Consumer Futures Unit

Hard-Wired Problems: Delivering effective support to households with electric heating

citizens advice scotland

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About us

Citizens Advice Scotland, uses research and evidence to put consumers at the heart of policy and regulation in the energy, post and water sectors in Scotland. We work with government, regulators and business to put consumers first, designing policy and practice around their needs and aspirations. Our advocacy work is underpinned by a set of seven consumer principles which are shown below.

The Citizens Advice network plays a vital role as an advice provider for energy consumers, through the Extra Help Unit, Citizens Advice Consumer Service, and the 60 Citizens Advice Bureaux across Scotland. In 2017-18, our services helped clients with almost 40,500 energy issues and secured over £1.6 million in financial gain for these consumers.

Consumer Principles

Executive Summary

Households that rely on electric heating face a range of challenges to achieving affordable warmth, not least due to the very high cost of heating a home using electricity. These challenges mean that those who rely on electric heating are almost twice as likely to be in fuel poverty as the population of Scotland as a whole[1].

All households in Scotland have a right to a warm, dry home that is affordable to heat, and households should never have to cut back on other essentials like food to pay their energy bills. The right to adequate housing and the right to standards of health are recognised in international human rights law as part of the right to an adequate standard of living[2]. It is our view that the ability to maintain an appropriate level of warmth in the home is a fundamental part of realising these rights.

However many of those who rely on electric heating, often with no other viable alternative, are unable to afford to heat their homes sufficiently. In 2016, around 26.5% of households in Scotland were defined as being in fuel poverty. For those who rely on electricity as their main source of heating, the figure is almost twice that at 51%. In that context, it is worth noting that we are yet to see the impact of the significant domestic energy price rises of 2017 and 2018, which were higher for electricity than gas.

This group faces challenges including the very high unit costs of electricity, a complex and often confusing tariff market, barriers to switching tariff or supplier, a lack of knowledge of how to use heating systems effectively, and systems frequently operating inefficiently[3].

Additionally, those using electric heating are more likely to have lower than average incomes, be economically inactive, and live in rented accommodation with little choice over their heating system[4].

Electric heating is significantly more common in Scotland than elsewhere in Great Britain, with around 11%, or 282,000 households relying on it as their main source of heating in 2016[5]. This is in part due to the fact that large parts of Scotland do not have access to mains gas. As part of its Energy Market Investigation of 2016, the Competition and Markets Authority (CMA) highlighted electric heating as an area of concern, particularly for those using restricted electricity meters. This was identified as an area where there were significant adverse effects on competition, with households facing substantial barriers to engaging in the market. In response to this, the CMA has introduced remedies designed to address these barriers.

Due to the challenges faced, those who rely on electric heating can often require extensive holistic support to resolve problems and reduce costs. While individual issues can cause detriment themselves, a number of them are often interlinked and there may be a need for an integrated solution to address them all. For example, renewing an electric heating system may in turn result in a need for advice on using controls or identifying an alternative, more appropriate, tariff.

The support that is available to consumers who rely on electric heating in Scotland comes from a broad range of sources, including central and local Government initiatives, housing association-led initiatives, other third-sector services such as Citizens Advice Bureaux energy advisers, energy suppliers' customer services and other industry-led initiatives.

1 Scottish House Condition Survey, 2016

2 Article 25.1, Universal Declaration of Human Rights, 1948

3 De Haro, TM and Koslowski, A, Fuel Poverty and High Rise Living: Using community-based interviewers to investigate tenants' inability to keep warm in their homes, in Journal of Poverty and Social Justice, 21:2, June 2013

4 Consumer Focus, *From Devotees to the Disengaged: A summary of research into energy consumers' experience of Time of Use tariffs and Consumer Focus's recommendations*, 2012

5 Scottish House Condition Survey, 2016

It is less clear to what extent the services available are able to cover all of the support needs of electric heating consumers throughout Scotland in a comprehensive and holistic manner, and whether and where there are gaps in provision. While some services may provide support that addresses the full range of needs of consumers, it is not clear how widespread, well known or accessible these services are. Conversely, it is possible that some services that are widely accessible may not address all of the potential interconnected needs of consumers, but focus on specific aspects such as switching advice.

In this context, Citizens Advice Scotland sought to gain insight into the nature and reach of these services, and consumers' experiences of using them, to determine if and how services could be better supported or improved. To do so, we commissioned Energy Action Scotland, Glasgow Caledonian University, and Dr Fraser Stewart to undertake research including deliberative workshops across Scotland with consumers who rely on electric heating, to examine their experience of using electric heating and their experience of advice and support services. Additionally, a survey of organisations providing support was carried out to determine the nature of that support and any barriers they faced, as well as a stakeholder workshop to further explore the experiences of these organisations.

Key Findings

> The high cost of using electric heating is consistently one of the most pressing concerns of households that rely on it, and there is a perception that high costs are unavoidable and inevitable when using electric heating.

> Disengagement from the energy market is a major and consistent problem faced by those using electric heating, due in part to a complex and often confusing tariff market, misconceptions around the benefits of switching, difficulties making price comparisons, and problems around dispute resolution.

> A lack of knowledge of how to use electric heating systems remains a significant problem for many households.

> Some consumers are receiving mixed messages about their heating from different organisations such as energy suppliers, installers of energy efficiency measures, governments, the regulator and support agencies, adding to confusion.

> In certain situations, face-to-face advice, delivered locally or in the home, is the most effective means of resolving electric heating issues, particularly for vulnerable consumers.

> While effective support is available, organisations providing support to households that rely on electric heating face a range of barriers to delivering the support that is required, including:

- A lack of information on all electricity-only tariffs, and a lack of information on restricted time-of-use tariffs, particularly DTS tariffs
- Misconceptions among consumers around the benefits of switching
- A lack of awareness among households of the support that is available
- A lack of funding or reliance on short-term project funding for ongoing services

> Some existing services are limited in their scope or only deal with specific issues, or only serve a restricted geographical area.

Recommendations

> The Scottish Government should provide support to programmes which deliver Scotland-wide advice and referral services, to develop and expand a bespoke service providing expert advice on specific issues associated with electric heating. Such a service should:

  - Develop existing national-level advice services such as Home Energy Scotland and provide a helpline that would deal with complex issues relating to electric heating such as system operation, metering, tariffs, upgrades and access to targeted financial support. It should also be available to support both consumers and advisers.

  - Emphasise and strengthen its links with face-to-face support that is delivered locally – such that it can act to support existing local services with expert advice and provide an addition-al face-to-face service where no other existing local services exist.

> There is a clear need for more consistent messaging across organisations in relation to a range of issues associated with electric heating. Ofgem, in conjunction with energy suppliers, should review the guidance that is available on resolving energy market issues that relate specifically to electric heating, such as making price comparisons, switching, understanding meters, using heating systems and understanding bills. Where necessary, additional clear guidance should be published and made easily accessible.

