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# Capturing the value of community fuel poverty alleviation



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# Capturing the value of community fuel poverty alleviation

Colin Nolden<sup>1</sup>, Daniela Rossade<sup>2</sup>, Peter Thomas<sup>3</sup>

This report summarises the findings of the ‘Capturing the value of community energy’ business collaboration project. Completed between September 2020 and January 2021, a team of researchers from University of Bristol (Vice-Chancellor’s Fellow Colin Nolden and PhD Researchers Daniela Rossade and Peter Thomas) analysed company data stretching back to 2015 from Energise Sussex Coast (ESC) and South East London Community Energy (SELCE), two non-profit social enterprises that seek to act co-operatively to tackle fuel poverty and the climate crisis. Both have won multiple awards for their work which includes community owned renewable energy schemes and tackling fuel poverty, which involves reaching out to vulnerable members of their communities to help them understand their energy bills, switch suppliers and reduce their energy demand. This business collaboration involved the analysis of their fuel poverty alleviation data to gain a better understanding of what fuel poverty advice and energy saving action works and what does not. We pursued a three-pronged approach to the data analysis. Firstly, we tried to establish comparability among the quantitative datasets to compare their approach, outreach and success in tackling fuel poverty. Secondly, we calculated the Social Return on Investment (SROI) using one specific dataset from 2018/19. Thirdly, we analysed the qualitative data to gain a deeper understanding of links between organisational approaches, fuel poverty alleviation interventions, data capture and management, and the funding environment. Due to complicated and highly variable reporting procedures it was only possible to establish comparable datasets on a few metrics which reflect requirements set by funders. The SROI calculation revealed that community fuel poverty alleviation efforts undertaken by companies such as SELCE and ESC has a SROI of 9-10:1 for every £1 invested. The qualitative analysis revealed the systematic underreporting of such value as funders’ targets are narrowly defined around numbers rather than genuinely lifting people out of fuel poverty. This report concludes with some recommendations to improve the operational environment for community fuel poverty alleviation services, especially given their invaluable efforts in reaching out to some of the most vulnerable members of our communities.

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## 1. Introduction

The following is an excerpt from a 2016 Big Energy Savings Network (BESN) report analysed as part of this business collaboration. It highlights fuel poverty alleviation funding and data reporting issues and summarises the importance of this analysis:

*It is a large amount of work to only fund 1 person for £5k to ensure delivery of 100 1:2:1 customised energy advice sessions and 40 frontline workers. [Our organisation] has had to contribute our own funds in order to be able to reach targets. [...]. The funding certainly doesn't cover time needed for any follow up advice such as tracking identified savings. Many beneficiaries will only switch once they have discussed the issue with fellow householders and only if they have this vital follow up support. [...] Funding simply does not allow for this following up work. [...]. Maybe it would be better to record ALL identified savings then also record if they switched or not. For example, during March we identified savings totalling £7,864 but actually people switching on the day £3,064. Also, from a financial point of view [Warm Home Discount] is worth an extra £140 per year. The focus on recording savings from switching underestimate the total savings from a combination of switching and access to the [Warm Home Discount].*

For community organisations engaging in fuel poverty alleviation, this narrow focus on targets, especially advising a minimum of 100 vulnerable people through 1:2:1 advice sessions, and switching suppliers during these sessions, even though Warm Home Discounts (WHD) provide an additional means of reducing expenditures, is evidently frustrating.

*As an organisation we were aiming to be cost effective but it was hard when people need 20-mins to 90 mins, depending on how vulnerable or complicated their situations are. The only thing we could do to overcome these barriers was deliver more sessions.*

Against this backdrop it might appear strange that the UK was the first country to define fuel poverty and politically recognise it as an issue. Initially it was defined as a household that “needs to spend more than 10% of its income on fuel to maintain an adequate level of warmth”. However, this definition was considered too sensitive to fluctuations in gas and electricity prices as well as assumptions about what constitutes an adequate temperature (Hills 2012). In 2012 it was replaced by the Low Income High Cost (LIHC) indicator where fuel poverty is defined as a household that has fuel costs that are above average and, were they to pay that amount, would be left with a residual income below the official poverty line. However, this definition has also been criticised due to the significant reduction in the projected number of fuel-poor households it entails (Bouzarovski 2018).

Although these definitions are important, they are not relevant to this report as SELCE and ESC reach out, and provide services to, vulnerable people more generally. Fuel poverty tends to be one aspect of their vulnerability, often compounding other vulnerabilities, and one which can be at least partly alleviated through a wide range of interventions. To really address these vulnerabilities, however, systemic changes, including better housing conditions, addressing the widening gap between the rich and the poor and better mental and physical support, just to name a few, are necessary.

Organisations such as SELCE and ESC nevertheless provide an essential service in reaching out to the vulnerable whose vulnerabilities are increasing in the absence of such system change. At the same time, Covid-19 has pushed more people into vulnerable situations while traditional approaches of community fuel poverty outreach, including energy shops, energy cafes and home visits, have not been possible. These are challenging times for a sector doing significant, often life changing work on a shoestring while desperately applying to funders who are mainly focused on chasing numbers and who have created a competitive market environment which drives consolidation in the hands of large organisations with no community links.

This business collaboration evolved out of discussions about the difficulty establishing anything resembling a self-sustaining community fuel poverty alleviation business model in light of these challenges. The initial objective of trying to establish which community fuel poverty alleviation approach works and which do not work progressed into the need for a reflective policy piece that goes beyond the existing research conducted on behalf of funders which has tended to deliver what funders want to hear.

SELCE's objective is to use this to influence funders to focus on what funding really works by overcoming assumptions about what community fuel poverty alleviation can and cannot deliver. ESC on the other hand want to understand what enables economies of scale, what is transferrable and what can be considered a standardised approach that delivers specific outcomes, which could be included in a support documentation for other organisations. Both want better data, better databases and better baselines as the funding environment is tipping towards organisations with very good data capturing, management and dissemination infrastructures. Both have a desire to use this business collaboration to develop a better understanding of **what will alleviate fuel poverty?**

This report is structured as follows: Section 2 provides background information on fuel poverty alleviation at European and UK level, as well as policies, strategies and funding which play a role in supporting organisations such as SELCE and ESC. Section 3 introduces the two organisations in more detail, their funding environment which determines their approach to fuel poverty alleviation, their data capturing and management approaches which are largely determined by their funding environment, and the methodologies we used to analyse this data. Section 4 analyses their company data, firstly by establishing comparability among the quantitative datasets and secondly by calculating the SROI. Section 5 contextualises these findings to gain a deeper understanding of links between organisational approaches, fuel poverty alleviation interventions, data capture and management, and the funding environment. Section 5 provides a discussion of this business collaboration. Section 6 concludes and Section 7 provides policy recommendations.

## 2. Background

### 2.1 UK fuel poverty in context

EU Energy Poverty Observatory (EPOV, 2019) figures show that 5.4% of the UK's population of around 67 million (2018 figures) reported that they were unable to keep their homes adequately warm in that year, compared to an EU average of 7.3%. Similarly, 5.4% were unable to pay their utility bills on time due to financial difficulties, compared to an EU average of 6.6%. Although this demonstrates that the UK fares better than the EU average it means that approximately 3.6 million households in the UK are in fuel poverty. Importantly, among the poorest 20% of society, 78% of households live in fuel poverty (NEA 2020). At the same time, 18.8% of households spend large proportion of their income on energy. These households are likely to occupy dwellings with poor energy efficiency ratings. As a reflection of poverty more generally, these households are also more likely to live in private rented accommodation (see Table 1 based on the LIHC calculation).

| Energy Efficiency Band | Not Fuel Poor | Fuel Poor | Ratio |
|------------------------|---------------|-----------|-------|
| A/B/C                  | 1,495,000     | 57,000    | 96:4  |
| D                      | 1,790,000     | 431,000   | 80:20 |
| E                      | 338,000       | 230,000   | 60:40 |
| F/G                    | 124,000       | 89,000    | 58:42 |

Table 1: Private rented homes by energy efficiency band (England only, 2018; BEIS 2020)

Based on the UK government's LIHC calculation, around 18% of private rental sector households are in fuel poverty, compared to 9% of social housing households and 8% of owner-occupied households

(BEIS 2020). Using a different calculation, National Energy Action concludes that around 1 in 7 UK households experience fuel poverty and live in homes that are difficult and expensive to heat (NEA 2020).

Compared to other European countries, energy bills are higher in the UK in part because of poor infrastructure and inefficient housing stock, which is among the oldest in Europe. In 2017, according to the Building Research Establishment Trust report on The Housing Stock of the United Kingdom (Piddington et al., 2020), around 20% of UK houses were built before 1919 and only 25% were built after 1980.

With its history of poor housing, fuel poverty has long been recognised as an issue in the UK (Boardman 1991). This has resulted in an accumulation of experience in community engagement, social policies and practical methodologies to address it. The issue of fuel poverty is also increasingly recognised as a major public health problem in the UK. An estimated 9,700 deaths each year “are attributable to the avoidable circumstances of living in a cold home” (Guertler and Smith 2018: 2).

According to E3G and National Energy Action (Guertler and Smith 2018), a baby born into cold housing is three-times more likely to suffer from illness such as respiratory diseases than a baby born into warm housing which in turn results in a 30% greater risk of hospital admissions. As the child develops, the effect of growing up in cold housing reduces long-term educational attainment due to illness and/or because they cannot find a quiet, warm place to study. One in four teenagers growing up in such conditions are at risk of multiple mental health problems.

In the UK almost 20% of households with a child under 16 lives in fuel poverty. Among lone parent households, the number climbs to 25%. Even regular work and income does not necessarily alleviate fuel poverty, with 47% of fuel poor households in full or part-time work. These issues are compounded for households in fuel debt that are forced to use a pre-payment meter because they are typically excluded from the cheapest tariffs. This can create anxiety, exacerbate mental health problems and lead to further depression and potentially suicide (Guertler and Smith 2018). In later life, fuel poverty often leads to poor physical and mental health, as well as loneliness. This is important because health conditions such as cardiovascular and respiratory diseases, falls and injuries and mental health cost the NHS an estimated £1.36 billion per year (Age UK 2012).

With energy bills expected to increase by up to 20% due to Covid-19, more households sheltering and working from home, and incomes declining due to redundancies and general economic uncertainty it is possible that more households will be facing fuel poverty in the future. This could have devastating long-term effects on all household members, but especially children. Home energy improvements to address fuel poverty have shown to decrease the rate of sickness absence from school by 80% for children with asthma and recurrent respiratory infections (Somerville et al. 2000; in Guertler and Smith 2018).

## 2.2 The UK fuel poverty policy and alleviation environment

Despite years of engagement and developing understandings of the causes and effects of fuel poverty, including a desire to eradicate fuel poverty in the Warm Homes and Energy Conservation Act 2000 (DETR 2000; HM Government 2015), there is no national system in place to help the vulnerable. Nor is a national fuel poverty registry in place to track progress, not to mention an adequate support infrastructure. This is regularly identified as a significant flaw in the system, with a study supported by the Chesshire Lehmann Fund (2016) stating that:

“The success of the [Big Energy Saving Network] scheme, continued in 2016, should not mask the very real challenge facing all voluntary and public sector organisations: namely that there is little or no effective national energy advice infrastructure in the UK”

Successive governments have shown no interest in these issues. Community organisation wishing to address fuel poverty in their local areas are at the whim of funders, mostly energy utilities, who are required by the Office of Gas and Electricity Markets (Ofgem) to address fuel poverty. Such utilities, however, do not have a good track record of treating their customers fairly and Ofgem does not have a good track record of encouraging them to do so either.

Grants are often targeted at supplier switching and receiving income supplements such as the Warm Home Discount (WHD). Although these are essential and vital activities that provide immediate benefits to households in fuel poverty, tackling this issue systematically would require an overall improvement of housing conditions as well as more equal wealth distribution. In the absence of a supportive policy regime to address these issues, the value of engaging with and visiting the fuel poor in their homes morph from admirable recognition at national level into numbers of “customers” on funders’ spreadsheets.

Nevertheless, a wide range of community organisations, charities and NGOs work against the odds to provide fuel poverty alleviation work throughout the UK. Paid staff are essential for continuity and in-depth advice to grant the fuel poor the financial support they are entitled to. Advice workers in the community are trusted and have detailed knowledge of their local areas. Due to a lack of funding, however, these organisations struggle to maintain their operations.

At the same time, the sector is in flux. In the past, organisations were motivated by government policies and targets around fuel poverty. In the early 2000s, these included the 2001 Fuel Poverty Strategy and the cross-government commitment to end fuel poverty by 2015 (DETR 2000; CEE 2020). Such ambitions were reinforced in the 2010s through the Fuel Poverty (England) Regulations 2014 which set a target requiring that as many fuel poor homes as is reasonably practical achieve a minimum energy efficiency rating of Energy Performance Certificate Band C by the end of 2030. In 2015, the Fuel Poverty Strategy established interim milestones of “raising as many fuel poor homes as reasonably practical to Band E by 2020, and as many fuel poor homes as is reasonably practical to Band D by 2025” (BEIS 2020: 15).

The 2010s also saw the launch of the feed-in tariff (FIT) for renewable electricity generation. As a result, community groups in particular started shifting their focus towards electricity generation, sometimes to develop a sustainable income stream to support their fuel poverty alleviation work (Nolden et al. 2020). The focus has shifted once more following the termination of the feed-in tariff and the declaration of a national net-zero carbon target as well as local climate emergencies in villages, towns, cities and regions (Tingey and Webb 2020).

## 2.3 Energy White Paper

The recently published Energy White Paper (published December 2020) will bring further changes to the organisational and institutional environment of community fuel poverty alleviation services. It commits to placing consumer costs and fairness at the centre of the energy transition. For example, the report states that energy policies should protect the fuel poor, provide opportunities to save money on bills, give us warmer, more comfortable homes and balance investments against bill impacts. The report goes on to state that vulnerable consumers may need additional protections appropriate to their circumstances and that people in fuel poverty will not be left behind. However, it indicates that most changes will be set out in its Fuel Poverty Strategy for England, due to be published in early 2021. The following areas of the report are particularly relevant to organisations such as SELCE and ESC.

### 2.3.1 Tariffs

The White Paper includes a commitment to consult by March 2021 on changes to tariffs including opt-in and opt-out tariff switching. The report cites evidence that over 50% of consumers remain of default tariffs and end up paying more than they need to despite almost all knowing they can switch. While

no specific policies are recommended the report notes that a study by Ofgem found that customers can be prompted to switch with well-designed letters and emails. It also notes that the most successful techniques were ones that removed as many steps as possible from the switching process and provided additional reassurances, such as independent support.

