

SDR 205/2010

26 November 2010

## Living in Wales 2008: Fuel Poverty

The Living in Wales survey is a household survey for Wales commissioned by the Welsh Assembly Government. The survey comprised a household survey for each year from 2004 to 2008 with additional property surveys in 2004 and 2008. The Living in Wales property survey involved qualified surveyors visiting some 2,700 addresses that had participated in the Living in Wales household survey.

This report covers the topic of fuel poverty. A household is fuel poor if it cannot afford to keep adequately warm at a reasonable cost. Fuel poverty statistics for Wales, as for England, are reported against two definitions: full income and basic income. This report uses the full income definition of fuel poverty (see definitions on page 8) and analyses the data from the property and household surveys against various characteristics of the household and the dwelling. Statistics for fuel poverty amongst households which are most vulnerable to the effects of fuel poverty are also shown, as are statistics for the severity of fuel poverty.

The Welsh Assembly Government's Fuel Poverty Strategy, published in July 2010, sets out the approach of the Welsh Assembly Government to tackling fuel poverty. The Welsh Assembly Government's target is, that as far as reasonably practicable, fuel poverty should be eradicated in vulnerable households by 2010, in social housing by 2012 and in all households by 2018. Data from this report are used to monitor progress towards achieving these targets.

### Key points show:

- In 2008, 332,000 households in Wales were estimated to be fuel poor. This is equivalent to 26 per cent of all households. This is an increase of 198,000 households, or 15 percentage points, since 2004. This increase may reflect the impact of rising fuel prices over this period.
- In 2008, 29 per cent of vulnerable households were estimated to be fuel poor. This was approximately 285,000 households, an increase of 172,000 households and 17 percentage points.
- One in five households with dependent children were estimated to be fuel poor. This is equivalent to 70,000 households in 2008 and is an increase of 51,000 households since 2004.
- Of the households that were fuel poor, one in five would be required to spend more than 20 per cent of their income on fuel use. Around 50 per cent of non-fuel poor households would be required to spend between five and ten per cent of their income on fuel use. This means that approximately 530,000 households in Wales could move into fuel poverty if energy prices continue to rise.

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Llywodraeth Cynulliad Cymru  
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## Dwelling Characteristics of the Fuel Poor

**Table 1: Fuel poverty by tenure**

Tenure	Fuel Poverty (%)	
	2004	2008
Private rented	17	36
Local authority	10	28
Owner-occupied	11	25
Housing association	4	24
All tenures	11	26

Table 1 shows how fuel poverty differs by tenure. A greater proportion of private renting households were fuel poor compared to households in other tenures. Households who rented privately accounted for less than 10 per cent of all households in Wales, but 36 per cent of these were fuel poor. This was equivalent to 41,000 households in 2008 and was an increase of 23,000 households from 2004.

Around 11 per cent of owner-occupied households are fuel poor, but they make up the greatest number of fuel poor households, with around 231,000 households.

Households in housing association properties saw the greatest increase in fuel poverty between 2004 and 2008, with an increase from 4 per cent to 24 per cent of households. This is an increase of 18,000 households, bringing the total number of fuel poor households in housing association properties to 20,000 in 2008.

**Table 2: Fuel poverty and average SAP rating by age of dwelling**

Dwelling Age	2004		2008	
	Fuel Poverty (%)	Average SAP rating	Fuel Poverty (%)	Average SAP rating
Pre 1850	37	28	47	31
1850 - 1899	16	41	39	40
1900 - 1918	11	46	32	46
1919 - 1944	15	43	29	47
1945 - 1964	12	45	27	52
1965 - 1974	6	47	21	53
1975 - 1980	5	50	18	55
1981 - 1990	4	55	14	57
Post 1990	4	61	11	64
Total	11	46	26	50

Weighted total: 1,268,000 (2008) and 1,209,000 (2004)

Source: Living in Wales 2008 and 2004

Table 2 shows fuel poverty rates by the age of the dwelling and its SAP rating. The age of the dwelling appears to have an effect on the levels of fuel poverty, with households in older dwellings having a higher incidence of fuel poverty. In 2008, almost half of all households living in dwellings built before 1850 were fuel poor.

Over half of all households live in dwellings that were built before 1965. The newer a dwelling is, the higher the SAP rating and the lower the percentage of households in fuel poverty.

