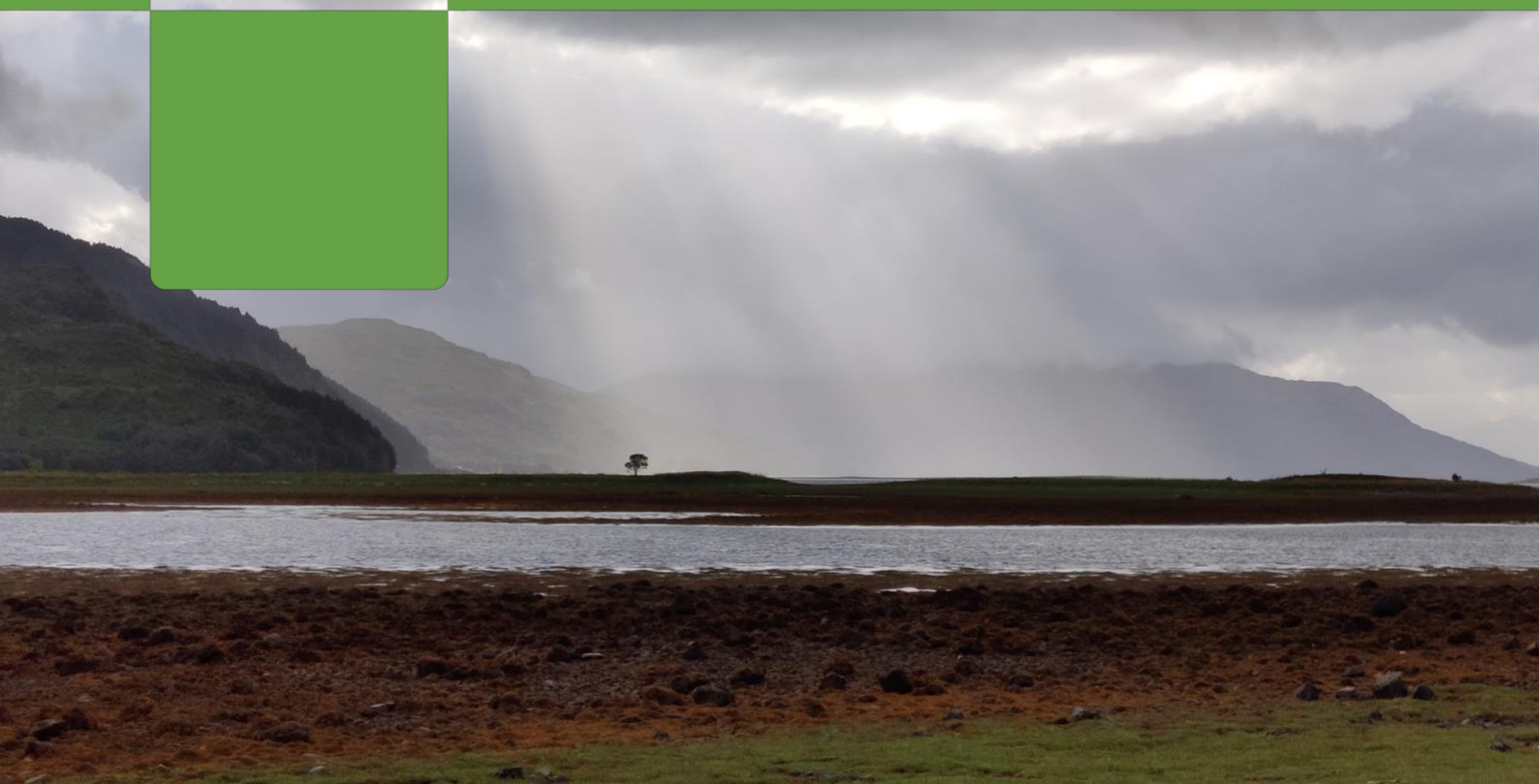


**energy  
saving  
trust**

# **Supporting Scotland's Green Ambitions**

**Energy Programmes delivered by Energy Saving Trust  
on behalf of the Scottish Government**

May 2023



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Cover image: Balmacara Castle. Photo credit: Jack Hamston-Goodfellow

## 1. Introduction

Over recent years, Energy Saving Trust has received an increasing number of enquiries about how the programmes it delivers on behalf of the Scottish Government work and what changes they deliver on the ground. These are often from organisations seeking to inform policy in other parts of the UK. There has also been increasing interest from stakeholders in other parts of Europe and beyond, keen to learn more about the Scottish experience.

This publication responds to that demand for information and is updated annually to reflect relevant programme developments over the course of each year and to provide up to date information on impact. This is the report's third annual update and includes an expansion in scope to cover programmes for small and medium sized businesses (SMEs) and district heating.



## 1.1 Scope of this Report

This report describes some of the programmes that Energy Saving Trust delivers on behalf of the Scottish Government, including energy efficiency programmes for owner occupiers, tenants, small private landlords and SMEs as well as for heat networks.

It provides information on programmes that promote energy efficiency improvements: insulation, low and zero emissions heating systems, other domestic renewables systems, energy storage and behaviour change. Some of these programmes also cover wider support to address fuel poverty (eg helping people get on the right energy tariff and access the welfare benefits they are entitled to).

There are broader policies that impact on home energy improvements that are not covered in this report, for instance funding arrangements for social housing<sup>1</sup> and policies to tackle housing disrepair<sup>2</sup>.

**Section 2** provides an overview of the **broader policy context**: why the Scottish Government is taking action to improve the energy performance of Scotland's buildings.

**Section 3** outlines the relevant medium- and long-term **policy landscape and objectives**.

A distinctive element of the Scottish home energy policy programme is the emphasis put on advice to householders and businesses. **Section 4** explains the Home Energy Scotland and Business Energy Scotland **advice services**.

**Section 5** details the **financial support** made available to help improve the energy performance of properties.

**Section 6** focuses on programmes designed to improve the **delivery of home energy improvements** by the supply chain, social landlords and local authorities and some of the wider supporting activity delivered by Energy Saving Trust to build the market for home energy improvements.

**Appendix A** summarises how some of the programmes are administered and delivered (contractual arrangements, quality assurance, evaluation, etc).

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<sup>1</sup> More information about the Net Zero Social Housing Fund can be found here: <https://www.gov.scot/publications/social-housing-net-zero-heat-fund---call-for-funding-applications/pages/overview/>

<sup>2</sup> See: <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2021/03/housing-2040-2/documents/housing-2040/housing-2040/govscot%3Adocument/housing-2040.pdf>

## 2. Policy Context

Recent years have seen the rapid evolution of the energy efficiency landscape in Scotland. This has been driven by a significant policy focus on both climate change and fuel poverty.

Scotland was one of the first countries in the world to declare a climate emergency and the Scottish Government has committed to ending Scotland's contribution to climate change *"definitively, within one generation."*<sup>3</sup> To this end, it has legislation in place which sets a target date for net-zero emissions of all greenhouse gases by 2045 with interim targets for reductions of at least 75% by 2030 and 90% by 2040.

Scotland has statutory targets set out in the 2019 Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act which require that in 2040: no more than 5% of households should be in fuel poverty; no more than 1% of households should be in extreme fuel poverty; and the median fuel poverty gap of households in fuel poverty is no more than £250 in 2015 prices before adding inflation.

Since these targets were set, the broader policy landscape has experienced several shocks that have impacted the way in which policy can be developed and delivered, including the Covid-19 pandemic and the energy and cost-of-living crises, which have been exacerbated by Russia's invasion of Ukraine. When the energy price cap was set in October 2022, energy prices had almost doubled based on the same point the previous year.

Issues around energy affordability are compounded by the effects of inflation: the Consumer Prices Index (CPI) rose by 8.7% in the 12 months to April 2023<sup>4</sup>, down from the high of 11.1% in October 2022. The October figure was the highest annual CPI inflation rate since the National Statistics dataset began in January 1997.

As noted by Consumer Scotland in its first Energy Affordability Tracker<sup>5</sup>, rates of fuel poverty in Scotland are more in flux now than at any time previously because of increasing energy prices. Official statistics for 2020 show that 24.6%<sup>6</sup> of households were estimated to be in fuel poverty in 2019. Updated statistics are expected in 2023, however, in November 2022 the Scottish Government published cross-government analysis of a wide range of sources to provide an overview of emerging evidence on the cost-of-living crisis<sup>7</sup>. This showed that predicted rises to the energy price cap in October 2022 would result in around 35% of Scottish households falling into fuel poverty, with around 24% in extreme fuel poverty.<sup>8</sup>

Scotland's housing stock is responsible for 13% of Scotland's greenhouse gas emissions and the Scottish Government recognises that *"reducing emissions from our homes and buildings is one of the most important things we can do to help end Scotland's contribution to climate*

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<sup>3</sup> See: <https://www.gov.scot/policies/climate-change/>

<sup>4</sup> See: <https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/april2023>

<sup>5</sup> See: <https://consumer.scot/publications/consumer-spotlight/>

<sup>6</sup> See: <https://www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/>

<sup>7</sup> <https://www.gov.scot/publications/cost-living-crisis-scotland-analytical-report/pages/4/>

<sup>8</sup> See:

<https://new.theclaymoreproject.com/uploads/entities/1230/files/Publications/Consultation%20Responses/220308fuelpovertyLAmapFEB22.pdf>

change”<sup>9</sup>. Reducing emissions from Scotland’s housing stock will not only require improved energy efficiency to reduce demand for energy. It will also require the rapid deployment of low and zero emissions heating systems such as heat pumps and heat networks, such that by 2030, over 1 million homes are using these systems instead of fossil fuelled boilers<sup>10</sup>. Improving the energy efficiency of Scotland’s homes also helps lower fuel bills.



The Scottish Government have stated that at the “heart” of their emissions reduction efforts will be “a defining mission for a just transition to net zero – leaving no person, industry or community behind”. This includes continuing efforts to eradicate fuel poverty. To this end, they set up an independent Just Transition Commission in 2019. The Commission’s role is to provide recommendations for action that will “maximise the economic and social opportunities that the move to a net-zero economy by 2025 offers, build on Scotland’s existing strengths and assets”<sup>11</sup>.

The Commission published its second report in July 2022<sup>12</sup>, which included strategic priorities and recommendations for the four economic sectors that are due to be addressed by Just

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<sup>9</sup> See: <https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/documents/>

<sup>10</sup> See: <https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/documents/>

<sup>11</sup> See: <https://www.gov.scot/groups/just-transition-commission>

<sup>12</sup> See: <https://www.gov.scot/publications/making-future-initial-report-2nd-transition-commission/>

Transition Plans from the Scottish Government by the end of 2023<sup>13</sup>. Recommendations related to fuel poverty were included for both the energy and the buildings and construction sectors.

In early 2022, the Scottish Government established a Green Heat Finance Task Force, to develop financial solutions to enable decarbonisation of buildings. The Task Force is due to publish its findings in 2023<sup>14</sup>.

Scotland's small business community has suffered significant setbacks throughout the course of the last two years and, despite the best efforts of government to mitigate the damage done by the pandemic, are facing rising inflation, increasing energy prices, supply chain disruption and staff shortages. Many small businesses are facing these challenges with severely depleted cash reserves and/or emergency Covid-19 loans to repay. As of July 2021, according to the Federation for Small Businesses (FSB), businesses in Scotland had taken on at least £4.1 billion of loans through the Coronavirus Business Interruption Loan Scheme and the Bounce Back Loan Scheme<sup>15</sup>. The FSB also notes that in many key markets such as energy, small and medium sized businesses have a bargaining position more akin to that of a domestic consumer but enjoy none of the protections afforded to households.

