

# CHESSHIRE LEHMANN FUND FUEL POVERTY PILOT, HASTINGS

The positive mental health benefits of key interventions

What works? What are the policy implications?







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# **PROJECT BACKGROUND**

### CHESSHIRE LEHMAN FUND GRANT

The project aims were to provide energy advice to 160 vulnerable residents, to identify 20 case studies that provide anecdotal evidence of improvements ("what works") and to examine the relevant policy implications.

The Chesshire Lehman Fund (CLF) grant was supplemented by an award from East Sussex County Council to amplify the research and integrate it within the framework of the Fuel Poverty Reduction programme in East Sussex.

Emergent policy recommendations would be of value to the commissioners of the Hastings and Rother clinical commissioning group (CCG) currently distributing a £5 million grant to address health inequalities in the area.

These inequalities are particularly acute. For example, the Silchester Road office of Energise Sussex Coast is in a neighbourhood that ranks in the lowest 1% for health and disability in the UK. The difference in life expectancy for males between the poorest and least poor neighbourhoods in St Leonards is 11.1 years. In two neighbourhoods in North East Hastings child poverty is in the lowest 0.3% in the UK.

### FUEL POVERTY WORKSHOP

A "Community Solutions to Fuel Poverty" workshop was organised on 13 May 2016 where the case studies and results of the research from this and other CLF projects were summarised for the Secretary of State for Energy and Climate Change (Rt Hon Amber Rudd MP).

This report and the policy recommendations nominated and prioritised by a wide range of academic, private sector, public sector and voluntary organisations at the workshop will be presented in writing to DECC, Ofgem and the Secretary of State.

The discussion and the recommendations are timely as they follow publication of the CMA report and the NIC consultation and precede the publication of the Bonfield report and the detail surrounding the ECO2 scheme that replaces ECO in 2017 with its alleged focus on targeting fuel poor homes.



Richard Watson introduces the Fuel Poverty Workshop, Sussex Coast College, May 13 2016 with (from left) Dr Mari Martiskainen, Sussex University, Dr Brenda Boardman, Oxford University, Ollie Pendered, Community Energy South and Kayle Ente, Brighton and Hove Energy Service Co-operative.

### **ENERGISE SUSSEX COAST**

Energise Sussex Coast (ESC) is a community benefit co-operative with three volunteer member/Directors and two members of staff (paid on a project by project basis). It was set up in 2012 to address Fuel Poverty in Hastings and Rother primarily through the development of community share-owned renewable energy projects and the creation of a community fund.

ESC first began giving energy advice and promoting the \*CERT and \*CESP schemes from a Rother District Council owned energy advice centre in 2012 but since 2013 has been running Pop-up Energy shops and energy advice desks at locations frequented by the target fuel poor groups (at Libraries, Town Halls, community centres, medical practices, Job centres and Day centres).

The Big Energy Saving Network (BESN) was established in 2013 to address exclusion in the energy market. The Network delivered face-to-face outreach, tailored to the needs of communities, through organisations they know and trust. It built on efforts of existing support networks and helped vulnerable consumers by developing the capability of advisors through training them on tariffs, switching and how to access energy efficiency programmes. During the first year of the Network, DECC funded over 150 projects from more than 90 third sector organisations.

ESC was involved in the first Big Energy Saving Network (BESN) scheme in 2013/2014 and in 2015 led a group of 15 energy champion groups across Sussex and Kent who gave energy switching advice to 2150 vulnerable residents and trained 660 frontline staff.

\*CERT = Carbon Emissions Reduction Target \*CESP = Community Energy Saving Programme

### THE FUEL POVERTY CHALLENGE FOR PRACTITIONERS

The success of the BESN scheme, continued in 2016, should not mask the very real challenge facing all voluntary and public sector organisations (especially post Green Deal/ECO ): namely that there is little or no effective energy advice infrastructure within the UK.

Many organisations such as the Citizens Advise Bureaux, Local Authorities, Community organisations and charities such as NEA, Age UK, as well as local charities and for-profit organisations seem to run competing or similar schemes funded by Energy Companies, grant bodies, Ofgem, DECC and Local Authorities.

These (Energy Best, BESN, Winter Home Check referrals) are often seasonal, short term, sporadic and geographically patchy. The combined effect is a 'pepperpot' approach which will result in needy households not being captured by a programme.

The stop-start nature of such energy advice schemes also confuses the public who see no consistency or continuity. It is difficult to evaluate what works and what the long term positive effects are of such schemes (other than the initial one year cash savings generated from tariff switching for example) yet such schemes have to justify the following year's budget allocation by demonstrating success.

This puts huge pressure on the delivery partners to achieve challenging targets within narrow timeframes and produce glowing reports demonstrating they have done so.



Dr Brenda Boardman and Dr Anne Feltham presenting the CLF cheque to Richard Watson and Deborah Derber of Energise Sussex Coast.

Summary of fuel poverty challenges and policy implications:

- Structured local and national energy advice infrastructure needed
- A mechanism in place to help organisations work together
- A map of energy advice services to look at geographical strengths and gaps
- A consistent annual approach to FP services (not seasonal)

### BUILDING EFFECTIVE LOCAL PARTNERSHIPS

This project is intended to inform the debate around what a continuous community energy advice service might look like and, since one organisation cannot deliver every aspect of an integrated fuel poverty reduction service, what kind of partnerships with other organisations (following the NICE guidelines) would need to be in place to deliver an effective and trusted local service.

During this project ESC was fortunate to work closely with many organisations and delivery partners who collectively form part of the East Sussex Energy Partnership (ESEP) delivering the Winter Home Check (WHC) service with a procured delivery partner (Osborne Energy). ESC also works with other partners outside the WHC scope such as Social Housing Provider Amicus Horizon, the BESN champions and Community Energy South partners in other areas.

For this project ESC also partnered with the Seaview Charity for rough sleepers and the insecurely housed and ran a weekly energy desk in the day centre which supports up to 100 service users per day. Last year the Seaview charity helped 1300 of the poorest residents of Hastings, one third of whom were rough sleepers and two thirds insecurely housed. A significant percentage of service users are under 35, have mental and physical disabilities and all are severely impoverished.

What has emerged from this partnership in 2016 is the realisation that Seaview service users have contrasting energy management needs to other vulnerable residents facing energy poverty. Usually we would try to steer those on low incomes away from prepayment meters (PPMs) because of the high cost of energy associated with them but the housing and support staff at Seaview convinced us that for those with chaotic lives PPMs are the best and often the only way to access energy regularly.