### 2.3.2 Smart System

There is recognition in the report of the role smart technologies including smart meters and smart appliances will play in the future energy system. In theory these technologies help to ensure billing accuracy by reporting exact usage to the energy provider and can help reduce bills, for example, by automatically running the washing machine while electricity is cheap. However, these 'smart appliances' are potentially out of reach of fuel poor households who may end by being penalised as a result.

### 2.3.3 Energy Efficient Retrofit

The Government indicates that there needs to be a significant push to ensure homes are more energy efficient in order to significantly reduce demand and save money on their bills. In September 2020 it consulted on proposal to ensure privately rented homes meet a minimum of EPC by 2029 and it plans to consult on how mortgage lenders could support homeowners in making these improvements. The report also notes that 44 per cent of all social rented homes in England currently have an EPC Rating below C and committed to a review of the Decent Homes Standard which currently only stipulates that homes should provide a reasonable degree of thermal comfort and be free of excess cold (broadly equivalent to EPC Band F). Finally, it notes that the benefits of well-insulated homes, on health and well-being and on bills, should not be the preserve of households which can afford to pay for energy efficiency measures.

### 2.3.4 Grants

The report outlines the Government's intention to continue offering additional protections to the vulnerable and fuel poor, through the Energy Company Obligation (ECO), the Warm Home Discount (WHD) scheme and the Green Homes Grant. ECO and the WHD will both be extended to 2026 and the WHD will be expanded so that all suppliers can offer it which will give fuel poor consumers more flexibility regarding switching to a cheaper tariff with an alternative supplier. The Government also plans to implement reforms to improve fuel poverty targeting, such as using government data to provide automatic rebates to most recipients. Lower income households can receive up to £10,000 to improve the energy efficiency of their homes via the Green Homes Grant scheme. Households can also benefit from the £500 million of the Green Homes Grant that has been ringfenced for Local Authority Delivery.

The two Accelerating Business Collaboration partners, ESC and SELCE, need to adapt their business models accordingly. For the moment, however, they struggle to maintain the necessary income stream to continue delivering award-winning energy poverty alleviation.

## 2.4 Energise Sussex Coast and South East London Community Energy

**Energise Sussex Coast (ESC)** was founded in 2012 to address fuel poverty and increase renewable energy generation in the Hastings area. Since 2013, ESC has been running pop up energy shops and energy advice desks staffed mainly by trained volunteers in locations frequented by the fuel poor, such as libraries, town halls, community centres, medical practices, job centres and day centres. To achieve continuity in light of piecemeal funding, ESC complements grant income with renewable energy generation. In the last 8 years, ESC has helped thousands of people make their homes more efficient and save vulnerable people money on their bills, as well as lowering carbon emissions. Mostly this has been achieved through face-to-face meetings and events where ESC representatives discuss clients' issues. As this has not been possible in 2020 due to Covid-19 restrictions, ESC has set up a new Energy Helpline in collaboration with Hastings Advice and Representation Centre (HARC), alongside

their online help. CEO Richard Watson was awarded an OBE in 2016 for services to the community of Sussex.

**South East London Community Energy (SELCE)** was founded in 2014 and now comprises three strands. The fuel poverty side of its business model, which increasingly includes energy efficiency, is highly dependent on grant income and barely breaks even. To help address this issue, SELCE developed a 0.5MW community financed solar scheme to provide a continuous income stream. Increasingly, SELCE is moving into the retrofitting business with able-to-pay clients by offering a wide range of energy efficiency services. SELCE's approach typically follows the sequence of switching to an energy company which provides a Warm Home Discount (mainly funded through the Energy Company Obligation which covers about half the money required), checking bills to assess whether they are higher than average (standard contracts are for one year so this needs to be done on a regular basis) and home visits (where possible) to improve energy efficiency. In 2019, SELCE was awarded the Community Energy Social Impact Award at the Community Energy Awards.

## 2.5 Funding and data

Relevant current grant providing organisations in the geographical and organisational context of ESC and SELCE include:

- Department for Business, Energy and Industrial Strategy (BEIS) and National Energy Action (NEA) who fund the Big Energy Saving Network (BESN)

Launched by the Coalition Government in 2013, BESN is one of the largest programmes to support third sector organisations and community groups to deliver help and advice to vulnerable consumers. Following the success of the inaugural 2013/14 BESN, which reached over 90,000 consumers nationally, the Department of Energy and Climate Change (now BEIS) provided £1m funding to continue the programme into 2014/15. In 2017/18 this had increased to £1.7m.

- UKPN (UK Power Networks)

UKPN provided grants of up to £30,000 to address fuel poverty. This has been replaced by £300,000 per year to fund the Power Partners scheme which is administered by the Centre for Sustainable Energy. Power Partners supports up to 40 organisations with grants of £2,000-20,000 to combat fuel poverty, improve energy efficiency and support people in vulnerable circumstances. Together with eight utilities UKPN donated another £500,000 to support vulnerable customers during Covid-19. According to Julie Minns, Head of Customer Engagement, UKPN "provide an essential service to some of the richest and poorest communities in Britain, and over the past few years we have developed our role from simply keeping the lights on, to being a highly respected corporate citizen providing advice and support to over 1.6 million customers in vulnerable circumstances" (UKPN, 2019).

- SGN (formerly Scotia Gas Network)

SGN's engagement in fuel poverty alleviation is delivered through its Discretionary Reward Scheme. It supports Ofgem's Fuel Poor Network Extension Scheme and, according to its own accounts, has made a voluntary contribution of £145m to consumers in November 2017. Together with stakeholders, SGN has also established a £20m fund and created a dedicated team to address fuel poverty. Some of this money is used to support partnerships with community organisations to deliver social outputs. Together with UKPN, Thames Water and SSEN for example they supported a 2-year "Faith and Utilities" project (SGN, 2018). SGN are particularly interested in knowing what works under what cultural, geographical and demographic circumstances.

- The British Gas Energy Trust (BGET)

BGET was established in 2004 by British Gas as an independent Charitable Trust. Now a Charitable Incorporated Organisation, it is governed by a group of Trustees with Jessica Taplin CEO overseeing

day-to-day operations. Its mission is to alleviate the detrimental impact of poverty, helping people in, or at risk of, financial hardship to meet their energy needs and manage their energy costs through support, education and raising awareness of sound money management. Through direct access grant programmes for individuals, families and third-sector money and energy advice organisations, it seeks to contribute to the relief of poverty, with a particular focus on energy poverty by helping those who are struggling to pay for their gas and electricity consumption to get out of fuel debt.

Community Energy South, an umbrella organisation and regional hub enabling its members (local community energy groups and community organisations) to grow as sustainable low carbon businesses, provided match-funding from SGN for this project. This funding was used to pay the CEOs of SELCE and ESC, Giovanna Speciale and Richard Watson OBE, for their time on this project. It covered the sourcing, anonymising, sharing and interpretation of their company data.

As part of this business collaboration, community Energy South also contributed aggregate data on fuel poverty submitted by the by the following organisations:

- Energise Sussex Coast (ESC)
- South East London Community Energy (SELCE)
- Brighton and Hove Energy Service Cooperative (BHESCo)
- Ouse Valley Energy Services Coop (OVESCo)
- Sussex Green Living

This data allows ESC and SELCE data to be placed into the context of community organisational fuel poverty alleviation efforts across a greater geographical area. ESC and SELCE company data itself reflects the source of funding and associated reporting and monitoring requirements. Most of their fuel poverty alleviation activities since 2015 have been funded by BESN, UKPN and SGN. Other sources such as the Cheshire Lehmann Fund, Community Chest, East Sussex County Council and SELFy have also been used to help cover expenses as funding provided by utilities and BESN is insufficient to reach their targets. This funding gap is evident in the organisational data provided by SELCE and ESC.

### 3 Organisational data and methodology

#### 3.1 Organisational data

Overall, the data is best described as messy and inconsistent, although it varies hugely from year to year and between the two organisations. Aggregate yearly data is provided in excel spreadsheets. Changing requirements by funders, changing organisational capacity and changing data gathering approaches imply that such yearly data is often inconsistent. Significant support by both the CEOs of ESC and SELCE was necessary to facilitate interpretation and allow us to gain an overview of inputs and outcomes.

Funders' emphasis on switching suppliers and making savings on energy bills through the Warm Home Discount throughout the years provides us with a certain consistency while SELCE's calculation of financial return on investment from the year 2018/19 provides the basis for our SROI calculation. More granular data is available in case studies and reports. These paint a very different picture of the success and shortfalls of community fuel poverty alleviation. The following sections provide an overview of organisational differences in data capturing and management.

##### 3.1.1 Summary of Data provided by SELCE

SELCE's data for the past 5 years was provided for this project. Given the changes in funding sources, General Data Protection Regulation (GDPR) rules and the economic climate, there is a vast discrepancy in exactly what data was collected each year.

The most useful source of information was the raw data spreadsheet which exists for each winter (2015/16 - 2019/20). The following information was collected in all years: those given switch advice,

those eligible for WHD, those who received information about WHD, those who applied for WHD, those eligible for Energy Company Obligation (ECO) services, those eligible for the Priority Service Register (PSR), and those for whom no action was taken. In some years (such as 2017) this information is recorded in words, in some years (such as 2019) it is also provided as a binary count.

In some years much more information is collected than listed above. Information on housing conditions (central heating, old or inefficient heating, storage heating, poor or no insulation, mould or damp and draughts) was included in the data for 2017/18 and 2019/20. Data from 2019/20 also included information on white goods. Years 2017/18 and 2018/19 included questions that could be useful in assessing vulnerability, such as 'are you cold in your home?' or 'are your fuel bills more than you can pay?' with pre-allocated answers 'always', 'sometimes', 'never'. However, for year 2018/19, of 330 client entries in the spreadsheet those questions are only answered by 30% and 28% of clients respectively making it hard to draw any statistical conclusions from.

A large number of unpopulated fields is also seen in the demographic data such as age and gender. Although the spreadsheet is set up to collect this information, it is only populated in 35% and 51% of cases respectively. Without significant time input from SELCE staff, it was often also difficult to interpret the data. For example, a count was made of 'action taken'. In some years it seems to only refer to the switching of supplier on the day, while in other cases it seems to include any action, including advice. For the year 2015/16 two data spreadsheets were included and it was unclear if these were separate activities or if they were subsequent drafts of the same activities and therefore contained information on the same clients. Attempts were made to combine the information into a single database to simplify the analysis but discrepancies between years and type of questions asked made this challenging.

SELCE also provided additional documentation, for example case studies for each year. Sometimes these were typed into report form and sometimes included as scanned copies of handwritten notes taken during advice sessions. Sometimes drafts of the questionnaires and scripts used by energy advisors were also included. Funding reports were included for the years 2015/16, 2016/17, 2018/19 but not the other two years. These funding reports were helpful for analysis of activities but each report contained different information, most likely a result of which funding body the report was written for. The most useful information was in the report for the year 2018/19 which included a simplified SROI calculation, although on further scrutiny did not include all project inputs and only calculated the financial return on investment. It therefore did not include value as a result of improved health or living conditions. For the year 2020, reports included one on social impact estimated based on calculations using the HACT social value bank. The results in this report were difficult to substantiate as there was not a clear description of the methodology or of assumptions. The report also states that its 'value' calculation does not include comfort or financial security.

### 3.1.2 Summary of Data provided by ESC

ESC's data provided for this project also covers the last 5 years. Given the same changes in funding sources, GDPR rules and economic climate, the quality and quantity of activities and data also varies widely from year to year. Some data was more valuable for this analysis than others, for example, one spreadsheet recorded the provision of food parcels provided to clients during 2020.

The most comprehensive data is available from 2015/16 and 2016/17. One particular document included 220 case studies from 2016. The case studies included a description of the situation, action and outcome for specific cases along with basic demographic and energy related data. For example, one entry recorded the following:

**Situation:** Age UK referral for pensioners receiving Disability Living Allowance who is also hard of hearing so finds it difficult to speak to suppliers on phone and doesn't have access to the internet.

**Action:** During the home visit the advisor from ESC called the existing gas and electricity supplier and arranged for the customer to be on a new tariff.

**Outcome:** The pensioner saved £425 per year and said they were "thrilled to bits with it [...] being hard of hearing this has helped a lot and my partner has a medical condition so this has really helped".

Aside from switching suppliers and arranging WHD this dataset provided great detail on debt repayment and energy efficiency improvements, including better insulation, new boilers and central heating systems that were provided as part of the project.

In other years, data closely aligned to the funders' requirements. This reflects the organisations capacity to collect and evaluate data. This was especially the case where the donor stipulated a certain reporting format as part of the funding requirements. For example, data was provided for the BSEN UKPN SGN project. This recorded the number of people who received advice and estimated the value associated with it. In most cases the data provided was standardised. For example, the provision of energy efficiency advice was recorded at £40, income maximisation advice at £200 and behavioural change at £30. Brief notes were sometimes recorded by advisor to provide some additional context on the advice given. Similar data was also provided for the Energy Caravan events run by ESC in October - November 2019 and January – March 2020. ESC provided a range of other excel spreadsheets include BSEN data for 2017 and 2019 that recorded the number and types of events carried out. Some of this data provided a brief overview of the number of clients reached and estimates of the financial value of the advice given. Some also provide notes on the advice given.

ESC also provided datasets for their project with British Gas Energy Trust. The main dataset recorded 60 interactions with customers during October and November 2020. The data collected was very similar to the other datasets provided but, in some cases, it also included notes on whether the customer was being impacted by Covid-19. Another spreadsheet recorded follow up actions made by ESC and while data wasn't recorded universally it did include notes regarding the actions taken.

One dataset recorded energy saving and retrofit measures that had been provided to households. Measures had been recorded as 'major' which mostly included replacing storage heaters and gas boilers with more efficient alternatives and 'minor' which included things such as draught proofing, replacing old bulbs with LED alternatives, installing a thermostat and repairing or replacing doors and windows. In both cases the cost of the measure along with the annual CO<sub>2</sub> saving was recorded for each measure. In total, 124 major measures and 458 minor measures were recorded (Lowe and Maclean 2018).

ESC also provided an example of a questionnaire used by advisors to collect data. The questionnaire comprised of 97 questions which included customer demographic and economic data including access to financial support schemes, questions about who was providing the advice and how, data protection and sharing clarifications, questions about the dwelling including tenure information, details about electricity and gas consumption, home insulation and heating system details and access to schemes such as the WHD. An example of the simple advice sheet completed following a one-to-one advice session was also provided. This recorded data such as the advisor and customer name, date of the interaction along with a brief description of the advice given and key actions taken during the session.

