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Delivering a new energy future for Scotland's homes

Home energy programmes delivered by
Energy Saving Trust on behalf of
the Scottish Government

September 2020

1. INTRODUCTION

The Scottish Government recognises home energy efficiency as a National Infrastructure Priority and over recent years has spent considerably more in this area per head of population than other UK administrations. Energy Saving Trust is a key delivery partner for the Scottish Government in its energy efficiency programmes.

Over the last few years Energy Saving Trust has received an increasing number of enquiries about the home energy efficiency programmes it delivers on behalf of the Scottish Government. These are often from organisations who are seeking to influence policy in other parts of the UK. There has also been increasing interest from stakeholders in other parts of Europe and elsewhere keen to learn more about the Scottish experience of delivering home energy programmes.

This publication responds to this demand for information and is updated annually to reflect relevant programme developments over the course of each year. This is the report's first annual update.

The body of the report starts, at Section 2, with an overview of why the Scottish Government is prioritising home energy efficiency. Section 3 outlines Scotland's medium and long term policy objectives for energy efficient housing. Section 4 details the financial support made available to homeowners, tenants and landlords in Scotland to help them address energy efficiency. A distinctive element of the Scottish home energy policy programme is the emphasis put on advice to householders and Section 5 explains the Home Energy Scotland advice service. Section 6 focuses on programmes designed to improve the delivery of home energy efficiency by the supply chain, social landlords and local authorities. Appendix 1 is a detailed table summarising how each of Scotland's main government home energy programmes is administered and delivered (contractual arrangements, quality assurance, evaluation, etc.).

What do we mean by “home energy programmes?” This report discusses programmes that promote energy efficiency improvements in homes (insulation, efficient heating systems and efficient electrical appliances); renewable energy measures in homes; behavioural advice on energy and carbon saving. These programmes can also cover wider support to address fuel poverty: helping people get on the right energy tariff and access all the welfare benefits they are entitled to.



2. CONTEXT: WHY IS ENERGY EFFICIENCY A PRIORITY IN SCOTLAND?

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

The Scottish Government has stated that they are “determined to lead the world” in tackling climate change and end “Scotland’s contribution to climate change, definitively, within a generation”¹. Action on fuel poverty, which remains a significant issue in Scotland with 25%² households estimated to be in fuel poverty in 2018, is driven by the Scottish Government’s ambition to achieve a “fairer, socially just and sustainable Scotland” and this is also an area where the Scottish Government intends to be a world leader³.

Indeed, it was because of the scale of these two challenges – to eradicate fuel poverty and to mitigate climate change as well as a desire to grow the Scottish economy in an inclusive way, that the Scottish Government designated energy efficiency as a National Infrastructure Priority in 2015. They also did so because of the many benefits associated with energy efficiency. These are summarised by the Scottish Government as follows: “[energy efficiency] puts money in people’s pockets, delivers savings to the public sector to reinvest in frontline services, and improves the competitiveness of our businesses. Investing in energy efficiency will boost growth, with research showing a 10% improvement in the energy efficiency of all UK households leads to a sustained GDP expansion of around 0.16%”⁴.

The Scottish Government is keen to ensure that any action taken to reduce emissions is done in a way which is fair and that leaves no-one behind. To this end they have set up a Just Transition Commission. The role of the Commission is 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” and that will “understand and mitigate risks that could arise in relation to regional cohesion, equalities poverty (including fuel poverty), and a sustainable and inclusive labour market”⁵.

2.1 Energy Saving Trust

Energy Saving Trust is a key delivery partner for the Scottish Government in addressing energy efficiency. Energy Saving Trust was established by UK government in 1992 as a grant funded agency 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 - transport⁶.

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 is able to support related policies such as those on sustainable transport and sustainable water use.

¹ See: <https://www.gov.scot/policies/climate-change/>

² See: <https://www.gov.scot/publications/scottish-house-condition-survey-2018-key-findings/>

³ See: <https://www.gov.scot/publications/draft-fuel-poverty-scotland-2018/>

⁴ See: <https://www.gov.scot/publications/energy-efficient-scotland-route-map/>

⁵ See: <https://www.gov.scot/groups/just-transition-commission>

⁶ Some of Energy Saving Trust’s programmes for the Scottish Government are grant-funded under the terms of the Environmental Protection Act (1990). Other programmes are delivered for Scottish Government by Energy Saving Trust on the basis of commercial procurement.

3. HOME ENERGY EFFICIENCY PROGRAMMES IN SCOTLAND

3.1 GB wide programmes

Generally, energy efficiency policies in Scotland are set by the Scottish Government but some policies that impact on energy efficiency in Scottish homes are set by the UK Government at GB level, for example, the Renewable Heat Incentive (RHI), the smart meter roll out and the Energy Company Obligation (ECO)⁷. 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.

3.2 The Scottish policy framework for home energy efficiency

Scotland's overarching energy efficiency programme is Energy Efficient Scotland (EES) which was announced in response to the designation of energy efficiency as a National Infrastructure Priority. EES is a 20-year programme, which was formally launched in May 2018 with the publication of the EES route map, and aims to make "Scotland's existing buildings near zero carbon wherever feasible by 2050" in a way that is "economically sustainable". It has two main objectives:

- ✔ To remove poor energy efficiency as a driver of fuel poverty.
- ✔ To reduce greenhouse gas emissions through more energy efficient buildings and through decarbonising Scotland's heat supply.

