

This paper looks at the potential benefits of climate proofing Scotland's buildings through retrofitting programmes. It considers how these programmes should be delivered to reduce emissions quickly while maximising social and economic benefit. It recommends that more direct approach to delivery is needed with the Scottish Government providing the finance necessary for Local Authorities to establish municipal energy companies and deliver street-by-street retrofitting programmes, supported by a National Infrastructure Company.



The social, economic and environmental benefits of retrofitting

- Emissions from buildings were responsible for 23% of Scotland's emissions in 2018.ⁱ Emissions from the homes alone are 13%. We need to reduce emissions from our homes if we are to meet climate targets.
- 613,000 households in Scotland are experiencing fuel poverty, with half of them in extreme fuel poverty. Figures are particularly high in our island and rural communities. It is also estimated that COVID and an increase in working from home will lead to a further 136,000 households falling into fuel poverty – meaning 30% of our households will be in fuel poverty.ⁱⁱ This is before the recent increase in gas prices and before cuts to Universal Credit. Given that £1 in every £4 spent on heating our homes leaks out again, we need to make our homes more energy efficient if we are to reduce fuel poverty.
- The energy crisis, and a lack of preparation through storage capacity has left the UK particularly exposed to the spiralling cost of wholesale gas prices. Making our homes more energy efficient will reduce our need for imported gas and improve our security of supply.
- A number of health issues in Scotland are caused or exacerbated by cold houses. Making our homes warmer can help overstretched NHS services.
- 61,000-136,000 jobs could be created over 10+ years in decarbonising buildings and broadband, with a further 22,000-37,000 jobs over three years in building new social housing, according to STUC commissioned research.ⁱⁱⁱ
- The Existing Homes Alliance estimates that 12,900-13,800 skilled jobs in the energy efficiency retrofit sector could be created and sustained in Scotland per year, while the low carbon heat sector could create and sustain around 3,300-7,800 skilled jobs.^{iv}
- Unlike offshore wind jobs, retrofitting jobs are difficult to offshore: they largely require work that is delivered on-site. This requires a local workforce and that could be of real benefit in rural and island communities.

How much will retrofitting cost?

There are more than 2.6 million dwellings in Scotland, and the vast majority require retrofitting.^v Although there is a great deal of uncertainty about costs, it is estimated that energy efficiency measures, plus low-carbon heating systems, could be between £9,000 and £20,000 per dwelling.^{vi} The Scottish Government's own Heat in Buildings Strategy suggests a total cost of more £33 billion to transform our homes and buildings.^{vii} It is clear therefore that the £1.8 billion of funding planned for this session of Parliament is insufficient,^{viii} particularly given evidence at a UK level that for every £1 invested in domestic energy efficiency, it is estimated that GDP could be increased by £3.20 and UK Government tax take by £1.27.^x

Where are we now?

The total number of retrofitting measures installed in 2017/18 was 27,700, assisting nearly 15,500 households.

Type and number of energy efficiency measures installed in 2017/18

Type of installation	Installations
Solid wall insulation	8,620
Cavity wall & other insulation	8,274
Heating system installations	4,474
Other measures	4,366

Source: Existing Homes Alliance

It is estimated that only around 4% of Scottish homes have had some form of renewable heating installed. It may be necessary therefore to install on average 70,000 renewable heating solutions each year to achieve targets.^{xi} This can be contrasted with a current rate of around 1,500 installations each year.^{xii}

Scaling up delivery poses a huge skills challenge, particularly given the large number of self-employed contractors understandably reluctant to take time out of being paid to learn new skills. Public works programmes, delivered by Local Authorities but funded by the Scottish Government, could help bring new capacity into the workforce and address this significant challenge.

Learning from previous transitions

While a number of energy transitions have been detrimental to working class communities, the United Kingdom's conversion from 'town gas' to 'natural gas' between 1968 and 1976 involved converting around 40 million appliances for 14 million customers, mostly households. Working alongside 12 regional gas boards, the Government took a central coordinating role, with a nationalised Gas Council giving the state direct control of the required investment.^{xiii}

Sweden's transition to district heating is another example which has enabled high security of supply, low carbon dioxide emissions, and efficient use of available heat sources.^{xiv} Evidence from across Europe also shows the key role of municipalities in the energy transition – delivering publicly owned renewable energy and delivering retrofitting programmes.*

Lessons can be learned from both of these examples about the scale of Government intervention required to ensure a comprehensive and successful street by street transition of residential heating.

The need for a publicly owned infrastructure company

The construction industry is well known for corrupt practices.^{xv} Carillion, which held contracts with the Scottish Government and the West of Scotland Housing Association, is just one example of Directors enriching themselves at public expense.^{xvi} Procurement fraud, supply chain fraud, tax fraud, and embezzlement are all well-known problems.^{xvii} Poor employment practices including bogus self-employment; umbrella contracts; a lack of health and safety standards; and the systematic blacklisting of workers, means that financial insecurity and health and safety risks are passed onto workers.^{xviii} Meanwhile, price-fixing passes costs onto clients, many of whom are public sector institutions.

The Scottish Government has said it ‘will start work to create a National Infrastructure Company’.^{xix} If aligned with municipal energy companies, as advocated by Commonweal and the Scottish Greens,^{xx} this could play an important role in decarbonising our homes and creating well-paid, unionised, green jobs. It is disappointing that the Heat in Buildings Strategy published in October^{xxi} appears to have no mention of a publicly-owned energy company, a national infrastructure company or municipal energy companies.

