

Fuel poverty is a worldwide issue affecting an ever increasing proportion of the global population. Although there is recognition of the problem at the highest levels of government, insufficient efforts are being made to address fundamental needs. Bioenergy and other renewables, have a significant role to play in mitigating the worst effects of fuel poverty although this needs careful planning and implementation.

Fuel Poverty and Bioenergy Discussion paper

IEA Bioenergy

IEA Bioenergy Task 43
Report 2015:TR03



FUEL POVERTY AND BIOENERGY DISCUSSION PAPER

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KEY MESSAGES

Fuel poverty is a worldwide issue affecting an ever increasing proportion of the global population. Although there is recognition of the problem at the highest levels of government, insufficient efforts are being made to address fundamental needs. Bioenergy and other renewables, have a significant role to play in mitigating the worst effects of fuel poverty although this needs careful planning and implementation.

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SUMMARY

A review of attitudes and actions to address fuel poverty has revealed that only a limited number of countries have defined the problem of fuel poverty. Nevertheless, most northern hemisphere and European countries realise that there is a problem and that it is getting worse as global energy prices continue to rise at a rate exceeding that of incomes.

Energy efficiency initiatives are having an impact and there is a role for renewable energy and for Bioenergy solutions, particularly with District Energy schemes linked to social housing. However, ironically, at the current time the increased use of 'green energy' is seen to be part of the problem of fuel poverty and not the solution by some politicians and large energy utilities. This is because the additional costs of moving to a green economy with the concomitant costs of investing in more renewable and energy efficient infrastructure and housing is being borne by consumers through paying more for their electricity and heating.

A number of interviews with private and public landlords in the UK has shown that there is increasing alarm at the rise in fuel poverty and the lack of concerted political will to deal with the matter effectively. The government has introduced a number of fiscal incentives in the UK that should catalyse change and ultimately benefit those in fuel poverty. Nevertheless, uncertainty clouds the views of the organisations that can create the change and there is a lack of faith in the continuity of relevant government policy. This in turn is affecting the mood for investment, for example through the 'Green Deal' and most recently with the 'Energy Company Obligation' where major changes in government policy are expected at any time.

The message for Bioenergy is nevertheless positive and local solutions linking supply with use are seen as beneficial. There is a particular opportunity for communities and small to medium sized business (SMEs) to come together to operate District Energy schemes drawing on local wood resources. This has the potential to create major socio-economic benefits as well as help address fuel poverty.

1 INTRODUCTION

1.1 Background and definition

The inability to maintain a comfortable temperature in the home due to economic difficulty has been termed 'living in fuel poverty'. The exact definition in reality, has many different interpretations and definitions including those relating to insufficient energy to be able to cook food, provide lighting and so forth. Mostly, the definition relates to a northern and cold climate definition where keeping warm in winter is the main priority. Nevertheless, there is an equally valid proposition that failing to be able to keep sufficiently cool in hotter climates due to economic difficulty is also a case of 'fuel poverty'.

This paper will deal with the former circumstances and will focus on the United Kingdom (UK) situation although draw on other country experiences too including Germany, Croatia and Canada. In the UK, the issue of fuel poverty has risen in importance following a series of harsh winters where people have found it harder to keep warm affordably.

In the UK, unlike many countries, fuel poverty has been defined. Until recently, fuel poverty was determined by household and where more than 10% of its combined disposable income was spent on fuel to meet a certain level of adequate heating (usually 21°C for the main living area, and 18°C for other occupied rooms).

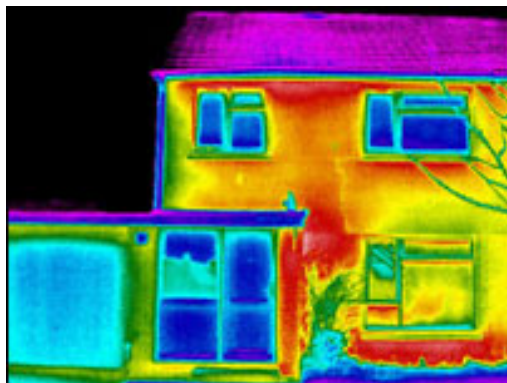


Figure 1: Poor building stock exacerbates fuel poverty issues

Three factors are particularly important in assessing whether a household is considered as being fuel poor. These are, the cost of energy, how energy efficient the property is and the total household income¹. Pressure upon individuals as to whether they can afford energy differs, some will have a property that is very inefficient and do not have the means to improve this efficiency whereas others may have an efficient home but have a low income². This definition is based upon 'a need to spend' initiative in that it measures those with high energy bills and also those who under heat their homes due to cost. If fuel poverty was to be measured on an actual spend basis as some suggest, it would not include those who under heat their homes and therefore miss many people who are unable to use the fuel that they require. Some also suggest a subjective assessment of whether people

¹ <https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/fuel-poverty-statistics>

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211180/FuelPovFramework.pdf

think they can afford to heat their homes³. This is likely to lead to a distortion of the statistics as some people seek to gain financial advantage through suggesting greater financial difficulty than actually exists. :



Figure 2: Increasing public awareness

A recent review by Professor Hills of the London School of Economics on the definition of fuel poverty found that the current definition was inadequate. As a result, a new definition has been created. This seeks to discount those households that are in fact not 'fuel poor' This could include high income homes which are just very inefficient. It was also argued by Hills that this definition had painted a misleading picture of trends, understating the scale of the problem when energy prices were low and overstating it when prices were high. Since prices vary considerably, price alone cannot be used as a clear indicator as it will distort the figures with households coming into and leaving 'fuel poverty' on a weekly basis. The suggestion is to use an average measurement of price.

Following on from this review, the UK government has now announced a new definition of fuel poverty in which to be classified as fuel poor a household needs to have a combined income that is 'below the poverty line', taking into account energy costs. In addition, they must also be paying a higher bill than the typical cost for their household type. The new definition also takes into account a fuel poverty gap, the difference between a household's modelled bill and what their bill would need to be for them to no longer be fuel poor. It is hoped that this new definition will enable the government to tackle the problem of fuel poverty much more effectively and ensure that a minimum or average level of fuel efficiency is achieved⁴.

Under the current definition of fuel poverty, nearly 50% of households are pensioners (10% contain a person over the age of 75 or over), 34% contain someone with a disability or long-term illness and 20% have a child aged 5 or under. Under the new definition, this should change significantly with the removal of the wealthy out of the equation - probably many pensioners who remain in old and larger properties.

³<http://www.sustainabilityfirst.org.uk/docs/2011/Review%20of%20the%20UK%20fuel%20poverty%20measure-%20for%20publication%20Feb%202011.pdf.pdf>

⁴ <https://www.gov.uk/government/news/davey-determined-to-tackle-scourge-of-fuel-poverty>

Fuel poverty is still expected to increase with those in society with the lowest incomes least able to absorb any price rises. These price rises are inevitable as demand increases but supply diminishes from finite fossil fuel resources that we remain heavily reliant upon in our day to day lives⁵.

There are four income definitions of fuel poverty which are used for a fuel poverty indicator. These are:

- **full income**, where a household spends more than 10% of its income on energy (this includes housing benefit, income support for mortgage interest and council tax benefit, this is the official government definition)
- **basic income** this is the same, however, it does not include housing benefit, income support for mortgage interest or council tax benefit
- **full income equivalised**, this is the same as full income, however, income is equivalised and very low incomes are not imputed
- **basic income equivalised**, which is the same as basic income but income is equivalised and low incomes are not imputed.

