

# GREEN HOME FESTIVAL

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# Future funding: Grants and Expertise for Eco-Friendly Homes

With Yordan Popov,  
Home Energy Scotland

Friday 16 August  
@ 11.00am



# GREEN HOME FESTIVAL

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     #GHF24



# Home Energy Scotland:

## Support for energy efficiency improvements and low carbon technologies

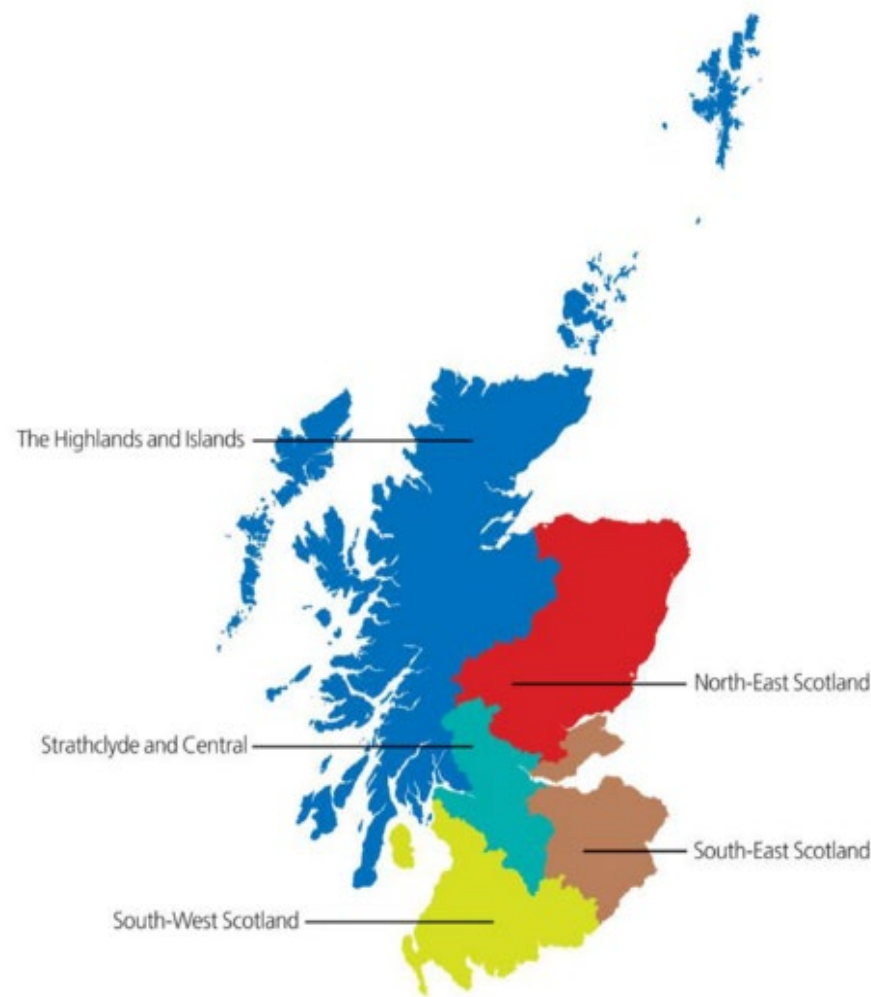
**Yordan Popov**  
**Technical Officer**

**HOMEENERGYSCOTLAND.ORG**  
**0808 808 2282**  
FUNDED BY THE SCOTTISH GOVERNMENT



# Home Energy Scotland

- **Free and impartial advice** on energy efficiency, renewables, transport and water efficiency.
- Help people stay warm and reduce bills by providing advice and funding.
- Funded by the **Scottish Government**, managed by **Energy Saving Trust**.
- Delivered by regional advice centres.
- **38,000 households supported by HES SE alone last year.**







# In-Home Specialists Service

Through our specialist home visit service, we can offer:

- Provide **tailored advice** regarding the property and its specific needs
- **A free and impartial** home visit to survey the property
- **In-depth report** with personalised recommendations and estimated costs, savings and income