Some Seaview service users also need support to make sure they feed their prepay meters regularly since if they are not assisted to do this they risk spending their limited resources elsewhere.

Hastings is now fortunate to have a new fuel bank (announced on May 13 2016) funded by the Npower £ 26 million Ofgem fine. The fuel bank will provide Prepayment meter vouchers (for PPMs only) worth up to £ 150 a year per meter. According to Matthew Cole of Npower, this addresses the key problem of those in fuel poverty who self disconnect from the grid. There are 4 million PPMs in the UK and in Npower's view many fuel poor homes that self disconnect will go undetected as the change in the frequency of their payments is harder to measure than if they use standard meters.

According to Seaview the vouchers could be equally important as a way to help their service users reconnect to the grid. The fuel poor who self disconnect by not feeding their prepayment meters may be statistically invisible to researchers but they continue to accumulate debt on a PPM. In our experience this debt is often transferred to unwary incoming tenants and when fuel poor homes resume payments they are penalised by accumulated standing charges.

It will be important for local partners (CAB, ESC and Seaview) to lobby Npower and its local Tressel Trust Food bank contacts hosting the new Fuel Bank to ensure that the referrals to the Fuel Bank are from local organisations who can both identify recipients whose needs are greatest and also offer ongoing support to those most at risk.

Ultimately, a scheme to make dwellings less energy profligate, or more able to generate free energy for tenants (such as funding solar PV or ASHP and PCT for fuel poor homes) would be a better long term use of energy company fines than extending the life of the inequitable and expensive prepay meters.



Rebecca Jones of National Energy Action and Councillor Bruce Dowling, Mayor of Hastings at the Hastings Big Happy Energy Day organised by ESC

This view contrasts with that of Seaview staff and underlines the complexity of the energy market and its excluded users and the need to avoid simplistic solutions to fuel poverty.

Seaview and ESC are currently past the first round of a bid to Scottish Power for £ 50,000 to support home energy advice and training for an in house team that could support vulnerable service users in their homes.

### FUTURE SMART ENERGY COMMUNITIES

The National Infrastructure Commission's advice on energy priorities highlights several opportunities for improving how electricity demand and supply could be better forecast and balanced in the future. A key recommendation in this report will be that NICs work must benefit domestic customers and build on successful trials such as those under the Low Carbon Network Fund (LCNF) or the Network Innovation Allowance (NIA). This could be critical in galvanising DNOs, local authorities and other private sector partners to lead on city-wide domestic retrofit projects and help accelerate the UK Government's fuel poverty commitments in England over the next 14 years.

ESC is part of the Innovate UK funded Energy Local scheme to pioneer local energy generation and storage solutions together with Time of Use tariffs for groups of domestic consumers which will address the dual aim of reducing energy consumption and carbon emissions, and in the process offer potential energy bill savings of between 5% and 30% for all residents who are part of the scheme. This is the kind of smart energy project, linked to solar investment for social homes, that could have a significant impact in fuel poor and deprived (but sunny) neighbourhoods such as Hastings. The Welsh Government have an area-based programme that receives substantial EU funding. Whilst EU funds can be leveraged into energy efficiency schemes in England, they can be very difficult to access as there is a match funding requirement under current schemes (mainly ECO) where the inability to guarantee assistance for very vulnerable, eligible households (who currently contribute to the costs of the scheme but are excluded access) undermines bids or the momentum of other local referral projects.

Nevertheless, a recent award of a £900,000 EU (NWE) grant has been made to ESC, Hastings Borough Council and lead partner social landlord Amicus Horizon. This partially funds a project to improve 600 homes in a deprived area of Hastings (Climate Active Neighbourhoods) over 3 years and will provide ESC with an opportunity to install the Energy Local smart meters with home energy management systems to 100 homes. The challenge for this project will be to demonstrate that low carbon innovation and smart energy interventions to reduce emissions can also reduce fuel poverty.

### GEOGRAPHICAL FOCUS AREA

Hastings (and St Leonards) and three urban neighbourhoods in Rother account for 47 of the 69 most deprived wards in East Sussex with many in the lowest decile in the UK.

Hastings ranks 19th out of all 326 local authorities in England for local concentration of multiple deprivation; Central St Leonards and Gensing are two of the most deprived neighbourhoods in the SE with a high degree of social churn, only 56% of residents having lived there for 1–5 years.

The wider area has the lowest life expectancy in the county partly caused by the condition of the housing stock. 62% of residents are 1 person households; 32% economically inactive; 26% with long-term health problems or disability, 15% aged 65+; median income per household is £20k per annum.

Over 58% of dwellings in Central St Leonards are privately rented and approximately 49% of privately rented dwellings failed to meet the decent homes standard.

The project also included engagement via Community Energy South partners in similar areas in Brighton and Faversham, Kent and a focus on homes in rural fuel poverty in rural Wealden.



### **METHODOLOGY**

Two Energy Champion staff members of ESC part– funded by BESN (Richard Watson and Deborah Derber) organised and ran regular energy advice desks in the Town Hall, at the Seaview Day centre and at various community centres. By running these desks regularly we reassured local people that this was a reliable and stable local service.

ESC organised a focal point public energy event "The Hastings Big Happy Energy Day" and invited over twenty other health and debt advice organisations from the private, voluntary and public sector to attend. This event was hosted by ESC on 17 February 2016 and was attended by 85 people.

Its core purpose was;

- To link energy advice and wellbeing enhancement under one roof and by inviting multiple organisations enable them to network and see the value in collaboration.
- To demonstrate to the public how many different local organisations were able to support them with debt relief applications, energy and water saving advice, housing, welfare and benefits advice, home, health and wellbeing improvements as well as home safety checks and much else besides.

e.g. local authority housing officers)

Another source of useful data for the project included the database of vulnerable BESN clients engaged in 2015 who were referred to the Winter Home Check service or to the Citizens Advice service for debt support (or to other support agencies).

A selection of these clients were telephoned to establish what interventions had taken place and whether the outcomes had been positive. These clients were also part of a database of 900 Big Energy Saving Network (BESN) clients across Sussex and Kent whose details were recorded in consumer evaluation reports in 2014/2015.