The first two definitions are used for the Government's official fuel poverty statistics. The third and fourth definitions are consistent with the measurement of income used by the Government's Households Below Average Income (HBAI) statistical series⁶.

Different definitions provide radically different results. For example, using basic income instead of full income leads to more households with children (particularly lone parent households) being classed as fuel poor and a reduction in the number of over 60s (single and couples) who are defined as fuel poor. Using equivalised income rather than full income also leads to changes in the types of household classified as fuel poor - notably away from single pensioners to couples with children. Alternative measures of fuel poverty are also discussed elsewhere⁷.

Despite this new definition meaning to make households in true fuel poverty easier to target this is not seen to be the case in practice. Interviews carried out with two housing associations and one local authority (see Annex) strongly suggest that the new definition is unduly complicated and does not allow the targeting anticipated. As a result, the tendency is to stick to the old definition.

Some implied that it may just be a way of reducing the numbers in official fuel poverty, but there will still be others in need. Reading Borough Council stated that it needed a definition to help better target those in fuel poverty and neither the new nor the old definitions do this effectively. As a result, they use other indicators such as the 'index of multiple deprivation' and 'housing condition surveys'. Sovereign Housing Association have recently unveiled a new company policy for tackling fuel poverty and will retain the older definition.

⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/50945/7318-fuel-poverty-advisory-group-for-england-tenth-an.pdf

⁶ <http://www.fuelpovertyindicator.org.uk/newfpi.php?mopt=1&pid=defining>

⁷ <http://www.sustainabilityfirst.org.uk/docs/2011/Review%20of%20the%20UK%20fuel%20poverty%20measure-%20for%20publication%20Feb%202011.pdf>

1.2 Fuel poverty - the worldwide perspective

Fuel poverty is heavily concentrated in developing countries but it is also widespread within developed countries. Worldwide, as populations continue to increase, the demand for energy is set to rise significantly. This rise in demand will likely lead to higher fuel prices and to more households suffering from fuel poverty as affordability becomes an increasing issue.

With rapid population growth such as in Africa where a doubling in numbers to 2 billion is predicted by 2050 and Asia already having over half of the world's population, but only consuming 25% of global energy, the problem of fuel poverty for the poor can only be set to rise. These areas of the world already have a great problem with fuel poverty for example less than 30% of sub Saharan Africa has no access to electricity, with the population set to increase it is inevitable that this percentage will increase greatly unless something is done to increase access.



Figure 3: Not just a developed country issue

Many countries do not have their own resources meaning that they are much more vulnerable to fuel poverty. Other countries, in the Middle East for example, have considerable energy wealth. These imbalances lead to increasing tensions that are unlikely to be resolved in the near future.

Biomass is a very important energy source for many poor countries and its sustainable management is itself a major issue. Worldwide there is a large problem of fuel poverty within rural areas with an average of only 60% having access to electricity for example. Access often needs to be dealt with at the same time as affordability. Rapid urbanisation in some countries is likely to see an increase of fuel poverty, particularly in developing countries where many of the extreme poor live in informal settlements.⁸ In order to reduce fuel poverty it is important to not only expand electricity coverage and access to other energy sources but also to make sure that the poorest are able to access energy where it is already available⁹.

Fuel for cooking is extremely important and biomass (wood) is often the main stay. Accessing fuel can be difficult and hazardous. Likewise its use on open stoves and fires where health issues become significant. Addressing fuel poverty here needs to be on many fronts enabling the sustainable management of resources,

⁸ <http://www.ofid.org/HOME/EnergyPoverty/EnergyPovertyWorldwide.aspx>

⁹ http://www.chronicpoverty.org/component/docman/doc_view/72-energy-policy-guide

introducing new, safer and more efficient technology as well as educating people on its use. Without such assistance, many households will remain in ‘energy traps’ in a poverty cycle. Women and children suffer particularly from these impacts¹⁰.

1.3 Fuel poverty - a problem in Europe?



Figure 4: Fuel poverty action across Europe



Figure 5: European forum

Between 50 and 125 million people in Europe are estimated to be fuel poor. The exact numbers are difficult to know as many European countries do not have a set definition of fuel poverty, probably even more important is the lack of a clear definition across the EU. Only three member states have an official definition of fuel poverty, these are **Ireland**, their definition is the same as the old UK version, however, it is based upon an actual spend basis rather than a need to spend basis, the **UK** and **France**. The addition of France has only happened very recently.¹¹ with their definition being “anyone who meets, in its housing, particular difficulties to have the necessary energy to meet its basic energy needs because of the inadequacy of its resources or of its housing conditions”¹² In the absence of effective national legislation to protect vulnerable consumers, for example, it would seem rational and equitable that the EU should take a much more active role in safeguarding the interests of consumers. This lack of a definition means that it is difficult to contrast and compare different member countries and therefore use resources effectively in order to target it. A European Fuel Poverty and Energy Efficiency (EPEE) Programme has recommended a number of actions for preventing fuel poverty, these are:

- A common definition - The EU must set out a clear definition of fuel poverty. This may be quite general but should recognise the key issue of inability to achieve adequate warmth at an affordable cost
- A legislative framework,
- A consistent diagnosis

¹⁰ http://www.chronicpovertynetwork.org/component/docman/doc_view/72-energy-policy-guide

¹¹ <http://fuelpoverty.eu/2012/02/10/fuel-poverty-in-spain/>

¹² <http://fuelpoverty.eu/2012/08/24/fuel-poverty-in-france/>

- Establish a fuel poverty special interest group.

The five partner countries of the EPEE project have come up with this definition: “Fuel poverty is a household’s difficulty, sometimes even inability, to adequately heat its dwelling at a fair, income indexed price”¹³. This project involved 5 EU countries, UK, France, Italy, Belgium and Spain.

Fuel poverty is seen to be experienced particularly in Eastern and Southern states¹⁴. This is perhaps counter intuitive since these are generally the warmer European countries, however, it may be that such countries are less prepared for cold weather when it does happen and thus run into difficulties. Their homes are not built to withstand prolonged low temperatures and will not protect the occupants. They will be less efficient and therefore cause many people to be in fuel poverty.

Spain is one particular example of this. They have no legal definition of fuel poverty, according to EU statistics almost 6% of the population cannot keep their homes warm¹⁵. However, another study suggested this was as high as 9%¹⁶. This difference in percentages highlights the difficulty in measuring fuel poverty and the difficulty there is going to be in tackling it across the EU. Unlike many developing countries, it is the urban areas in Spain which suffer the greatest from fuel poverty, showing the difference there needs to be in policy making in order to tackle fuel poverty everywhere¹⁷.

Denmark on the other hand has much lower fuel poverty despite being a colder country. Perhaps this is because they are more accustomed to the cold and have taken appropriate measures. However, they have a high level of District Heating, with over 500,000 people in the capital provided for in this way¹⁸. Such infrastructure should allow for economies of scale and make heating homes more affordable. Denmark has invested vast sums in improving energy efficiency within the home with the standards being set extremely high¹⁹. Bioenergy is also a recognised and important fuel.

Looking further afield, **Canada** has tended to use the original UK definition of fuel poverty i.e. more than 10% of disposable income spent to adequately heat a home. Citizens living in fuel poverty tend to also be living below the poverty line. The issue of fuel poverty is gaining importance in Canada as there is upward pressure on fuel prices. Some of this pressure comes from Canada’s efforts to reduce greenhouse gas emissions through carbon taxes and other means. Those efforts will increase the number of people living in colder than acceptable conditions.

