



WWF

REPORT

SCOTLAND

2012

Conservation

Climate Change

Sustainability

MIND THE GAP: FUNDING HOME ENERGY EFFICIENCY TO DELIVER SCOTLAND'S CLIMATE CHANGE AND FUEL POVERTY TARGETS

An analysis of the investment challenge

POLICY SUMMARY

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Based on the full report to WWF Scotland from Verco¹.

October 2012.

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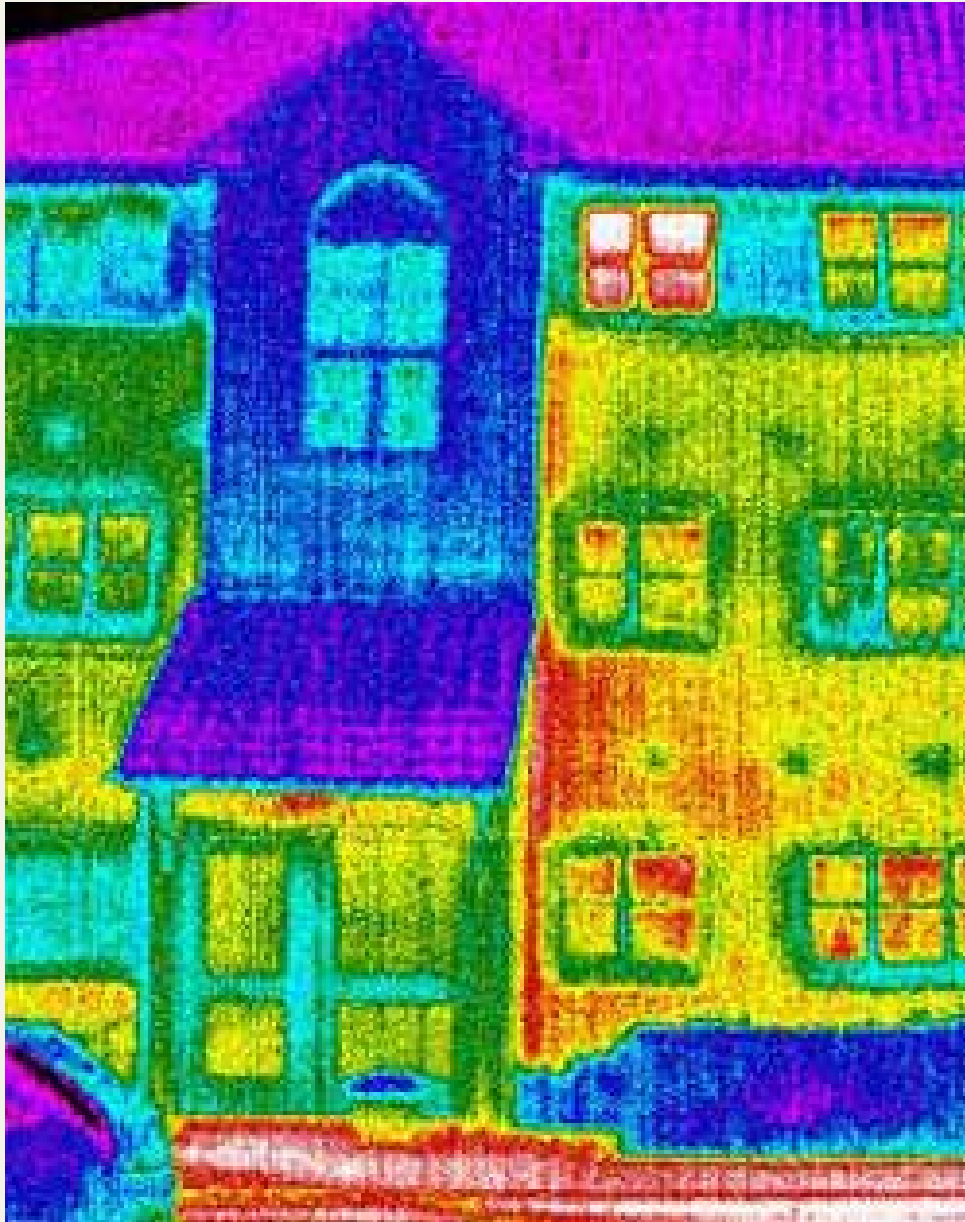
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Acknowledgements

Written by Verco for WWF Scotland.