### 3.2 Establishing comparability

Establishing comparability between these two datasets required comparative analysis of the yearly spreadsheets. This process is explained in the following paragraphs, starting with Table 2, which is a random excerpt from one of the datasets (columns detailing the financial benefit of individual actions are analysed in more detail below):

| Date of interaction | Location of interaction (postcode) | In-depth advice given - action taken/likely to follow | Total Financial Benefit -£ |
|---------------------|------------------------------------|-------------------------------------------------------|----------------------------|
| 04/09/2019          | BN11 1EE                           | 1                                                     | £335.00                    |
| 11/09/2019          | BN11 1EE                           |                                                       | £0.00                      |
| 18/09/2019          | BN11 1EE                           | 1                                                     | £196.00                    |
| 18/09/2019          | BN11 1EE                           | 1                                                     | £0.00                      |
| 18/09/2019          | BN11 1EE                           | 1                                                     | £140.00                    |
| 25/09/2019          | BN11 1EE                           |                                                       | £0.00                      |
| 09/10/2019          | BN11 1EE                           | 1                                                     | £0.00                      |
| 09/10/2019          | BN11 1EE                           | 1                                                     | £403.00                    |
| 30/10/2019          | BN11 1EE                           | 1                                                     | £0.00                      |
| 30/10/2019          | BN11 1EE                           | 1                                                     | £0.00                      |
| 30/10/2019          | BN11 1EE                           | 1                                                     | £205.00                    |
| 30/10/2019          | BN11 1EE                           | 1                                                     | £0.00                      |
| 30/10/2019          | BN11 1EE                           | 1                                                     | £0.00                      |

Table 2: Excerpt from company data excluding columns detailing the financial benefit of individual actions

Data in Table 2 indicates that the interaction takes place on the same day of the week, sometimes on a weekly basis, sometimes less frequently, in the same location. It also shows that on some days, no actions are likely to follow in-depth 1:2:1 advice sessions. It also shows that on around half the occasions where in-depth 1:2:1 advice is given (5/11), it results in financial benefit, in this case averaging around £250 savings. This might not sound like a lot of money but if it entails warmer living conditions, lower bills and/or reduced stress regarding fuel debt, such benefit can be substantial. This data does not reveal anything about the input that went into enabling such interactions to take place on the same day of the week, sometimes on a weekly basis, sometimes less frequently, in the same location.

Such information about the staff input hours is essential to understand what resources are required to provide this service. With the help of the CEOs and our review of the literature we established that such regular interactions are often pop-up energy shops or energy cafes. However, “it is difficult to estimate what proportion of energy-shop clients have been fuel poor, as community groups have limited resources to undertake consistent data collection. Furthermore, identifying those in need of advice can be very difficult. The reach of energy shops varies, with for example one pop-up shop reaching 200 clients in one week, whilst another had only six clients during three drop-in sessions” (Speciale 2016, in CLF 2016: 46). With such background information and interpretative support, the company data also provides insight into the organisational structure of the organisations providing these services and the organisations funding these services.

Organisational data on measures and interventions is generally most detailed and useful (see Sections 2.2 and 2.3). Where it has been recorded consistently, such data provides details regarding the value and frequency of fuel poverty alleviation action. The abovementioned omitted columns of the random dataset include the following data (Table 3).

| Income maximisation | Estimated value of Financial Benefit -£ | Tariffs | Estimated value of Financial Benefit -£ | Energy Efficiency | Estimated value of Financial Benefit -£ | Heating solutions | Estimated value of Financial Benefit -£ | Total Financial Benefit -£ |
|---------------------|-----------------------------------------|---------|-----------------------------------------|-------------------|-----------------------------------------|-------------------|-----------------------------------------|----------------------------|
| 1                   | 219                                     | 1       | 116                                     |                   |                                         |                   |                                         | £335.00                    |
|                     |                                         |         |                                         |                   |                                         |                   |                                         | £0.00                      |
|                     |                                         | 1       | 196                                     |                   |                                         |                   |                                         | £196.00                    |
|                     |                                         |         |                                         |                   |                                         |                   |                                         | £0.00                      |
|                     |                                         |         |                                         |                   |                                         | 1                 | 140                                     | £140.00                    |
|                     |                                         |         |                                         |                   |                                         |                   |                                         | £0.00                      |
|                     |                                         |         |                                         |                   |                                         |                   |                                         | £0.00                      |
| 1                   | 284                                     | 1       | 119                                     |                   |                                         |                   |                                         | £403.00                    |
|                     |                                         |         |                                         | 1                 | 0                                       |                   |                                         | £0.00                      |
|                     |                                         |         |                                         | 1                 | 0                                       |                   |                                         | £0.00                      |
| 1                   | 170                                     | 1       | 35                                      |                   |                                         |                   |                                         | £205.00                    |
|                     |                                         |         |                                         |                   |                                         |                   |                                         | £0.00                      |
|                     |                                         |         |                                         |                   |                                         |                   |                                         | £0.00                      |
|                     |                                         |         |                                         |                   |                                         | 1                 | 140                                     | £140.00                    |

Table 3: Columns detailing the financial benefit of individual actions

Data in Table 3 shows that income maximisation advice, where applicable, can result in the greatest single financial benefit, without specifying what such maximisation encompasses. Tariff switching is the most frequent action undertaken with financial benefits averaging over £100. Heating solutions appear as a flat rate of £140 while energy efficiency advice, in this case, has no financial value attached.

To decipher these figures, we conducted some research on financial proxies. Two reports stand out, one by Sia Partners (2018) and one by Oxford Economics (2015), because of their detail and because they were commissioned by government or funders, one by Ofgem and one by the British Gas Energy Trust respectively. Key costs and value relevant to this report are summarised in Table 4 below.

| Proxy                                         | Unit   | Cost/value           | Activity                                                                                                                               |
|-----------------------------------------------|--------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Switching</b>                              | Year   | £150 <sup>1</sup>    | Average annual cost saving for customers going on to social tariff as opposed to standard tariff                                       |
| <b>WHD</b>                                    | Person | £140 <sup>1</sup>    | Either as Guarantee Credit element of Pension Credit (known as 'core group') or meeting supplier's criteria (known as 'broader group') |
| <b>Winter Fuel Payment</b>                    | Person | £200 <sup>1</sup>    | Those born before 5 November 1953 could get between £100 and £200 to help pay heating bills                                            |
| <b>Watersure</b>                              | Year   | £200 <sup>1</sup>    | Households with an income below a certain threshold are entitled to a discount on their water bill                                     |
| <b>Annual savings per vulnerable customer</b> | Year   | £194.31 <sup>1</sup> | Fight fuel poverty and give advice to vulnerable customers on how to save money and keep war                                           |

|                                                                                           |        |                      |                                                                           |
|-------------------------------------------------------------------------------------------|--------|----------------------|---------------------------------------------------------------------------|
| <b>Life satisfaction change per individual</b>                                            | person | £499.38 <sup>1</sup> | Increase quality of life                                                  |
| <b>Average cost of mould removal</b>                                                      | Event  | £2,147 <sup>1</sup>  | Heating leads to higher quality homes and less need for home improvements |
| <b>Reduced stress, depression and anxiety (mild)</b>                                      |        | £2,940 <sup>2</sup>  | Loss of a QALY for a person with mild mental health issues                |
| <b>Reduced stress, depression and anxiety (severe)</b>                                    |        | £10,560 <sup>2</sup> | Loss of a QALY for a person with severe mental health issues              |
| <b>Improved financial skills</b>                                                          |        | £495 <sup>2</sup>    | Cost of non-professional budgeting course                                 |
| <b>NHS - general health</b>                                                               |        | £1,456 <sup>2</sup>  | Cost of visiting GP more often                                            |
| <b>Sources:</b> <sup>1</sup> Sia Partners (2018) and <sup>2</sup> Oxford Economics (2015) |        |                      |                                                                           |

Table 4: Financial proxies used by other organisations to calculate cost-benefit profiles (Oxford Economics 2015; Sia Partners 2018)

Some of these costs and values are direct financial benefits, such as the WHD which was introduced by government in 2011. It offers a one-off discount of £140 on electricity bills between September and March to those who receive the Guarantee Credit element of Pension Credit (core group) and those on low income who meet their energy supplier's criteria (broader group). Other costs and values, however, are approximations such as 'life satisfaction change per individual'.

Due to different approaches to calculating and interpreting such approximations, we place more emphasis on direct benefits in both the analysis of fuel poverty data trends and the SROI calculation in the following sections. Evaluating direct benefits from WHD is also helped by organisational experience with advice and applications. As a result, data on WHD applications and advice is also fairly consistent over the years (see analysis section below). This also applies to data on switching suppliers.

### 3.3 Calculating the Social Return on Investment

As switching suppliers and WHD applications only represent a share of the total financial savings and benefits that result from 1:2:1 advice provided by organisations such as ESC and SELCE, it is necessary to put these figures into the context of financial support and overall financial savings and benefits. While figures on switching and WHD applications represent absolute figures, others, especially on the financial savings and benefits side, are less accurate as they include many assumptions about actions taken and average values. These include assumptions about action taken on switching advice and WHD advice as well as other schemes such as the Energy Company Obligation (ECO) and behaviour change following 1:2:1 advice.

At aggregate level, the following numbers have been provided which provide an insight into the direct financial return on investment. This is the money directly saved by clients per pound of funding awarded to the charity:

|                             | <b>2018/19</b> | <b>2019/20</b> |
|-----------------------------|----------------|----------------|
| <b>UKPN</b>                 | £25,000        | £25,850        |
| <b>SGN</b>                  | £20,385        | £25,000        |
| <b>Total funding</b>        | £45,385        | £50,850        |
| <b>Total saving</b>         | £52,317        | £76,270        |
| <b>Return on investment</b> | 1.152737689    | 1.499901672    |

Table 5: Total funding and savings at aggregate level

UKPN and SGN provided between £20,385 and £25,850 funding in both 2018/19 and 2019/20 which amount to a total of £45,385 and £50,850 respectively. Total savings and benefits delivered by the organisations to whom this funding was distributed amounted to £52,317 in 2018/19 and £76,270 in 2019/20, with returns on investment of 1.15 and 1.5 respectively for every £1 invested.

What these numbers do not tell us, however, is both the effort that goes into achieving these savings nor the benefit that such savings and experiencing dedicated 1:2:1 advice implies for somebody in fuel poverty. We have tried to get a more accurate picture of both the efforts going into fuel poverty action and the outcomes by calculating the SROI. To this end, we drew on data from energy interventions run by SELCE in 2018/19.

In a typical SROI analysis, the stakeholders would be engaged to offer their opinions on the value that has been created for them. This project calculated SROI based on existing data and since there was no funding to reach out to stakeholders, such engagement was outside the scope. Instead, the numbers used in this report are taken from other SROI calculations conducted by Oxford Economics (2015) for British Gas and Sia Partners (2018) for Fuel Poor Network Extension Scheme. The numbers used were also discussed and validated with the CEO of SELCE who has seven years of experience talking to stakeholders and understanding how their lives are and could be affected by interventions related to energy poverty, and has contributed to several reports and academic papers on fuel poverty (e.g. CLF 2016; Martiskainen et al. 2018).

The methodology for a SROI calculation outlined by the SROI Network (2012) report ‘A guide to social return on Investments’ has been used to develop this study. It has been slightly adapted in order to use historical data rather than design the investment calculations for an upcoming intervention. The process is depicted in **Error! Reference source not found.1**. The assumptions and estimates used in the study are explained in the following sections.

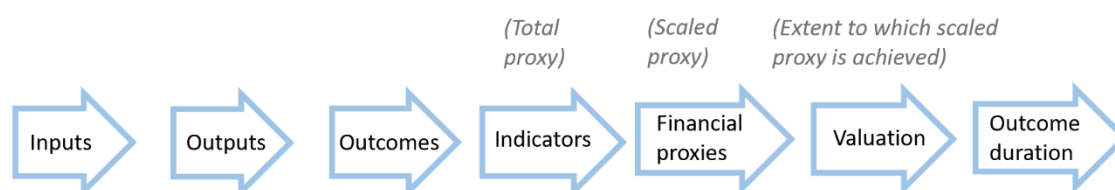


Figure 1: Methodology and stages of SROI calculations

The following analysis section compares SELCE’s and ESC’s client data and fuel poverty alleviation trends over the years before presenting the SROI calculations.

## 4 Analysis of SELCE and ESC data

### 4.1 Comparative analysis of clients

ESC’s and SELCE’s clients are as varied as the geographical area that they cover. SELCE is based in Lewisham and provides fuel poverty alleviation services across several London Boroughs in the southeast of London. ESC is based in St Leonards-on-Sea and provides fuel poverty alleviation services in the surrounding areas (see Figure 2).



Figure 2: Geographical reach of SELCE (on the left) and ESC (on the right)

The geographical areas that ESC and SELCE cover include some of the most deprived areas (at ward and Lower Layer Super output Area – LSOA – level). But ESC's location on the coast with its many retirees and SELCE's location in London, one of the most diverse metropolitan areas in the world, imply that client demography varies significantly. Data, however, is inconsistent. Only one ESC dataset includes information on age and the ranges are 16-25, 26-40, 41-50, 51-65 and 65+ (258 in total; right side of Figure 2). SELCE has gathered such data on numerous occasions, but used different age ranges (18-29, 30-45, 46-60, 61-74 and 75+; 181 in total; left side Figure 3). This limits comparability although the overall trend is evident.

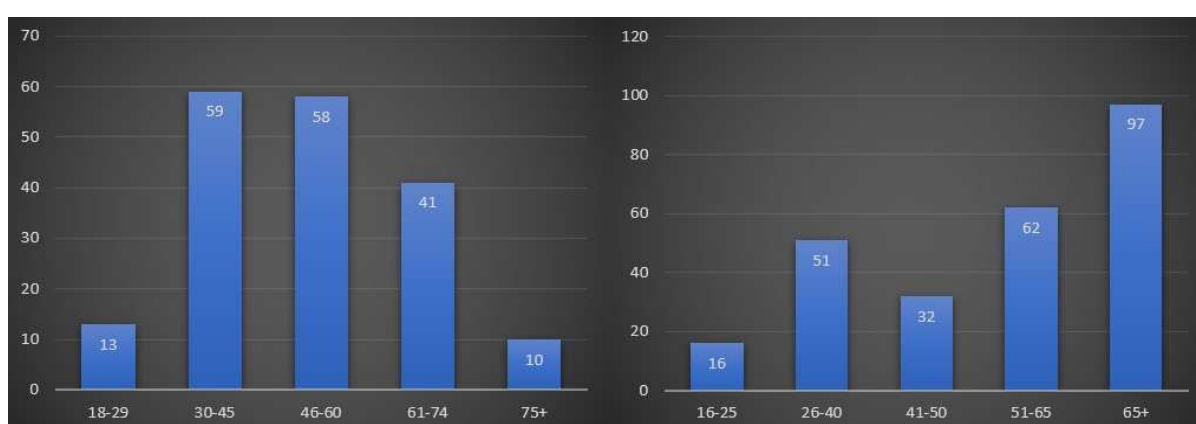


Figure 3: Age ranges of SELCE (on the left) and ESC (on the right) customers

Figure 3 indicates that SELCE's customers tend to be younger than ESC customers. Similar discrepancies are also evident in data on ethnicity, which is even less consistent than data on age. The following graphs (Figure 4) provide a snapshot from the only data available, the Winter Home Check Service 2015-18 report that ESC was involved with (831 responses, 215 blanks) and SELCE's 2018/19 Energy Café dataset (417 responses, 227 blanks). Regarding ethnicity, the differences are striking (see Figure 3).

