Energy and Equity

Access to Government Programmes for Rural and Off Gas Households in England

Joint Policy Briefing September 2013

About National Energy Action (NEA)

NEA is a leading UK fuel poverty charity. At the forefront of NEA's focus are low income households across the UK who are struggling to afford the energy they need to heat and power their homes to a standard needed for health and wellbeing. NEA work to influence and increase strategic action against fuel poverty, develop and progress solutions to improve access to energy efficiency products, advice and fuel poverty related services in UK households.

NEA estimates that the charity has helped over 7.5 million households in the UK gain access to energy advice and energy efficiency grants. Over £110m of energy efficiency improvements have been installed through NEA's Warm Zones subsidiary community interest company which focuses on delivering a wide set of benefits to low income households in deprived areas. Through NEA's in-house training scheme around 20,000 people have gained NEA/City and Guilds energy awareness qualifications. NEA also identifies and shares best practice and has built capacity in communities to deliver energy efficiency and fuel poverty solutions for over 30 years.

NEA's priority has been to promote energy efficient solutions to address fuel poverty and to ensure that adequate financial resources were available to fund the necessary programmes. Inevitably this involved concentration on the most cost-effective conventional measures such as loft and cavity wall insulation and efficient conventional heating technologies. However, NEA has also trialled and evaluated innovative technologies such as solar thermal hot water, heat pumps, biomass, solar photovoltaics, micro and small wind power, micro-hydro, micro-CHP and fuel cells.

More recently, in 2012/13, NEA ran over 200 projects in England, Wales and Northern Ireland, many involving new partners. Other relevant headline achievements last year include helping 5,500 stakeholders have improved knowledge of action they can take to help their customers, neighbours or peers who are living in fuel poverty. NEA trainied over 3,000 front line advisors and directly assisted with insulation, heating and other energy saving measures 25,000 households.

About Calor

Calor Gas Ltd is Britain's leading supplier of bulk and bottled LPG (liquefied petroleum gas) to homes and businesses largely located off the mains gas grid. Calor began operating in 1935 with the aim of bringing clean and efficient and affordable energy solutions to rural Britain. Today Calor continues to play a vital role in meeting rural energy requirements a sustainable way. Fuel poverty is a particular problem in rural areas however, off-grid locations have seen little effective focused support to alleviate the problem.

Since 2010, Calor has been working with NEA to raise awareness of, and find practical solutions to, rural fuel poverty through the Future of Rural Energy (FREE) initiative. FREE is the first national dedicated fuel poverty to solely support off-gas grid households. Through FREE, NEA has trained rural advice workers in fuel poverty and energy efficiency awareness. These advice workers are now acting as local energy champions within off-grid communities, raising awareness of rural fuel poverty at all levels – from rural residents, through to local and national Government – and helping to facilitate practical energy efficiency solutions.

Calor is committed to ensuring a fair deal for rural householders by keeping energy costs as low as possible whilst also working with organisations such as NEA, with the overall aim of eradicating rural fuel poverty.

Introduction

In the foreword to the Fuel Poverty: a Framework for Future Action which was presented to Parliament on July 10th 2013, the Secretary of State for Energy and Climate Change acknowledged that millions of households are facing a pressing challenge. He wrote: 'Fuel poverty is a real and serious problem faced by millions of households in the UK today. It is a problem that leaves many facing difficult choices about where to spend their limited income. It leaves many fearing for their health or the health of their children as they live in a home seemingly impossible to heat. This Government is determined to act'[1].

On 9th July Baroness Verma tabled a series of amendments to the Energy Bill in the House of Lords setting out the Government's continued commitment to tackling fuel poverty in England. The proposals require Government to set an objective to address fuel poverty and to specify a date for achieving this. Within six months of the regulations being implemented, the Government must publish a new strategy setting out how the objective will be realised. The changes mark a significant opportunity to establish a new primary objective for minimum energy efficiency targets for all fuel poor households which are required to be met by specified dates and make the case for additional resources within the new fuel poverty strategy.