**Table 3: Fuel poverty and average SAP rating by dwelling type**

Dwelling Type	2004		2008	
	Fuel Poverty (%)	Average SAP rating	Fuel Poverty (%)	Average SAP rating
Detached	13	42	29	45
Semi-detached	12	45	26	51
End terrace	11	46	26	47
Mid terrace	8	52	24	54
Other	9	52	25	62
<b>Total</b>	<b>11</b>	<b>46</b>	<b>26</b>	<b>50</b>

Weighted total: 1,268,000 (2008) and 1,209,000 (2004)

Source: Living in Wales 2008 and 2004

Table 3 shows that the type of dwelling has an impact on the levels of fuel poverty. Households in detached houses are slightly more likely to be fuel poor. Detached dwellings also have the lowest average SAP rating.

**Table 4: Fuel poverty by main type of fuel used for heating**

Fuel type	Fuel Poverty (%)	
	2004	2008
Solid Fuel	39	48
Oil	21	47
Electricity	29	39
Gas	7	22
<b>Total</b>	<b>11</b>	<b>26</b>

Weighted total: 1,268,000 (2008) and 1,209,000 (2004)

Source: Living in Wales 2008 and 2004

Almost half of all households using solid fuel or oil were fuel poor in 2008. The number of fuel poor households using gas rose from 7 per cent in 2004 to 22 per cent in 2008.

The rise in the price of gas over this period is likely to have played a substantial part in this increase. Between 2004 and 2008, average gas prices increased by around 50 per cent. Average electricity prices increased by around 40 per cent. In comparison, earnings income increased by around 10 per cent over the same period.

In 2008, 79 per cent of households used mains gas as their primary heating fuel, a similar number as in 2004. If including other forms of gas, 81 per cent of all households used gas to heat their homes.

## Household Characteristics of the Fuel Poor

**Table 5: Fuel poverty by age of Household Reference Person**

Age of HRP	Fuel Poverty (%)	
	2004	2008
16-44	6	19
45-64	12	23
65 or more	17	40
<b>All ages</b>	<b>11</b>	<b>26</b>
Weighted total: 1,268,000 (2008) and 1,209,000 (2004)      Source: Living in Wales 2008 and 2004		

The percentage of households that are fuel poor varies according to the age of the household reference person (HRP). Table 5 shows that households with older HRPs are more likely to be fuel poor than households with younger HRPs. In 2008, there were approximately 139,000 households with HRPs aged 65 or more which were in fuel poverty. This is an increase of 84,000 households since 2004.

**Table 6: Vulnerable Households in fuel poverty, by reason for vulnerability**

Vulnerability	Fuel Poverty (%)	
	2004	2008
Households including someone:		
Under 16	5	19
60 and over	16	34
Long term sick or disabled	15	31
Vulnerable households	12	29
<b>All households</b>	<b>11</b>	<b>26</b>
Weighted total: 1,268,000 (2008) and 1,209,000 (2004)      Source: Living in Wales 2008 and 2004		

Vulnerable households are defined as a household that contains one or more of the following: children under the age of 16; adults aged 60 and over; and a person who is long term sick or disabled.

Table 6 shows the percentage of households who were fuel poor in each of these groups and for all vulnerable households. In 2008, 980,000 households were classed as vulnerable and, of these, 285,000 households were fuel poor. Households with someone aged 60 or over showed the largest percentage point increase in fuel poverty. In 2008, 34 per cent of these households were fuel poor, an increase of 18 percentage points since 2004.

**Table 7: Fuel poverty by household type**

Household type	Fuel Poverty (%)	
	2004	2008
Pensioner	18	42
Adults	11	25
Families with dependent children	5	19
Families with non-dependent children	12	15
<b>Total</b>	<b>11</b>	<b>26</b>
Weighted total: 1,268,000 (2008) and 1,209,000 (2004)      Source: Living in Wales 2008 and 2004		

Household type also affects the likelihood of being fuel poor. Pensioner households account for 26 per cent of all households in Wales, and 42 per cent of these households are in fuel poverty. In 2008 19 per cent of families with dependent children were in fuel poverty compared with only 5 per cent in 2004.

Fuel poverty also varies by the working status of the household. One in ten working households were in fuel poverty, compared to around one in five households with some working and some workless household members, and nearly one in two workless households. This equates to over 100,000 workless households in fuel poverty.