1. *Mind the Gap: Funding Home Energy Efficiency to deliver Scotland's Climate Change and Fuel Poverty Targets – an analysis of the investment challenge*, (October 2012), a report to WWF Scotland by Verco



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Thermal image showing heat loss from a typical residence.

POLICY SUMMARY

The Scottish Government has legally binding targets to cut greenhouse gas emissions by 42% by 2020 and 80% by 2050 over 1990 baseline. It also has a statutory commitment to end fuel poverty, as far as is reasonably practical, by 2016.

25%
HOUSING SECTOR
ACCOUNTS FOR ¼ OF
SCOTLAND'S CARBON
EMISSIONS

The housing sector accounts for around a quarter of Scotland's carbon emissions and one third of its energy demand. The poor energy performance of the existing housing stock is also a significant contributor to fuel poverty. Therefore improving the energy efficiency of the housing stock is critical to delivering against both these targets. WWF commissioned Verco² to analyse the total investment challenge (public and private funding) required to meet the 2016 fuel poverty target and the housing sector's share of the 2020 climate change emission reduction target. The projected investment shortfall has then been worked out based on the forecasted Scottish Government spending, expected funding through the obligation on energy companies to reduce carbon, as well as expected private sector investment in domestic energy efficiency through the Green Deal.

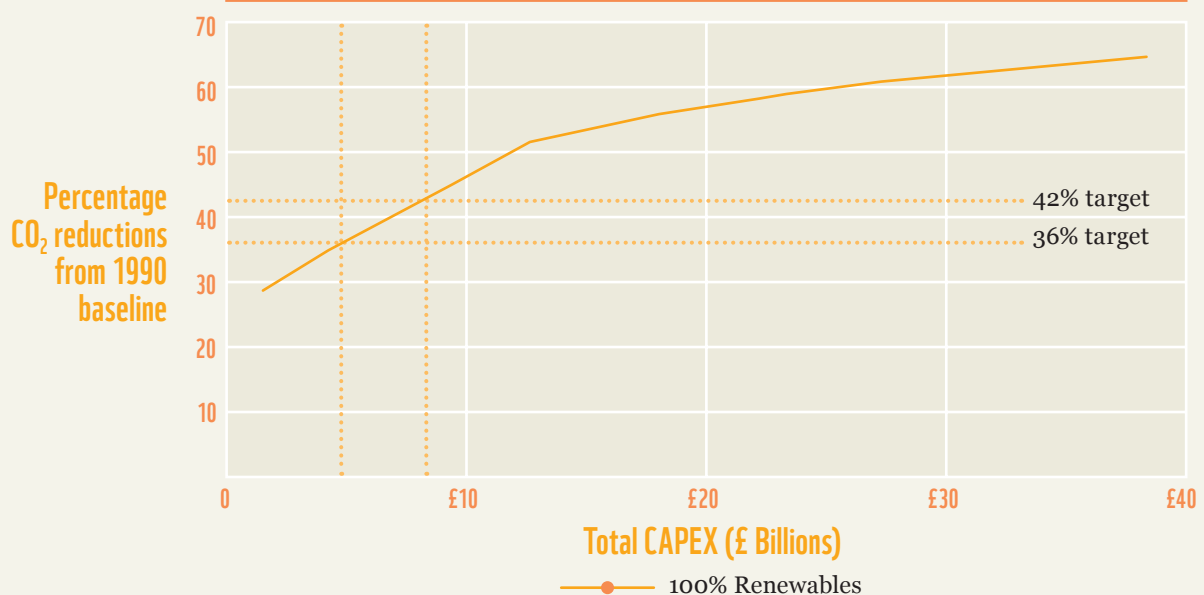
Climate change

The government is committed to a 36% reduction in emissions from a 1990 baseline from the housing sector, the ambition given in the Scottish Government's report, *Low Carbon Scotland* (also known as the Report on Proposals and Policies³) which sets out how the government expects to achieve emissions reductions across all sectors of the economy. The analysis indicates that the total investment cost (public and private funding) of delivering a **36% reduction in emissions from the housing sector by 2020 is around £4.6bn.**