The Coalition Government has also announced a revised definition of fuel poverty in England. The low income high cost definition, originally proposed by John Hills in his independent review, will now be used by Government as the primary method for defining fuel poverty in England. The new approach consists of two parts; the number of households that have both low incomes and high fuel costs and the depth of fuel poverty amongst these households. Whilst many stakeholders have reservations about the threshold that will be used to determine whether a householder is considered to have high or reasonable energy costs, the second measure may prove more useful[2].

The 'fuel poverty gap', represents the difference between the modelled fuel bill for each household, and the reasonable cost threshold for the household and indicates the impact this is currently having for those households with the lowest incomes and high energy costs. This can be summed for all households that have both low income and high costs to give an aggregate fuel poverty gap.

[1] More in info is available is available in Fuel Poverty: changing the framework for measurement Government response, Department of Energy and Climate Change (DECC), July 2013.

[2] Households with energy costs higher than the median are considered to have 'unreasonably high' energy costs. This is considered to be an arbitrary and loose approximation for the 'affordability' of the energy costs facing the household in question. On the 29th July, the Energy and Climate Change Committee published a report into 'Energy Prices, Profits and Poverty'. The report, which gathered evidence from a range of experts, including NEA, highlights many of the key risks with the current or planned approach to energy policy within the UK and noted that fuel costs can be below the median and yet still remain unaffordable and recommend a modification to the new definition of fuel poverty to better reflect affordability.

Whilst under the new measurement of fuel poverty levels in England the overall headcount of fuel poverty is lower[3] and unlikely to be largely affected by changes in energy prices, the aggregate and individual fuel poverty gap does increase and largely captures the impact of increasing energy prices. For example, updated figures released by DECC in August illustrate that the aggregate and average fuel poverty gap is projected to increase in 2012 and 2013. The aggregate gap is projected to increase from £1 billion in 2011, to £1.2 billion in 2013, and the average gap is projected to increase from £438 in 2011 to £494 in 2013.

The three main causes of fuel poverty are however largely unchanged and well documented: Poor energy efficiency of the housing stock; low income and high energy costs. The combination of these factors means that fuel poverty can affect households regardless of their geographical location, whether they are urban or rural dwellers and whether they have access to the most economical available heating sources. However, as the next section explores, the circumstances of some households leave them particularly vulnerable to fuel poverty and its depth.

Between 2010 and 2012 Calor and NEA concluded their Future of Rural Energy (FREE) initiative. The findings of this work highlighted that without further interventions, many households in rural and dispersed areas are unlikely to benefit from existing energy efficiency schemes led by obligated energy suppliers. This is despite the depth of the problems facing many of these households, some of which have deep levels of fuel poverty and fuel poverty gaps more than double the size of the average fuel poor household.

The barriers that face rural households being able to access current energy programmes are explored within this paper and recommendations are made about how these issues must be addressed as part of an ambitious and suitably well-resourced fuel poverty strategy in England.

[3] Whilst the UK Government have restated fuel poverty levels for 2011 in England under 10% indicator, NEA notes that the Government has not produced equivalent fuel poverty levels in England for 2012 and 2013 under the 10% indicator; it was anticipated that figures using the 10% indicator would continue to be produced up to 2016. In the absence of actual Government statistics, fuel poverty researchers are reliant on modelling assumptions from other parties which extrapolates the incidence of fuel poverty from a combination of official statistics and subsequent movements in energy prices. NEA notes figures from CSE which compare fuel poverty levels under the Hills definition and 10%. The results are quite striking; their projections for 2013 show that under the 10% indicator there would be 5,109,312 householders in England that are fuel poor (23.7% of all households) compared to 2,799,729 householders in England that are fuel poor using the new definition (13.0% of all households).

