

Additional home energy cost for households not on the gas grid

Description of the Issue

Around 369,000 occupied dwellings (15%) in Scotland are beyond the reach of the gas grid network. The vast majority of these (259,000) of these are in rural areas and a third (117,000) in the Highlands and Islands (Annex A). This equates to 63% of all occupied dwellings in rural areas, compared with only 6% of those in urban areas¹. Given the correlation between off-gas heating regimes and fuel poverty, this puts those in rural areas at a significant disadvantage as they are faced with higher home energy costs. (In addition, there are an estimated 120,000 additional properties in Scotland off the gas grid, but regarded as 'potentially connectable' given their proximity to the existing network. However, the focus of this paper is those households in communities not served by the gas grid.)

Analysis of the root cause

With no access to mains gas for heating, households not on the gas grid cannot benefit from dual fuel discounts and have to rely on electricity and other fuels such as oil for their primary heating source. Moreover, whereas the cost of supplying and distributing gas is spread across *all* UK consumers, the cost of supplying and distributing electricity has 'regional' variations with customers in the North of Scotland 'region' paying the highest charges in the UK (over 2p more per standard unit than in the South of Scotland 'region'). In addition, other factors including dwelling type, build, insulation and weather all play a role in making homes harder to heat and hence more costly to do so. These issues are more prevalent for dwellings in rural areas, and the Highlands and Islands in particular, where coupled with higher energy tariffs and greater under occupancy of homes, fuel poverty rates are amongst the highest across Scotland (Annex A).

Evidence

Lochalsh and Skye Housing Association (LSHA) estimate that households in the area pay an additional £1,000 a year on energy bills than an average sized home in Scotland (Annex B) – a 76% premium. Based on these costs, **the estimated additional energy bill cost for all households in Scotland beyond the gas grid is around £210 million**, of which approximately £99 million is for homes in the Highlands and Islands (Annex C). While heating oil prices are currently well below their 2012 peak, electricity prices have increased. On balance the heating cost premium is likely to be lower than £1,000 at the moment, but not substantially so.

Estimates are based on average home energy bills in 2012. Key assumptions are:

- The additional energy cost for households off the gas grid is the difference between the LSHA estimates of the average fuel bill by primary heating type and the average energy bill for an averaged sized home in Scotland (£1,258);
- All homes in the Highlands and Island² are assumed to pay the additional energy bill costs estimated by LSHA, while a slightly lower additional cost is assumed for those in the rest of Scotland;
- The central heating fuel type (based on data from the 2011 census) is assumed to be the only fuel used.

Possible Current Solutions

Possible current solutions include extending the Islands Fuel Discount scheme for petrol and diesel to an equivalent for heating oil and LPG; lowering the price of the heat component of mains electricity to that of mains gas and/or introducing flat rate home energy tariffs across Scotland.

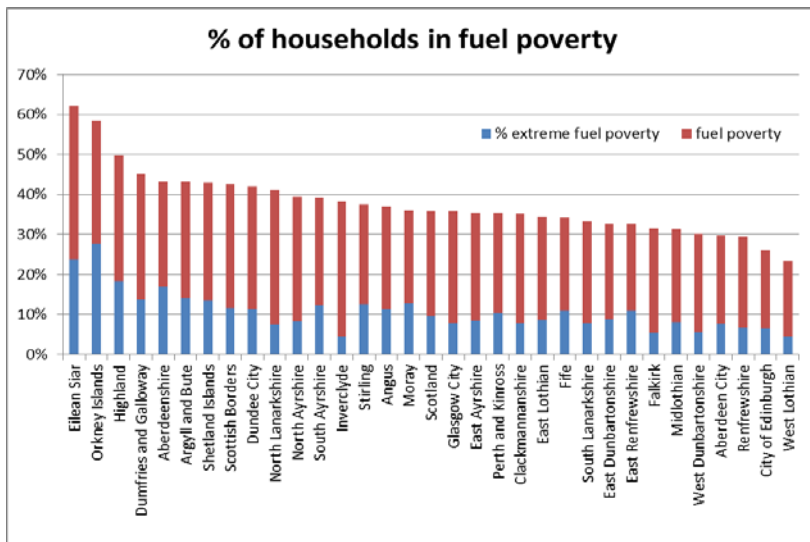
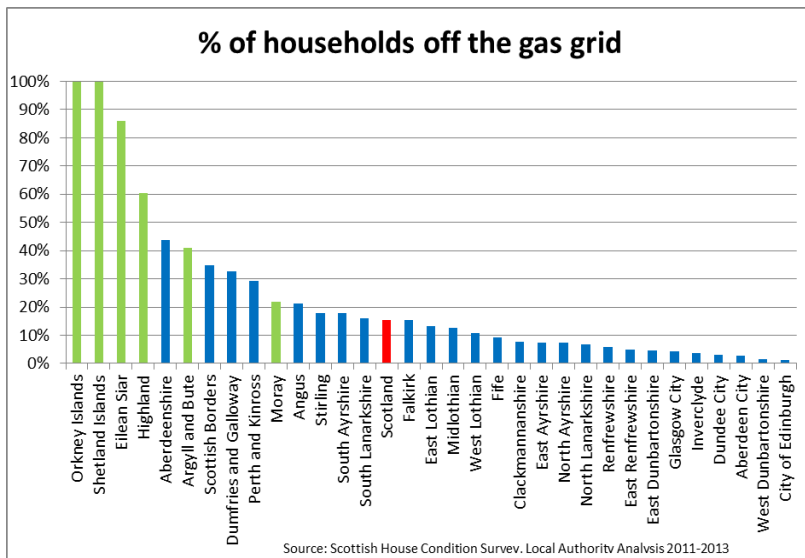
Possible Future Solutions

