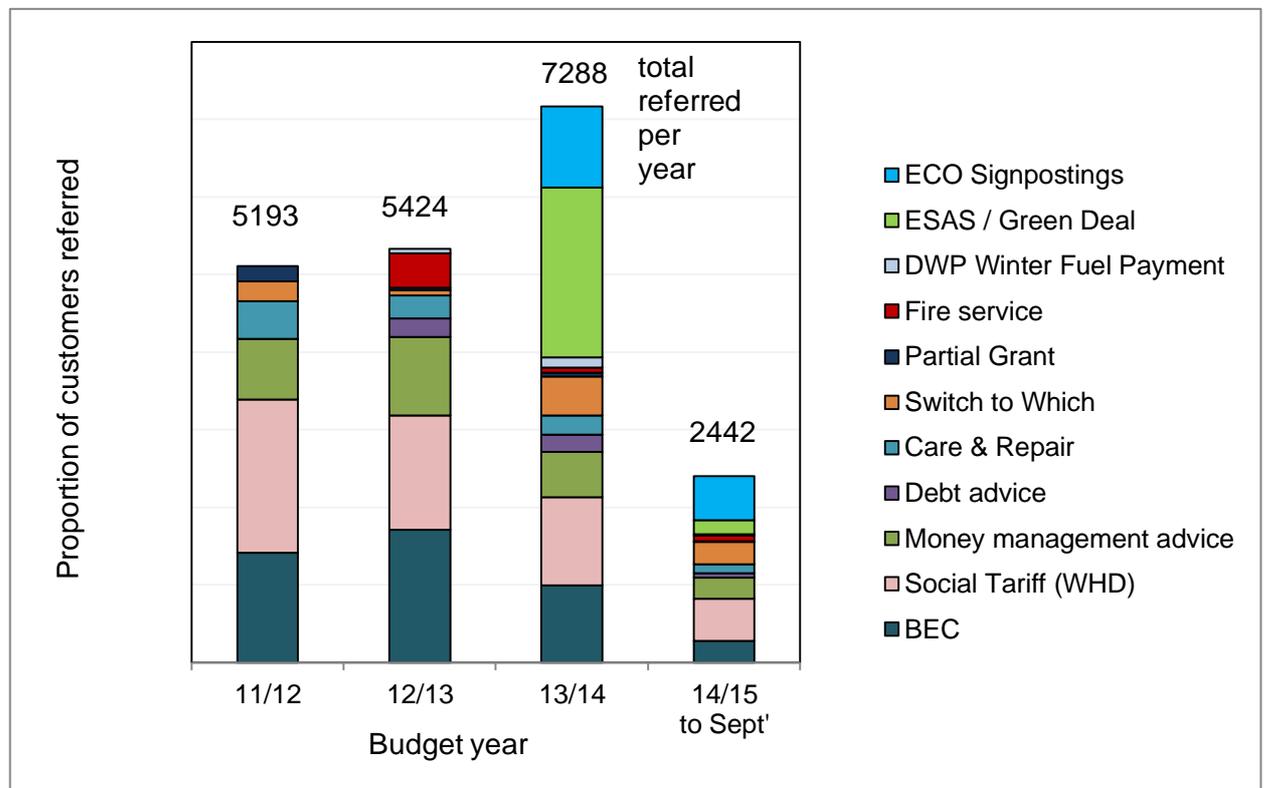
Advice from Third Party providers

5.4 Figure 3 over the page shows that the volume of households referred to third parties increased year on year from 5,193 in 2011/12 budget year to 7,288 in 2013/14, making a total of 20,347 over the life of the scheme to September 2014. Referrals for the budget year (2014/15) stood at 2,442 in September 2014. Since many households received more than

³⁰ Data for 2011/12 is not available as there was no standalone contact centre for Nest and so data could not be attributed to the programme.

one referral, the graph shows the proportions referred to each organisation for each year. The greatest number of referrals over the course of the scheme has been to the WHD, making up 25 per cent of all referrals, closely followed by Benefits Entitlement Checks (BEC) (22 per cent). Referrals for ESAS/Green Deal are not shown in the earlier budget years as at that stage neither ESAS nor Green Deal had been established.

Figure 3 Customers referred by Nest to third parties



Source: Nest monitoring data

5.5 Although third parties were generally happy with the Nest processes, many referred to the desire for greater referrals and hoped to receive further referrals for the remainder of the current and subsequent schemes.

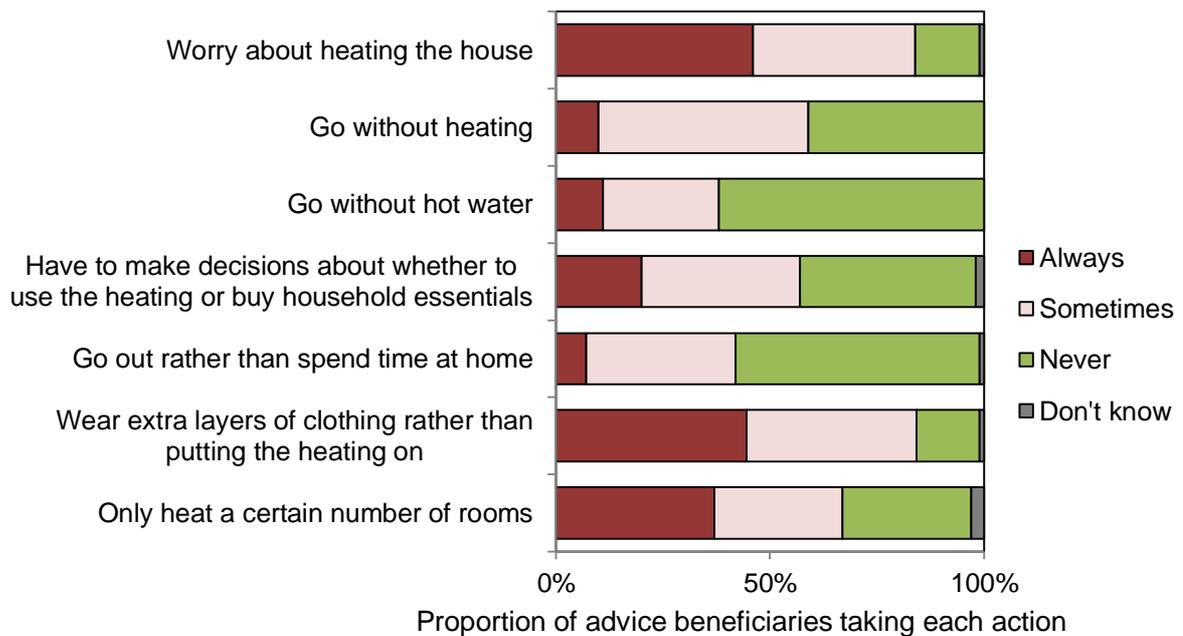
Effectiveness of targeting

5.6 According to monitoring data, 87 per cent of customers enquiring about the scheme in 2012/13 budget year were recorded as being in fuel

poverty, 82 per cent in 2013/14 and 84 per cent in 14/15 to the time of writing (based on 61-66 per cent customers providing data³¹). A slightly smaller proportion (75 per cent) of those surveyed who received advice reported being in fuel poverty prior to contacting Nest.

5.7 Figure 4 below shows that a large proportion of advice beneficiaries worried about heating their house prior to receiving advice from Nest (46 per cent reported that prior to calling Nest they would always worry about heating the house, 38 per cent reporting they would sometimes worry). Advice beneficiaries also reported undertaking a number of behaviours linked with their concerns about heating their home and the need to reduce their bills.

Figure 4 Self-reported behaviours of advice beneficiaries prior to calling Nest³²



Source: Quantitative survey of advice beneficiaries. Base: 913

5.8 Although some of the results are based on self-reported data, the collective evidence base, including scheme monitoring data, would suggest that the scheme has been effective in reaching those in fuel

³¹ Applicants are asked to provide their income details when they apply to Nest but this data is not validated by Nest.

³² Question: did the cost of heating your home lead you to act in any of the following ways?

poverty and who were in need of support. For a wider discussion of targeting, see section 4.39.

Outcomes and Impacts

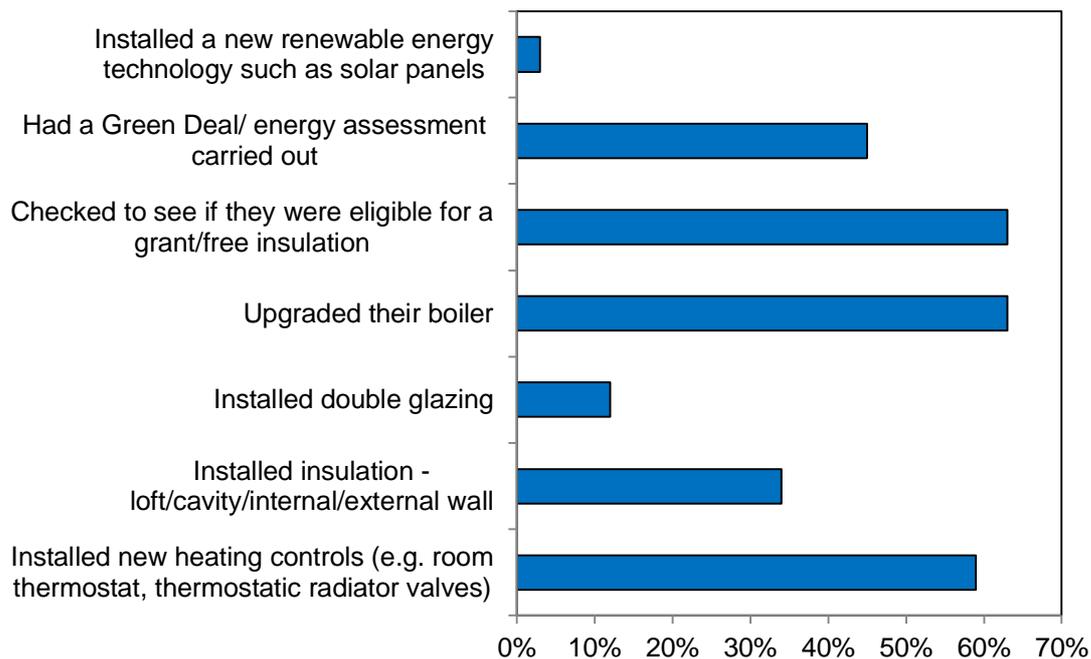
5.9 Those calling the Nest helpline receive direct energy advice and support from the front-end advice service. In addition, those who are found eligible for measures can receive further advice during different stages in the process including assessment, installation and inspection of measures.

Outcomes of Nest advice

5.10 Nest telephone advisors reported that the extent to which callers were receptive towards advice varied significantly between individuals and by the types of advice being given. Similarly, their experience from making customer call backs indicated that this also was the case with regard to following up on advice. Overall, the quantitative survey revealed that 77 per cent of those who received advice found it useful (47 per cent very useful and 30 per cent fairly useful).

5.11 A total of 59 per cent of those surveyed who had received advice reported that they had acted on it. Figure 5 and Figure 6 show the multiple actions these respondents reported they had taken based on the advice provided by Nest.

Figure 5 Actions beneficiaries reported having taken as a result of Nest advice



Source: Quantitative survey. Base: those who acted upon advice (535)

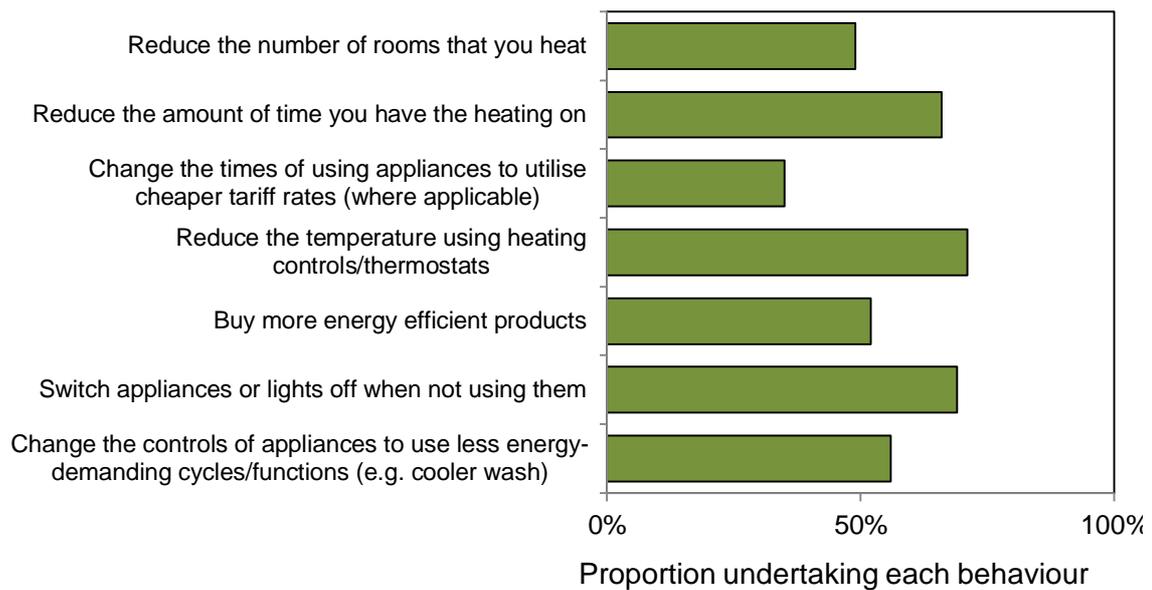
5.12 As shown by Figure 5 above, the most common actions taken by advice beneficiary survey respondents were checking to see if they were eligible for either a grant for free insulation or for an upgrade to their boiler, each of which was reported by 63 per cent of respondents. Over half (59 per cent) of respondents also reported installing new heating controls such as a thermostat following advice from Nest and a further 45 per cent reported having an energy assessment carried out. In addition, a total of 15 per cent had installed double glazing or renewable energy technologies.

5.13 Whilst the outcomes of eligibility assessments are unknown, many of the other actions, such as upgrading a boiler and installing double glazing and insulation could be expected to lead to improvements to the SAP rating of properties.

5.14 In addition to the above actions taken, survey respondents were asked if they made any of a list of behaviour changes as a result of advice.

Figure 6 shows that the behaviour changes most commonly reported to result from advice were; reducing the temperature and length of time heating was on, or switching off appliances or lights when not using them. These types of behaviours were also described by delivery team advisors as those which beneficiaries expressed the most interest in, as they offered beneficiaries the clear prospect of easily saving money.