Section One: Quantifying the scale of rural fuel poverty

On the 8th August, DECC released an updated set of fuel poverty statistics. The statistics are the first time the Department has released comprehensive analysis and detailed breakdowns on households living in fuel poverty in England as well as sub-regional information under the new definition[4]. This section presents statistics from this analysis showing the composition of fuel poor households. The analysis not only provides more detailed information regarding fuel poverty levels but also illustrates the depth of the problems facing some households, some of which have fuel poverty gaps more than double the size of the average fuel poor household. Headline results include the following previously unknown information:

- Under the LIHC measure there were **2.6 million households in England** that are fuel poor; an estimated **500,000 fuel poor households live in rural locations**.
- **Households living in the most energy inefficient dwellings** (those with a SAP rating of E or below) are much more likely to be fuel poor than those in more energy efficient dwellings, and have higher fuel poverty gaps.
- **Fuel poor households that heat their properties with oil, solid fuel, LPG or electricity** typically have individual fuel poverty gaps double the average, typically over £1000.
- **Households with other non-cavity wall types (usually solid)** are much more likely to be fuel poor than those with insulated cavity walls, and have much higher average fuel poverty gaps.
- **Households containing larger numbers of people** (5 or more) tend to both be more likely to be fuel poor, and be more deeply in fuel poverty (with larger fuel poverty gaps)
- **Households without duel fuel or paying for their electricity by pre-payment meter** are more likely to be fuel poor than those paying by other methods, with direct debit customers being least likely to be fuel poor.
- **Households in dwellings built before 1964** are more likely to be fuel poor than those in more modern dwellings, and also tend to have the largest average fuel poverty gaps.

The statics highlight how the problem of low household income is exacerbated by other factors e.g. where households are reliant on more expensive and possibly inefficient sources of space and water heating and where thermal standards of their dwellings cannot be improved in a cost-effective manner. Because of these circumstances, statistically, fuel poverty is more likely to prevail in rural and/or off gas areas. This is also illustrated through the higher fuel poverty gap of rural fuel poor households - £588 against an average gap of £404 for all households and £361 for urban households. However, the risks of fuel poverty in rural and off gas areas is also reinforced by other statistical evidence produced by DECC.

[4] The statistics presented are based on the 2010 English Housing Survey (EHS) and the LIHC indicator that has been adopted.

Regression analysis, also produced by the Department aimed to isolate different variables to predict the likelihood of households being fuel poor. The model was created by using a backward elimination procedure. According to the EHS, properties that are within rural or off gas locations are statistically much more likely to be larger, detached or older with solid floors and high ceilings. Of these dwelling types, households living in bungalows or detached properties have the highest odds of being fuel poor (3.5 times that of flats). Households living in older properties, generally tend to have increased odds of being fuel poor compared to more recently built properties. The odds of being fuel poor also increased notably for properties with floor spaces above $50m^2$. Households living in properties larger of $110m^2$ or more have the largest odds of being fuel poor.

The conclusion of this analysis is therefore clearly beyond doubt. Whilst greater numbers of fuel poor households still reside within urban locations, the problem of fuel poverty is likely to be most acute in many rural and off gas locations.

This conclusion is also illustrated more generally by research which shows consumers that are wholly reliant on using electricity for heating are further disadvantaged. The Centre for Sustainable Energy (CSE) on behalf of Consumer Futures recently researched the impact of Government policies on energy bills and found that as the vast majority of policies are funded through levies on electricity bills, those with electric heating face a disproportionate share of the costs. The report found that consumers with electric heating – 11 per cent of all consumers – are most affected by Government policies yet tend to be lower income than those with other forms of heating. These consumers pay 19 per cent of the total cost of energy policies yet only receive 7 per cent of the benefits. Only 27 per cent of consumers with electric heating receive some form of benefit, compared to 40 per cent of all consumers. Consumers with electric heating who do not receive any benefits face an average annual bill increase of £282 in 2020.

There are examples of Government schemes that aim to address these inequities (such as collective purchasing schemes, energy efficiency programmes, energy discounts, assistance for renewable heating and Feed in Tariffs etc). These schemes can make a significant difference to the households that can benefit. The next section therefore explores access to the principle programmes of relevance to low income households.

Section 2: Access to Government Programmes for Rural and Off Gas Households in England

This section explores the assistance that is currently provide to households in England to help reduce household bills, reduce carbon emissions, enhance the share of energy that comes from renewable sources or enhances levels of household income.

Improving energy efficiency - The Energy Company Obligation and Green Deal

Following termination of the Warm Front scheme in January 2013, England is the only UK nation without a Government-funded energy efficiency programme. In contrast, Scotland and Wales have maintained and even expanded funding for their own national programmes. Before the closure eligible applicants to Warm Front were guaranteed to receive assistance and could benefit from a grant of up to £6,000 to those off the gas-grid. The grant could be paid for measures such as insulation (loft, hot water tank lagging, draughtproofing) or other more extensive measures such as electric or oil heating systems and LPG boiler repairs.