Dylan Rendall



Bryony Peace



Gordon Spowage



Yordan Popov



Marek Vrabec



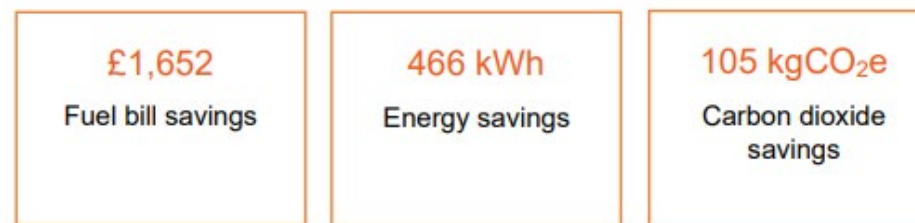
# Home Energy Improvement Report

Recommended improvement	Indicative cost	Annual savings		
	£	kWh	kgCO <sub>2</sub> e	£
Extension roof - Insulation for flat roofing (250 mm)	£1,800	206	26	£13
Room-in-roof flat ceiling and residual loft space - Room in roof, flat ceiling and/or residual loft space insulation (300 mm)	£2,400			
Bathroom - Room-in-roof flat ceiling and residual loft space - Room in roof, flat ceiling and/or residual loft space insulation (300 mm)	£1,400			
Room in roof wall - Room in roof walls and sloping parts, 100mm insulation	£5,400			
Extension wall - Cavity wall insulation	£500			
Main walls - Internal wall insulation	£6,700			
Main floor - Standard insulation (e.g. mineral wool) between floor joists (150mm)	£3,100			
Extension floor - Solid floor with 150 mm insulation	£3,100	1,070	137	£66
Single glazed windows - Secondary glazing	£2,200	718	91	£43

Potential improvement of your home's energy efficiency



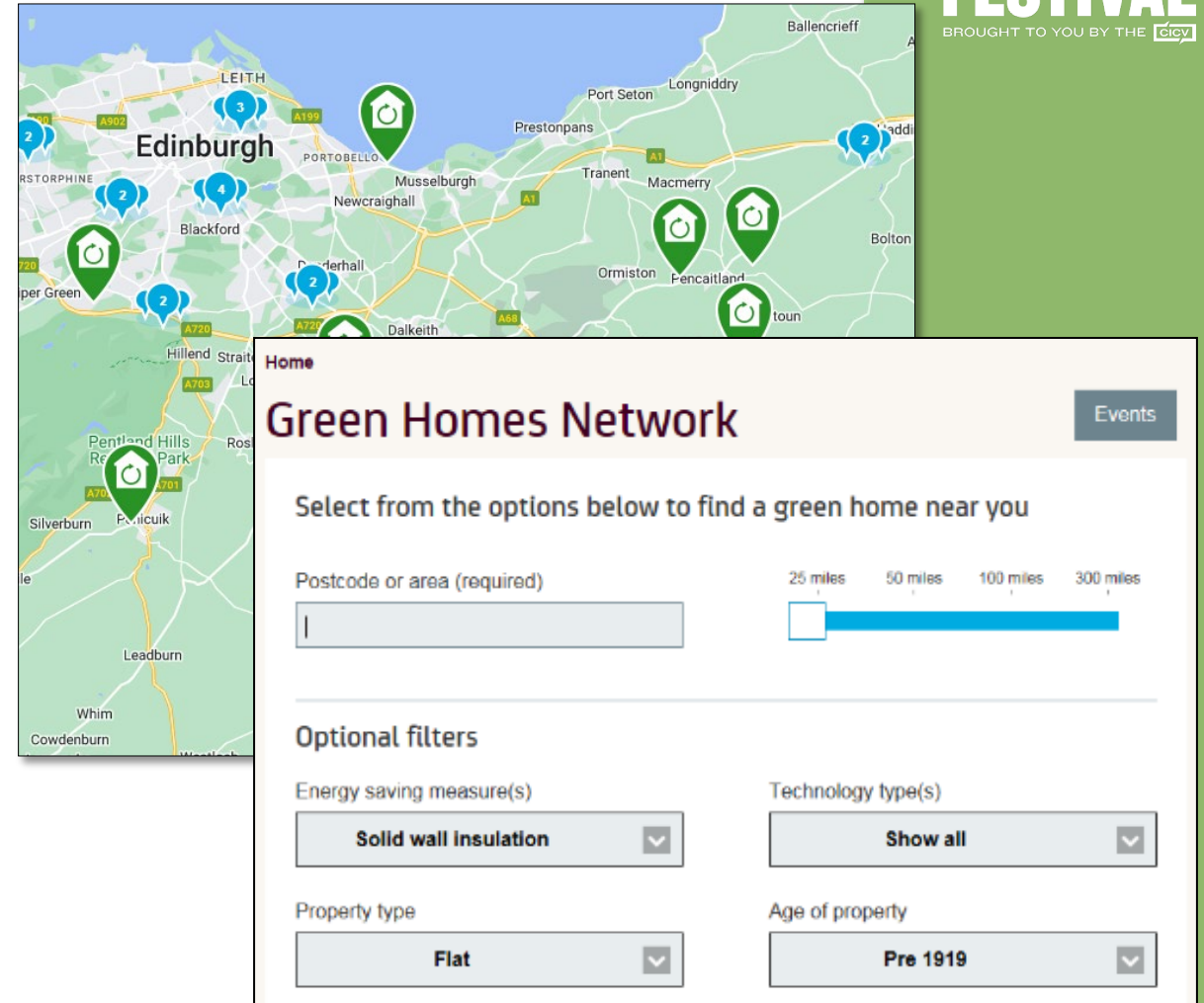
Estimated annual savings and payments with this package of improvements