#### 20 Case studies have been highlighted in this report and the database in the appendices stands at 75 cases.



### FROM OCT 2015-APRIL 6, 2016 DATA COLLECTION SUMMARY

Number of energy clinics held	43
Number of residents engaged	250
Number of home visits	18
Number of Frontline staff trained and engaged.	58
(Note that some staff see 10-20 vulnerable residents a week	(combined reach to over 500 vulnerable households)

#### **NOTES RE DATA**

ESC would welcome any collaboration to extract learning outcomes from this evidence base as we see the data gathering part of this project as ongoing. Such was the scope and variety of potential and actual interventions – from helping clients with debt relief, water debts, white good replacements, new boilers, tariff switching and even solar miss-selling advice, it remains challenging to capture universal or uniform outcomes, including positive health outcomes, without some kind of bench marking process over time.

In many cases we were able to record energy usage and in some cases we were able to take a Warwick-Edinburgh scale snapshot of a client's wellbeing profile before or during an intervention but for the most part we remain reliant for positive outcomes on what clients told us when we contacted them and how they said they felt. We will continue to update and expand this database and add new fields as they are suggested.

Our own measure of "client dependency on future support" is based on our assessment of a client's needs post interventions (the likelihood that they would contact us for further support) and is not necessarily scientific.

Our ultimate aim is to help residents become informed, empowered and self-reliant and to undertake their own annual bill checks and tariff switching and manage their own energy needs affordably in future.

A key addition to this report is the enclosure of the CAB study in Hastings (Hastings Citizens Advice 1066: Debt Advice Health Outcomes).

Canterbury University is evaluating the county-wide project (known as FADES) on debt advice for people with mental health problems or other long term conditions. Through this project 850 clients have been seen in the last 2 years with over £7.5 million of debt being dealt with by Citizens Advice money advisers (Jones, 2016). This recent local East Sussex based study is the latest academic evidence demonstrating the link between social outcomes and mental health outcomes in debt advice.

The project demonstrated that total savings on GP visits per client per annum are £228.80. This equates to total savings for 850 people in the project across East Sussex worth £ 194,480, but this figure is amplified by other contingent savings.

We have not applied the CAB multiplier to our case studies but we understand that this is transferable. In the case of energy debts this would equate to a saving in healthcare and general welfare costs to the NHS of roughly £ 1645 for every client supported with energy debts. We assume that this includes helping vulnerable clients towards an improved management of energy in the home, including keeping warm affordably.

Area of work	Number of Clients	Amount of Debt	Average Debt	Savings on GP visits	Wider savings to health and social welfare
FADES (mental health clients)	220	1,295,794	8,814	50,336	361,900
EBDX (energy bill debts)	95	93,375	4,668	21,736	156,275
MASDAP (debt advice for other client groups)	328	2,033,461	9,591	75,046	539,560
Hasting Borough Council (debt advice for other groups)	52	137,405	6,245	11,897	85,540
Hastings and Rother Universal Credit	1	150	150	228	1,645
TOTAL	696	3,560,187	29,472	159,244	

# CASE STUDY 1 (A8)

### **SITUATION 1**

Hastings working family with 3 young children in receipt of working tax/child credits. On low incomes with water debt, struggling to stay warm for 5 years in private rented house with damp and mould issues. Very old boiler last made in 1995. Rads with no TRVs. Repeated health issues. Using prepayment meters.

#### **INTERVENTION**

H and family featured in BBC Panorama – Too poor to stay warm. Offer of support from local MP (Rt Hon Amber Rudd) EPC and energy check completed (= E rated EPC (SAP score 51). House now for sale and tenant given Section 21 eviction notice so no further tenant-centred investment possible.

#### OUTCOME

Landlord (a solicitor) unhappy with Panorama programme. Claimed that he was familiar with ECO schemes and had installed all the energy improvements possible.

Clear implications for landlord legislation in 2018 (where E rated EPC homes considered adequate). Data logger used to measure temp and humidity levels shows remarkable results. This home is having a noticeable effect on children's learning, wellbeing and health (with humidity levels at 90%)

See Article in BBC Magazine: Fuel Poverty. The anatomy of a cold home



"When it's cold, it feels like the whole house has turned into a big block of ice. It feels like someone is rubbing ice on my nose,"

8 yr. old Ava



"When you're a kid you sit there and you think, 'When I grow up I'm going to have this big house and it's going to be great,'" says Hayley. "Your home's your safe place, your warm place, your comfort. But I just don't want to be in this house. I just exist here, that's it really, no more than that."



Being cold at home and the broken sleep is starting to affect Ava's work at school. "It makes me really tired at school if I don't sleep well and then I can't concentrate," she says.

"In winter, I get really poorly and I'm up all night coughing. I'd like to move to a house that doesn't have any mould in the bedrooms or anywhere. That would be better really."

"The kids getting ill is one of my biggest worries. The situation has had me in tears several times," says Hayley.

The emotional stress is also affecting Ava.

"I worry that I'm going to wake up one day and my mum's not going to be here because she's really ill and she's going to be in hospital. That's why every time I go to bed I want her to go to bed after me so I know that she's in bed."

"From literally the minute we come into the winter I have to be on it. I have to go round, check all the windows, wipe them all down, go round all the window sills, then go round all the walls and scrub them down. I've done that every year including when I was pregnant."

#### DATA LOGGER RESULTS

A temperature and relative humidity data logger was installed in one of the bedrooms in the property. It was set to take readings every half hour and was left at the property from early February through to early April. Figure 1 shows the graphical results of what was recorded. The red trace is the ambient temperature in Centigrade (left hand 'Y' axis). The blue trace is the relative humidity in percent (right hand 'Y' axis). The green trace is the dew point in Centigrade (left hand 'Y' axis). This is a figure computed from the ambient temperature and relative humidity figures. Where the dew point exceeds the ambient temperature, one can expect condensation to form.



## TEMPERATURE & HUMIDITY DATASET (FIG 1)

Detailed examination of the data shows the following:

- The heating comes on around 06:30 and goes off around 09:45;
- There is some heating most evenings but this is at a much reduced level to that which occurs in the morning. Peak temperatures in the evening are much lower than in the morning. Some evenings, there is no heating;
- The bedroom achieves peak temperature around 09:00. Most bedrooms could be expected to be unoccupied by this time;
- There are no, or inadequate, temperature controls:
  - The temperature normally peaks well above 20°C. The highest temperature recorded was 42°C. One would normally expect a bedroom to be at 18°C
  - The temperature would fall during the night, typically to 14°C;
- Relative humidity rose during the night as the ambient temperature fell. It was normally well above 70% for most of the night. The highest recorded humidity was 89%. One can normally expect increase in fungal spores at relative humidity levels above 60%;
- Whilst the dew point temperature was never recorded above the ambient temperature, it was quite close on several occasions. The data logger can only record the conditions in its own immediate locality. Given the proximity of the two temperatures, it is highly probably that the dew point was above the ambient temperature in colder parts of the room such as windows, window rebates & exterior walls. One would expect to see condensation and visible mould as a result.