> In order to help address the lack of consumer awareness of the support that is available, the Scottish Government should consider what additional resources could be made available to promote existing impartial advice and support services.

> More extensive training should be made available to advisers across different organisations on a Scotland-wide basis. The Scottish Government should work with advice organisations to facilitate the development of a detailed training module dealing with specific issues relating to electric heating in Scotland.

> Governments and regulators should give consideration to where longer-term funding could be made available to organisations delivering support. Local-level organisations that provide support to address persistent issues associated with electric heating should be able to do so on a long-term basis where required, in order to develop services over time, ensure their availability, and retain experienced staff.

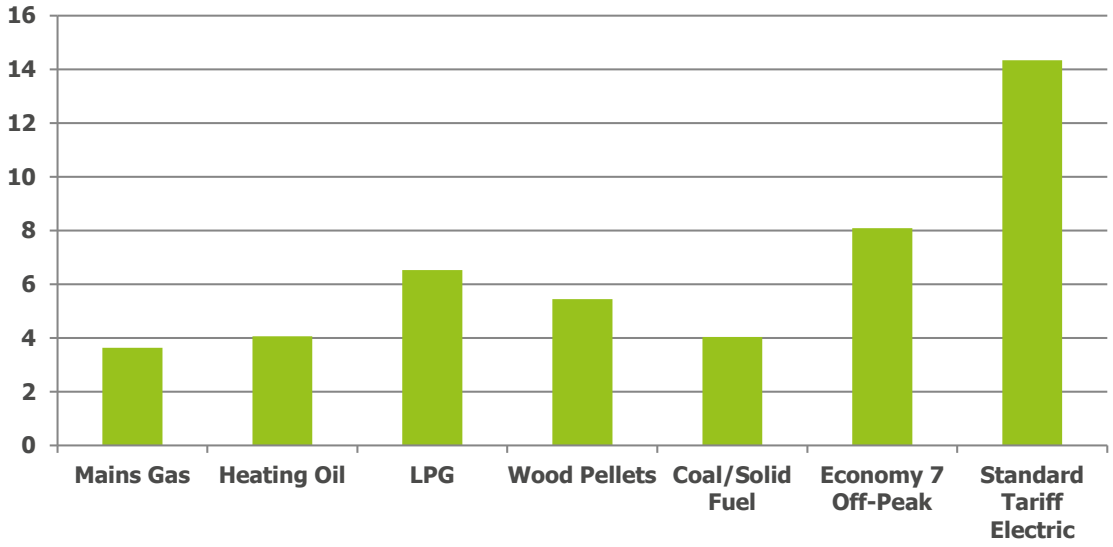
> Ofgem should examine how the CMA Restricted Meters Remedy can be better publicised among consumers, energy suppliers and support providers, and suppliers must be made fully aware of their obligations under the remedy. More information has to be made readily available on existing restricted meter tariffs in order to facilitate easier comparisons with single-rate tariffs. Clear guidance should be made available to both households and advisers on how to effectively make a price comparison.

> The potential for targeted support for upgrades to electric heating systems should be explored by Governments and the regulator. There should be a review of what new technologies related to electric heating could help to reduce energy bills, beyond traditional energy efficiency improvements. Consideration should be given to what funding can be made available for upgrades, how households in need can be identified, and how improvements can be most effectively targeted and delivered. At a Scottish level, Energy Efficient Scotland may present an opportunity to deliver this.

1. Introduction

1.1 At present, around 282,000 (11%) households in Scotland depend on electric heating to heat their homes[6]. There is a strong association between electric heating and low income[7], and the cost of heating a home with electricity is consistently higher than other fuels. Unit prices for electric heating are often around three times the unit cost of mains gas – the most common and generally the cheapest alternative.

Average Heating Fuel Price per kWh, March 2018[8]



1.2 Those who rely on electric heating often encounter a range of interlinked issues associated with their heating and metering systems, including:

> Affordability, with research finding that 20% of those using electric heating say it is unaffordable, compared to 10% of those who use mains gas[9]. Electric central heating on a standard tariff has consistently remained the most expensive way to heat a home[10].

> Confusion over off-peak times and rates and the inability to use sufficient electricity during off-peak times.

> Wider uncertainty around which tariffs or meters are appropriate or optimal.

> Barriers to, or confusion around, switching tariff or supplier[11].

> Lack of awareness of how to use heating systems[12].

> Heaters being unreliable or faulty[13].

> Metering and heating systems being incompatible or incorrectly installed.

6 Scottish House Condition Survey, 2016
7 Citizens Advice Scotland, *Off-gas consumers: Updated information on households without mains gas heating*, 2018
8 Energy Saving Trust, based on average unit cost over 12 months to March 2018.
9 Consumer Futures Unit, Consumer Tracker Survey, 2017
10 Citizens Advice Scotland, *Off-gas Consumers: Updated information on households without mains gas heating*, 2018
11 https://www.gov.uk/government/publications/energy-market-investigation-restricted-meters-order-2016
12 De Haro, TM & Koslowski, A, Fuel Poverty and High Rise Living, in Journal of Poverty and Social Justice, 21:2, June 2013
13 Ibid

> General lack of satisfaction – 25% of consumers using electric storage heating have been found to be dissatisfied with their heating system, compared with just 9% of those using gas central heating[14].

1.3 While these individual issues can cause detriment themselves, a number of them are often interlinked and there may be a need for an integrated solution to address them all. For example, renewing an electric heating system may in turn result in a need for advice on using controls or identifying an alternative, more appropriate, tariff.

1.4 In addition to the specific challenges posed by metering and heating systems, previous studies have indicated that consumers who are reliant on electric storage heating as their main source of heat face additional disadvantages in terms of the group's demographics.

1.5 Key characteristics of this group include a greater likelihood of:

> Lower than average incomes.