As Canada is a cold country, the housing stock is usually adequate for all conditions; fuel price versus low incomes is at the heart of the problem. Canada is also very large and there are people in remote areas such as the far north where

¹³ http://www.fuel-poverty.org/files/WP5_D15_EN.pdf

¹⁴ <http://fuelpoverty.eu/2012/02/10/fuel-poverty-in-spain/>

¹⁵ <http://fuelpoverty.eu/2012/02/10/fuel-poverty-in-spain/>

¹⁶ http://www.fuel-poverty.org/files/WP2_D6_en.pdf

¹⁷ http://www.fuel-poverty.org/files/WP2_D6_en.pdf

¹⁸ <http://www.guardian.co.uk/housing-network/2013/feb/21/scotland-denmark-fuel-poverty>

¹⁹ <http://www.hi-energy.org.uk/Downloads/General%20Documents/Report%20on%20Fuel%20Poverty%20in%20Relati on%20to%20Grid%20Charging%20and%20Renewable%20Generation.pdf>

fuel prices are very high and people are at risk of living in fuel poverty. The national and provincial governments are aware of these issues and efforts to address the problem of fuel poverty are underway.

Since the massive rise of energy costs from 2008 and the discussion about renewable energies, the problem of fuel poverty found its way into the public debate in **Germany**. Still, compared to other European countries cited above, fuel poverty is still not a big issue. As a result, there is no official definition of fuel poverty in Germany and various actors have used different ways of defining it.

The Wuppertal Institute for instance, speaks of fuel poverty if there is an insufficient access to adequate, affordable, reliable, high-quality, safe and eco-friendly energy services. The Fuel Poverty Project of the European Union in Germany refers to the difficulties or inability of households to pay their bills for daily energy supply, including heating, warm water, light and the operating of electronic devices²⁰. The Consumer advice centre of Nordrhein-Westfalen speaks of fuel poverty if households have to spend more than average on fuel costs or if they have problems to pay their energy bills.

Also, the academic research into issues of fuel poverty is still underdeveloped especially when compared with the UK, France or Belgium. However, regarding electricity costs for private households, Germany ranks as one of the most expensive being second only to Denmark with 25.30 Euro per kWh in 2011, which is 39% higher than the average for the European Union (18.16 kWh, UK: 15.09 kWh). Since 2000, fuel costs in Germany have risen year on year making matters worse.

The problem of rising energy costs affects all households, but two groups in particular are affected the most: The first group are the poor households, which are defined by the European Union as households with less than 60% of their nation's average income. According to this definition, the number of affected people has risen in Germany from 12% in 1999 to 17.2% in 2005²¹.

The second group, are the marginal households that have a very low income, yet too high an income to receive income support. As a result, they have to pay the energy costs by themselves, which results in a high proportion of their income being spent to meet their energy costs in relation to the gross income of this group²² (Enquete S.80).

The social-economic characteristics for a high risk of fuel poverty concerns low income earners, unemployed individuals, pensioners, young adults, single persons, lone parents and persons with long-term diseases.

The main cause of fuel poverty can thus be identified in Germany as a subset of general definitions of poverty in context with the increase in energy costs. Also, poor energy inefficiency as a result of inadequate building structures combined with inappropriate consumer behaviour are seen as additional causes.

The households affected by fuel poverty face different kinds of problems. The most drastic effect is the cessation of energy supply by electricity or other providers, which has been the case for 312,000 households in 2011.²³ Additionally, saving energy can lead to health problems or even damage to buildings, for

20 FinSH 2010: Energieeffizienz statt Energiearmut, p. 3.

21 Kopatz et al. 2010: Energiearmut, p.10.

22 Enquetekommission NRW 2008: Bericht der Enquetekommission, p.80.

23 Bundesnetzagentur 2012: Monitoringbericht.

example through mould formation as a consequence of insufficient heating. Also, spending more money on energy means financial shortages in other essential areas, such as food and clothing.

There are several instruments to mitigate the impact of fuel poverty in Germany. In general, the social security system in Germany provides for the energy costs of the receivers. However, there has been an insufficient adaption of the amount of the social transfer in relations to the rise of energy costs.

There is a strong need for action to respond to this challenge. The consumer centre of Nordrhein-Westfalen, for example, demands the prohibition of energy 'cut offs' and the implementation of social tariffs with a certain amount of free electricity granted.

Another set of measures to mitigate issues of fuel poverty targets the spending of energy or more specifically increasing the energy efficiency of homes. These measures can be divided in individual-related and building-related instruments. The individual-related aims to give advice to affected households in order to increase the consciousness of energy use. The building-related measures target 'leaky' buildings and searches for ways to renovate buildings in a more energy efficient way.

In summary, it can be said, that fuel poverty is an increasing issue in Germany. But there remains a lack of research and thereby a lack of appropriate measures to tackle the problem.

Regarding the topic of renewable energies, there are no direct connections in terms of solving the fuel energy problem. On the contrary, issues of fuel poverty are often discussed in the context of the promotion of renewable energies, where change to green energy is seen as a primary cause of rising electricity costs and thereby of making fuel poverty worse. As a consequence, the fuel poverty debate in Germany rather leads to a negative framing of the renewable energies debate although in actuality, renewables are causing only a small share of the rising costs for energy.

Croatia like most countries in the European Union does not have a defined definition for fuel poverty, nor a method for its determination. The demand for energy continues to rise even in small countries like Croatia and because of higher demand, fuel prices continue to increase resulting in more households suffering fuel poverty. Croatia does not have enough of its own resources to satisfy its total energy needs, but does have great potential, especially in biomass and solar energy to make a significant contribution. Most homes are very old and need to be made more energy efficient which presents a major problem for inhabitants keeping warm during the winter. As with other countries, households suffering the most from fuel poverty are those with elderly people, children, people with disabilities and those unemployed. These are the most vulnerable groups in our society.

According to the new Energy Act in Croatia (OG 120/12) defined in Article 39, customers of energy from networked systems may have special protection (protected and endangered purchaser) in the event of crisis situations. This for security reasons, the potential threat to life and work as well as for social reasons. The Croatian government regulate the criteria for determining who may be considered a protected customer. Households considered to have such a person or persons are:

- where people have social issues and have need of social assistance,

- where there are people with a given degree of disability, people with special needs or people in poor health deemed vulnerable due to lifestyle or health restrictions

As a result, households that fall into this category qualify as being in poverty and as prescribed by special regulations are entitled to a social minimum energy supply. Certain conditions relate to the type of home, whether in an apartment or a house as in which they live, the number in the family, their state of health and their economic status.

The Social Welfare Act in Croatia (OG 33/12) also provides support for needy households for housing costs. According to Article 49, housing costs are related to rent, utility charges, electricity, gas, heating, water, drainage and other costs. Assistance with housing costs may be granted to a single person or family related to the monthly income of a single person or family over the past three months. Income during this period must not exceed the amount of the support allowance established under Article 33 of this Act. Of particular interest is that those that use woodfuel to provide heat can receive 3 m³ of wood free (or get the amount of money to cover the cost). The amount is determined by the local (regional) government or the City of Zagreb.

According to data from the Croatian Bureau of Statistics, Croatia has an ageing population with some 18% now over 65. The average age of the population is 43.4 years, compared to 1953 when the average age was only 31.9 years old. This is important since older people are more exposed to fuel poverty. This is mostly due to low income given that the average pension represents just 40% of the average monthly salary. This is hardly sufficient to meet even basic needs.