The Energy Company Obligation (ECO) is now the principle policy to enable low income and vulnerable households in England benefit from energy efficiency measures and was intended to provide fully funded energy efficiency measures for low-income households or support those households who's properties do not meet the 'Golden Rule' (when the cost of the measures is higher than the estimated savings on energy bills).

There are three parts to ECO:

- **Affordable Warmth Obligation** to provide heating and insulation improvements for low-income and vulnerable households (but not social housing tenants)
- **Carbon Saving Obligation** to provide funding to insulate solid-walled properties (internal and external wall insulation) and those with hard-to-treat cavity walls
- **Carbon Saving Communities Obligation** focuses on the provision of insulation measures and connections to district heating systems to domestic energy users that live within an area of low income. This target has a sub-target, which states that at least 15% of each supplier's Carbon Saving Community Obligation must be achieved by promoting insulation measures to low-income and vulnerable households within rural households (the rural safeguard).

It is estimated that the Energy Company Obligation (and any associated Green Deal measures) might remove between 125,000 and 250,000 households from fuel poverty over the period[5] to 2023 and ECO aims to help an estimated 150,000 - 230,000 low-income households or those in low-income areas by the time the first phase of the scheme ends in March 2015, importantly, across the whole of the UK.

As noted above, eligible low-income households currently benefit from the Affordable Warmth obligation (worth an estimated £350 million per year), closely targeted on low-income vulnerable households in the private sector and delivering a wide range of heating and insulation measures. In addition, a new Carbon Saving Communities Obligation targeted on financially and materially deprived areas (worth an estimated £190 million per year) will deliver a range of basic energy efficiency measures. In total, annual expenditure on heating and insulation programmes for fuel-poor households has reduced from approximately £1.1 billion (including Warm Front, the Community Energy Saving Programme and Carbon Emissions Reduction Target priority groups) in 2010/11 to around £540 million.

In addition, ECO-obligated energy suppliers also have full discretion to determine the extent of support they (or their contractors/agents) provide to households and the measures they choose to install. One of the main reasons for this concern for rural households is that suppliers may only provide a limited number of energy efficiency measures to eligible households, if at all.

As noted within the previous section, heating measures in rural and off gas properties often require more expensive interventions for space and water heating and thermal standards of dwellings are likely to be less attractive or cost-effective, compared to households with cavity walls. Therefore, whilst all fuel types are eligible under scheme rules for boiler repair or replacement, ECO obligated suppliers, who are funding ECO, have confirmed that they are not currently funding heating oil or LPG boiler repair or replacement due to the higher costs and additional complexities of delivering these boilers or heating systems. The need to intervene to provide distributional equity was however partially recognised during the policy initial development and 15% of the Carbon Saving Communities target must be delivered on behalf of low-income vulnerable households in rural communities at an estimated cost of £25m a year. There are two ways in which a household may qualify to be eligible for activity in this section of the CSCo; if a household is within a settlement of fewer than 10,000 inhabitants and is in receipt of one of the qualifying benefits for the Affordable Warmth element of ECO or a household is within or adjoining one of the qualifying areas.

[5] Based on the previous 10% definition.

From the outset of the ECO scheme concerns have been raised about the validity of the 10,000 inhabitant threshold. Whilst this number of inhabitants would be comparatively small for an urban settlement, this number of households could imply a community is still on-gas, potentially on the urban fringe. This will mean that the support that suppliers provide is unlikely to benefit deep rural areas which certainly won't have access to the gas grid and therefore may be more reliant on comparatively expensive alternative heating fuels.

Evidence that this is the case is building. To date however, (up to 30th June 2013), under 10 measures have been installed within the rural safeguard, no affordable warmth eligible households have had solid wall insulation installed and 96 per cent of all ECO measures have been installed in gas-fuelled properties, with 3 per cent installed in those fuelled by electricity and 1 per cent installed in those fuelled by other fuels[6].