£7.7bn
TOTAL INVESTMENT
REQUIRED TO ACHIEVE
42% CUT IN CLIMATE
EMISSIONS FROM
HOUSING

WWF believes the housing sector can and should deliver more – a 42% reduction by 2020 – because the technology is readily available, warm homes are popular, it helps deliver on fuel poverty and green jobs, and the results are durable – households will reap the savings of energy upgrades for years to come. The analysis suggests the **costs to meet a 42% reduction in carbon emissions by 2020 would be about £7.7bn.**

FIGURE 1 INVESTMENT REQUIRED TO DELIVER 2020 CLIMATE CHANGE TARGET



2. Verco – energy and carbon advisory services consultancy.

3. *Low Carbon Scotland: Meeting the Emissions Reduction Targets 2010-2022*, Scottish Government.

£1.5bn
GOVERNMENT'S
PROJECTED
INVESTMENT ON
FUEL POVERTY AND
DOMESTIC ENERGY
EFFICIENCY TO 2020

In contrast, **the level of funding available under existing and proposed carbon reduction policies between now and 2020 is around £1.5bn, a fraction of the required level.** Scottish and UK government policies and programmes will need to generate over £6bn, from the private sector by 2020. The Green Deal is likely to contribute only marginally to these targets: around a quarter of a billion investment expected based on uptake rates published by DECC. Government programmes alone cannot be expected to plug this gap, but government should know how that private investment will be generated through its leadership, policies and programmes.

The total investment required to meet the 36% ambition set in the Report on Proposals and Policies would require £4.6bn, still 3 times the current and projected government investment rate, leaving £3.1bn to be met by the private sector.

TABLE 1 EXPECTED INVESTMENT DUE TO CURRENT AND PROPOSED POLICY INSTRUMENTS

INSTRUMENT	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	TOTAL (£ MILLIONS)
Proposed National Retrofit Programme		£65	£66.25	£67.6	£68.9	£70.3	£71.7	£73.2	
Eco – Scottish proportion (based on Scottish homes forming 9.1% of UK housing stock)	£118.3	£118.3	£118.3	£118.3	£118.3	£118.3	£118.3	£118.3	
Green Deal Promotion – Scottish proportion	£20.1								
Fuel Poverty and Domestic Energy Efficiency Programmes (UHS, EAP, Boiler Scrappage)	£65								
Warm Homes Fund (based on proposed £50 spend over course of parliament)	£3.25	£7.5	£18.75	£20.5					
Total available budget targeted at fuel poverty (£ millions)	£100.25	£104.5	£117	£120.1	£100.9	£102.3	£103.7	£105.2	£853.95
Total available budget (£ millions)	£184.7	£190.8	£203.3	£206.4	£187.2	£188.6	£190	£191.5	£1,543

Fuel Poverty

The total investment required to meet the 2016 fuel poverty target is estimated at £6.3bn. This compares with the funding under existing current and projected fuel poverty policies and programmes to 2016/17 of .54bn, leaving a gap of £5.76bn⁴. In other words, for every £1 of government investment, more than £10 of private sector funding must be found. The analysis used previous research carried out by Verco (formerly Camco) for England. The study estimated the level of investment required to upgrade the energy performance of fuel poor homes such that their modelled energy spend does not exceed 10% of the household income (up to a maximum energy efficiency rating of EPC Band B). The projected investment is a generous estimate as it includes the entire National Retrofit Programme budget, which while focused on fuel poverty is also likely to fund measures in other households. This yawning gap highlights the need to tackle fuel poverty on all fronts – income levels, fuel prices, and energy efficiency. However, energy efficiency is devolved to the Scottish Government, and offers a durable solution to fuel poverty, future-proofing homes and locking in savings.