According to research carried out by GfK Omnibus in a randomised survey conducted of household incomes and expenses in 2012, results showed that almost three quarters of the population do not have sufficient income to meet the basic necessities of life (see diagram below).

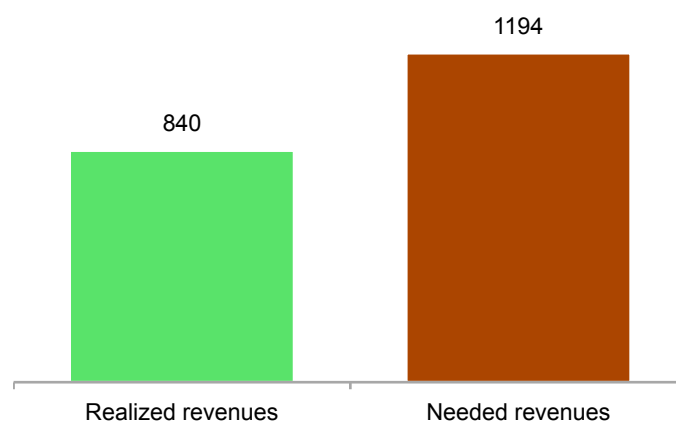


Figure 6: Current income gap to meet basic living needs

How affordable is energy in Croatia, UNDP, GfK

According to the same research, the average share of the cost for energy was 12.2% of total household income, whilst almost 23% of households spent more than 20% of income on energy.

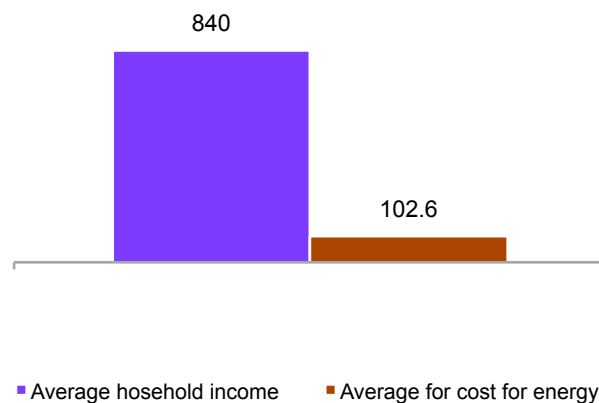


Figure 7: The proportion of income spent on energy

How affordable is energy in Croatia, UNDP, GfK

In Croatia, households are the largest single user of energy, consuming some 30% of all energy. In terms of electricity, households consume some 40% of the total generated. Increasing awareness and the need for energy efficiency is crucial to future energy policy.

Croatia has a significant renewable energy potential. In particular, using renewables in the domestic sector is seen as important for increasing security of supply and boosting development of equipment suppliers and services more generally to achieve social, economic and environmental targets.

The Croatian Energy Strategy is committed to maximising renewable energy production and use limited only by acceptable environmental and social impacts. The strategy has the following strategic objectives:

- To fulfill the commitments proposed by the EU Directive on the promotion of renewable energy sources concerning the share of renewable energy sources, including large hydropower plants, in gross final energy consumption up to 20%;
- To fulfill obligations under the European Union Directive on the share of renewable energy sources in final energy consumption in transport in 2020 of 10%.

Croatia has the objective to achieve a 35% contribution from renewables to total electricity production, this to include large hydropower plants, by 2020.

According to the Third energy package of EU regulations, Member States are required to develop national action plans or other appropriate frameworks to solve

the problem of energy poverty. This will be with the aim of reducing the number of people who find themselves in this situation. Member States should also ensure that the necessary energy supply is available for vulnerable customers, proposing an integrated approach with relevant social policy and measures improving energy efficiency in homes. Noted that there is also a requirement to define the concept of vulnerable (endangered) customers.

2 FUEL POVERTY AND POLICY - CURRENT DEVELOPMENTS (UK)

2.1 Review of existing policies

Current UK Government policies focus on energy efficiency and direct bill payment. Fuel policies have gone some way to alleviating problems. However, more needs to be done on basic education to achieve behavioural change to have more impact.

Policies are currently based upon benefit proxies or area-based criteria. This is seen as the best way to measure it ,however, some difficulties do arise in measuring whether a household is fuel poor as discussed earlier. This can mean that policies are not best targeted as the Government is as of yet unable to find a measure of fuel poverty that will correctly identify all those who are genuinely fuel poor and in need. Data needs to be shared to ensure that policies can be best used as this ensures that many different areas are being taken into account²⁴.

2.2 National Government policies

The fuel poverty package in the UK aims to reduce fuel poverty, primarily by increasing the efficiency of homes, reducing the cost of energy and targeting those on low incomes.

Firstly the government is tackling energy efficiency. In the past, they have used programmes such as *Warm Front*. Increasing the energy efficiency of a property is one of the most effective ways of reducing energy costs and therefore this is an important part of policy for the Government. Regulation of appliances has also been increased ensuring that they are more energy efficient. At the present time, Government is implementing policies such as the Green Deal and ECO; there is more about these policies in section 2.2.

With the aim of reducing costs, the Government is trying to make information about energy suppliers much more readily available and make the transition between suppliers much easier, to ensure that households can get the cheapest possible energy deal and to encourage more competition within energy supply companies. Government is trying to reform the markets to make the system of tariffs much simpler and reduce the choice so that people can choose more easily what they require at the best possible price. Smart meters are one way of assisting with this policy drive by making people more aware of how much energy they use and with what appliances. Providing advisors for the most vulnerable in society ensures that they can also access the best deals available even if they are unable to understand the technicalities.

²⁴https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211180/FuelPovFramework.pdf

Help is also provided through policies such as the *winter fuel payment* which provides a direct payment ensuring that certain targeted people can afford to keep warm.

The Government has the aim of building upon its policies in order to help eradicate fuel poverty²⁵.

2.3 Local authority policies

National government has been working closely with local authorities in order to ensure that energy efficiency can be improved for the fuel poor. For example, through the Home Energy Conservation Act (HECA). Local Authorities are required to report every two years setting out the energy conservation measures that the authority considers practicable, cost-effective and likely to result in significant improvements in the energy efficiency of residential accommodation in its area. The guidance also notes that authorities may wish to use their HECA reports to develop a separate *Affordable Warmth Strategy* and to consider the role that local Health and Well Being Boards and local health partners, as well as how local authorities' existing duties and powers under the Housing Health & Safety Rating System, could play a role in supporting any such plans. This should greatly reduce the amount of households in fuel poverty as not only will they benefit from nationally imposed policies they should also benefit from local ones too that will be regulated by the Government ensuring the resources are being used in the best possible way²⁶.

However, despite being given control over providing their own strategies to eradicate fuel poverty there is no explicit requirement for local authorities to work to the national objective meaning that local and national Governments could in fact be working against each other. Therefore, despite some measures being put in place, the lack of a requirement means that there have only been a handful of best practise examples to show. These do illustrate that the actions of local authorities can be very influential in the dealing with fuel poverty, but a few examples of best practise is not going to change the picture nationally. Despite the lack of targeted action, many existing policies do manage to target fuel poverty if not specifically. Local authorities are well placed to broker the kinds of partnerships that can act strategically and have significant impact in these areas. As a response, many local authorities have developed affordable warmth strategies, in which they set out how they propose to achieve these objectives. However, as stated earlier this is not happening everywhere and is unlikely to have significant impact²⁷.