Clearly, in itself, delivery in the early stage of the scheme is exceptionally disappointing. However, as the ECO is not funded by general taxation, if householders fail benefit from the programme directly (which for rural households is very likely given the above) these households will simply see an increase in their energy bills as the policy is paid for through a levy on energy bills (estimated to be circa £57 a year per household). Therefore, a regressive funding mechanism is being compounded by a lack of equal benefits for rural and off gas households.

It should also be noted that different approaches are also now being developed nationally or locally which will affect where suppliers target their roll out of the programme. The Government does not ring-fence budgets of supplier's programmes nationally and therefore it is unknown to what extent ECO will be delivered in different parts of the UK. This is especially a concern in England, given the likely positive impact of the introduction of recurrent funding that has been allocated to all Scottish local authorities to support Green Deal and ECO delivery and the reinvigorated NEST and Arbed programmes in Wales.

[6] On the 19th September 2013, the Government released updated statistics on delivery of ECO to date. Whilst the number of instillations under the rural safeguard and solid wall measures in Affordable Warmth eligible households had previously been reported, the Government failed to provide these figures within the updated statistics. Read the updated statistics for the Green Deal and ECO here.

In summary, whilst welcoming the intervention to create a rural safeguard, as a result of the choice of funding mechanism and despite having the deepest fuel poverty problem, householders in rural and off gas areas are currently contributing to the ECO programme but are failing to benefit from it. There are also compelling reasons to believe that the current approach creates a number of barriers for the majority of local authorities and community based organisations[7].

The approach in England was recently criticised by the Climate Change Committee (CCC) in its 5th progress report to Government on meeting the Carbon Budgets. The CCC highlighted the advantages of the new Scottish fuel poverty scheme which is tax funded and led by local authorities (HEAPs). The report notes that one of the particular advantages of the scheme is that additional tax funded support for local authorities in Scotland will help reduce costs on delivery of their interventions (and suppliers would be able to fund the least cost measures but the 'heavy lifting' could be done by a tax funded policy).

This argument was equally reinforced by the Energy and Climate Change Committee's report into Energy Prices, Profits and Poverty. The report, rightfully noted that energy efficiency programmes should be the focus of Government's fuel poverty policy in order to tackle the long-term root causes of the problem cost-effectively however they noted that resources under the ECO are insufficient considering the scale and depth of fuel poverty. The Committee recommend that more specialised resources are needed to tackle fuel poverty in rural areas, in particular to address the difficulties experienced by off-gas grid customers. It is clear from the Committee's remarks that there is a necessary balance between tax funded support and future supplier obligations.

Support for Alternative Heating - Renewable Heat Incentive

The upfront costs of micro-generation technologies are prohibitively expensive for fuel-poor households. Without assistance in paying the capital costs, these households are unable to benefit from the operational incentives targeted at micro-generation. The Renewable Heat Premium Payment (RHPP) is currently live. Despite providing welcome support to cover part of the upfront cost of a renewable heat installation, the remaining contribution is highly likely to be beyond most, if not all fuel poor households in private housing.

[7] Currently the majority of LAs do not have sufficient means to a) access current support under the ECO outside of the brokerage mechanism b) are required to cherry pick only relatively cost effective properties or projects on behalf of obligated suppliers. There is currently no recurrent funding mechanism for local groups to enhance delivery and assist vulnerable households.

The Renewable Heat Incentive (RHI) for domestic properties has also now been announced. Similar to the feed-in tariff for electricity, this scheme will pay people for the renewable heat they generate in their home. It is hoped that as a result, more renewable heat systems will be taken up, the price of them will drop and they will subsequently make a bigger contribution to affordable warmth and lower carbon emissions. The scheme will open for applications in spring 2014. Installations from 15th July 2009 will be eligible to apply. Systems and installers must be MCS accredited and homes must have had a Green Deal Assessment with loft and cavity work complete.

The intention that Green Deal and the RHI are fully integrated to offer 'those who are off the gas grid a way to a warmer, cheaper, lower carbon home' has been realised, at least in part. NEA welcomes the RHI as one of a number of steps that can help bring renewable heat technologies to the mass market and therefore help people off the gas network to access affordable warmth. However, NEA and partners do not yet have confidence in how the Green Deal, RHI and ECO may integrate. In particular, how households on low incomes will be able to use the RHI payment to capitalise its value to overcome the high up-front costs of renewable heat technologies.