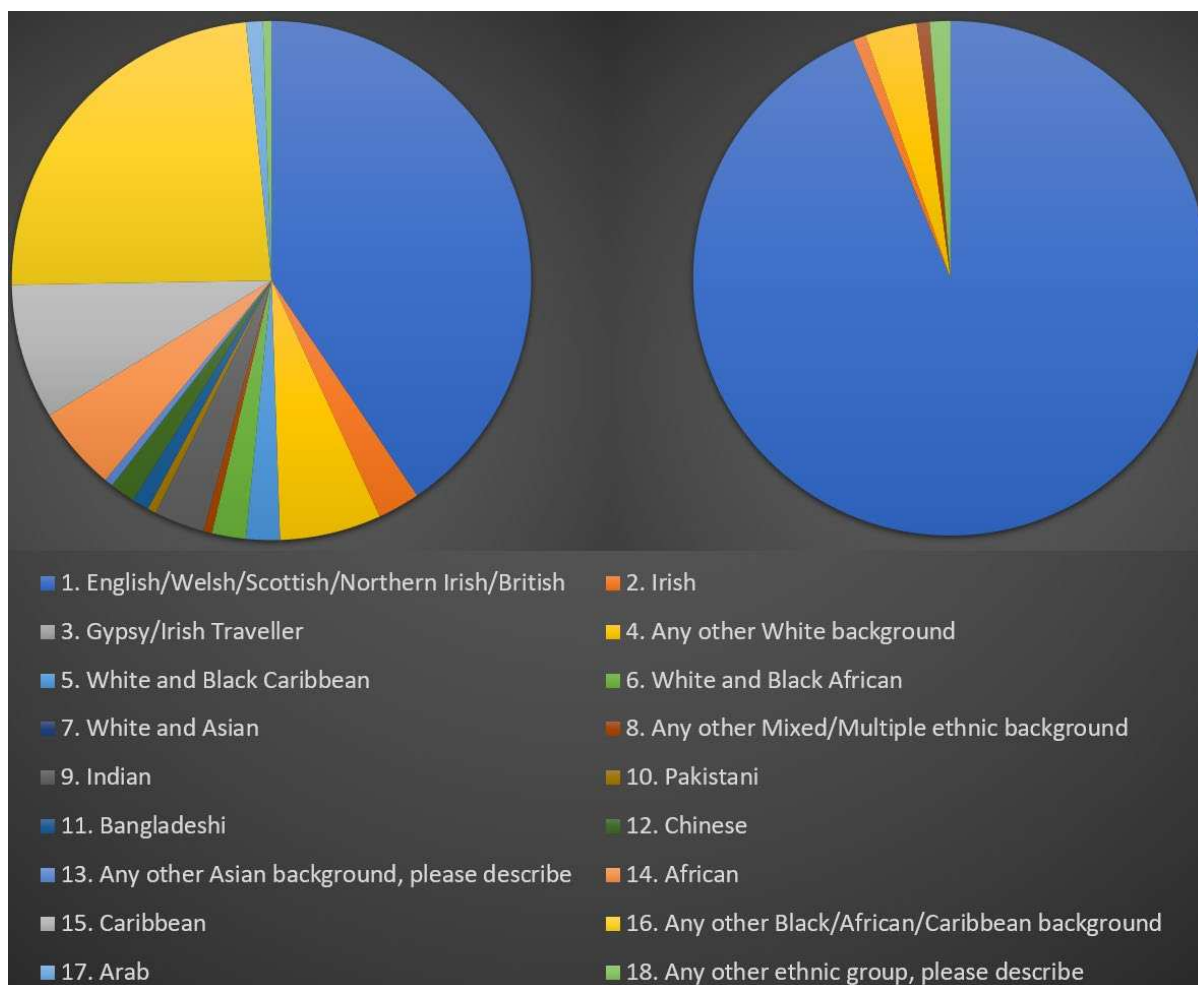


Figure 4: Ethnicity of SELCE (on the left) and ESC (on the right) customers

Despite inconsistencies, the snapshot of data from the two reports visualised in Figure 4 is clear. Winter Home Check 2015-18 report data provided in part by ESC (on the right in Figure 3), where 91% of respondents are white (which appear as blue in Figure 4), reflects the ethnic composition of East Sussex, which is 96% white, and Hastings, which is 93.8% white (East Sussex County Council 2011).

Both SELCE and ESC report that non-native English-speaking communities tend to miss out on opportunities to reduce their bills by switching and by applying for WHD. Recently immigrated communities in particular often display cultural unfamiliarity with UK heating, warm water and electricity provision and billing systems. Combined with cultural differences in cooking, heating, and cleaning habits this can result in very high bills, but not necessarily through their own fault. Both SELCE and ESC report anecdotally that billing mistakes appear to be more prevalent among such communities.

There was also limited data available on the tenure of customers making analysis of this aspect challenging. A dataset provided by ESC provided a snapshot of 58 customers supported as part of that programme. It suggested that 63% were owner occupiers, 23% were the tenant of a private landlord, 6% were a council tenant and 8% were a housing association tenant. In terms of housing type, 31% were recorded as living in a flat, 39% in a terrace house (mid and end terraced), 24% in a house (detached or semi), 4% lived in a caravan and 2% lived in a bungalow.

In comparison, there was slightly more information available from SELCE. This data suggested that that 28% of SELCE customers were owner occupiers, 19% were the tenant of a private landlord and 53% were in social housing (e.g. a council or housing association tenant). In terms of housing type,

60% were recorded as living in a flat, 24% in a terrace house (mid and end terraced) and 16% in a house (detached or semi). While this data set comprised a much large sample (n. 550) there were a number of entries where data was not recorded. For example, approximately 61% of customers did not have their tenure recorded and 65% did not have their household type recorded.

Data on vulnerability was even more difficult to find and evaluate. ESC has a very useful dataset of 220 case studies from 2016 which records information on whether customers receive government benefits, whether they have disabilities, whether they have internet access, whether their households are connected to the gas grid, whether they use electric heating and whether they pay their bills using a prepayment meter. As such data was not gathered in other years, it is difficult to draw accurate conclusions.

SELCE has gathered more such data over the years compared to ESC. Data sets on 2017/18 and 2018/19 included questions that could be useful in assessing vulnerability, such as 'are you cold in your home?' or 'are you fuel bills more than you can pay?' with pre-allocated answers 'always', 'sometimes', 'never'. However, for year 2018/19, of 330 client entries in the spreadsheet those questions are only answered by 30% and 28% of clients respectively so even these more extensive data sets make it difficult to establish statistical conclusions.

#### 4.2 Comparative analysis of fuel poverty alleviation

Despite issues with data consistency, our analysis of SELCE and ESC company data alongside aggregate Community Energy South data on Energy Champions provides us with some interesting insights into trends. Organisational data from ESC encompasses BESN data for all years plus supplementary data from other schemes, such as its Energy Caravan programme. Organisational data from SELCE also encompasses BESN data for all years but in some cases data was separated into energy café notes, home visit notes and telephone advice notes supported by a variety of organisations. The following table (Figure 5) provides an overview of the total number of people reached in a given year for the Winters of 2015/16 through to 2019/20, for example through energy cafes, pop-up energy shops and phone advice:

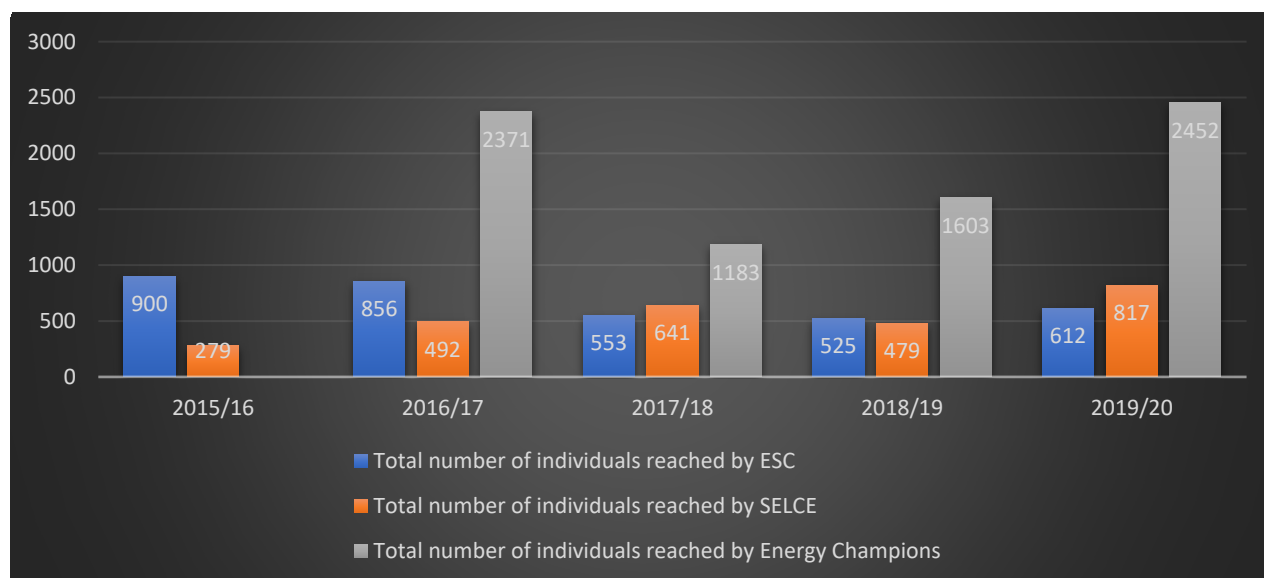


Figure 5: Total number of individuals reached

Figure 5 shows that at aggregate level, numbers have fluctuated quite significantly. ESC was reaching more people in its early years but after a particular difficult year in 2017/18 there is a slight upwards trend in the numbers of individuals reached. SELCE, with the exception of 2018/19, has registered an upward trend.

Success in reaching out to the fuel poor, however, does not necessarily translate into direct financially beneficial outcomes for the fuel poor, for example through energy bill savings or income maximisation. At aggregate level, there has been an increase in the number of individuals who were actively switched to another supplier as part of 1:2:1 advice while the average financial benefit has declined over time (Figure 6).

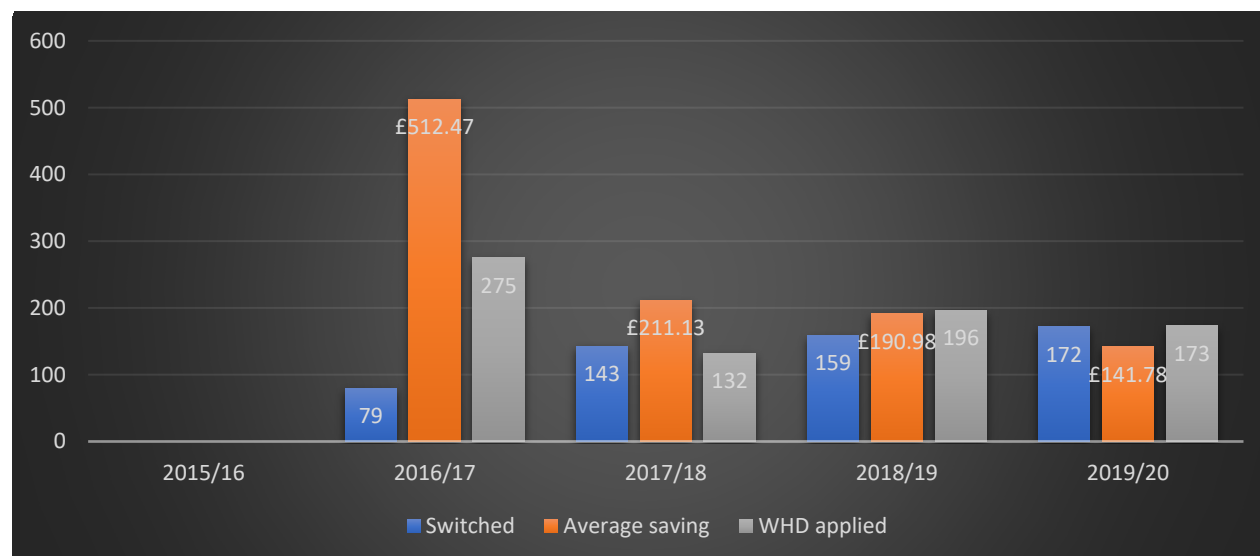


Figure 6: Total number and value of actions at aggregate level

Figure 6 also shows how the number of WHD applications as part of 1:2:1 advice sessions has declined slightly over the years at aggregate level. At organisational level, different trends are evident. Contrary to the aggregate trend, the number of individuals who were actively switched to another supplier as part of ESC 1:2:1 advice declined between 2015/16 and ESC's most difficult year in 2017/18. Since then, numbers of switches have increased while the average financial benefits of switching declined, reflecting the trend at aggregate level. The number of WHD applications as part of 1:2:1 advice initially fluctuated before increasing significantly in 2019/20 (Figure 7).

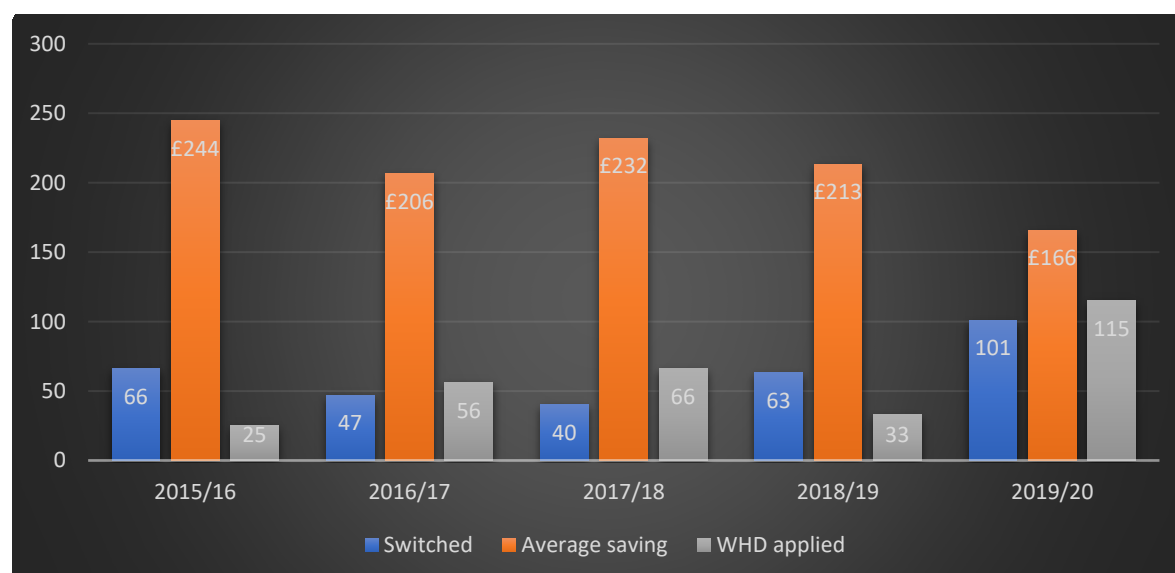


Figure 7: ESC number and value of actions

SELCE, on the other hand, succeeded in continuously increasing in the number of individuals who were actively switched to another supplier as part of 1:2:1 advice in line with the overall trend. Average

saving appears to run contrary to the overall trend until 2019/20. The number of WHD applications as part of 1:2:1 advice fluctuates significantly throughout the years (Figure 8).