From studying four of the councils within the Thames Valley, it is clear that there is a large difference in policy even within such a small area. It is particularly clear that it is the urban areas such as Oxford and Reading that have most targeted policy in place as well as actions/ projects to ensure that they reach their specified goals. Reading for example, has the Greener, warmer, safer project which tackles fuel poverty and wider household environment issues, and there is also 'winter watch' which provides an emergency service for those struggling to pay bills in winter. They try to target the vulnerable by sending letters and door knocking in

²⁵https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211180/FuelPovFramework.pdf

²⁶https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211180/FuelPovFramework.pdf

²⁷ http://www.carillionenergy.com/downloads/pdf/beacon_toolkitFinal.pdf

areas where fuel poverty is likely to occur. They also aim to retrofit many properties and ensure new builds are built to particular high standards.

Council	Policy easily accessible	Following national policy	Adding to national policy	Creating own policies
Reading	Green	Green	Green	Green
Oxford	Green	Green	Green	Green
West Berkshire	Red	Yellow	Red	Red
South and Vale	Yellow	Yellow	Yellow	Yellow

■ Clear evidence
■ Small amount of evidence
■ Lack of/no evidence

Figure 8: Comparison of Local Authority activities in addressing fuel poverty

Oxford has low carbon Oxford which builds upon the national project of the Green Deal through retrofitting homes in its most deprived areas. On the other hand, it was much more difficult to find (on line) information on policy procedures by rural councils, West Berkshire for example. The help available seems to be much less. This is particularly worrying as it is clear that there are many people within rural areas suffering from fuel poverty, heavily reliant upon heating oil and not always having access to the national grid.

2.4 Proposed key instruments to mitigate the impact of fuel poverty

Government has introduced a number of instruments in order to mitigate the impact of fuel poverty; they are targeted at a range of organisations, such as housing associations and individuals such as landlords and tenants.

2.4.1 The Green Deal



Figure 9: Green Deal Logo

The Green Deal was introduced by the Government in order to improve energy efficiency within UK households; it also helps with the issue of fuel poverty. It does this by providing the services to make a home more energy efficient such as insulation. These services are provided with no upfront cost, this means that even the poorest in society can benefit from a more energy efficient home and therefore are much less likely to fall into fuel poverty. The assessment will ensure that the bill payer will make savings equal to or more than the cost of installing the measures. However, despite this it does not avoid the problem completely of those on a low income being fuel poor, this is because they still have to pay energy bills even if they are lower they might otherwise have been. A loan repayment is attached to the property and when the property changes hands the residual loan becomes the responsibility of the new owners. Loan repayments are stretched over 25 years and the amount paid will always be less than the saving made. This makes it a viable option for much of the population as it is available to home owners, tenants and landlords.

The major concern is of the rate of interest charged on the loan which is currently seen as too high for many and preventing wide scale take up.

2.4.2 Energy Company Obligation (ECO)

ECO, or Energy Company Obligation, is another way for certain householders to increase the energy efficiency of their properties. This is a grant scheme targeted at low income and vulnerable households provided by the Big Six energy companies. Unlike the Green Deal, they do not need to be repaid and therefore are much more likely to appeal to the fuel poor and help to lift them out of fuel poverty. ECO can be used alongside the Green Deal to fund larger projects too. <http://www.greenddeal.co.uk/green-deal-faqs>

2.4.3 Feed in tariffs (FIT)



Figure 10: A typical rooftop solar PV installation (domestic)

Feed-In Tariffs (also known as FITs) is a scheme that pays people for creating their own "green electricity". The tariffs have been introduced by the Government to help increase the level of renewable energy in the UK towards the legally binding target of 15% of total energy from renewables by 2020 (up from under 2% in 2009). These tariffs encourage people to spend on renewable energy by providing three financial benefits. Firstly they give a payment, provided by the energy supplier for all energy that is produced even if the consumer uses it themselves. The consumer gets a set amount for each unit, however, this depends on the size of the system, the technology installed, when it was installed and who it was installed by (this needs to be a certified installer to get the FIT). Secondly, additional bonus payments for any electricity that is exported onto the grid, the consumer gets a payment for each unit of electricity²⁸. Finally a reduction on their electricity bill as they are producing the electricity themselves²⁹.

2.4.4 Renewable Heat Incentive (RHI)



Figure 11: A typical solar hot water installation (domestic)

Similar to this is the Renewable Heat incentive which relates to heat energy production rather than electricity. The RHI has the aim of increasing uptake of renewable heat technologies in order to cut carbon, help meet renewables targets

²⁸ <https://www.gov.uk/feed-in-tariffs>

²⁹ <http://www.fitariffs.co.uk/FITs/>

and cut the cost of bills³⁰. The scheme has been introduced in phases with the non-residential first followed by the residential later on³¹. Information on tariffs likely to be paid has only recently been made available but looks encouraging, particularly for biomass. This scheme could be provided alongside the Green Deal, or people could also receive money off vouchers through the Renewable Heat Premium Payment Scheme³² until the full introduction of the residential scheme.

2.4.5 Direct payments



Figure 12: The elderly are a particular group affected by fuel poverty

The Government also provides the **Rural Community Energy Fund (RCEF)** which aims to target assistance for rural communities to raise the money needed to carry out feasibility studies into renewable energy projects.. This includes covering the costs of applying for planning permission. This should in turn help them to apply for private funding. The RCEF offers funding in two stages. There is a grant of up to £20,000 on offer for feasibility studies into renewable energy projects in local areas. Once these studies have been successfully completed, communities can then apply for a loan worth up to around £130,000 to help with project costs, such as seeking planning permission and relevant environmental permits. The projects do not have to repay the Government until they have secured and received the private funding they need. This is a sustainable fund as when projects pay back the loan they have to pay a set amount on top of it which enables the fund to help more community projects³³.

The **winter fuel payment** was introduced by the Government in order to ensure that the elderly can be kept warm throughout the winter and not enter into fuel poverty. This should help to reduce the number of winter induced deaths. People can get up to £300 tax free as long as they fit the criteria of being born on or before 5th January 1952 and receive the state pension or another social security benefit (not Housing Benefit, Council Tax Reduction or Child Benefit)³⁴.

The Government also provides a scheme whereby if someone is receiving certain benefits they can receive a **cold weather payment**. This payment should reduce the number of people in fuel poverty as it ensures that if the temperature is going

³⁰ <https://www.gov.uk/government/news/the-heat-is-on-for-householders>

³¹ <http://www.rhincensive.co.uk/RHI/>

³² <https://www.gov.uk/government/news/the-heat-is-on-for-householders>

³³ <https://www.gov.uk/government/news/15m-fund-for-rural-energy-projects-opens-to-applications>

³⁴ <https://www.gov.uk/winter-fuel-payment>

to be an average of zero degrees or below they will receive a payment enabling them to better heat their homes and therefore keep warm³⁵.

Another policy that could assist a household in getting out of fuel poverty is the **Renewable Heat Premium Payment scheme**. This provides a lump sum of money to help with the cost of installing renewable heating technologies. This does not have to be paid back but the consumer has to agree to provide information about their energy usage³⁶. This may lead to people not using this grant as they do not want the burden of having to keep providing information. The scheme will be phased out as the full RHI is enabled.

2.4.6 Smart meters



Figure 13: Smart metering of energy use in homes

Looking to the future, the Government aims for all homes and small businesses to have smart meters installed by 2020. A smart meter gives consumers the opportunity to see how much energy they are using and what it will cost. This will in turn give them more control and therefore help them to save money. People will only be billed for exactly what they use and it will be much easier to switch energy suppliers meaning that consumers can get the best deals³⁷. However, despite this sounding appealing, many people may not be able to understand the information they are being given and may still be unable to understand what tariff would be best. Education will also be needed to get the most out of this change.