In short, it must be acknowledged that for many households and businesses, the past 12 months have proved incredibly challenging and the need for support to transition to more energy efficient practices has never been so acute.

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<sup>13</sup> The consultation draft of the Energy Strategy and Just Transition Plan was published on 10<sup>th</sup> January 2023. See: <https://www.gov.scot/publications/draft-energy-strategy-transition-plan/pages/1/>

<sup>14</sup> See: Scottish Government (2022) Heat in Buildings – Green Heat Finance Taskforce: terms of reference, <https://www.gov.scot/publications/heat-in-buildings-green-heat-finance-taskforceterms-of-reference/>

<sup>15</sup> See: <https://www.fsb.org.uk/resources-page/fsb-scotland-budget-submission-october-2022.html>

### 3. Policy landscape and objectives



Footdee, Aberdeen. Photo credit: Bethy Picton

#### 3.1. Home energy

At the end of 2020, an updated Climate Change Plan was laid before Parliament which set out the Scottish Government's approach to reducing emissions in line with Scotland's new climate change targets to reduce emissions by 75% by 2030 (compared with 1990) and to net zero by 2045.<sup>16</sup> The updated plan puts delivering a green recovery from Covid-19 at its core.

##### 3.1.1. Heat in Buildings Strategy

Recognising the need for a clear, long-term vision and policy direction for heat in buildings, the Scottish Government published its Heat in Buildings Strategy (HiBS) in October 2021. The strategy builds on the policies and actions set out in the 2020 Climate Change Plan update and signals a

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<sup>16</sup> The next update to the Climate Change Plan is due in 2023.



step change in the focus on removing emissions from Scotland's buildings. The Strategy "sets out a pathway to zero emissions buildings by 2045 and details a series of near-term actions to put us on a clear path towards this, as well as a range of further, longer-term commitments to accelerate the transformation of the nation's building stock", including a commitment to introduce standards across all tenures for zero emissions heating and energy efficiency, where it is within the Scottish Government's legal competence between 2023 and 2025.

The policies and actions outlined in HiBS built on those in the draft strategy that was published in 2021 and on the cooperation agreement between the Scottish Government and the Scottish Green Party which committed to developing a strengthened policy and delivery framework for green homes and green buildings. This includes strengthened proposals for long term energy performance standards for homes in Scotland.

An update on progress against HiBS was published in October 2022<sup>17</sup>. The update confirmed that a new HiBS Public Engagement Strategy will be published in 2023 to guide long term awareness raising and education on energy use and heat in homes. Changes to building standards, due to come into effect from 1<sup>st</sup> April 2024, will ensure that the use of direct emission heating systems in new buildings is prohibited. Also in 2023, the Scottish Government will consult on a Heat in Buildings Bill, which will drive better energy efficiency standards and zero emissions heating in Scotland's existing buildings from 2025. Alongside these measures, in January 2023 the Scottish Government announced plans to introduce new minimum environmental design standards for all new build housing to meet a Scottish equivalent to the Passivhaus standard.

Local Heat and Energy Efficiency Strategies (LHEES) are a key element of HiBS and will underpin an area-based approach to heat and energy efficiency planning and delivery. LHEES strategies will set out the long-term plan for decarbonising heat in buildings and improving their energy efficiency across an entire local authority area. The LHEES Order 2022 entered into force on 21<sup>st</sup> May and requires local authorities to publish LHEES Strategies and Delivery Plans by 31 December 2023. Guidance on the strategies and delivery plans was published 20 October 2022<sup>18</sup>.

### **3.1.2. Energy Performance Standards**

The Scottish Government's proposed long term energy performance standards for homes in Scotland are as follows:

- By 2030 a large majority of homes to achieve an Energy Performance Certificate (EPC) rating of C with all homes meeting at least this standard by 2033 (where technically and legally feasible and cost effective).
- The Energy Efficient Standard for Social Housing aims to maximise the number of social rented homes achieving EPC B by 2032 and requires that no social housing should be re-let if the rating is lower than EPC D from 2025, subject to some temporary exemptions.

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<sup>17</sup> See: <https://www.gov.scot/publications/heat-in-buildings-strategy-2022-update/pages/progress/>

<sup>18</sup> See: <https://www.gov.scot/publications/local-heat-energy-efficiency-strategies-delivery-plans-guidance/>

- Private rented homes to reach a minimum standard equivalent to EPC C from 2025, where technically feasible and cost-effective, at change of tenancy, with a backstop of 2028 for all remaining existing properties.
- All homes with households in fuel poverty to reach an energy efficiency rating equivalent to EPC C by 2030 and equivalent to EPC B by 2040 (where technically feasible and cost effective and affordable).
- Multi-tenure or mixed-use buildings may, under certain circumstances, be given until 2040-45 to improve both their energy efficiency and install a zero-emissions heat supply.

The Scottish Government has consulted on proposals to reform EPCs, to include a new energy use rating. Work is underway to ensure that EPCs include a metric to improve their suitability as a tool for delivering energy efficiency improvements.

The Scottish Government has also committed (subject to technological developments and reserved decisions) to phasing out the need to install new or replacement fossil fuel boilers:

- in off-gas areas from 2025 and
- in on-gas areas from 2030

### **3.2. Small businesses**

As at March 2020, there were an estimated 364,310 private sector businesses operating in Scotland. Almost all these businesses (98.2%) were small (0 to 49 employees). Businesses with no employees – that is sole proprietors/ partnerships comprising only the owner-managers or companies comprising only the employee director – accounted for 69.9% (254,740 businesses) of all private sector businesses in Scotland.<sup>19</sup> Many of these microbusinesses and small and medium-sized businesses provide crucial services to remote and island communities that are not, and cannot be, provided by other means. Such businesses also have a key role to play in helping to ensure a just transition to net zero.

According to polling carried out by the Federation for Small Businesses, 49% of small firms in Scotland are extremely concerned about rising business energy costs, compared to 38% of all small businesses in the UK. 72% of small firms in Scotland reported a price increase over the past year, higher than the UK average. In addition, almost half (49%) of small businesses in Scotland have seen their energy costs increase by double or more.<sup>20</sup>

### **3.3. Heat Networks**

Heat networks, as defined under the 2021 Heat Networks (Scotland) Act, include both district and communal heating. The Heat Networks Delivery Plan<sup>21</sup> was published in March 2022 and outlines

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<sup>19</sup> See: <https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2020/11/businesses-in-scotland-2020/documents/businesses-in-scotland-2020/businesses-in-scotland-2020/govscot%3Adocument/Businesses%2Bin%2BScotland%2B2020.pdf>

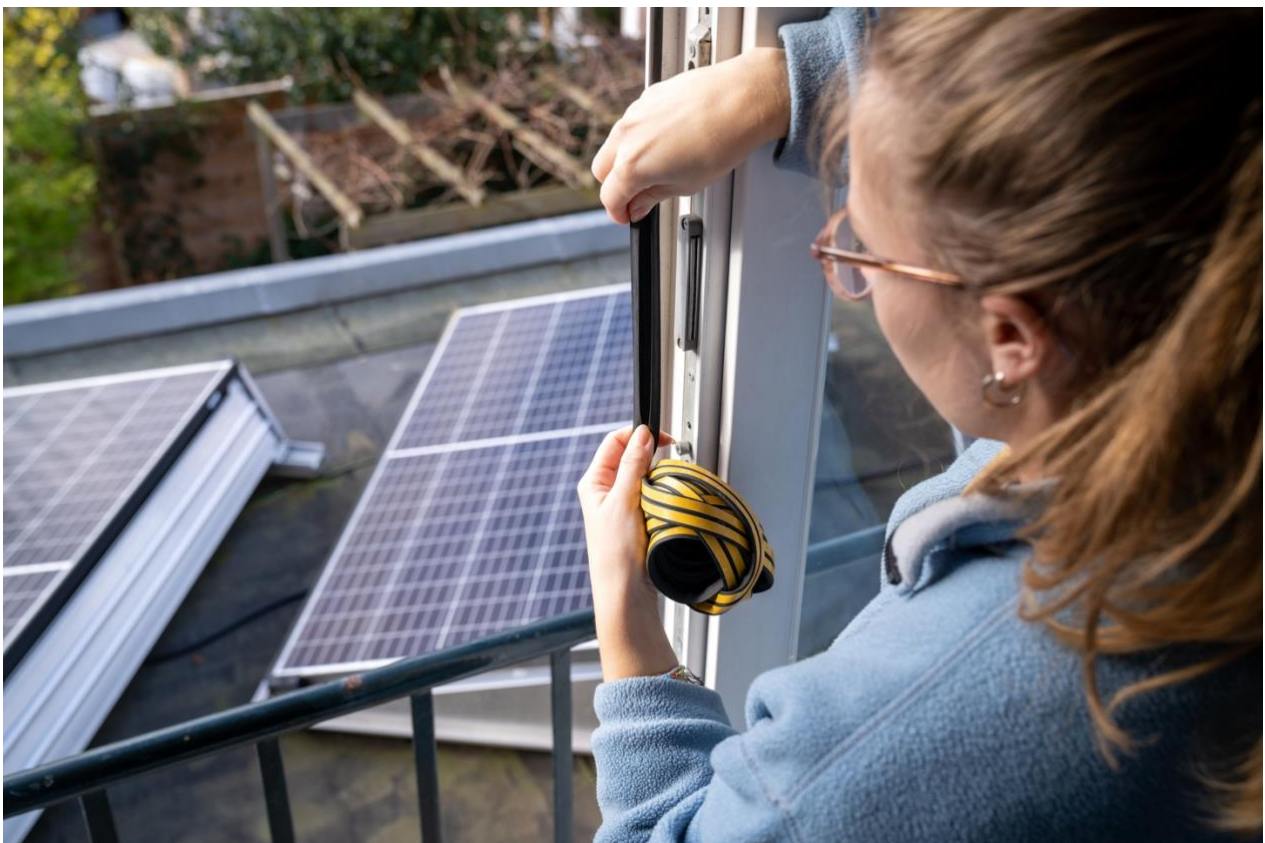
<sup>20</sup> See: <https://www.fsb.org.uk/resources-page/out-in-the-cold.html>

<sup>21</sup> See: <https://www.gov.scot/publications/heat-networks-delivery-plan/>

how the provisions of the Act and other supporting policies, will contribute to increasing the use of heat networks in Scotland and meeting the statutory targets of 2.6 TWh of output by 2027 and 6TWh of output by 2030. Consultations on a thermal energy target for 2035 and on heat network zoning were launched in December 2022 and further consultations are expected during the course of 2023 on consenting, permitting, licensing and powers of license holders.

### **3.4. GB wide programmes**

Home energy policies in Scotland are set by the Scottish Government but some policies that impact on the energy performance of Scottish homes are set by the UK Government at GB level, for example, the Smart Export Guarantee (SEG), the smart meter roll-out and the Energy Company Obligation (ECO)<sup>22</sup>. Some of the approaches the Scottish Government has taken to the delivery of energy efficiency can be understood as trying to maximise the impact of these GB-wide funding schemes and policies in Scotland.



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<sup>22</sup> The overall level of ECO and its delivery model across GB is set in Westminster. The Scotland Act 2016 provided Scottish Ministers with powers over some elements of ECO. To date these powers have not been exercised and the Scottish Government continues to participate in the GB-wide scheme.

## 4. Advice Services in Scotland

### 4.1. Introduction to energy advice in Scotland

A key, distinctive element of the policy landscape for home energy in Scotland is the focus given to high quality, impartial advice to support people to act on energy efficiency.