Figure 6 Behaviour change customers reported as a result of Nest advice



Source: Quantitative survey. Base: those who acted upon advice (535)

5.15 A number of Nest front-end advisors interviewed individually about their experiences when providing advice, reported a lack of awareness amongst customers of energy saving behaviours or of the difference they could make to their energy bills. This was reinforced in qualitative interviews with beneficiaries, a number of whom reported having been surprised by the amount of energy they could save by changing their behaviour.

“...putting the TV on standby, energy saving light bulbs, putting economy wash on – I have done everything they suggested. Little things have made a big difference” **Advice Beneficiary**

5.16 When survey respondents were asked if they had continued to undertake energy saving behaviours they had taken as a result of Nest advice, more than 97 per cent reported that they continued to undertake

each respective action. Although the time elapsed since beneficiaries had received advice varied, this could imply that the advice has not only led to behaviour change immediately following the advice provision, but could have seeded longer-term behaviour change.

5.17 When survey respondents were asked if they were better able to heat their home as a result of the advice provided by Nest, just over half (53 per cent) of beneficiaries surveyed (base: 1001) reported that they were, (35 per cent 'a lot better able' and 18 per cent 'a little better able').

5.18 This research has relied on beneficiaries recalling and self-reporting behaviour change. A longitudinal study over a longer period of time would be better placed to assess the extent of long-term behaviour change resulting from the advice, along with energy use monitors to verify respondent claims.

Reasons for not actioning advice

5.19 Just less than a third (32 per cent) of advice beneficiaries surveyed reported not taking any action as a result of the advice they received, whilst a further 9 per cent could not remember whether they had taken any action.

5.20 Examining the reasons given for not taking any action, a quarter of those who reported not taking any action reported that the advice was not relevant and 15 per cent reported already being aware of the advice given. A further 14 per cent reported that they did not act on the advice because of the costs associated with it. Related to this, one member of the delivery team reported a particular reluctance amongst younger individuals to replace their light bulbs with more efficient models, because of the financial outlay required.

5.21 Overall, 1 per cent of those who did not take any action reported that this was because they did not understand the advice and 2 per cent because

they felt that it would be too difficult to do so. One stakeholder reported that the advice was often unsuitable for older people due to the jargon involved and the necessity for internet access. The same stakeholder argued that there is no substitute for providing advice face to face.

5.22 Just under a fifth (18 per cent) of respondents reported not acting because they were ineligible for measures. The measure most commonly mentioned in this context was installation of a new boiler, implying that securing support for a new boiler was the primary motivation for contacting Nest for this group of respondents. Both advisors and assessors also reported that some of those enquiring about the scheme were focused on gaining a free boiler and were neither interested in nor receptive to any accompanying advice on energy savings. This is reinforced by the fact that, according to the survey, more households (90 per cent) called the Nest line hoping to receive some form of household improvement than called hoping to receive advice (72 per cent).

5.23 Of those advice line callers who did not act, 5 per cent reported that this was because they had not received any advice. This perception was also encountered when discussing experiences with the subset who had received household improvement measures. When prompted to discuss their experience of receiving advice from Nest, a common response from those interviewed was that they could not remember receiving any energy saving advice, either over the phone or from assessors and inspectors. This limited awareness suggests that not all instances of advice were necessarily recognised as such by recipients.

Outcomes of third party referrals

5.24 Based on the information gathered through the eligibility checks, households that do not meet the qualifying criteria for Nest home improvement measures may be referred for free or subsidised energy efficiency measures through a third party or alternative scheme. Survey respondents who reported having been referred to a third party were

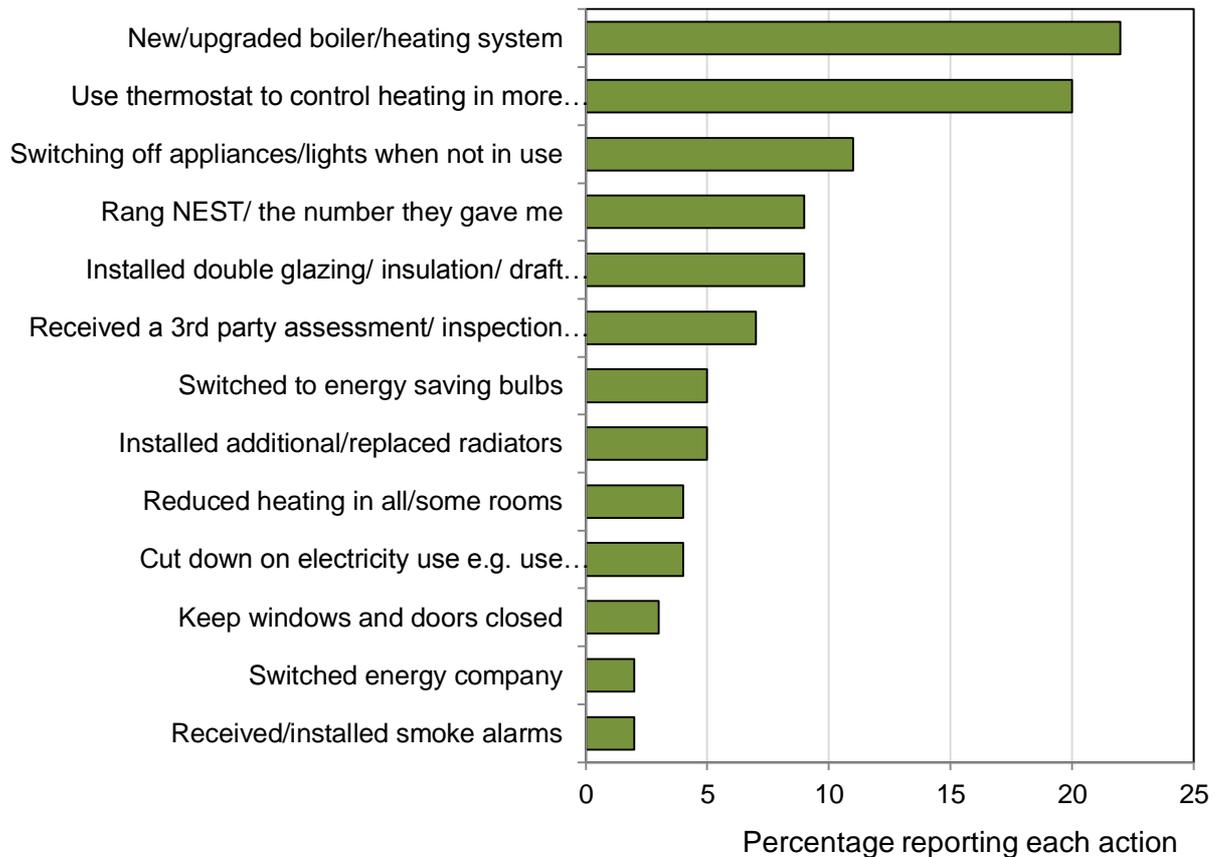
asked for the name of the organisation they had been referred to. In total, 54 per cent could not remember the name of the organisation to which they had been referred. A further 30 per cent specified an organisation to which the advice service did not refer people, frequently naming an energy supplier, including BG.

5.25 Overall, 70 per cent of respondents who had been referred to a third party reported that the advice they were given was either fairly or very useful and 51 per cent reported that they had acted on the advice in one or more ways.

5.26 Due to the large number of potential outcomes of referral, an open question was used to ask respondents what advice or support they had received. Because respondents were not prompted with a list of potential outcomes, the results relied strongly on the respondent recalling the content and outcomes of the conversation. Thirty-eight per cent of respondents either could not remember what had been discussed, could not remember enough detail for the answer to be meaningful (i.e. “I phoned who they said to phone”) or gave a completely unique response that did not fit into any of the other categories reported (i.e. “I got rid of my chip pan, I don’t deep pan anymore”).

5.27 Figure 7 shows the most common actions survey respondents reported having taken (actions reported by fewer than 2 per cent of respondents have been excluded). The graph shows the proportion of respondents reporting taking each action. Some respondents reported taking more than one action as a result of the advice provided to them.

Figure 7 Actions beneficiaries reported having taken as a result of third party advice



Source: Quantitative survey of third party referral beneficiaries. Base: 191: Those who acted on advice (1 Proportions lower than 2% not reported).

5.28 Figure 7 is indicative of the diversity of actions taken by respondents as a result of third party advice. The most commonly cited action, which was upgrading of boiler/heating systems, was taken by 22 per cent of the 191 respondents who reported acting on the advice whilst 36 (19 per cent) reported using their thermostat to control heating in a more efficient way.

6 Outputs, Outcomes and Impacts: household improvement measures

6.1 This chapter, as with Chapters 4 and 5, examines the full range of qualitative and quantitative evidence but with the addition of case studies developed to provide examples of households who have benefited from household improvements supported by Nest. The qualitative findings and case studies provide valuable insights and in-depth views from smaller numbers of respondents. Due to the smaller number of people interviewed they are not necessarily generalisable. For further information on methodology please refer to chapter 3.

Outputs

6.2 A total of 18,481 measures were installed up to September 2014, in 15,603 households (Appendix VI shows the range of measures installed in beneficiary households, by urban and rural areas). Gas boilers accounted for the majority of measures - almost two-thirds of all interventions - followed by oil (11 per cent) and loft insulation (10 per cent).

6.3 In line with the aim to provide a 'whole house approach', individual households received up to four separate measures (see Appendix VI for full list of measures) through Nest. The majority (84 per cent) of households received one measure. Perhaps reflecting the higher cap for off-grid properties, rural households on average had significantly more measures installed than urban households (on average, the number of measures installed per household was 1.21 and 1.16 in rural and urban areas respectively; table not shown).

Table 2 Number of measures installed per household and whether residence was rural or urban – April 2011-September 2014

Number of Measures Installed*	Rural Areas		Urban Areas		Total Number of households
	number of households	%	Number of households	%	
1	4,751	36	8,484	64	13,235
2	870	42	1,222	58	2,092
3 or 4	155	44	195	56	350
Total	5,776	37	9,901	63	15,677

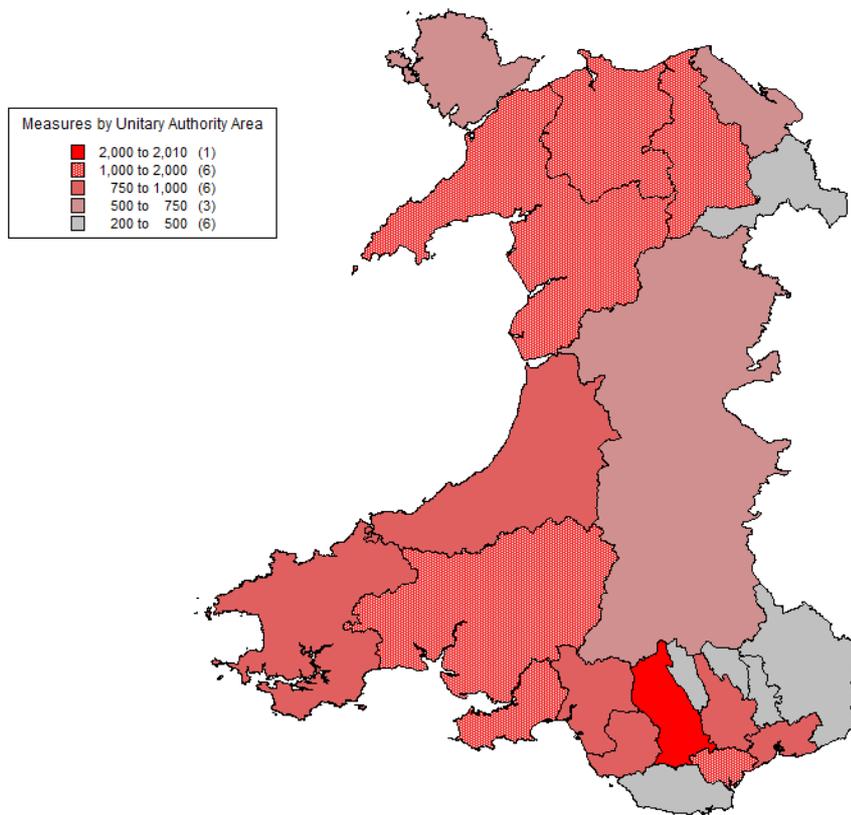
* A small number of households had 4 measures installed and so data has been amalgamated with those receiving 3 measures as it would not be valid to report the split between urban and rural households.

Source: Nest

6.4 Figure 8 summarises the energy efficiency improvement measures delivered by Nest across Wales. It shows a higher incidence of measures delivered in Rhondda Cynon Taf, Swansea and Denbighshire and lower numbers in Blaenau Gwent. This reflects the proportions of households benefiting documented in the Nest 2012 Annual Report³³. There is no available data on the proportion of households that are eligible in each area. Despite the fact that the qualitative research was focused on those areas with relatively high and low numbers of beneficiaries, no substantial evidence was found to confirm the reasons for the different numbers of measures installed across the country.

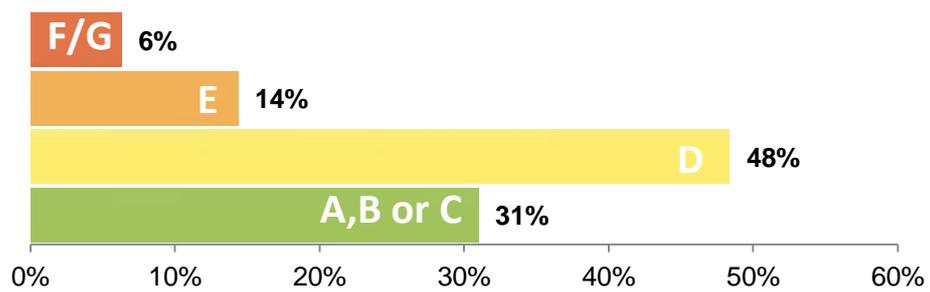
³³ Welsh Government (2013) Nest Annual Report April 2012 – March 2013; <http://www.nestwales.org.uk/sites/all/themes/zen/zen-internals/documents/annual-reports/nest-annual-report-2012-13-en.pdf>

Figure 8 Map showing household improvement measures delivered by Nest



Source: Nest/Miller Research

Figure 9 SAP rating following installation of measures, average from April 2011 to 30th September 2014



Source: Scheme monitoring data

6.5 Figure 9 indicates that just under one third of all properties benefiting from a Nest measure were increased to a rating of A, B or C from a rating of F or G. The SAP rating of almost half of all properties was increased to D, still demonstrating a substantial increase from their

former F/G rating. A small proportion of homes receiving an intervention remained F or G rated, predominantly because the cap per house was too low for some properties to receive sufficient measures or because no other measures were appropriate. In total, the scheme was successful in improving property SAP ratings above an F or G for 94 per cent of those who received a household improvement package.

