Paper to be presented at Unhealthy Housing: Promoting Good Health conference, Warwick University, 19th – 21st March 2003.

Eliminating Fuel Poverty in Britain: Policy, Prospects and Progress

John Shenton, Lecturer in Housing, Salford Housing and Urban Studies Unit, University of Salford, School of Environment and Life Sciences, Allerton Building, Frederick Road, Salford, Manchester M6 6PU, England.

Tel: 0161 295 2193 Fax: 0161 295 2184

E- mail: J.C.Shenton@salford.ac.uk

Eliminating Fuel Poverty in Britain: Policy, Prospects and Progress John Shenton, University of Salford

Abstract:

The elimination of fuel poverty is now established as a key political priority in Britain following the publication of the "UK Fuel Poverty Strategy" in November 2001.

Fuel poverty was first identified and highlighted as a significant social problem in Britain in the early 1990s when it was suggested by Brenda Boardman that some 7 million households were unable to afford to heat their homes. The consequences of fuel poverty are particularly important from a health perspective since it is a major contributor to excess winter mortality in Britain. The benefits of eliminating fuel poverty cannot be understated. There would be reductions in greenhouse gas emissions, improvements in the quality of the housing stock and reductions in excess winter mortality and morbidity reducing costs to the health service.

A major contributor to fuel poverty in Britain is the poor energy efficiency of the housing stock and any successful policy initiatives to reduce it must concentrate on this aspect. However, since the average SAP rating of the British housing stock is only 44.9 then any real improvement would require significant financial investment. Estimates suggest that between £15-20 billion would be needed. At the current rate of expenditure on energy efficiency measures, the earliest the problem could be eliminated would be some time in the next century.

The current approach to dealing with the issue places the responsibility on local authorities under the Home Energy Conservation Act 1995, requiring them to achieve a 30% improvement in energy efficiency by 2005 and since 2000 publish fuel poverty strategies.

This paper discusses the causes and effects of fuel poverty in Britain, evaluates current government policy, considers the progress made and analyses the prospects for the achievement of the government's target to eliminate fuel poverty in vulnerable households within 10 years. It concludes by suggesting that without some radical restructuring of the existing strategy then the government will fail to meet its objectives.

1. Introduction – Fuel Poverty and III health

The relationship between poor quality housing and ill health in Britain is now well established and the subject has been extensively reviewed (Smith,1989; Ransom,1991; Burridge and Ormandy, 1993). Indeed the catalyst for state intervention in housing in the mid 19th century. resulting in the "sanitation" of the environment was the impact of poor housing conditions on the health of the working class population. Early pioneers such as Chadwick and Snow demonstrated the significance of these conditions on health and persuaded the government of the time to introduce the first public health acts in Britain in 1848 and 1875. This intervention had a much more profound effect on improving public health than any subsequent medical intervention, by increasing life expectancy and reducing infant mortality rates (Byrne and Keithley,1993). It was, therefore, no coincidence that the responsibility for housing policy was initially under the direction of the Ministry for Health and this remained the case until 1951. The divorce of housing and health policy took place when the responsibility for housing was transferred to the then Ministry for Housing and Local Government. Ever since then the justification for state intervention in housing policy on health grounds has been severely limited. Indeed successive British governments have been criticised for failing to recognise the significance of the health benefits of good housing, particularly in respect to reducing inequalities in health.

During the 1980s and 1990s, a major research effort attempted to re-establish the link between poor housing and ill health to persuade the government of the advantages of increased housing expenditure. This research, however, often failed to demonstrate causation, the difficulty being an inability to isolate housing condition from other factors such as poverty and deprivation. Frank Dobson, Secretary of Health in 1997 stated at the National Housing Federation conference:

[&]quot;My officials tell me that it is hard to prove that better housing improves peoples' health"

Despite this, many researchers were able to demonstrate that poor housing influenced health status often by increasing the susceptibility of occupiers to a variety of health hazards even though it might not directly cause ill health. However, some academics have suggested that this obsession with proving causality is ill founded (Allen, 2000).