In Scotland, householders (owner occupiers, tenants) and smaller private landlords can access free, independent, personalised and impartial advice from the Home Energy Scotland (HES) service, provided on behalf of the Scottish Government by Energy Saving Trust. The importance of the advice provided by HES is stressed in the Scottish Government's Heat in Buildings Strategy which notes that the Scottish Government will *"retain the support and advice services currently operating as Home Energy Scotland and Energy Efficiency Business Support (to become Business Energy Scotland from April 2022) at the core of our delivery schemes"*.

The cost-of-living crisis has resulted in a significantly increased demand for HES advice. The Scottish Government has responded to this need by increasing funding to enable Energy Saving Trust to increase staffing across the network and through increased use of these digital tools and online support mechanisms. For example, HES produced an online assessment tool for customers who may be eligible for help through Warmer Homes Scotland (see [Section 5.1](#)).

Broadly, three types of advice are provided by HES:

- **Personalised advice** (see [section 4.2](#)) delivered over the phone by trained advisors working from regional advice centres across Scotland. This advice is based on information received from the householder (in relation to their housing type and tenure, their current circumstances, etc) but also on other available information on their home and its energy use (including EPCs where these are available).
- **Advice delivered face to face in the home.** Expert advice is provided either in-home or remotely for households identified as needing in-depth advice and support: very vulnerable households, people considering more complex home energy measures such as low and zero emission heating systems, other domestic renewable systems, energy storage and solid wall insulation, and some private landlords. As digital tools evolve and customers become increasingly energy aware, HES can provide an increasing number of these in-depth advice services remotely, while still delivering in-home advice to customers for whom it is most appropriate. Advice is also delivered at events eg MSP constituency office sessions staffed by HES advisors, advice 'stalls' in hospital settings, advisors engaging householders while they are waiting for flu and Covid vaccinations; and through webinars and online workshops provided to community groups and to groups of employees as 'employee engagement' supported by their employer.
- **Online advice** consisting of bespoke advice by email and social media, a dedicated website and online tools, managed and provided centrally by Energy Saving Trust on behalf of the Scottish Government.

The “Green Homes Network”, a library of exemplar low energy/carbon homes, reinforces these three advice channels (see [section 4.6](#)).

HES provides householders with “one-stop shop” access to the financial (and other) support for home energy efficiency offered by the Scottish Government, which is detailed in [section 5](#) below.

In addition to advice on home energy improvements and on accessing Scottish Government funding programmes, HES also provides:



Figure 1: Additional services provided by HES

There are five regional HES advice centres together with a sixth advice centre offering an out of hours service. The five regional centres cover the areas shown in figure 2 below. This localised approach means that the advice provided to householders can be better tailored to reflect local circumstances (eg housing types, the installer base, the support available from local authorities and other local organisations, etc). It also means that the advice centres can partner with others working in these areas to reach households through existing customer support networks. In addition, it enables easier access to local events, and outreach staff are available to visit households, where appropriate, in any part of Scotland.

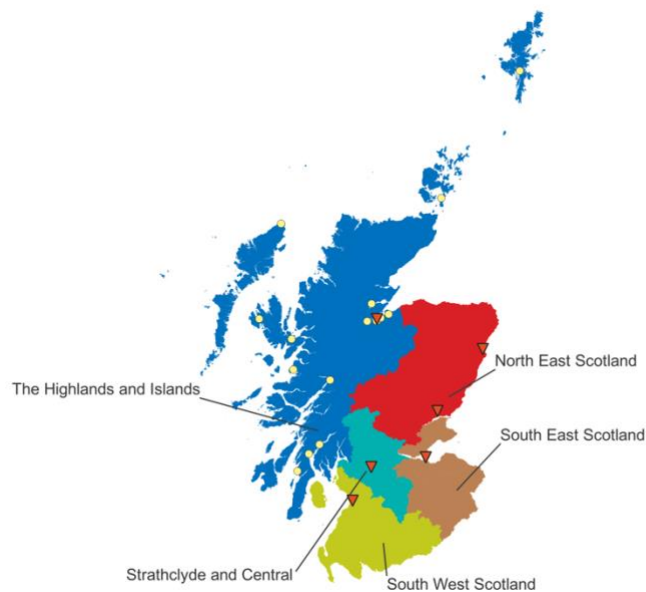


Figure 2: Map showing regional HES advice centres

Each year the network helps more than 130,000 customers in Scotland and even with these large volumes, average network promoter scores exceed 50 (excellent) and the network consistently exceeds its customer experience targets. The lifetime carbon saved by customers using the network in 2021/22 is estimated to be more than 496,000 tonnes CO<sub>2</sub>. Total lifetime energy bill savings from the network since its inception are estimated to be well over a billion pounds.



Figure 3: HES network impact 2021/2

The 2021/22 evaluation of the service shows that 91% of customers recalled the advice provided over the phone or by email. Since receiving advice from a HES adviser 47% of customers had installed at least one energy efficiency, low carbon heat or renewable energy improvement and 38% of customers were planning to install at least one improvement in the next 12 months.

Of the measures installed, the top five that were attributed to HES advice in 2021/2 were air source heat pumps (86%), new boilers (65%), electric storage heater upgrades (58%), solar PV (56%) and loft insulation (51%).

57% of the total savings achieved by customers can be directly attributed to the advice provided by Home Energy Scotland resulting in an average lifetime saving of 4.2 tonnes CO<sub>2</sub> per

customer advised verbally. This equates to lifetime financial savings of £1,785 per customer advised verbally.

## 4.2. Home Energy Scotland personalised advice

The advice provided by HES advisors is based, not only on the information received from the householder, but also on other available information on the home and its energy use. HES advisors can access each household's EPC and talk through the recommendations. For those whose home does not yet have an EPC, an online 'Home Energy Check' has been developed which provides a rapid assessment of potential energy saving measures, with outputs similar to the EPC.

For households identified as potentially fuel poor, HES advisors will:

- **Refer to Department for Work and Pensions (DWP) for a benefit check home visit, or signpost to Citizens Advice Scotland (CAS) for benefit check support.** Between April 2009 and July 2021 HES helped to unlock a total estimated increase in income from benefits checks of more than £13 million.
- **Ensure the tariff they are on is the most efficient and effective for their needs.** For those who can manage switching themselves HES show householders where to access resources of partners (eg CAS) to see the range of tariffs and options available.
- **Help customers to access Warm Home Discount and refer customers for support** from local agencies (eg Care and Repair), local in-home energy advice and advocacy services and for money advice.
- **Help refer customers to energy credit voucher schemes where available.** During Covid-19 lockdowns, customers were also signposted to sources of other non-energy related support such as services supplying food parcels.



Figure 4: HES support for fuel poor households

Recognising the complex relationship between electric heating systems, metering and tariff arrangements, and the high level of fuel-poverty amongst this consumer group (43% of fuel-

poor households in Scotland use electricity as their main heating fuel), HES's electric heating champions provide specialist advice on electric heating systems and restricted meter tariffs. Energy Saving Trust produced a series of HES factsheets and provided training on electric heating, metering and tariff arrangements to other advice agencies including Citizens Advice Bureaux and CAS staff.

HES works with trusted partner organisations including health and social care organisations, local authorities, charities, food banks etc to build referral pathways for vulnerable householders. This helps to ensure that those most in need of help can access the support available from HES. While most householders contact HES through the well-publicised freephone number, online or through outreach activity, a substantial number (around 10,000 in 2021/22) are referred from other organisations who have access to and are trusted by vulnerable householders. During the 2021/22 financial year around 8% of all the unique households advised by HES were referred from trusted partner organisations. These organisations can make seamless referrals using an online portal which works in real time to put the householder's details directly into HES's database for advisors to follow up.

### **4.3. In-home expert advice**

For those who need additional in-depth support, specialist advice is also available through HES. It is available for people considering more complex home energy improvements and for very vulnerable households. It is also available to some private landlords (see [section 4.4](#)). In response to the Covid-19 outbreak, HES developed tools and methods for delivering the same in-depth advice remotely that was previously only available through an in-person home visit, and continues to deliver in-depth remote advice where possible, while offering in-person advice to customers for whom it is most appropriate. This change has allowed HES to increase the delivery of specialist advice to a larger number of customers in a resource-efficient way and respond to sharply rising demand for specialist advice without diminishing the quality or impact of the service.

#### **4.3.1. In home affordable warmth advice and advocacy for vulnerable households**

Following a successful pilot in 2017/19, HES changed the in-home support it offers to householders, with the introduction of Energycarers. Energycarers are specialist energy advisors who can provide an enhanced level of handholding, advocacy and support, delivered through home visits or remotely, for very vulnerable households (in private rented or owner-occupied homes) to help them achieve affordable warmth. The service is available to those with issues relating to physical or mental health, disability, family circumstances, low income and expensive heating. Often these audiences are more likely to be in fuel poverty and are less able to make full use of the freephone service and website or email advice.

As part of enabling affordable warmth for these households, support includes helping them to deal with structural dampness, condensation and disrepair, including seeking funding for repair and improvement work, advice and support on dealing with fuel supplier issues and contacting



and engaging other support agencies. In 2020/21 the Scottish Government Fuel Poverty team asked HES to make referrals to the prepayment credit scheme managed by Fuel Bank Foundation and in the same timeframe several other prepayment meter credit voucher schemes became available. HES advisors and Energycarers were able to identify and refer households who were at risk of self-disconnection to these schemes. This resulted in high volumes of calls from individuals and referrals to HES from other advice and support organisation for this 'crisis' support. HES was able to signpost householders and organisations to many other national and local sources of support for vulnerable households during the Covid-19 lockdowns. In 2021/2 there were 2,895 referrals from HES for prepayment meter vouchers.

HES works with local energy advice organisations, rather than displacing them, so it will always look to access support through local partner organisations before arranging a home visit. If no partner can help and a visit would be helpful, an Energycarer visits the householder, sometimes with a relative or carer present, to look at how their home uses energy and see what could be improved.

#### **4.3.2. In-home specialist advice for those interested in more complex measures**

Individual owner occupiers in Scotland still encounter significant market barriers when considering the installation of low and zero emission heating systems, other domestic renewables systems, energy storage and solid wall insulation. Some barriers are financial, but others involve a lack of awareness and understanding of the options and support that is available due to its complexity and variety. This is further impacted by limited understanding of and lack of confidence in the technologies and supply chains.

The HES specialist advice service supplies hand-holding support to help clients navigate this complex landscape. The service includes home visits and surveys by specialist advisors, or remote advice and assessment where more tailored advice is provided on suitable low and zero emission heating and other domestic renewables, energy storage systems and solid wall insulation options. Advisers also provide information on any financial support available, including Scottish Government loans and grants, guidance on dealing with suppliers, planning issues etc, together with "aftercare" such as advice to the client on how to use their new heating system effectively.

To ensure that clients receive a high-quality service with a "whole house" approach, specialist advisors have specific training for the energy efficiency assessment of properties, home renewables and solutions for traditional and hard to treat properties.

The specialist advice service has established itself as a key part of the domestic low and zero emissions heating, renewables and solid wall insulation infrastructure in Scotland, and in recent years has had a particular focus on low and zero emission heating systems in off-gas-grid properties. Evaluation evidence shows that, where HES provides specialist in-home advice on more complex measures such as low and zero emission heating and other domestic renewables, energy storage systems and solid wall insulation, around 90% of customers who received this support and acted attributed that action, at least in part, to the support they received.

In 2021/22, the specialist advice service provided advice to 5,817 customers, of these:

- 1,099 (19%) were provided with a home visit
- 4,211 (72%) were provided with remote advice
- 507 (9%) received both

Customers supported by the advice service in 2021/22 will deliver total attributed lifetime savings of 112,000tCO<sub>2</sub> and lifetime financial benefits of £72.9 million. The financial benefits comprise fuel bill savings of £34.5 million and Smart Export Guarantee (SEG) and Renewable Heat Incentive (RHI) payments of £38.5 million.