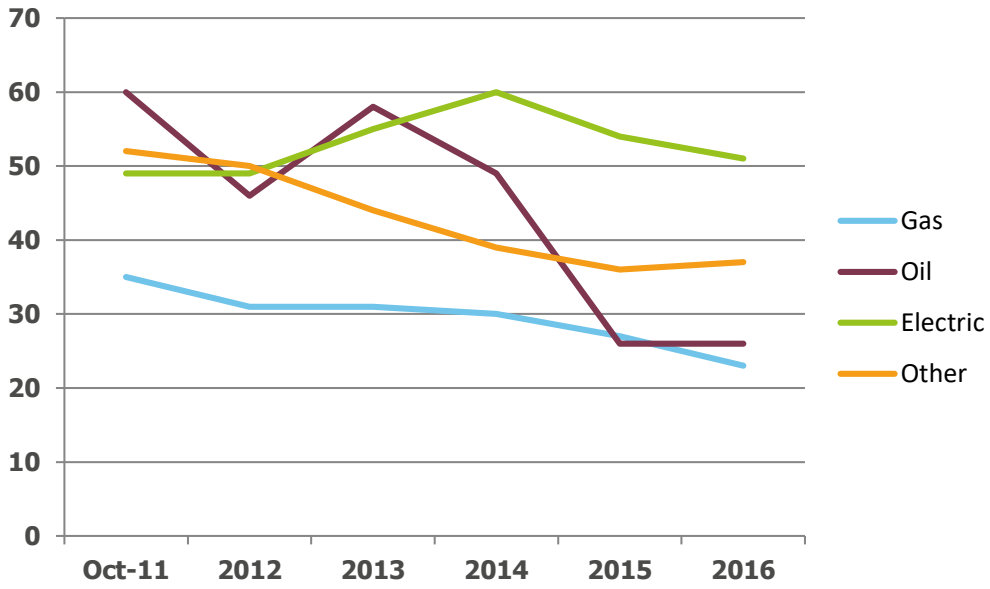
> Working in low skilled occupations or being economically inactive.

> Living in rented housing.

> Being under 34 or over 65 years of age[15].

1.6 The combination of these factors contribute to the fact that fuel poverty rates are high among this group, and have remained consistently high over time – currently at around 51%, compared with 26.5% for Scotland as a whole[16]. While groups that are reliant on mains gas or other fuels have seen reductions in fuel poverty rates over recent years, there has been little improvement among electric heating customers.

Figure 1: Fuel Poverty Rates by Main Heating Fuel, Scottish House Condition Survey 2011-2015



[14] Consumer Focus, F*rom Devotees to the Disengaged: A summary of research into energy consumers' experience of Time of Use tariffs and Consumer Focus's recommendations*, 2012

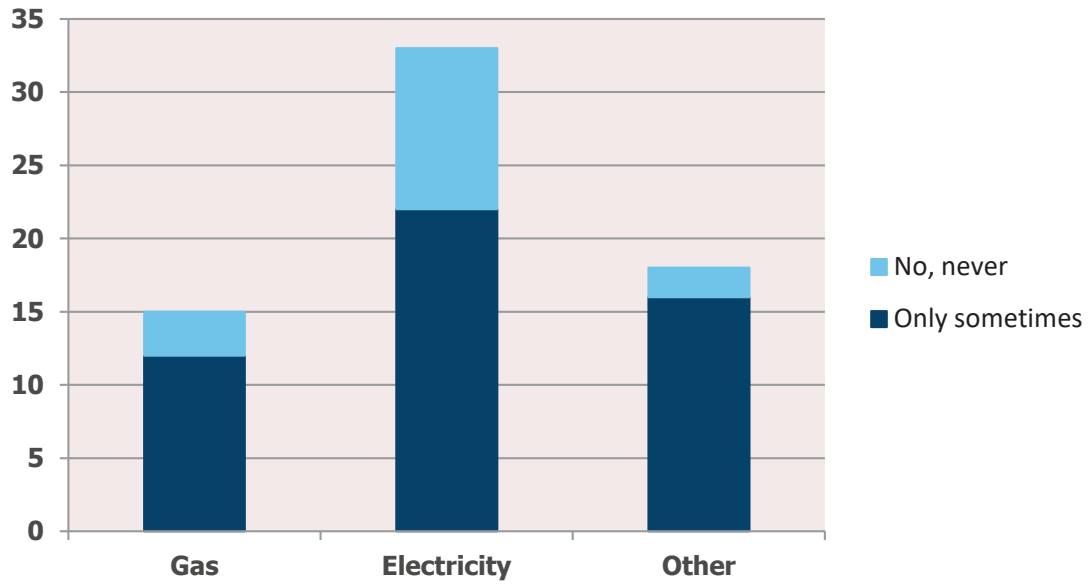
[15] Ibid

[16] Scottish House Condition Survey, 2016

1.7 Fuel poverty has four recognised drivers, namely energy prices, household income, home energy efficiency, and how energy is used. Reductions in fuel poverty levels over recent years have largely been attributed to reductions (albeit temporary) in the price of some domestic fuels, and to a lesser extent, improvements in energy efficiency[17]. As figure 1 demonstrates, however, it is clear that those reliant on electric heating have benefitted little from any price reductions in terms of fuel poverty. It is also worth noting that significant increases in energy prices since 2016 may have reversed much of the improvement, and the bulk of these price increases have fallen on electricity bills.

1.8 Fundamentally, those who use electric heating are less likely than those using other fuels to say that they are able to heat their homes sufficiently or affordably. Research carried out by CAS in 2017 found that households using electric heating were twice as likely to say their heating was unaffordable as those using mains gas[18]. As figure 2 demonstrates, the Scottish House Condition Survey indicates that those using electric heating are significantly less likely to find that their heating keeps them warm enough in the winter.

Figure 2: "Does Your Heating Keep You Warm Enough in the Winter?" [19]



Methodology

1.9 It is evident that households that rely on electric heating are likely to face significant and often complex challenges, and may require additional or more holistic forms of support to address these. CAS therefore identified a need to understand the specialised support services that are available to consumers who rely on electric heating as their main source of heat, and how those services meet their needs. In order to do so, we sought to:

> Develop an overview of the support needs of households with electric heating through reviewing existing data and engagement with consumers and organisations providing specialised support.

> Review of the existing advice and support services in Scotland which specifically address the needs of consumers who are reliant on electric heating to identify what is available.

[17] Scottish House Condition Survey, 2016
[18] CAS Consumer Futures Unit, Consumer Tracker Survey, 2017
[19] Scottish House Condition Survey, 2016

- Assess of the extent to which electric heating users are able to access suitable support and advice services.

- Identify if there are gaps in provision and what additional support may be required.

1.10 In order to explore these points, we commissioned Energy Action Scotland, Glasgow Caledonian University, and Dr Fraser Stewart to undertake research including deliberative workshops across Scotland with consumers who rely on electric heat, to examine their experience of using electric heating and their experience of advice and support services. There were four workshops, which took place in Renfrewshire, the Western Isles, Argyll and Bute, and the Kyle of Sutherland, ensuring a mix of urban, rural and island perspectives. This was accompanied by an extensive literature review and a snapshot study using interviews with four representatives from industry, including a large supplier, a network operator, a heating manufacturer, and a not-for-profit supplier. Interviews were also conducted with two organisations to provide a further consumer perspective – one being a project providing a technical solution to the provision of off-peak charged heat during demand times and the other an organisation representing the views of ethnic minority communities living and working in Scotland.