Evidence of a link between fuel poverty and ill health has been well documented (Boardman, 1993; Jones, 2000; Centre for Sustainable Energy, 2001; Wilkinson et al., 2001; Lawlor, 2001; Donaldson and Keatinge, 2002). The effects on health can generally be divided into two categories: the impacts of low internal temperatures and dampness and mould growth. The excess winter mortality rate in Britain is estimated at between 30,000 - 60,000 each year (Boardman, 1993;; Wilkinson et al, 2001; Archer, 2002). This excess death rate is one of the worst in Europe; only Ireland is comparable. Other countries such as Norway and Sweden have much smaller death rates of approximately 10% despite having much colder winter temperatures (Khaw and Woodhouse, 1995). In 1998 Donaldson et al concluded that Britain had worse excess deaths than Siberia!! Many of these cold related deaths are entirely avoidable. Deaths occur in all age groups, although rarely in the 5-24 age group (Curwen, 1981). It is also worth pointing out that a bad winter does not necessarily cause the deaths of those who would have died if there had been no risk associated with cold weather (Curwen and Devis, 1988). There is also a marked social class gradient in excess winter mortality according to Curwin, 1981. In 1985 the then Chief Medical Statistician suggested that for "every degree change in the average winter temperature there is a rise or fall in the number of winter deaths of 8,000 (Alderson, 1985).

Curwen, 1991 has estimated that of the "excess winter deaths" one third are attributable to respiratory disease and over half to heart attack and stroke. Hypothermia is registered as a cause in only 1% of the total deaths throughout the year (Collins, 1983). There is some controversy over the precise cause of the excess winter deaths in Britain. However, there is general agreement that temperature is the key factor as suggested by Alderson, 1985. According to Keatinge, 1986 there may be some issues regarding the relative contributions of internal and external temperatures. If external temperatures are a factor then there is a need to educate the public about appropriate clothing. The Eurowinter Group, 1997 suggests that excess winter deaths are lower in other European countries because their housing is more energy efficient and people dress up warmer to go out.

As well as excess mortality rates during the winter months there is also a considerable increase in morbidity rates. Cold housing is often associated with dampness and mould growth. Mould and mould spores are associated with a wide range of detrimental health effects such as asthma and other allergic diseases (Platt et al. 1993; Hunt, 1993; Raw et al, 2001). Cold, damp housing also affects the mental health of the fuel poor according to a study carried out in one London borough by Khanom in 2000 and in particular leads to stress related to the payment of fuel bills. House dust mites also proliferate in cold, damp housing and there is evidence of a link to asthma (Raw et al, 2001) and perennial rhinitis and eczema (Howarth et al 1992).

Thus, there is little doubt about the contribution that cold housing plays in excess winter mortality rates in Britain and that fuel poor households, particular the elderly are more likely to die prematurely.

2. The Scale of Fuel Poverty

The scale of fuel poverty in Britain was estimated to be in the region of 7.1 million households in 1991. These were households living in homes, which were poorly insulated and with inadequate or expensive heating systems and which they could not afford to adequately heat on their existing incomes. This equated to 31% of all households. It is also important to realise that poor households, including pensioners, the unemployed, single parents, the sick and the disabled often have to heat their homes for up to 16 hours per day rather than seven hours for those at work (Boardman, 1991).

In January 2002, the Building Research Establishment on behalf of DTI and DEFRA published data on the levels of fuel poverty using two definitions adopted by the government in its Fuel Poverty Strategy (DTI/DEFRA 2001). Both definitions include all fuel use and set the income level at 10%. However, the definition used by the government to set its targets includes housing

benefit and income support for mortgage interest as part of total income. A household will be in fuel poverty if it needs to spend more than 10% of its income to maintain a satisfactory heating regime (defined as 21°C in the living room and 18°C in other occupied rooms). The adoption of the definition has led to a great deal of criticism (Friends of the Earth 2001; Age Concern, 2001, Shenton, 2002, DTI, 2002b). The effects of the adoption of the two definitions are illustrated in the table:

Number of Households estimated to be in Fuel Poverty in England (millions)

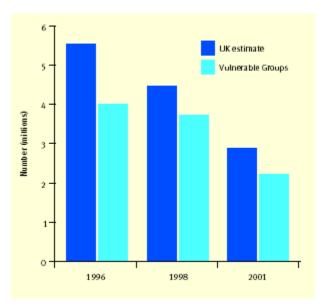
	Income	including	housing	Income	excluding	Housing
	benefit and ISMI			Benefit and ISMI		
1998	3.3			4.5		
1999	3.1			4.2		
2000	2.8			3.9		

Over one million households are excluded from the numbers by counting housing benefit (HB) and income support for mortgage interest (ISMI) as disposable income. This money is clearly not available to households to spend on fuel particularly if it is paid direct to landlords or mortgagees. Furthermore, if household expenditure on other essential items such as food is taken into account then the numbers in fuel poverty rises steeply to over 7 million

In 1998 over half of all the fuel poor were aged 60 or over, with one in seven fuel poor households containing children. About 60% of the fuel poor were owner occupiers, about one in nine were in the private rented sector and the rest were in local authority or registered landlord (RSL) properties. The highest concentration of fuel poor was found in the RSL sector where one in four households were fuel poor (DTI, 2003b). The table shows a reduction in the numbers in fuel poverty of 500,000 under the government's preferred definition and of 600,000 using the alternative. It has been generally accepted by the government that the slight reductions in the numbers of households in fuel poverty indicated by these estimates were due to income changes and fuel price changes rather than to improvements in the energy efficiency of the housing stock (Meacher, 2002).