Effectiveness of targeting those in fuel poverty

6.6 According to scheme monitoring data, prior to receiving household improvements from Nest, 55 per cent of household improvement customers were identified as being in fuel poverty (according to the fuel poverty definition for Wales) in the 2012/13 budget year, 62 per cent in 2013/14 and 62 per cent in 2014/15 to September 2014³⁴.

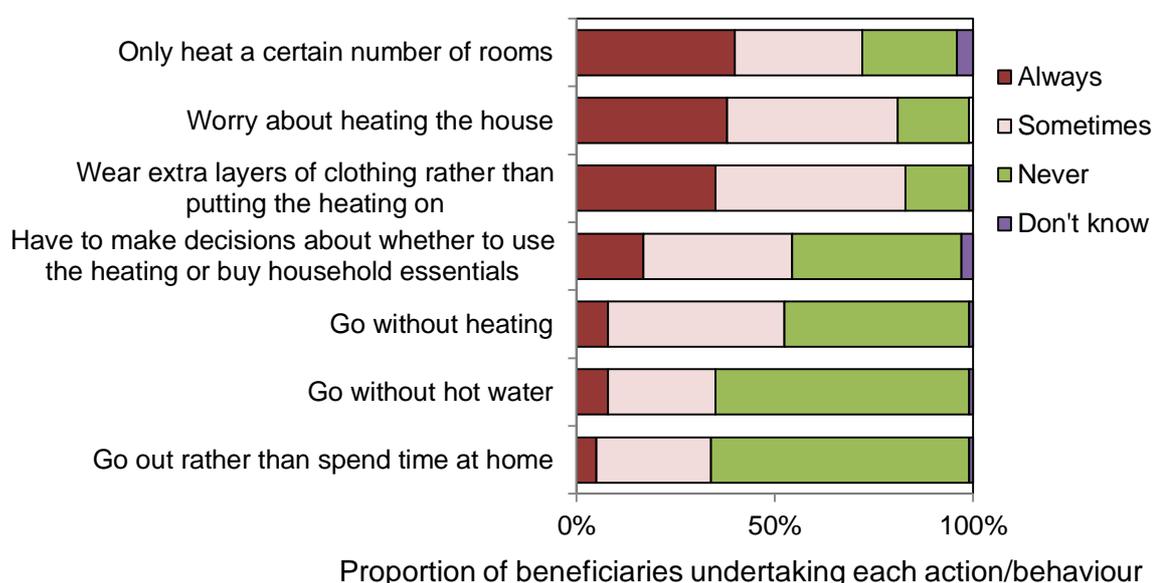
6.7 Results of the survey suggest that a greater proportion of those receiving measures were in fuel poverty than indicated by the monitoring data³⁵. In total, 78 per cent of beneficiaries who were surveyed in the home improvement sample reported spending more than 10 per cent of their household income on heating their home prior to receiving support (the proportion was slightly lower, at 75%, of the advice sample). This would suggest that Nest targeted those in fuel poverty with reasonable success. Whilst it is important to recognise that this question required customers to both remember and self-report whether they spent more than 10 per cent of household income on heating (and so is not necessarily reliable), this indication that they were in fuel poverty is reinforced by their reported behaviours prior to receiving Nest measures (as presented in Figure 10 and discussed below).

³⁴ Based on un-validated income data provided by >97 per cent of customers.

³⁵ This difference may be due to sample survey response bias. There is no way of knowing for certain whether those who either could not be contacted for the survey or were unwilling to participate were more or less likely to be in fuel poverty.

6.8 Figure 10 over the page shows that a large majority (81 per cent) of household improvement beneficiaries sometimes or always worried about heating their home prior to receiving a home improvement package from Nest. Seventy two per cent said that they only heated a certain number of rooms. More than half (55 per cent) reported having to make decisions about whether to use the heating or buy household essentials, whilst a smaller proportion reported taking more extreme actions due to the cost of heating their home, such as going out rather than spending time at home (34 per cent).

Figure 10 Self-reported behaviours of customers prior to receiving Nest household improvement measures³⁶



Source: Quantitative survey of household improvement beneficiaries. Base: 408

6.9 Nest monitoring data suggest that a greater proportion of those initially enquiring about the scheme were in fuel poverty than those who eventually received a measure (85 per cent of those initially enquiring who were prepared to supply fuel poverty data (55 per cent of the total enquiries) compared with 63 per cent of those receiving a measure³⁷). This suggests that a substantial proportion of those reporting that they were in fuel poverty did not receive Nest household improvements.

³⁶ Question: did the cost of heating your home lead you to act in any of the following ways?

³⁷ Monitoring data for the three months to September 2014.

However, the study design did not allow us to examine the reasons why individuals enquiring about the scheme did not receive a measure so it should be noted that although in some cases individuals may have been screened out due to not meeting the eligibility criteria, others may have chosen not to proceed despite being eligible. Data from Figure 10 and Figure 4 indicate similar levels of concern about heating costs between beneficiaries receiving advice only and those who also received measures. For example, 84 per cent of advice beneficiaries reported worrying about heating their house, compared with 81 per cent of those who received measures from Nest.

6.10 One member of the management team attributed the ineligibility of some households reportedly in fuel poverty to the SAP rating of their property or because they were not in receipt of *means tested* benefits. This would imply that the scheme's eligibility criteria (see paragraph 4.14) prevent a subset of those meeting the definition of fuel poverty from receiving household improvement support.

6.11 Linked to this issue, one member of the scheme management team suggested the need to target a new group; vulnerable low income households, including households who are struggling to pay their fuel bills but are currently ineligible because they are not claiming the relevant benefits, or because their property does not have an F or G SAP rating.

Effectiveness of targeting rural households in hard to treat homes

6.12 Geographical coverage of Nest has been uneven (see Figure 8) but this may be a reflection of both the different level of need across areas, and how active the local authority has been in publicising and making referrals. The delivery team admitted that targeting rural areas had been challenging:

“Accessing rural areas has been more challenging as people are more isolated cut off from communities” **Delivery team member**

6.13 There were perceptions from the scheme management and delivery team members that the number of rural referrals had increased in later years as a result of increased efforts to target rural off-grid properties. According to scheme monitoring data however, there was no increase, and in fact, the proportion of those receiving improvements in rural areas decreased marginally from 45.9 per cent in 2013/14 to 43.2 per cent in the 2014/15 year to September. It should be noted that there is no available data on the proportion of households that are eligible in rural vs urban areas.

6.14 The data further suggests that, over the most recent two and a half budget years, from April 2012³⁸ to September 2014, only 16 per cent of households receiving home improvements each year were residing in off-gas homes. This proportion had increased to 17 per cent for the most recent three months of data (July-September 2014) and stood at 19 per cent for September 2014. Due to a lack of data on the total number of off-gas homes in Wales, it is difficult to assess the success of the scheme in targeting off-grid homes. However, members of the delivery and management teams commonly expressed the difficulty of improving rural, off-gas homes within the cap available for each property.

Effectiveness in reaching vulnerable households

6.15 While interviewees acknowledged there would be a trade-off, it was argued that rural areas needed further targeting and that consideration should be given to raising the cap for installations in rural areas.

6.16 Assessors and installers generally reported that they believed the majority of those receiving measures were in great need of support and had benefited significantly from the home improvements. The kinds of people they mentioned as examples of those in need of support and who had benefited from Nest were older people, those with health problems,

³⁸ Data was only gathered from April 2012 onwards.

disabilities and young children as well as a number with substance misuse issues. Although the study only surveyed a sample of beneficiaries, the survey data would appear to reinforce this, with 55 per cent of households recorded as consisting of one or more individuals over the age of 65 years and 61 per cent of households including an individual with a limiting long-term illness or disability. The anonymised case study below illustrates the experience of a Nest beneficiary with ill health.

Mrs Lloyd, 42, semi-detached stone house, Ebbw Vale

Mr and Mrs Lloyd's previous boiler was old and inefficient. As a result of the consequent high cost of heating their home the couple used a log burner to keep warm last winter. The boiler was also temperamental and in May 2014, stopped providing hot water altogether. Mrs Lloyd was due to have surgery in September which would have left her with temporary limited mobility. She therefore wanted to have the heating fixed so that she could have hot baths when she returned from hospital.

“Before, it would never get warm, we’d have a log fire but it was expensive and you don’t want to get up because the rest of the house is so cold, you want to stay there when it’s so nice, sleep on the sofa.

Financially it’s come at the right time because we couldn’t have afforded the boiler... It would’ve been a struggle and it’s not like you can do without.”

The cost of a new boiler would have been too much for the couple to afford. It was then that Mrs Lloyd and her husband remembered a newspaper advert for Nest.

After finding out they were eligible, the couple received their new boiler within two weeks, along with new radiators throughout the house. Mrs Lloyd was pleased with how quickly the house warmed up and has found it cheaper to heat her home. She is particularly grateful that she will be able to have hot baths.

6.17 Across interviewee groups (stakeholders, the delivery and management team) it was reported that Nest had been particularly successful in targeting groups who already access services. For example engagement with older people had been facilitated through groups such as Age Concern and Care and Repair. It was felt that older people may also have been more aware of Nest marketing (e.g. TV, radio and newspaper adverts and community sessions) than vulnerable working people who may have been too busy to be engaged by such communication channels.

6.18 Members of the delivery team were unsure about the extent to which Nest had managed to reach the most socially excluded groups, for example gypsy-travellers, or those with complex needs who do not have the capacity to contact Nest.

“There is a depleted pool of those eligible and likely to have been those most able to manage the process. We [Nest] need to be moving on to more vulnerable people who aren't able to manage their own finances, household, and they need a lot more support to get through the scheme” **Delivery team member**

6.19 Scheme management and delivery team members, as well as some stakeholders suggested that there needed to be further consideration as to how the scheme engages with vulnerable people and those living in fuel poverty in rural areas. They suggested that this could be supported by: a collection of robust evidence about the current quality of Welsh housing stock to inform targeting; and improvements to the marketing of the scheme to reach hard to reach groups. In order to engage more vulnerable households in the scheme, interviewees suggested the scheme work with the NHS, social services and other relevant stakeholder groups.

6.20 Related to this, a beneficiary who had been in hospital prior to receiving improvements referred to difficulties in accessing the improvement package as, under the Nest scheme, householders have to be present at the time of the installation. The beneficiary reported being told that they would be unable to receive Nest improvements until they were back in their own home, and yet also described being unable to be discharged until effective heating had been installed.

Outcomes and Impacts

Customer satisfaction

6.21 In addition to the satisfaction ratings discussed in Chapter 4, survey respondents were also asked if they had experienced any problems relating to the home improvement they received. When asked if they had experienced any of a list of problems relating to the installation, 17 per cent reported experiencing problems relating to the installation itself, 10 per cent reported having problems understanding how to use the installation and 9 per cent stated that they had experienced disruption and untidiness to their homes (base= 408).

6.22 Scheme monitoring data additionally shows a decrease in the number of complaints from 2012/13 to the current 2014/15 budget year³⁹, suggesting improvements in customer satisfaction over time. As Table 3 indicates, the total number of complaints was highest in 2012/13 (105 registered), falling to 80 complaints in 2013/14 and standing at only 24 to September 2014. This is particularly positive given the large numbers of customers benefiting from the scheme. The research did not include examination of the type of complaints or the reasons why complaints were not resolved within the service level agreement.

Table 3 Customer care performance

	11/12	12/13	13/14	14/15 (to Sept '14)
% of Inspections completed within 15 days of installation	60%	59%	73%	64%
Total number of complaints	57	105	80	24
% of complaints resolved within service level agreement of 20 days	-	89%	47%	29%

Source: Scheme monitoring data

³⁹ Notwithstanding seasonal differences – given the 2014 data relates to spring and summer months only.

Economic

6.23 Overall, 89 per cent of those surveyed reported that they were better able to heat their home as a result of the installation, whilst 62 per cent reported that their energy bills had been reduced as a result of the household improvements. This was reinforced by beneficiaries interviewed qualitatively, many of whom reported noticing an increase in efficiency as a result of a new boiler, allowing them to reduce the amount of time the heating and/or hot water needed to be left on. Several beneficiaries also noted large savings on their fuel bills, some of whom reported they had benefited from as much as a 50 per cent reduction.

“we used to have the boiler on much more before we got the new one. It’s much more efficient now. We were paying £118 a month for gas and electricity but it’s down to £57 a month now”
Household improvement beneficiary

6.24 The anonymised case study below helps to illustrate the economic impact of a Nest installation on one household.

Mrs Watkins, in her 20s, terraced house, Denbighshire

Mrs Watkins is a mother of two young children. Their boiler broke in July 2014, and the family had to go to a relative nearby for baths. The family had been paying £10 a week for their gas but, shortly before their boiler broke down this had increased to £20 per week. As a result, the family had been reducing its spending on the children to pay for the increased fuel bills.

Mrs Watkins had tried to have the boiler fixed but was told that it couldn't be repaired. Eventually, a local plumber gave her the details of Nest. When Mrs Watkins called Nest and told them about the situation, she was told that they were eligible for the scheme. The survey was undertaken shortly afterwards, and they had a new boiler installed, as well as a new radiator in the bathroom and thermostats added to existing radiators.

Mrs Watkins was provided with instructions for the heating system that *“even a kid of ten or eleven down the street understood”*. The installers recommended that the boiler be kept on the ‘economic’ setting, which Mrs Watkins reported she was now *“always using”*. The installers also explained to her how the thermostat can be reset and how the operational temperature of the boiler can be

“As they were doing the work, they explained every step. At every stage, I was told what they were doing”.

“The new heating has made a hell of a lot of difference.. We’ve saved a lot of money since it was installed, I’ve only put £10 in since last week – I’m very pleased with that.”

increased.

The family are now able to take baths at home and the heating heats up “*noticeably faster*”. Mrs Watkins’s youngest child, who slept in the smallest room, has a heart murmur and requires the temperature in his bedroom to be maintained at a constant temperature. The new installation means the family is better able to ensure this.

