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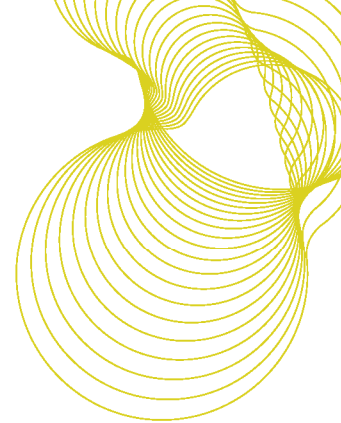
**Living in Wales 2008 –
Evaluating the impact of
energy price rises on
fuel poverty**

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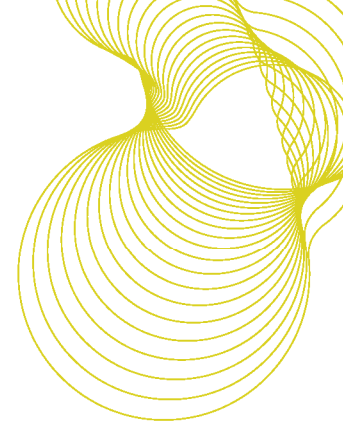
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1 Evaluating the impact of energy price rises on fuel poverty

The 2008 Living in Wales fuel poverty dataset has been used as the base data for a tool to evaluate the impact of energy price rises on fuel poverty. Unit prices and standing charges of gas, electricity, oil and solid fuels have been inflated by a series of percentage points and the numbers of households in fuel poverty at each stage have been plotted to produce trend lines. A best fit curve through the mix of fuels has been derived in order to produce a guide figure for the likely change in the number of fuel poor households for a 10% rise in fuel prices.

1.1 Method

Forty fuel price scenarios were created and applied to the 2008 base data. The scenarios included percentage changes ranging from -50% to +50% for electricity, oil, mains gas and solid fuel prices separately plus one further scenario for all fuels together. For the purposes of this tool, some of the less common fuels have been grouped with other fuels which show similar characteristics in fuel price rises. Therefore, communal heating has been grouped with mains gas, LPG and bottled gas have been grouped with oil and coal, wood, anthracite and smokeless fuels have been grouped with solid fuels. These less common fuels do not have a large effect on fuel poverty individually due to their limited use across the country. The following assumptions were also used in the creation of the ready reckoner:

- § Household income has not altered.
- § Energy efficiency has not altered.
- § The fuel mix of households has not changed.
- § Both standing charges (where applicable) and unit prices have been increased by an equal amount.
- § Number of households is assumed to remain constant.
- § Household composition remains constant.

1.2 Results

The results of the scenarios are shown in the figures below; Figure 1 for all households and Figure 2 for vulnerable households only. Tables of these results are presented in Appendix A (these include both numbers and percentages of households that are fuel poor).

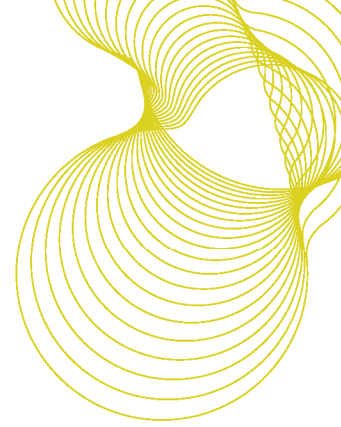


Figure 1: Fuel poverty variability (numbers) due to fuel price changes for all households using the Living in Wales 2008 dataset as a base.