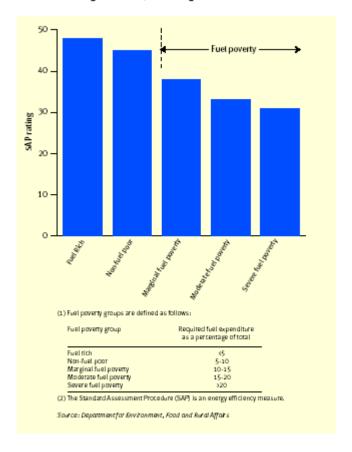
In March 2003, the government published its First Annual Progress report, which gives some indication of the progress being made towards the government's targets. Data produced by DTI shows the number of households in fuel poverty in 2001 at 3 million in the UK of which 2 million were deemed to be vulnerable. Thus, the number of fuel poor households has estimated to have fallen by 2.5 million since 1996. The reasons for the fall are suggested as being a consequence of falling energy prices. The number of fuel poor in England has fallen by 1.5 million.

Number of households in fuel poverty, United Kingdom



The DTI also produced data on fuel expenditure, other household expenditure and Standard Assessment Procedure (SAP) rating for assessing energy efficiency. The data in the table below confirms the fact that fuel poor households tend to live in the least energy efficient houses.

Energy effiency by fuel poverty group¹, measured using the SAP², 1998 England



The report made it clear that there had still been little progress on a uniform definition throughout the UK. In Northern Ireland and Wales for instance the definition to be adopted excludes HB and ISMI.

However, despite the issue over the definition the numbers in fuel poverty in Britain today is clearly unacceptable and further action needs to be taken to deal with the misery of winter mortality and morbidity, particularly amongst the elderly.

3. Tackling the Causes of Fuel Poverty

There are four main factors contributing to the current levels of fuel poverty in Britain. These are:

- The energy inefficiency of the housing stock
- Low income
- Fuel price
- Under-occupancy

Energy Inefficiency

The energy efficiency of dwellings can be assessed using SAP rating, measured on a scale of 1 to 100, the more efficient the house, the higher the number. Housing built today will typically achieve ratings above 70. The statistics given in the Fuel Poverty Strategy (DTI/DEFRA 2001) indicate the poor energy efficiency of the British housing. The average SAP rating for the stock in 1998 was 44.9 and for the lowest 30% income group it was 42.9. Thus, it can be seen that the average rating is well below the highly efficient (100) mark. Furthermore, low income households are likely to occupy the least efficient housing. In Britain in 2000 it was estimated that 36% of the housing stock could be designated as "hard to heat". These include those with solid walls, those of non-traditional construction type and those off the gas network (Pett, 2002). Most of these houses have SAP ratings well below average.

The most significant factor influencing the extent of fuel poverty in the UK and the excess winter mortality has been identified as the poor energy efficiency of the housing stock. (Boardman,1998; Pett, 2002). Thus, one of the most effective ways of reducing fuel poverty is by improvements in energy efficiency. This involves has Boardman suggested in 1993 the introduction of a programme of affordable warmth. Improvements to people's income and reductions in fuel prices cannot in themselves result in the alleviation of fuel poverty and excess winter mortality. As has been noted above low income households occupy houses with the lowest SAP ratings and these are often difficult to heat. The provision of a programme of affordable warmth designed to eliminate fuel poverty was estimated to cost between £15-20 billion by Boardman in 1998.

There are a number of dedicated programmes designed to improve energy efficiency operated by the government and the utilities. These include the Energy Efficiency Commitment (EEC), the Warm Front Team Grant Scheme (previously Home Energy Efficiency Scheme, HEES), Transco's Affordable Warmth Programme and several others. Sources of funding may also be available through Local Authority Capital Programmes, the Approved Development Programme, Neighbourhood Renewal Fund, New Deal and Community Energy Programmes. The government also set up the Warm Zones Strategy in 2001 in five areas focussing on vulnerable households. The impact of this initiative is currently being assessed. The initial results from the monitoring of the programmes suggest that considerable numbers of the fuel poor identified were not eligible for "Warm Front" grants. The reasons for this are currently being analysed. It could be that a large number of fuel poor households on low incomes are not in receipt of benefits and thus not eligible for help. Funds may also be available through Primary Care Trusts within Health Action Zones.