### TEMPERATURE & HUMIDITY SUBSET 26TH TO 30TH MARCH 2016 (FIG 2)

Figure 2 shows a representative subset of the recorded data for 26th through 29th March. The extent of the daily fluctuations in temperature and humidity can be clearly seen from this subset.



Figure 2. Temperature & humidity subset

# The Domestic Energy Adviser who completed the EPC noted the following potential improvements to the property:

1) The boiler is a Baxi Solo 2 40PF. The boiler was last manufactured in 1993 so is at least 23 years old, & in the Home Heating Guide has a Seasonal Efficiency of under 68%.

Recommendation is to replace.

2) The Radiators look like they need to be replaced with new & would suggest to have TRV's fitted. Please seek installer advice first.

#### **General Areas**

There are a lot of areas/rooms in the house that have mould especially in the back bedroom, lounge and bathroom.

This is mainly due to the poor condition of the guttering on the property which is causing water to run down the walls. The other main area is outside at the back where the path way has been built up to the bottom of the air brick to the suspended timber floor to the ground floor. When it rains the water has nowhere to go but through the air brick to the area below the suspended timber floor (kitchen) which is causing major damp problems and rotting of the timber joists.

The Bathroom has been constructed at a later time (no date) than the main building and is of cavity construction there is no signs of any cavity wall filling would suggest this is checked by an installer. Again there is a problem with rainwater from the pathway being able to soak into the walls and feel this is the main reason why the walls are showing signs of damp.

Would suggest that some form of drainage is installed around the back of the house to take the water away from the building.

There are signs of damp to the ceiling of the bathroom which has mainly a flat roof would suggest that the roofing area is looked at.

### **Energy Performance Certificate**

# SAP

#### Hollington Old Lane, ST. LEONARDS-ON-SEA, TN38 9DR

Dwelling type:	Semi-deta	ched house	Reference number:	0228-8933-6272-7425-993
Date of assessment:	02 Decen	nber 2015	Type of assessment:	RdSAP, existing dwelling
Date of certificate:	08 Decen	nber 2015	Total floor area:	56 m²

#### Use this document to:

Compare current ratings of properties to see which properties are more energy efficient

Find out how you can save energy and money by installing improvement measures

Estimated energy costs of dwelling for 3 years:		£ 2,733	
Over 3 years you could save			£ 1,503
Estimated energy co	sts of this home	المستحدين	A DESCRIPTION OF A
	Current costs	Potential costs	Potential future savings
Lighting	£ 117 over 3 years	£ 117 over 3 years	
Heating	£ 2,082 over 3 years	£ 915 over 3 years	You could
Hot Water	£ 534 over 3 years	£ 198 over 3 years	save E 1,503
Totals	£ 2,733	£ 1,230	over 3 years

These figures show how much the average household would spend in this property for heating, lighting and hot water. This excludes energy use for running appliances like TVs, computers and cookers, and any electricity generated by microgeneration.

Element	Description	Energy Efficiency
Walls	Solid brick, as built, no insulation (assumed)	***
	Cavity wall, as built, no insulation (assumed)	***
Roof	Pitched, 300 mm loft insulation	*****
	Flat, no insulation	* 会会会会
Floor	Suspended, no insulation (assumed)	-
	Solid, no insulation (assumed)	-
Windows	Fully double glazed	****
Main heating	Boiler and radiators, mains gas	*****
Main heating controls	Programmer and room thermostat	*****
Secondary heating	None	-
Hot water	From main system	*****
Lighting	Low energy lighting in all fixed outlets	*****

Current primary energy use per square metre of floor area: 404 kWh/m² per year

The assessment does not take into consideration the physical condition of any element. 'Assumed' means that the insulation could not be inspected and an assumption has been made in the methodology based on age and type of construction.

### CONCLUSIONS

The priority is keeping homes warmer and making homes healthier; mould growth is a very good indicator of unhealthy conditions. This key case study brought to national prominence by the BBC (A8) shows that a house that would meet the 2018 criteria for renting (EPC rate E) is nevertheless generating humidity levels of 80–90% in the children's bedroom. This has significant health impacts

This case study neatly captures other issues faced by Hastings residents, namely significant health inequalities linked with fuel poverty, low wages, poor housing stock and low educational achievement - Hastings has a high % of failing schools. It also highlights the nonsense of an EPC rating that rewards a house with a working gas boiler and radiators even when the boiler is 23 years old and the radiators have no thermostatic controls.

The key finding from the data logger is that the children's repeated illnesses (including visits to hospital) can be attributed to extremely high humidity levels (89%) and that the combination of cold and ill health in this case is affecting educational achievement as well as the wellbeing and happiness of the family. What is alarming is that the landlord in this case believed he was fully compliant with all current legal obligations to provide a decent home and did not need any advice.

#### POLICY RECOMMENDATIONS

- 1. Review of EPC criteria relating to old and inefficient boilers (high score) and the continued inclusion of Green Deal/ECO measures and costings in the EPC report
- 2. Health checks for houses that have mould and humidity issues (data loggers are not expensive!) and a proposal for a Parliamentary group to consider a "healthy home" campaign (with a checklist of essential healthy home criteria that should be applied in relation to health risks for young children or vulnerable adults.)

3. Review of the 2018 legislation relating to landlords and the requirement for a minimum "E" rated EPC - unless there is a mandatory inclusion of healthy home certification that is additional



#### **HEALTH IMPLICATIONS**

The implications for the health of the family with humidity levels at 80–90% have been known since the research paper published in 1986 in PMC – Environ Health Perspect. 1986 Mar; 65: 351–361 indirect health effects of relative humidity in indoor environments. A, E M Sterling, J H Biggin, and T D Sterling . Cited by other articles in PMC.

The key finding, highlighted in the Abstract is that the majority of adverse health effects caused by relative humidity would be minimized by maintaining indoor levels between 40 and 60%.

#### ABSTRACT

A review of the health effects of relative humidity in indoor environments suggests that relative humidity can affect the incidence of respiratory infections and allergies. Experimental studies on airborne-transmitted infectious bacteria and viruses have shown that the survival or infectivity of these organisms is minimized by exposure to relative humidifies between 40 and 70%.

Nine epidemiological studies examined the relationship between the number of respiratory infections or absenteeism and the relative humidity of the office, residence, or school. The incidence of absenteeism or respiratory infections was found to be lower among people working or living in environments with mid-range versus low or high relative humidifies.