To achieve these two objectives, the Scottish Government has proposed long term energy performance standards for all buildings in Scotland as follows:

- ✔ By 2040 all homes to achieve an Energy Performance Certificate (EPC) rating of C (where technically feasible and cost effective). In March 2019, the Scottish Government consulted on accelerating this timescale.
- ✔ The Energy Efficient Standard for Social Housing (ESSH) 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.
- ✔ Private rented homes to be EPC E by 2022, to be EPC D by 2025 and to be EPC C by 2030 (where technically feasible and cost effective).⁸
- ✔ All homes with households in fuel poverty to reach EPC C by 2030 and EPC B by 2040 (where technically feasible and cost effective and affordable).

Most recently the Scottish Government consulted on proposals to set a standard for energy efficiency for homeowners from 2024 onwards and asked specifically whether EPC Energy Efficiency Rating Band C was the appropriate standard to use⁹.

Nationally delivered support is seen as a key part of EES and under the programme all households and businesses in Scotland will continue to have access to "good quality, independent advice and information...".

⁷The 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.

⁸Note: the requirements for EPC E by 2022 and EPC D by 2025 have been laid before parliament and were expected to come into force by 1 April 2020. Due to the COVID-19 crisis these have now been delayed. If a new tenancy starts the property will need to have an EPC of at least band E by a date yet to be announced (previously 1 October 2020), and band D by 31 March 2025. The requirement to reach EPC Band C is not part of the regulations currently being considered by the Scottish Parliament.

⁹See: <https://consult.gov.scot/housing-and-social-justice/energy-efficient-scotland-owner-occupier-proposals/>

3.3 Scope of this report

This report covers direct home energy programmes for owner occupiers, tenants and small private landlords managed by Energy Saving Trust on behalf of the Scottish Government. It is important to note that Energy Saving Trust does not manage the Scottish Government's Energy Efficient Scotland: Area Based Schemes or the projects that have been set up specifically to support the development of EES. However, we want to give the whole picture and Home Energy Scotland (which Energy Saving Trust manages) does refer advice customers and provide other support to these two programmes. Therefore, this report does describe in Section 4 and Appendix 1 below the Area Based Schemes and the projects set up to support the development of EES alongside the Energy Saving Trust managed programmes.

The report also explains, at Section 6, some of the wider supporting activity delivered by Energy Saving Trust to build the market for home energy efficiency.

There are broader policies that impact on home energy efficiency that are not covered in this report, for instance funding arrangements for social housing, policies to promote expansion of district heating and policies to tackle housing disrepair.



4. FINANCIAL SUPPORT FOR HOME ENERGY EFFICIENCY (OWNER OCCUPIERS, TENANTS AND PRIVATE LANDLORDS) IN SCOTLAND

To overcome known financial barriers to the installation of energy efficiency improvements and home renewables the Scottish Government fund a range of financial support schemes for owner occupiers, tenants and private landlords in Scotland. These are:

- ✔ Warmer Homes Scotland (Scotland's national fuel poverty programme).
- ✔ Home Energy Scotland loans and cashback.
- ✔ Private Rented Sector Landlord loans.
- ✔ Equity Loans.
- ✔ Area based schemes.
- ✔ Projects set up to support the development of EES.

Each programme is described briefly below with additional detail available in Appendix 1. Scotland's national energy efficiency advice service, Home Energy Scotland, 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 ECO. 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.

4.1 Warmer Homes Scotland

Warmer Homes Scotland is Scotland's national fuel poverty programme. It was opened to applications in September 2015 and will spend at least £16 million plus VAT per year for up to seven years.

It is available to households living in or at risk of fuel poverty in the private sector (tenants or owner-occupiers). The programme offers fabric measures, such as insulation, as well as heating measures. It also offers renewable and microgeneration measures (particularly air source heat pumps) to ensure that a wide range of heating options are available to off-gas households. 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. However, interest free loans are 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.

Cavity Wall Insulation extraction and replacement has also recently been added as a new measure and this will be of particular benefit for those households with failed cavity wall insulation and the associated issues. Additional enabling measures have also been introduced including asbestos removal and the installation of fuel storage tanks and low energy lighting.

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.

4.2 Home Energy Scotland and Private Rented Sector Landlord loans and cashback

Interest free loan funding of up to £38,500 per property is available to owner occupiers (through the Home Energy Scotland loan) and eligible registered private sector landlords (through the Private Rented Sector Landlord loan).

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 up-front 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. In 2018-19 energy storage was introduced as an additional eligible improvement.

Evaluation of the renewables loans show that they are highly influential and cost-effective in encouraging the installation of renewables systems; 89% of funded actions were at least partly attributed to the loan and 64% would not have happened at all without the loan. As well as the fuel bill savings and RHI payments generated by the loan there are further benefits; 30% 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 Home Energy Scotland specialist renewables advisor, have reported that the loan is a more important driver to action than the RHI scheme.

In 2019-20 HES loans helped fund 1,008 households to install more than 1,207 measures.

For those taking out loans, cashback grants are also available for certain energy efficiency improvements to further increase uptake. These are subject to available funding and as a result are sometimes available for limited periods of time.