Low Income

It is low income combined with poor energy efficiency which results in fuel poverty. Thus, the lower the household income the more likely it is to be suffering from fuel poverty. Low income households are often those who need to spend the highest amounts on energy to keep warm. The government suggests that pensioner households with the Minimum Income Guarantee level and families not in paid employment will not be fuel poor if their total fuel bills are around £500 per year assuming the property has good insulation and an efficient central heating system (DTI, 2003a). Tackling poverty and social exclusion are key factors in reducing fuel poverty. There are a number of measures identified by the government in its fuel poverty strategy designed to improve income including New Deal, national minimum wage, minimum income guarantee and the various tax credits

In addition, there are also personal subsidies from the social security fund, providing one-off payments for vulnerable households most likely to suffer in cold weather. These include cold weather payments (£8.50 each week of cold weather) and winter fuel payments for pensioners (currently £200). The DTI Select Committee has recommended that the winter fuel payment should be extended to other vulnerable groups (DTI, 2002). The problem with this approach is that payments are only made in severe weather conditions and are paid after expense may or may not have already been incurred. Households will still not necessarily use this additional income to purchase expensive warmth particularly, as has already been noted that the poor tend to live in housing with the worst SAP ratings.

Fuel Price

Over the past 10 years the price of fuel has reduced by 23% in real terms due to the liberalisation of the energy markets and the promotion of competition (DTI/DEFRA, 2001). This has given consumers more choice in who supplies their fuel with the result that customers have been able to switch to cheaper suppliers. It is also suggested that there is little significant class difference in those who switch. However, the consumers who have benefited the most from the liberalisation of the energy markets are not generally the fuel poor. Low income householders often have difficulties paying their bills and do not have access to a bank account. They may have to use prepayment meters for their fuel, which usually incurs a higher unit tariff and standing charge than fuel paid for by direct debit. The use of prepayment card meters has increased over the past 10 years and whilst it has actually reduced the number of direct disconnections it has been criticised for increasing the level of self-disconnection and for fuel costs, particularly where it is being used to pay back previous debt. Fuel prices are now set to rise; gas by 5% and this will have an impact on the numbers of fuel poor. The government suggests that a 15% increase in gas prices and a 5% increase in electricity prices could increase the number of fuel poor by nearly one million (DTI/DEFRA, 2001).

More flexible arrangements for the payment of fuel costs have been recommended in OFGEM's Social Action Plan, which has the following key elements:

- Improve protection for disadvantaged customers through flexible payments, codes of practice for prepayment customers, promotion of help in energy efficiency measures.
- Research into payment patterns
- Downward pressure on prices including the annual surcharge to prepayment customers, now fixed at £15.
- Support for energy efficiency measures through administration of the Energy Efficiency Commitment.

Under Occupancy

The size of the property with respect to household size is another factor, which can affect fuel poverty. Those households in the most extreme fuel poverty tend to occupy larger than average houses. In 1998, 1.25 million fuel poor households were under occupying. 67% were in single person households and 70% were households containing pensioners (DTI, 2003a). A number of social landlords have incentive schemes designed to assist single households in moving to more appropriate accommodation. Local authorities are now required in their Housing Strategy to demonstrate that they have assessed the extent of the problem.

4. Policy

In order for the issue of fuel poverty to be tackled by governments, it must first accept that the problem is of sufficient political importance to warrant intervention. In this respect there has been significant progress since the 1980s. In 1985 the Conservative government denied the existence of fuel poverty suggesting it was a term with little usefulness. However, by 1997 the Labour government recognised the importance of eliminating fuel poverty and reducing the unacceptable excess winter mortality rates in Britain. Thus, the UK Fuel Poverty Strategy was published in November 2001 (DTI/DEFRA 2001). There had been a number of initiatives prior to the publication of the strategy mainly emphasising the need to improve the energy efficiency of the current housing stock.

In 1993, the Conservative government issued advice to local authorities on the need to improve the energy efficiency of their housing stock and some capital allocations were made available under such initiatives as the "Greenhouse" fund. In 1995 the Home Energy Conservation Act was introduced, which established Housing Authorities as Energy Conservation Authorities and set a target for a 30% improvement in energy efficiency of the housing stock within 10 years. It did not, however, provide dedicated funds. The average improvement is currently way below the target (DETR, 1998). Following the publication of the green paper "Our Healthier Nation" in 1998, in which the government stated that there were approximately one million homes with inadequate standards of energy efficiency, a **Joint Statement on Housing** was signed by 26 organisations. The statement accused the government of seriously underestimating the problem, claiming that there were 7 million households in fuel poverty and that the root cause was poor energy efficiency levels. It called for urgent action by the government. One of the signatories stating:

"—fuel poverty is not just ruining peoples' health and quality of life, it is also imposing a heavy burden on our overstretched National Health Service at an estimated cost of £1 billion a year---". Friends of the Earth, 1998.