**Table 8: Fuel poverty by household income**

Household income decile	Fuel Poverty (%)	
	2004	2008
1 <sup>st</sup> decile (lowest income)	51	94
2 <sup>nd</sup> decile	21	63
3 <sup>rd</sup> decile	10	38
4 <sup>th</sup> decile	8	24
5 <sup>th</sup> decile	3	14
6 <sup>th</sup> decile	5	13
7 <sup>th</sup> to 10 <sup>th</sup> deciles (highest income)	2	4
<b>Total</b>	<b>11</b>	<b>26</b>
Weighted total: 1,268,000 (2008) and 1,209,000 (2004)      Source: Living in Wales 2008 and 2004		

Household income was divided into deciles; ten groups with even numbers of households in each. The percentage of fuel poor households in each band decreases as income increases. In the lowest income band (the 1st decile), 94 per cent of households were fuel poor, whereas in the highest three income bands (7th to 10th deciles), only 4 per cent of households were fuel poor.

The lowest three income bands comprised nearly 75 per cent of all fuel poor households in 2008. In 2004, the lowest three income bands comprise nearly 90 per cent of all fuel poor households, suggesting that fuel poverty is increasingly becoming a problem in higher income households.

**Table 9: Fuel poverty by nature of the area locality**

Locality	Fuel Poverty (%)	
	2004	2008
Urban	8	22
Rural	26	42
Total	11	26

Weighted total: 1,268,000 (2008) and 1,209,000 (2004)      Source: Living in Wales 2008 and 2004

Table 9 shows that, in 2008, around one in five households living in urban areas were fuel poor compared to around two in five in rural areas.

## Quality Information about the Living in Wales survey

### Methodology

- The 2008 Living in Wales Property Survey continues a series of Welsh House Condition Surveys, last conducted in 1998 and 2004. The survey provides information to the Welsh Assembly Government for the development and monitoring of housing policies directed at the repair, improvement and energy efficiency of the housing stock.
- The survey was commissioned by the Welsh Assembly Government, managed by the Local Government Data Unit ~ Wales and conducted by Ipsos MORI.
- The sample for the Property Survey is taken from the 2008 Living in Wales Household Survey. The Household Survey was used to assess the condition of the dwelling and determine its inclusion in the Property Survey sample. The householder must also give consent. The final sample was 2,741 dwellings stratified by condition, age of the dwelling and tenure. The sample only contains occupied first homes. Further details of the survey are available in the technical report.  
<http://wales.gov.uk/about/aboutresearch/social/ocsropage/living-wales/technicalreports/?lang=en>
- The data from the 2008 Household Survey was linked to the data from the 2008 property survey to provide information on the dwelling and its occupants.
- The estimates for fuel poverty are produced using methodology developed by the Building Research Establishment (BRE). A more detailed explanation of this methodology can be found on the Department for Climate Change's website: [www.decc.gov.uk](http://www.decc.gov.uk). This methodology was originally designed for the English House Condition Survey and was adapted for use with the 2004 Living in Wales survey.
- The variable used in this release for the classification of rural and urban differs from that used by BRE. This release classifies urban and rural using the postcode of the property. BRE classifies urban and rural using information provided by the surveyor. The percentages shown for urban and rural in Table 9 will therefore differ to those shown in the full BRE fuel poverty report.

### Comparability

- There are no known reasons why the 2004 and 2008 Living in Wales Surveys should not be comparable. The surveys were designed to ensure comparability where possible. If this is not the case it is noted in the text of the report.
- Changes to the fuel poverty methodology between surveys are:
  - A new algorithm for thermal bridging;
  - Revisions to the dimensioning model; and
  - A fourth heating regime was added to cover under-occupation.
- The Living in Wales Survey methodology differs from other house condition survey methodologies in the UK and care should be taken when making comparisons between UK countries.
- The fuel poverty methodology is consistent with that used in other UK countries.

### Accuracy

- The overall response rate for the Property Survey was 71.6 per cent. Response rates varied by local authority from 60 per cent to 80 per cent. The figures are designed to be reported at a Wales level.
- The Living in Wales Survey is a sample survey and is subject to sampling variability. All figures in this report are estimates.
- BRE, who were contracted to produce the fuel poverty analysis, have produced 95% confidence intervals for the fuel poverty estimates (see links below for the full BRE reports). This means that in 95 per cent of samples, the range given would contain the exact value. Users of these confidence intervals should note the methodological caveats included in the BRE report regarding the calculation of these confidence intervals.
- Figures reported in this publication have been rounded to the nearest 1,000 grossed responses and percentages rounded to the nearest whole number.