# The Green Homes Network

- A network of **over 300 households** in Scotland
- Managed by the Energy Saving Trust
- Read variety of case studies from across Scotland
- You can call, email or visit GHN members to learn more about their tech and experience, or even attend one of their events



# Home Energy Scotland Grant & Loan: Overview

## Scottish Government scheme;

- Available to homeowner and occupiers in Scotland
- Grant funding available for certain improvements
- Grants can be taken on their own or alongside an **optional** interest-free loan
- Some improvements are loan funded only
- Loan funded improvements would incur an admin fee
- Repayment period can be **between 5 to 12 years**
- Funding is not **means tested**



# Home Energy Scotland Grant and Loan: Funding for renewable measures

Renewable measures	Loan funding per improvement	Grant funding per improvement
Air/ground/water to water source heat pumps	£7,500	£7,500*
District heating scheme connection	£7,500	Not available
Solar thermal	£5,000	Not available
Hybrid solar PV / water heating	£5,000	Not available
Wood fuelled (biomass) boilers (and eligible stoves)	£7,500	£7,500*
Wind turbine	£2,500	Not available
Hydro turbine	£2,500	Not available

**\*Rural uplift is available** to some rural, remote and off-grid households **taking the available grant up to £9,000**

# Home Energy Scotland Grant and Loan: Funding for energy efficiency improvements

Energy efficiency improvements	Loan funding per improvement	Grant funding per improvement
Solid wall insulation (external and internal)	£2,500	£7,500*
Flat roof or room-in-roof insulation	£1,000	£3,000*
Loft, cavity and underfloor insulation	£500	£1,500*
Insulated doors	£4,500	Not available
High heat retention storage heaters	£5,500	£2,500*
Warm air units	£5,000	Not available
Glazing improvements	£8,000	Not available

\*Up to £9,000 of combined grant across energy efficiency measures available to some with 'rural uplift'



# Home Energy Scotland Grant and Loan: Example

Example measures	Maximum Grant Available	Maximum Optional Interest-Free Loan Available	Maximum Total Funding Available
Air Source Heat Pump	£7,500 (£9,000)*	£7,500	£15,000
Cavity Wall Insulation	£1,500	£500	£2,000
Loft Insulation	£1,500	£500	£2,000
<b>Total</b>	<b>£10,500 (£12,000)*</b>	<b>£8,500</b>	<b>£19,000 (£20,500)</b>

**\*Additional grant funding available for those eligible for the rural uplift as shown in brackets**

# Home Energy Scotland Grant & Loan: Application requirements

## To apply for the funding, you will need;

- Initial contact and funding referral
- Suitable report (e.g. Energy Performance Certificate, Home Renewable Selector Report, etc.)
- Quotes from accredited installers (e.g. MCS, Trust Mark, etc.)
- Once you apply the application is subject to processing times, etc.