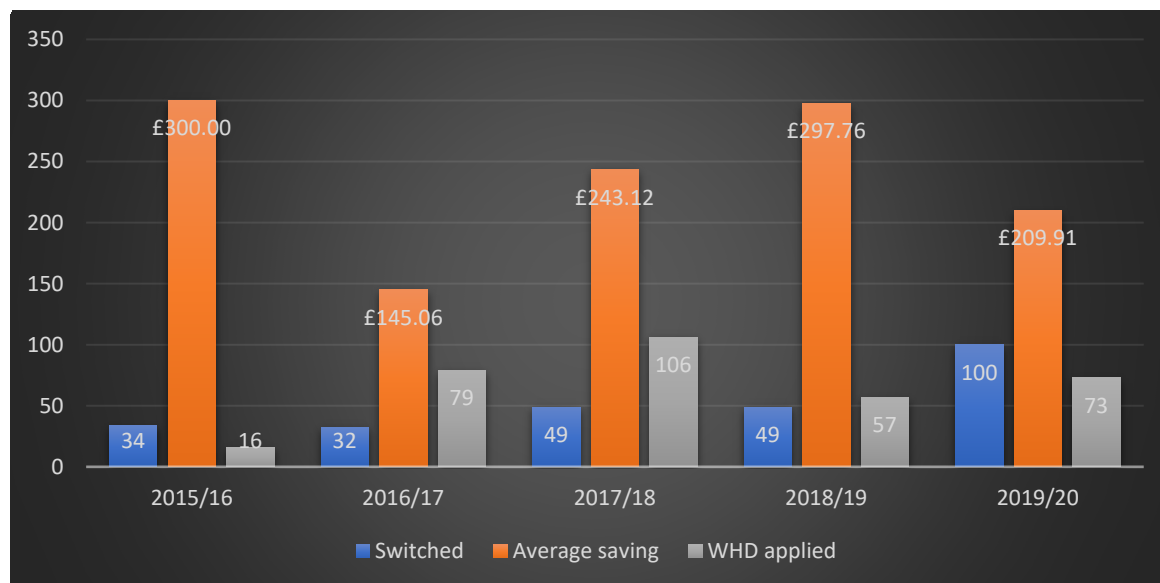


Figure 8: SELCE number and value of actions

Total financial savings from 1:2:1 advice, which includes all supplier switches and WHD applications on the day of 1:2:1 advice sessions, at aggregate and organisational level, are as follows (Figure 9):

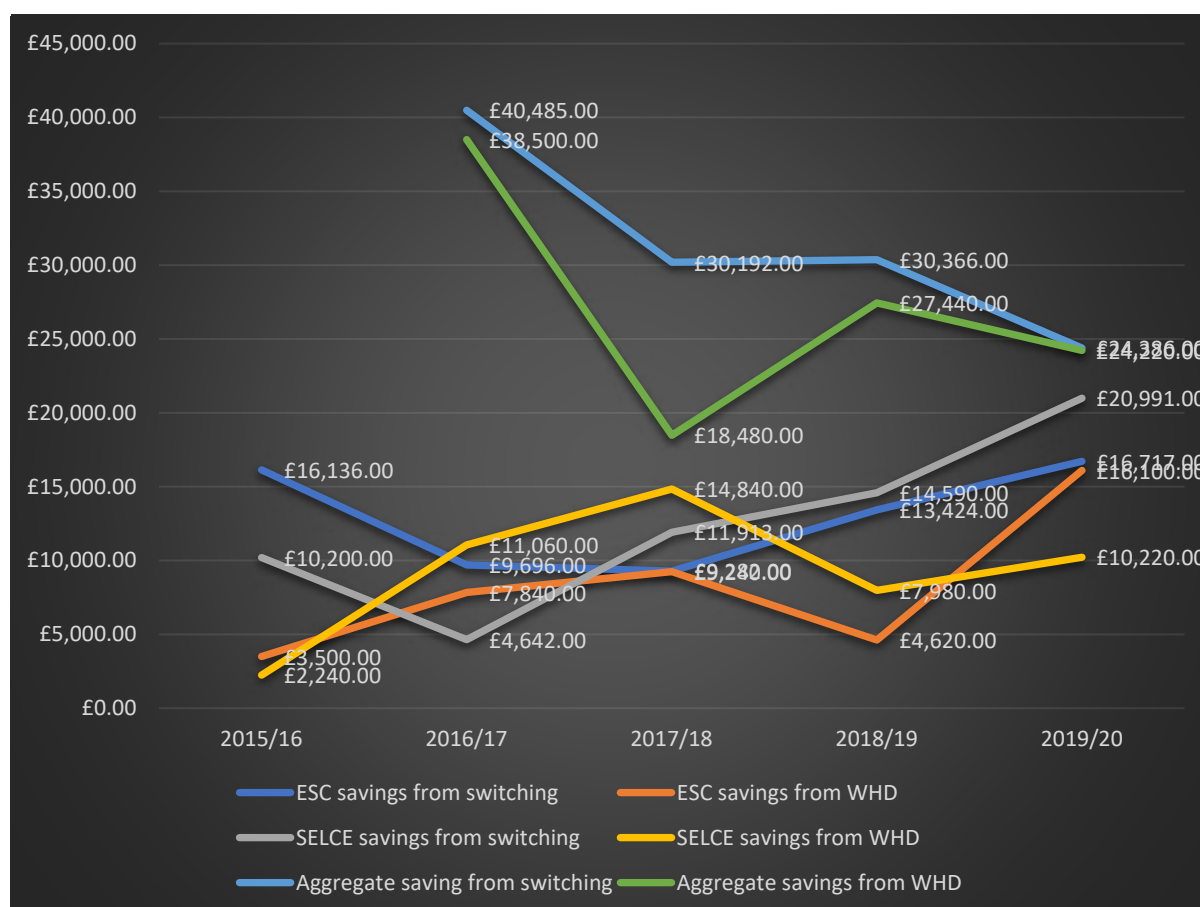


Figure 9: Total switching and WHD values at aggregate and organisational level

At aggregate level, there is a decline in the total value of savings from switching and WHD applications over time, although the value of WHD applications fluctuated by over 50%. At organisational level, both ESC and SELCE registered a drop in value of savings from switching between 2015/16 and 2016/17. From that point on, SELCE registers a significant increase in the total value of savings from switching. ESC witnessed the same trend from 2017/18 onwards.

Savings from WHD applications follow the same trend in both organisations. After increasing rapidly between 2015/16 and 2016/17 and more slowly in the following winter season, both organisations witnessed a drop on total savings from WHD applications in 2018/19. Since then, numbers have picked up again, especially those of ESC.

As impressive as these figures are, they only capture simple financial return of reported success. They are highly susceptible to changes beyond the control of these organisations and fail to capture the value they are creating for those people who spend their days feeling cold, have cold related illnesses or expensive energy demand habits which can be addressed through advice and support. It is therefore necessary to take a wider view on the value that these organisations create to encourage more sustainable funding to help lift people out of fuel poverty rather than creating dependents.

Some interventions are consistently good with useful systems in place for implementation. Some are done much more effectively by some organisations than others. This highlights the great benefits that might be experienced if there was the opportunity to share resources/information and data management approaches between organisations doing similar work to understand what leads to this success. Again, this is not possible in the scope of the current funding system.

### 4.3 Social Return on Investment

These SROI calculations aim to estimate the value produced by SELCE's energy cafes, workshops and talks. In addition to these interventions, SELCE also organise home visits to assess energy efficiency of clients homes and arrange for new appliances or energy saving devices (such as secondary glazing) to be installed. These interventions will create significant, long lasting social returns in additions to the value calculated by the energy cafes that features in the SROI calculations below. These longer term interventions will be more effective in pulling people out of fuel poverty however because of limited time and resource in this analysis, SROI is calculated for the shorter term interventions only.

#### 4.3.1 SROI calculations

##### *Inputs*

The input to this project is staff time in organising and running the interventions. This is partially paid for by the funders (as shown in Table 6) and is partly from voluntary hours provided by the employees. There are four employees paid for 1.7 days per week over the 6-month winter period October-March. According to SELCE CEO Giovanna Speciale, each member of staff contributes approximately an extra 0.5 days per week voluntarily. The hourly rate for the staff is calculated from the total funding (£23,480) divided by the hours worked at 1.7 days a week over 6 months for the 4 staff members. In the year 2018/19 from which this data is taken, SELCE did not take on any other voluntary staff. The staff therefore cost £23,462 (paid for by the funding) and contribute an additional £7,219 in voluntary hours leading to an input value of £30,609 (Table 7).

|                |              |
|----------------|--------------|
| <b>Funding</b> |              |
| BESN           | 16000        |
| SELFy          | 2600         |
| Donations      | 880          |
| Smart Energy G | 4000         |
| <b>TOTAL</b>   | <b>23480</b> |

Table 6: SELCE funding sources 2018/19

|                             | PAID    | Volunteer | Total cost<br>(input value) |
|-----------------------------|---------|-----------|-----------------------------|
| Weeks (6 months)            | 24      | 24        |                             |
| Staff                       | 4       | 4         |                             |
| Hours/week                  | 13      | 4         |                             |
| Total hours                 | 1248    | 384       |                             |
| Cost at rate of<br>£18.8/hr | 23462.4 | 7219.2    | 30681.6                     |

Table 7: Input value of £30,681 for SROI calculations made up for £23,462 paid staff hours and £7,219 voluntary staff hours

## Outputs

The outputs of the projects are what is directly created as a result of the inputs. In this case inputs include energy cafes, workshops, talks and frontline worker trainings. See columns 2 and 3 in Table 8. In 2018/19 the outputs included 40 energy cafes which reached 280 people on a 1:2:1 basis, 35 events such as talks, workshops and presentations which engaged 145 people on a 1:2:1 basis and 20 front line workers training sessions in which a total of 213 workers were trained. Such workers are representatives from other organisations, mostly on the public sector, who are trained to recognise fuel poverty, provide basic advice and make referrals where necessary.

| Inputs     | Outputs                                                                                                         | Outcomes                                                                                                                                                                                        |                                                                                                                                                               |                                               |                                                     |                                                                       |
|------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------|
|            |                                                                                                                 | 1                                                                                                                                                                                               | 2                                                                                                                                                             | 3                                             | 4                                                   |                                                                       |
| Staff time | 40, 6 hour-long energy cafes reaching 280 people on a one to one consultation basis                             | 45 people <b>switched suppliers</b> on the day, 227 agreed to review savings with a view to switching (total 258 people reached)                                                                | More money for life basics                                                                                                                                    | Improved mental health                        | Better performance life/ work                       | Better equipped with info to switch in future/ autonomy over finances |
|            | 35 events (workshops, talks or stalls), engaging 479 clients of which 145 received short on to one advice slots | Assisted 57 clients applying for <b>WHD</b> during the session, assessed 30 as eligible for WHD. Gave advice to a further 111 so they could apply when applications re-opened.                  | More money for life basics                                                                                                                                    | Improved mental health                        | Better performance life/ work                       | Better equipped with info to switch in future/ autonomy over finances |
|            | 20 Front line workshops in which 213 front line workers were trained                                            | 45 people applied for <b>watersure discounts</b> in the sessions, assesses 27 as eligible, gave advice to 111 about watersure discounts                                                         | More money for life basics                                                                                                                                    | Improved mental health                        | Better performance life/ work                       | Better equipped with info to switch in future/ autonomy over finances |
|            |                                                                                                                 | 30 people presented <b>debt</b> problems, 22 were received an <b>action</b> (onward referral or application), 6 received <b>advice</b>                                                          | Improved mental health                                                                                                                                        | Increased productivity in life/ work          | knowledge of how to do it in the future             |                                                                       |
|            |                                                                                                                 |                                                                                                                                                                                                 | More money for life basics                                                                                                                                    | Improved mental health                        | Better performance life/ work                       |                                                                       |
|            |                                                                                                                 | 34 people receiving <b>behavioural advice</b> which will save money and some of this advice (eg draft proofing) will also improve lived comfort and/or physical health (eg reducing damp/mould) | Less energy expenditure                                                                                                                                       | better mental health as result of saved money | Better performance life/ work                       |                                                                       |
|            |                                                                                                                 |                                                                                                                                                                                                 | Improved comfort                                                                                                                                              | Better physical health                        | better mental health as result of living conditions | Increased productivity in life/ work                                  |
|            |                                                                                                                 | 51 <b>PSR</b> applications made, 23 other given advice on how to do so                                                                                                                          | The value of PSR applications for the clients was hard to estimate- not including it leads to an overall underestimate of SROI.                               |                                               |                                                     |                                                                       |
|            |                                                                                                                 | <b>Advocacy</b> - Advisors advocated on behalf of 31 clients- in 9 cases with a landlord, in 22 cases with an energy company                                                                    | These can be highly time consuming, it's hard to estimate the value created but not including them in calculations leads to an overall underestimate in SROI. |                                               |                                                     |                                                                       |
|            |                                                                                                                 | 85 referrals for <b>home visits</b>                                                                                                                                                             | Home visits are often extremely highly valuable- excluding them here results in a big underestimate of SROI                                                   |                                               |                                                     |                                                                       |
|            | OTHER (inc. advice on smart meters, white good and referrals to other advice organisations)                     | These are smaller, some=times one off interventions that reach only a small number of clients. Not including them leads to an underestimate of SROI                                             |                                                                                                                                                               |                                               |                                                     |                                                                       |

Table 8: A table of inputs, outputs, and outcomes. The outcomes in green correspond directly to monetary gain, the outcomes in blue are related to mental health, the outcomes in grey are related to increased productivity and those in pink are related to knowledge. All others are presented in yellow.