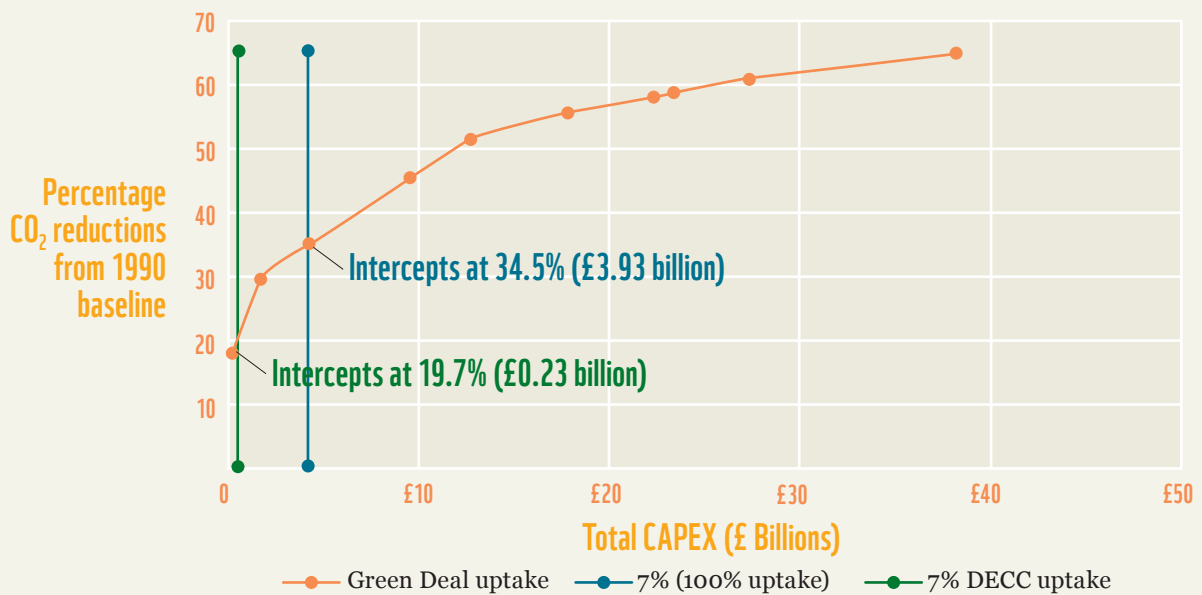
£6.3bn
TOTAL INVESTMENT
REQUIRED TO
ERADICATE FUEL
POVERTY BY 2016

4. Includes the portion of the Energy Company Obligation (ECO) targeted at fuel poverty.

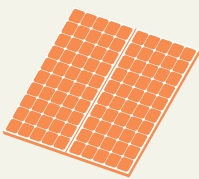
What about the Green Deal?

Estimates have also been made on the level of investment and associated CO₂ savings that could potentially be delivered via the Green Deal across the Scottish housing stock to help plug the gap. Energy efficiency measures that work within the Green Deal ‘Golden Rule’ could, in theory, deliver around 34.5% reduction over the 1990 baseline at an investment of £3.9bn, an additional 17% over and above the reduction achieved to date against the 1990 baseline⁵. However, factoring in the likely uptake for Green Deal based on DECC projections brings down the figure to 19.7% over the 1990 baseline, **providing under 2% to the CO₂ emissions reduction achieved to date⁶ against the 1990 baseline – a marginal contribution.**

FIGURE 2 GREEN DEAL CONTRIBUTION TO EMISSIONS REDUCTION TARGETS



RECOMMENDATIONS



The level of ambition for policy instruments aimed at energy efficiency in the domestic sector needs to be reviewed. Otherwise, there is a very real danger that Scotland will fall well short of delivering its carbon reduction and fuel poverty targets and be forced to live with the consequences - more and more fuel poor households, fewer businesses benefitting from a retrofit revolution, and failing on the promise to fight climate change.