**\*Do not start the work before your application is approved**



# Other Funding Schemes

- Private Sector Landlord Loan
- Warmer Homes Scotland
- Area Based Schemes
- Energy Company Obligation funding



We will ensure you are assessed for all available funding!



# Get in touch



Call our freephone number: 0808 808 2282



Email us:

[technicalteam@se.homeenergyscotland.org](mailto:technicalteam@se.homeenergyscotland.org)



@HomeEnergyScot



@HomeEnergyScotlandSouthEast



Thanks for listening!

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With Ian Rippin,  
CEO, MCS

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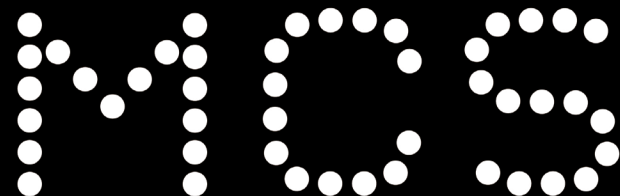
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MCS


## Microgeneration Certification Scheme (MCS)

MCS is a standards organisation and quality assurance partner for the sector.

MCS certifies low-carbon products and installations used to produce electricity and heat from renewable sources.

Certification to MCS demonstrates adherence to these recognised industry standards; highlighting **quality, competency** and **compliance**.





Overwhelmingly, consumers indicate that they want **certified, qualified installers** who know what they're doing and who have rules to follow and who install **products that meet standards** and are proven to work.

And they want to know there is some **protection** should anything go wrong.





## What to expect from your MCS installer

Installation designed for you and your home

Installation compliant with the national (MCS) standards

MCS Certificate



# Scotland's all low-carbon product installations

Source: MCS Data Dashboard





# Scotland's heat pump installations

Source: MCS Data Dashboard





[www.mcscertified.com](http://www.mcscertified.com)

MCS Helpdesk 0333 103 8130



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With Scott Sanford,  
SNIPEF

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**How heat pumps leave some homes so cold people are ripping them out - and even happy owners urge caution: Is the plan to replace our boilers wise?**

**Nightmare story of a badly installed heat pump**

**Heat pump outrage over 'misinformation lie' they are 3x better than gas boilers**

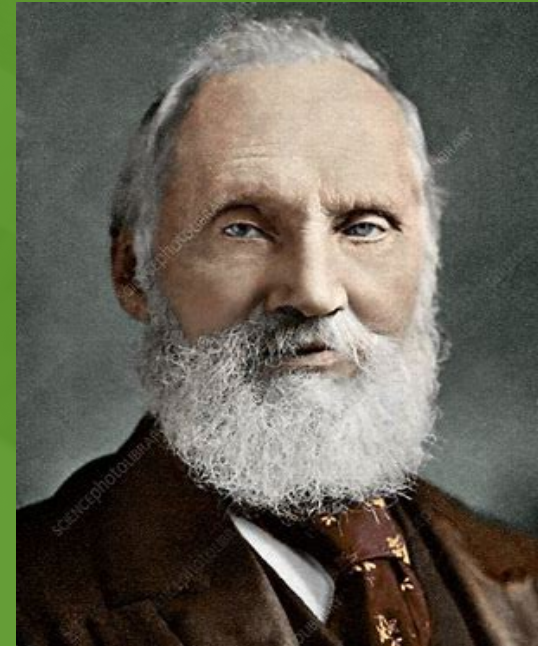
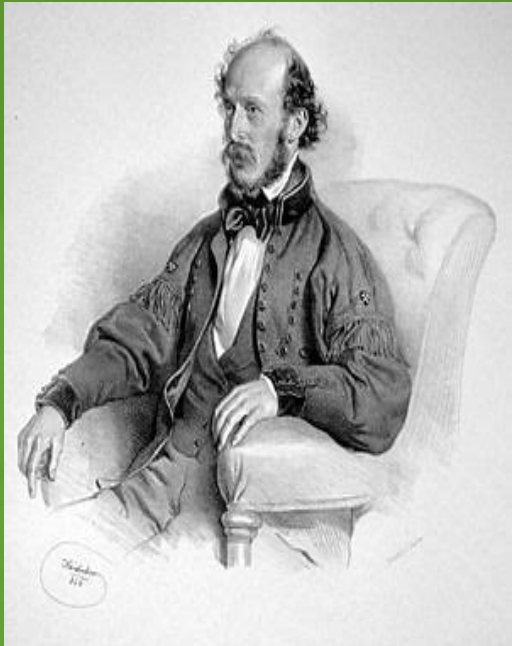
**Six reasons not to buy a heat pump**