4.3 Equity Loan Pilot Scheme

The Scottish Government's Equity Loan scheme was launched in 2017 and is a pilot programme designed to help homeowners improve the energy efficiency of their home and carry out necessary repairs. The scheme was designed to fill a gap in the market for those who were not necessarily eligible for the Scottish Government's standard interest free loans. Instead they can use the equity in their property to cover the cost of improvements avoiding the usual loan requirements of credit and affordability checks. The programme is currently available in Argyll and Bute, Dundee, Glasgow City, Inverclyde, Perth and Kinross, Renfrewshire, Stirling and the Western Isles. The scheme is delivered by Energy Saving Trust in partnership with Care and Repair and allows applicants to borrow money against the value of their property with the Scottish Government taking a security against the property. The amount borrowed is translated into a percentage equity stake of the total value of the property. Unlike other loans there is no requirement to make ongoing repayments. The borrowed amount is usually only paid back when the property is sold or on the death of the last applicant. To protect loanees a cap is applied to the amount that is to be repaid ensuring in the event of a sharp rise in property values, the loanee is not unduly penalised.

¹⁰ Note: Interest free loans are available to help with these contributions.

4.4 Energy Efficient Scotland: Area Based Schemes (EES: ABS)

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' contributions¹⁰ 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 a large number of Scottish homes while delivering emission savings and helping reduce fuel poverty.

4.5 Projects set up to support the development of Energy Efficient Scotland

The Scottish Government has funded a number of phases of pilot projects to inform the development of EES. They invited local authorities and their partners to submit proposals for trialling new approaches to delivering energy efficiency measures in both domestic and non-domestic buildings. These pilot projects aim to contribute to the design of future programmes aimed at tackling fuel poverty and reducing greenhouse gas emissions.



5. Home Energy Scotland: Advice

5.1 Introduction to home 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 take action on energy efficiency.

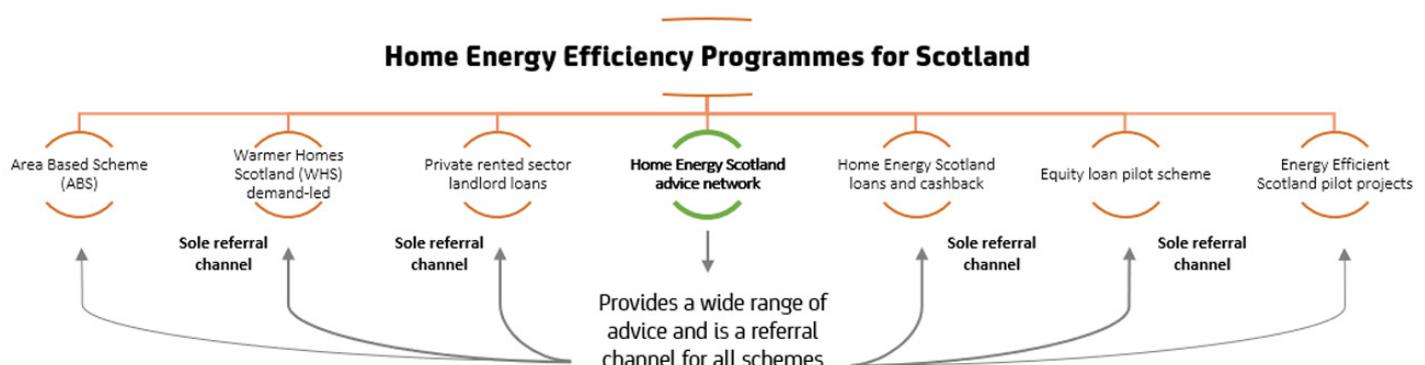
In Scotland householders (owner occupiers, tenants) and smaller private landlords are able to access free, independent, personalised and impartial advice from the Home Energy Scotland service, provided on behalf of the Scottish Government by Energy Saving Trust. The importance of the advice provided by Home Energy Scotland is stressed in the Scottish Government’s Route Map for the EES Programme which notes that the “foundation of the programme offer” is that “all households will be able to access good quality, independent advice and information on improving the energy efficiency of their property and reducing their fuel bills” and that “independent advice will be the bedrock” of the programme.⁸

Broadly, three types of advice are provided under Home Energy Scotland:

1. Personalised advice delivered over the phone by trained advisors working from regional advice centres across Scotland.
2. Advice delivered face to face either at events or in the home. In-home expert advice is provided for households identified as needing in-depth advice and support: very vulnerable households, people installing more complex home energy measures and some private landlords.
3. Online advice consisting of both static webpages 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 (for further details see Section 6 below).

Home Energy Scotland provides customers with “one-stop shop” access to the financial (and other) support for home energy efficiency offered by the Scottish Government, which we explain in Section 4 above and as shown in the diagram below:

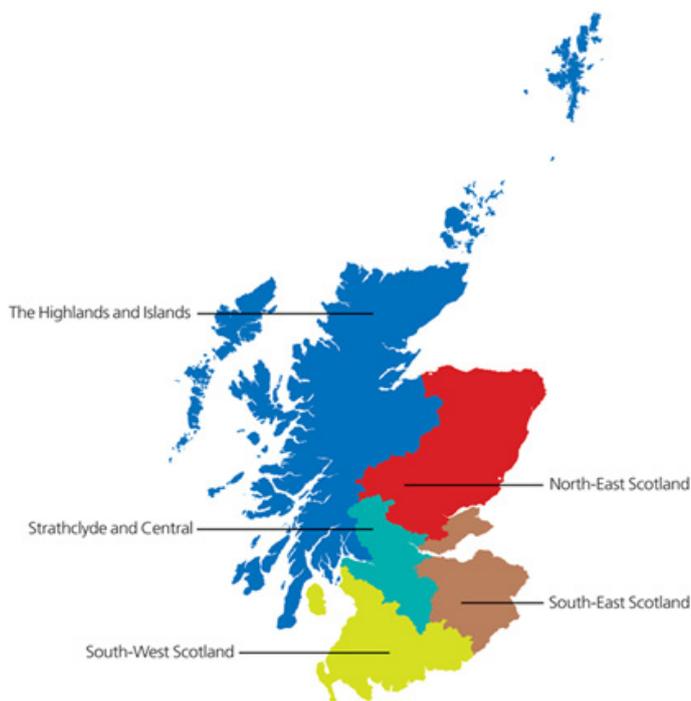


⁸ For further information see: <http://www.gov.scot/Publications/2018/05/1462>

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

- ✔ Information on ECO schemes run in Scotland by energy companies and their installer partners.
- ✔ Advice about behavioural energy saving actions.
- ✔ Advice on low carbon transport and greener travel.
- ✔ Advice on water efficiency, including reducing hot water usage.
- ✔ Signposting to tariff/switching advice.
- ✔ Help to access benefits and other support.

There are five regional Home Energy Scotland advice centres together with a sixth advice centre offering an out of hours service. The five regional centres cover the areas shown below.



This more localised approach means that the advice provided to householders can be better tailored to reflect local circumstances (e.g. housing types, the installer base, the support available from local authorities and other local organisations, etc.). It also means that the advice centres are able to 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 for home visits where required.

Each year the network helps more than 90,000 customers in Scotland and even with these very large volumes, customer satisfaction is at 97%. The lifetime carbon saved by customers using the network in 2018-19 is estimated to be more than 439,000 tonnes CO₂. Total lifetime energy bill savings from the network since its inception are estimated to be well over a billion pounds.

5.2 Home Energy Scotland personalised advice

The advice provided by Home Energy Scotland advisors is based, not only on the information received from the customer, but also on other available information on the home and its energy use.

Home Energy Scotland advisors are able to access each customer's EPC and talk through the recommendations. For customers 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.

In addition, smart meter data can now be integrated into the advice delivered by Home Energy Scotland (where a customer has a compatible smart meter and has provided consent for Energy Saving Trust to access their data). This allows Home Energy Scotland advisors to discuss actual energy consumption levels and patterns for a customer as well as provide more tailored savings estimates.

For customers identified as potentially fuel poor, Home Energy Scotland advisors will:

- ✔ Refer for benefit check support. Between April 2009 and March 2020 Home Energy Scotland has helped to unlock a total calculated increase in income from benefits checks of £7,767,059.
- ✔ Ensure the tariff they are on is the most efficient and effective for their needs. For those who are able to manage switching themselves Home Energy Scotland show householders where to access resources of partners (e.g. Citizens Advice Scotland) to see the range of tariffs and options available. For those who need more support Home Energy Scotland has a partnership with the social enterprise Citrus who offer impartial advice covering the whole range of tariffs and suppliers available in the market and are able to support vulnerable customers to switch fuel suppliers over the phone. Between July 2016, when this partnership started, and March 2020 referrals made by Home Energy Scotland resulted in projected annual savings of £139,691 with the average saving per customer switching estimated to be £254 (as reported to Energy Saving Trust by Citrus Energy).
- ✔ Helps customers to access Warm Homes Discount and refer customers for support from local agencies (e.g. Care and Repair), local in-home energy advice and advocacy services and for money advice.

Recognising the complex relationship between electric heating system, metering and tariff arrangements, partnered with the high level of fuel-poverty amongst this consumer group (43% of fuel-poor households in Scotland use electricity as their main heating fuel), Home Energy Scotland's advisors also provide specialist advice on electric heating systems and restricted meters.

Home Energy Scotland works with a number of trusted partner organisations such as health and social care organisations to build referral pathways for vulnerable householders. This helps to ensure that those most in need of help are able to access the support available from Home Energy Scotland. While the majority of householders contact Home Energy Scotland through the well-publicised freephone number, online or through outreach activity, a substantial number are referred to Home Energy Scotland from other organisations who have access to and are trusted by vulnerable householders. These organisations are able to make seamless referrals to Home Energy Scotland using an online portal which works in real time to put the householder's details directly into Home Energy Scotland's database for advisors to follow up.

5.3 In-home expert advice

For those who need additional in-depth support, specialist in-home advice is also available through Home Energy Scotland. It is available for people installing more complex home energy improvements and for very vulnerable households. It is also available to some private landlords (see Section 5.5 below).

In home affordable warmth advice and advocacy for vulnerable households

Following a successful pilot in 2017-19, Home Energy Scotland changed the in-home support it offers to householders, with the introduction of Energycarers. Energycarers are specialist energy advisors who can provide intensive support to households (in private rented or owner-occupier homes) 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.

Home Energy Scotland 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 is able to help and a visit would be helpful, an Energycarer meets the householder, sometimes with a relative or carer present, to look at how their home uses energy and see what could be improved.

The Energycarer supports the householder during the initial energy check and throughout the process of any changes made to their home heating or insulation. They work with the householder to make sure they can control the temperature in their home and find the best energy tariff.