2.5 Experiences from implementation

The authors carried out interviews in August 2013 with a number of organisations and people involved with providing homes to people who are deemed to be in fuel poverty. These were:

- Private sector landlord (Mr Adrian Foster-Fletcher)
- Housing Association (Sovereign)
- Housing Association (Housing Solutions)

³⁵ <https://www.gov.uk/cold-weather-payment>

³⁶ <https://www.gov.uk/renewable-heat-premium-payment>

³⁷ <https://www.gov.uk/government/policies/helping-households-to-cut-their-energy-bills/supporting-pages/smart-meters>

- Local authority (Reading Borough Council)

Feedback from these interviews is contained in the following section.

2.5.1 Public sector

Oxford City Council (OCC) is responsible for over 7,500 homes and as such is considered to be a major landlord. Many tenants will be low income and will be in fuel poverty. With such a significant number of households it may not be possible to achieve all OCC aims of retrofitting existing council homes and building new zero carbon ones. Local councils seek to improve energy efficiency and therefore reduce fuel poverty, however, with limited resources this may not be possible across all housing stock. The extension by the Government of the Green Deal which enables councils to bid for a lump sum of funding to improve areas or streets through the Green Deal rather than single properties could be beneficial. It should ensure that the Green Deal can meet many more households particularly those living in fuel poverty who may not be able to afford the repayments³⁸.

The ECO scheme is much simpler for local government to undertake. This is because work is outsourced to the large energy companies who also find the customers and provide the services. It should mean that more households will benefit. Also local government is much more likely to be able to negotiate and get a better deal as their projects will be on a much larger scale³⁹.

Reading Borough Council (see interview) is unlikely to set up its own initiative to do with the Green Deal as this is too expensive particularly with cut backs. The preferred option is to work with other local authorities under an existing contractual framework. This is still being negotiated. As stated earlier ECO is a much simpler method for a local authority and this would suggest why there are already plans for Reading Borough Council to utilise this funding on a small project targeting vulnerable areas. However, there is yet to be a framework for ECO and so they cannot target residents as effectively as they would like.

West Berkshire Council unlike Reading do not have any of their own housing stock. Despite this, in a similar approach to that of Reading Borough Council, they are looking to provide a Green Deal initiative along with other local councils.

2.5.2 Housing associations

Housing association experience with a range of recent Government policies has been mixed and hence they view new initiatives with caution (the same could be said of local authorities). There has recently been a review of FITs which is potentially going to have a huge negative effect on housing associations projects. 27,000 installations have been put at risk and £1 million in abortive costs⁴⁰. Not only this, but schemes have been delayed by EU requirements and legal negotiations⁴¹.

Having interviewed two housing associations within the Thames Valley region it is clear that housing associations are unlikely to take part in the Green Deal. Due to

³⁸ <https://www.gov.uk/government/news/green-deal-communities>

³⁹ <http://www.publicsectorenergy.co.uk/>

⁴⁰ <http://www.housing.org.uk/policy/greener-neighbourhoods/renewables/feed-in-tariffs/#sthash.JxzFVrik.dpuf>

⁴¹ <http://www.housing.org.uk/policy/greener-neighbourhoods/renewables/feed-in-tariffs/#sthash.JxzFVrik.dpuf>

the review of FITs, one association said that they had very little confidence in the Green Deal, they are therefore sceptical/ cautious and are unlikely to undertake related works. They can see the principal of what the Government is hoping to achieve but they cannot see the benefits of following the initiatives as devised. The other housing association stated that residents are unlikely to take up the Green Deal as many are already struggling with debt and will not take on further burden. This association decided against being a provider of the Green Deal and are looking to use ECO to match fund the work they are going to undertake under their warmer homes project. They also stated that the Green Deal could be creating problems with working with local authorities.

2.5.3 Social landlords/ private sector

ptake from social landlords of the Green Deal has been very slow. Only two of the 17 largest landlords in the country have said that they would grant permission for tenants to carry out the works. Many of the others have not committed themselves. This lack of commitment seems to emanate from the relatively untested nature of the Deal. Refusing to take on the work whether through the Green Deal or not means that many tenants will remain in fuel poverty unable to carry out the work even if they want to⁴².

The Ecologist conducted a workshop to gauge the feelings of MPs and local stakeholders surrounding the Green Deal, this workshop uncovered many problems that they considered the Green Deal to have. Tenants rather than landlords are the ones being given responsibility to undertake the work which they are unlikely to do as they will not benefit in the long term.⁴³

For landlords to invest they need more certainty in their investment. Investing in renewable energy is a long term solution; landlords are not going to regain their investment for many years. In this market they need to be sure that their suppliers are still going to be around to maintain the investment, otherwise they will lose out. They need to have the certainty that these companies can withstand any changes to government policy which is likely to happen⁴⁴. Even with the greatest efforts of landlords, tenants may not gain that much unless they are educated on the how to be more energy efficient⁴⁵.

Adrian Foster-Fletcher, a landlord in the Thames Valley area had very clear ideas on the Green Deal and other such Government policies. He undertook retrofit work anyway installing solar PV and insulating homes. Despite this he said that it is difficult to see why landlords would do this work as it doesn't really help in attracting tenants to live in the property. He could see that the implementation of renewable energy technologies and encouraging greater energy efficiency would reduce fuel poverty. However, the underlying factor in this situation is money and he stated that he would not undertake the Green Deal as he would have to charge more rent as a result and trying to explain why to new tenants would be complicated with a risk that he would eventually lose out. What he needed was to see a clear financial benefit.

⁴² <http://www.guardian.co.uk/housing-network/editors-blog/2012/aug/31/green-deal-social-housing-providers-indecision>

⁴³ http://www.theecologist.org/blogs_and_comments/commentators/other_comments/1218574/getting_a_good_deal_from_the_green_deal.html

⁴⁴ <http://www.governmentbusiness.co.uk/features/40/4219-considering-energy-in-social-housing>

⁴⁵ <http://www.jrf.org.uk/publications/renewable-energy-getting-benefits-right-social-housing>

3 COUNTRY SPECIFIC CASES

3.1 United Kingdom

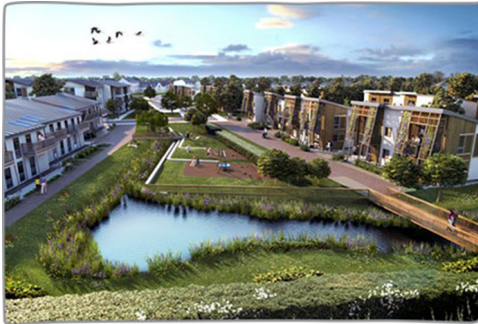


Figure 14: Green developments



Figure 15: Utility logo

A range of different organisations have been using renewable energy in order to reduce costs and tackle fuel poverty. These include housing associations, local government, energy providers and community not for profit organisations. The most prominent of the groups being local government. This group will not be aiming for profit but they will be aiming to ensure a better standard of living for their residents by reducing their energy costs and meeting national climate change targets. These are of a larger scale than many of the other organisations projects and suggest the extent of the problems to which they have to fix. Energy companies will have a completely different incentive behind their implementation of projects with profit having much more of a significance. The presence of schemes such as ECO means that they will want to undertake the work in order to receive the money from the Government for being involved in projects such as the E-on carried out. Housing associations are in the middle of these two groups. This is because they have an incentive to make a profit but they also have an obligation to their tenants to ensure that their housing is affordable and to try to lift them out of fuel poverty. Finally community organisations have the sole aim of providing for those most at need in the community. This will encourage them to use the most economically viable forms of renewable energy which provide the greatest return at the lowest cost. This suggests the reason for a lack of investment in biofuels as these can be difficult to maintain and many British people are unhappy to rely solely upon biofuel which has only been encouraged recently in the UK unlike in Scandinavian countries such as Denmark which as stated earlier has well-established district heating schemes.