As part of its response to this pressure, the Labour government introduced the Warm Homes and Energy Conservation Act 2000. This extended the duties placed on Energy Conservation Authorities under HECA to report on their policies, strategies and achievements in tackling fuel poverty. It also required the government to establish targets for the elimination of fuel poverty. Twelve months later the government issued its draft UK fuel poverty strategy. The final version of the strategy was published in November 2001. It set overall targets for the UK and separate ones for each of the nations. The primary aim of the strategy was to ensure that by 2010 no vulnerable households would be in fuel poverty and risking ill health due to a cold house. The government estimated that there were 3million vulnerable households in fuel poverty. In addition there was a commitment to tackle fuel poverty in other households once progress had been made on the priority vulnerable groups. Fuel poverty would be tackled through home energy efficiency programmes, action to keep fuel bills low and action on poverty, low income and social exclusion. The Government also established the Fuel Poverty Advisory Group (FPAG) to monitor the effectiveness of current policies and make recommendations. It published its first annual report in March 2003 (DTI, 2003c).

There is no doubt that the introduction of the strategy was a major step forward in tackling fuel poverty. However, there are major concerns with respect to the definition adopted for

target setting as mentioned previously, Friends of the earth, 2002 suggested the government had "fiddled the figures" excluding one million households formerly considered as fuel poor.

More recently the government's commitment to the strategy has been called into question particularly with respect to progress on improving energy efficiency. In 2002, Michael Meacher, the environment minister told the Department of Industry Select Committee that there had never been a government commitment to the 30% target set under The Home Energy Conservation Act 1995 (HECA). The government's reluctance to accept an enforceable target was also demonstrated in July 2002, when MP Des Turner was forced to withdraw his Home Energy Conservation Bill, which would have enforced the achievement of the 30% target.

5. Prospects

Whilst the strategy applies to all of the UK this evaluation concentrates on England. As has been noted the elimination of fuel poverty requires action to improve incomes, control fuel prices and improve the energy efficiency of the housing stock by providing a programme for affordable warmth. The relative importance of each of these actions is significant. The ability to solve the problem through action on incomes and fuel price alone has been questioned by Boardman, 1998. She suggests that the only way to ensure that 10% of income purchases affordable warmth is through energy efficiency measures. Clearly this involves a significant capital investment in the housing stock of the poorest households living in the least energy efficient housing. The liberalisation of the energy markets has benefited the better off as noted above. The fuel poor spend significantly more on each unit of energy than do more affluent households. Improving peoples' incomes whilst clearly beneficial does not mean that additional income will be spent on keeping warm. She suggests that:

"households in the least efficient properties would be spending at least £700 per year more if they were going to have adequate warmth in their present homes".!! **Boardman, 1998**.

More recently the Trade and Industry Select Committee in its 6th report 2002 confirms the views of Boardman suggesting that the only real long term solution is improving the energy efficiency of the housing stock.

There can be little doubt that eliminating fuel poverty effectively means introducing a programme of affordable warmth through improved energy efficiency measures. The potential difficulties to be faced in achieving the government's target were recently highlighted in a report, which considered the problems posed by providing a programme of affordable warmth in "hard to heat" homes. (Pett. 2002). The report stated that there were some 3 million homes off the network and that 36% of dwellings were of non-cavity wall construction. Pett suggests that there are 5 million households in fuel poverty (considerably higher than government figures). Furthermore some 2 million of the total live in "difficult to heat" homes. There are a large number of the vulnerable who live in "difficult to heat" homes (approximately 1.7 million), the majority of whom are owner-occupiers. This provides a huge challenge in persuading them to take up energy efficiency measures. Pett estimates the cost of providing affordable warmth to a typical solid wall terraced property at about £5,000 to include external or internal insulation and gas central heating. This would mean a global sum of £4.41 billion would be required. The monies available per property under current schemes would be insufficient to deal with such properties. Dealing with the problem in these houses is clearly a long-term project given the costs involved and the present finance available.

The current level of stock replacement through clearance, which is at about 10,000 houses per year adds to the difficulties; pre-supposing too long a life for our older housing, much of which falls in the "hard to heat" category and for which the only solution is likely to be through demolition. At present the fitness standard does not specify a requirement that a dwelling be energy efficient merely that it has adequate provision for heating. The new Housing Health and Safety Fitness rating, which is now long overdue has the scope for incorporating an assessment of energy efficiency and relating it to statutory intervention. This might be particularly helpful in dealing with the least energy efficient housing in the private sector.