#### 4.3.2 Outcomes

The theory of change is the theory behind how outputs turn into a chain of outcomes. It is explained in this section. The outcomes of the outputs are listed in columns 4-7 (Outcomes 1-4) of **Error! Reference source not found.8**. For this example, since each output (e.g. an advice session) can create a wide variety of outcomes (e.g. switching suppliers, debt advice), the outputs are further sub-divided into each 'sub-intervention' from which there is a very clear series of outcomes. In other words, outcomes stem from a more specific sub-intervention such as 'application for a WHD' rather the broader intervention of 'an advice session'.

This paragraph explains the outcomes for each sub intervention. Switching suppliers, securing WHD and securing Watersure discounts all primarily save clients' money on energy (and water) bills (see Table 4). Such money can subsequently be used for other purposes, such as securing basic needs or paying for rent arrears, which often go hand in hand with fuel poverty and fuel debt (Preston et al. 2014; CLF 2016)

Having more money to afford these basic needs can significantly reduce stress and improve mental health. This is assumed to lead to higher productivity at life and work (Oxford Economics 2015). During 1:2:1 advice sessions, clients are also taught how and why to switch. This knowledge can stay with them after the session, improving their chance to do so themselves and save money in the future. The exact extent to which all these outcomes are achieved is discussed below.

There are two outcome chains from debt advice which have been separated into different rows in Table 8. Firstly, application for payment plans or referrals to debt relief charities will mean more money coming in. This can lead to better mental health and improved productivity as described earlier. Another outcome stems from talking to someone about their concerns which can reduce some of the stress and anxiety they might be experiencing as a result of the debt. This can also lead to improved mental health and increased productivity in life and work. The advice and strategies learnt from this advice will stay with them, making them less likely to end up in this position in the future and empowering them to take control of their energy consumption (Oxford Economics 2015; Citizens Advice 2019).

From behavioural advice there are also two streams of outcomes. Improving behaviour around energy consumption can help to reduce energy costs. This leads to better mental health, improved productivity and equips the client better for the future (Oxford Economics 2015). Another set of outcomes will come from the improved living conditions as a result of more strategic behaviour and control around energy consumption. For example, reducing damp and mould will influence the physical health of clients. Reducing draughts will also increase thermal comfort for clients which could lead to improved mental health. As discussed in section 2.1, colder homes can also lead to poorer health (Guertler and Smith 2018). This will be reduced if behaviour is optimised to maximise comfort and temperature. Health, and comfortable living environment also lead to greater productivity (Oxford Economics 2015).

Given the experience of both SELCE and ESC, who both report an increase in referrals from frontline workers (now amounting to around 20% of total client numbers), further frontline worker training is likely to increase the number of referrals in the future. Increased referrals should boost all of the above outcomes. Therefore, in this report it is assumed that the referrals from frontline workers increase the reach of the interventions by 20% in the first year and by 10% in the second year (due to staff moving on or forgetting the details of the training). These figures are included as percentage increased of the total impact of all other interventions after the SROI calculations have been completed.

#### 4.3.3 Indicators and financial proxies and valuation

This section explains the assumptions behind the use of the indicators, the financial proxies, and the valuation. First, these three steps will be explained and then they will be explored for each outcome in turn.

The indicator is any referenced financial value that relates to an outcome. The financial proxy asks the questions how much of this indicator can reasonably be considered to be targeted by an intervention? (SROI Network 2012). For example, for outcome 2, money causes stress which leads to poor mental health. The indicator used relates to the loss of QALY (quality adjusted life-year) for a person with mild mental health issues (Oxford Economics 2015).

However, it is unreasonable to assume that all mental health issue can be addressed with money. A QALY is nevertheless a standard measure and represents the equivalent amount of years from someone in full health compared with someone in poor health. In summary, it is an indicator for illness-burden. We assume for example that 25% of mental health problems are attributed to stress which can be alleviated by more financial security. Of this 25% subset, energy related expenditures for those in fuel poverty represent over 10% of total expenditure. As a consequence, we assume that energy costs might have an effect of 2.5% on mental health. This 2.5% is the proxy. It is similar to a scaling factor of the full indicator.

The valuation considers how effective the intervention is in achieving the proxy. For example, the proxy for outcome 4 in Table 8 is the value of improved financial skills in managing personal debt from a non-professional budgeting course (Oxford Economics 2015). The advice given in the advice session is not as detailed as a financial course would be, so it is assumed to be 25% as effective as the full course. In areas that include monetary gain, the valuation figure is expressed as a percentage of the money against the cost of an average UK energy bill.

##### *Outcome 1: More money for life basics*

The indicator for monetary gain is simply the increase in money (or money saved) from the intervention. A WHD, as mentioned above, is always £140 (Oxford Economics 2015; Sia Partners 2018). The value used for an energy switch is based on the average value of the money saved as a result of SELCE's 1:2:1 advice and switching supplier on the day in 2018/19 which is ~ £298 (see Figure 4). For the Watersure discount of 50%, 50% of the average yearly water bill at £400 is taken, leading to an indicator of £200 which is also based on SELCE calculations.

The outcomes of behavioural advice are more difficult to quantify. In 2018/19, SELCE advised 34 clients about behavioural change, including:

- Advice about soft measures (e.g. draft proofing)
- Temperature in the home (two clients had their thermostat set to 30 degrees)
- Advice on the correct use of a storage heater
- Advice on how to reduce mould by reducing condensation in kitchens and bathrooms
- Advice on using central heating rather than electric room heaters

In the past, SELCE has not attempted to financialise behavioural advice due to its highly subjective and variable nature. In our calculation we assume that 5% of an energy bill can be saved. This is based on a study of students at 43 UK Universities in 2011/12 who reduced their electricity use by an average of 6% as part of the Student Switch Off campaign organised by the National Union of Students (POST 2012). This is likely to be a significant underestimate as the student population are well educated and usually from average or above average income households. They may already have responsible energy habits unlike some SELCE clients, who lack fundamental understanding of good energy practise. For example, anecdotally we have heard of some clients enjoying hour long power showers every day or heating their house with expensive electric heaters rather than using the gas central heating system.

In these cases, behavioural advice potentially leads to significant savings that could far exceed the 5% we have used in our calculations.

The savings from a debt management plan are estimated at £194.31 based on annual savings per vulnerable customer following advice on how to save money and stay warm (Sia Partners 2018). Since this is a clear monetary value, the financial proxy in this case is the same as the indicator. The valuation is the extent to which that amount of money helps a family afford the basics. That is calculated by taking the savings as a percentage of the energy bill of an average small house or flat in the UK, £784 (OVO 2020). The assumptions and values used for this outcome are shown in Table 9.

|                                                       |          |            |                                             |                        |                  |
|-------------------------------------------------------|----------|------------|---------------------------------------------|------------------------|------------------|
| <b>Outcome 1:<br/>More money for life basics</b>      |          |            |                                             | <b>Financial Proxy</b> | <b>Valuation</b> |
| <b>Indicator and source</b>                           | <b>£</b> | <b>per</b> | <b>Note</b>                                 |                        |                  |
| <b>Switching Estimates</b>                            |          |            |                                             |                        |                  |
| Giovanna                                              | 298      | Year       | for 2018/19                                 | 1                      | 0.38             |
| <b>WHD</b>                                            |          |            |                                             |                        |                  |
| Giovanna                                              | 140      | Year       | This is the Warm Home Discount (WHD)        | 1                      | 0.18             |
| <b>Watersure</b>                                      |          |            |                                             |                        |                  |
| Sia Partners                                          | 200      | Year       | This is half a water bill of average £400   | 1                      | 0.26             |
| <b>Behavioural advice savings</b>                     |          |            |                                             |                        |                  |
| Parliamentary Office of Science & Technology Note 417 | 39.2     |            | Assuming you can save 20% of an energy bill | 1                      | 0.05             |
| <b>Av savings debt management plan</b>                |          |            |                                             |                        |                  |
| Sia Partners                                          | 194.3    |            |                                             | 1                      | 0.25             |

Table 9: Indicator, Financial Proxy and Valuation assumptions for Outcome 1

#### Outcome 2: Improved mental health

The indicator for the improved mental health outcome is taken from the Oxford Economics (2015) SROI report which stipulated that the value of 'a loss of a QALY for a person with mild mental health issues' is a single value of £2,940. The assumptions and values used for this outcome are shown in Table 10.

Improved mental health as a result of more money is given a financial proxy of 2.5% based on the assumption outlined above. The valuation is then the amount of money saved as a percentage of an average UK energy bill for a small house or flat (OVO 2020).

Improved mental health as a result of debt advice is estimated at 25%. Taking the same estimation as above, that 25% of mental health problems are attributable to stress which would be alleviated by more money, it is estimated that half of this stress might come from debt. This means debt relief contributes to 12.5% of the improved mental health indicator. The valuation follows the argument that this intervention is not debt relief but debt advice, hence 'advice' is estimated to have 30% of the benefits of debt relief.

Improved mental health as a result of improved living conditions, and greater comfort in the home, is estimated to have an effect of 20% on overall mental health. Using the figures from the Parliamentary Office of Science and Technology, it is assumed behaviour change might have a 5% effect on living conditions (POST 2012).

| Outcome 2:<br>Improved mental health |           |      |                                                            |                                                 | Financial |           |
|--------------------------------------|-----------|------|------------------------------------------------------------|-------------------------------------------------|-----------|-----------|
| Indicator                            | proxy (£) | per  | Note about proxy                                           | From:                                           | Proxy     | Valuation |
| Oxford Economics                     | 2940      | Life | Loss of a QALY for a person with mild mental health issues | More money                                      | 0.025     | 0.09      |
|                                      |           |      |                                                            | Debt advice                                     | 0.125     | 0.30      |
|                                      |           |      |                                                            | Behavioural Advice (improved living conditions) | 0.2       | 0.05      |

Table 10: Indicator, financial proxy, and valuation assumptions for outcome 2

#### Outcome 3: Increased productivity in life and at work

The indicator for this is taken from a survey conducted as part of the Oxford Economics (2015) report on participants which revealed a 12% increase in productivity from relief of debt stress equalling £2,200 per year. This is the financial proxy for debt relief used. Following a roughly similar logic, it is assumed that more money might lead to a 5% increase in productivity and that improved living conditions might lead to a 15% increase. The valuation for debt advice, is 30% of debt relief (as in Outcome 2). The valuation of more money is the percentage increase of money relative to the average price of a UK energy bill (OVO 2020). The valuation for the effect of behavioural advice is taken as 5% (as in Outcome 2). The assumptions and values used for this outcome are shown in Table 11.

| Outcome 3:<br>More productive at life and work |           |      |                                                                                                                                              |                                                 | Financial |           |
|------------------------------------------------|-----------|------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------|-----------|
| Indicator                                      | proxy (£) | per  | Note about proxy                                                                                                                             | From:                                           | Proxy     | Valuation |
| Oxford Economics                               | 18333     | year | Figure by survey respondent in british gas survey of impact- 12% increase in productivity from reliefment of debt stress equalling £2200/yr. | Debt advice                                     | 0.12      | 0.30      |
|                                                |           |      |                                                                                                                                              | More money                                      | 0.05      | (£x)/ 784 |
|                                                |           |      |                                                                                                                                              | Behavioural advice (improved living conditions) | 0.15      | 0.05      |

Table 11: Indicator, financial proxy, and valuation assumptions for outcome 3

#### Outcome 4: Future knowledge

The indicator for the knowledge about energy expenditure that beneficiaries gain from the process is the cost of a non-professional budgeting course which represents improved financial skills and is valued once at £495 (Oxford Economics 2015). Since energy is at least 10% of total expenditure for those in fuel poverty, the financial proxy for having 'more money' is 10%. It is assumed that 'financial knowledge' might include things such as 'knowing how to apply for a WHD'. Since debt is very closely related to general financial skills and management, it is given a financial proxy of 80% of the indicator. The valuation of 'more money' is estimated at 60%, representing the assumption that 60% of the information provided is retained for at least one year (based on SELCE assumptions). The valuation of debt advice given in the sessions is considered significantly less detailed than an actual financial course hence it is estimated to be 25% as effective as a financial course. The assumptions and values used for this outcome are shown in Table 12.

| Outcome 4:<br>Better equipped with information for the future |           |      |                                                                       |             | Financial |           |
|---------------------------------------------------------------|-----------|------|-----------------------------------------------------------------------|-------------|-----------|-----------|
| Indicator                                                     | proxy (£) | per  | Note about proxy                                                      | From:       | Proxy     | Valuation |
| Oxford Economics                                              | 495       | Life | Cost of non-professional budgeting course (improved financial skills) | More money  | 0.1       | 0.60      |
|                                                               |           |      |                                                                       | Debt advice | 0.8       | 0.25      |

Table 12: Indicator, financial proxy and valuation assumptions for outcome 4

#### Outcome 5: Improved comfort

The indicator for 'better comfort' is taken from the SIA Partners (2018) report that stipulated the life satisfaction change per person is valued once at £499. The financial proxy for this indicator assumes that comfort constitutes one third of life satisfaction and that a comfortable house contributes to half of that. So the financial proxy is around 15%. The valuation of this proxy estimates that reduction in mould, damp and draught while increasing ambient temperatures could improve comfort by 80%. The assumptions and values used for this outcome are shown in Table 13.

| Outcome 5:<br>Better comfort |           |      |                                     | Financial |           |
|------------------------------|-----------|------|-------------------------------------|-----------|-----------|
| Indicator                    | proxy (£) | per  | Note about proxy                    | Proxy     | Valuation |
| SIA partners                 | 499       | Life | Life satisfaction change per person | 0.15      | 0.80      |

Table 13: Indicator, financial proxy and valuation assumptions for outcome 5

#### Outcome 6: Improved physical health

The indicator for improved physical health is taken from the Oxford Economics (2015) study which values general health by assessing the cost of more frequent visits to the GP as a single amount of £1,456. The financial proxy estimates that 20% of people visit GPs for respiratory illnesses, common colds and flu (as a result of damp, mould or draught in a house) or aches and pains (from living in a cold house). The valuation is the same as in outcomes 2 and 3, that behavioural advice might improve living conditions by 5% (POST 2012). The assumptions and values used for this outcome are shown in Table 14.

| Outcome 6:<br>Improved Physical Health |           |      |                                                | Financial |           |
|----------------------------------------|-----------|------|------------------------------------------------|-----------|-----------|
| Indicator                              | proxy (£) | per  | Note about proxy                               | Proxy     | Valuation |
| Oxford Economics                       | 1456      | Life | General health- cost of visiting GP more often | 0.2       | 0.05      |

Table 14: Indicator, financial proxy and valuation assumptions for outcome 6

#### Duration

The impact is assessed based on one winter season. However, the knowledge of how to deal with many of these problems faced by those in energy poverty may continue beyond that single energy season. In the SROI calculations, the effects over 3 years following the intervention are considered.