Energycarers help householders to navigate through an otherwise complex landscape and more specifically they help householders to:

- ✔ Find funding for energy efficiency improvements or home repairs through Warmer Homes Scotland and other funds.
- ✔ Prepare their home for work to be carried out.
- ✔ Where the home is rented, approach their private landlord about energy issues.
- ✔ Resolve fuel billing issues and where necessary provide advocacy support.

In-home specialist advice for those interested in more complex measures

Individual owner occupiers in Scotland still encounter significant market barriers when considering home renewables, energy storage and solid wall insulation. Some barriers are financial but others involve a lack of understanding of the support available due to its complexity and variety, limited understanding of renewables and lack of confidence in the renewables, energy storage and solid wall insulation markets and their supply chains.

It is against this background that the Home Energy Scotland specialist advice service supplies hand-holding support to help clients navigate this complex landscape. The service includes home visits and surveys by specialist advisors, tailored advice on suitable renewables technologies, energy storage and solid wall insulation options, 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 assistance with any post-installation performance issues or advice to the client on how to use their new renewables system effectively.

To ensure that clients receive a high quality service with a “whole house” approach the specialist advisors have specific training including Domestic Energy Assessor training for the energy efficiency assessment of properties, home renewables (City and Guilds) and solutions for traditional and hard to treat properties (Historic Environment Scotland).

Our evidence shows that where Home Energy Scotland provides specialist in-home advice on more complex measures such as small-scale renewables and solid wall insulation around 83% of customers who received this support and took action attributed that action, at least in part, to the support they received.

In 2018/19, the specialist advice service provided advice to 3,670 customers, of these:

- ✔ 1,749 (48%) were provided with a home visit.
- ✔ 1,343 (36%) were provided with remote advice.
- ✔ 578 (16%) received both.

Customers supported by the advice service in 2018/19 will deliver total attributed lifetime savings of 62,000tCO₂ and lifetime financial benefits of £250.92 million. The financial benefits comprise fuel bill savings of £19 million and Feed In Tariffs and RHI payments of £6.3 million.

Advice through digital channels

The Energy Saving Trust Scotland website is a key resource for large numbers of Scottish householders looking for help to make their home more efficient and cheaper to heat. It covers all of Energy Saving Trust’s work in Scotland for the Scottish Government and includes a funding finder and a number of 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 Home Energy Scotland advice centre network.

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 Home Energy Scotland digitally to ask questions or seek further information. Home Energy Scotland Facebook and Twitter channels actively promote energy efficiency and affordable warmth to householders and stakeholders in Scotland, supported by Energy Saving Trust blogs on emerging technologies, myth-busting, news on funding and other sustainability topics.

Householders are also able to access a number of online renewables tools and resources, including:

- ✔ Renewables Installer Finder Scotland - 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 – newly updated in 2020, this tool helps customers in Scotland to find out what renewables technologies might be suitable for their home (as well as information about those technologies) and provides fuel bill and carbon saving estimates based on the characteristics of their property.
- ✔ Solar Calculator – provides an indication of the potential benefits from the installation of a solar PV system for the particular customer.
- ✔ Wind Speed Predictor- provides an indication of the potential suitability of installation of a wind turbine for the particular customer.
- ✔ Green Homes Network and Green Network for Businesses – a searchable database of case studies of exemplar homes and businesses to help encourage action by customers of Home Energy Scotland and Energy Efficiency Business Support Scotland. Customers can request visits to example sites near them.

5.4 Specialist support 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 a number of Scottish Government and UK programmes providing financial support or tax allowances to private sector landlords and is also the reason why the Scottish Government previously announced that minimum energy efficiency standards would apply to the private rented sector from April 2020 (see Section 3.2 above) – this policy development is currently delayed due to the COVID-19 crisis. In addition to these structural issues there are a number of 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. 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 Home Energy Scotland 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. 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 including Domestic Energy Assessor training for the energy efficiency assessment of properties, home renewables (City and Guilds) and solutions for traditional and hard to treat properties.

5.5 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 Home Energy Scotland and Energy Efficiency Business Support.

Energy Saving Trust has developed networks of more than 500 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. 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. Homes or businesses can be visited and 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.

The Networks are an important resource to promote low and zero carbon technologies, energy efficiency measures and also resource efficiency measures 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 measures themselves. They are a useful tool for Home Energy Scotland, 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.

5.6 Trialling and integrating, innovative approaches to advice provision

Home Energy Scotland provides the infrastructure that enables the network to trial innovative approaches to advice provision. Recent examples of trials include:

- ✔ Advice informed by smart meter data. Building on a significant amount of pilot work undertaken through Home Energy Scotland between 2012 and 2014 and funded by the EU's Northern Periphery Programme and the Scottish Government, Home Energy Scotland can now provide householders with more detailed and tailored advice informed by their smart meter data. This included the development and piloting of a smart meter advice tool. This uses smart meter data to present smart meter data in a user-friendly way in order to inform the advice provided by Home Energy Scotland advisors. The pilot project demonstrated significant savings potential; along with a positive consumer response, 89% of households reported an increased understanding of energy use and the same fraction reported feeling more positive about smart meter systems, while 78% of respondents used the advice tool at least once a month. Further funding from the Scottish Government enabled additional refinement of the tool and at the end of September 2019 the service went 'live'.
- ✔ Provide person centred in-home support by Energycarers. Following a successful pilot (2017- 2019) Home Energy Scotland changed the in-home support it offers to householders with the introduction of Energycarers. Energycarers are specialist energy advisors who can provide intensive support to households with issues relating to physical or mental health, disability, family circumstances, low income and expensive heating.