The importance of extending the gas network is also significant. Estimates of the costs suggest that to take 100,000 households out of fuel poverty in this way might cost £50 million (DTI, 2002). This aspect is particularly important with respect to rural fuel poverty, an issue, which has recently been reviewed (Baker, 2002).

Improvements to the energy efficiency of the housing stock through better insulation and heating are primarily being tackled through EEC, which places obligations and targets on the energy companies and WFTGS. WFTGS is the government's main programme for private sector households. Access to the scheme requires the receipt of a qualifying benefit. The maximum grant available is currently £2,500. The scheme is currently under government review. There is an issue relating to targeting of the schemes. Almost half of those benefiting are not in fuel poverty and of more concern is the discovery from the Warm Zones initiative that nearly 30% of the fuel poor were not eligible for either EEC or Warm Front. This is in part related to the failure of households to take up benefits (DTI, 2003). It is also evident that the grant is inadequate to deal with "hard to heat" homes.

In 1998 about 25% of those in social housing were fuel poor. The obligations placed on social landlords under the "Decent Homes" standard should help to reduce the numbers. This standard includes a thermal comfort element. Dwellings must comply with basic insulation and heating criteria. However, according to the Fuel Poverty Advisory Group many of the current one million fuel poor households already occupy houses, which meet this standard so that compliance will not necessarily relieve fuel poverty in the social sector. There is now increasingly speculation that many social landlords will not be able to achieve the standard by 2010.

Progress towards the 30% improvement in energy efficiency recommended under HECA 1995 is far from encouraging. The average improvement between 1996 and 2001 was only 10% with some local authorities showing improvements of less than one percent (DEFRA, 2002).

The most recent assessment of the government's progress and prospects for achieving the targets set out in the Fuel Poverty Strategy was set out in the FPAG's First Annual Report (DTI, 2003c). Whilst welcoming the reduction of 500,000 households since 2000, the majority of which were accounted for by changes in income and fuel prices, it cast doubt on the ability of the government to meet the targets given the current level of expenditure. The group estimated that the cost of meeting the 2010 target would cost £4.5 billion based on the narrow definition (including HB and ISMI) and £6.5 billion using the broader definition (excluding HB and ISMI), assuming that the government figures are accurate. Government spending on energy efficiency schemes is currently running at about £300 million per year. However, a proportion of this sum is accounted for by administration and marketing costs and it has already been noted that almost half of those benefiting from the scheme were not fuel poor households. The Group suggest that funding for the programmes needs to be increased by 50% in order to alleviate fuel poverty in vulnerable households by 2010 even based on the narrow definition. The group also estimated the numbers still likely to be in fuel poverty in 2010 under the present policies. They suggest that existing energy efficiency measures will only reduce fuel poverty by 80,000 households per year making a total of 800,000 over the ten years, leaving 1.5 million (2.4 million by wide definition) vulnerable households still in fuel poverty. Their most optimistic assumption suggests this figure could rise to one million. These estimates are based on a nil impact on numbers from income and fuel price changes over the period. For every one percent real change in energy prices and in real benefit/tax credit levels the numbers in fuel poverty change by 100,000. The Group conclude that unless Warm Front and other programmes are targeted on the fuel poor and the £2,500 limit removed then the fuel poverty targets will not be met. This confirms the findings of another evaluation of the Warm Front programme in which it is suggested that it is unlikely to have a significant impact on fuel poverty without more emphasis on focusing on the fuel poor (Sefton, 2002).

The FPAG made a number of recommendations to the government including:

- A systematic annual review of progress towards targets
- A 50% increase in current programmes and the upper limit on "Warm Front" to be removed.
- Better integration of different fuel poverty programmes at local levels

- Vigorous implementation of the thermal comfort standards in the "Decent Homes" Standards and monitoring to determine whether some households in homes up to the standard remain in fuel poverty
- New or expanded programmes for "hard to heat" homes including pilot extensions to the gas network
- Reductions in the costs of prepayment meters
- The need for more effective integration across government departments
- The need for energy policy to take account of fuel poverty

If there is to be any hope of the government achieving its target then more resources are required together with more effective targeting on the fuel poor. Otherwise the elimination of fuel poverty will never be achieved within the government's time frame. Pett hopes that:

"the threefold drivers of fuel poverty, climate change and health will surely prevent such a long delay" Pett, 2002

The issue that needs to be addressed is how can the programme be resourced? As early as 1993 the utilisation of the fossil fuel levy was suggested as a means of financing a programme of affordable warmth (Boardman, 1993). The government has estimated that the costs of providing winter fuel payments over the next 5 years is likely to cost £8 billion and that £30 million was paid in the winter of 2000/01 in cold weather payments to vulnerable households. Estimates of the cost to the health service of fuel poverty are about £1 billion per annum. Therefore, the setting aside of sufficient funds for capital investment in the housing stock to alleviate the misery of fuel poverty appears self-evident. It would result in significant savings to the health and social security budgets over the medium to long term.