Since people are likely to forget details over time, or old energy habits might slip back, a high percentage drop off is calculated. These assumptions are mainly taken from the CEO of SELCE who has a good general idea of how clients relate to interventions and a lot of anecdotal evidence of how the interventions play out over time.

| Total Value | SROI (PV/Inputs) | Max estimate<br>(+10%) | Min estimate<br>(-10%) |
|-------------|------------------|------------------------|------------------------|
| Year 1      | £5.53            | £5.63                  | £5.43                  |
| Year 2      | £3.09            | £3.19                  | £2.99                  |
| Year 3      | £1.66            | £1.76                  | £1.56                  |

| Sub-intervention   | Value Created<br>in Year 1 | Contribution to<br>Total Value |
|--------------------|----------------------------|--------------------------------|
| Energy Switch      | £108,515.86                | 64%                            |
| WHD                | £17,268.93                 | 10%                            |
| Watersure discount | £24,241.29                 | 14%                            |
| Debt advice        | £12,707.03                 | 7%                             |
| Behavioural advice | £6,889.33                  | 4%                             |

|                 | Description                                                                                                                           | Estimate | 10%     | -10%   | Sensitivity analysis of +/- 10%                                                               |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------|----------|---------|--------|-----------------------------------------------------------------------------------------------|
| <b>SROI</b>     | This is the present value of effects of the energy intervention over three years, per £1 of input                                     | £10.06   | £ 11.07 | £ 9.05 | <b>The social return on investment per £1 input is estimated to be between £11 and £9</b>     |
| <b>Net SROI</b> | This is the net present value of effects of the energy intervention calculated over three years at a discount rate of 3.5%, per £1 of | £9.06    | £ 9.97  | £ 8.15 | <b>The net social return on investment per £1 input is estimated to be between £10 and £8</b> |

Table 15: Drop off rates of the benefits of intervention over time

### Impact

The overall impact of the outcome must take into consideration the deadweight displacement and attribution of the project. These factors scale down the valuation calculated in Section 4.2 to account for circumstances around the intervention.

Deadweight is a percentage, deducted from the valuation to account for the proportion of outcome that may have happened naturally without the intervention. A value of 11% has been used, in line with that used for deadweight in the Oxford Economics (2015) report. This 11% reduction in valuation allows for effects that are not a direct result of the intervention. For example, beneficiaries may have reduced their energy expenditure by hearing about the WHD from a friend or by doing their own research into behavioural habits that waste energy.

Attribution discounts evaluate what proportion of the outcome may be due to another person or body. For example, there is a chance that a landlord may at some stage have installed a new boiler. This would have positively impacted the beneficiaries despite not being part of the intervention. A value of 9% for attribution has been used in this calculation, in line with that used for attribution in the Oxford Economics (2015) report. (This is usually included because people are asked about what effects they have experienced since the intervention. Although the people involved in this project have not been consulted in this calculation, it is included as it may have influenced the anecdotal evidence of change that the SELCE staff hear about).

Displacement, the act of not solving but shifting a problem to a different geographical location, was not considered relevant to this intervention so no reduction has been made.

## 4.4 Calculation

### *Adjusted number of recipients*

The number of recipients stems directly from the SELCE data but sometimes it includes estimates, hence the 'adjusted' number. An example of this occurs in the applications for WHDs where 57 clients were supported with an application during the 1:2:1 advice session, 30 clients were eligible and committed to making the application in their own time after the session and 111 clients were informed about the discount but could not apply because the applications portal was closed during the session. In these cases, SELCE have estimated how many of those who said they intended to apply and those who were informed about it went on to apply and this is reflected in the 'adjusted number or recipients'.

### *Calculations*

Following the identification of inputs, outputs and outcomes; assigning indicators and financial proxies to the outcomes; valuing them and accounting for attribution and displacement and then adding the effects of a single season with the projected duration of effects in 5 subsequent years, the SROI for the SELCE interventions can be calculated. Results are shown in Table 16.

|                               |                    |                               |             |                    |
|-------------------------------|--------------------|-------------------------------|-------------|--------------------|
| <b>SROI<br/>(PV / Inputs)</b> | <b>10.05933374</b> | <b>NET<br/>(NPV / Inputs)</b> | <b>SROI</b> | <b>9.059333738</b> |
|-------------------------------|--------------------|-------------------------------|-------------|--------------------|

Table 16: Results of the SROI calculations

The impact and the Present Value (PV) of benefits are calculated for each outcome stream. The PV of benefits is the discounted at a rate of 3.5% per annum.

The PV of benefits is £308,636. The Net Present Value is the PV minus the inputs which, as shown in **Error! Reference source not found.** to be £30,682. This gives an NPV of £277,954.

The SROI is the PV/Inputs and is equal to £10. The Net SROI is the NPV/inputs and is equal to £9.

### *The calculations spreadsheet*

The spreadsheet for these calculations has been set up as a template so that values assumptions and estimates can be easily interchanged.

### *Stakeholders*

Stakeholders not included are the funders of the project. Although they all have their specific reporting requirement geared towards increasing numbers, it is not believed that the exact outcome of the intervention is relevant. This is because most of the money comes from sources that are required in legislation.

The staff are also not included in the SROI calculations because it is not typical to include employees in these calculations. The staff also contribute a significant number of voluntary hours. There could be an argument for considering the stress/financial loss to staff of volunteer hours that are necessary to keep the projects running but the nature of these hours is unclear so in this case they are omitted.

## 5 Discussion

### 5.1 Reflections on quantitative data

The starting point of this collaboration was the analysis of the available data, followed by research into data recording practices, data management, funders' requirements and how such data reflects, and is used for, fuel poverty alleviation. Once we had established the input that goes into fuel poverty alleviation and data collection, management and evidencing, we established comparability among the datasets (Sections 4.1 and 4.2) and calculated the SROI (Section 4.3). This section analyses these

findings in the context of SELCE and ESC's community fuel poverty alleviation environment and the changes that need to happen to eradicate fuel poverty.

Comparing the datasets revealed that SELCE, on average, reach a younger (see Figure 2) and more ethnically diverse (Figure 3) clientele than ESC. This is a reflection of the overall demographic of the areas where these organisations are most active. But it is also a reflection of where and when data has been gathered. To assume that ESC primarily serves white retirees because of the presented data is misleading. Through its Faith and Power project and its Energy Caravan, ESC has reached out to individuals and households from different religious backgrounds, as well as refugees and asylum seeker. However, relevant data on demographics and ethnicity has not been gathered.

Comparative data using the most consistently gathered data on supplier switching and WHD provides us an insight into trends at aggregate level (using data provided by Community Energy South) as well as trends at organisational level. Considering different organisational structures, resources, geographical target areas and scant available data on customer demographics (see Section 4.1), as well as different trends in the total number of clients reached (Figure 5), switches completed as part of 1:2:1 sessions (Figures 7 and 8), average savings resulting from switches (Figures 7 and 8) and WHD applications (Figures 7 and 8), it is remarkable how similar the trends in total switching and WHD values (Figure 9) among SELCE and ESC are.

This is even more remarkable considering that total switching and WHD values at aggregate appear to follow an entirely different trend. This is a reflection of SELCE's and ESC's organisational resilience in an unfavourable business environment. Despite rising total values, declining trends in savings from switching in Figures 7 and 8 reflect structural changes in the energy market. Saving money by switching energy supplier is a quirk of the UK's electricity market. According to a study commissioned by the Cheshire Lehmann Fund (2016: 9), "energy companies could make a real difference to older people if they were more effective at helping people to understand their tariffs, payment systems and processes. There is a need for energy companies to provide simple, clear information and advice and a way of being able to compare different tariffs that is not only internet based".

The result of confusing tariffs is that switching to a cheaper one can save a lot of money and many funders, especially those linked to government such as the BESN (see section on Funding and data), place particular emphasis on supplier switching as a means of tackling fuel poverty. During the coalition government in particular, switching to a cheaper tariff was considered proof that the competitive market is working. Thanks to organisations such as SELCE and ESC encouraging switching, energy companies removing their cheapest tariff following the introduction of the price cap and improving internet literacy and savviness, savings from switching have been getting smaller (see Figures 6, 7 and 8).

This is good news as it implies that fewer people are being ripped off by energy companies. Before the introduction of this cap, energy companies could easily afford to offer the cheapest tariffs because they got so much money from people on variable tariffs who forgot to switch. Many of the fuel poor, especially those with chaotic lives, never switched suppliers and their loyalty was punished with higher bills. Despite more people switching, however, there are still many people who cannot take advantage of such opportunities and organisations such as SELCE and ESC play a vital role in ensuring that those in most need do not pay a poverty premium.

The SROI calculation is an attempt to go beyond interventions such as tariff switching and WHD applications to capture the huge amount to value which is missing from existing funding and reporting structures. Our conservatively calculated SROI of £10 and Net SROI of £9 for every £1 invested, impressive as they are, represent the absolute minimum. If other interventions were captured through follow up research, these figures would likely be higher.

These SROI calculations stand in contrast to the figures required by funders and reported by ESC and SELCE as well as by Community Energy South at aggregate level. As the excerpt at the beginning of Section 1 indicates, limiting reporting to figures on households switching supplier during a 1:2:1 advice session misses out on those that might have done so following the session while the SROI calculation provides an indication of the overall improvement of wellbeing that can result from such interventions.

As this SROI calculation is based on financial proxies which in some cases are at least six years old, there is huge room for improvement. If such additional value had a role to play in the way that fuel poverty alleviation was funded and community organisations went about alleviating fuel poverty, a much better understanding of the links between health, vulnerability, housing and community support could be established.

## 5.2 Reflections on qualitative data

In other areas, data is much less comparable, making it difficult to derive statistical conclusions. In particular, demographic data captured by both ESC and SELCE over the years is limited as such data is not required by most funders. Where such data is available, such as ESC's dataset of 220 case studies from 2016 which records information on whether customers receive government benefits, whether they have disabilities, whether they have internet access, whether their households are connected to the gas grid, whether they use electric heating and whether they pay their bills using a prepayment meter, it allows us to draw much more meaningful conclusions than trends and comparability.

Similarly, SELCE's datasets from 2017/18 and 2018/19 included questions that could be useful in assessing vulnerability, such as 'are you cold in your home?' or 'are your fuel bills more than you can pay?' with pre-allocated answers 'always', 'sometimes', 'never'. Despite low completion rates 30% and 28% respectively, they provide us with a much greater insight into what community fuel poverty alleviation can deliver compared to financialised values. One example of a retired male who 'lives in a cold home', who 'needs to be careful with money' and is in 'debt', shows that speaking to a community fuel poverty advisor led to:

- supplier switching which saved £756,
- referrals to supportive agencies,
- switch from pre-payment meter to a regular meter, and
- the arrangement of a money advice sessions on debt (worth £495 according to Outcome 4, Table 12).

Direct financial savings of £756 and debt management support can make the difference between living in cold conditions due to anxiety about spending money on heating and being able to heat one's home and improving overall living conditions.

The abovementioned ESC dataset with 2020 case studies includes an example of a retired couple who are homeowners on pensions with low incomes of <£16,000 per annum. He is on heart medication but suffers from cataracts and glaucoma. Both are suffering from cold. Following several visits to the energy desk followed by home visits they were switched to a cheaper tariff and referred to Winter Home Check Service which led to the installation of a new boiler worth £3,000. The case study concludes that the "couple [is] delighted with help and being able to afford to heat the home and wrote a very supportive letter of thanks. Good indication of how trusted community groups can help anxious residents through the referral process and secure positive outcomes".

Another case study by ESC from 2016 reports on a woman with HIV and her daughter, both with Asperger's and physical disabilities, and prone to chest infections, living in a cold and damp two bed park home with a combined income of <£11,000 per year. Their medical conditions imply that a dehumidifier needs to run constantly. She is paying off the Park Home as well as £4000 per year ground rent. Electricity is provided at a premium by the park owners. They should have been entitled to

Npower Health Through Warmth funding for insulation worth £6,000 but park homes are not eligible as they count as holiday lets. The case study concludes that “this is a desperate situation that many face when they find they have taken loans for park homes and find they are not entitled to housing benefits or grants.”

These examples provide insight into both the desperate need for community fuel poverty alleviation services and the value they deliver which extends well beyond the SROI values we calculated for comparative data. In the context of the available data, they also indicate the complexity of reaching out to those in greatest need for support and the difficulty to establish and maintain data gathering infrastructure in an unsupportive funding landscape.

Reaching out to vulnerable members of society and helping them out of fuel poverty involves a lot more than switching suppliers and making savings on their energy bills. To complicate matters, targets and reporting requirements change over the years, sometimes in response to such criticism, sometimes in response to changing political priorities and sometimes in response to changing corporate strategies. Data gathered by aggregators such as Community Energy South is also determined by funders’ requirements.

### 5.3 Reflections on data capture and management

While outcome data was often inconsistent and patchy, there was hardly any information available on the input required to deliver the outcomes. From the literature we surmised that those in greatest need of support are the most difficult to reach (pride vs. pounds). This was recognised in the first academic publications on the subject by Brenda Boardman (1991). It is also supported by our analysis which revealed:

- the complexity of reaching out to those in greatest need for support;
- the difficulty of valuing interaction (and not just £ saved on bills) and getting such value recognised; and
- the highly political nature of funding to support community energy fuel poverty alleviation.

The political priority for community fuel poverty alleviation, switching suppliers to reduce fuel bills (see Section 5.1), also reveals the contradictory nature of supporting vulnerable customers in a market dominated by the logic competition and the motivation to maximise profits. The CEOs of SELCE and ESC highlighted the issue of automatic supplier switching services being challenged by suppliers while price caps increasingly limit savings that can be achieved through supplier switching.

To complicate matters, there is a danger of multiple layers of overreporting at institutional level and serious underreporting at organisational level. The former can result from organisations such as SELCE and ESC lacking the resources to disentangle data relating to one funding source from another. Underreporting is evident in the quote provided at the beginning of this report, as only interventions that are directly acted upon are included as outcome data.

These issues can render organisational data incomplete and difficult to interpret. It can also make it difficult to derive meaningful conclusions from data analysis without research into how, when and why data was (or was not) gathered, and who went on to use this data. Data is critical but only a couple of organisations operating in the fuel poverty alleviation space have adequate data management capabilities. SELCE and the Centre for Sustainable Energy are outliers and more standardisation across these organisations is necessary to improve delivery and comparability.

Current data gathering and availability also does not necessarily reflect the real result of what most organisations operating in this space are doing. The data also fails to capture the additionality of what such organisations are doing beyond the value of a specific intervention. This is the primary reasons we have developed the SROI tool.

It is also crucial to try to understand what information needs to be collected for what outcome, and what is missing from this data. After all, there is no point in collecting data if it not analysed or used to improve interventions. It is also critical to understand the importance of outliers in terms of the support and help that could be provided with the help of ESC and SELCE – and outliers in terms of the support and help that was desperately needed but could not be provided. Case studies, which both ESC and SELCE are excellent at producing, give an idea of what this implies in practice (see Section 5.1).