1.11 In addition to this, CAS carried out a survey of organisations that provide advice and support to households that rely on electric heating to determine the nature of the support they provide, any barriers to providing support that they faced, and areas where organisations could be better supported. A stakeholder workshop was also held to further explore the views of support providers. The types of organisations that were identified as providing specific support to households that rely on electric heating included:

- Central Government advice and support initiatives

- Local Government energy advice services

- Housing Associations

- Community Enterprise / Social Enterprise Companies

- Other third-sector services including Citizens Advice Bureaux Energy Adviser Services and the Extra Help Unit

- Energy Suppliers and energy trade associations

1.12 Through all of this, we hoped to build a more comprehensive picture of whether appropriate and sufficient specialised support is available for consumers who rely on electric heating as their main source of heat, and to identify if and where improvements need to be made.

2. Policy Context

2.1 At a regulatory level, there are a range of levies on energy bills, the aims of which include supporting renewable and low-carbon energy, improving energy efficiency, and mitigating fuel poverty. The majority of these levies fall on electricity bills rather than gas. In August 2018, Ofgem indicated that environmental and social obligation costs made up around 17.5% of electricity bills, while these only accounted for around 1.4% of gas bills[20]. This is in part because the vast majority of households across GB are connected to the electricity grid, while significant numbers are off the gas grid. However, it means that those who rely on electricity for their heating are likely to end up paying for a greater proportion of these levies due to higher electricity consumption.

2.2 There are also regional variations in the cost of electricity due to distribution charges. In the North of Scotland, electricity distribution charges are higher than any other GB distribution region, and are significantly higher than in the South of Scotland. For example, as a result of these charges, the benchmark maximum charge for winter 2018-19 under Ofgem's Safeguard Tariff for those using Economy 7 tariffs is £714.67 in North Scotland, compared with £676.07 in Southern Scotland[21][22]. This price differential is, to an extent, mitigated by the Hydro Benefit Replacement Scheme, however many households still experience higher network charges, and the scheme is paid for by a levy on electricity bills which again those using electric heating are likely to pay a higher proportion of.

2.3 Most households that rely on electric heating in Scotland use restricted meters, designed to be used with corresponding time-of-use tariffs and storage heating. These include a range of dynamically teleswitched (DTS) systems, Economy 10 and Economy 7 meters. A significant proportion of these households are likely to be using DTS meters. These are time-of-use meters that have separate on-peak and off-peak registers. The off-peak register will generally be used for charging storage heaters over a specific number of hours, and can have multiple and variable off-peak charging periods. Charging periods can be activated or altered remotely at different times in the year, or in response to changes in weather. DTS tariffs, designed to work with specific corresponding meter types, are generally 'legacy tariffs', which were originally introduced by municipal suppliers, and maintained for existing customers only following privatisation. As such, many of the DTS tariffs used in Scotland are SSE's Total Heat Total Control, or one of Scottish Power's multiple Comfort Plus tariffs. As these legacy tariffs are not available to new customers, if a consumer should switch to a different tariff, it is likely that they will be unable to switch back to their original DTS tariff.

2.4 These types of meters and tariffs are very common among households using electric heating in Scotland. In 2012, around 124,000 households were thought to be using DTS tariffs in Scotland, compared with around 32,000 in the rest of Great Britain[23].

[20] https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits

[21] Based on usage of 4,600 kWh.

[22] https://www.ofgem.gov.uk/system/files/docs/2018/08/aug_2018_-_cap_levels_for_publication.pdf

[23] Ofgem, ***The state of the market for customers with dynamically teleswitched meters*****,** 2013

DTS meters and DTS tariffs across regions as of December 2012[24,25]

Region	Estimated Numbers of Customers with DTS Meters	Domestic customers on DTS tariffs or "mirror" DTS tariffs
Northern Scotland	82,000	~ 77,000
Southern Scotland	79,000	~ 47,000
East Midlands	390,000	~ 32,000

2.5 DTS systems are also common in off-gas areas, often being relied upon by households in rural areas as well as many high rise flats. Unlike Economy 7 or Economy 10 meters, there are generally very few alternative tariffs for those using DTS systems, and so it is generally difficult for consumers to make accurate price comparisons. It is anticipated that replacing DTS meters with smart meters will give households a wider choice of tariffs, but it is unclear when appropriate smart meters will be available to all households using electric heating.

2.6 Those using this type of meter face wider challenges including high unit prices. These problems are compounded by issues including:

- Real and perceived barriers to switching tariff and supplier. There are a limited number of tariffs available to use with these meters, the tariffs being promoted are not always appropriate, the market is complex and can be confusing, and there is a lack of clear information on whether switching would be beneficial or not.
- Consumers often face difficulties accessing clear or consistent information on the details of DTS tariffs, such as off-peak periods.
- Those using DTS meters are likely to benefit later from the Smart Meter roll out than other groups, as they will often require the second generation of meters to work with their heating systems.
- There is often a lack of knowledge among customers of how to use their heating systems, and systems are often old and inefficient.

2.7 It is notable that alternative DTS tariffs do exist, with innovations such as OurPower's Take Control tariff, which works with the metering systems associated with existing DTS tariffs. At present, this tariff is also competitively priced[26]. However, there are few such alternative tariffs available, and similar innovations are yet to become more widespread in the market. Consumer choice therefore remains restricted in comparison to those using single-rate meters.

2.8 An additional challenge comes with the infrastructure around DTS systems. The system that activates or alters charging periods relies on a longwave radio signal which is due to be discontinued in 2020. It was originally envisaged that this would coincide with the completion of the Smart Meter rollout, but it is not clear whether every household will have a functioning smart meter by then. An additional concern comes from the fact that DTS systems can lose functionality when operated with the first generation of smart meters, or SMETS1. This could lead to the inability to alter charging times, or the inability to properly use storage heaters. It is hoped that the second generation of smart meters, or SMETS2, will allow systems to retain their functionality, although it seems unlikely that every electrically heated house in Scotland will have one of these meters by the time the signal is terminated in 2020. This could cause critical issues, with the potential for households to be unable to properly use their heating systems and it is unclear whether sufficient contingency arrangements are in place.

[24] Ibid

[25] Figures are provided for Northern Scotland, Southern Scotland and East Midlands as the numbers of DTS meters in other GB regions are negligible.

[26] https://our-power.co.uk/takecontrol

2.9 The Competition and Markets Authority (CMA) has recently attempted to address some of the barriers to switching faced by those using restricted meters. Previously, those using DTS meters have often found that they would have to have their meter replaced in order to use a different tariff or switch supplier, as DTS meters are generally designed to work with a very specific tariff. For other restricted meter types, most prominently Economy 7, a wider range of tariffs that are designed to work with the existing meter are generally available from multiple suppliers, and so there are considered to be fewer barriers.