Maximising income and mitigating high energy prices

Until 2011 suppliers delivered a range of initiatives under a voluntary agreement. These initiatives included social tariffs, Trust Funds, debt advice and a range of other programmes decided by the supplier with agreement from Ofgem. For the period 2010-11 this amounted to £150 million. From 2011/12 the Warm Home Discount Scheme (WHDS) was introduced as a mandatory replacement for this voluntary arrangement. In the first phase the funding offered a mandatory discount of £120 in 2011/12 on electricity bills for households aged over 60 and in receipt of the Guarantee element of Pension Credit (the Core Group). The discount for this year from April is £135; this will rise to £140 in 2014/15.

Currently only low income pensioner Core Group recipients receive an automatic rebate with other fuel poor households only receiving discretionary support provided by energy suppliers. There is also no recognition within the policy of the higher energy costs that are incurred for households that are reliant of electricity or other more expensive fuels. Like the ECO, WHDS is not funded by general taxation, if householders fail benefit from the programme directly these households will see an increase in their energy bills as the policy is paid for through a levy on energy bills (estimated to be circa £15 - 20 a year per household).

The Winter Fuel Payment (WFP) is made to everyone provided they have reached the official retirement age for women (currently 61 but will change over time), it is not means tested. Up to the age of 79 the payment is £200 per household rising to £300 for eligible households over 80. This year, average expenditure on the WFP fell from £2.5 to circa £2.1 billion.

Cold Weather Payments are made to eligible households in an area where a period of exceptionally cold weather has occurred (defined as 7 consecutive days during which the average of mean daily temperatures is 0oC or lower). Households are eligible based on age and vulnerability and in receipt of income-related benefits. Yet because of recent changes to the definition of fuel poverty, less households who are classed as fuel poor are now in receipt of means tested benefits and unemployed households only make up 11% of fuel poor households. In addition, households where the youngest person in the household was under 24 are much more likely to be fuel poor than those containing only older people. Lone parents overall are the group most likely to be fuel poor, with nearly one in five being so in 2011.

Section 3: The costs of failing to act

The Calor FREE programme illustrated that enhancing activity that can tackle cold homes can prompt the accrual of a wider set of benefits, such as enhance a sense of pride and confidence within the community. Additional research has also highlighted the potential for greater levels of energy efficiency within homes to reduce public health and potentially care costs and in many instances may also generate additional local jobs where they are needed most[8].

A recent research by Verco and Cambridge Econometrics evaluated the environmental and economic stimulus of investing in energy efficiency[9]. Their report challenges the assumption that we cannot address rising energy prices and afford to tackle fuel poverty. It argues that there is a triple win available of warmer homes, greater energy efficiency and economic growth if we can use carbon taxes revenue to benefit consumers, and fuel poor households in particular. The report notes that over the next 15 years £63 billion will be added to consumer energy bills through the carbon floor price and EU Emissions Trading System (ETS). If this resource was directed toward a major programme to improve the energy efficiency of homes we could make homes warmer, more affordable to heat and take a major step toward our legally binding carbon reduction and emerging fuel poverty targets[10]. This is the approach being taken by the French, the German and other EU Governments.

Cambridge Econometrics and Verco's research also shows that an energy efficiency programme is also a more effective way to stimulate the economy – compared to likely alternatives like cutting VAT, reducing fuel duty or investing in capital infrastructure projects such as building roads[11]. The social and environmental benefits of the programme would also take nine out of ten fuel poor households from fuel poverty; quadruple the impact of Green Deal and ECO's reduction of domestic carbon emissions.

[8] NEA commissioned Durham University Business School to assess the value of energy efficiency in the North East in 2005-6 and it found increased Gross Added Value in economic terms through job creation and money being spent within local communities that had been previously used on wasted energy.

[9] Jobs, growth and warmer homes Evaluating the Economic Stimulus of Investing in Energy Efficiency Measures in Fuel Poor, Final Report for Consumer Focus, October 2012.