The indoor size of allergenic mite and fungal populations is directly dependent upon the relative humidity. Mite populations are minimized when the relative humidity is below 50% and reach a maximum size at 80% relative humidity.

Most species of fungi cannot grow unless the relative humidity exceeds 60%. Relative humidity also affects the rate of off gassing of formaldehyde from indoor building materials, the rate of formation of acids and salts from sulphur and nitrogen dioxide, and the rate of formation of ozone.

The influence of relative humidity on the abundance of allergens, pathogens, and noxious chemicals suggests that indoor relative humidity levels should be considered as a factor of indoor air quality. The majority of adverse health effects caused by relative humidity would be minimized by maintaining indoor levels between 40 and 60%.

This would require humidification during winter in areas with cold winter climates. Humidification should preferably use evaporative or steam humidifiers, as cool mist humidifiers can disseminate aerosols contaminated with allergens.

# CASE STUDIES 2-10 (VULNERABLE & ELDERLY)

SITUATION	INTERVENTION	OUTCOME
A55: Home owning Hastings couple in their 90's on pension credits and DLA with cold related illness and high bills and usage. Large temperature difference between living room and other rooms. Reluctance to downsize	Gas CH but also using night storage heaters and E7 tariff (so high elec users but also had free solar panels installed!). BG service contract on their boiler. Meters not read for 1.5 yrs. £ 1100 in credit on estimated readings	BESN champion gave BG up to date meter reading. BG paid back £ 780 cheque. Switched supplier to save further £ 360 pa. Further work on water bills due. Working with Steps East support worker. Had winter home check. Couple delighted with savings but BG sent debt collection letter that distressed them.
A41: Private tenant 83, pension credit, no savings, lost interest and direction after car accident and death of partner after 40 years. Charged for electricity by two companies. In debt to Southern Water, BG and Eon. Ignored the brown envelopes (following his partner's death)	Erroneous transfer by EDF meant he overpaid for 2 years. We interceded and eventually EDF refunded £ 2185. Applying for debt relief on other energy bills and water. Paying £ 90 /m payment plans. Had Winter Home Check.	This has changed his life - he came to a pot luck supper with Transition Town group. He feels he is "getting his life back". As a successful comedian and raconteur we hope he will become an ambassador for pensioner groups
A54: Pensioner with mental health issues requiring carer support – on PPM with gas, thought boiler was broken down but turned out to be safety switch had cut gas supply– she had no heating and hot water for months. Referral from STEPS	Arranged EPC and plumber visit. This established the problem which was fixed.	Client was "over the moon" as she could wash herself again. Indicative of how vulnerable residents in fuel poverty often unable to pay the call out charge that might have avoided months of discomfort.
A 50: Single pensioner 76, living on Attendance Allowance and pension credit, no upstairs radiators, using kettle for hot water, suffered hypothermia and stroke in summer, hospitalised. Boiler system non-functioning. Homeowner but would not consider using equity in house to improve its efficiency (EPC E 48). Very low user of energy. 1600 kwh gas and 1000 kwh electricity on Age UK EON rate (not cheapest, but would not change). Big temperature difference between lower and upper floor (immersion heater upstairs)	Supported by Steps, obtained WHD and priority services, completed EPC. Now has new boiler installed. Downstairs room adapted to have bed. Partition with living room	Now much warmer and with hot water. Struggling with timer and controls so will get advice from installer next week.

SITUATION	INTERVENTION	OUTCOME
A46: Wife very ill. Gas Boiler broken for 2 years. High electric usage. 1 room 24 degrees but corridors v cold. Pension credits but small work pension put joint income over threshold. Npower bill £ 2500 (using 11,500 kwh elec). Several energy interventions possible. Wife no longer wished to go to hospital but had 11 illnesses and was recovering from multiple operations (but very resilient and keen to provide a home for 36 grandchildren).	EPC arranged. E 42 Bills assessed. Income added. With his SSE work pension total household income was £ 18 k making them ineligible for the Referral to winter home check	Switched Npower tariff saving 300 pa (further savings available if switching supplier). New boiler and CH system due to be installed 20/4/2016 taking 4 days. Loft cleared and due to get new insulation. Now qualified for extra benefits. Monthly energy payments down from 250/m to 130/m.
A45: Hastings husband in his 50's v ill (COPD, heart and breathing difficulties. Hospital needed) – boiler not working, leaking into loft which he could not access with his illness. Low income –pension credits for her, His illness and breathing difficulties meant he needed the windows open to breathe even when central heating was on (for her). Using 11000 kwh gas and 5000 kwh electricity annually. Help was needed urgently.	CLF and BESN funded Energy Champion obtained EPC, sent plumber to fix boiler temporarily. Applied to Npower Health through Warmth for new boiler (partnering with NEA).	New boiler installed, some insulation. Client very pleased and grateful though husband had to return to hospital for more treatment. Clear case of how collaboration between multiple agencies can support (and fund) essential repairs and energy efficiency improvements quickly. This is what ECO 2 funds should facilitate but needs a data sharing protocol
A47: Single pensioner living in own 2 bed flat. Out of work and cumulative debts (13 k) facing repossession. Flat in negative equity as condition v poor – not reflected in EPC. Declared bankrupt 4 years previously. Intelligent ex teacher but state of flat suggests breakdown. Appliances not working, holes in bathroom wall, no light fittings.	EPC arranged. Bills assessed. Supported by Steps East	Referred for Winter Home Check. Advised could save 142/pa by switching. Pleased with service but little else we could do. Continue to ring.
A52: Family on WTC and DLA with severely disabled child. Struggling to heat rural home in off gas area (Icklesham) with only electric heating. Let down by British Gas ECO funded Warm Home scheme. Assessed twice for HHCRO	Arranged EPC and referral to EDF Trust and free biomass boiler scheme	Not able to get free biomass boiler as heat demand of property only 12500 kwh (22,000 min required) – supported since 2012 but this family unlucky with eligibility and ECO scheme. Continuously let down
A48: Single pensioner living in 2 bed rented basement flat on pension credits and DLA. Boiler old and in need of repair/replacement. Gets chest pains and angina when boiler not working.	EPC arranged. Switched tariff (Gas and elec) to save £ 250 pa. Supported by Steps East. Referred for WHC	Referred to winter home check. Energy checklist sent. Contacted landlord re EPC and boiler. Client said she had sourced funding for her own boiler. Following up to find out if new boiler installed