2.10 In response to this, as part of its Energy Market Investigation of 2016, the CMA introduced its Restricted Meters Remedy. This remedy requires all energy suppliers with 50,000 or more domestic customers to allow those using non-Economy 7 restricted meters and tariffs to switch to a single rate electricity tariff without changing their meter. The aim of this has been to make more tariffs available to these households ahead of the completion of the smart meter rollout, and the remedy is due to be in place until 2020.

2.11 There are also uncertainties around the role that electricity will play in the future of heating. It is anticipated that there will be changes in the energy mix used in Scotland amid efforts to decarbonise energy up to 2050. It is currently unclear what direction this will take, but the Scottish Energy Strategy sets out a potential approach where there will be greater use of decarbonised, grid-supplied electricity for space and water heating. However, alternative approaches could include a greater reliance on low carbon gas such as hydrogen[27]. Whichever strategy is eventually pursued, it is clear that consumers risk continuing to pay high prices for electric heat while decisions are being made.

[27] Scottish Government, Scottish Energy Strategy: The future of energy in Scotland, 2017

3. Key Findings and Analysis

3.1 The findings of this research have provided valuable insight into the needs and experiences of households that rely on electric heat, and the challenges they face. It has also helped us to understand the nature and extent of the support that is currently available, and the barriers that the organisations delivering it face to providing holistic services.

Consumer Experience

3.2 Our research has suggested that households that rely on electric heating face a number of distinct challenges, both in relation to using electric heating and accessing appropriate support.

Affordability

3.3 Perhaps unsurprisingly, the high cost of using electric heating was cited as a major difficulty. There was an indication that, in relation to their heating, people think more about saving money than anything else, and almost every discussion in the deliberative workshops featured concerns regarding high costs.

3.4 There was a widespread perception that high costs were unavoidable and inevitable when using electric heating. Worries about these costs appeared to offset or overshadow enthusiasm for new technologies and innovations, such as more efficient storage heaters, that could potentially bring about savings. It was evident that people are facing difficulties with costs in all areas, and this was an issue that cut across almost all of the themes explored in the workshops.

"[The] key issue was the cost per unit of electricity, which is excessive compared to other types of energy"

3.5 Participants in rural areas expressed particular concern about a 'rural premium' due to higher energy costs, as well as higher general living costs, in these areas[28]. There was also concern about the fairness of households in different areas of the country paying different amounts for their energy. This may be due to factors such as the inability to access cheaper alternatives such as mains gas in some areas, or higher distribution charges in the North of Scotland leading to higher electricity bills. This reflects similar concerns expressed in wider CAS research into fuel poverty, where those in rural areas expressed particular concerns about high energy costs and their ability to afford them[29].

"It is too expensive to run properly"

"Electric heating [is the] system from hell due to the excessive cost"

3.6 Participants also raised concerns that many who rely on electric heating live in rented accommodation, and have no choice over the heating system that they use. When taken along with the common perception that there is little they can do to meaningfully reduce costs, it is evident that many feel the unaffordability of electric heating to be an issue that they are powerless to overcome.

"A lot of people have no option when they rent a property, you have to go with the heating installed. Landlords should be more considerate of their tenants' affordability of the heating they have in the property."

[28] Scottish Rural Fuel Poverty Taskforce: An Action Plan to Deliver Affordable Warmth in Rural Scotland, 2016

[29] CAS, *Speaking Up: Understanding Fuel Poverty Support Needs*, 2018

Using and Understanding Heating Systems

3.7 A lack of knowledge of how to use heating systems effectively was considered to be a significant issue for many households. There were also reports of clients being unable to properly understand or read their meters, meaning they could face challenges understanding bills or checking usage. This was cited as a particular problem when consumers were receiving estimated bills, facing difficulties providing accurate readings.

3.8 Some support providers reported that their clients often encountered challenges with understanding the technical language or jargon that may be used in relation to electric heating systems, further adding to confusion around system operation.

> ***"It is the lack of support available to households that is the biggest problem. Numerous people talked about 'getting lost' using the manual controls, and the handbooks that come with the heaters just make things more confusing"***

3.9 Participants also highlighted problems with heating systems being inefficient or otherwise not operating as they should. A common issue appears to be storage heaters failing to retain heat correctly, or being very difficult to control. This may cause problems in terms of affordability as the system is not operating efficiently, and problems in terms of controlling the heating system itself. This lack of control may also contribute to increased stress and a mistrust of, and reluctance to engage in, the market.

> ***"Lack of control with much electric heating is a difficulty e.g. storage heaters aren't always controllable"***

3.10 A range of coping methods were reported, including turning individual heaters off, using plug-in heaters rather than storage heaters, not using storage heating at all, only heating certain rooms, and putting on extra clothes. It is likely that some of these could have implications for energy affordability and health.

> ***"[The heating system is] a waste of money because the heating is coming on during the day when most people are out at work"***

Engagement in the Market

3.11 In a market where engagement by consumers is often seen to be an effective means to reduce energy costs, disengagement emerged as a major and consistent problem faced by those using electric heating. Throughout the deliberative workshops, participants reported feeling abandoned by suppliers, regulators and ombudsman services, and did not feel they were able to engage with the market in a way that would benefit them. Feelings of fear, frustration, abandonment and also suspicion were evident. Furthermore, disengagement from the market appeared to often extend to disengagement from seeking support with heating. The result is that many may not be aware of the assistance that is available, regardless of its effectiveness.

3.12 Complexities in the current tariff market were a key driver of this, particularly where the tariffs being promoted by suppliers may not be appropriate for some electric heating systems or regimes. In particular, the tariffs being promoted were often considered to be inappropriate for use with some electric heating systems such as DTS systems – where a single-rate is offered, it could lead to higher prices due to the loss of the off-peak rate, and there is a risk that using some other tariffs with DTS metering infrastructure could increase the risk of billing errors. These issues are explored in greater detail below.

3.13 Many also find it very difficult to determine which tariffs are appropriate for them due to a lack of easily accessible information on DTS tariffs and the inability to easily compare them with other tariffs. There was widespread confusion, especially among those using restricted meters and tariffs, about whether it is in their best interest to switch in the first place. For those who do switch and find it is not in their interest, it is then generally impossible for them to return to a legacy deal.

> ***"Other than stating the obvious that electric heating is the most expensive heating, there is no comparative costs with other forms of heating, or details of the different electric heating tariffs"***

3.14 This was supported by the fact that many organisations providing advice and support cited a lack of information on electricity only tariffs such as time-of-use tariffs as a key barrier to delivering effective support. These organisations repeatedly referred to misconceptions around the benefits of switching, and a general reluctance to switch supplier or tariff among their clients.

3.15 Difficulties around dispute resolution and advocacy also appear to drive disengagement from the market. Some participants reported experiencing long waiting times to have problems resolved or obtain help. While this is not an issue that is unique to electric heating, the complexity of the electricity supply industry in Scotland means that there are particular problems that have to be addressed that may also be complex. This may be adding to disengagement from the market and general feelings of distrust and despondency among electric heating customers.