Home Energy Scotland's ability to quickly adapt to provide new types of advice in new ways meant that it has been well placed to be able to offer additional support to vulnerable customers during the COVID-19 crisis and also to support other organisations that have been overwhelmed with demand for support as a result of the crisis. Home Energy Scotland's phone lines and digital lines have remained open since the very start of the lockdown period despite all staff needing to work from home. Examples of the additional support Home Energy Scotland has provided include:

- ✔ Actively helping households access the additional support that is being put in place by Scottish Government and Scottish local authorities, with a particular focus on vulnerable households who are being called to check they are okay and to offer support.
- ✔ Supporting householders to access the help available from their energy suppliers including acting as advocates for householders who need extra help to resolve issues and help them access support.
- ✔ Helping people to access on-line services. As a result of the crisis more services have been moved on-line and some people are not able to access these due to lack of internet access. Home Energy Scotland is helping those without internet access to access these.
- ✔ The provision of outbound calls on behalf of some local authorities to vulnerable households to ensure they get the support they need.
- ✔ Facilitating the delivery of food parcels to vulnerable households.
- ✔ Facilitating the provision of vouchers for households on pre-payment meters who are struggling to pay their fuel bills.

6. Programmes designed to improve delivery

6.1. Sustainable Energy Supply Chain support

The Scottish Government-funded Sustainable Energy Supply Chain programme provides assistance and support to businesses in Scotland to help them to participate fully and effectively in the supply chain for energy efficiency and home renewables installations. The programme also seeks to raise standards across the supply chain and ensure householders and business can access suppliers regardless of their location.

Scottish Government programmes such as EES, together with ECO and the RHI will continue to drive a very large amount of spending on sustainable energy measures in Scotland over the next few years. This means that there are very significant opportunities for Scottish businesses, particularly SMEs, to benefit by becoming installers, surveyors, assessors or suppliers under these initiatives. Scotland's 2017 Energy Strategy which sets out the Scottish Government's vision for the future energy system in Scotland 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. 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. They also need to make connections with key players in the market such as energy companies, large contractors and local authorities.

Since 2013 the Sustainable Energy Supply Chain programme has supported small and medium-sized enterprises (SMEs) and local suppliers to maximise their share of spend from ECO, EES, the RHI, and other large-scale sustainable energy investment programmes to the significant benefit of both the overall and the low carbon economies in all areas of Scotland.

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 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, RHI, the Scottish Government's EES programme and other funding initiatives. The requirements for the Energy Efficient Standard for Social Housing (EESHS) (see Section 3.2 above) continue to drive demand from social housing providers for advice on funding support to help achieve the required targets in their housing stock.

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

6.3. Data tools and services to plan policies and programmes

With funding from Scottish Government Energy Saving Trust has developed highly sophisticated tools that allow Scottish Government and local authorities to analyse energy efficiency and plan energy improvement strategies at all levels - from an individual home up to national, Scottish level.

Energy Saving Trust maintains, the Home Energy Efficiency Database (HEED). This acts as a central repository for data on energy efficiency measures from a number of sources, for example historic ECO work by fuel suppliers and government fuel poverty schemes. This data would otherwise remain fragmented in a number of 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 (see Section 5.2 above) as collected by Home Energy Scotland.

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 EES: ABS and EES, resulting in enhanced uptake and cost effectiveness.

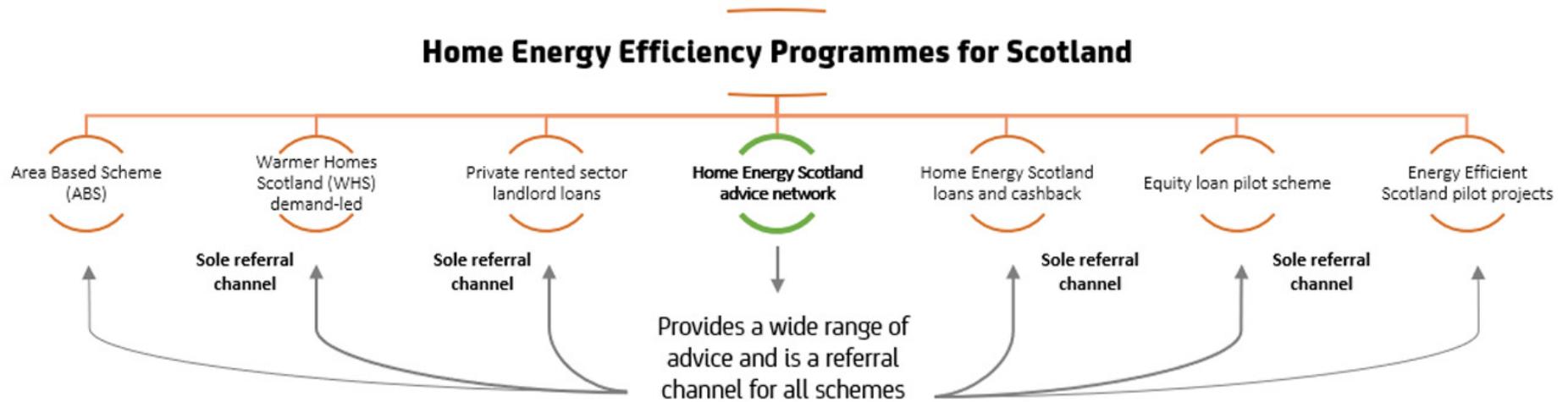
Finally, in this area, Energy Saving Trust has developed a sophisticated modelling tool, Home Analytics which provides address level data on the energy performance of Scotland's homes. It has been designed for use by Scottish local authorities and housing associations to support the development, targeting and delivery of policies and programmes. 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.