Future solutions could include the expansion of national or local gas grid networks; the expansion of current programmes to improve the insulation and build of homes in rural areas; and to explore opportunities involving renewable energy heating solutions.

¹ Source: Scottish House Condition Survey Key Findings 2013

² Note calculations for the Highlands and Islands are based on the six local authorities within the area.

Annex A: Proportion of households off the gas grid and in fuel poverty by local authority



Annex B: Estimates of the average total energy bill for homes in Skye and Lochalsh, by primary heating type

Primary Heating Type	Average Energy Bill*	Difference to Scottish Average
Electricity	£1,621	£363
Solid Fuel	£2,176	£918
LPG Gas	£2,357	£1,099
Oil	£2,519	£1,261
All heating types	£2,218	£960
Scottish average energy bill**	£1,258	

*Source: Lochalsh and Skye Housing Association, sample of over 1000 homes in Skye and Lochalsh, 2012 costs;

**Consumer Focus, July 2012

Annex C: Additional cost of energy bills for households not on the gas grid - methodology

1. Estimate the number of households not on the gas grid by central heating type

	Electric central heating	Oil central heating	Solid fuel central heating	Other central heating	None or two or more types of central heating	Total number of occupied households not on the gas grid
Highlands and Islands	46,200	42,300	9,300	3,600	16,000	117,400
Rest of Scotland	120,500	67,500	11,900	7,300	41,700	248,900
Total	166,700	109,800	21,200	10,900	57,700	367,000

Source: Scottish House Condition Survey; Census 2011, note - totals may not sum due to rounding

Assumptions: The distribution of central heating type for households off the gas grid is the same as for all households.

2. Estimate the additional cost per heating type

Additional cost of home energy bills (£)					
	Electric central heating	Oil central heating	Solid fuel central heating	Other central heating	None or two or more types of central heating
Highlands and Islands	363	1,261	918	1,261	960
Rest of Scotland (factor of 0.59)	215	745	543	745	568

Source: Lochalsh and Skye Housing Association 2012 costs; Consumer Focus, July 2012

Assumptions:

- The additional energy cost for households off the gas grid is the difference between the LSHA estimates of the average fuel bill by primary heating type and the average energy bill for an averaged sized home in Scotland (£1,258);
- Central heating fuel type is assumed to be the only fuel used;
- The average energy bill by heating type for households off the gas grid in the Highlands and Islands is the same as calculated by LSHA for households in Skye and Lochalsh;
- Households in the rest of Scotland pay a lower additional cost, applying a factor of 0.59 to the average costs calculated by LSHA. This factor is based on how the average Scottish energy bill compares to the average for households in Skye and Lochalsh.
- 'Other central heating' cost estimates is based on the additional cost for LPG (£1,261) while cost for those with no central heating/two or more types are based on the average additional cost (£960).
- Based on average energy bills in 2012.

3. Calculate the total additional cost of energy bills for households not on the gas grid

Estimated additional cost of fuel for households not on the gas grid (£million)						
	Electric central heating	Oil central heating	Solid fuel central heating	Other central heating	None or two or more types of central heating	Total additional energy cost for households off the gas grid
Highlands and Islands	£16.8	£53.3	£8.6	£4.5	£15.4	£98.6
Rest of Scotland	£25.9	£50.3	£6.4	£5.4	£23.7	£111.7
Total Scotland	£42.7	£103.7	£15.0	£9.9	£39.1	£210.3