



Warm, affordable to heat, low carbon homes for all

May 2015

The Existing Homes Alliance Scotland¹ (ExHAS) is a coalition of environmental, anti-poverty, consumer, housing and building organisations calling for urgent action to transform Scotland's existing housing stock and make it fit for the 21st century. With 39% of Scottish households living in fuel poverty it is clear that the statutory target to eradicate fuel poverty by November 2016 will not be achieved. Annual climate change targets are being missed and the housing sector is not on track to deliver expected emission reductions.

Therefore the Alliance believes we need a bold programme of low-carbon refurbishment of Scotland's homes set in the context of a **National Infrastructure Project**, incorporating targets for **energy performance, fuel poverty** and **climate emissions reduction**. The programme should include incentives, support and regulations aimed at cutting greenhouse gas emissions and tackling fuel poverty. We believe a **'Warm Homes Bill'** that incorporates these policies and programmes should be introduced to provide a strong statutory foundation.

National Infrastructure Project

The Alliance calls for energy efficiency to become a National Infrastructure Project. This would mean that the retrofit of Scotland's existing housing would become a national 'project' with legally-binding, long-term targets, key milestones and budgets.

The overall goal of the project would be for **all housing to reach the Energy Performance Certificate (EPC) band C by 2025**. This means at least 127,000 homes would be upgraded every year between now and 2025, resulting in residents across all housing tenures enjoying the benefits of warm, affordable to heat and low carbon homes. To help ensure the target is met, we call for an interim milestone of 70% of homes to meet EPC band C by 2020. There will be exceptions for properties which struggle to meet this target, but every effort should be made to overcome any barriers to upgrading these properties. As part of this process, improvements will need to be made to ensure the accuracy and quality of EPCs and the assessment process are improved.

The overall cost of this infrastructure project would be in the order of £10.7bn over 10 years² of which £4.5bn would be made up of public investment. According to recent research³, this investment would represent a benefit cost ratio of over 2:1, and therefore falls into the category of 'high' value for money, and compares favourably in terms of value for money with other infrastructure projects.

Such a programme would be funded by a combination of government grants for the fuel poor, incentives and low interest loans for the able to pay, and private investment from homeowners,

¹ The ExHAS steering group members are: Association of Local Authority Chief Housing Officers, Chartered Institute of Housing, Changeworks, Citizens Advice Scotland, Energy Action Scotland, Energy Agency, Energy Saving Trust, Scottish Federation of Housing Associations, WWF Scotland

² Building the Future: The economic and fiscal impacts of making homes more energy efficient, 2014, Consumer Futures. <http://www.energybillrevolution.org/wp-content/uploads/2014/10/Building-the-Future-The-Economic-and-Fiscal-impacts-of-making-homes-energy-efficient.pdf>

³ Ibid.

landlords, and other sources. We would expect government support for loans to lever in more than twice as much funding from private householders, and in time loans would be paid back, replenishing capital budgets. To ensure that the predicted savings from measures are maximised behaviour change support would be an integral part of the programme.

Based on research for the Energy Bill Revolution⁴ for the UK, a scenario for the breakdown of public and private expenditure for Scotland could be:

Public Investment 2015-2025	Private Investment 2015-2025
£2.2 bn grants	£6.15bn
£2.3 bn loans	
TOTAL £4.5 bn / £450m per annum	TOTAL £6.15bn / 615m pa
<i>OR £330m per annum if ECO or equivalent included</i>	

The Building the Future scenario consists of a programme to upgrade all UK housing to EPC band C, financed via energy efficiency grants for low income homes, and a 0% interest rate loan for able-to-pay homes, both capped at £10k. The report analysed the investment required to upgrade homes to EPC band C by determining the package of energy efficiency measures that represented the most cost-effective route to achieving the target.

These estimates do not include funding from any current or future obligation on energy providers. However, if it is assumed Scotland receives its pro-rata share and a scheme or something similar continues at current levels to 2025, this could off-set public expenditure by approximately £120m per year. Given proposals to devolve the design and implementation of the supplier obligation in Scotland, there could be even more opportunities to maximise the impact of this spend.

Rationale

With fuel poverty rates on the rise and annual climate targets being consistently missed, a new approach to improving Scotland’s housing stock is required. Analysis for WWF, using the Scottish Government’s housing model, shows that the vast majority of Scotland’s homes will have to reach a C rating or above by 2020 to achieve a 40% emissions reduction in the sector⁵. In terms of fuel poverty, 87% of households at bands F&G live in fuel poverty, as opposed to 27% at bands C and B.⁶ Research for WWF, Consumer Futures Scotland (now part of Citizens Advice Scotland) and the Energy Bill Revolution have identified a multi-billion pound funding gap to deliver required emissions savings and eradicate fuel poverty.