In response to user need, Energy Saving Trust has also developed, with funding from the Scottish Government, the Portfolio Energy Analysis Tool (PEAT): this uses 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.

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) wide directive requiring energy labelling of all buildings at point of sale or rental. The EPC regime in Scotland is delivered by a large number of different stakeholders. These include Approved Organisations and their members, 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, a central database where every EPC is lodged. Energy Saving Trust uses EPC data in providing householder advice and planning and delivery work on behalf of the Scottish Government. Sixty percent 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.

Appendix 1



	Area Based Scheme (ABS)	Warmer Homes Scotland (WHS) demand-led	Private Rented Sector Landlord loans	Home Energy Scotland advice network	Home Energy Scotland loans and cashback	Equity loan pilot scheme	Projects set up to support the development of EES
Contract	Allocation to 32 local authorities.	Contract with Warmworks.	Contract with Energy Saving Trust.	Grant to Energy Saving Trust.	Contract with Energy Saving Trust.	Grant to Energy Saving Trust.	Allocation to participating local authorities.
Management arrangement	Schemes managed by local authorities directly or by their managing agents (e.g. Changeworks manage 4 local authorities' schemes).	Scheme managed by Warmworks (Joint venture company formed by Everwarm, Energy Saving Trust and Changeworks).	Managed by Energy Saving Trust.	Managed by Energy Saving Trust.	Managed by Energy Saving Trust.	Managed by Energy Saving Trust.	Schemes managed by local authorities directly or by their managing agents (e.g. Changeworks).
Installer/contractor procurement	Installers procured by local authorities or their managing agents. Guidance from the Scottish Government is to design schemes to support the local economy and use local installers as far as possible.	Installers procured by Warmworks for 16 area 'lots' – at least 2 installer/lot.	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.	Advice contractors procured by Energy Saving Trust for 5 areas 'lots'.	Customer chooses their own contractor(s) – it is recommended that for energy efficiency measures the contractor should be PAS2030 and for renewable technology MCS.	Customer chooses their own contractor(s); Care and Repair are a project partner and can help customers find installers.	Local authority decides how to support self-funders which could include procuring a framework of installers to provide certainty of cost, support to household to obtain three quotes, etc.

	Area Based Scheme (ABS)	Warmer Homes Scotland (WHS) demand-led	Private Rented Sector Landlord loans	Home Energy Scotland advice network	Home Energy Scotland loans and cashback	Equity loan pilot scheme	Projects set up to support the development of EES
Quality Assurance	Local authority decides requirements with some additional checks by the Scottish Government. The Scottish Government require statement on QA and every scheme to have an independent clerk of works and meet ECO standards. (some schemes check 100% of jobs).	100% of jobs inspected before payment released. Scottish Government contractor Pennington Choices audits Warmworks.	Applications via Home Energy Scotland means landlords get advice on appropriate measures and ongoing support and advice; loans calls are call quality monitored.	Energy Saving Trust quality monitors advice provision and carries out monthly customer satisfaction survey. Results reviewed monthly and areas of improvement identified and actioned.	Applications via Home Energy Scotland means people get advice on appropriate measures, where grants are available and ongoing support and advice; loans calls are call quality monitored.	Applications via Home Energy Scotland means people get advice on appropriate measures, where grants are available and ongoing support and advice; equity loans calls are call quality monitored; Care and Repair are a partner and quality check work where a householder has opted to take up their support.	The objective of the scheme is to provide quality assurance at all levels of the energy efficiency improvement process. This is the added value Scottish Government sees local authorities and their delivery partners bringing to the programme.
Measures Available	Primarily ECO-eligible energy efficiency measures decided by local authority with the main focus on insulation (priorities solid wall insulation and hard-to-treat cavity wall insulation); doors and/or windows only provided as a secondary measure. Councils can propose special projects that are more flexible and/or include heating, micro-generation and battery storage measures.	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.	Maximum loan amount depends on measure e.g. <ul style="list-style-type: none"> ✔ External/internal wall insulation: £10,000 ✔ Heating system (gas,LPG or oil boilers): £5,000 ✔ Glazing (only available for improving single glazing and not for replacing or improving existing double glazing): £4,500 See full list at: https://energysavingtrust.org.uk/scotland/grants-loans/private-rented-sector-landlord-loan-overview	Energy efficiency and renewables advice on measures and behaviours, including advice delivered in the home; 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. Sustainable transport advice including active travel.	Maximum loan & cashback amount depends on measure e.g. <ul style="list-style-type: none"> ✔ Solid wall insulation: up to £10,000 (£7,500 loan plus £2,500 cashback) ✔ Solar photovoltaic or solar water heating systems: £5,000 See full list at: https://www.energysavingtrust.org.uk/scotland/grants-loans/home-energy-scotland-loan-overview	Repairs which reduce heat loss or damp or moisture, energy efficiency and renewable energy measures as recommended by an EPC or Home Energy Scotland report. <p>Up to £40,000 based on equity on the property, repaid at point of sale of the house.</p>	Energy efficiency measures including insulation and heating (for both domestic and non-domestic properties).