The reality is that there are a limited number of actions relating to renewables in addressing fuel poverty. Solar energy usage is by far the most popular where ‘free’ electricity can be given to residents on generation. Other renewables such as biomass/ wood are more complicated and are often resisted particularly at the single dwelling scale. Feedback from interviews suggests that this is often due to one or more of the following issues:

- Complexity - can’t just flick a switch
- Higher capital cost
- Seen as ‘old technology’

- Insurance/ risk - increased fire concerns over other conventional technologies
- Increased risks due to carbon monoxide poisoning and poor maintenance
- More landlord involvement - for example making sure the chimney/ flue is swept regularly
- Fuel quality - ensuring the correct type of fuel only is burnt

The case for using biomass to reduce fuel poverty seems to focus on the use of central boiler schemes and district energy initiatives at various scales. In the UK, micro-grids could work in rural areas linking several buildings and where there is enough scale to merit installation. Energy cost savings could then be passed on to tenants helping to alleviate fuel poverty. Likewise, larger schemes based in urban areas could achieve similar goals.

The diagram below illustrates some of the initiatives undertaken by various organisations to help address fuel poverty. These include 'bulk buying' initiatives using economies of scale and the power of bulk purchase.

Project	Instigator	Aims	Successes	Failures	Future?
Hanham Hall– Providing over 60 eco homes	Sovereign– Housing Association	<ul style="list-style-type: none"> • Reduce Carbon emissions • Reduce energy bills 	<ul style="list-style-type: none"> • Not yet known 	<ul style="list-style-type: none"> • Not yet known 	<ul style="list-style-type: none"> • Provide homes for those on low incomes with low energy costs
Stroud district council fights fuel poverty with solar-powered immersion heaters	Stroud district council	<ul style="list-style-type: none"> • Use existing solar PV to heat homes 	<ul style="list-style-type: none"> • Lower bills • Greater efficiency of solar PV panels • Small cost 	<ul style="list-style-type: none"> • Only properties with existing panels benefit 	<ul style="list-style-type: none"> • Should ensure lower heating costs for residents, meaning less proportion of income is spent on fuel
Gedling boiler give-away	Gedling Borough council	<ul style="list-style-type: none"> • Replace energy inefficient boilers free of charge for residents in private rented accommodation and owner occupiers 	<ul style="list-style-type: none"> • Lower bills • Some who had never had a gas central heating system got a boiler • Reduced Carbon emissions • Better standard of living 	<ul style="list-style-type: none"> • Only 80 residents benefitted 	<ul style="list-style-type: none"> • Beneficiaries will continue to benefit from the lower cost of the boiler for years to come
Solar PV in Manchester	Carillion services and Northwards housing	<ul style="list-style-type: none"> • Install solar PV to social housing 	<ul style="list-style-type: none"> • Cheaper energy costs for residents 	<ul style="list-style-type: none"> • Reductions circa 19% on fuel bills • 711 installations 	<ul style="list-style-type: none"> • Continue to provide aftercare ensuring most efficient use and best cost saving
Islington carbon offset fund	Islington council	<ul style="list-style-type: none"> • Charge carbon offset fund to new developments • Use funds to improve energy efficiency in social and private rental housing 	<ul style="list-style-type: none"> • None as of yet 	<ul style="list-style-type: none"> • So far only got £15000 • Large housing association development got an exemption as said project wouldn't be viable with fund 	<ul style="list-style-type: none"> • Could earn £500000 a year • 75% of current building stock to be standing in 2050 so crucial to solving fuel poverty
Challenge 100	E-ON	<ul style="list-style-type: none"> • Tackle fuel poverty for 100 families in 100 homes in 100 days • Provide support and advice for families to heat their homes effectively and affordably 	<ul style="list-style-type: none"> • Provided support and advice for the fuel poor including services such as loft insulation 	<ul style="list-style-type: none"> • Some restrictions due to lack of funding from government for rural areas • Too much consumer choice • Only 100 homes helped 	<ul style="list-style-type: none"> • Residents can continue to use knowledge learnt • Homes will be permanently more energy efficient
Oil Club Berkshire	Community Council for Berkshire	<ul style="list-style-type: none"> • Bulk buy fuel to negotiate best price to reduce cost for members 	<ul style="list-style-type: none"> • Reduce costs for those reliant on heating oil and not national grid– particularly those in rural areas 	<ul style="list-style-type: none"> • Annual membership fee may not be accessible to very poor 	<ul style="list-style-type: none"> • Membership ensures cheaper fuel for a year
Community projects	Brixton energy	<ul style="list-style-type: none"> • Make homes more energy efficient • Provide useful information • Build solar panels as a way of generating power and income 	<ul style="list-style-type: none"> • Bills reduced • Making use of FITs • Investors can make a return 	<ul style="list-style-type: none"> • Investors don't get capital back for 20 years • Shares difficult to sell 	<ul style="list-style-type: none"> • More projects should see more able to benefit greatly reducing fuel poverty • Homes have been retrofitted so should remain more energy efficient

Figure 16: Examples of actions to address fuel poverty (UK)

4 CONCLUSIONS AND RECOMMENDATIONS

It is clear that an effective definition of fuel poverty is imperative in combatting fuel poverty. The new definition introduced in the UK is hoped to allow better targeting but feedback from landlords is quite critical. After meeting with housing associations, local authorities and a private landlord it is clear that this new definition will make little difference in policy implementation with many fuel poverty policies for the foreseeable future having already been discussed and planned around the earlier definition. The new definition will, however, reduce the number of people deemed to be in fuel poverty. A new definition needs to be implemented which will more effectively target those in genuine need. This will require access to sensitive personal data and hence must be organised and administered by Governmental organisations.

There also seems to be an issue with wider Government policy. The Green Deal in particular does not seem like a viable option for many with only Reading Borough Council (as interviewed) considering taking it up and perhaps this is only because they are inclined to as a local authority. There is a lack of trust by landlords and housing associations due to previous policies such as FITs not living up to expectations and being changed without warning. Additionally, recent statements by the government suggesting that 'green taxes' should be reduced or removed are being interpreted as a backtracking on energy commitments such as ECO. Landlords are unlikely to take up the scheme as there is little obvious financial gain for them and tenants particularly those suffering from fuel poverty are unlikely to take on a loan when the long term benefit will not be theirs plus they may already have outstanding debts. In contrast to this, there seems to be much interest surrounding ECO as it seems a method which is much more viable. ECO is not a loan so will get more uptake where landlords and housing associations can gain financial benefit from it. The Green Deal will almost certainly need further adjustment if it is to succeed.

Use of renewable energy is seen as helpful for all sectors. A number of types have been used and considered with some being more successful than others.

Solar PV is the most utilised and therefore the most likely method of renewables use to reduce fuel poverty in the short term. It is easy to maintain and use and therefore ensures the least technologically minded people can use it without having to alter their energy consumption by a considerable amount. However, the gains are even greater if they do! Housing associations and private landlords can get an income from these through FITs and tenants have reduced bills. Winners all round.