6.25 This example, in addition to the results of the survey, would suggest that Nest has been successful in helping residents to keep their homes warm at a more affordable cost, at least temporarily helping them to become more resilient to rising energy prices. However, whilst increased energy efficiency and reduced fuel bills resulting from the scheme have temporarily made heating more affordable for many beneficiaries, several stakeholders were sceptical of the long term difference to fuel bills, given continual increases in the cost of fuel. It was noted that insulation, in combination with a new boiler, would reduce heat loss, offering the potential of greater return on investment in the long term in the face of increased fuel costs.

6.26 A small number of beneficiaries interviewed reported noticing an increase in the fuel bills with the replacement heating system provided by Nest. It cannot be assumed that this was necessarily the result of the new installation as it could also be due to increased use of heating i.e. heating more rooms or to a higher temperature.

6.27 A member of the front-end advice management team also reported that some beneficiaries who had previously lived without central heating were unaware of the cost of fuel. As a result, the team member reported some beneficiaries being unprepared and sometimes unable to meet the fuel bills incurred as a result of the use of their new boiler. Delivery team members therefore emphasised the importance of providing information and advice on the likely on-going costs they would incur in addition to, and as a result of the installation of measures.

6.28 Other economic benefits suggested by delivery and management team interviewees included the increased value of properties as a result of improved SAP ratings and a perception that beneficiaries would have greater disposable income. However, interviews with beneficiaries suggested that reduced bills meant they could use their heating more rather than increasing the amount of disposable income they had.

6.29 Besides the economic benefits to householders, SME installers also reported benefiting significantly from the scheme. Many referred positively to Nest, describing the extent to which they valued the additional employment and revenue it provided to them, alongside a sustained relationship with BG and even recommendations to the family and friends of beneficiaries. A member of the scheme management team suggested that this additional employment plugged a gap in installation work between funding streams from CERT to ECO. For some installers, the work provided by Nest was even enough to safeguard a number a jobs which would otherwise have been under threat.

“[The scheme] is a godsend, and for a local company like ours it’s a lifeline. To have regular work makes a massive difference” **SME Installer, South Wales**

“Nest has helped us a great deal, we are a small company and it has helped us give opportunities to local lads” **SME Installer, South Wales**

6.30 These reports are reinforced by monitoring data that show that, at any one time over the course of the scheme, up to 46 SMEs have been supported, creating a total of 83 apprenticeships, trainee positions and jobs. Members of the BG scheme management team argued that the scheme had contributed positively to local economies throughout Wales by contributing to job creation. This was, however, disputed to some extent by one stakeholder who argued that there was an under-representation of SMEs employed in West Wales compared, in particular, to South East Wales; this stakeholder believed that SMEs from the South East were working in other parts of Wales, thereby limiting local economic impacts.

6.31 A key benefit of involvement in the scheme for SMEs is the training that is provided to qualify staff as Nest installers. This training is additional to that provided by the business itself but is often transferable to wider areas of their work. The case study below illustrates how one company reported benefiting from the training their staff received as a result of Nest.

SME Installer, Gwent

One of the installers for Nest is a small heating engineering company in Gwent who primarily supply and install gas, oil LPG and solid fuel boilers. The company were contracted by BG to carry out installations delivered through Nest and have been part of the scheme since its inception. The team have installed full central heating systems, draught proofing measures and loft installations as part of Nest.

Besides the work and revenue provided by the scheme, the company has benefited from the training staff members have received through working with BG.

BG health and safety policies and procedures are extensive and strictly enforced. Like many other smaller contractors, the company had not considered the full set of these procedures until they received training from BG. The training has increased their awareness of various safe working practices. An example of this is the concept of a safe haven, which requires customers to agree a space in which they will reside whilst installation work is carried out, minimising risks to all parties. Practices such as this and knowledge gained by installers through BG training has been disseminated throughout the rest of the company to other areas of their work.

“The scheme is fantastic... the people are treated the same as private customers, if not better due to the tight standards relating to the fact that it’s a government scheme”.

6.32 An additional benefit reported by a member of the scheme management team and other stakeholders was the joint working and development of partnerships between stakeholders working to tackle fuel poverty.

Social/ health/ wellbeing

6.33 Many of those involved in the delivery and operation of the scheme were keen to emphasise that the greatest impacts of Nest were to the quality of life as opposed to reduced energy bills. This was also reinforced by several beneficiaries who were interviewed qualitatively (see case study 6).

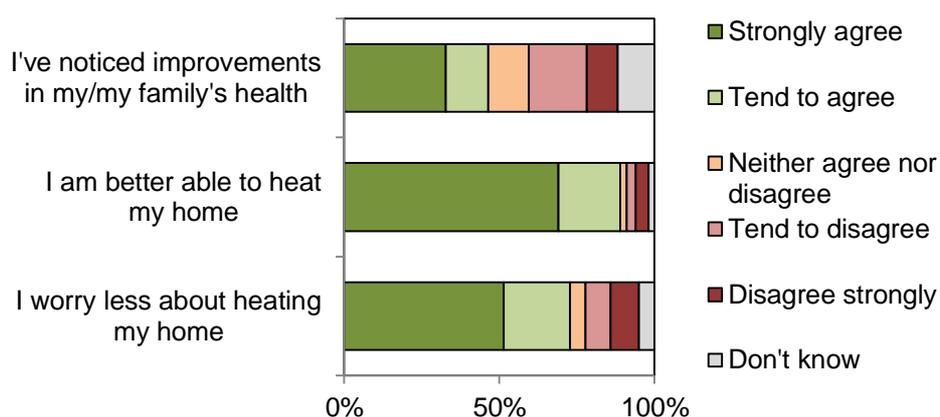
6.34 There were instances of beneficiaries interviewed qualitatively who had been living sometimes entirely without heating or hot water prior to the scheme, either due to faulty systems, the cost of fuel or both. They described the inconvenience this caused them, their guilt for relying on friends and relatives and also noted being unable to dry their clothes in winter.

“I’m not putting anyone out anymore, I always thought I was disturbing people when I went round to wash....my mum isn’t that well off and she is on a water meter too” **Household improvement beneficiary**

“Before I couldn’t afford to have a bath here. I’d go to the gym . It’d be cheaper for me to pay £30 to be a member in the gym a month than it was to have a bath in my own house.” **Household improvement beneficiary**

6.35 Due to the kinds of issues described above, having a reliable and more efficient boiler had direct positive impacts on beneficiaries, making their life both easier and providing them with what many beneficiaries referred to as *“peace of mind”*. Reinforcing this, Figure 11 over the page shows that almost three quarters of beneficiaries surveyed worried less about their heating as a result of the improvements they received. A small number of the qualitative Interviewees, including both beneficiaries and members of the delivery team, linked this with reduced stress levels and improved mental health.

Figure 11 Impacts of home improvements as reported by beneficiaries



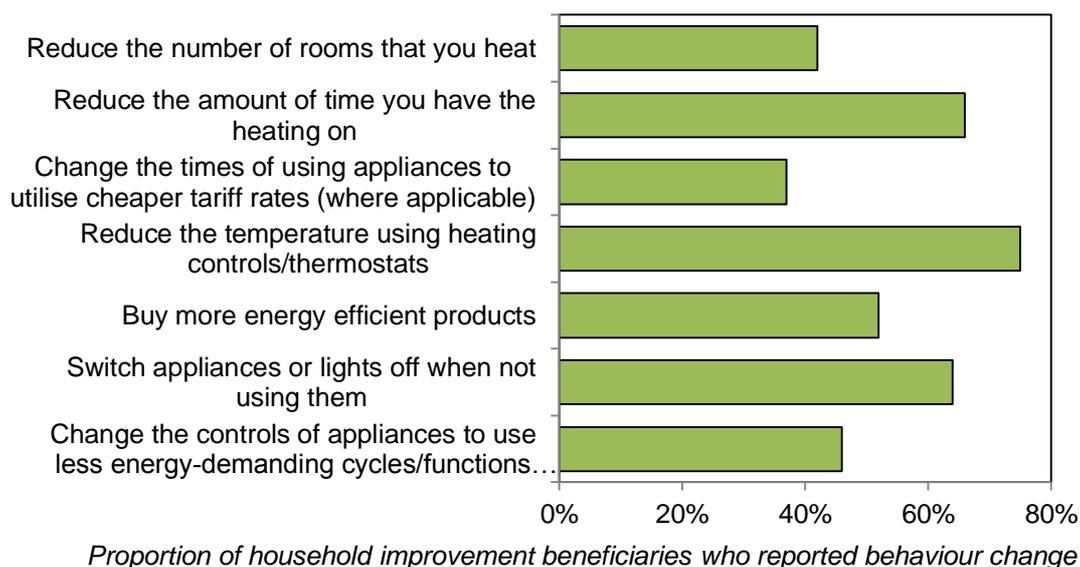
Source: Quantitative survey of household improvement beneficiaries. Base: 408

6.36 Of those surveyed, almost half of beneficiaries reported improvements in their health or that of their family as a result of the home improvements. External stakeholders also pointed to health benefits resulting from the scheme, predominantly in relation to those with existing health problems and those who spent little time out of the house, such as the elderly or those with young children. For example, a member of the scheme management team referred to a beneficiary who had been suffering from asthma whose ailments were reportedly relieved following Nest home improvements.

Behaviour change

6.37 In total, 83 per cent of beneficiaries surveyed stated that they were more aware of their energy use as a result of the installation they received. Figure 12 over the page illustrates the type of behaviour changes respondents reported as a result of the installation they received, the most common behaviours being: using heating controls/ thermostats to reduce temperatures and reducing the amount of time that heating was on for.

Figure 12 Reported behaviour change as a result of installation



Source: Quantitative survey of household improvement beneficiaries. Base: 193

6.38 The qualitative interviews with beneficiaries identified some examples of relatively small behaviour changes people had been advised to make as a result of the installation and advice they received:

“I learnt lots of new things as a result of the advice e.g. putting the TV on standby, energy saving light bulbs, putting economy wash on I have done everything they suggested and the little things have made a big difference” **Household improvement beneficiary**

6.39 Other beneficiaries reported using their heating in a different way as a result of their boiler installation:

“I now only turn thermostat up to three-quarters and have it on for a ‘quick blast’ to warm house’, before I used to have it on for hours, and it still wasn’t keeping the house warm”. **Household improvement beneficiary**

Value for money

6.40 Value for money of the Nest scheme can be measured in a number of ways. The most straightforward of these is probably to examine energy savings and return on investment on home improvement packages. Table 4 shows the annual average and overall number of households assisted through measures, the scheme cost and the average reduction

in energy costs per household. Using this data, we can estimate the overall annual energy saving accruing to beneficiary households over the period of the scheme to date as totalling £7.48m. These benefits can be expected to continue to be produced for at least the expected minimum life of a boiler (10 years), to deliver a lifetime benefit of £74.8m. Given an overall investment of £58m, this equates to a benefit to cost ratio of 1.29, (£74.8 divided by £58.0) meaning that the Welsh economy achieves a return of £1.29 back for each £1 spent. Alternatively, this could be seen as having a 7.75 year payback period, or an annual rate of return of 12.9 per cent.

Table 4 Return on Investment of Interventions April 2011 – September 2014

	11/12	12/13	13/14	14/15	Scheme Total
No. of households invoiced	3,723	4,668	4,906	1,460	14,757
Scheme Costs, £	15,939,299	19,192,030	16,623,911	6,268,582	58,023,822
Average reduction in energy costs per household, £	552	511	474	492	507
Overall annual savings, £	2,055,096	2,385,348	2,325,444	718,320	7,484,208
Benefit to cost ratio	1.29	1.24	1.39	1.15	1.29
Payback period (years)	7.76	8.05	7.15	8.73	7.75
Effective ROI	12.9%	12.4%	14.0%	11.5%	12.9%

Source: Nest monitoring data

6.41 In reality, the investment will be more effective than this, given the longevity of the return on investment for interventions (expected 10 years for boilers, but considerably longer for some other measures) and the fact that fuel price increases (expected to be around 5 per cent p.a. for fossil fuels) are likely to grow faster than the yields offered by alternative uses for the investment (possibly around 3 per cent p.a.). In

addition to energy cost savings, the scheme has levered additional returns for beneficiaries, including:

- A total of £1,548,934 in annual benefits claims for those signposted to benefits checks;
- An estimated £57,110 in annual Warm Homes Discounts achieved through signposting;
- A small amount (circa £5K) of partial grant vouchers for household measures.

The first two of these will clearly accrue over a number of years, subject to changes in availability or eligibility criteria.

6.42 In addition to the above, the contracting out of delivery arrangements to agencies in Wales will have additional impacts. For example, both the front-end advice centre and BG call centre will deliver economic impacts in their respective local areas through sourcing of goods and services and some of this spend will be re-circulated by beneficiaries. Employees' wages and salaries will also be recycled through the Welsh economy in the same way. The use of SME installers across Wales will echo this impact, with scheme spending being disseminated in the locations where household interventions were delivered. These financial impacts will have further impacts in terms of supporting additional employment in Wales, through the additional finance circulating in the economy.

6.43 A member of the scheme management team queried the long-term value for money that the scheme offered. They suggested that greater cost effectiveness could have been achieved if Welsh Government could have worked with others to provide additional measures such as new windows, doors and roofs to complement the installations funded by Nest.

6.44 In order to make an assessment on value for money, it is useful to draw comparisons with other schemes. This is however difficult without comparable data for other schemes over the same timeframe. The tighter

eligibility criteria for Nest interventions and the limitations on private landlords in comparison to HEES, whilst aiming to target those most in need, could be expected to reduce the reach of the scheme. Meanwhile comparisons with Arbed need to take account of the economies of scale that have been achieved through its partnership work with Housing Associations and also the fact that the cost per household of interventions within Arbed were broadly similar to those of Nest⁴⁰.

Counterfactual

What would have happened in the absence of the scheme?

6.45 Establishing the counterfactual, that is what would have happened in the absence of the programme, is a complex challenge; given the wide range of potential contributors to improvement of circumstances or development of behaviour change in this field. In this case, the evaluation team were limited to asking beneficiaries what they would have done in the absence of the Nest intervention.

6.46 There was no doubt amongst external stakeholders, the scheme management and delivery team that without Nest, a much greater number of people would be suffering from fuel poverty in Wales. Despite the number of other schemes available, it was felt that there were no other schemes that delivered a similar level of intervention⁴¹. Nest was considered to cover a broader range of groups and offer a wider range of installations, which could provide a longer term benefit to recipients.