[10] On the 9th July, the Westminster Government committed to bring forward a comprehensive delivery strategy for fuel poverty in England within 6 months after the current Energy Bill is passed. This was coupled with a commitment to introduce a new primary objective for minimum energy efficiency targets for fuel poor households. These energy efficiency targets are also likely to be supported by additional supplementary indicators based on addressing or reducing cold related morbidity/mortality, fuel debt etc.

[11] It shows that such a programme would also have substantial economic benefits. It would create 71,000 jobs by 2015 and boost gross domestic product (GDP) by 0.20 per cent.

Poor housing standards and high energy costs are also responsible for the impaired physical and psychological health of millions of UK households. The links between low indoor temperature and poor health have been well understood for many years[12]. Cold homes increase the likelihood, repetition and the severity of respiratory and cardiovascular diseases. The links dampness and mould growth on asthma and allergies are also well known and understood. There is also some evidence that a cold home impacts on poor mental health, low self-esteem, and social isolation.

In this context, both Calor and NEA welcome the work that has been undertaken within DECC's fuel poverty framework document to capitalise or, more loosely, 'assign value' to energy interventions which result in positive health outcomes and more broadly welcome the recognition by Government of the health impacts of cold homes on health and wellbeing[13]. However, currently policies still fail to lever the value of these additional benefits (or to be more accurate fail to net off likely avoided costs in order to make a more compelling business case compared to a more intricate counterfactual). This issue is not just relevant to health costs, for example, in our experience fuel debt reduces expenditure on other essential goods and reduces spending in the local economy. There are also other implications or costs that are less well understood; that could be used to further enhance the case for further interventions, for example:

- The increased chances of carbon monoxide poisoning (acute and chronic) if a heating system is old or inefficient
- The increased chances (and related costs) of a fall or accident if the householder is not kept warm
- The implications of poor personal and domestic hygiene, food poisoning or unbalanced diet (poor nutrition/obesity) if a household does not have access to electricity or gas for cooking, refrigeration, cleaning and bathing.

Sadly, this situation is generally understood and even accepted. It is critical that these costs to the economy and potential for jobs and enhanced communities are regarded as key motivations to better realise the multiple benefits that could be captured by tacking Britain's cold damp housing.

[12] Collins in 1986 stated that householders that experience indoor temperatures below 16°C have an increased risk of respiratory disorders. In 1993 Collins went on to prove that (along with Lan Chang et al 2004; Howieson and Hogan 2005) that below 12 °C cardiovascular stress occurs. In 2000, Colins concluded that acute respiratory infectious diseases cause the highest mortality when they affect a vulnerable section of the population, such as elderly people already suffering from chronic disabling respiratory illness.

[13] Fuel Poverty: A Framework for future action, DECC, July 2013, page 21.

Section 4: Conclusions and recommendations

The Calor FREE initiative helped tackle fuel poverty and promote effective energy efficiency advice and behaviours in off-gas grid communities. It identified the need for independent carbon reduction and fuel poverty advice to be delivered directly into rural communities by a network of trusted expert advisors. Year 1 of FREE focused on ascertaining the nature and extent of rural fuel poverty, and building specialist knowledge and capacity within rural community networks to both identify fuel poverty and recommend a holistic range of solutions.

The major component of Year 2 was the undertaking of Village Energy Audits (VEAs) in off-mains gas villages. The FREE VEA process involved:

- A detailed physical energy assessment of domestic properties and Community Buildings
- A paper-based housing survey of all households within the village
- A walk-through external survey of all properties within the village

Each VEA produced a suite of reports profiling the village housing, energy and social demographics, and signposting residents to energy efficiency opportunities tailored to both individual household circumstances and typical housing types. These reports were used to educate householders about better managing their energy usage, as well as identifying heating system replacement (including renewables), insulation and financial improvement opportunities.

The main barriers to delivering rural energy efficiency improvements were a lack of knowledge of existing assistance schemes, the prohibitive increased cost of delivering practical measures into rural areas and the complexity of rural building design, fabric, and heating systems – including high proportion of solid wall. Whilst portraying only a small snapshot of rural households, it is evident from the Village Energy Audits and the policy analysis above that rural communities are currently at best being left behind and at worst ignored. Urgent action is therefore required to tackle rural energy efficiency and fuel poverty issues.