	Area Based Scheme (ABS)	Warmer Homes Scotland (WHS) demand-led	Private Rented Sector Landlord loans	Home Energy Scotland advice network	Home Energy Scotland loans and cashback	Equity loan pilot scheme	Projects set up to support the development of EES
Criteria	<p>Areas with high fuel poverty targeting the most in need first. Private sector properties only through coordination with Registered Social Landlords. Council tax bands A-C (+D where EPC E-G).</p>	<p>Private sector + SAP<=67 or lower + qualifying benefit recipient + be:</p> <ul style="list-style-type: none"> ✔ Pensioner with no working heating. ✔ >75. ✔ Pregnant or with child under 16. ✔ With disability (PIP/DLA higher rate/Armed Forces Independent. Payment/Industrial Injuries Disablement benefit). ✔ A carer. 	<p>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:</p> <ul style="list-style-type: none"> ✔ by an individual in their capacity as a sole trader ✔ by some or all of the members of an incorporated association in trust for the association ✔ by either: a limited company; a limited liability partnership; a trust; a partnership; a registered society under the Co-operative and Community Benefit Societies Act 2014; or a Scottish Charitable Incorporated Organisation, or in any other capacity which Energy Saving Trust or the Scottish Government considers to be a business. 	<p>Any household.</p> <p>Support also provided to communities, local authorities, housing associations, businesses.</p>	<p>Owner occupiers and certain private sector landlords, properties based in Scotland.</p>	<p>Homeowner or private landlord in Perth and Kinross, Stirling, Dundee, Glasgow City, Inverclyde, Renfrewshire, Argyll and Bute or the Western Isles, and finding the costs of making energy efficiency home improvements prohibitive.</p> <p>Owners of properties in Council Tax bands A - C, or owners (or permanent occupiers, like partners or children) who receive qualifying benefits.</p> <p>Private landlords with no more than two properties to rent that are in Council Tax bands A - C, or whose tenants receive the qualifying benefits. A landlord must be classed as a 'natural person' (meaning they're not registered as a business) and cannot own more than two properties.</p>	<p>Self-funder households who are ineligible for HEEPS: ABS or Warmer Homes Scotland. Private sector. Also non-domestic SMEs either occupied by the owner of where occupier has legal responsibility to manage building energy efficiency.</p>
Principles Applied	<p>Fabric first. 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 EES: ABS and through WHS. 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 Home Energy Scotland.</p>	<ul style="list-style-type: none"> ✔ Scheme emphasises a "fabric first" approach to measures installation. 	<p>Application through Home Energy Scotland 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. Home Energy Scotland can also ensure landlord understands the flexibility they have to choose an installer.</p>	<p>Advice must be:</p> <ul style="list-style-type: none"> ✔ Impartial. ✔ Expert . ✔ High quality. ✔ It must also present all options to customer to enable customer choice. 	<p>Application through Home Energy Scotland to ensure householder 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. Home Energy Scotland can also ensure householder understands the flexibility they have to choose an installer.</p>	<p>Application through Home Energy Scotland 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. Home Energy Scotland can also ensure landlord understands the flexibility they have to choose an installer.</p>	<p>All or most of the funding provided by the owners. Improve the energy efficiency of buildings, bringing savings to householders and businesses as well as supporting the local economy.</p>

	Area Based Scheme (ABS)	Warmer Homes Scotland (WHS) demand-led	Private Rented Sector Landlord loans	Home Energy Scotland advice network	Home Energy Scotland loans and cashback	Equity loan pilot scheme	Projects set up to support the development of EES
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.	ECO levered in by the managing agent and used to increase total number of households benefitting.	Advice on ECO provided by Home Energy Scotland.	Advice on ECO provided.	Advice on ECO provided by Home Energy Scotland.	Advice on ECO provided by Home Energy Scotland.	ECO ideally levered in to reduce costs to owners.
Client Contribution	Client contribution may be required. Typical value of grant-in-aid is from £7k to £8k but higher levels are available to households in extreme fuel poverty and in remote rural/ island areas (£14k-£16k). Interest free Home Energy Scotland loans available and must be flagged.	Client contributions not normally required unless measures additional to the package are requested (e.g. additional radiators). Home Energy Scotland loan available for any client contributions.	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.	No cost to customers – Freephone number free to call from mobiles and landlines.	Successful loans are subject to an administrative fee of 1.5%, up to a maximum of £150.	Successful applications subject to a £671 administration fee to cover the processing of the application and the legal work by the Scottish Government's solicitors to create the loan offer. Householder pays any fees charged for a property valuation and work by their own solicitor, but these costs can normally be included within the loan.	All or most of the funding provided by the owners.

	Area Based Scheme (ABS)	Warmer Homes Scotland (WHS) demand-led	Private Rented Sector Landlord loans	Home Energy Scotland advice network	Home Energy Scotland loans and cashback	Equity loan pilot scheme	Projects set up to support the development of EES
Also Includes	Behaviour change advice from Home Energy Scotland 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.	SSEN/SGN funded enabling measures where these go beyond limit of Scottish Government funding provision.		Specialist advice for private landlords; specialist in home advice for renewables and complex energy efficiency measures; 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.			
Useful Links	EES ABS	Warmer Homes Scotland	Private Rented Sector Landlord loans	Home Energy Scotland	Home Energy Scotland Loans and cashback	Equity loans pilot	Projects set up to support the development of EES