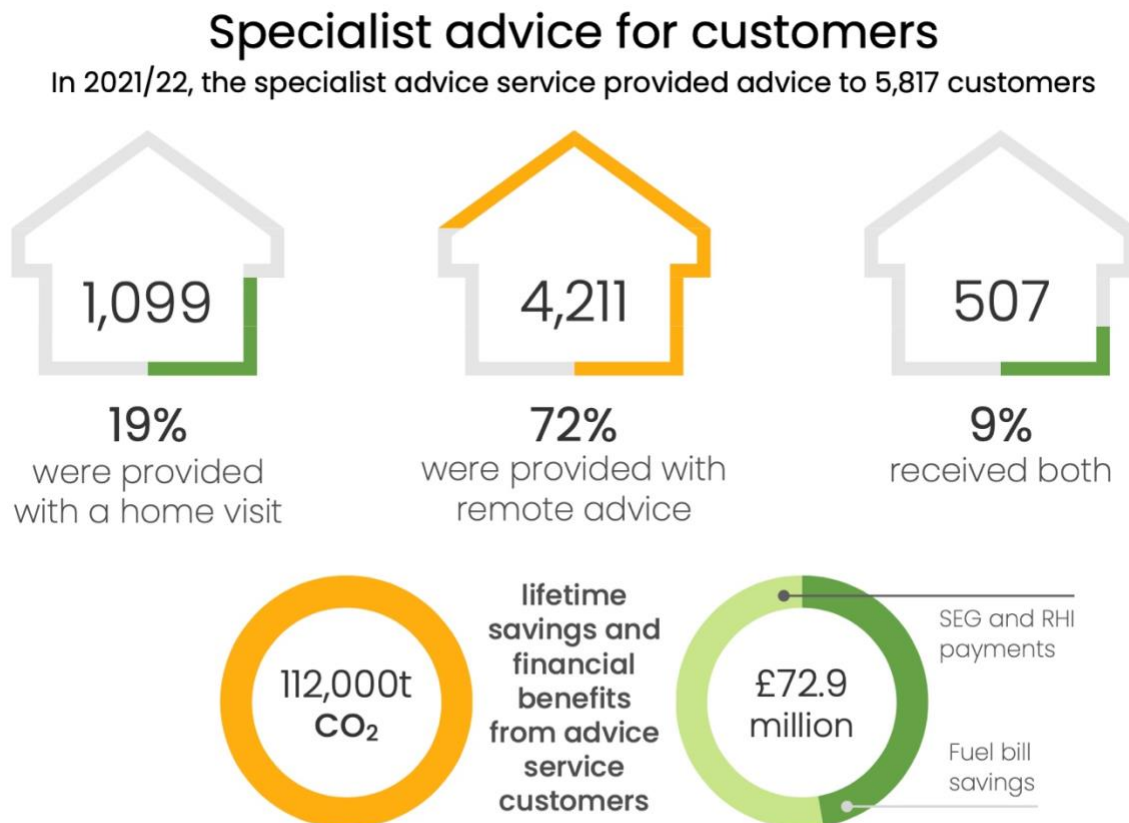


Figure 5: Impact of HES specialist advice for customers

#### 4.3.3. Advice through digital channels

The HES website<sup>23</sup> is a key resource for large numbers of Scottish householders looking for help to make their home more efficient and cheaper to heat, with around 3,000 users per day. It covers all of Energy Saving Trust's work in Scotland for the Scottish Government and includes a

<sup>23</sup> See: <https://www.homeenergyscotland.org/>

funding finder and several popular online tools and calculators which help show users how to live more sustainably and how to cut their energy bills, as well as signposting them to help with making their home more efficient and cheaper to heat. The site also acts as an important driver for traffic to the HES advice centre network and is also used to reinforce the advice provided by advisors to customers.

Householders in Scotland can complete an online Home Energy Check to get a tailored report on the energy efficiency measures appropriate for their home, check the funding finder for financial support available for these measures and then easily contact HES digitally to ask questions or seek further information. HES's Facebook<sup>24</sup>, Instagram<sup>25</sup>, YouTube<sup>26</sup> and Twitter<sup>27</sup> channels actively promote energy efficiency and affordable warmth to householders and stakeholders in Scotland, supported by Energy Saving Trust blogs<sup>28</sup> on emerging technologies, myth-busting, news on funding and other sustainability topics.

Householders are also able to access several online renewables tools and resources, including:

- **Renewables Installer Finder Scotland**<sup>29</sup> – (c. 100 users per day) allows potential purchasers of home renewables systems to search for and view information about accredited installers to inform their purchasing decisions and share information about installers with other householders via a review system.
- **Home Renewables Selector**<sup>30</sup> – (c. 100 users per day) this tool helps customers in Scotland to find out what low and zero emissions heating and other domestic renewables might be suitable for their home (as well as information about those technologies) and provides fuel bill (including payments from funding schemes such as RHI and SEG) and carbon saving estimates based on the characteristics of their property. Users are also able to download a report summarising their results and call HES to talk through their results with a specialist renewables advisor, should they wish. This tool was particularly helpful for customers during Covid-19 lockdown restrictions when visits were not available.
- **Green Homes Network**<sup>31</sup> (c. 30 users per day) and **Green Network for Businesses**<sup>32</sup> (c. five users per day) (see section 4.6) – a searchable library of case studies of exemplar homes and businesses (including community-owned buildings) to help encourage action by customers of HES and Business Energy Scotland. Customers can request visits to example sites near them and/or contact them to ask questions.

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<sup>24</sup> See: <https://www.facebook.com/HomeEnergyScotland/>

<sup>25</sup> See: <https://www.instagram.com/homeenergyscot/>

<sup>26</sup> See: <https://www.youtube.com/c/HomeEnergyScotland>

<sup>27</sup> See: <https://twitter.com/HomeEnergyScot>

<sup>28</sup> See: <https://energysavingtrust.org.uk/blog/>

<sup>29</sup> See: <https://energysavingtrust.org.uk/tool/renewables-installer-finder/>

<sup>30</sup> See: <https://energysavingtrust.org.uk/tool/home-renewables-selector/>

<sup>31</sup> See: <https://energysavingtrust.org.uk/tool/green-homes-network/>

<sup>32</sup> See: <https://businessenergyscotland.org/casestudy/green-network-businesses-tool/>



Figure 6: Digital channel reach

#### 4.4. Specialist advice for private landlords

The private rented sector contains some of the least energy efficient housing in Scotland. It has traditionally been a difficult sector in which to promote energy efficiency because of the ‘split incentive problem’; the landlord must pay to improve the energy efficiency of the property but most of the resultant savings will benefit their tenants. It is for this reason that there have been several Scottish Government and UK programmes providing financial support or tax allowances to private sector landlords. This is also the reason the Scottish Government is planning to introduce regulations for minimum energy efficiency standards in 2025. These will require all private rented sector properties to reach a minimum standard equivalent to EPC C, where technically feasible and cost effective, with a backstop of 2028.

In addition to these structural issues there are several other relevant factors. Many private landlords operate on a small scale with limited investment funds and are often not aware of any financial and other support available to them to help with improving their properties. Covid-19 has also put significant financial pressure on landlords, who may no longer have the same level of funds to invest in their property and tenants who may be struggling to pay their rent. Whilst landlords may have EPCs for their properties they may not properly understand the range of improvement options suitable for the dwelling or how to access the relevant supply chain. This is particularly the case for landlords who have solid wall or other hard to treat properties where solutions can be wide-ranging, complex, disruptive and costly.

To meet these needs, Energy Saving Trust provides specific advice, information and support to private sector landlords through the HES network, reproducing for landlords the simplicity and accessibility of the “one stop shop” approach the network offers to householders. This is complemented by a more intensive service of either home visits by specialist advisors to interested landlords’ properties or specialist remote advice where a visit is not required. Specialist landlord advisors can also provide advice and support to landlords interested in applying for funding from the Private Rented Sector Landlord loan (see [section 5.3](#)). To ensure

that landlords receive a high-quality service with a “whole house” approach, the specialist landlord advisors, like the specialist renewables advisors, have specific training for the energy efficiency assessment of properties, home renewables and insulation solutions for traditional and hard to treat properties.

In 2021/22, the specialist advice service for private landlords provided advice to 615 customers covering 855 privately rented properties.

- 240 (28%) properties were provided with a home visit
- 615 (72%) properties were provided with remote advice
- 50% of these properties were in EPC bands E, F or G at the time of assessment

Customers supported by the advice service for private landlords in 2021/22 will deliver total attributed lifetime savings of 4,400tCO<sub>2</sub> and lifetime financial benefits of £2.7 million.

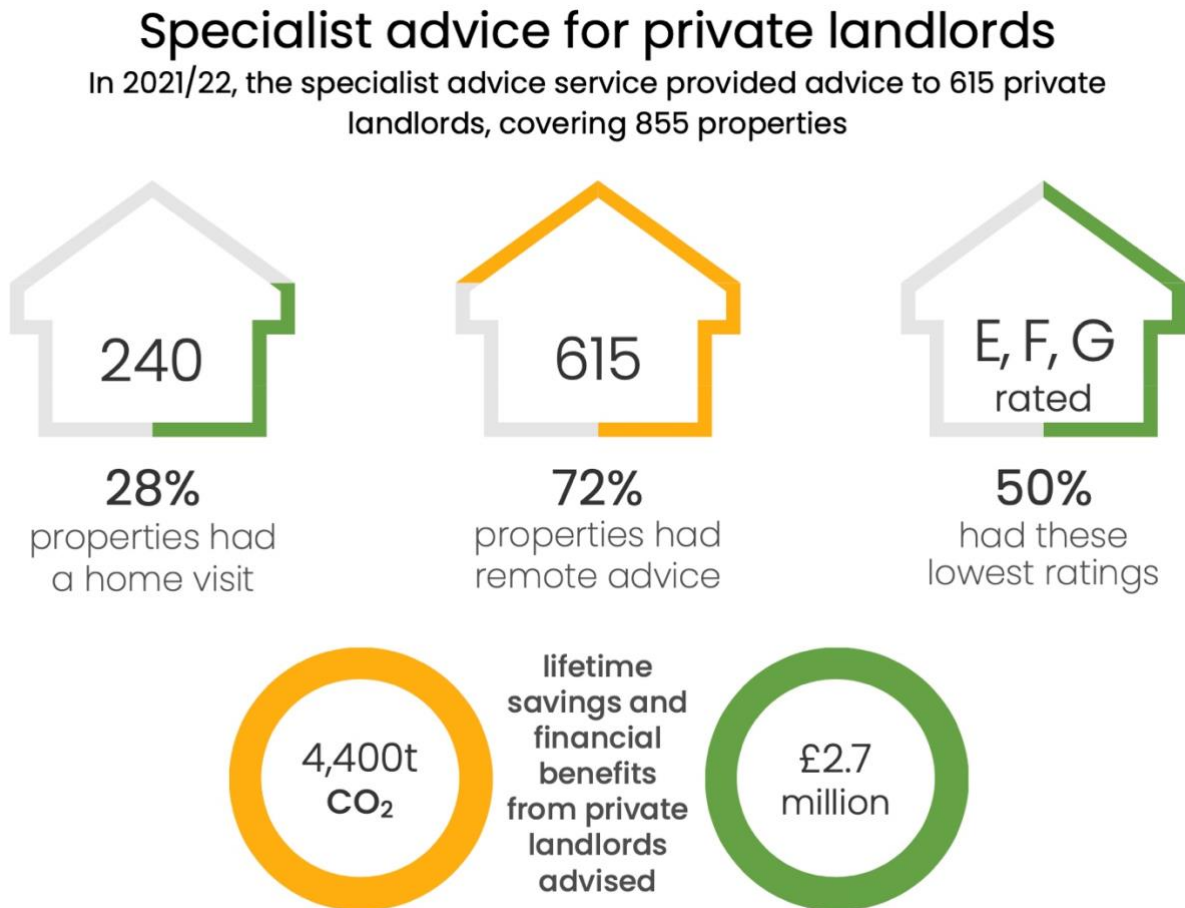


Figure 7: Impact of specialist advice for private landlords

#### 4.5. Business Energy Scotland

Free and impartial advice and support is currently available to Scottish SMEs to help improve energy efficiency and decarbonise heating in their premises through Business Energy Scotland

(BES). BES launched in April 2022, building on experience gained from the preceding business support programmes of Energy Efficiency Business Support Service (EEBSS) and Resource Efficient Scotland.