# CASE STUDIES 11-16 (VULNERABLE ADULTS, 30-60, INSECURELY HOUSED OR IN DEBT)

SITUATION	INTERVENTION	OUTCOME
A43: 57 yr. old on JSA who suffers from Asthma, arthritis and has physical difficultie. The door of his rented flat does not fit and the windows are in bad condition. There is condensation and mould and a build-up of water when it rains. He is applying for PIP. He is using a PPM for both gas and electricity and he says he is spending £ 20 every two weeks on each meter. Bailiffs have removed a lot of his possessions. Using food banks. Debt to water company. Claims he did not qualify for CAB support	We applied for debt relief and enabled him to get a new cooker and fridge freezer. This was unsuccessful in 2015 but successful in 2016.	He was pleased but sold them immediately we learnt afterwards. Illustrates life on the edge. "T" cannot get the WHD or Winter Fuel Payments so needs PPM vouchers (but will he sell them?) Discussions with the charity establish that T is extremely likeable, intelligent and trying to "survive". He is one of 1300 service users seen by the charity in 2015 illustrating the depth of the problem in Hastings.
A 44: Service user in his 30's, living in a private rented bedsit. He has no other income and a debt to HMRC for overpaid working tax credit. All tenants in the property buy £10 electricity vouchers from their landlord. He struggles to stay warm and has conditions (depression, asthma, under active thyroid that leave him vulnerable to cold.	Applied to EDF Trust for modern efficient electric heater, new electric cooker, new fridge freezer and a heavy curtain in his bedsit/studio flat to stay warm. Applied to the WHC	Getting his bank details for the EDF Trust referral and we will check his meter. He does not know how much electricity he is using. He is being contacted about a WHC but did not respond to the first contacts. He supports others at the day centre and is highly valued by the charity for his volunteering
A31: Single 44 yr. woman living in rented accommodation for first time (rehabilitated). Sole income ESA and applying for PIP. Has been supported by her family through her addiction and enjoying the challenge of having her own flat to furnish.	1 bed flat -electric only - key meter with EDF costing £ 30 every 2 weeks. Had pneumonia in 2014 - keeps home warm to avoid recurrence so bills very high. Paying £ 26/month for water. Immersion heater is v expensive, costs £ 4 to have a bath.	EDF Trust referral. Needs help with energy bills. Referred to East Sussex benefits advice line, CAB and HARC in St Leonards, given list of income maximisation contact numbers for Hastings. Referred for free ESCC Winter Home Check service. Successful in getting a cooker and Fridge/Freezer

### SITUATION

A19: Single overseas artist in private rented flat with multiple single glazed windows. Was using 14500kwh of gas so thought £1106. Unable to pay. Helped put her on payment plan. electric heating would be cheaper but now using 10500kwh electricity pa? Low, variable income but well known in her field and having international exhibitions. Struggling to afford hard to heat property, debt to EDF. Debt to overseas bank. Income as an artist £7978 pa. Applying for WTC but process hard.

### INTERVENTION

Not billed by EDF for 2 years so faced 1 yr. total of She found dealing with the energy company on the phone very difficult.

### OUTCOME

Applied to EDF trust for debt relief but unsuccessful. Contacted EDF on her behalf and had her put on affordable plan. Not eligible for WHC as not on benefits

A15: 39 yr old single woman on ESA and PIP, has a fractured coxis and will never work again. She suffers from anxiety and depression and urgently needs help with an EDF debt of up to £1000 – she is currently on a payment plan but also has other debts she is dealing with separately (Water etc.). Her flat is above a car exhaust centre and very cold and damp and she suffers from Asthma. Her disability means she finds climbing the two large flights of stairs very difficult, especially taking washing to the launderette and she has housing issue needs.	We referred her to Osborne Energy (WHC) who visited within the last 3 months and checked flat, but have not come back. Advised her to go back to a local support provider after the last support worker disappeared on her. Gave her number for Money Advice to help with application for £1000 debt relief. Also applied to EDF Trust via CAB Thanet for new washing machine and debt relief. Needs application for new bed if O/T cannot help her.	Awaiting result of referrals and WHC.
A9: Hastings mother and daughter with mental and physical illnesses and disabilities made worse by cold and damp. Could not afford to heat their 2 bed park home when it was freezing. £10000 debt to Santander (repayment at £10/week). Joint annual income £11 k (PIP/ ESA/ Carers allowance) Her medical condition requires a dehumidifier that is constantly on. Electricity is by private wire, heat LPG. She is paying for the Park Home and paying £4000/year ground rent	Tried to refer to WHD and get the Npower Health Through Warmth funding for insulation (costing £ 6000). Npower unable to help as a park home counts as a holiday let. One company (Insulated Homes) able to offer a grant of £ 500. This is a desperate situation that many face when they find they have taken loans for park homes and find they are not entitled to housing benefit or grants.	Uncertain. Have tried to contact client and left messages but there is little that she can expect in the way of grant funded interventions in her circumstances. This is something we wish to try and address Similar situation for vulnerable tenants living in HMOs and paying their landlords for electricity without any record of usage.
A3: Service users (40's)who live solely on joint income support and PIP. They have no savings and struggle to pay their electric heating bill (the gas boiler is condemned). His condition (High blood pressure + Crone's disease) means that he needs to stay clean and warm. The extractor fan in the flat is broken. The block is a "council supported private letting scheme" but the couple are struggling to cope financially. She would benefit from a new washing machine to be able to keep their clothes clean and support his condition. She also has a permanently damaged spine (receiving PIP) and he is blind in one eye.	Referral for debt relief to EDF Trust. Referral to WHC. Council property to be reported as inadequate. Currently supporting them with their budget. She has children in care and a debt to a storage warehouse with 250 cubic feet of her possessions including children's items she would like to return. This would involve finding a grant of £500.	Given emergency heating. Eligible for loft insulation and replacement boiler. She is anxious about her possessions. Warwick Edinburgh wellbeing score 33 ( UK average 52)