The Sustainable Housing Strategy and the Report on Proposals and Policies offer immediate opportunities to put in place the right combination of policies, programmes and regulation to achieve a rapid shift to low carbon homes. This package will generate a cultural and market transformation in how Scotland values energy and energy efficiency, leveraging in the private investment required. WWF recommends the following steps as essential to plugging the investment gap:

1. **National Retrofit Programme** – local authority led, area-based programme focussed on fuel poverty as set out in the Sustainable Housing Strategy, but with government funding increased to at least £130m per year. The additional funding would increase the breadth and depth of impact for the programme. The funding will attract ECO investment through enabling measures, promotion, and facilitation. It will also plug the gaps where ECO criteria fail to deliver on the Sustainable

5. Based on 2009 Scottish domestic sector data.

6. Based on 2009 Scottish domestic sector data.



© SHUTTERSTOCK

Home energy efficiency is one of the most cost effective ways of reducing Scotland's carbon emissions.

Housing Strategy targets – funding measures for those who are fuel poor, and supporting the Green Deal and other means of private finance such as remortgaging to reduce the interest rate.

2. **The Sustainable Housing Strategy** should make explicit how government policies and programmes will lever in the necessary private investment required to supplement public funding to deliver on climate change and fuel poverty targets. The government should report annually on the balance between public and private investment, as additional public sector investment may be required if sufficient private sector investment is not levered in.
3. **Government commitment to the introduction of minimum standards of energy performance** for all private sector housing at point of sale, rental and major refurbishment (Band E on the EPC scale) from 2015. All government funding for housing should be contingent on the property meeting the minimum standard of E (eg Empty Homes loans) as of now.
4. **Apply all available fiscal measures to reward energy efficiency**; eg council tax rebates, the Land and Buildings Purchase Tax (replacing stamp duty). These must be researched carefully to ensure they are set at the right level, and promoted in the right way, to get a good response.
5. **The Scottish Government should provide funding to help housing associations and co-operatives meet the standards proposed for 2020 and deliver the National Retrofit Programme.** Social landlords should be able to access NRP funding to tackle hard-to-treat properties where accessing ECO is difficult, putting the proposed 2020 standard out of reach. In addition, the government should set aside a percentage of the European Structural Funds that it administers in order to fund retrofit.
6. **Increase investment in Energy Saving Scotland advice centres**, working with community groups to provide greater provision for fuel poverty support services, and a more in depth customer service. This should include a much increased provision for home visits to support the whole-house approach and more complex mix of measures, particularly on hard-to-treat properties and solid wall insulation, as this will be a focus for Green Deal and ECO. The aim should be for a smooth and swift customer journey resulting in an energy upgrade with post-installation advice and support on behaviour change. Once established, the advice centres should maintain this customer relationship for several years, encouraging further upgrades, providing information on new offers, making sure the upgrade is working.
7. **Fund programmes to develop skills and build capacity amongst the workforce to respond to the National Retrofit Programme**, including the specific requirements of the Energy Company Obligation and the Green Deal.
8. **Provide programmes of support to rural, remote and island areas** so they can maximise uptake and benefits of the National Retrofit Programme and ECO (enabling measures, subsidy, training and support for small businesses).
9. **Develop and implement a public engagement campaign** working with local and professional intermediaries to promote the National Retrofit Programme and foreshadow regulation with community groups, small businesses, related government agencies, professional associations.
10. **The Sustainable Housing Strategy Working Group should continue** with a remit to oversee progress on the strategy, the balance of public and private expenditure, and to conduct a thorough review of possible revenue sources for retrofit and how to use existing and potential government powers to lever in this funding.