As well as providing training and online resources to support small and medium sized businesses as they transition to net zero, BES provides in-depth, one-to-one advice and support to help businesses identify and implement no- and low-regret technologies to realise the benefits of carbon and cost savings. As the BES programme is now managed by Energy Saving Trust, there will be increased opportunities for synergies with other areas of Energy Saving Trust activity, particularly HES advice, HES loans and cashback, green networks, CARES and the Green Heat Installer Engagement Programme. This coordinated and integrated provision of multisector support by Energy Saving Trust will ensure advice and support can be delivered at scale and with increased efficiency to generate the biggest impact.<sup>33</sup>

#### **4.6. The Green Homes Network and the Green Network for Businesses**

Energy Saving Trust manages and promotes networks of exemplar homes and businesses to help encourage action by customers of HES and BES.

Energy Saving Trust has developed networks of more than 600 exemplar low and zero-carbon businesses, homes and social housing projects. Interested members of the public can make appointments to visit the properties of Green Network members or speak to the members themselves. In addition, the homeowner or a designated business contact will also respond to email or phone queries about the improvements they have installed if these channels are preferred. Properties are locatable and bookable via interactive online libraries which also provide access to a brief case study of each property; video case studies have been produced for key properties.

The networks are an important resource to promote low and zero carbon technologies, energy efficiency measures and resource efficiency improvements to homeowners and businesses. They allow property and business owners to show those interested in making improvements how they work in practice and to share their experience of installation and operation, increasing the likelihood that the visitor will install such improvements themselves. They are a useful tool for HES, including the in-home renewables and energy efficiency specialists because they allow the experience of installing and living with energy efficiency and renewable improvements to be shared.

The networks are well-used: in 2021/22, 15,000 views of online case studies were made by more than 8,000 unique visitors and there were around 650 engagements with members by service users through visits, phone calls or events. The annual evaluation shows that more than a quarter of specialist advice customers interact with the green homes network and the evaluation of the green network for business (GNB) shows high impact with 74% of organisations interacting with a business network member subsequently acting, with 61% of those attributing this action at least in part to the interaction with the GNB.

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<sup>33</sup> See: <https://businessenergyscotland.org/case-studies/>

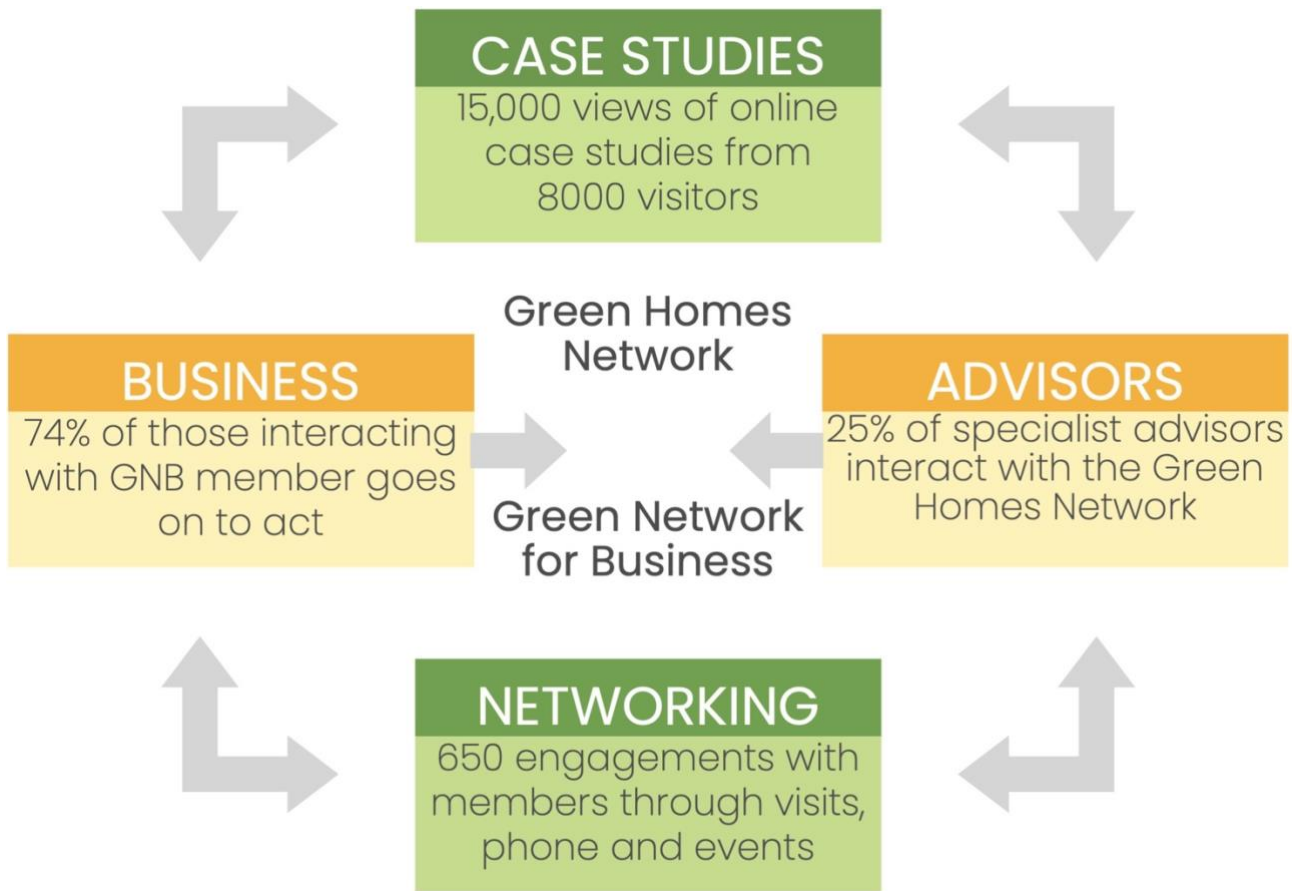


Figure 8: Reach of the Green Homes Network and Green Network for Business

## 5. Financial support for energy efficiency in Scotland



The Scottish Government funds a range of financial support schemes for owner occupiers, tenants, private landlords and small and medium sized businesses (SMEs) in Scotland. These are:

- 5.1 [Warmer Homes Scotland: Scotland's national fuel poverty programme](#)
- 5.2 [Home Energy Scotland Grant and Loan Scheme](#)
- 5.3 [Private Rented Sector Landlord Loans](#)
- 5.4 [Area Based Schemes](#)
- 5.5 [SME Loans](#)
- 5.6 [District Heating Loan Fund](#)

Each programme is described briefly below with additional detail on the home energy programmes in sections 5.1–5.4 available in [Appendix A](#). Scotland's national energy efficiency advice service, Home Energy Scotland (HES), provides customers with "one-stop shop"



information about, and access to, these schemes. This ensures that, where eligible, customers can be referred to the most appropriate programme, specific to their personal circumstances.

Each programme is designed to work with other energy efficiency programmes by combining funding with other schemes, such as the Energy Company Obligation (ECO) scheme. This helps maximise the opportunities available to households and local authorities and makes it possible to build larger funding pots to help deliver larger and/or more expensive projects.

It is important to note that Energy Saving Trust does not manage the Scottish Government's Area Based Schemes. However, in order to give the whole picture, this report briefly describes these schemes alongside Energy Saving Trust managed programmes.

## 5.1. Warmer Homes Scotland

Warmer Homes Scotland<sup>34</sup> is Scotland's national fuel poverty programme. It was opened to applications in September 2015 and has helped more than 30,000 households since its inception. It is available to households living in or at risk of fuel poverty in the private sector (tenants or owner-occupiers). The eligibility criteria were revised in 2022 to allow more households to access the scheme:

- in February 2022, the threshold SAP rating was changed;
- in August, a 'fabric only' stream of funding was introduced, with less restrictive benefits criteria; and
- also in August, the scheme was widened to offer new heating systems to people aged over 75 who have no central heating (no benefits requirement).



In 24 hours I had seven new radiators, a heat pump and a new boiler – all paid for by Warmer Homes Scotland. Everything worked out really well and I definitely think I chose the right system for the house. It has had a huge impact on my wellbeing as I was always getting so stressed with my older heaters and the high bills. I have less to worry about the bills now, and I am now warm and comfortable.

**Kathleen Harrison**

Warmer Homes Scotland customer

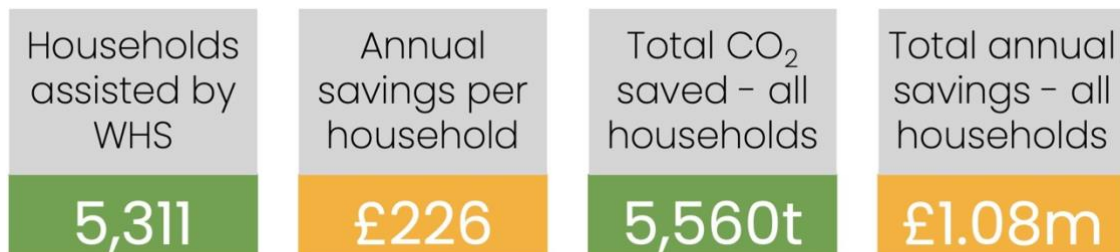
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<sup>34</sup> See: <https://www.homeenergyscotland.org/funding/warmer-homes-scotland/>

The programme is delivered by Warmworks Scotland which was set up to deliver the Warmer Homes Scotland programme and is a joint venture partnership between Energy Saving Trust, Everwarm and Changeworks. The current scheme is set to expire in September 2023, with a successor scheme under procurement and due to start in October 2023.

The programme offers fabric measures, such as insulation, as well as heating measures including air-source heat pumps. It also offers renewable and microgeneration measures to ensure that a wide range of heating options are available to off-gas households. As of September 2020, the programme does not provide support for the installation of oil or LPG boilers. In some circumstances, where certain more expensive measures like solid wall insulation are required, customers are required to make a financial contribution towards the cost of the measures, and there are interest free loans available to help with these contributions. The programme also seeks to use innovative measures and approaches where these will benefit its recipients. For example, Q-Bot technology (which uses robots to spray insulation under the floor) has been introduced as a programme measure for insulating under suspended floors.

Between 1 April 2021 and 31 March 2022 5,311 households received help from Warmer Homes Scotland. Each of these households saved an average of £226 per year off their energy bills, which equates to total annual cost savings of around £1.08 million and saving more than 5,560 tonnes CO<sub>2</sub>.<sup>35</sup>



### Warmer Homes Scotland

Figure 9: Warmer Homes Scotland impact

Energy Saving Trust has produced an online assessment tool for customers who may be eligible for help through Warmer Homes Scotland. This tool allows customers to enter their details to be checked by an advisor before completion of the referral.