# CASE STUDIES 17-20: RURAL FUEL POOR IN EAST SUSSEX AND BRIGHTON CASE STUDIES

SITUATION	INTERVENTION	OUTCOME
Single working mother in Wealden with young (disabled) children renting off-gas period rural property (oil heating, damp, cold). High usage. In debt to Energy supplier, problems with meter	Local oil group gave 1 year supply for free. BESN Energy champion wrote to Scottish Power Fund who wrote off £ 940 debt. Switched Tariff to save £ 300. Received Winter Home Check who fitted energy saving measures.	Positive but indicative of amount of support needed. This client should also receive the WHD. Supplier with indebted vulnerable customer like this should not have them on standard tariff. Need to resolve meter issues when electricity consumption registers this high (7500 kwh). Key need for rural RHI and energy efficiency investment
Single mother of three renting 4-bed draughty, hard to heat home in Brighton. High bills	BESN Champion helped her switch tariff and access WHD to save £ 800/year. Also installed energy saving measures	Positive result but this client one of 1000's in council properties that have had no energy efficiency improvements since they were constructed in the 1960's. Switching tariff not enough, home energy improvements urgently needed
Brighton widow in her 70's became indebted to energy supplier ( £ 900)	BESN Champion completed 3 year analysis of bills to find day and night usage had been erroneously switched. This saved £ 700. Supplier did not accept error until 6 month meter log was supplied.	Positive result but many vulnerable consumers are in this situation with concerns about meters and errors. (some concerns incorrect) Very time consuming support exercise

### **DATA ANALYSIS**

For this project we collected a wide range of data on case studies including such details as tenure, state of housing, dependency on benefits, disability, age, wellbeing, EPC rating, energy usage, prepayment meters, debt. The analysis of this data is ongoing.

We compared the data on our case studies with the data collected for a pilot study in 22 Hastings Homes. The Energy Express study invited Hastings residents to recieve energy advice and up to £ 250 of energy saving measures installed for free. These included battery operated TRVs, eco shower heads, radiator reflectors, energy monitors, insulation jackets, LEDs and power down plugs. The EE pilot took place in 2014/2015 and the final results are currently being measured.

The following table includes some of the analysis of the 57 Chesshire Lehmann fund case study set and the 22 EE pilot homes. The key selection difference is that EE pilot homes were privately owned or rented homes whose occupants volunteered for the scheme whereas the CLF case studies were generally vulnerable residents reached via energy advice clinics in public spaces or via referrals from other support agencies.

	CLF data	EE pilot
Dependent on benefits	82.5%	13.6%
Poor Housing	77.2%	86.4%
Mental/physical illness	66.7%	13.6%
Young children	31.6%	36.4%
Pensionable age	<b>36.</b> 8%	18.2%
In debt	31.6%	4.5%
Average EPC score	61.3	52.8
Sample size	57	22

# FINAL CONCLUSIONS

Through this project we have identified two different categories of community energy champion interventions that are effective. Broadly these divide into energy bill interventions, including help to access grants or other schemes, relieve debts or correct errors. These interventions are often time consuming and involve champions dealing with energy or water supply companies on behalf of vulnerable clients.

The second category is the identification of energy inefficient and unhealthy homes and housing conditions. This latter category and range of interventions is fundamental to any strategy aimed at tackling fuel poverty systemically. In this project we did not directly engage in home retrofits with the exception of commissioning some EPCs and engaging heating engineers to do some urgent repairs to heating systems but we did refer obvious D, E and F rated homes and their eligible occupants to other schemes such as the Winter Home Check or Npower Health through Warmth (London Warm Zone) scheme.

As a result of this project we have committed to establish a Retrofit Works scheme in Hastings that supports effective retrofit solutions. This is a cooperative scheme developed by Parity Projects that enables referral agencies and local contractors to undertake lower cost retrofit solutions that are managed by local partners

### ENERGY BILL INTERVENTIONS

The case studies show a wide range of positive interventions by Energy Champions that can show measurable benefits for clients. These range from applications for replacement white goods to more dramatic interventions that prompt comments like "I felt like I got my life back "from an 83 year old billed by two electricity suppliers for years and refunded £ 2185 after getting help.

Vulnerable clients with mental health issues and suffering from anxiety can be significantly helped by small and easy to achieve interventions such as getting the Warm Home Discount or saving £ 200 a year after being helped to switch to a cheaper tariff.

Some home improvement interventions, such as essential repairs to boilers that are not working can be achieved quickly and have positive outcomes. In the case of A54 – a pensioner with mental health disabilities who was convinced her boiler was not working – when a plumber established that the prepayment gas meter had £ 128 of credit but the gas was switched off as a safety precaution (there was no fault in the boiler) the client was "over the moon" that she could wash, having had no heating or hot water for several months.

### CONCLUSIONS

- 1. The energy market continues to penalise the vulnerable.\*
- 2. Some easy interventions are possible but can be very time consuming. These are unlikely to be undertaken by commissioned private sector companies as they can involve multiple hours. This could be done by community and voluntary sector energy champions but an advice service needs to be structured and sustainable (with champions well trained and committed and well supported if they are volunteers)

\*The energy market remains problematic. The fact that there are over 40 suppliers and multiple price comparison sites is claimed to be evidence that there is a competitive market but this is far from true. Margins to suppliers from retailing electricity are relatively low. According to Guy Thompson of MY UTILITY GENIUS, a cheaper tariff from First Utility would generate a profit of £75 per annum per customer. For this reason the Big 6 persist with a business model predicated around promoting the Standard Variable tariff (where the profit margin is £200–£300pa) and ensuring customers eventually return to it by default. This implies systemic risk (more fines) with suppliers' call centres making unsupportable claims about "their best tariffs" or sending statements that claim a customer is already "on our cheapest comparable tariff "when the standard tariff has no comparators. The CMA review calculates that £1.7 billion is overpaid by energy customers and recommends that there should be transitional tariffs introduced for the 4 million PPM users. Vulnerable energy customers are less able to secure fair prices from a complex market or resolve errors in their favour.

### HOUSING INTERVENTIONS

### CONCLUSIONS

- 1 The key systemic issue is the energy inefficiency and poor quality of the housing stock. This is a fundamental infrastructure problem but is not perceived as such by Government or the markets. Affordable retrofit loans have yet to be provided by banks or energy suppliers (or a combination of both).
- 2 The case studies show that housing problems (inefficient heating, poor insulation, condensation, damp and mould) can have far reaching consequences for their occupants. Not only do they compound the issue of unaffordable warmth and trap households in fuel poverty but the health and wellbeing consequences – the direct physical and emotional effects of living in a cold home or tolerating 90% humidity – can be catastrophic for a family and result in high stress, family break ups, depression, illness and poor attendance at school (as evidenced by our Hayley and family case study).
- **3** The scandal of fuel poverty rates in the UK and the relatively straightforward solution (an urgent retrofit poor performing houses) should be a priority, particularly in the light of the Paris COP 21 commitment. It remains puzzling that for this Government fuel poverty solutions remain uncoupled from climate change, energy and housing solutions when they are essentially the same.