- Where comparisons have been made with 2004 data the figures may have different accuracy associated with them due to sampling.

### **Timeliness**

- The 2008 Living in Wales Household Survey was conducted between January and August 2008. The 2008 Living in Wales Property Survey was conducted between September and December 2008.
- The Living in Wales Survey was conducted in 2004 and similar methodology was used in previous House Condition Surveys in 1998 and 1986.
- The Living in Wales Survey has now been replaced by the National Survey for Wales for the household element. No further house condition surveys are planned.
- The Living in Wales Property Survey data is collected via paper forms and scanned to form an electronic database. The processes for checking the data are more complicated than for the Household Survey which is collected electronically. The Property Survey data is used in various post-survey modelling processes to obtain energy efficiency ratings and repair costs. These processes all contribute to a longer analysis period and therefore a delay in publication compared to the Household Survey results.

### **Terms and definitions**

**Fuel Poverty** – A household is said to be in fuel poverty if it is required to spend more than 10 per cent of its income on fuel for heating.

**Full Income definition** - in which a household is said to be in fuel poverty if, in order to maintain a satisfactory heating regime it would be required to spend more than 10 per cent of its income (including Housing Benefit or Income Support for Mortgage Interest) on all household fuel use. This is the definition against which fuel poverty targets in the UK are set against.

**Basic Income definition** - in which a household is in fuel poverty if, in order to maintain a satisfactory heating regime it would be required to spend more than 10 per cent of its income (excluding Housing Benefit or Income Support for Mortgage Interest) on all household fuel use is used in order to enable historical comparisons.

**Household** – is defined as one person living alone, or a group of people (not necessarily related) living at the same address with common housekeeping – that is, sharing either a living room or sitting room or at least one meal a day.

**HRP** – Household Reference Person is defined as the person in whose name the home is owned or rented. If it is jointly owned or rented the HRP is the person who earns the most. If there are equal incomes the HRP is the eldest.

**Adult** – Any person who is not a dependent child.

**Dependent Child** – Persons aged between 0 and 15, and persons between 16 and 18 who are single, in full time education and economically inactive.

**SAP** – The Standard Assessment Procedure giving a rating of 1 to 100, where 100 is most energy efficient. This report uses SAP 2005 methodology.

**Vulnerable household** – Any household containing a child under 16, an adult over 60 or someone with long-term illness or disability. These definitions are linked to eligibility for partial grants under the new



fuel poverty scheme and these eligibility criteria are under review, particularly in terms of the vulnerability of young people aged between 16 and 25.

**Urban/Rural** – As defined by ONS morphology. <http://www.ons.gov.uk/about-statistics/geography/products/area-classifications/rural-urban-definition-and-la-classification/rural-urban-definition/index.html>. Urban combines the urban and town categories and rural combines the villages and isolated dwellings and hamlets. The variable used in this release for the classification of rural and urban differs from that used by BRE as detailed in the Quality Information section.

**Household Income** – the household survey asks about the HRP's and their partner's income. This is combined with income from some benefits.

## Further information

- Living in Wales Household Survey 2008 results  
<http://wales.gov.uk/topics/statistics/publications/livinginwales08/?lang=en>
- Living in Wales Household Survey 2008 technical report  
<http://wales.gov.uk/about/aboutresearch/social/ocsropage/living-wales/technicalreports/?lang=en>
- Living in Wales Property Survey 2008 technical report  
<http://wales.gov.uk/about/aboutresearch/social/ocsropage/living-wales/technicalreports/?lang=en>
- Full fuel poverty analyses and reports produced by the Building Research Establishment will be available from the Social Research pages of the Welsh Assembly Government website:  
<http://wales.gov.uk/about/aboutresearch/social/?lang=en>
  
- Further information on previous Living in Wales surveys is available from the Living in Wales web pages: <http://www.wales.gov.uk/livinginwalesurvey>
  
- If you require any further information about using the data collected by the Living in Wales survey, then please contact the Welsh Assembly Government. The contact point for requests for statistics on the Living in Wales survey is:

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