## 5.2. Home Energy Scotland Grant and Loan Scheme

In December 2022, the HES Loan Scheme was replaced by the HES Grant and Loan Scheme<sup>36</sup>. This scheme provides a grant which can be taken on its own or alongside an interest free HES Loan. The grant replaces the cashback funding, which was previously available under the HES

<sup>35</sup> See: <https://www.warmworks.co.uk/wp-content/uploads/2022/06/Warmer-Homes-Scotland-2122-Annual-Report.pdf>

<sup>36</sup> See: <https://www.homeenergyscotland.org/funding/grants-loans/overview/>

Loan Scheme, with a key difference from the previous scheme being that householders can access HES grant funding without taking out a HES Loan.

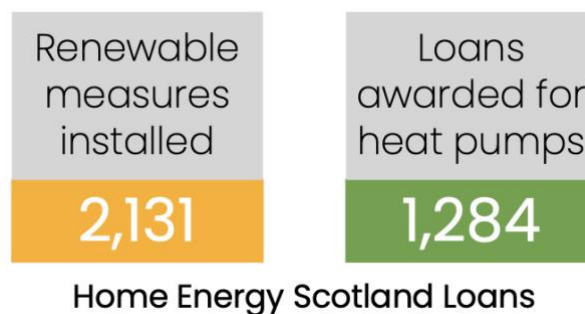
The HES Grant and Loan Scheme is available to householders who own and occupy their property. The Scheme includes a rural uplift to reflect the increased costs associated with installations in rural areas<sup>37</sup>.

The new scheme also introduces two support funding packages to drive uptake of low and zero emissions heating by incentivising complementary measures that wouldn't attract grant funding as stand-alone measures. For example, if a householder installs a heat pump, solar PV and battery storage, grant funding would be available for all three; whereas solar PV and battery storage would not attract grant funding if installed without the heat pump.

Grant funding has been applied to measures which have the highest impact on carbon emissions. Grant funding is available for solid wall insulation, flat roof or room-in-roof insulation, cavity wall insulation, heat pumps and (only where a heat pump would not be suitable for the property in question) for biomass boilers or stoves. Grant funding is also available for electric heating, solar PV and energy storage systems if installed as part of a package of measures.

Funding for energy efficiency is up to 75% of the combined cost of improvements up to the maximum grant amount of £7,500 (£9,000 with rural uplift). Grant funding for heat pumps is up to £7,500 (£9,000 with rural uplift).

Evaluation of the renewables loans show that they are highly influential and cost-effective in encouraging the installation of renewables systems; 93% of funded actions were at least partly attributed to the loan and 54% would not have happened at all without the loan. As well as the fuel bill savings and renewable heat incentive (RHI) payments generated by the loan there are further benefits: 40% of all loan recipients evaluated said the loan had freed money which was then spent on other renewable energy or energy efficiency technologies, increasing their total investment in sustainable energy. Importantly, those who have received advice from a HES specialist renewables advisor have reported that the loan is as important a driver to action as was the RHI scheme when still open to new applicants.



<sup>37</sup> The rural uplift is available to households in Remote Rural and Island areas, as well as off-gas Accessible Rural areas, as defined by the Urban Rural Classification (see: <https://www.gov.scot/publications/scottish-government-urban-rural-classification-2020/pages/2/>).

Figure 10: HES loans impact

In 2021/22 HES Loans supported households to install 2,131 renewable measures. The number of heat pumps for which funding was committed through the HES Loan scheme increased by two thirds, from 762 systems in 2020/21 to 1,284 systems in 2021/22.



There was no central heating in the house and the costs of the water heating system were horrendously high. An advisor from Home Energy Scotland recommended an air source heat pump. Though energy prices went up after the installation, heating the house is still costing me less now since the heat pump uses fewer units of electricity to provide the same amount of heating.

**Elizabeth**

Home Energy Scotland customer

### 5.3. Private Rented Sector Landlord Loan

Interest free loan funding of up to £100,000 (£35,000 per property) is available to private sector landlords registered in Scotland with five or fewer properties through the Private Rented Sector Landlord Loan<sup>38</sup>. Landlords with more than five properties in their portfolio can borrow a maximum of £250,000 and will be subject to interest at a rate of 3.5% APR. These loans help overcome a critical barrier to the installation of energy efficiency improvements, renewables and energy storage – the upfront capital cost. For many householders and landlords, the upfront costs of purchasing and installing these improvements continues to be the main barrier to uptake and the interest-free loan is designed to help overcome this barrier.

The loans cover a range of energy efficiency improvements, including up to £17,500 for home renewables systems or connections to an approved district heating scheme powered by a renewable energy source. There is no grant element to the Private Rented Sector Landlord Loan.

<sup>38</sup> See: <https://www.homeenergyscotland.org/funding/private-landlord-loans/>

The Private Rented Sector Landlord Loan provided funding for 172 measures in 93 properties over the 2021/22 financial year.

#### **5.4. Area Based Schemes**

The Scottish Government funds local authorities to develop and deliver energy efficiency programmes (mainly solid wall insulation) in areas with high levels of fuel poverty. This funding is combined with ECO funding, owners' contributions<sup>39</sup> and funding from registered social landlords who may choose to insulate their homes at the same time. The schemes are designed and delivered by councils with local authority delivery partners. They target fuel-poor areas to provide energy efficiency measures to many Scottish homes while delivering emission savings and helping to reduce fuel poverty.

The focus is primarily on insulation measures for 'hard to treat' properties but includes zero/low carbon heating and microgeneration measures as part of a whole house approach. HES refers advice customers to Area Based Schemes where appropriate. Since 2013, the programme has supported over 104,000 households to improve the warmth and energy efficiency of their homes and has been particularly effective in enabling improvements to mixed tenure blocks of flats and terraced properties.

#### **5.5. SME Loan**

The SME loan<sup>40</sup> is available to Scottish businesses that fall within the EU definition of a small and medium-sized business (SME), including not-for-profit organisations and charities. Interest free loan funding of up to £100,000 per business is available to fund the installation of a range of energy efficient and renewable systems, including heating, ventilation and air conditioning upgrades; renewable heat technologies, such as heat pumps; improving insulation, draught-proofing, double or secondary glazing; installing LED lighting; and installing solar panels, wind turbines and wood-burning stoves.

Some energy efficiency and renewable improvements attract a 75% grant. Grants are based on total costs and capped at £20,000 for energy efficiency measures and £10,000 for renewables. This loan helps Scottish businesses overcome the financial barrier that comes with installing energy efficiency improvements and renewable systems; improvements and systems that will help businesses reduce their energy usage, fuel costs and carbon emissions. The scheme has provided Scottish businesses with over £26 million in loans for more than 950 projects.

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<sup>39</sup> Note: Interest free loans are available to help with these contributions.

<sup>40</sup> See: <https://businessenergyscotland.org/smelan/>



The Day-Today Local Myre Store is a convenience store in the Bellsmyre area of Dumbarton. With support from advisors and an SME Loan, store owner Babar Latif was able to install a new heat pump and energy-efficient fridges.

Total energy savings are estimated at over £3,000 (6.6 tonnes CO<sub>2</sub>) a year, which will payback the total capital expenditure in 8.3 years. This is a triple win for Babar as the store is now heated at low cost and with low carbon emissions and can be heated comfortably throughout the year. "I'm very satisfied with the support received, it was quick and effective to get things organised

## 5.6. District Heating Loan Fund

The Scottish Government's District Heating Loan Fund (DHLF)<sup>41</sup> is designed to promote expansion of district heating and help address the financial and technical barriers to district heating projects, as commercial borrowing can be extremely expensive and difficult to obtain. By providing capital support for heat networks, the DHLF has funded many social housing projects where fuel bills for householders have been significantly reduced, with the additional benefit of providing warmer homes with the resultant health benefits for householders.

Loans of more than £1 million are available as low interest unsecured loans with repayment terms of either 10 or 15 years. Loans for larger projects above £500,000 will be considered on a case-by-case basis. Loans of over £1 million could involve co-investment with a potential range of funding partners. A typical interest rate of 3.5% applies for low-risk projects (dependent upon credit status). The scheme is open to local authorities, registered social landlords, SMEs and energy services companies with fewer than 250 employees.

Since 2011, £20 million has been lent to 53 different projects across Scotland. These projects have generated benefits such as providing affordable warmth to householders, creating local employment, reducing costs for businesses and reducing greenhouse gas emissions.

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<sup>41</sup> See: <https://energysavingtrust.org.uk/programme/district-heating-loan-fund>

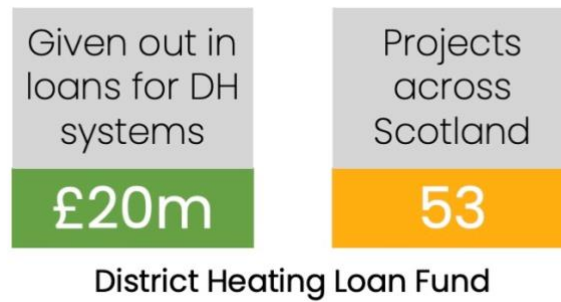


Figure 11: District Heating Loan Fund impact

The DHLF is part of a wider package put in place by the Scottish Government to support the development and rollout of zero emission heat networks across Scotland. This wider support package includes the £300 million *Scotland's Heat Network Fund*, which launched in February 2022. It offers long-term support to enable the delivery of heat networks by making capital grant funding available to public and private sector organisations. It provides funding for new zero-emission heat networks, including communal heating systems, the expansion of existing heat networks and the decarbonisation of existing fossil-fuelled heat networks.

## 6. Programmes designed to improve delivery



Neist Point, Isle of Skye. Photo credit: Helen Thompson

### 6.1. Green Heat Installer Engagement Programme

Support for the downstream supply chain<sup>42</sup> in Scotland has been available since 2013, when Energy Saving Trust started to deliver a Scottish Government programme that supports small and medium-sized businesses (SMEs) and local suppliers to maximise their share of spend from Scottish Government programmes, the Energy Company Obligation (ECO), the Renewable Heat Incentive (RHI), and other large-scale sustainable energy investment programmes.

The Scottish Government-funded Green Heat Installer Engagement Programme<sup>43</sup> provides assistance and support to businesses in Scotland to help them to participate fully and effectively in the emerging green heat sector for low and zero emissions heating, energy efficiency and microgeneration measures and installations. The programme also seeks to raise

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<sup>42</sup> i.e. those who are involved in the process of installing measures, including installers, designers, assessors and architects. The programme also engages with merchants and distributors as they act as a channel for engaging with the wider industry.

<sup>43</sup> Formerly the Sustainable Energy Supply Chain Programme.



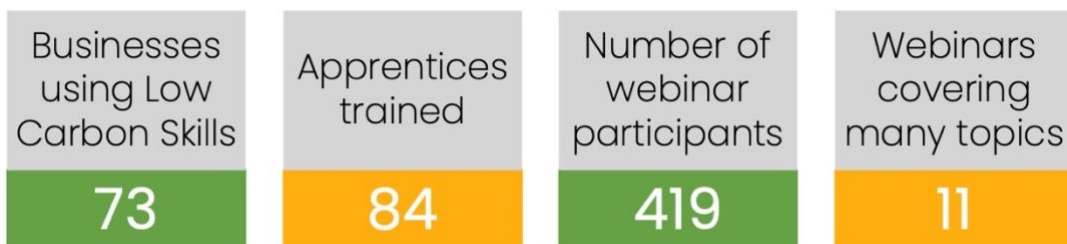
standards across the sector and ensure householders and business can access suppliers regardless of their location.