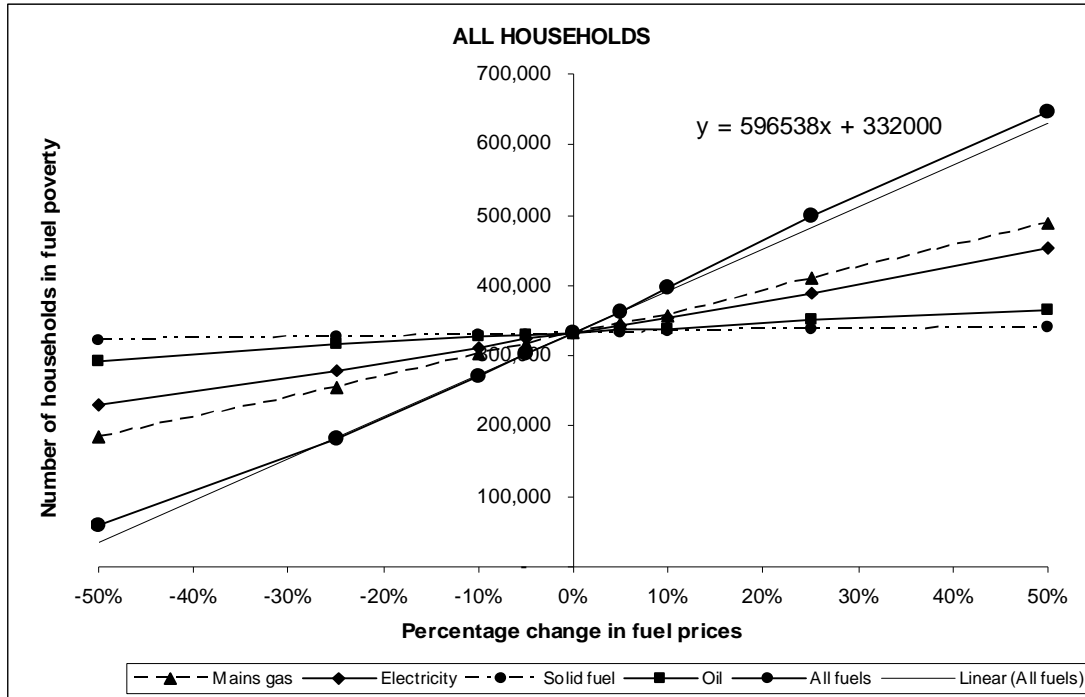
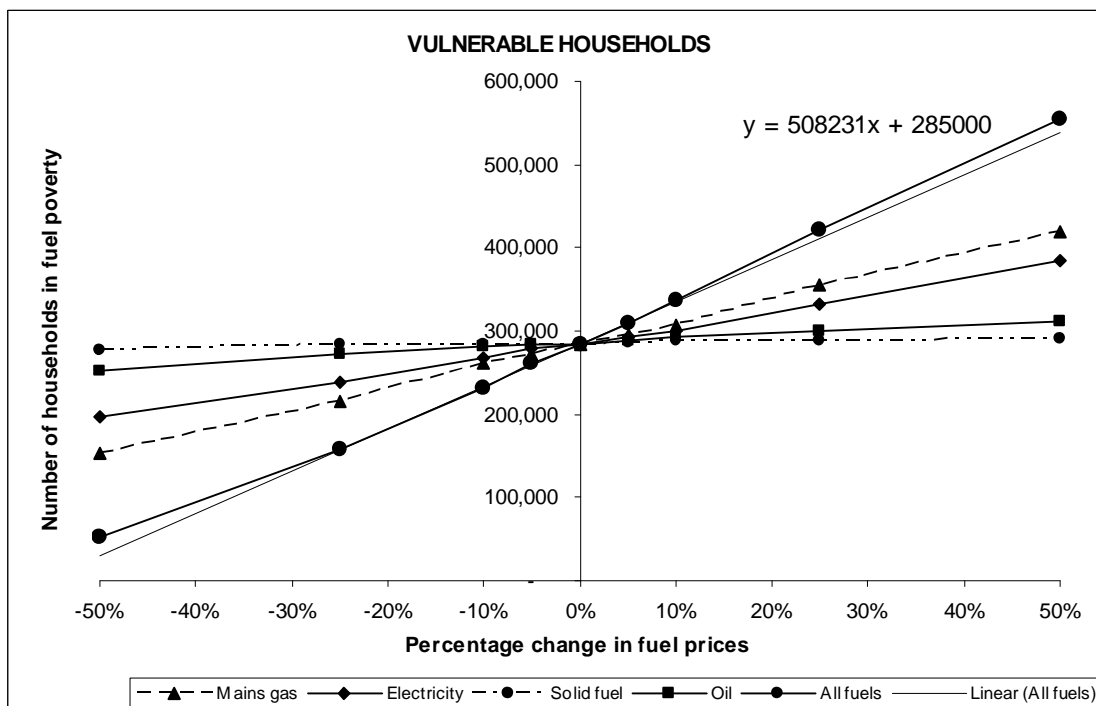
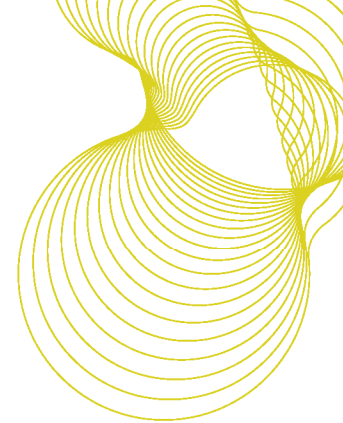


Figure 2: Fuel poverty variability (numbers) due to fuel price changes for vulnerable households using Living in Wales 2008 as a base.