Whilst many of the points raised above may create challenges, engagement with the Secretary of State, Ministers, Political Advisors, and Officials has revealed the importance placed on a new approach in order to ensure that as well as DECC, HM Treasury and other relevant Government Departments help develop and fund a new Fuel Poverty Strategy. There is now a precious opportunity to help work towards these objectives and the remaining section proposes some potential solutions and recommendations.

The following recommendations are intended to address some of the most pressing issues and these should be considered a priority.

Recommendations

1. ***Further additional resources are required to address the level and depth of fuel poverty in rural and off gas areas***

    - The Government must recognise that resources under the Energy Company Obligation (ECO) are insufficient considering the scale and depth of fuel poverty and despite constrained public finances there is a need to dramatically enhance and supplement existing programmes like the Energy Company Obligation, especially in rural and off areas in England.

    - The Government must recognise that additional targeted tax funded support helps reduce delivery costs, in particular, this can help address the difficulties experienced by off-gas grid customers and tackle fuel poverty in rural areas without increasing the cost of delivery for all energy consumers.

    - The Government should reconsider how best to incentivise take-up and funding of the most expensive energy efficiency measures such as solid wall insulation in affluent homes.

    - Whilst noting the potential of micro-generation or renewable heat technologies to deliver affordable warmth NEA and Calor are concerned that key financial barriers remain unaddressed or unresolved and expresses concern that until the issue of upfront costs are addressed by further Government intervention, fuel poor household will largely be unable to benefit from the operational incentives targeted at these technologies. In addition, many of these technologies can also present substantial and unforeseen maintenance costs which are not always made clear to the householder.

2. ***Recognise a 'one size fits all' solutions will not be effective due to the dual challenges of engaging with rural communities and providing effective solutions to the complexities of rural energy options and housing types.***

    - Working proactively at a community level and securing the assistance of trusted local individuals and networks to engage with rural householders is one of the most effective ways to ensure that the countryside is not unfairly disadvantaged and can play its part in the carbon and fuel poverty reduction agenda. However, at present there is currently no recurrent funding mechanism for local authorities and groups to enhance delivery and assist vulnerable households.

- The Government should explicitly consider how best to maximise the involvement of councils, voluntary sector organisations and other trusted intermediaries in rural areas within the upcoming Community Energy Strategy and be prepared to fund their capability

- NEA and Calor strongly support (and recommends the expansion of) the concept of a co-ordinated network of energy advice services and emphasises the need for the Big Energy Saving Network Pilot to lead to a comprehensive advice network service that can also deal with a range of consumer problems including debt management, benefit entitlement advice and support in resolving any threat of disconnection and illustrate how this complements the aims of the Community Energy Strategy

- NEA and Calor note concern that whilst aware of many examples of good practice and individual projects, no attempt is being made by DECC and the Local Government Association to date to aggregate the extent of Community Energy activity across England and (through consistent reporting requirements) illustrate what contribution this type of activity can or does make to national targets and aspirations.

3. Due to the costs of interventions within rural and off gas households, further additional benefits should be consistently integrated within DECC and HMT Treasury's cost benefit analysis

- Beyond the direct potential benefits of enhancing support for households, the additional costs to the economy and potential for jobs and enhanced communities must be regarded as key motivations to better realise the benefits that could be captured by tacking Britain's cold damp housing through energy efficiency and mitigating high energy prices through further electricity discounts.

- Assistance through the Warm Home Discount scheme, winter fuel payments or an additional mechanism should attempt to provide assistance for other vulnerable customers (beyond the poorest pensioners).

- Extending the data matching powers taken in the Pensions Act 2008 to a wider group of benefit recipients would also represent an efficient approach of targeting current resources on households who are currently eligible for the Affordable Warmth element of ECO and the Rural Safeguard. This presents a proportionate benefit for the use of this sensitive information by reducing costs for all energy consumers and directly benefiting those that would be assisted. Both NEA and Calor appreciate that this would require primary legislation and additional funding from suppliers.