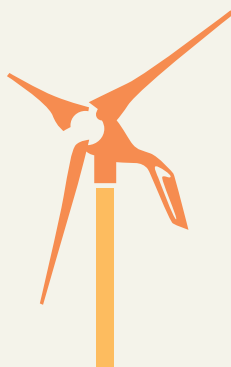


**OVER
800,000
HOUSEHOLDS LIVING
IN FUEL POVERTY**

At a UK level

- 1. The Scottish Government should argue for a new policy mechanism to deliver demand reduction in its electricity market reform (EMR)** via the Energy Bill to pay projects that can demonstrate measured electricity savings on a per KWh basis (energy efficiency feed-in-tariff)⁷. Without amendment, the bill will reward the building of higher cost power stations ahead of the pursuit of lower cost efficiency, and consumers will pay over the odds for their electricity as a result.
- 2. The Scottish Government should work at the UK level to support the recycling of carbon taxes** from EU ETS and carbon price floor into domestic energy efficiency offering a potential revenue stream to fund either grants for fuel poor or appropriate incentives for other households. This will ensure that the impact on fuel poor and low income households is less regressive compared to, let's say, a bigger supplier obligation funding pot as a large proportion of these carbon taxes are already reflected in consumer energy bills.

CONCLUSION



The Scottish Government has set a vision for 'warm, high quality, affordable, low carbon homes' in its Sustainable Housing Strategy. We strongly support this vision, and urge the government to put in place the necessary funding, policies and programmes which will make this vision a reality. This research shows that the investment gap to reach a 42% emissions reduction target by 2020 from the housing sector is about £6bn. Even to reach the more conservative government projection of a 36% reduction in emissions by 2020 requires three times what is now planned. WWF believes government not only needs to increase its own investment in the National Retrofit Programme, but needs to employ all fiscal and regulatory measures to lever in the necessary private investment and create a market that values energy efficiency. Taking forward these recommendations is critical to meeting Scotland's climate change and fuel poverty targets, reducing Scotland's demand for energy and minimising the costs of the transition to a low carbon energy system.

Note on methodology for the report

To model the cost of meeting the 2020 climate targets, the energy savings potential for representative dwelling types within the Scottish housing stock has been carried out using SAP (Standard Assessment Procedure) methodology. The results from the technical analysis have been fed through Verco's in-house NAVITAS tool. The tool prioritises packages of measures across all archetypes based on their cost-effectiveness (£ spend per tonne of CO₂ saved) to work out the scale of investment required across the housing stock, including both social and private sectors. This is an iterative process that allows for targeting the so called 'easy wins' across the stock first, rather than trying to meet the required climate reduction target for all archetypes. Sensitivity analysis has then been carried out to assess the impact of key variables on the scale of investment required.

The figures are based on a grid carbon intensity of 0.1 kgCO₂/kWh in 2020, in line with Scotland achieving its 100% renewable target. The figures also take into account the emission reduction achieved to date (2009 data) against 1990 baseline equivalent to around 18% drop in domestic sector emissions (or a 10% reduction if excluding electricity which is classed as traded emissions and addressed separately in the RPP). The sensitivity analysis suggests a cost range of between £6.3bn - £9.4bn to meet a 42% climate change target depending on weather data used for the analysis and assumptions around the pace of grid decarbonisation.

The full report is available at wwfscotland.org.uk/homes

7. *Creating a market for electricity savings: paying for energy efficiency through the Energy Bill*, October 2012, WWF UK and Green Alliance.

100%
RECYCLED



Delivering Scotland's climate change and fuel poverty targets in numbers

£1.5BN

Government's projected investment on fuel poverty and domestic energy efficiency to 2020.

25%

housing sector accounts for 1/4 of Scotland's carbon emissions.

£6.3BN

Total investment required to eradicate fuel poverty by 2016.



£7.7BN

Total investment required to achieve 42% cut in climate emissions from housing.

OVER 800,000

Households living in fuel poverty.

	<p>Why we are here To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.</p> <p>wwf.org.uk</p>
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