Public investment and control

Done wrongly, decarbonising our homes could push costs onto tenants, increase fuel poverty and lead to work needing to be redone. But done correctly it could reduce our emissions, tackle fuel poverty, and create green jobs across Scotland.

A number of steps need to be taken. Overall investment needs to be scaled up with appropriate resources to support Local Authorities develop and deliver new Local Heat and Energy Efficiency Strategies. Local Authorities hold important information on local housing conditions and can help identify those who would be classed as low income and so the new National Energy Agency should be designed to support action at a local level. Investment in advice and support services are needed.^{xxii} Investment in skills and training is a huge challenge.^{xxiii} Regulation and rent controls are required to ensure tenants are not left to pay for the bill of refurbishment. Fundamentally however, a more direct approach to delivery is needed with publicly owned companies delivering a ‘whole house retrofit’ approach.

The STUC is calling on:

- Local Authorities to write to the Scottish Government asking for funding to establish Municipal Energy Companies which would develop, own and deliver low carbon heat and energy efficiency infrastructure at local or regional level.
- The Scottish Government to provide funding to Local Authorities to establish these companies and deliver area-based programmes.
- The Scottish Government to establish a National Infrastructure Company to support Local Authorities in decarbonising buildings.

“Never has it been clearer that we need to upgrade our homes. Warmer homes mean healthier, happier people and less pressure on the NHS.

Our campaign sets out how to do this in a way which creates good quality green jobs, tackles fuel poverty, reduces emissions, and provides better value for money for the taxpayer. With the right level of funding, Municipal Energy Companies could truly be transformative, and the creation of a National Infrastructure Company would ensure that Local Authorities can be adequately supported to decarbonise buildings.

With COP26 approaching, we need to drastically reduce emissions from our homes, and this is the way to do it that creates good quality jobs and benefits us all.” - Roz Foyer, STUC General Secretary



COMMON WEAL



The Energy Poverty Research initiative

- ⁱ <https://digitalpublications.parliament.scot/ResearchBriefings/Report/2021/1/12/109b01e8-6212-11ea-8c12-000d3a23af40>
- ⁱⁱ <https://www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/>
- ⁱⁱⁱ http://stuc.org.uk/files/Policy/STUC_Green_Jobs.pdf
- ^{iv} <http://existinghomesalliancescotland.co.uk/wp-content/uploads/2021/08/EHA-Green-Recovery-Report-Final.pdf>
- ^v <https://www.gov.scot/publications/housing-statistics-scotland-2019-key-trends-summary/>
- ^{vi} <http://existinghomesalliancescotland.co.uk/wp-content/uploads/2021/08/EHA-Green-Recovery-Report-Final.pdf>
- ^{vii} <https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/>
- ^{viii} <https://www.gov.scot/publications/scottish-government-and-scottish-green-party-shared-policy-programme/documents/>
- ^{ix} <https://researchbriefings.files.parliament.uk/documents/POST-PN-0550/POST-PN-0550.pdf>
- ^x <http://existinghomesalliancescotland.co.uk/wp-content/uploads/2021/08/EHA-Green-Recovery-Report-Final.pdf>
- ^{xi} https://www.vivideconomics.com/wp-content/uploads/2019/10/WWF_Report_VIVID_Climate_2019_web.pdf
- ^{xii} <http://existinghomesalliancescotland.co.uk/wp-content/uploads/2021/08/EHA-Green-Recovery-Report-Final.pdf>
- ^{xiii} <https://obr.uk/box/decarbonising-domestic-heating-lessons-from-the-switch-to-natural-gas/>
- ^{xiv} <https://www.sciencedirect.com/science/article/pii/S0360544217304140>
- ^{*} <https://municipalpower.org/articles/the-state-of-european-municipal-energy-transition-an-overview-of-current-trends/>
- ^{xv} <https://www.ciob.org/industry/research/Corruption-UK-Construction-Industry> and <https://competitionandmarkets.blog.gov.uk/2021/04/28/cartels-in-construction-cma-message-for-business-leaders/>
- ^{xvi} <https://birlinn.co.uk/product/bandit-capitalism/>
- ^{xvii} <https://www.gov.scot/publications/report-review-compliance-enforcement/>; and <https://www.scottishconstructionnow.com/article/fraud-and-bribery-in-the-construction-sector-another-sting-in-the-tail>
- ^{xviii} <https://innovatingworks.org.uk/dist/assets/Facing%20the%20future%20constructively.%20Report%20for%20STUC.pdf>
- ^{xix} <https://www.gov.scot/publications/fairer-greener-scotland-programme-government-2021-22/>
- ^{xx} <https://commonweal.scot/build-for-the-future-not-for-failure/>; <https://greens.scot/policy/energy> and <https://twitter.com/markruskell/status/1440625050965602311>
- ^{xxi} <https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/>
- ^{xxii} Recent research by Scottish Housing Day partners found that 63% would like to make improvements to energy efficiency of their home but could not afford to; 48% think it is difficult to access information on how to make improvements; and 38% thought it would be too difficult to organise: http://www.scottishhousingday.co.uk/?page_id=12945
- ^{xxiii} https://neweconomics.org/uploads/files/Great-Home-Upgrade-Policy-Briefing_September-2021_final.pdf