Clarity and Consistency of Advice

3.16 Participants in the deliberative workshops reported receiving mixed messages from different organisations such as energy suppliers, installers of energy efficiency measures, governments, the regulator and support agencies, in relation to their electric heating. This was making advice confusing, and adding to the general confusion that consumers experienced around using electric heating, saving energy and engaging with the market. There was a suggestion that there is a greater need for consistency across organisations, providing a common message but with a local context.

3.17 The ability of individuals to understand the advice and support available was a concern that was frequently expressed. There was a suggestion that those with a lack of basic literacy or numeracy were more likely to fall into debt as they were less able to engage with or understand some forms of advice and support, particularly when it is not delivered verbally. The key implication here is that advice needs to be clear, coherent and accessible for all audiences. Where individuals face challenges engaging with advice, there may be a need for additional support to be made available.

3.18 Participants also reported some frustration at the time it can take to access support from energy suppliers' customer services, the time before new technologies, such as smart meters, come into effect, and disputes on metering issues lasting a long time.

What Effective Support Looks Like

3.19 As outlined above, those who rely on electric heating can often require specific support including:

- Help to navigate and understand the electricity tariff market, including when switching would be in their interests, how to compare restricted tariffs with others, and how to switch.
- Assessments of heating systems to determine system specifications, how efficiently a system is working, where upgrades may be required, and which upgrades would be appropriate.
- Advice on using heating controls effectively.

3.20 Participants in the deliberative workshops indicated that face-to-face advice, delivered in the home, can sometimes be the most effective means of resolving issues, particularly for vulnerable households. This was also evident in both the survey and workshop, where support providers indicated that this can be a more effective means of helping to understand the complex market, and addressing challenges faced around using and understanding heating systems, as set out above.

3.21 Repeat face-to-face advice on a long-term basis was considered to be particularly effective in helping individuals to understand the energy market and to use heating systems effectively, through continual positive reinforcement and increasing confidence. It was also considered to be particularly valuable in providing support for vulnerable individuals, which reflects the findings of previous research by CAS[30]. However, this form of support is costly, and support organisations can struggle to maintain sufficient funding to provide the necessary services.

3.22 There is an indication that people will not necessarily understand the advice and support that they are given in the same way, and that providing support and advice is not necessarily a one-off event. The deliberative workshops suggested that people do not always engage with information in a straightforward, linear way, and as a result repeat face-to-face long-term advice and support can be highly valuable.

3.23 There was clear evidence that participants in the deliberative workshops saw significant benefits in services that were available in the local community, with strong feelings of trustworthiness of community-based support initiatives. There were indications that those who had energy issues dealt with in this manner found the process less stressful. While support delivered by phone is considered to be highly valuable for a range of issues including complaint resolution, concerns were raised that trying to get the right help from someone located far away, by phone or on the internet, could sometimes be less effective for certain issues, as the adviser was not able to see the individual circumstances that led to the need for help. Examples of these circumstances included the adviser not being able to see the specific heating and hot water systems, specific tariffs, unknown meter types, signs of dampness, and reliance on blankets to keep warm.

"It is essential that the adviser knows what the householder has in terms of heating/hot water system, tariff, meter type, etc.; so that the advice can be accurate and reliable"

3.24 This suggests that in some circumstances, it can be highly beneficial for an adviser to observe both the heating system and the conditions in which a client is living. One implication of this could be that phone energy audits are not always accurate, and there is a risk this could result in individuals who are eligible for support not being able to accessing it. These issues, and the inconvenience and stress associated with them, may be more likely to be resolved if community-based organisations are able to visit people in their own homes.

"[The local advice service is] a holistic service that meets the needs of the local community"

3.25 This contrasted with the experience of many participants in relation to dealing with energy suppliers, the regulator and Ombudsman, where many felt that assumptions were being made about their property or heating system, and general solutions were being applied across the board that did not necessarily take into account or address the circumstances of individual households.

"There is a widely held view that individual customers are not prioritised by the regulator or suppliers"

[30] CAS, *Facing Fuel Poverty: Research on face-to-face actions to help consumers in fuel poverty in Scotland*, 2017

Existing Support Services

3.26 Our research indicated that there are a range of services at both national and local levels providing crucial advice and support to address the issues faced by those who rely on electric heating. The organisations and initiatives identified as providing this support include:

- Central Government supported initiatives, such as Home Energy Scotland
- Local Government energy advice services
- Housing Associations
- Third-sector services including Citizens Advice Bureaux Energy Adviser Services and the Extra Help Unit
- Community Enterprise and Social Enterprise Companies
- Energy Suppliers and energy trade associations

3.27 It was clear that there is a range of high-quality support available at both local and national levels, addressing a wide range of issues. However, it was also apparent that there are limitations to the available support, and major barriers to delivering the support that many households need.

Limitations of Support

3.28 The majority of organisations that were surveyed reported facing specific barriers to providing the support that households who rely on electric heating often require.

3.29 Most prominently reported were a lack of information on all electricity-only tariffs, and a lack of information on restricted time-of-use tariffs such as DTS tariffs. This included confusion over off-peak times and rates, and the inability to easily compare tariffs. This would appear to reflect the issues faced by deliberative workshop participants around not having easy access to information on DTS tariffs and the inability to easily compare them with other tariffs.

3.30 Support providers also suggested that switching rates were lower in Scotland due to the difficulties associated with switching while using DTS tariffs and meters. It was suggested that there were also a lack of appropriate electricity-only tariffs available for those using electric heating.

3.31 Misconceptions around the benefits of switching were also considered to be a major barrier to delivering effective support by many support providers. Many of those who rely on electric heating appear to hold the view that switching will not bring any significant benefits and it will remain unaffordable, and there was general confusion around the switching process among clients. In particular, both clients and support organisations found it difficult to determine whether switching would be beneficial for those using DTS meters. This is discussed in greater detail below. All of this may in turn help to drive the widespread disengagement from the market among these households.

3.32 Support organisations also encounter significant difficulties in making clients aware of the services that are available. This was evident both in the survey of support providers and the stakeholder workshop. In the workshop, a number of organisations raised concerns about the visibility or recognition of services among clients. Some found that those who required or were looking for support did not know about their organisations, or did not know what they do, meaning that unless they were referred from elsewhere, many of those in need were not accessing services. This again reflects the findings of previous CAS research into the support needs of those in fuel poverty, which suggested that those who had the greatest need for support were often the ones who were not accessing existing support[31].