6.47 The survey of those who had received household improvements revealed that the majority would have been unlikely to go elsewhere for support, or lacked awareness of other sources of support available. Although a very small percentage mentioned other schemes such as

⁴⁰ Welsh Government figures show Arbed Phase 1 supported 7,500 interventions at a cost of £29.6m, giving a cost per household of £3932. Nest supported 14,757 interventions at a cost of £58.0m, giving a cost per household of £3,947.

⁴¹ Major energy suppliers have chosen to fulfil the HHCRO element of ECO (Boiler replacements) rather than more expensive measures such as ECO external wall work .

government, local authority and energy company schemes, 54 per cent said that they did not know where they would have received support if it weren't for Nest, and a further 27 per cent reported they would not have received support from another scheme.

6.48 Many beneficiaries interviewed qualitatively also suggested that without Nest, they would have continued to experience cold homes or high fuel bills, mainly because the cost of a new boiler was unaffordable. Whilst some claimed they could have paid for the installation themselves, they also claimed they would have had to save money over time, in the meantime suffering from the cold (see case study 2).

"If I hadn't got the new boiler I would have had to borrow money or save up to get it..." **Household improvement beneficiary (case study 9)**

"We couldn't afford a new boiler and radiators on our own. We probably would have soldiered on, paying for someone to keep fixing the old boiler" **Household improvement beneficiary**

6.49 Beneficiaries in the private rented sector also doubted landlords would have replaced the boiler. Without the scheme they would have continued to suffer from regular boiler breakdown, high fuel costs and the cold.

7 Conclusions

- 7.1 This chapter draws on the evidence presented in the previous chapters to summarise and make informed conclusions on the Nest scheme, its processes, success in supporting a reduction in fuel poverty, reaching households most in need, outcomes, impacts and value for money.
- 7.2 The scheme has ultimately been successful in achieving a number of its objectives, removing a large number of households from fuel poverty, improving the energy performance of some of the poorest housing stock, providing a package of advice to large numbers of householders and growing SMEs in Wales. The research has however highlighted questions over the suitability of the eligibility criteria and caps per household in targeting those most in need and achieving a 'whole house approach', as discussed in subsequent sections.

Scheme processes

- 7.3 Qualitative evidence suggests that management, governance and customer service have been strengths of the Nest scheme. It is clear that monitoring data has been effectively collected and used to inform alterations to the scheme, ensuring scheme processes and targets have been responsive to challenges and improved over time.
- 7.4 Meanwhile, marketing and accessibility for the most vulnerable were highlighted as weaknesses of the scheme which should be improved for the future in order to ensure that those most in need are both aware of and able to access the support available to them.

Supporting a reduction in fuel poverty

- 7.5 Qualitative and quantitative evidence suggests that Nest domestic energy efficiency improvements have been successful in achieving the ultimate aim of reducing the fuel poverty experienced by households benefiting from the scheme. This is underpinned by an overwhelming majority of those benefiting from measures reporting that they were

better able to heat their home as a result. This self-reported data is further reinforced by scheme data indicating improved SAP ratings as a result of Nest improvements.

- 7.6 There is widespread support and praise for the aim of the scheme to offer a 'whole-house approach'. However, in reality this has often not been achieved, with the majority of households receiving only a single measure. Reflecting this, whilst the majority of properties have benefited from significant improvements to their efficiency, only around 30 per cent of properties receiving a measure were improved to SAP ratings C+. Therefore, whilst the scheme has supported fuel poor households in the short-term, there is a risk that where the number of interventions completed for some households was limited, this will prevent the full benefits of heating being realised and left households vulnerable to rising fuel costs.
- 7.7 The results of the survey would suggest that advice provision alone has been less effective in achieving outcomes relating to fuel poverty. Whilst the majority found Nest advice useful, a lesser proportion reported acting on it, for example upgrading their boiler or heating controls or undertaking a grant eligibility assessment, and only just over half felt they were better able to heat their home as a result of contacting NEST.
- 7.8 There is evidence to suggest some level of behaviour change amongst a large proportion of advice beneficiaries in terms of using heating and appliances more efficiently. It should be recognised however that this is based on self-reported information, which can be unreliable.
- 7.9 Advice from third parties was also not followed up consistently, with just over half of those surveyed reporting taking action as a result of their referral. The process has, however, led to a variety of reported outcomes for beneficiaries, including making changes to the use of

heating and appliances, upgrading or installing energy efficient measures, switching energy company and installing smoke alarms.

7.10 The evaluation would suggest that Nest has been successful in removing many households from fuel poverty, most notably through its home energy improvement packages. However, it is difficult to assess the extent to which the scheme has tackled the issue of fuel poverty in Wales due to the lack of available data or baseline on the numbers of households living in fuel poverty in Wales that would have been eligible for the scheme.

Reaching households most in need

7.11 The results of the qualitative research provide examples which illustrate that the households who received Nest home improvements were very much in need of support and could not have accessed support elsewhere. It is evident that prior to receiving the measures, heating their home was a worry for the majority of beneficiaries, with some living without hot water or heating altogether. There is also evidence to suggest that the scheme has been successful in reaching vulnerable households including the elderly and those with limiting illnesses.

7.12 Those benefiting however, represent only a proportion of those living in fuel poverty in Wales, due, in part, to the choice of eligibility criteria, which are a necessary part of ensuring the scheme remains within budget. Critically, the scheme omits households on low incomes and those living in poorly insulated properties which may be slightly above an F rating. It is apparent that many of those enquiring who were found ineligible, were experiencing similar levels of fuel poverty and forced to make similar choices about heating to those who were deemed eligible. Whilst the scheme has reached some households in need, there is a risk that others equally in need, have been unable to access the support they need.

7.13 There are also suggestions that vulnerable households (including isolated individuals and those with illnesses that limit their mobility) are missing out on the scheme due to a lack of awareness of it and that the scheme does not offer adequate support with the application process for households with special needs, such as those with sight and hearing difficulties, disabilities or mental health problems.

7.14 Despite perceptions that targeting of rural houses was improving, data would suggest that the proportion of households receiving home improvements which were classed as rural has in fact decreased over time. The data does show however that a greater proportion of households in rural areas have received multiple measures than those in urban areas. This could indicate that the scheme has succeeded in its aim of achieving a whole house approach in rural, 'hard to treat' homes.

Outcomes and impacts

7.15 The most significant and widely stated impacts of the scheme have been increased confidence in, and reduced concern about, heating homes as a result of both measures and advice received by households. For some households this extended to both mental and physical health improvements. Whilst some benefited from energy savings, new systems and increased efficiency have enabled others to use heating and hot water where they could not before.

7.16 The scheme has evidently also benefited SMEs and their employees, many of whom valued the opportunity for additional employment, training and maintained relationships with BG.

Value for money

7.17 Overall the scheme demonstrates a good value investment, based on the estimated energy savings per household. According to monitoring data, the overall energy saving accruing to beneficiary households over the period of the scheme to date totalled £7.48m. Given an overall

investment of £58m, this equates to a benefit to cost ratio of 1.29, meaning that the Welsh economy achieves a return of £1.29 back for each £1 spent. Alternatively, this could be seen as having a 7.75 year payback period, or an annual rate of return of 12.9 per cent.

7.18 In addition to energy cost savings, the scheme has levered additional returns for beneficiaries, including:

- A total of £1,548,934 in annual benefits claims for those signposted to benefits checks;
- An estimated £57,110 in annual Warm Homes Discounts achieved through signposting;
- A small amount (circa £5K) of partial grant vouchers for household measures.

In addition to the above, the contracting of delivery arrangements to agencies in Wales will have additional impacts, through local economic effects of the front end advice centre and SME Installers.

7.19 To more effectively assess its value for money, the scheme's return on investment should be compared with that of similar schemes. One of the nearest comparisons would be Arbed, which had an intervention cost almost equivalent to that of NEST.

Continuation of the scheme

7.20 There was wide support for the continuation of Nest, or a similar scheme from all those consulted for the evaluation. Many argued there is still significant demand for measures and that this could continue to increase with rising fuel prices and welfare reform. Others pointed to the absence of other schemes tackling the issue of fuel poverty in Wales and were hopeful that extending the operational life of the scheme would further improve awareness of it. It was also widely suggested by the members of the management and delivery teams however that the eligibility criteria be re-examined and potentially altered. Within the context of limited funding, such amendments would have implications for the

number of households supported and value for money. These implications are considered in Appendix VIII.

Contents

Appendix I: Overview of measures for tackling fuel poverty	71
Appendix II : Qualitative Interviews	72
Appendix III: Sampling	73
Appendix IV: Qualitative Topic Guides.....	74
Appendix V: Quantitative surveys	85
Appendix VI: Measures Installed in Beneficiary Households	92
Appendix VII: Case studies	93
Appendix VIII: Implications of changes to eligibility criteria for Nest household improvement package	103

Appendix I: Overview of measures for tackling fuel poverty

Factors affecting Fuel Poverty		Example solutions
Fuel requirement	<p>Energy Efficiency of housing - whether housing is well insulated or efficiently heated (including fuel type) is likely to impact upon the cost of heating the home;</p>	<p>Improve the energy efficiency of the housing stock e.g.</p> <ul style="list-style-type: none"> • More efficient heating systems e.g. new gas boilers • Changing fuel type where possible e.g. from solid fuel or oil to gas. • Better insulated housing e.g. loft insulation, double glazing, cavity wall insulation, external wall insulation, draught proofing etc. • Regulation on the energy efficiency of new homes • Regulation on energy efficiency of the existing housing stock e.g. Private Rented Sector regulations • Financial instruments for investment in household improvements e.g. Green Deal, equity release⁴² etc.
	<p>Energy usage - heating needs and behaviour such as spending more or less time at home can have a significant impact upon fuel requirement.</p>	<p>Reducing consumption e.g.</p> <ul style="list-style-type: none"> • Advising and promoting energy efficient behaviour e.g. smart metering, understanding heating systems etc.
Household income	<p>Income level affects whether energy bills account for 10% or more of household income.</p>	<p>Increasing income e.g.</p> <ul style="list-style-type: none"> • Benefits advice • Advice for managing finances/ financial capability e.g. managing debt • Financial support e.g. Warm Home Discount, Winter Fuel Payment, Cold Weather Payments, National Concessionary Fuel Scheme.
Fuel price	<p>The cost of energy affects whether the cost of heating the home is above 10% of household income.</p>	<p>Reducing energy costs e.g.</p> <ul style="list-style-type: none"> • Price comparison, switching and tariffs • Collective buying/ switching • Local energy generation/ micro-renewable generation • Advice and support on energy payment options • Energy bill support e.g. Warm Home Discount

⁴² Joseph Rowntree Foundation (2012) Assessment of equity release pilot schemes, <http://www.jrf.org.uk/sites/files/jrf/equity-release-schemes-full.pdf>

Appendix II: Qualitative Interviews

Interviewee group		Description	Number of interviews completed	
Scheme management team	Welsh Government	Policy and programme team.	4	
	Core Nest Team	BG and EST managerial level staff.	9	
External stakeholders	Stakeholders	Active and former members of the scheme stakeholder board and local authority representatives.	12	
	Third party organisations	Representatives of organisations to which Nest customers are referred for further advice or support.	5	
Delivery team	Partnership Development Managers	Work closely with stakeholder groups, third party organisations and agencies which help people, attending events and promoting Nest to target groups and individuals across Wales.	2	
	Customer facing team	EST telephone advisors and BG personal customer managers.	13	
	Assessors	Individuals who carry out initial assessment of properties and subsequent inspection of installations across Wales.	4	
	Installers	SME installers of Nest home improvements.	12	
Beneficiaries	Household improvement beneficiaries	Households which have received installations funded by the Nest scheme.	Denbighshire	5
		Swansea	6	
		Rhondda Cynon Taf	5	
		Blaenau Gwent	8	
			Total	85

Appendix III: Sampling

The table below shows the sample supplied to GfK NOP by British Gas.

Following the proposed quotas for each, the final sample comprised:

- Home Improvement Beneficiaries (HIB) 600
- Advice Beneficiaries (AB): 1000
 - Of which Third Party Beneficiaries (TPB): 376

This sample was arrived at as follows:

	HIB		AB		TPB	
Total sample provided by BG	9506		5699		7879	
Useable sample remaining after de-duplication	3125	100%	3648	100%	4418	100%
Interviews	600	19%	377	10%	624	14%
Non-contact (voicemail, no answer etc.)	1664	53%	1766	48%	2312	52%
Ineligible (did not call advice line)	19	1%	362	10%	343	8%
Refusals	173	6%	342	9%	467	11%
Out of quota (Did not fit the criteria for inclusion in the interview sample)	279	9%	132	4%	0	-
Other non-response (cannot continue, away during fieldwork etc.)	173	6%	195	5%	224	5%
Incorrect number: (Response but not the correct number for the beneficiary)	217	7%	471	13%	446	10%

A sample of 5,699 individuals offered advice and guidance was sourced from BG, from which 377 interviews were conducted. In practice 248 of the 624 TPB respondents said they were not referred and so by default these became AB interviews; making the balance 376 TPB and 625 AB.

Appendix IV: Qualitative Topic Guides

Notes for Interviewer (preceding all topic guides)

Please ask respondents to consider project processes and management over the entire course of the scheme. **Prompt:** *has this been consistent over the course of the scheme?*

Clarify aims of research:

The aim of this project is to undertake an evaluation of the scheme to assess whether or not it has met its objectives and also to analyse the overall effect of the scheme on energy efficiency and fuel poverty.

To provide evidence to the Welsh Government about the impact of the Nest scheme and in particular to assess;

- If the scheme has reached households most in need
- If the scheme has provided value for money for the Welsh Government
- Whether the scheme resulted in energy savings for the householder(s)?
- The customer's experience of the service throughout the process

The evaluation will identify areas for improvement for the remainder of the scheme and provide evidence to inform the scheme and wider policy over the next 3-5 years.

The final report will be issued to Welsh Government in November 2014.

Confidentiality:

Please reassure interviewee that anything said during the interview will be treated in complete confidence and we will be reporting on general issues and themes only. Where direct quotes are used they will be sufficiently anonymised to ensure that they cannot be attributed to any one individual.

Please advise interviewee to raise any concerns with the Project Manager, Mair Smith mair@miller-research.co.uk

Interviewee	
Role/organisation	
Time/date	
Interviewer	

A. SCHEME MANAGEMENT TEAM TOPIC GUIDE

Energy Saving Trust / British Gas/ Welsh Government

1. INTRODUCTION

- 1.1 Please can you describe your role in the Nest scheme?
- 1.2 Do you work with any other Nest teams? **Prompt:** PCMs/EST advisors/third parties
- 1.3 Please describe your relationship with them. Any issues?