**Nobody is buying heat pumps because they're an awful product**

Is anyone surprised that the heat pump rollout is failing? They cost a ton and aren't particularly efficient

**Heat pumps misinformation bringing confusion and delay**









# The history of heat pumps – some key moments

- 1748 Scotsman, William Cullen, physicist, chemist & agriculturalist, pioneered artificial refrigeration.
- 1834 American mechanical engineer & physicist Jacob Perkins builds a practical refrigerator with diethyl ether
- 1852 Northern Irish mathematician, physicist & engineer, Lord Kelvin, proposed heat pumps for space heating.
- 1855 – 1857 Austrian engineer, Peter Von Rittinger, installed the 1<sup>st</sup> known heat pump for heating.
- 1912 Swiss engineer, Heinrich Zoelly, proposed and patented electrically driven ground source heat pumps for low temperature heating.



# The history of heat pumps – some key moments

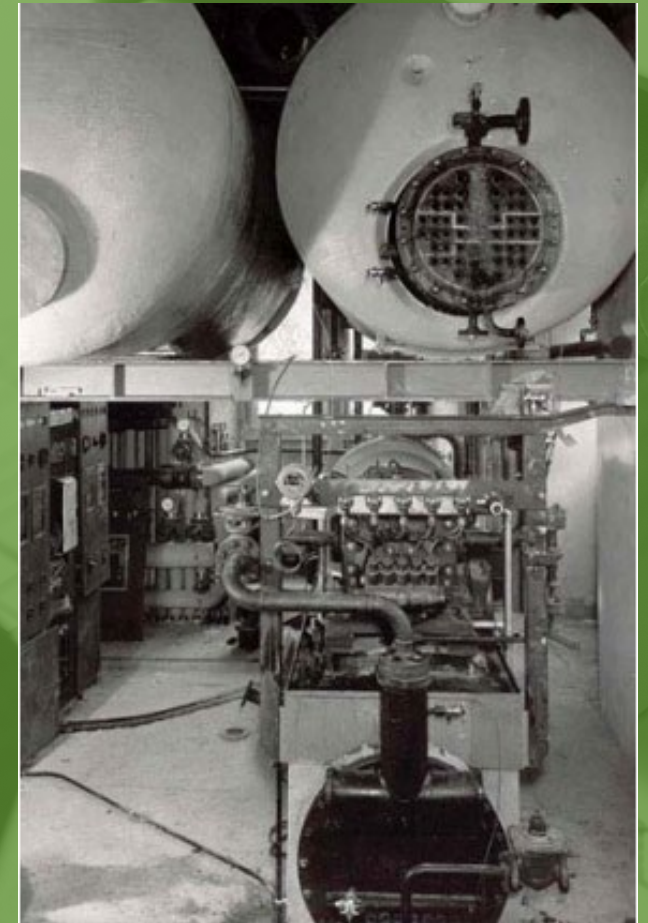
- 1927 Dr T.G.N Haldane, the first engineer in Britain (and, possibly, internationally) to construct, monitor and document the performance of a heat pump system for space heating.
- 1938 heat pump installed into Zurich city hall replacing wood stoves.
- 1945 1<sup>st</sup> ground source heat pump installed in UK.
- 1964 Zurich city hall, heat pump compressor replaced.
- 1983 – 84, Zurich city hall heat pump system & ventilation improved.
- 2001 heat pump in Zurich city hall replaced – 63 years old!
- The original heat pump runs for 1 hour every week.