5. Conclusions

There can be little doubt that the unacceptable levels of excess winter mortality in Britain are related to the condition of the housing stock. Households suffering from fuel poverty tend to occupy the poorest housing with the worst levels of energy efficiency and are particularly susceptible to the health effects associated with cold housing especially the elderly. The most effective way of tackling excess winter mortality amongst vulnerable households is to take them out of fuel poverty.

Tackling fuel poverty requires action to improve income, stabilise fuel costs and improve the energy efficiency of the housing stock. However, action concentrating on income and fuel costs alone will not be sufficient to eliminate fuel poverty. The most effective way would be by the introduction of a programme to improve energy efficiency i.e. a programme for affordable warmth.

The introduction of the UK Fuel Poverty Strategy was a major step forward in recognising the significant health benefits of reducing the numbers of fuel poor households, especially amongst vulnerable groups. The foregoing analysis raises a number of doubts concerning the commitment of the government to the policy. The ability of the government to achieve its targets within the time frame set is also called into question. The reduction in numbers through action on income and fuel prices has reached a peak. Fuel price increases now feeding through are likely to increase the numbers in fuel poverty over the next 12 months. Thus, action, concentrating on energy efficiency measures should be a priority for the future.

Presently, the government is relying on two key programmes to deal with the issue, the Energy Efficiency Commitment and The Warm Front Team Grant scheme. However, assessment of the schemes suggests two major problems; targeting and the current level of expenditure. If action is not taken to address these issues then the FPAG estimates that there will still be 1.5 million vulnerable households in fuel poverty in 2010 under the narrow definition.

The lack of integration of the current programmes especially at local level is also hindering the prospects for achieving the targets. Whilst Local authorities are responsible for developing coherent strategies, their lack of control of the disparate funding regimes restricts their effectiveness.

So what should be the way forward? A radical restructuring of the existing strategy is likely to be required in order to achieve the government's objectives. The setting aside of sufficient funds within a dedicated programme for affordable warmth over a ten-year period would certainly be beneficial. The ability of LHAs to develop a coherent, integrated strategy is hampered by a lack of control of the resources made available under a whole range of programmes. The "rolling up" of all the various funding into one programme for affordable warmth seems to make a lot of sense. After all this has been done with other budgets such as "Supporting People". The programme could then be administered by LHAs with consequent savings on administration. The incorporation of a central heating programme for elderly households similar to that in Scotland could also reap benefits. Without any changes then the scandal of excess deaths amongst the British population will remain a major public health problem for the foreseeable future.

References

Age Concern (2001) The UK Fuel Poverty Strategy, Policy Unit, Age Concern, England.

Alderson, MR (1985) Season and Mortality, Health Trends 17 pp 87-96.

Allen, C. (2000) On the "Physiological Dope" Problematic in Housing and Illness Research: towards a critical realism of home and health, Housing Theory and Society, 17, 2 pp. 47-67.

Archer, P. (2002) Assessing the UK Fuel Poverty Strategy, Environmental Health Journal August 2002 pp244-247.

Baker, W. (2002) Rural Fuel Poverty: defining a research agenda, a report to Eaga Charitable Trust. EAGA.

Boardman, B. (1991) Fuel Poverty: From Cold Homes to Affordable Warmth, London, Belhaven

Boardman, B. (1993) Prospects for Affordable Warmth in Unhealthy Housing, Research, Remedies and Reform, Burridge and Ormandy Eds. London, E & FN Spon.

Boardman, B. (1998) Energy Efficiency and Fuel Poverty, Paper presented to Praseg annual conference.

Burridge, R. and Ormandy, D. (1993) *Unhealthy Housing: Research, Remedies and Reform,* E & FN Spon.

Byrne, D. and Keithley, J. (1993) Housing and the health of the Community in Burridge R. and Ormandy, D. (Eds) Unhealthy Housing: Research, Remedies and Reform, E & FN Spon.

Building Research Establishment (2002) Fuel Poverty in England in 1999 and 2000, DTI and DEFRA.