Such in-depth reporting is essential to indicate the importance, and limitations, of community fuel poverty alleviation services. However, like most organisations that engage in community fuel poverty alleviation services, ESC and SELCE lack the resources to take a step back and critically analyse their data as well as the inputs and outcomes which have not been captured in (more or less) standardised reporting formats.

Overall, such data is collected primarily to satisfy funders' reporting requirements. As these change over time, along with sources and application procedures, there is often little comparability between years or opportunities to carry out much analysis of what has or has not worked. Even maintaining award-winning levels of service places significant administrative burden on the organisations seeking funds.

#### 5.4 Reflections on funding

Energy poverty organisations typically seek small amounts of money from a wide range of different organisations. This funding is often not sufficient to provide the advice or measures needed to lift people out of fuel poverty. For example, one funder pays roughly £250 for the installation of soft measures (i.e. draft proofing or LED lightbulbs) which is not enough for most businesses to cover their costs of delivering such measures given the administration time involved and the lengthy communications with clients and referral agencies this entails.

In some cases, grants are provided based on the number of people who have received advice but this money is not enough to cover the costs of delivering the advice. As a result, it is not uncommon for organisations to manipulate their figures to ensure that they can meet the unrealistic expectations made by funders. For example, BESN only provides £25 of funding per 1:1 meeting with a client which is insufficient to cover the costs associated with providing this advice. As a result, the organisations run workshop with brief (5 minute) individual advice sessions, but this is typically not enough time to deliver meaningful fuel poverty advice.

There is little to no funding available to cover operational costs or admin related activities such as recruitment, training staff, applying for grants or awards, or for advocacy related work. Furthermore, funders typically do not take into consideration the amount of time it takes to set up a workshop (around half a day a week for workshops).

Many of the people energy poverty organisations deal with are living in private rented accommodation that has not been maintained to an appropriate standard by the Landlord (see Section 2.1). There are examples where these landlords have taken advantage of grant funding aimed at alleviating fuel poverty to receive free or heavily discounted energy retrofit technologies including replacement boilers. For example, during one programme, some landlords issued section 21 notices to tenants after installations took place and some tenants were moved into other properties with poor heating so that they could get a new boiler installed.

#### 5.5 Reflections on organisational capacity

Major funding is typically only available over the winter period which causes logistical challenges for organisations in terms of capacity. For example, most staff are recruited on short-term contracts or on a contractor basis because work throughout the year is not available. Each year the organisations

need to recruit and train a new cohort of energy advisors who leave at the end of their contract. This type of discontinuous funding also limits opportunities to develop a strong support, referral and delivery network.

More resources are also necessary to maintain their own service delivery networks as people, living arrangements and organisation also change quickly. When SELCE and ESC relaunch their programmes in autumn they often find that last year's volunteers or contact person in other organisations has moved on and it might not be possible to get in touch, so the capacity and network building process has to start all over again.

No strategic relationship building is funded by grants and it is difficult to contribute strategically without stepping on people's toes. Local authorities often pretend that everything is fine as they do not want to admit failure. On the other hand, fuel poverty alleviating organisations typically only have a very short period of time to build capacity and networks in order to deliver advice to potential clients which can be particularly challenging in circumstances where the potential client is physically or mentally unwell (see case studies in Section 5.1).

Managing client expectations is also a major challenge. Striking the balance between providing sufficiently detailed information which is easy to understand and the need to go into detail to understand the root cause of fuel poverty is rarely possible in the time available. Overall, there is a 'constant rebuilding of relationships in the community sector because of funding' which is less than is needed to both build relationships, deliver good advice to customers and provide good data to funders and policymakers to help them improve their support.

A competitive market for both suppliers and fuel poverty alleviation services would not be an issue if companies can be compared and the 'playing field' was level. In practice, however, diminishing returns imply that energy companies make it difficult to identify cheapest tariffs (and have successfully challenged automatic tariff switching services) while large organisations with established funding and data management infrastructures drive market consolidation in community fuel poverty advice.

## 6 Conclusion

Attempts to quantify the outcome of community fuel poverty alleviation are important to help identify and value inputs and outputs but much of the outreach work and low frequency/high impact interventions are excluded from such calculations. This is also inherent in funding and subsequent reporting. The amount of time given by funders to deliver energy advice is less than is needed to build relationships and deliver good advice. But such relationships and good advice are key to move beyond savings on fuel bills and debt relief towards improving living conditions, reducing energy loss and making homes warmer and healthier.

The issue with current funding structures for fuel poverty alleviation is that they are more about reducing fuel related debt rather than ridding the country of fuel poverty. Although this is very important work, it fails to prioritise long-term solutions such as improving the building fabric. In the past, however, some schemes have succeeded in doing just that. One example is the Winter Home Check Service 2015-18 to which ESC made many referrals (Lowe and Maclean 2018).

This coordinated approach, involving community organisations, the local authority and an energy company made significant changes in many people's living conditions and successfully tackled fuel poverty (Lowe and Maclean 2018). Major infrastructural changes supported by this scheme include 99 replacement boilers and 53 new central heating systems alongside numerous minor measures such as lagging/draught proofing (157), door/windows repair/replace (118), radiator folds (109), energy saving bulbs (99), boiler service (74) and boiler/heating repair (59). The average budget for major measures of between £3,000 and £3,250 was never exceeded under this scheme and clients reported significant improvements in their wellbeing (Lowe and Maclean 2018).

However, this service was cut due to austerity measures imposed upon East Sussex County Council. Since then, options to improve housing through major infrastructural changes have diminished significantly. Compared to the savings resulting from common interventions such as supplier switching and Warm Home Discounts, major infrastructural changes make a real lasting difference. To eradicate fuel poverty, as recognised in the government's Energy White Paper, significant infrastructural changes through energy efficient retrofits are required.

In the absence of government funding, a lot of hope rests on business models which use future fuel savings to pay for energy efficiency investments (such as the Green Deal model). However, such business models appear less suitable for fuel poor households than more affluent households. Underheated and fuel poor households often lack the energy expenditure to make the significant savings required to pay for investments in better insulation and low-carbon heating systems in the long run.

Therefore, the service ESC and SELCE provide needs to be understood as more than sheer numbers. In many cases, such organisations resemble a lifeline for those in danger of falling through the cracks. These cracks are growing with the increasing emphasis on competitive market-based solutions which results in more people dropping off the radar of organisations with a duty of care, as well as the growing gap between the rich and the poor, with the additional challenges associated with Covid-19. Yet, the competitive funding environment increasingly concentrates fuel poverty advice services among organisations with good data management infrastructures, significant bid-writing experience and political clout while organisations with local knowledge, who are well-rooted in their communities, and arguably better places to support communities lose out.

The consequent emergence of dominant actors in a consolidated market, even though they are new to the sector and often lack the local knowledge necessary to reach out and help those in most need overcome the stigma and accepting help in desperate situations, is driven by current fuel poverty alleviation funding structures. Grants, such as those provided through BESN, UKPN, SGN and BGET, are difficult to fulfil. They are too specific, they focus too much on data, specific interventions (such as switching supplier) and customer relationship management (CRM) systems, they do not last long enough and focus too little on alleviating fuel poverty. Rather than lifting people out of fuel poverty, there is a fixation on numbers. Limitations of grants also limits their availability.

Smaller and less well-resourced organisations, such as ESC and SELCE who have been driving the community fuel poverty alleviation agenda for years, are being pushed aside, along with their knowledge of how to approach whom, where and when. Despite years of experience, evaluation, analysis and reflection, the current competitive market-based approach is therefore failing the fuel poor and community energy organisations that strive to reduce fuel poverty.

Organisations with sufficient resources to do so, such as ESC and SELCE, have been diversifying towards the delivery of a wide range of energy services as funding for fuel poverty alleviation only ever provides contribution to the resources required to deliver such services locally. Match funding needs to be sourced elsewhere to enable these organisations to maintain their business models under increasingly challenging circumstances.

Overall, one gets the impression that the situation ESC and SECLE find themselves in resembles a dead end. The funding they receive if they are lucky enough to have their bids accepted does not address the root causes of fuel poverty and is in danger of burning out those engaging in advice and alleviation. Fuel poverty is an effect of poverty and not a cause. Addressing it requires a lot more than funding to help people out of fuel debt. At the same time, community energy organisations engaging in fuel poverty need to be provided with alternative routes to market to maintain a sustainable business model, but it is unclear how this can be achieved while still maintaining emphasis on fuel poverty alleviation.

## 6. Recommendations

It is evident that community energy organisations engaging in fuel poverty need to diversify to maintain a sustainable business model while still maintaining emphasis on fuel poverty alleviation. Integrating fuel poverty alleviation services into just transition engagement appears to be a strategy where funding from diverse range of sources is available, especially given that around three quarters of UK local authorities declaring climate emergencies over the course of 2019 and 2020.

At the same time, a more coordinated approach is necessary to address the main causes of fuel poverty: absolute poverty and poor housing leading to negative health impacts (i.e. damp, mould and condensation). Community organisations can help understand where interventions should be prioritised, but it is difficult to build rapport with clients in a single meeting. It is also difficult to establish comparability between input, need and outcome.

The following measures would ensure that organisations such as SELCE and ESC can continue their good work supporting people on their journey out of fuel poverty:

- **Development and dissemination of a single data capturing and management tool**

According to SELCE CEO Giovanna Speciale, however, ‘it would take two grants worth of consulting to set up a CRM system’. The lack of a unified CRM system was also identified in previous project evaluations (Lowe and Maclean 2018). Such a tool would facilitate follow up analysis to reduce underreporting at organisational level while reducing the danger of overreporting at funding level. It would also facilitate comparability, provide the basis for more targeted intervention and business model innovation, and evidence success to lobby government and funders to provide a more supportive funding environment.

- **Data analysis support**

As there is no point collecting data if it is not analysed, there also needs to be more support for data analysis. Our SROI calculation provides an insight into the value of capturing and analysing organisational input and outcome data. To improve such calculations and to provide them with more ‘weight’ it is necessary to undertake more research into the consequences for community fuel poverty alleviation efforts. Our report has only scratched the surface of what fuel poverty alleviation approach works and what does not and much more emphasis needs to be placed on the long-term consequences of fuel poverty, the interventions to alleviate fuel poverty which are prioritised by funders and interventions favoured by community organisations such as SELCE and ESC.

- **Changing funding structure**

It needs to be recognised that market consolidation is driven by the progressive squeezing of organisations such as SELCE and ESC through grants which have not increased despite increasing compliance requirements and inflation. More regular (as opposed to seasonal) resources are required to enable such organisations to capture their input and to follow up on their output, especially people that have received advice in the past. Less emphasis on hitting targets and numbers would help concentrate efforts where interventions can make very significant differences to people’s circumstances.

- **Holistic fuel poverty alleviation strategy using local resources**

If the management of laudable support schemes such as the Green Homes Grant, which can cover 100% of the cost of energy efficiency improvements is a member of a household receives certain benefits, was shifted to local authorities (instead of the current arrangement where management lies with a US consultancy based in Virginia), they could directly act upon the evidence provided by organisations such as ESC and SELCE. Enabling the Green Homes Grant to be claimed towards the cost

## Appendix 1: SROI Spreadsheet

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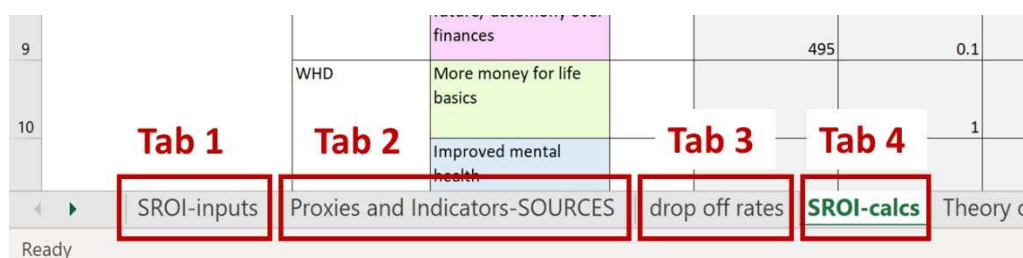
## Appendix 2: How to use the accompanying spreadsheet

The excel file for this SROI calculation has been set up as a template to allow easy adjustment of assumptions and easy updates. This section of the report explains how to use the spreadsheet.

There are four important tabs:

1. SROI Inputs
2. Proxies and Indicators
3. Drop off rates
4. SROI calcs

All calculations happen in the “SROI calcs” tab however these tabs reference values input from the other 3 tabs.



To adjust the project inputs, you can edit the fields in the red boxes shown in figure x.

Tab 1: SROI Inputs

|                          |             |                  |                                 |
|--------------------------|-------------|------------------|---------------------------------|
| <b>Funding</b>           |             |                  |                                 |
| BESN                     |             | 16000            |                                 |
| SELFy                    |             | 2600             |                                 |
| Donations                |             | 880              |                                 |
| Smart Energy GB          |             | 4000             |                                 |
| <b>TOTAL</b>             |             | <b>23480</b>     |                                 |
|                          |             |                  |                                 |
| Event                    | Event       | people reached   | people reached 1-2-1            |
|                          | <b>PAID</b> | <b>Volunteer</b> | <b>Total cost (input value)</b> |
| Weeks (6 months)         | 24          | 24               |                                 |
| Staff                    | 4           | 4                |                                 |
| Hours/week               | 13          | 4                |                                 |
| Total hours              | 1248        | 384              |                                 |
| Cost at rate of £18.8/hr | 23462.4     | 7219.2           | 30681.6                         |
|                          |             |                  |                                 |
| Funding from fun         |             | 23480            |                                 |
| SELCE overheads          |             | 22232            |                                 |

To adjust the proxies and indicators, you can edit the fields in the red boxes shown in figure x.

### Tab 2: SROI Inputs

[illegible]

To adjust the drop off rates, you can edit the fields in the red boxes shown in figure x.

Tab 3: drop off rates

| Outcome            | Drop off rate |        | Source             |
|--------------------|---------------|--------|--------------------|
|                    | Year 2        | Year 3 |                    |
| Switch             | 0.5           | 0.25   | Giovanna estimates |
| WHD                | 0.8           | 0.5    | Giovanna estimates |
| Watersure          | 0.8           | 0.5    | Giovanna estimates |
| Debt advice        | 0.3           | 0.1    |                    |
| Behavioural advice | 0.5           | 0.25   | Giovanna estimates |

|             | Value | Source           |
|-------------|-------|------------------|
| Attribution | 0.91  | Oxford Economics |
| Deadweight  | 0.89  | Oxford Economics |

|               | Value | Source           |
|---------------|-------|------------------|
| Discount rate | 0.035 | Oxford Economics |

The SROI calcs tabs uses all the assumptions and information inputted into the other tabs to produce the SROI value. The field values should not be edited, as shown in figure x.

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