3.33 Funding concerns were also highlighted, with some organisations indicating that a lack of funding limited the support they were able to provide. Some local advice agencies appear to be struggling from year to year on short-term project funding to provide the support that is necessary, causing problems with maintaining and expanding services year-on-year, and retaining staff. As highlighted earlier,

[31] CAS, *Speaking Up: Understanding Fuel Poverty Support Needs*, 2018

some forms of support such as face-to-face advice are effective but costly, and limited or short-term funding may represent a major barrier to delivering this support to the level that it is required.

3.34 Some support providers also reported encountering other barriers, including:

- Difficulties identifying clients who are most in need;
- A lack of information on the switching process for those using electric heating;
- Clients living in remote areas and being difficult to reach;
- A lack of training available for staff;
- Clients' unwillingness to try to use their heating systems due to the perception that it will be unaffordable regardless.
- Staffing costs.

3.35 Poor customer service from some energy suppliers was also cited as a barrier to delivering effective support. As many consumers may seek support from their supplier in the first instance, when poor service is provided, or inaccurate information is given, this can complicate the situation for the consumer and subsequent attempts to provide support. This further contributes to low levels of trust in energy suppliers[32], and may also drive disengagement from the market.

3.36 The survey of support providers indicated that many of the holistic services that are available are restricted to specific geographical areas, often within Local Authority areas. While some cover the whole of Scotland, many of these faced barriers to providing holistic support to all of the households that may need it, or did not provide the full range of support that may be required. This may imply that while holistic support is available, it is likely that the ease with which it can be accessed, or the problems that it can address, varies between different areas.

3.37 It is notable that some participants in the stakeholder workshop indicated that there was particularly limited access to these services in the highlands. As with other parts of rural Scotland, most of the highlands are off the gas grid and many households rely on electric heating. It is therefore possible that these areas have an even greater need for services. This may further be compounded by the fact that living costs in remote rural areas are higher than other areas, and electricity prices are higher in the North of Scotland due to higher distribution costs[33]. As demonstrated above, there are likely to be benefits where certain support is provided locally or within a community, and this may become more challenging where there are higher numbers of remote households.

3.38 The forms of support, and how they are delivered, also varied between organisations. There are examples of services which provide a wide range of support that, taken together, may be considered holistic. This included organisations offering a range of services such as tariff and switching advice, advice on using heating system controls, advice on using heating systems efficiently, advice on using time-of-use tariffs, in-house assessments of heating systems, advice on installing or using smart meters, financial support or income maximisation, and support towards heating system upgrades.

3.39 However, while it was also clear that a number of individual organisations excel in a specific form of support, such as tariff and switching advice, many were also limited to these forms of support. Some suppliers did offer a wide range of support, however this is likely to only be used by their own customers. It would also be reasonable to expect that the tariff and switching advice provided by suppliers is likely to only apply to that supplier's own tariffs. Crucially, as discussed earlier, there are low levels of trust in suppliers and consumers maybe unenthusiastic about approaching their supplier for impartial advice. This could in part driven by the fact that, as we have seen, many consumers report receiving poor customer service and confusing information from their supplier.

[32] Ofgem, ***State of the Energy Market***, 2018

[33] https://www.ofgem.gov.uk/system/files/docs/2018/08/aug_2018_-_cap_levels_for_publication.pdf

3.40 A wide range of advice and support is delivered at both a national and local level by Home Energy Scotland, through advice services delivered by phone and online which include energy checks, and at a local level, through a network of local advice centres. It also plays an important role in coordinating with and supporting local organisations, and is currently running a pilot 'Homecare' programme, which provides in-depth holistic support to the most vulnerable households. The work of HES is highly positive in addressing a range of issues associated with electric heating, and it provides a useful model for service delivery at both national and regional levels. It does have limitations though, including limited resources which may restrict the reach of some services. The Homecare initiative, for example, provides highly extensive and holistic support to households in rural areas, but at present the scheme is only available in Moray and Dumfries and Galloway, and is available to a relatively small number of households. The scheme is currently restricted to these areas as funding was initially provided for pilot projects, but there is an intention to make services more widely available in the future, drawing upon lessons learned from the pilot programme. Home Energy Scotland also provides support on a wide range of issues beyond electric heating.

CMA Restricted Meters Remedy

3.41 The research indicated that there are a number of issues with the CMA's Restricted Meters Remedy. The remedy is intended to make the switching process simpler for households that use non-Economy 7 restricted meters, and to give those customers access to more tariffs (details of the remedy can be found in Chapter 2). However, the remedy appears to have a number of significant shortcomings.

3.42 Of the support organisations that were surveyed, a number were not aware of the remedy and the obligations it places on energy suppliers, despite these organisations providing support to electric heating customers who are likely to be using relevant meters. The reasons for this are unclear, but it may suggest that the details of the remedy have not been sufficiently publicised.

3.43 Of those organisations that were aware of the remedy, the majority had not made use of it. The reasons given included that it was difficult or complicated to calculate whether a household would be better off if they switched, that switching would not be beneficial or appropriate for many households, and that the switching process itself was complex. Some who had calculated the cost difference said they found that switching to a single rate would, in fact, be more expensive than their clients existing tariff. There were also suggestions that some suppliers were not sufficiently familiar with the remedy, or lacked knowledge of restricted meters, and therefore there was a risk that a switch could have negative consequences. There was also scepticism among these organisations' clients, with many feeling switching would not be beneficial, and some feeling that there was a risk that their heating system would not function properly if they switched to a single rate.

> ***"[Switching] is unlikely to have benefited the clients. They would no longer have access to cheaper heating costs (off peak) and it would be likely that most of their energy costs would be down to heating costs."***

3.44 For those organisations that had used the remedy while advising clients, many were either unaware of whether it had benefitted their clients, or believed that they were unlikely to have benefitted. In particular, there was concern that the loss of the cheaper off-peak heating rate used with restricted tariffs would lead to significantly higher heating costs. While the remedy may make more tariffs available to these households, there was a feeling that these tariffs would hold little benefit for them.

3.45 One supplier indicated that while they were not always able to determine the long-term benefits for customers who switched using the remedy, they were aware of some switching to cheaper tariffs with the same supplier. Nevertheless, it appeared that there had been few positive experiences of using the remedy among support providers, and that there is little confidence in any associated benefits among both support providers and clients.

What further support is needed?

3.46 Support providers highlighted a number of interventions that they felt could help to support the services that they deliver.

3.47 Most prominently, organisations said that providing longer-term funding for staff would make a major difference, to address issues associated with developing services and retaining staff. There was also extensive support for specialised training on the issues associated with electric heating to be made more widely available to advisers. Many also indicated that additional independent advice material on all aspects of electric heating should be made available, for example through downloadable guidance for both advisers and households. This is likely to be in response to the commonly held view that there is insufficient information currently available on things like electricity-only tariffs.