2. SCHEME LOGIC

- 2.1 Was there evidenced need for the intervention? If so, please describe.
- 2.2 Do you think there was existing market failure in terms of support for target groups? If so, please describe.
- 2.3 Where does Nest sit within other Welsh/UK initiatives? **Prompt:** (Is it complementary/ overlapping/ distinct from others?)
- 2.4 In what way do you think Nest contributes to reducing the numbers of people living fuel poverty?

3. INPUTS

- 3.1 Did the scheme have the right objectives & targets at the outset? If not, please explain.
- 3.2 Has the qualifying household criteria (F/G rated house and means testing) been set at an appropriate level? If not, what do you think it should be set at?
- 3.3 Is the capping level for household improvements appropriate (£8,000 on gas grid, £12,000 off grid)? If not, what do you think the level should be?
- 3.4 Is the design of the scheme fit for purpose? **Prompt:** Have the financial resources been allocated effectively/are there any financial constraints? If not, please describe what modifications you would suggest.
- 3.5 Has the scheme been effective in drawing in other funding to date? If not, what has prevented it from doing so?
- 3.6 Could greater impacts be achieved with the same financial resources if they were allocated differently?
- 3.7 Does the scheme enjoy the support of partners/stakeholders? If not, please explain?

4. PROCESS

- 4.1 Are governance and monitoring systems effective? If not, why do you say that?
- 4.2 How has marketing been undertaken? Is it effective?
- 4.3 Who does marketing target? Has it targeted the right groups/areas effectively?
- 4.4 How effective is the referral process?
- 4.5 Have there been any issues/challenges at: the point of referral/ eligibility? (internal/external) If so, please describe.
- 4.6 Have there been any issues/challenges with SME contractors? If so, please describe.
British Gas Prompt: Were there any problems in procuring installers with particular skills or in particular areas? Why did some drop off the approved list?
- 4.7 Has the scheme included effective monitoring and evaluation systems throughout? If not, why do you say that?
- 4.8 Are there any gaps in the monitoring information? If so, what are they?

5. OUTPUTS

- 5.1 Has the scheme been successful in engaging individuals from target groups? If not, why not?
- 5.2 Has the scheme been more successful with some groups than others? And why? (low income/elderly/people living alone/ families with young children/ people with a disability/long term illness)
- 5.3 Has distribution of engagement varied across Wales? If so, why do you think this is?
- 5.4 Has the scheme been cost effective/ provided value for money (compared to other schemes) to date? If not, why not?
- 5.5 Does the scheme deliver a quality customer experience? Are you aware of any customer feedback? Does the marketing raise expectations (i.e. Household improvements)?

6. COUNTERFACTUAL / ATTRIBUTION / DEADWEIGHT AND DISPLACEMENT

6.1 What would have happened in the absence of the scheme?

6.2 Were there any unexpected benefits arising out of the scheme? If so, what?

6.3 To what extent were impacts directly attributable to the scheme?

7. FUTURE

7.1 Is there anything you would like to see improved for the remainder of the scheme? If so, what?

7.2 Do you think there is a continued need for the scheme post-2015? If so, what are the needs – specific groups?

8. Do you have any further comments on the scheme?

THANK YOU.

B. EXTERNAL STAKEHOLDERS TOPIC GUIDE

Stakeholder board/ Partners

1. INTRODUCTION

- 1.1 How have you/your organisation been involved in the Nest scheme? Please describe your role.
- 1.2 How do the aims of the scheme fit with your organisation?
- 1.3 Have you used the Nest online portal? If so, how often and how have you found it?
Prompt: has it been useful?
- 1.4 Who have you worked with as part of the Nest scheme i.e. BG/EST/WG?
- 1.5 Please describe your relationship with them. Any issues?

2. SCHEME LOGIC

- 2.1 Was there evidenced need for intervention? Please explain. **Prompt:** Were there gaps in support for target groups?
- 2.2 Where does Nest sit within other Welsh/UK initiatives? (Is it complementary/ overlapping/ distinct from others?)
- 2.3 In what way do you think Nest contributes to reducing the numbers of people living fuel poverty?

3. INPUTS

- 3.1 Are you aware of the scheme's objectives/targets?
- 3.2 If so, do you think they were set at the right level? If not, please explain.
- 3.3 Has the qualifying household criteria (F/G rated house and means testing) been set at an appropriate level? If not, what do you think it should be set at?
- 3.4 Is the capping level for household improvements appropriate (£8,000 on gas grid, £12,000 off grid)? If not, what do you think the level should be set at?
- 3.5 Is the design of the scheme fit for purpose? **Prompt:** are financial resources allocated effectively? **Prompt:** If you were designing the scheme, what modifications would you make? How would you spend the money?
- 3.6 Could greater impacts be achieved with the same financial resources if they were allocated differently?
- 3.7 Has the scheme been effective in drawing in other funding to date? If not, what has prevented it from doing so?
- 3.8 Does the scheme enjoy the support of all partners/stakeholders? If not, please explain?

4. PROCESS

- 4.1 Are you aware of any marketing efforts? If so, how has marketing been undertaken? Is it effective?
- 4.2 Who does marketing target? Has it targeted the right groups/areas effectively?
- 4.3 How effective is the referral process?
- 4.4 To what extent does your organisation refer individuals to Nest? Could more be done to improve this process and increase referrals?

5. OUTPUTS

- 5.1 Has the scheme been successful in engaging individuals from target groups? **Prompt:** Has it been more successful with some groups than others? And why? (Low income/elderly/people living alone/ families with young children/ people with a disability/long term illness). If not, why do you say that?
- 5.2 Has the scheme been cost effective/ provided value for money (compared to other schemes) to date?

6. COUNTERFACTUAL / ATTRIBUTION / DEADWEIGHT AND DISPLACEMENT

- 6.1 What would have happened in the absence of the scheme?
- 6.2 Were there any unexpected benefits arising out of the scheme?
- 6.3 To what extent were impacts directly attributable to the scheme?

7. FUTURE

7.1 Is there anything you would like to see improved for the remainder of the scheme? If so, what?

7.2 Do you think there is a continued need for the scheme post-2015? If so, what are the needs – specific groups?

8. Do you have any further comments on the scheme?

THANK YOU.

C. TELEPHONE ADVISORS AND PERSONAL CUSTOMER MANAGERS TOPIC GUIDE

EST Telephone Advisors and BG Personal Customer Managers

Where question is preceded by EST – ask only to Energy Saving Trust Telephone Advisors, PCM – ask only to Personal Customer Managers.

1. INTRODUCTION

- 1.1 Please can you describe your role in the Nest scheme?
- 1.2 Do you work with any other Nest teams? **Prompt:** PCMs/EST advisors/third parties
- 1.3 Please describe your relationship with them. Any issues?

2. PROCESS

- 2.1 What do you think of the customer journey? Is it effective/are there any issues/challenges?
- 2.2 Has management been effective?
- 2.3 Is delivery efficient? If not, why not?
- 2.4 Are you aware of how the scheme is marketed? Is it effective?
- 2.5 **EST** - Does the marketing raise expectations (i.e. Household improvements)?
- 2.6 Who does marketing target? Has it targeted the right groups/areas and been successful in reaching them?
- 2.7 How effective is the referral process between advisors and PCMs?
- 2.8 **PCM:** How effective are the processes in arranging (a) surveyors visits?

3. OUTPUTS

- 3.1 **EST** – Are callers receptive to the advice provided? **Prompt:** Are they more receptive to some areas of advice than others? Do you think the advice provided is relevant and applicable to the majority of callers?
- 3.2 Overall, does the scheme deliver a quality customer experience? If not, why not? What are good/bad about the scheme?
- 3.3 What impacts do you think the scheme has delivered? **Prompt:** What have been the benefits of the improvements to households?
- 3.4 Were there any unexpected benefits arising out of the scheme? If so, please describe. **Prompt:** for example, do you think there were any benefits to the householder beyond financial savings on fuel bills.
- 3.5 Are you aware of any customer feedback? (positive and negative) If so, please describe.

4. FUTURE

- 4.1 Is there anything you would like to see improved for the remainder of the scheme?
- 4.2 Do you think there is a continued need for the scheme post-2015? If so, what are the needs – specific groups?

5. Do you have any further comments on the scheme?

THANK YOU.

D. THIRD PARTY REFERRALS TOPIC GUIDE

Organisations which Nest callers are referred to, often if ineligible for household improvements or seeking specific advice. The contacts spreadsheet specifies the method of referral: Nest caller receives a call from third party organisation/Nest caller is required to proactively call third party organisation. The method of referral is likely to affect the extent that the organisation is aware of Nest and its processes.

1. INTRODUCTION

- 1.1 **SCREENING QUESTION:** Are you aware of the Nest scheme and its advice service which refers callers to your organisation?
- 1.2 What is your role within your organisation? [tailor subsequent questions to anticipated knowledge].
- 1.3 How did your organisation become involved with Nest?
- 1.4 How do the aims of the scheme (to reduce fuel poverty) fit with your organisation?
- 1.5 What are the aims of your organisation? What is its remit? Where does it operate?

2. SCHEME LOGIC

- 2.1 Was there evidenced need for an intervention to tackle fuel poverty? Please explain.
Prompt: Were there gaps in support for target groups?
- 2.2 Where does Nest sit within other Welsh/UK initiatives to tackle fuel poverty? (Is it complementary/ overlapping/ distinct from others?)
- 2.3 In what way do you think Nest contributes to reducing the numbers of people living fuel poverty?

3. PROCESS

- 3.1 Are you aware of the referral process to your organisation? Please describe the process.
- 3.2 How effective do you think the process is?
- 3.3 How could it be improved?
- 3.4 What advice and/or services do you provide to those referred by Nest? If more than one area, what are your most common topics of advice?
- 3.5 Do you provide advice on a wider set of topics to others not referred through Nest?
- 3.6 Are those referred suitable/relevant to what you can offer?
- 3.7 Are those referred aware why they have been referred and what you offer?
- 3.8 **[IF ORGANISATION CALLS THEM]** What is the reaction of those referred by Nest when you contact them? **Prompt:** Were they aware they would be contacted? Were they aware they had been referred?

4. OUTPUTS

- 4.1 Are you aware of the volume callers successfully referred to your organisation? Could more be done to improve this process and increase referrals?
- 4.2 To what extent do those referred benefit from your organisation? **Prompt:** What proportion receive advice and/or services from you?
- 4.3 To what extent do you feel your organisation has benefited from the Nest referral process?

5. FUTURE

- 5.1 Is there anything you would like to see improved for the remainder of the scheme? If so, what?
- 5.2 Do you think there is a continued need for the scheme and referrals to your organisation? If so, what are the needs – specific groups?
- 5.3 Are there any other ways in which fuel poverty could/should be tackled in Wales?
Prompt: What measures would be most effective? which households should be targeted? How could they be reached?

6. Do you have any further comments on the scheme?

THANK YOU.

E. SURVEYORS/INSPECTORS TOPIC GUIDE

British Gas surveyors/inspectors

Surveyors also take the role of inspecting properties. Therefore, this interview is perhaps best conducted in person when you visit beneficiaries as part of the inspection.

1. INTRODUCTION

- 1.1 Please can you describe your role in the Nest scheme.
- 1.2 Have you carried out both the initial surveys **and** inspections of households?
- 1.3 Do you work with any other Nest teams? **Prompt:** installers/PCMs?
- 1.4 Please could you describe your relationship with them?

2. INPUTS

- 2.1 In your opinion, has the qualifying household criteria (F/G rated house and means testing) been set at an appropriate level? If not, what do you think it should be set at?
- 2.2 Is the capping level for household improvements appropriate (£8,000 on gas grid, £12,000 off grid)? If not, what do you think the level should be?

3. PROCESS

- 3.1 Has management of the process from survey to inspection been effective?
- 3.2 Has communication with customers been sufficient throughout the process? For example, are customers well informed of the process and aware of the role you play?
- 3.3 What do you think of the customer journey? Is it effective/are there any issues/challenges? If so, what?
- 3.4 Have there been any issues/challenges in assessing eligibility? If so, please describe.
- 3.5 Have there been any issues/challenges with installers? If so, please describe.

4. OUTPUTS

- 4.1 Overall, does the scheme deliver a quality customer experience? What's good/bad about the scheme?
- 4.2 Does the scheme benefit the householder and how?
- 4.3 Do you think measures have increased SAP ratings? To what extent? How does this compare to the investment?
- 4.4 What impacts do you think the scheme has delivered? **Prompt:** What have been the benefits of the improvements to households and their homes? Do you think the measures will impact on their use of heating or the fuel bills?
- 4.5 Were there any unexpected benefits arising out of the scheme? If so, please describe. **Prompt:** for example, do you think there were any benefits to the householder beyond financial savings on fuel bills.
- 4.6 Could any of these impacts have been achieved without the scheme? **Prompt:** Are there any other funding/support programmes?
- 4.7 Are you aware of any customer feedback? If so, please describe. **Prompt:** Are customers generally satisfied? What are the most common complaints?
- 4.8 Have you encountered any/many problems with installations? Please describe.

5. FUTURE

- 5.1 Is there anything you would like to see improved for the remainder of the scheme? If so, what?
- 5.2 Do you think there is a continued need for the scheme post-2015? If so, what is the need – specific socio-demographic group/house type/energy installations?
- 5.3 **Do you have any further comments on the scheme?**

THANK YOU.

F. INSTALLERS TOPIC GUIDE

SME Installers

1. INTRODUCTION

- 1.1 Please can you describe your role in the Nest scheme
- 1.2 How are your relationships with others working on the scheme: inspectors/Contract Development Managers?

2. PROCESS

- 2.1 Has management been effective? **Prompt:** communication with your organisation and the organisation of appointments. If not, why not?
- 2.2 Are customers well informed before you arrive, for example, did the customer know you were coming and what installation they would receive? If not, please describe.
- 2.3 Have there been any issues/challenges in installation/with customers? If so, please describe.

3. OUTPUTS

- 3.1 Does the scheme deliver a quality customer experience? If not, why not?
- 3.2 Does the scheme realise benefits for the householder? If not, why not? If so, please describe.
- 3.3 Are you aware of any customer feedback? If so, please describe.

4. COUNTERFACTUAL / ATTRIBUTION / DEADWEIGHT AND DISPLACEMENT

- 4.1 Were there any unexpected benefits arising out of the scheme?