Centre for Sustainable Energy (2001) Fuel Poverty and III Health: a Review, www.cse.org.uk/articles/fp_and_ill_health_review.html

Collins, KJ. (1983) *Hypothermia – the facts,* Oxford University Press.

Critchley, R. (2001) Slow Progress, Environmental Health Journal, June 2001

Curwin, M. (1981) *Trends in Respiratory Mortality 1951-1975, England and Wales, OPCS DH1 No. 7, HMSO, London.*

Curwin, M. (1991) Temperature and Cardiovascular Mortality, Lancet, 345, 337-338, Feb 11.

Curwin, M. and Devis, T. (1988) Winter mortality, temperature and influenza: has the relationship changed in recent years? Population Trends 54, OPCS pp. 17-20, HMSO, London.

DTI/DEFRA (2001) The Fuel Poverty Strategy, London, HMSO.

DTI/DEFRA (2003) The UK Fuel Poverty Strategy First Annual Report, HMSO.

DEFRA (2002) Home Energy Conservation Act 1995 Fifth Progress Report Data, HMSO

DETR (1998) Home Energy Conservation Act Report to Parliament, HMSO

DTI (2002) Fuel poverty: House of Commons Trade and Industry Select Committee Sixth Report 2001-02, HMSO.

DTI (2003a) Energy Consumption in the United Kingdom its impact on the environment and Society, HMSO

DTI (2003b) UK Energy Sector Indicators 2003, HMSO.

DTI (2003c) Fuel Poverty Advisory Group (for England) First Annual Report, HMSO.

Donaldson, GC, Ermakov, SP, Komarov, YM et al. (1998) Cold-related mortalities and protection against cold in Yakutsk, eastern Siberia, observation and study, British Medical Journal (Clinical Research Ed) 1998; 317 pp978-982.

Donaldson, GC and Keatinge, WR. (2002) Excess Winter Mortality: influenza or cold stress? Observational Study, British Medical Journal Vol. 324, p.89-90.

Friends of the Earth, (1998) Fuel poverty and Energy Inefficiency Major Killers, (Press Release, 4th May).

Friends of the Earth, (2001) Warm words but cold homes: Fuel poverty strategy falls short, (Press release, 23 Feb.).

Friends of the Earth, (2002) *BMJ Research shows need to Fight Fuel Poverty,* (Press Release, 11th January)

Howarth, PH; Lunn, A. and Tomkins, S. (1992) A double blind, placebo controlled trial of intervent bedding system in perennial allergic rhinitis, Journal of Allergy Clinical Immunology, 89, 305.

Hunt, S, (1993) Damp and mouldy housing: a holistic approach, in Burridge R. and Ormandy, D. (eds.) Unhealthy Housing: Research, Remedies and Reform, E & FN Spon.

Jones, E. (2000) The Curse of the Cold, Environmental Health Journal, Dec 2000.

Keatinge, **WR**, **(1986)** Seasonal mortality among elderly people with unrestricted home heating, British Medical Journal, 293, 732-733.

Khanom, L (2000) Impact of fuel poverty on health in Tower Hamlets, in Rudge, J. and Nicol, F. (Ed.) Cutting the costs of the cold, E & FN Spon.

Khaw, KT and Woodhouse, P. (1995) Interrelation of vitamin C, infection, Haemostatic factors and cardio-vascular disease, British Medical Journal 310, pp1559-1562, 17 June.

Lawlor, D. (2001) The health consequences of fuel poverty: what should the role of primary care be? British Journal of General Practice, June 2001.

Meacher, M. (2002) evidence submitted to the DTI Select Committee on Fuel Poverty 23rd May 2002 (www.eaga.co.uk/whatsnew/trade&ind23MAY 2002.htm)

Pett, J. (2002) Affordable Warmth for "Hard to Heat" Homes: Finding a Way Forward, London, EAGA & ACE.

Platt, SD; Martin, CH; Hunt SM and Lewis CW, (1993) Damp housing, mould growth and symptomatic health state, British Medical Journal, 298, 1673-1678, 24 June.

Raw, GJ, Aizlewood, CE and Hamilton, R, (2001) Building regulation, health and safety, Building Research Establishment.

Sefton, T. (2002) *Targeting fuel poverty in England: is the government getting warm?* Fiscal Studies, Sept 2002 pp369-399.

Shenton, J. (2002) Affordable Warmth: Reality or Fantasy, Environmental Health Journal Sept 2002 pp272-275.

Wilkinson, P., Armstrong, B., Landan, M. and Colleagues (2001) Cold Comfort: The social and environmental determinants of excess winter deaths in England 1986 – 1996, Joseph Rowntree Foundation.