3.48 There was also support for a bespoke, Scotland-wide referral service dealing specifically with electric heating issues. This could take a similar form to existing services that are available for issues such as switching or energy efficiency improvements, but with a sole focus on the wide range of issues associated with electric heating, and providing specialist expertise in resolving these specific issues. Similarly, there was support for a specialist consultancy service that could provide information and support to advisers in other organisations to help resolve these issues. This could be beneficial in providing the specialist knowledge and consistent messaging that is required, while supporting existing organisations, in particular services that are delivered locally and were greatly valued by participants in the deliberative workshops. Some similar Scotland-wide services are already available to provide some of this support, and the work of organisations like Citizens Advice Scotland's Extra Help Unit and Citrus Energy was considered invaluable by many.

However, many existing services only provide certain forms of support, such as dispute resolution or tariff and switching advice, and tend to cover the whole of the energy market, or large parts of it. There was a suggestion that a body that could provide expert support and advice specifically for the range of issues faced by electric heating customers would be beneficial in making support more holistic.

3.49 As well as longer-term funding, several organisations also stated that additional funding for staff, and additional funding for travel, for example to facilitate face-to-face support, would be beneficial.

3.50 A supplier also stated that advisers sometimes faced challenges to keep up-to-date with new types of heating system and appliance as they come onto the market, and therefore making material on these would be beneficial, as would having a Scotland-wide referral service that customers could be signposted to for advice on how best to use their heating.

3.51 Another organisation indicated that improvements in the customer services of some energy suppliers would be necessary to facilitate improved support.

4. Recommendations

4.1 The findings from this research demonstrate that those who rely on electric heating face a range of complex issues, and that the services that deliver support to address these issues often face a range of barriers to delivering the holistic support that is needed. High costs and the complexity of the market need to be addressed, and both households and support services need better access to clear information. Local organisations need to be supported, but there needs to be a strategic national approach. The following recommendations could help to achieve these outcomes.

Develop Specialised Support Services Dealing with Electric Heating

4.2 The Scottish Government should provide support to programmes which deliver Scotland-wide advice and referral services, to develop and expand a bespoke service providing expert advice on specific issues associated with electric heating. Such a service should:

> Develop existing national-level advice services such as Home Energy Scotland and provide a helpline that would deal with complex issues relating to electric heating such as system operation, metering, tariffs, upgrades and access to targeted financial support. It should also be available to support both consumers and advisers.

> Emphasise and strengthen its links with face-to-face support that is delivered locally – such that it can act to support existing local services with expert advice and provide an additional face-to-face service where no other existing local services exist.

4.3 This should provide expert support to both consumers and advisers themselves. This service should be able to answer complex questions relating to electric heating, or to guide advisers through the process of resolving complex issues.

4.4 It should also help to strengthen referral links with face-to-face support that is delivered locally, to bolster these services with expert advice, and provide additional face-to-face advice services where no others exist locally. It will be important to link to any support that could be delivered through Energy Efficient Scotland.

Ensuring consistency of messaging across organisations

4.5 There is a clear need for more consistent messaging across organisations in relation to a range of issues associated with electric heating. We would encourage Ofgem to work with energy suppliers to review the guidance that is available on resolving energy market issues that relate specifically to electric heating, such as making price comparisons, switching, understanding meters, using heating systems and understanding bills. Where necessary, additional clear guidance should be published and made easily accessible. In particular, this should be made available for those using DTS meters and tariffs as a priority.

4.6 The national referral service proposed above could also help to facilitate this by both providing advice and making guidance available. Suppliers should play a key role in providing information on meters and tariffs

Greater Promotion of National Advice and Referral Mechanisms

4.7 In order to help address the lack of consumer awareness of the support that is available, the Scottish Government should consider what additional resources could be made available to promote existing impartial advice and support services.

4.8 A key focus of these efforts should be to raise awareness of locally delivered services. Initiatives including locally-delivered Home Energy Scotland services should be publicised among both consumers and local organisations.

4.9 For consumers to engage effectively there needs to be a consistent, accessible, and clear route to advice. This should build upon the brand identity of existing services. Additional awareness-raising should be carried out to further publicise new or expanded services among consumers and advisers. The Scottish Government would be well placed to facilitate this as part of existing advice initiatives like Home Energy Scotland and public campaigns relating to energy efficiency.

Training for advisers should be made more widely available

4.10 More extensive training dealing with specific issues relating to electric heating in Scotland should be made available to advisers from a range of organisations across Scotland. The Scottish Government should support advice organisations to work in partnership to review and develop training which draws upon the experiences and expertise of different organisations. Resources should be made available to provide a training module, where required, to local-level organisations.

4.11 National-level support services dealing with electric heating could potentially play a role in delivering this as part of any additional support. Again, this would help to support the consistency of information and messaging around the issues associated with electric heating.

Longer-term funding for holistic support services

4.12 Consideration should be given to where longer-term funding could be made available to organisations delivering support. Longer-term funding models exist for certain services such as Home Energy Scotland, which have proven effective at maintaining services. However, some services rely on short-term funding from a range of different sources. Local-level organisations that provide support to address persistent issues associated with electric heating should be able to do so on a long-term basis where required, in order to develop services over time, ensure their availability, and retain experienced staff.

Where these services are delivered and organisations rely on short-term project funding, which can be annual, options should be made available for support organisations to acquire longer-term funding where this is appropriate.

CMA Restricted Meters Remedy

4.13 The CMA Restricted Meters Remedy needs to be better publicised among consumers, support providers and energy suppliers. Efforts are needed to ensure that all suppliers are fully aware of their obligation to provide a single-rate tariff without replacing metering infrastructure under the remedy.

4.14 In addition to this, and in line with the proposals above, more information has to be made readily available on existing restricted meter tariffs in order to facilitate easier comparisons with single-rate tariffs. Clear guidance should be made available to both households and advisers on how to effectively make a comparison. Ultimately, the outcomes of this should be to ensure that consumers are able to genuinely make informed decisions under the remedy.

Support for heating upgrades

4.15 The potential for targeted support for upgrades to electric heating systems should be explored. There would be potential benefits in upgrading some systems to high-retention storage heaters to improve efficiency. In addition, there should be a review of what other new technologies related to electric heating could help to reduce fuel bills, beyond traditional energy efficiency improvements.

4.16 Cost-effective measures that have a meaningful impact on bills should be prioritised for this group, and consideration should be given to what funding can be made available for these upgrades, how households in need can be identified, and how improvements can be most effectively targeted and delivered.

Further Questions to be Explored

While this research has helped us to understand some of the challenges associated with electric heating, and some of the solutions to help address them, it has also raised a number of questions that we believe warrant further investigation. These include:

> Understanding the full potential implications of the switching off of the DTS signal, and its impact on the functionality of different DTS meters, particularly where SMETS2 meters are not installed.

> Uncertainty of the future energy mix and implications for electric heating.

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