5. FUTURE

- 5.1 Is there anything you would like to see improved for the remainder of the scheme? If so, please describe.

6. Do you have any further comments on the scheme?

THANK YOU.

G. BENEFICIARIES TOPIC GUIDE

Household Improvement Beneficiaries

The beneficiary is likely to have received the installation reasonably recently and therefore may not have felt the full benefits of the improvements (given the warmth of the last few months). Therefore, where appropriate, please also ask them to consider the relevant outcomes in terms of the future and winter months.

1. INTRODUCTION

- 1.1 What household improvements or installation did you receive? [prompt if necessary].
- 1.2 How did you become aware that you may be entitled to household improvements?
Prompt: an advert on the radio/television, a leaflet, an advice service, word of mouth
- 1.3 Are you aware of who/what financed the [specify installation/ household improvements] you received? If so, please state.
- 1.4 Why did you call the Nest line? **Prompt:** were you seeking advice/ household improvements, if so what type?
- 1.5 Before receiving the [specify installation/ household improvements], how warm did you keep your house and why? **Prompt:** did you have difficulties heating your home to a temperature which is comfortable? What is your primary way of keeping warm in your house in winter?
- 1.6 Were you unable to heat your home as much as you wanted because of the cost?
Prompt: Did you struggle to pay or worry about your heating bills? How did this affect your day to day life? Did you have to make choices about whether to heat your home or pay for other essentials?
- 1.7 What difference do you hope the scheme would make to you?

2. PROCESS

- 2.1 How did you find the application process?
Prompt: was it easy to understand? Was your contact at Nest helpful and friendly? Did you encounter any problems or difficulties in applying? If so, please explain.
- 2.2 Were you kept aware of what was happening at each stage? **Prompt:** How? Were you aware of the improvements you would receive before you received them?
- 2.3 Was the appointment for installation made at a convenient time and communicated to you with enough notice? If not, please describe any issues.

3. ADVICE

- 3.1 In addition to the [specify installation/ household improvements] you received, did you receive any advice? **Prompt:** energy savings, appliances, finance, utility bills, heating controls or other
- 3.2 If so, how useful and applicable to you was it? Were you satisfied with the advice?
- 3.3 Did you act on it? If so, how?
- 3.4 How has the advice made a difference to you?
Prompt: Is your home warmer? Are you or do you think you will spend less money on heating/utility bills? Have you made any other money savings? [Please explain]

4. HOME IMPROVEMENTS

- 4.1 Are you satisfied with what was offered by Nest and the home improvements you received? Why/why not? [please explain]
- 4.2 Are you satisfied with the [specify installation/ household improvements]? Did you have any problems?
- 4.3 Were you provided with any instructions? **Prompt:** Were they clear? And, [if applicable] do you understand how to operate the controls?
- 4.4 Did you make any complaints? If so, how did you find the complaints process? **Prompt:** Were you satisfied with the way in which it was dealt with/resolved?
- 4.5 Are you happy with the aftercare/follow up support provided? i.e. Inspection/ response to any questions/problems. **Prompt:** [please describe] If not, why not?

5. OUTCOMES

- 5.1 Has, or will the [specify installation/ household improvements] you received change the way you use your heating? Please describe.
Prompt: do you use your heating more/less/the same or have you changed when you turn the heating on/how long you leave it on.
- 5.1.1 If so, how do you think this will affect your day to day life?
- 5.2 How has, or will the [specify installation/ household improvements] affect your fuel bills?
- 5.3 Do you think the [specify installation/ household improvements] will save you money?
Prompt: Do you think the advice will [specify installation/ household improvements] help you to keep your home warm at a more affordable cost? [please explain]
- 5.3.1 If so, are you able to estimate how much you spend on fuel bills now compared with before the improvements to your home?
- 5.3.2 How have you/ do you intend to make use of the savings? **Prompt:** will you heat your house for longer or put it to other uses?
- 5.4 Besides any financial savings, what other benefits have/will you experience as a result of the improvements made? **Prompt:** Is your home warmer? Do you feel happier or healthier in your home?
- 5.5 Has the installation made you think about other ways to save money on your bills?
Prompt: other measures ie. Insulation/boiler

6. COUNTERFACTUAL / ATTRIBUTION / DEADWEIGHT AND DISPLACEMENT

- 6.1 Do you think you could have received the [specify installation/ household improvements] or any similar support elsewhere?
- If so, where?
 - Would you have accessed it?

7. FUTURE

- 7.1 Did/will you tell anyone about the household improvements you received? **Prompt:** Would you recommend Nest to others and why?
- 7.2 Some people have suggested the process could be improved, is there anything you would like to see improved with the process and installation?
- 7.3 Now that you have received measures are there any areas where you feel you might need additional help, in terms of your home energy usage?
- 7.4 Do you think Nest should continue in future? If so, why?

1. Do you have any further comments on your experience?

THANK YOU.

Appendix V: Quantitative survey scripts

A. ADVICE BENEFICIARIES (ABS) (X1000)

INTRO: In [insert year], you called the Nest advice line which offers advice and household improvements to make Welsh homes warmer and more fuel-efficient places to live. You were given advice on energy saving and/or money management by a member of the Nest Team. The scheme is currently being evaluated, as part of which we would appreciate the opportunity to discuss your experience. We would therefore be very grateful if you could spare 10 minutes to answer some simple and straightforward multiple choice questions.

Confidentiality clause: All the information you provide is confidential and will only be used for the purpose of the evaluation

1. Firstly, can I just check, how many of each of the following age groups live at this address.
 - a. Adults aged 16-64: ENTER NUMBER
 - b. Children under 16: ENTER NUMBER
 - c. Adults aged 65+: ENTER NUMBERREFUSED

2. Does anyone in your household have any long standing illness, disability or infirmity that limits their normal day to day activities? By 'long-standing' we mean anything that has troubled them over a period of time or that is likely to affect them over a period of time. Normal day to day activities include everyday things like eating, washing, walking and going shopping

Yes a household member has a long-standing illness, disability or infirmity ...PROBE...
It limits their activities all of the time
It limits their activities some of the time
It doesn't limit their activities
No-one in the household has a long-standing illness, disability or infirmity
REFUSED

3. **To which of these groups do you consider you belong?**

White
Asian or Asian British
Black or Black British
Mixed
Other ethnic group
(Don't know)
(Refused)

4. Which of these best describes your current situation? READ OUT

Working full time (30 hours a week or more)
Working part time
Unemployed and looking for work
Retired from paid work altogether
In full-time education
Looking after the home or family
Something else
REFUSED

5. In winter how easy or difficult do you typically find it to heat your home to a temperature which is comfortable? PROBE FOR CODE

Very difficult
Fairly difficult
Fairly easy
Very easy
Don't know

6. Prior to calling the Nest line, did the cost of heating your home lead you to act in any of the following ways? NEVER/SOMETIMES/ALWAYS/DK
- a. only heat a certain number of rooms
 - b. wear extra layers of clothing rather than putting the heating on
 - c. go out rather than spend time at home
 - d. have to make decisions about whether you heat your home or buy household essentials
 - e. go without hot water
 - f. go without heating
 - g. worry about heating my home
7. Prior to calling Nest, did you typically spend more than 10% of your household income on heating your home? (For example, if your household income is £200 per week this would mean spending more than £20 a week on heating your home).

Yes
No
DK

8. How did you become aware that advice was available or that you may be eligible for household improvements? PROBE TO CODE
- a. Website
 - b. Newspaper
 - c. Radio
 - d. TV
 - e. A leaflet
 - f. Word of mouth
 - g. Advice services (please specify)
 - h. An event (please specify)
 - i. Other
- Can't remember
9. Why did you call the NEST advice line? Were you hoping to receive READ OUT
- a. household improvements?
 - b. advice on energy savings?
 - c. advice on money management?
 - d. Other DO NOT READ
 - e. Can't remember DO NOT READ

10. How useful was the advice received? Would you say it was READ OUT
- a. Very useful
 - b. Fairly useful
 - c. Not very useful
 - d. Not useful at all
DO NOT READ Don't know

11. Did you act on any of the advice provided?
- a. Yes – ASK Q12

- b. No – SKIP TO Q15
- c. Can't remember – SKIP TO Q16

IF YES Q11:

12. As a result of the advice did you...? READ OUT AND CODE ALL THAT APPLY

- a. Install new heating controls (e.g. room thermostat, thermostatic radiator valves)
 - b. Install insulation – loft/cavity/internal/external wall
 - c. Install double glazing
 - d. Upgrade your boiler
 - e. Check to see if you are eligible for a grant/ free insulation
 - f. Have a Green Deal/ energy assessment carried out in your home
 - g. Install a renewable energy technology such as solar panels
- None of these

IF YES Q11:

13. As a result of the advice, did you READ OUT AND CODE ALL THAT APPLY

Yes/No/DK – FOR EACH YES ASK Q14 STRAIGHT AWAY

- a. Change the controls of appliances to use less energy-demanding cycles/functions (e.g. washed at 30 rather than 40 degrees)
- b. Switch appliances or lights off when not using them
- c. Buy more energy efficient products
- d. Reduce the temperature using heating controls/thermostats
- e. Change the times of using appliances to utilise cheaper tariff rates (where applicable)
- f. Reduce the amount of time I have the heating on
- g. Reduce the number of rooms that I heat

14. Do you still (answer to Q13)?

- Yes
- No

IF NO Q11:

15. Why not? PROBE TO CODE

- a. Already knew it
- b. Not relevant
- c. Didn't understand it
- d. No time/too busy
- e. Too difficult
- f. Cost
- g. Other (specify)
- h. DK

16. As a result of the advice you received are you better able to heat your home?

- a. Yes, a lot
- b. Yes, a little
- c. Not a lot
- d. Not at all
- e. DK

17. How satisfied were you overall with the advice service provided? READ OUT

- a. Very satisfied
- b. Fairly satisfied

- c. Neither satisfied nor dissatisfied
- d. Fairly dissatisfied
- e. Very dissatisfied
- f. DO NOT READ DK

B. Third Party Referral Beneficiaries (TPBs)

Subset of ABs (x350 approx.)

Screening:

We understand that you were referred to a third party. Can you remember who you had contact with and received advice from? READ THE LIST BELOW TO REMIND THEM IF THEY CAN'T REMEMBER

- a. ESAS
- a. Mid and West Wales Fire Service
- b. Powys Fire Service
- c. Money Advice Service
- d. Care and Repair
- e. Riverside Advice Service
- f. Health through Warmth
- g. Local Council
- h. Western Power Distribution
- i. Tai Eryri
- j. Switch and Which
- k. Other (specify)
- Not referred (GO TO END)
- Referred but can't remember organisation

18. How useful was the advice received? Would you say it was READ OUT

- Very useful
- Fairly useful
- Not very useful
- Not useful at all
- DO NOT READ Don't know/can't remember

19. Did you act on any of the advice provided?

- Yes
- No
- Can't remember

IF Q19 YES:

20. How did you act on the advice? OPEN

IF Q19 NO:

21. Why not? PROBE TO CODE

- a. Already knew it
- b. Not relevant
- c. Didn't understand it
- d. No time/too busy
- e. Too difficult
- f. Cost
- g. Other
- h. DK

C. HOUSEHOLD IMPROVEMENT BENEFICIARIES (HIBS) (X600)

INTRO: In [insert year], you received some home improvements to save energy, funded by Welsh Government under the Nest scheme. The scheme is currently being evaluated, as part of which we would value your opinion and appreciate the opportunity to discuss your experience. We would therefore be very grateful if you could spare approximately 10 minutes to answer some simple and straightforward multiple choice questions.

Confidentiality clause: All the information you provide is confidential and will only be used for the purpose of the evaluation.

22. Firstly, can I just check, how many of each of the following age groups live at this address.

- a. Adults aged 16-64: ENTER NUMBER
 - b. Children under 16: ENTER NUMBER
 - c. Adults aged 65+: ENTER NUMBER
- REFUSED

23. Does anyone in your household have any long standing illness, disability or infirmity that limits their normal day to day activities? By 'long-standing' we mean anything that has troubled them over a period of time or that is likely to affect them over a period of time. Normal day to day activities include everyday things like eating, washing, walking and going shopping

Yes a household member has a long-standing illness, disability or infirmity ...PROBE...

It limits their activities all of the time

It limits their activities some of the time

It doesn't limit their activities

No-one in the household has a long-standing illness, disability or infirmity

REFUSED

24. **To which of these groups do you consider you belong?** READ OUT

White

Asian or Asian British

Black or Black British

Mixed

Other ethnic group

(Don't know)

(Refused)

25. Which of these best describes your current situation? READ OUT

Working full time (30 hours a week or more)

Working part time

Unemployed and looking for work

Retired from paid work altogether

In full-time education

Looking after the home or family

Something else

REFUSED

26. In winter how easy or difficult do you typically find it to heat your home to a temperature which is comfortable? PROBE FOR CODE

- Very difficult
- Fairly difficult
- Fairly easy
- Very easy
- Don't know

27. Prior to calling the Nest line, did the cost of heating your home lead you to act in any of the following ways? READ OUT. never/sometimes/always/DK

- h. only heat a certain number of rooms
- i. wear extra layers of clothing rather than putting the heating on
- j. go out rather than spend time at home
- k. have to make decisions about whether you heat your home or buy household essentials
- l. go without hot water
- m. go without heating
- n. worry about heating your home

28. Prior to calling Nest, did you typically spend more than 10% of your household income on heating your home? (For example, if your household income is £200 per week this would mean spending more than £20 a week on heating your home).