Scottish Government delivery programmes, together with ECO and the Smart Export Guarantee (SEG), will continue to drive a large amount of spending on energy efficient, low and zero emissions heating and other domestic renewable technologies in Scotland over the next few years. Over the course of the current parliament, the Scottish Government will make available £1.8 billion for heat and energy efficiency projects across Scotland. This means that there are significant opportunities for Scottish businesses, particularly SMEs, to benefit by becoming installers, surveyors, assessors or suppliers under these initiatives. The Scottish Energy Strategy emphasises the economic benefits of sustainable energy investment and of these opportunities.

To ensure that the supply chain takes advantage of these opportunities and fulfils the Scottish Government’s ambitions, businesses within the supply chain will need to both expand and develop their services, which can also contribute significantly to the wider green recovery following the impacts of Covid-19. It is therefore important for Scottish businesses to understand the opportunities available to them and what they need to do to get involved in the associated supply chains.

Key achievements of this programme in the 2021/2022 financial year include:

- 73 businesses (represented by 84 apprentices) taking up the low carbon skills grant through their local college so they have a person within the company that can install heat pumps.
- Two case studies produced. One showing a female apprentice who has been trained on heat pumps and another with a business who has transitioned from fossil fuel boiler to heat pump installations.
- 11 webinars/workshops held between April 2021 and March 2022 on topics such as policy, skills and training, and technical information on heat pumps. These events in total had 419 attendees.



**Green Heat Installer Engagement**

Figure 12: Green Heat Installer Engagement impact

## **6.2. Support for local authorities and housing associations in maximising ECO and other funds**

Local authorities and housing associations play a vital role in delivering energy efficiency in the domestic housing sector, both as owners of approximately 25% of the housing stock and in their capacity as community leaders.

The Scottish Government funds Energy Saving Trust to work with local authorities and housing associations to help them take a strategic approach to sustainable energy and ensure that the sector takes full advantage of the opportunities provided by ECO, SEG, Scottish Government programmes and other funding initiatives. The requirements for the Energy Efficiency Standard for Social Housing (EESH) (see [section 3.1.2](#)) continue to drive demand from social housing providers for advice on funding support to help achieve the required targets across their housing stock. This programme 'unlocks' substantial amounts of funding. The funding levered in by local authorities and registered social landlords in 2021/22 was £3 million.

This work is delivered on the ground via a dedicated staff member, working through the HES network as appropriate.

## **6.3. Data tools and services to support policy and programme planning**

With funding from Scottish Government, Energy Saving Trust has developed highly sophisticated tools that allow Scottish Government and local authorities to analyse the energy efficiency of their housing stock and plan energy improvement strategies at all levels - from an individual home up to national, Scottish level. These tools are only available to Scottish local authorities and housing associations and are free of charge.

Energy Saving Trust maintains the Home Energy Efficiency Database (HEED). This acts as a central repository for data on energy efficiency measures from several sources, for example, historic energy company obligation work by fuel suppliers and government fuel poverty schemes. This data would otherwise remain fragmented in several incompatible systems and could not be accessed, analysed and used effectively.

In addition to the standard HEED reports, Energy Saving Trust also makes available HEED+, which brings in two other major sources of data to provide a more comprehensive view of the housing stock in a given area, these are data from EPCs and Home Energy Check data, as collected by HES.

HEED and HEED+ reports allow government, local authorities and other sustainable energy stakeholders to access and analyse this collated energy efficiency data at any level down to individual census sub-area. The data has many uses, informing policy development, assisting analysis and reporting, and supporting targeting of programmes, such as area-based schemes, resulting in enhanced uptake and cost effectiveness. Due to data protection restrictions on the use of EPC data, HEED+ can only be accessed by Scottish Government and local authority users.

Energy Saving Trust has also developed a sophisticated property-level housing stock database, Home Analytics<sup>44</sup>, which provides address-level data on the energy performance of Scotland’s homes. It has been designed for use by Scottish local authorities and housing associations to support the development, targeting and delivery of policies and programmes such as area-based schemes, EESSH and Local Heat and Energy Efficiency Strategies (LHEES). Home Analytics data contains elements from both HEED and HEED+ but is designed to provide a more comprehensive profile of the housing stock. It records what is known about dwellings but also provides data on every dwelling in Scotland by drawing on a wider variety of datasets, such as data on housing types, age, census and mapping data to model information that is not directly available for a given address.

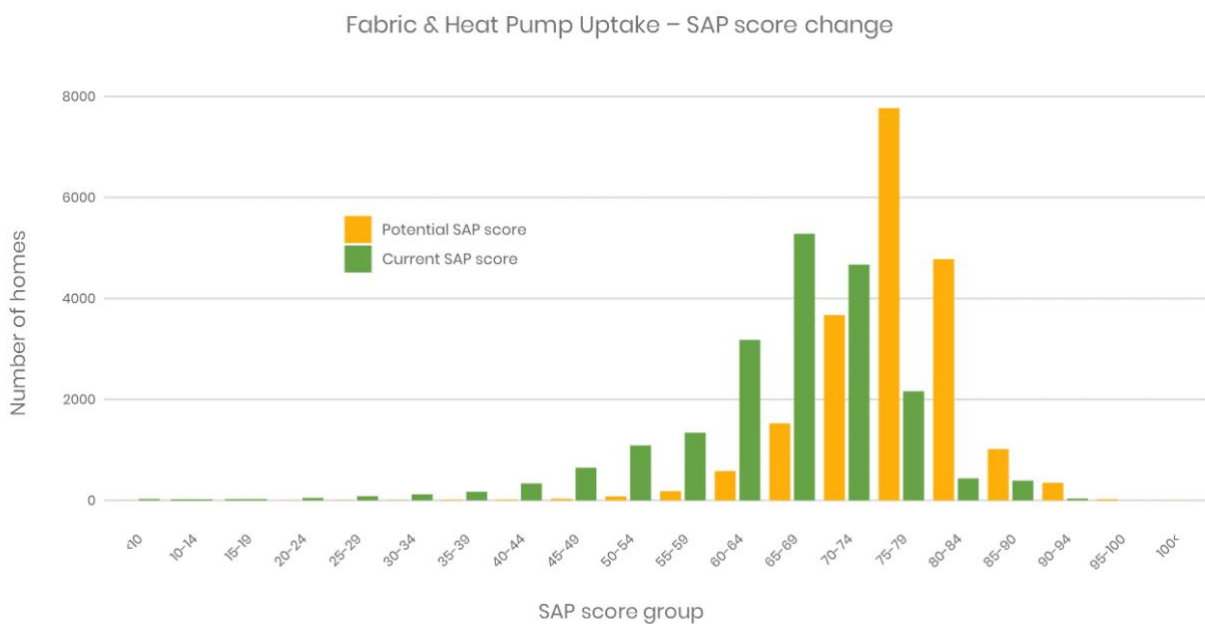


Figure 13: Potential SAP score increase for homes in Kirkaldy, calculated from fabric and heat pump installations proposed by PEAT modelling

Finally, and in response to user need, Energy Saving Trust with funding from the Scottish Government, has also developed the Portfolio Energy Analysis Tool (PEAT).<sup>45</sup> Using data from Home Analytics, PEAT allows the modelling of energy improvement strategies for groups of buildings: for example, to assess the impact of installing cavity wall insulation across a whole street – in terms of the homes’ bills, energy and carbon performance. PEAT can also present data on what measures are required to bring all the homes in an area to (for example) Energy Performance Certificate “C” Standard. This is a key tool to help local authorities and social housing providers plan energy efficiency programmes. PEAT is also used as part of the methodology the Scottish Government have developed for LHEES, which local authorities will use

<sup>44</sup> See: <https://energysavingtrust.org.uk/service/home-analytics/>

<sup>45</sup> See: <https://homeanalyticspeat.est.org.uk/About.aspx>. PEAT was developed by Solstice Associates on behalf of Energy Saving Trust.

to produce long term plans for heat decarbonisation and the deployment of energy efficiency measures.

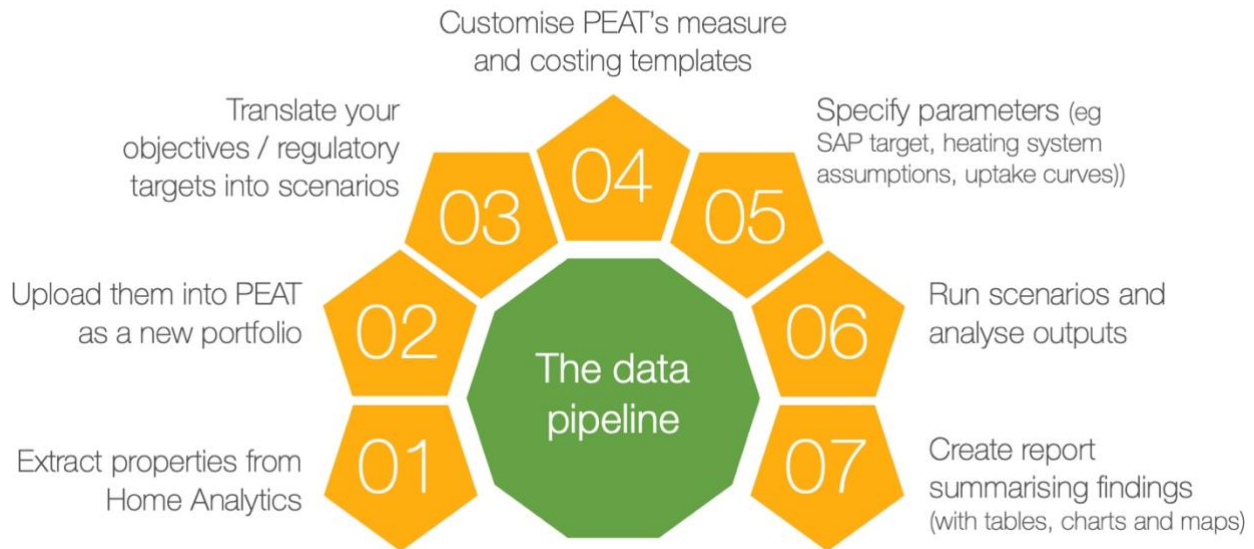


Figure 14: PEAT data pipeline

## 6.4. Energy Performance Certificate (EPC) register

Scotland's mandatory EPC scheme was introduced between 2006 and 2008 in response to a European Union (EU) directive requiring energy labelling of all buildings at point of sale or rental. The EPC regime in Scotland is delivered by many different stakeholders. These include Approved Organisations and their members, and Energy Assessors, who deliver EPC assessments. The Scottish Government is responsible for the legislation and regulation around the system while also playing a quality assurance role, regularly auditing the approved organisations and their assessors. Energy Saving Trust manages the EPC register<sup>46</sup>, a central database where every EPC is lodged. Energy Saving Trust uses EPC data in providing householder advice, planning and delivery work on behalf of the Scottish Government. 62.7% of Scottish homes now have an EPC and Scotland's EPC register therefore now constitutes a huge dataset on home energy performance. As mentioned above, the ability to integrate this data with other data sets plays an important role in ensuring programmes are targeted effectively.