- **4** Private sector rental legislation is next to useless. Tenants are very often too scared to say anything and landlord exemptions are too many, ensuring that fuel poverty in the private sector is very difficult to eliminate.
- **5** Reducing mental stress produces big benefits and has a significant saving for the NHS estimated at £1650 per client in reduced health and social care costs (CAB study). A reasonably practical timeline is perhaps up to 3 years The Warwick Edinburgh guidelines are a useful indicator but perhaps less helpful in determining what works. In this project we found clear cases where mental stress and anxiety around energy bills was reduced by saving residents money through switching schemes, registering them for the WHD or providing referrals to free replacement boiler schemes co-funded by the NEA.
- **6** The EPC rating system needs an overhaul and should include a "healthy home" measure.

**7** The phenomenon of 'unintended consequences', where perfectly well-meaning policy initiatives by Government or other institutions and companies lead to silly results. Dr Brenda Boardman cited the example of a modern combi boiler being recommended as a replacement for an old inefficient unit that has broken down. The improvement is calculated not from a direct replacement of a less efficient boiler with a modern unit, but with peak electric heaters substituting

the combi boiler. This is based on the assumption that the broken down boiler would most likely be replaced by direct electric heaters rather than any other form of heat



\*\* Recent work (by Walker R, McKenzie P, Liddell C and Morris C (2012, 2014)) has shown that just as there are poverty clusters in certain geographic areas, this is equally true of energy poverty. Through area based assessments, clusters of 125 homes can be ranked to identify areas in East Sussex with the most acute energy poverty. According to Dr Boardman, linking with Healthcare professionals to identify fuel poor geographic areas would be an effective way to target interventions.

# **POLICY RECOMMENDATIONS**

Note: policy recommendations drafted by Peter Smith, Head of Policy and Research at National Energy Action (NEA) – supplemented by ESC comments

- 1 The CMA recommended a key way to address the level of detriment in the energy market is a transitional price control for the 4 million households who are on prepayment meters, who face limited competition from suppliers and whose ability to switch and find better deals is far more limited than for credit and direct debit customers. We would go further and request a review of the marketing strategies of energy suppliers supporting the standard variable tariff.
- 2 Address exclusion from the energy market particularly for vulnerable residents reliant on lengthy support - by supporting the Big Energy Saving Network scheme. During the first year of the Network, DECC funded over 150 projects from more than 90 third sector organisations. DECC provided a further £1m funding to continue the Network into 2014/15. Around 170 projects across GB have delivered an expanded programme of outreach over the autumn/winter of 2014/15. DECC's evaluation report of the first vear estimated that the Network reached over 90,000 consumers in total – 16,000 participants via workshops and 78,000 through frontline workers. East Sussex energy champions were particularly successful.
- **3** Improving conditions in the Private Rented Sector – From April 2016, domestic landlords in England and Wales are not able to unreasonably refuse requests from their tenants for consent to energy efficiency improvements, where financial support is available from national or local schemes.

From April 2018, all private rented properties (domestic and nondomestic) will also need to be brought up to a minimum energy efficiency standard rating of EPC rating "E". Taken together with the existing powers under the Housing Health and Safety Rating System (HHSRS), introduced in the 2004 Housing Act (which is already regulating minimum standards in housing), there is the potential for an enhanced approach which could improve the physical and psychological health of millions of UK households in the private rented sector.

We would go further and suggest that the target to get the 300,000 fuel poor homes from F and G rated homes to C by 2035 (via E in 2021) be reviewed. Fuel Poor homes straight to C by 2021. Increased responsibility on owners (not tenants) and penalties for noncompliance. Particular attention should go to regulating the HMO and Park Home (holiday chalet) sector which is where many difficult to help fuel poor households are hidden.



4 Improving the Warm Home Discount Scheme - Following effective engagement by the Department of Energy and Climate Change (DECC), NEA, the Children Society and a range of other well-known charities the Comprehensive Spending Review (CSR) committed that the Warm Home Discount scheme will be extended to 2020-2021.

However the Broader Group criteria remain complex and the scheme is used by suppliers to reduce debtors rather than address fuel poverty. The Home Heat Helpline (Energy UK) only covers the Big 6 and is no longer fit for purpose.

There needs to be a national Home Heat Helpline supporting the WHD and Priority Service Registers available from all suppliers and the DNOs.

- 5 Ensuring the successor to ECO is fit for purpose - The UK Government is committed to ensuring there is a home energy efficiency policy to supersede the current phase of the Energy Company Obligation (ECO) which is due to end in 2017. The Secretary of State, Ministers and the Department of Energy and Climate Change (DECC) have also publicly stated the intention for the supplier obligation post 2018 to be dedicated to helping households in fuel poverty. At the Hastings Fuel Poverty workshop there was universal support for Local Authorities to be funded to deliver ECO2 with local partners. This would support the Retrofit Works model in Hastings.
- Reformed and refocused RHI scheme to address rural fuel poverty. The Renewable Heat Incentive (RHI) budget is to increase from £430 million in 2015/16 to £1.15 billion in 2020/21 To date the scheme has failed to support fuel poor off gas households who cannot afford the upfront costs of new heating systems. Recommendation for a new round of Central Heating Fund grants, low cost home improvement loans (LAs or Parity Trust and Credit Unions) or Local Authority retrofit funds and ECO2 funds to support the RHI scheme and deliver renewable heating systems for rural households that need the most help. Retrofit Works a good example of a local solution.
- 7 Finding the hard to reach. The recent Cabinet Office consultation into Better use of data in government could result in the introduction of a new primary power to extend data-sharing with suppliers to further automate the WHD which is likely to be wrapped into a new Data-sharing Bill later this year. The UK Government must also seize the opportunity to share data for the purposes of enhancing services provided or supported locally by public sector bodies such as local authorities or GP practices.

This should not exclude voluntary sector organisations. While it is essential to preserve data protection norms while building up a good evidence base (such as these case studies and the BESN clients database) in order to inform a well-founded fuel poverty reduction strategy, data protection can be a severe limiting factor for schemes to tackle fuel poverty effectively that involve multiple organisations. To date many of our effective interventions (replacement boilers) are dependent on informal contacts and data sharing with other agencies.

The community energy champion's effort will be far more effective if well integrated into an organisational structure with a data sharing protocol. In particular, those points of access to the health service such as medical centre receptions are an extremely effective filter for fuel poverty problems to be identified and assistance offered.



# SUPPORTED BY