# The history of heat pumps – some key moments

- 1<sup>st</sup> heat pump piloted 167 years ago
- 1<sup>st</sup> heat pump in UK piloted 97 years ago
- 1<sup>st</sup> ground source heat pump in UK 79 years ago
- Zurich city hall heat pump 86 years old and still works.







**How heat pumps leave some homes so cold people are ripping them out - and even happy owners urge caution: Is the plan to replace our boilers wise?**

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# Scotland's Journey to Net Zero

- Heat in buildings strategy net zero greenhouse gases by 2045.
- £1.8billion investment by Scottish government to fund heat & energy efficiency improvements.
- Fabric first approach in Scotland.
- Heat pumps best way to decarbonisation.





# Heat in Buildings Strategy

- 6338 certified heat pump installations in Scotland 2023
- This needs to ramp up to over 200,000 installations per year late 2020's
- Currently 200 - 400 installers in Scotland
- Varying research of installers required to meet targets:
  - Nesta 4000 by 2033,
  - ClimateXchange 4500 – 5400 by 2030,
  - CITB 4300 by 2028.



# Domestic Building Services Compliance Guide

Compliance guide used to support standards in the Scottish Technical Handbooks.

Note: It is recommended that heat pumps should be designed and installed in accordance with the technical standards given in the Microgeneration Certification Scheme's Microgeneration Installation Standard: MIS 3005, subject to the limitations on scope as outlined in this Standard.



# Competence

- MCS contractor shall be competent or instructed.
- Design personnel shall be able to demonstrate a thorough technical knowledge to be compliant.
- Installation personnel shall be able to demonstrate an adequate level of technical knowledge and installation skills.



# Certification

- Level 3 plumbing/heating or equivalent
- Water regulations or byelaws
- Vented and unvented hot water systems.
- Low-Temperature Heating Design and Hot Water
- Energy efficiency
- Energy efficiency in older and traditional buildings (pre 1919)
- Heat Pump installation
- Manufacturers training
- Experience





# Accreditation & Affiliation

- New builds - Building control or approved certifiers, certify new build installations.
- Retro fit MCS – own the standards and support the industry, however installers do not need to be MCS accredited.
- Plumbing and heating association – SNIPEF, The Scottish and Northern Ireland Plumbing Employers’ Federation.
- Since 1923, we have represented the best interests of the plumbing and heating industry, from sole traders to large-scale businesses. We also manage the training of plumbing apprentices, ensuring a skilled workforce in the future.



# SNIPEF - Why do plumbers and heating engineers join us?

- They're professional and held accountable to work to high standards.
- SNIPEF manage the apprenticeship in Scotland.
- Technical and business support.
- Provide quality assurance to consumers.
- SNIPEF is their voice for the industry ensuring they can use their expertise to shape policies and standards.



Nesta/SNIPEF  
**'Start at Home'** project







# What is 'Start at Home' and why are we doing it?

- 40 plumbing & heating engineers upskilled to become heat pump installers.
- 20 will receive a free heat pump to install at their own home.
- Nesta and SNIPEF will conduct research to discover the challenges and benefits of this approach.
- The findings will be used to help shape future training and lobbying.
- Aim to improve training, installer confidence and quality of installations.





**Heat pumps: more than 80% of households in Great Britain 'satisfied with system'**  
Exclusive: England, Scotland and Wales survey reports similar response to people with gas boilers

**Heat pumps twice as efficient as fossil fuel systems in cold weather, study finds**  
Doubts about whether heat pumps work well in subzero conditions shown to be unfounded, say researchers

**'I don't regret my heat pump - here's why you should get one, too'**

**'Greener, cheaper, much warmer' - heat pump owners laud their new system**



Thank you for your attention.

Any questions?



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