<sup>46</sup> See: <https://www.scottishepcregister.org.uk/>

## Appendix A Administration and delivery of home energy programmes

### 1. Home Energy Scotland (HES) Advice Network

Legal Basis	Grant to Energy Saving Trust.
Management arrangement	Managed by Energy Saving Trust.
Installer / contractor procurement	Advice contractors procured by Energy Saving Trust for five areas 'lots'.
Quality Assurance	Energy Saving Trust quality monitors advice provision and carries out monthly customer satisfaction survey. Results reviewed monthly and areas of improvement identified and actioned.
Measures Available	Energy efficiency and renewables advice on measures and behaviours, including: <ul style="list-style-type: none"> <li>- Advice delivered in the home.</li> <li>- Referrals for financial support for measures, benefit checks, tariff checks and support with switching, referrals and signposting to local and national sources of support, such as money advice, energy suppliers' priority services registers.</li> <li>- Sustainable transport advice including active travel.</li> </ul>
Eligibility	Any household. Support also provided to communities, local authorities, housing associations, businesses.
Principles applied	Advice must be: <ul style="list-style-type: none"> <li>- impartial</li> <li>- expert</li> <li>- high quality</li> </ul> It must also present all options to customer to enable customer choice.
Relationship with ECO Funding	Advice on ECO provided.
Client Contribution	No cost to customers Freephone number free to call from mobiles and landlines. Online tools and support also all free
Also includes	Specialist advice for private landlords; specialist in home advice for renewables and complex energy efficiency measures Sustainable transport advice and signposts for support

	Water efficiency advice and water saving packs funded by Scottish Water Survey booking for Warmer Homes Scotland funded by Warmworks Advice talks on waste reduction funded by Zero Waste Scotland.
Find out more	<a href="https://www.homeenergyscotland.org/">https://www.homeenergyscotland.org/</a>

## 2. Warmer Homes Scotland<sup>47</sup>

Legal Basis	Delivered by Warmworks under contract from the Scottish Government
Management arrangement	Managed by Warmworks (Joint venture company formed by Everwarm, Energy Saving Trust and Changeworks).
Installer / contractor procurement	Installers procured by Warmworks for 16 area 'lots' – at least 2 installers per lot.
Quality Assurance	100% of jobs are inspected before payment released. Scottish Government contractor Pennington Choices audits Warmworks.
Measures Available	Package of energy efficiency, heating and micro-renewable measures determined by EPC survey. Private tenants cannot access measures their landlords are required to provide under the Repairing Standard.
Eligibility	Home must be: owner occupier or private sector tenant + SAP<=72 + be resident for six months (unless terminally ill) + council tax band A-F + floor size <230m2. Household must contain one of: <ul style="list-style-type: none"> <li>- over 75 + no working heating system</li> <li>- terminally ill (DS1500 or Benefits Assessment for Special Rules in Scotland (BASRiS) form)</li> <li>- over 16 and in receipt of a qualifying benefit (includes; Disability Living Allowance, Personal Independence Payment, Child Disability Payment, Adult Disability Payment, Attendance Allowance, Carers Allowance, Universal Credit, Pension Credit, Job Seekers Allowance, Child Tax Credit, Working Tax Credit, housing benefit, income support)</li> </ul>
Principles applied	Scheme emphasises a "fabric first" approach to measures installation.
Relationship with ECO Funding	ECO levered in by the managing agent and used to increase total number of households benefitting.

<sup>47</sup> At the date of this report, Warmer Homes Scotland is in the process of being re-tendered. Applications received up to 31 March 2023 were sent to Warmworks, who will continue to complete work until September 2023. From 1 April until 2 October 2023, HES will 'stack' applications and pass these to the new tender managing agent on 2 October 2023.

Client Contribution	Client contributions not normally required unless measures additional to the package are requested (eg additional radiators). WABS Loan available for any client contributions.
Also includes	SSEN/SGN funded enabling measures where these go beyond limit of Scottish Government funding provision.
Find out more	<a href="https://www.homeenergyscotland.org/funding/warmer-homes-scotland/">https://www.homeenergyscotland.org/funding/warmer-homes-scotland/</a>

### 3. Home Energy Scotland (HES) Grant and Loan

Legal Basis	Delivered by Energy Saving Trust under contract from Scottish Government
Management arrangement	Managed by Energy Saving Trust.
Installer / contractor procurement	Customer chooses their own contractor(s) For energy efficiency measures the contractor must be PAS2030 qualified or Green Deal certified and for renewable technology MCS accredited.
Quality Assurance	Applications via HES means people get advice on appropriate measures, which grants and loans are available and ongoing support and advice Loans calls are call quality monitored.
Measures Available	Maximum loan & grant amount depends on measure eg <ul style="list-style-type: none"> <li>- Heat pumps (either air source to water, ground source to water, water source to water or hybrid air source to water): £15,000 (£7,500 grant plus up to £7,500 loan) (£9,000 grant with rural uplift).</li> <li>- Solid wall insulation: up to £10,000: £7,500 grant plus up to £2,500 loan.</li> <li>- Solar photovoltaic or solar water heating systems: £6,000 loan; grant funding available when taken in packages with heat pump or high heat retention storage heaters.</li> <li>- Packages - in addition to the grants for heat pumps and energy efficiency improvements, two additional support funding packages are available to drive uptake of low and zero emission heating by incentivising householders to install complementary renewable improvements. (up to £10,000 total grant value (£11,500 with rural uplift)).</li> </ul> See full list at: <a href="https://www.energysavingtrust.org.uk/scotland/grants-loans/home-energy-scotland-loan-overview">https://www.energysavingtrust.org.uk/scotland/grants-loans/home-energy-scotland-loan-overview</a>
Eligibility	Owner occupiers based in Scotland.
Principles applied	Application through HES to ensure householder receives advice on appropriate measures and is informed of funding available.
Relationship with ECO Funding	Advice on ECO provided by HES

Client Contribution	Successful loans are subject to an administrative fee of 1.5%, up to a maximum of £150.
Find out more	<a href="https://www.homeenergyscotland.org/funding/grants-loans/">https://www.homeenergyscotland.org/funding/grants-loans/</a>

#### 4. Private Rented Sector Landlord Loans

Legal Basis	Delivered by Energy Saving Trust under contract from Scottish Government
Management arrangement	Managed by Energy Saving Trust.
Installer / contractor procurement	Landlord chooses their own contractor(s). It is recommended that for energy efficiency measures the contractor should be PAS2030 accredited and for renewable technology MCS accredited.
Quality Assurance	Applications via HES means landlords get advice on appropriate measures and ongoing support and advice. Loans calls are call quality monitored.
Measures Available	Maximum loan amount depends on measure eg <ul style="list-style-type: none"> <li>- external/internal wall insulation: £10,000</li> <li>- heating system (gas boilers): £5,000</li> <li>- glazing (only available for improving single glazing and not for replacing or improving existing double glazing): £4,500</li> </ul> See full list at: <a href="https://energysavingtrust.org.uk/scotland/grants-loans/private-rented-sector-landlord-loan-overview">https:// energysavingtrust.org.uk/scotland/grants-loans/private-rented-sector-landlord-loan-overview</a>
Eligibility	Registered private landlords, acting either as an individual or a business that owns privately rented properties, can apply. Funding is only available for businesses owned: <ul style="list-style-type: none"> <li>- by an individual in their capacity as a sole trader.</li> <li>- by some or all members of an incorporated association in trust for the association.</li> <li>- by: <ul style="list-style-type: none"> <li>- a limited company,</li> <li>- a limited liability partnership</li> <li>- a trust</li> <li>- a partnership</li> <li>- a registered society under the Co-operative and Community Benefit Societies Act 2014</li> <li>- a Scottish Charitable Incorporated Organisation</li> </ul> </li> <li>- in any other capacity which Energy Saving Trust or the Scottish Government considers to be a business.</li> </ul>
Principles applied	Application through HES to ensure landlord is informed of any grants and receives advice on the appropriateness of measures they are considering – and can also get follow up advice post installation.



	HES can also ensure landlord understands the flexibility they have to choose an installer.
Relationship with ECO Funding	Advice on ECO provided by HES.
Client Contribution	Successful loans are subject to an administrative fee of 1.5% of the total loan value, up to a maximum of £250. Applicants with five properties or fewer in their portfolio will not be subject to interest. Applicants with six or more properties in their portfolio will be subject to interest at a rate of 3.5% APR.
Find out more	<a href="https://www.homeenergyscotland.org/funding/private-landlord-loans/">https://www.homeenergyscotland.org/funding/private-landlord-loans/</a>

## 5. Area Based Schemes

Legal Basis	Allocation to each of Scotland's 32 local authorities.
Management arrangement	ABS are managed directly by local authorities or by their managing agents (eg Changeworks manages ABS for 7 local authorities).
Installer / contractor procurement	Installers are procured by local authorities or their managing agents. Scottish Government guidance states that ABS should be designed to support the local economy and use local installers where possible.
Quality Assurance	Local authorities set their own QA requirements with some additional checks by the Scottish Government. Scottish Government requires a QA statement, every scheme to have an independent clerk of works and to meet ECO standards. Some schemes check 100% of jobs.
Measures Available	Primarily ECO-eligible energy efficiency measures decided by the local authority with a focus on insulation (priorities are solid wall insulation and hard-to-treat cavity wall insulation). Doors and/or windows are only provided as a secondary measure. Councils can propose special projects that are more flexible and/or include heating, micro-generation and battery storage.
Eligibility	Areas with high fuel poverty, targeting the most in need first. Private sector properties only though coordination with Registered Social Landlords. Council tax bands A-C (+D where EPC E-G).
Principles applied	Priority is fabric first but also to ensure all properties reach an EPC rating of C or better by 2030. In some circumstances households can benefit from measures provided by ABS and through Warmer Homes Scotland. Grant-in-aid is typically not available for PRS landlords owning more than three properties (including their own home). Councils can use up to 20% of funding towards enabling and administrative costs. Households must be referred to HES if a contribution/loan is required and advice services should be equivalent to that provided by HES.

Relationship with ECO Funding	Councils are expected to maximise leverage of ECO financing to allow more properties to benefit and achieve more energy efficiency improvements.
Client Contribution	Client contribution may be required. Typical value of grant-in-aid is £7k-£8k, but higher levels are available to households in extreme fuel poverty and in remote rural/island areas (£14k-£16k). Interest free HES loans available and must be flagged.
Also includes	Behaviour change advice from HES on using heating systems effectively once insulation has been installed. General advice about care/ maintenance of installed measures should be offered to customers by all local authorities/managing agents.
Find out more	<a href="https://www.gov.scot/policies/home-energy-and-fuel-poverty/energy-saving-home-improvements/">https://www.gov.scot/policies/home-energy-and-fuel-poverty/energy-saving-home-improvements/</a> <a href="https://www.changeworks.org.uk/projects/energy-efficient-scotland-area-based-schemes">https://www.changeworks.org.uk/projects/energy-efficient-scotland-area-based-schemes</a>

## **About Energy Saving Trust**

Energy Saving Trust is an independent organisation dedicated to promoting energy efficiency, low carbon transport and sustainable energy use. We aim to address the climate emergency and deliver the wider benefits of clean energy as we transition to net zero.

We empower householders to make better choices, deliver transformative programmes for governments and support businesses with strategy, research and assurance – enabling everyone to play their part in building a sustainable future.

Energy Saving Trust was established by the UK government in 1992 to support householders to improve the energy efficiency of their homes. Following devolution in 1997, the Scottish Government began funding Energy Saving Trust directly as a delivery partner for work on home and community energy, and – more recently – transport.

The Scottish Government provides funding to Energy Saving Trust to deliver an extensive range of home energy programmes, which are the focus of this report. That is only part of the work we undertake together. Energy Saving Trust also manages programmes on behalf of the Scottish Government in community energy, district heating and sustainable transport. There are increasing linkages between our programmes covering homes, communities and transport. For example, the Home Energy Scotland advice network can support related policies such as those on sustainable transport and sustainable water use.

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