The National Infrastructure Project differs from the current schemes by providing a comprehensive approach over a minimum of a 10 year period to reducing energy use and switching to low carbon heat. As with other national infrastructure projects, this project will require a high level, cross-departmental project team which will design the project in such a way as to attract the necessary private funding from investors and householders and win the numerous returns on public investment.

At present, the Scottish Government’s capital budget supports a number of high carbon projects, including an extensive road building programme. The Queensferry Crossing, for instance, will

⁴ Ibid

⁵ Maximising the Minimum, WWF Scotland, 2011 http://assets.wwf.org.uk/downloads/min_stds_full_web.pdf

⁶ SHCS key findings, 2013, Scottish Government

cost £1.45bn of Scottish Government capital funding to complete from 2011-2016, and initial estimates for the A9 dualling project indicate a budget of up to £3bn up to 2025. While there is a commitment to low carbon infrastructure in the Infrastructure Investment Plan, there is a lack of ambitious, 'at scale' low carbon projects supported by the Scottish Government. The Home Energy Efficiency Programmes for Scotland (HEEPS) is included in the Infrastructure Investment Plan, but this is as an annual funding line rather than a discrete, time-bound project with a clear end goal.

There will be a significant gap in the Scottish capital budget opening up from 2017/18 onwards following the completion of projects such as the Queensferry Crossing and the South Glasgow Hospital Development, so there is a clear opportunity to make energy efficiency a National Infrastructure Project, with a budget large enough to transform Scotland's housing stock. The Scottish Government's new borrowing powers under the Scotland Act 2012 also provide an additional opportunity to fund energy efficiency at big scale, allowing annual borrowing of up to 10% of the annual capital budget limit (approximately £300m/year).

While led by the capital budget, innovative funding models should be included to deliver on the overarching objective, leveraging in private sector investment from the Green Investment Bank, private investors, and householders.

A National Infrastructure Project on energy efficiency would:

- Generate a three-fold return in GDP for every pound invested by government⁷.
- Improve health and well-being with resulting lower healthcare expenditure.
- Help to eradicate fuel poverty.
- Create and sustain local jobs.
- Improve energy security.
- Deliver substantial climate emissions reductions.

In addition to the energy performance target noted above, the National Infrastructure project would include specific targets on fuel poverty and climate emissions reduction which are set out below.

Fuel poverty

Target

The National Infrastructure Project should include a **new statutory target to eradicate fuel poverty**. We call on the Scottish Government to acknowledge that the 2016 fuel poverty target will be missed and convene a time-limited series of roundtables in 2015 to define the new statutory target and milestones to measure progress by early 2016.

The target should encompass all aspects of fuel poverty – energy efficiency, income and energy costs. We also suggest there is a fourth aspect to fuel poverty relating to how people live in their homes – to ensure they are getting the most out of heating systems and renewables and adopt the best energy-saving behaviours.

The overall target should be accompanied by a new statutory Scottish Government fuel poverty programme that sets out clear milestones laid down in legislation with accompanying annual targets in order to measure progress towards fuel poverty eradication.

⁷ Building the Future: The economic and fiscal impacts of making homes more energy efficient, 2014, Consumer Futures

While not an area of primary focus for EXHA as a whole, we recognise that the success of any fuel poverty strategy will also rely on firm targets and milestones in the areas of reducing energy costs and improving people's incomes. EXHA therefore calls on the Scottish Government to make full use of its current devolved powers to take appropriate action in those areas too, and where they do not have explicit powers, to exert as much influence as possible at a UK level to ensure progress is made.

The statutory fuel poverty target should be accompanied by a legislative framework which provides for adequate scrutiny including the following:

- Reporting to Parliament against annual targets.
- Submitting five year delivery plans and progress reports to Parliament.
- Updating the Fuel Poverty Forum's remit to provide regular scrutiny (quarterly) of the delivery plan and annual targets.

The target should be based upon the usual definition of fuel poverty which is the need to spend more than 10% of income to pay for fuel bills. This should include all energy used within the home and heating the home to a satisfactory standard. It is acknowledged that if over 20% is required, then this is termed as being in extreme fuel poverty. There are areas of Scotland where the situation is even worse – 11% of respondents to a recent survey by The Energy Advisory Service (TEAS) in the Western Isles reported that they were spending more than 30% of their income on fuel⁸.