- Yes
- No
- DK

29. How did you become aware that advice was available or that you may be eligible for household improvements? PROBE TO CODE

- j. Website
- k. Newspaper
- l. Radio
- m. TV
- n. A leaflet
- o. Word of mouth
- p. Advice services (please specify)
- q. An event (please specify)
- r. Other (please specify)
- Can't remember

30. How satisfied were you with each of the following elements of the assessment and installation process (Very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied, DK) READ OUT

- a. The explanation of the process given to you
- b. The waiting period between your initial application and assessment of your home
- c. The convenience of the assessment time and date
- d. Communication with you on what was going to be installed
- e. The home improvements offered to you
- f. The waiting time between the assessment and the installation
- g. The convenience of the installation time and date
- h. Instructions on how to use the installation
- i. The aftercare provided (ie. support after the installation)
- j. Your overall experience of the process

31. Have you experienced any of the following problems related to the installation?
READ OUT
(Yes/No/DK for each)
- Length of time taken for installation
 - Disruption or untidiness
 - Problems with installation itself
 - Understanding how to use the installation
 - Other (specify)
32. What, if anything, did you do as a result of receiving this installation? READ OUT AND
CODE ALL THAT APPLY
- Change the controls of appliances to use less energy-demanding cycles/functions (e.g. washed at 30 rather than 40 degrees)
 - Switch appliances or lights off when not using them
 - Buy more energy efficient products
 - Reduce the temperature using heating controls/thermostats
 - Change the times of using appliances to utilise cheaper tariff rates (where applicable)
 - Reduce the amount of time you have the heating on
 - Reduce the number of rooms that you heat
 - None of the above
33. As a result of the installation to what extent do you agree or disagree with each of the following statements? READ OUT
(Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, disagree strongly, DK)
- I'm more aware of my energy use
 - I worry less about heating my home
 - I am better able to heat my home
 - I've noticed improvements in my/my family's health
 - My energy bills have been reduced
34. Where else would you have accessed help to enable you to better heat your home?
CODE DO NOT PROMPT
- The council/local authority
 - Energy Company
 - Another government scheme (ie. Arbed/ECO)
 - Energy Savings Trust
 - Health Through Warmth
 - Care and Repair
 - Tai Eryri
 - Other (specify)
 - DK

Appendix VI: Measures Installed in Beneficiary Households

Measure	Number Installed			
	Urban	Rural	Total	Total, %
Air Source Heat Pumps	47	155	202	1.1
Biomass	5	74	79	0.4
Electric	164	392	556	3.0
Gas	9293	2225	11518	62.3
LPG	80	402	482	2.6
Oil	216	1879	2095	11.3
Solid Fuel	59	534	593	3.2
Cavity Wall Insulation	286	156	442	2.4
Cylinder Insulation	4	8	12	0.1
Draft Proofing	148	205	353	1.9
E Insulation	146	173	319	1.7
Loft Insulation	1069	761	1830	9.9
Total	11517	6964	18481	100.0

Source: Nest

Appendix VII: Case studies

All case studies in this appendix have been anonymised to protect the privacy of those featured.

1. Mrs Thomas, 42, end of terrace house, Treherbert

Mrs Thomas lives with her two teenage sons in an end of terrace house. The family had been without hot water and heating for two years as she had been unable to afford a new boiler. As a result, the family had to wrap up to keep warm and take showers in the houses of relatives. Mrs Thomas was on a local authority waiting list for a grant to remedy her damp problems and it is through this that she was referred to Nest.

“Before I got my new boiler we used to have to go relatives to have showers and our clothes would never dry in the winter...now I can’t believe how warm it is and I don’t have to put anyone out anymore by using their hot water”

“I learnt lots of new things as a result of the advice I was given for example not putting the TV on standby, fitting energy saving light bulbs and putting an economy wash on, I have done everything they suggested and I think these little things have made a big difference”

Within about a week of her first phone call to Nest, a new boiler and radiators had been installed in Mrs Thomas’ house. The installers also repaired a gas leak and referred her to an electrician when they found her wiring wasn’t earthed. Mrs Thomas also welcomed the energy saving advice she received from the Nest helpline.

Nest provided her with a new boiler that she wouldn’t have been able to afford otherwise and the Nest scheme also saved her money by identifying and repairing a gas leak which had previously been contributing to her energy bills.

Mrs Thomas praised her experience of Nest, commenting that everyone she spoke to was friendly and helpful and that appointments were well organised at her convenience. Not only did Nest provide her with a new boiler that she wouldn’t have been able to afford, the scheme also saved her money by identifying a gas leak which had previously been contributing to her bills.

2. Mrs Williams, 70, mid terrace house, Tonypany

Mrs Williams lives in a mid-terrace house in Tonypany with her husband for whom she is a full time carer. During a routine service she was informed that her boiler was faulty and needed replacing. Mrs Williams could not afford a new boiler at the time and had been living with the faulty boiler for five months.

She saw an advert for Nest in her local newspaper and was surprised at how quickly she could get an appointment and her new boiler was fitted within a couple of weeks. As a result of husband’s illness Mrs Williams is virtually housebound and uses central heating a lot. While Mrs Williams would have been prepared to save up for a new boiler it would have taken some time, leaving her and her husband suffering in the meantime. She comments that the provision of a new boiler by the Nest scheme has made a great difference to her and her husband’s quality of life.

““I feel a lot happier now, I can only leave the house twice a week so keeping warm is important to me”

3. Ms Coleman, 42, terraced brick house, Ebbw Vale

Ms Coleman had a hot water cylinder and standard boiler. She heard about Nest through a friend but was initially found ineligible due to the SAP level of her property. However, one day water from the system leaked through the downstairs ceiling and the boiler failed to function. Ms Coleman's daughter looked up Nest online and urged her to give them a call.

As a result of the fault with the boiler, the SAP rating of the property fell within the criteria and within two weeks of the call she had a new combination boiler.

Ms Coleman was cautious about using the new controls so a family member came to the house and the installer explained the instructions to both of them together.

Ms Coleman used to limit her use of the heating to first thing in the morning and early evening. She continues to do this now in order to keep her fuel bills low but the greater efficiency of the new boiler means that the house warms up quicker and to a higher temperature so does not get as cold during the day. Being more efficient, Ms Coleman hopes this will save her money over the winter months.

"It wasn't getting warm before. I used to say it's like an igloo in here and my son and daughter bought me the plug in electric blanket thing to keep warm. I used to put it [the heating] on before and it would be over an hour to get it really... I used to leave it on for about two hours if I wanted a really hot bath."

"It's brilliant, I can't fault none of them, the work men were fabulous. When I come in [after the installation] and I come by the door the heat hit me, I said I've never had it like this for a long time, I'm thrilled to bits. Now when I want a bath it's marvellous, just turn it on and I get hot water".

4. Mr White, 45, solid brick terraced house, Tredegar

Mr White had an old back boiler which was breaking down repeatedly. It was expensive to run and fix and Mr White would often put off showering in order to save money. This also meant he avoided undertaking physical activities which would require him to shower afterwards.

Mr White was recommended the scheme through a friend and had expected to have to pay something towards the costs.

"Before I couldn't afford to have a bath here. I'd go to the gym instead. It'd be cheaper for me to pay £30 to be a member in the gym a month than it was to have a bath in my own house. I do a lot of mountain biking, out on my push bike, but I can afford to shower and bath here now whereas I couldn't before."

Mr White is very happy with his new boiler which he received within two weeks of calling to enquire about the scheme. Although he still keeps the heating on for a limited time, he is optimistic that he will have saved money. Overall, being able to use the hot water without fear of the resulting bills has been the biggest difference and has made Mr White's life a lot easier.

5. Mr Taylor, in his 40s, terraced house, Swansea

Mr Taylor suffers from depression and finds it difficult to speak to new people, particularly on the phone. He rented his home from a private landlord and lived there with his daughter. They had experienced long-standing problems with their boiler which regularly cut-out and only produced low levels of warmth.

Simple tasks like running a bath for his daughter would take 30 minutes to an hour, which he found frustrating and exacerbated his depression. The house was also cold and damp in the winter, even with the thermostat turned up to maximum at all times of the day. He bought halogen heaters, and he and his daughter had to wear coats and sit under quilts to keep warm. Metal surfaces in the kitchen had also started to rust due to damp. The landlord was not willing to buy a new boiler and Mr Taylor could not afford to do so himself.

Mr Taylor initiated the Nest application rather than the landlord, and he found the process of applying *“not very nice”*. He says he was asked to provide more and more documentation at different points in the process, including documents from his landlord.

“It was just one hurdle after another.”

He was becoming increasingly frustrated and came close to abandoning his application until his daughter intervened to complete the process on his behalf.

Despite issues with the application, Mr Taylor was extremely positive about the speed and quality of the service he subsequently received through Nest. This included a new gas boiler, installed in May 2014. He is now able to keep the house warm, without having to use the heating as much, which he is sure will save him money and anxiety during the winter. He is also already saving money on his water bills (£7 a week) because he no longer needs to run taps for an extended period to have hot water. He feels *“lucky”* to have benefited from Nest.

6. Mr Bonds, in his 80s, terraced house, Swansea

Mr Bonds was an elderly widow, who was partially deaf and living on his own. The boiler in his house was over 10 years old, took a long time to warm up and was very unreliable. He had a contract with a local firm to service the boiler and they had been called out one more than one occasion over the last year without fully resolving the problems.

Mr Bonds could not afford to pay for new central heating and if he hadn't benefited from Nest he thinks he would have had to continue to pay for the old boiler to be repaired at regular intervals.

His son [who doesn't live at the property but also took part in the interview] was very concerned that the boiler would stop working entirely during the winter, leaving his father without any source of heat. He was told about Nest by the local firm that his father had a service contract with, and he undertook the application on his father's behalf.

The survey was undertaken within days of the application and a new gas boiler and radiators were installed in August 2014. The installers were *“very professional”* and overall Mr Bonds thought service was *“excellent”*.

He does not expect to make significant savings on his energy bills but this had not been the priority for himself or his son.

“The main thing it's given us is peace of mind” [son of beneficiary]

Both now feel reassured that Mr Bonds will not be left without a means of staying warm during the winter. He has also expects to save money because he will not need to pay for a service contract for the boiler while it is under warranty with Nest.

7. Mrs Leigh, in her 70s, stone bungalow, Denbighshire

Mrs Leigh's heating system dated back to the time the house was built, 50 years ago, and was not very effective. Her husband had a health condition that required the temperature to be maintained at a certain level in every room, and his bedroom was quite cold. They often had to use a convection heater in the room to top up the heating. *"It was difficult to maintain temperatures."* To balance their budget, they avoided driving in winter so that they could pay for the heating.

A friend told Mrs Leigh that the Nest scheme was running, so she applied and had a new boiler, thermostats and radiators installed in August 2014. The process took only three weeks from application to completion of installation.

"It was very easy, Nest were very helpful. The whole process was so quick – unbelievable. We had no problems whatsoever. ... They even agreed to do my husband's bedroom first, as he was needing to use it, and then they did this other room once he was in the bedroom."

Mrs Leigh was pleased that the radiators had been increased to two-panel type and was sure that she wouldn't have to use the heating on as much as before.

"The house will be warmer, so I won't have to worry about my husband's health all the time! In the past, I've had to put him on a nebuliser when he woke up with a coughing fit in the middle of the night when the weather was cold."

8. Mr Walton, 70s, stone house, Denbighshire

Mr Walton had a solid fuel furnace, but its canopy had burned out and it was no longer operating efficiently. As a result Mr Walton and his wife were unable to heat their house as much as they would have liked.

Mr Walton received a leaflet from Nest through the post as well as a recommendation from a friend to contact Nest. He applied, found out he was eligible, and had a new solid fuel heating system and radiators installed.

"The process was straightforward. They [call centre staff] were helpful."

Mr and Mrs Walton moved out of their home during the installation, *"they even changed the installation date to suit us better"*. Mr Walton was *"more or less"* satisfied by the improvements, mentioning that the installers had said that the heating system pipes would be installed in one location (under a window), but were in fact installed in another (up the wall).

The installers described how to operate the new heating system when it had been installed and provided him with advice on the correct fuel types to be used which would ensure it operated efficiently and would not clog up.

Mr Walton found that more heat was coming out of the furnace. As the hot water pipes had also been lagged, Mr Walton was happy that this would keep the hot water hotter for longer.

9. Mrs Jones, 75, mid terrace house, Treorchy

Mrs Jones lives alone in a mid-terrace house in Treorchy. During an annual inspection, Mrs Jones was informed that her boiler was faulty and required replacing. Already on a debt management plan with her energy company, Mrs Jones could not afford to replace her boiler.

***“The process was brilliant, they phoned back when they said they would and kept to all of their appointments...
If I hadn't have got the new boiler I would have had to borrow money or save up to get it”***

Mrs Jones found the process of applying for a new boiler straightforward and she welcomed the energy saving advice she received from the Nest telephone team. When a member of the Nest team came to assess her property they also identified a gas leak which meant Mrs Jones had been paying for gas she hadn't been using.

On a limited income and already in some financial difficulty, Mrs Jones would have struggled to save up for a new boiler. Both the Nest property assessment and installation of a new boiler have given Mrs Jones and her family peace of mind. They are hopeful her energy bills will be reduced with the new system as well as not paying for gas that was leaking from her property.

Appendix VIII: Implications of changes to eligibility criteria for Nest household improvement package

Existing criteria	Potential amendment	Implication	Limitations
Means tested benefits	Remove criteria altogether.	Significantly broadened eligibility would allow much larger numbers of households to access a home improvement package.	Scheme would be accessible to all, including those not in fuel poverty. Increased demand would mean spending and measures per household would have to be limited. This could reduce ability to achieve whole-house approach. Increased demand could require greater resources for management and delivery. The scheme could run out of funds in a short period of time if demand is high.
	Widen those eligible to include low income households.	Broadened eligibility would allow targeting a greater number of households in fuel poverty.	Necessary to develop means of assessing income, contributing an additional stage in the application process and further administration. Increased demand could require greater resources for management and delivery. The scheme could run out of funds in a short period of time if demand is high.
Cap on spending per household	Increase cap for rural, off-grid, hard to treat homes	A higher cap per household would improve the ability of the scheme to offer multiple measures and a whole-house approach for those properties most difficult and costly to improve efficiency.	Reduction in the number of households helped for the same level of investment. May also impact on value for money for the scheme.
	Allow customers to top up the allowance per property in order to be able to access a greater number of measures which would otherwise exceed the cap	Private investment leveraged. Increased number of measures without increased scheme costs. Contribute towards realising whole-house approach, could lead to greater improvements of SAP ratings and increase resilience to future fuel price rises.	Additional component of the scheme could contribute to confusion. Additional communication would be required to explain options to potential customers. Could be perceived to disadvantage those unable to contribute financially.
Property with SAP rating F/G	Widen to SAP rating to include D and E rated properties	Widened eligibility would allow a greater number of households to access a home improvement package.	Likely to require the cap on spending per household to be reduced or more restricted benefit eligibility in order to balance costs. This would continue to prevent more costly measures from being installed and reduce the ability to realise a

			<p>whole-house approach. Households in hard to treat properties may be unable to access the measures required to improve their SAP rating. Increased demand could require greater resources for management and delivery. If changes are not made to the cap or the benefit criteria then the scheme could run out of funds in a short period of time if demand is high.</p>
--	--	--	---