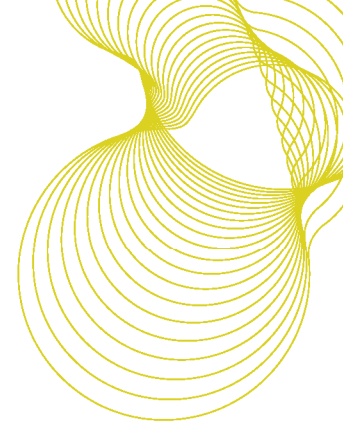




1.3 Ready Reckoner

Assuming a linear fit to the 'All Fuels' curve, it is estimated that a **10% rise in fuel prices implies a rise of 5% in the proportion of households in fuel poverty**. That is, if fuel prices were to rise by 10%, the proportion of households in fuel poverty would increase from 26% to 31% from the 2008 'base' position. For all households this represents a rise of 60,000 households for every 10% rise in fuel prices and for vulnerable households only this represents a rise of 51,000 households for every 10% rise in fuel prices. We regard this to be a conservative approach (i.e. producing a 'worst-case' estimate) in that it is unlikely that prices for all fuels would increase by the same percentage amount at the same time. However, it is likely that if one fuel increases in price others will follow the same general trend.

It was not possible to produce a guide figure for a 1% rise in fuel prices, as is done for England, due to the smaller sample size in the 2008 Living in Wales base data. The results presented here could be used to infer the change in fuel poverty for a change as small as a 5% fuel price rise or decline; however a change in fuel prices of less than this results in a change in the number of fuel poor households that is below the bounds of the sampling error for this data.



Appendix A

Table A1: Number of fuel poor households (000s) for fuel price scenarios – ALL HOUSEHOLDS (using Living in Wales 08 as base).

ALL CASES	Number of households (000's) fuel poor								
Change in price (%)	-50%	-25%	-10%	-5%	Base	5%	10%	25%	50%
Mains gas	184	254	304	317	332	346	358	411	489
Electricity	231	279	311	324	332	343	353	388	452
Solid fuel	322	328	330	331	332	333	336	337	340
Oil	293	317	328	329	332	337	339	352	365
All fuels	60	183	271	303	332	363	396	498	647

Table A2: Number of fuel poor households (000s) for fuel price scenarios – VULNERABLE HOUSEHOLDS (using Living in Wales 08 as base).

VULNERABLE ONLY	Number of vulnerable households (000's) fuel poor								
Change in price (%)	-50%	-25%	-10%	-5%	Base	5%	10%	25%	50%
Mains gas	154	216	260	272	285	296	308	355	419
Electricity	198	239	269	279	285	294	301	331	384
Solid fuel	277	283	284	284	285	286	288	288	291
Oil	252	273	281	283	285	289	292	301	312
All fuels	52	157	231	260	285	310	337	422	554

Table A3: Percent fuel poor for fuel price scenarios – ALL HOUSEHOLDS (using Living in Wales 08 as base).

ALL CASES	% of households fuel poor								
Change in price (%)	-50%	-25%	-10%	-5%	Base	5%	10%	25%	50%
Mains gas	14.5	20.0	23.9	25.0	26.2	27.3	28.3	32.4	38.6
Electricity	18.2	22.0	24.5	25.6	26.2	27.1	27.8	30.6	35.6
Solid fuel	25.4	25.9	26.0	26.1	26.2	26.3	26.5	26.6	26.8
Oil	23.1	25.0	25.9	26.0	26.2	26.6	26.8	27.7	28.8
All fuels	4.8	14.4	21.3	23.9	26.2	28.6	31.2	39.2	51.0

Table A4: Percent fuel poor for fuel price scenarios – VULNERABLE HOUSEHOLDS (using Living in Wales 08 as base).

VULNERABLE ONLY	% of vulnerable households fuel poor								
Change in price (%)	-50%	-25%	-10%	-5%	Base	5%	10%	25%	50%
Mains gas	15.7	22.0	26.5	27.8	29.1	30.2	31.4	36.2	42.7
Electricity	20.2	24.4	27.5	28.5	29.1	30.0	30.7	33.8	39.2
Solid fuel	28.3	28.8	28.9	29.0	29.1	29.1	29.3	29.4	29.7
Oil	25.7	27.8	28.7	28.8	29.1	29.5	29.8	30.7	31.8
All fuels	5.3	16.0	23.5	26.5	29.1	31.6	34.4	43.0	56.5