While we support the continued use of the current fuel poverty definition, we are also supportive of the need identified by the Scottish Fuel Poverty Forum to refine the underlying assumptions supporting the definition so it better reflects people who are genuinely fuel poor.

Delivery

The Scottish Government's fuel poverty programme should be required to provide measures which are heavily subsidised or at no cost to the householder to achieve a minimum of EPC band C (there will be some exemptions where this is not technically feasible). The EPC band C will not eliminate fuel poverty, but is a reasonably cost-effective standard that will achieve meaningful energy bill savings.

To achieve these targets, it is expected the programme will need to deliver a whole house approach to a minimum of 78,000 homes per year to 2025, over three times the current activity of HEEPS. In addition, the Scottish Government should fund a new programme of behavioural advice and support to ensure people can maximise the energy performance of their homes.

The current winter fuel and cold weather payments should be retained as universal benefits due to savings on administrative costs. These payments should be seen as a help for those in and at risk of falling into fuel poverty but not a replacement for energy efficiency upgrades. It may be useful to consider the potential for tailored support for those living off the gas grid, such as a premium payment to help with the excessive costs of non-regulated fuels, as well as a lack of consumer protections and limited access to government-funded programmes.

⁸ Fuel Poverty Report 2014, The Energy Advisory Service, on behalf of Comhairle nan Eilean Siar
http://www.theenergyadvisoryservice.co.uk/downloads/FuelPovertyReport2014_Email-Layout.pdf

Climate change and emissions reduction

Target

The National Infrastructure Project should make clear its ambition to significantly reduce emissions from the housing sector. The Alliance continues to call for the housing sector to deliver a 42% reduction by 2020. These emissions savings can be achieved relatively easily compared with other sectors such as transport because they are cost effective, technically possible, and popular with householders.

The Report on Proposals and Policies 2 (2013-2027) sets out a lesser ambition of 37% reduction by 2020 and 51% by 2027. We believe the Scottish Government is not on track to meet its plans and must redouble its efforts to make sure housing meets its low carbon potential.

Looking ahead to 2050, we need to plan for climate-friendly homes that have zero carbon emissions. This means the next RPP, covering the period 2028-2032 will need to increase the ambition for housing, and make sure the plans are consistent with the government's policy to 'largely decarbonise' the heat sector with 'significant progress' by 2030. Initial findings of forthcoming research by Ricardo AEA for WWF Scotland show that the residential sector will have to reduce emissions by approximately 70% on 2015 levels by 2030 (including electricity and heat) in order to hit climate targets, and 40% of heating must be from renewable sources by that point.⁹

The Alliance calls on the Scottish Government to assess the carbon savings from raising the energy performance standard of homes to EPC band C by 2025. We also recommend that the Scottish Government model what a 70% reduction in emissions on 2015 levels by 2030 means in practice for housing and their EPC ratings. This should be done through the energy systems modelling being undertaken for RPP3.

The *Building the Future* report provides modelled figures at a UK level, which can be applied pro-rata in Scotland as a very rough estimate. However, they are likely to be a significant underestimate due to the different nature of the Scottish housing stock and the fact that the *Building the Future* scenario relies only on upgrading *fuel poor* homes to C by 2025, rather than *all* homes by 2025. These figures indicate a pro-rata carbon saving in Scotland of approximately 1.34MtCO₂ /year by 2025.¹⁰ This is close to double the rate of carbon savings anticipated from all RPP2 policies in the homes sector by 2027.

Delivery

In addition to the target for all homes to be at EPC Band C or above, we call for the following policies and programmes to help ensure emissions are reduced in line with the Climate Change (Scotland) Act:

⁹ Ricardo AEA's figures for residential sector emissions reduction cover both home heating and electricity use in homes, and as such are not directly comparable with RPP2 figures.

¹⁰ The Building the Future modelled savings take into account direct, indirect and macroeconomic rebound effects. Approximately one quarter of the carbon savings are in electricity, while the remainder are in heating/cooking. However, Scotland has almost double the proportion of electrically heated homes than the rest of the UK (13% vs 7%) so the impacts in Scotland will be different.

Regulation:

The Alliance continues to call for the regulation for minimum standards of energy performance for all private sector housing, focusing on the worst-performing homes where fuel poverty is concentrated. These properties are lagging behind, with little or no improvement since 2010.