There is currently little evidence for biomass as a solution. It is being considered by some, particularly on a micro-grid scale. It is thought once installed this will reduce fuel poverty. However, getting it installed in the first place is the issue, with tenants unlikely to want the disruption and being distrusting of new technologies that they do not know much about.

Heat pumps (mostly air source) have been used but the feedback on these is mainly negative. Residents do not change the way in which they use the energy and this causes great problems particularly with huge bills. Despite being educated on how to use them they still refer back to the way in which they used their gas or storage heaters in the past adjusting the thermostat as the on/ off control. With potentially higher bills as a result, this could in fact lead to an increase in fuel poverty.

5 INTERVIEWS

These were carried out by Sophie Pearce, Mihaela Mehadžić and Keith Richards.

Mr Adrian Foster-Fletcher (Private Landlord) was interviewed on 7th August 2013. Mr Fletcher as a private landlord (14 homes managed) sees first-hand people suffering from fuel poverty.



Figure 17: Example of a private landlord introducing measures to reduce fuel poverty

His opinions were very clearly defined. He told us that the number of people living locally that were in fuel poverty had quadrupled from 1,000 in 2002 to 4,000 now suggesting how great is the need for an effective policy. Similar to Sovereign housing association, he assumed that few people would actually be affected by the new definition of fuel poverty suggesting that it may not have been an effective way to spend public funds given that changing the definition in reality achieved little. Contrary to the statistics he provided, he hasn't seen an increase in fuel poverty from his tenants perhaps as a result of his initiatives but perhaps the sample size is too small to pick up on this change.

With regards to the Green Deal, he does not see the attraction for private landlords as there is not opportunity for personal gain and therefore he can see why the uptake for this has been so slow. He is unlikely to undertake any more renewable energy technology investment beyond what he has done to date as it involves huge capital expense when he is not the one responsible for paying the bills (the tenant is). This is likely to be the case with the majority of private landlords as they are in this business to make a profit. The only thing that would incentivise him to do more would be the provision of grants,

however, in his case he has done the majority of work that can be done. The overall picture on the opinion of private landlords on the issue of fuel poverty can be seen by the fact that only 4 landlords have signed up to the Green Deal. This suggests a huge failure for this Government scheme but also a worrying future for the thousands of people living in fuel poverty.

Sovereign Housing Association (Dave Ingram) is on a much larger scale to Mr Fletcher with 36,500 homes and with a strong social obligation.



Figure 18: Dave Ingram of Sovereign Housing Association

This would suggest a different idea and approach to tackling fuel poverty. However, having met both people the difference is not as great as would be expected. Similarly to Mr Fletcher SHA do not see the benefit to them of using the Green Deal. This is because the Green Deal is meant to target those living in fuel poverty, however, due to the situation of them being in poverty more generally they are unlikely to want to take it up an additional loan as they are likely to be struggling with debt. They were much more enthusiastic about ECO as this would provide them with the means to match fund their Warmer Homes project, meaning that it would not only be those on housing benefit that could benefit but neighbours too. It will target the properties but mainly the tenants ensuring they have the education to become more efficient and therefore reduce their bills. On the subject of renewable energy they are looking into biomass through a micro grid approach. Central boiler but there are a lot of obstacles to overcome before they will implement this. These include the risk of carbon monoxide poisoning and having to educate residents on how to use such a system.

They have an email address where people can say they are suffering from fuel poverty and ask for help, however, the uptake to this scheme has been very low suggesting that people are either not concerned about fuel poverty or people do not respond well to this kind of approach. Perhaps this is because they are embarrassed to ask for help or perhaps it is because many people in social housing are elderly and they will be unable to respond to this type of communication.

SHA believed that fuel poverty is likely to increase with the forthcoming change in social benefits.

SHA believes that limited local authority funds are holding back progress that could be made.

Housing Solutions (Peter Hatch) is a much smaller housing association with 5,000 properties. The difficulty in defining fuel poverty is clearly apparent here. Despite having an obligation to help their tenants they do not know the proportion of their residents living in fuel poverty. This means they are reliant on other indicators to help target. One they

believe is particularly effective is the presence of mould and condensation - since this situation arises as a result of insufficient heating ventilation.



Figure 19: Peter Hatch of Housing Solutions

Through stock optimisation they are aiming to improve energy efficiency of homes and therefore reduce the number of households suffering from fuel poverty, however, they also saw the importance of education in tackling it. The failure of previous Government initiatives has left them being extremely cautious of what help they take suggesting perhaps why they haven't taken up the Green Deal.

They recall bad experiences in the past with certain renewables, for example, air source heat pumps. They have decided not to use these again limiting further the ways in which they can reduce fuel poverty. They are slightly behind sovereign with no fuel poverty strategy as of yet, however, this is soon to change with a new policy being created. Like Sovereign they do not have anyone employed specifically to tackle fuel poverty and therefore this may result in it taking longer to address peoples' needs.

They suggested zero VAT on improvements to stock which would mean that many more households could be targeted. Despite all of these efforts, like Sovereign they believe that fuel poverty will not be eradicated completely so it poses the question of how far they should go.

Reading Borough Council (Graciela Melitsko) is an urban council with housing stock. Most tenants will be able to use natural gas - a cheaper fuel than heating oil. Nevertheless, there is still a huge problem with fuel poverty. A survey conducted in 2013 showed that half of the 1,000 households surveyed struggled to pay bills and within the private sector 17.9% are suffering from fuel poverty, this figure is extremely alarming. It is difficult for the council to regulate fuel poverty as they are heavily reliant on housing associations to provide additional housing stock. Also, surprisingly data protection stops them accessing much of the information they need in order to reduce fuel poverty (e.g. personal income data). The incentive of the Green Deal is not enough for the council to make their own framework and they are hoping to join Southampton on an existing contractual framework. It seems that they are much more interested in ECO as this offers a viable approach to dealing with some needy properties/ tenants. They are trying to ensure that everyone benefits from their projects through processes such as mail shots, door knocking and community events. Greener, Warmer, Safer Reading should be a long term solution to fuel poverty with winter watch being a short term solution in the months when people are most likely to suffer from fuel poverty. However, this cannot be a long term solution as it does not improve the efficiency of homes per se and will require similar injections of funds to attain the same crucial benefits.

ACKNOWLEDGEMENTS

The time and views of the many local authority, housing association and private landlords interviewed is gratefully acknowledged.

IEA Bioenergy

IEA Bioenergy is an international collaboration set up in 1978 by the IEA to improve international co-operation and information exchange between national RD&D bioenergy programmes. IEA Bioenergy's vision is to achieve a substantial bioenergy contribution to future global energy demands by accelerating the production and use of environmentally sound, socially accepted and cost-competitive bioenergy on a sustainable basis, thus providing increased security of supply whilst reducing greenhouse gas emissions from energy use. Currently IEA Bioenergy has 22 Members and is operating on the basis of 13 Tasks covering all aspects of the bioenergy chain, from resource to the supply of energy services to the consumer.

IEA Bioenergy Task 43 - Biomass Feedstock for Energy Markets - seeks to promote sound bioenergy development that is driven by well-informed decisions in business, governments and elsewhere. This will be achieved by providing to relevant actors timely and topical analyses, syntheses and conclusions on all fields related to biomass feedstock, including biomass markets and the socioeconomic and environmental consequences of feedstock production. Task 43 currently (2013-2015) has 13 participating countries: Australia, Canada, Croatia, Denmark, European Commission - Joint Research Centre, Finland, Germany, Ireland, Netherlands, Norway, Sweden, UK, USA.

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