The Alliance believes the regulation should initially require that all private sector housing must meet a minimum EPC band E at the point of sale and rental. The regulation should include a trajectory to raise the minimum standard to a D within five years of implementation. While there will be a need for some exceptions due to technical barriers to upgrade, the principle should be that every property is improved. When engaging home owners and landlords in minimum standards the Scottish Government should encourage them to go further than the minimum, where this is financially and technically feasible, so that any changes contribute to fuel poverty and carbon emission reduction targets.

This regulation will play a vital role in achieving the National Infrastructure Project target raise the standards of all homes to EPC Band C by 2025 by acting as a backstop, accelerating upgrades, and transforming how the property market values energy efficient homes.

In addition, the Scottish Government should apply the standard for any household in receipt of improvement grants (eg local authority, Historic Scotland), and at the point of major refurbishment.

To support compliance with the regulation and encourage wider and more ambitious energy upgrades where possible, the Scottish Government should develop a well-resourced implementation strategy which would include advice, incentives, and support to the energy efficiency industry to ensure capacity and skills are in place.

Evaluation:

The Alliance is concerned that there is a significant 'performance gap' between projections for emissions reductions and what is being achieved in practice. We believe there is a need for more detailed evaluation of Home Energy Efficiency Programmes for Scotland, including in-home monitoring and analysis of householder experiences. Consideration should also be given to how quality control and behaviour advice can be enhanced in future programmes. RdSAP, the assessment method which is the basis of both recommendations for individual homes and overall strategies, needs to update and improve the theoretical model to reflect the actual impact of measures.

Support:

Current support and advice provision needs to be augmented as follows:

- Further research, advice and supply chain support for appropriate measures for 'expensive to treat' properties.
- Ongoing customer journey for householders to support the adoption of energy saving behaviours
- Engage with the property industry to help raise awareness and shift attitudes to energy performance.
- Smart meters with in-home displays provide an opportunity for engagement and there is concern that it could be missed. There is a need to link advisory services with smart meter energy data.

Low carbon heat:

The Alliance calls on the Housing Joint Policy and Delivery Group to develop a vision of how homes will be heated in 2030, 2040, 2050 that take account of fuel poverty, emissions, and practical issues such as grid capacity. According to recent research for WWF Scotland, we need 40% of our heat delivered by renewable sources by 2030 if we are to reach climate change targets. This work will inform the balance of funding between district heating, electric and gas connections and the delivery of the Scottish Government's Heat Generation Policy Statement.

This vision will need to challenge the long term dependency on gas which is not sustainable for either achieving climate change targets or the availability of supply. The fuel poverty programme should be sense-checked against this strategy, to make sure adequate consideration is given to eradicating fuel poverty through non-gas technological solutions, such as micro-renewables, harvested waste heat, and other forms of district and communal heating.

Conclusion

A National Infrastructure Project on energy efficiency would deliver many benefits for Scotland's economy, society and environment.

Fuel poverty:

The project would make all fuel poor households highly energy efficient, having a significant mitigating impact on fuel poverty.

Climate emissions reduction:

The project would reduce carbon emissions by more than 1.34MtCO₂ p.a. by 2025.

Jobs and the economy:

The project would¹¹ provide a net increase in jobs of 8-9000 per year. These jobs would be spread around Scotland unlike other infrastructure projects. It would also be a 'value for money' project – creating more jobs and benefits for the wider economy than a fiscally equivalent spending package¹². Finally, it would reduce fuel cost by £552 pa for current fuel poor households.

Health:

The project would reduce costs to the NHS. The cost of fuel poverty in the UK to the NHS is likely to be in the region of £600m to £1bn per annum. This would equate to cost of between £48m - £80m per annum for Scotland, though this is likely to be a conservative figure. It is also worth noting the recent NICE guideline¹³ about reducing the risk of death and ill health associated with living in a cold home. The report recommends that as a minimum, properties should be raised to an EPC band C and ideally to a band B.

¹¹ Economic impact of improving the energy efficiency of fuel poor households in Scotland, 2014, Consumer Futures Scotland

¹² Ibid.

¹³ <http://www.nice.org.uk/guidance/ng6/resources/excess-winter-deaths-and-morbidity-and-the-health-risks-associated-with-cold-homes-51043484869>

Energy security:

The economy would be less vulnerable to energy price fluctuations, and less dependent on imports and fossil fuels. This would make for a more resilient and low carbon economy.

Summary

A National Infrastructure Project for energy efficiency aimed at upgrading Scotland's housing stock will help eradicate fuel poverty and future-proof others from falling into fuel poverty. It will make a significant contribution towards meeting Scotland's ambitious climate change targets. Importantly, it will do this while providing a high Value for Money infrastructure programme, with further benefits for health, local jobs, and energy security.

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