

# energise

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Tackling the threat of climate change and ending the misery of cold homes

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# Climate injustice

CSE report reveals social patterns behind UK carbon emissions

People who emit the least carbon in the UK are most likely to suffer from the consequences of climate change. Two new reports, published by the Joseph Rowntree Foundation (JRF), show for the first time who emits the most carbon and identifies who and where is most vulnerable to climate change in the UK.

The first of these reports was written by CSE. *The distribution of UK household CO<sub>2</sub> emissions: Interim report* reveals distinct social patterns in the way that emissions vary across UK households.

It shows that people in the 45-55 age group emit the most carbon, 50% more than the under-25s. It also shows that wealthier households have the highest overall emissions, with the top 10% of earners emitting more than twice as much carbon as the bottom 10%.

CSE's Joshua Thumim, who is leading the research team, said: "This work confirms what we have long suspected – there is a direct and significant relationship between household income and carbon emissions."



## Who emits the most CO<sub>2</sub>?



## Who is the most vulnerable?



Above: the findings of our report presented in graphic form at [www.jrf.org.uk/climate-change](http://www.jrf.org.uk/climate-change)

"Importantly this relationship is even stronger when flying and driving are taken into account. The challenge is to use this information to design fairer climate change policies."

Travel accounts for much of this variation, with the top 10% of earners emitting five times as much carbon from flying as the bottom 10%, and three times as much from driving. And multi-car households have on average three times the emissions of those with no car.

The differences, though still significant, are smaller for household fuel use, with the top 10% of earners emitting 45% more than the bottom 10%.

This report is part of a wider project that CSE is undertaking for JRF which seeks to understand the social impacts of UK climate policies.

You can download the report from JRF's new climate change microsite at [jrf.org.uk/climate-change](http://jrf.org.uk/climate-change).

# CSE report reveals 'under-consumption' of energy in UK homes

We spend less on energy than policy-makers think

British households consume only 70% of the energy that the 2007 English House Condition Survey – one of the cornerstones of energy policy-making – says that they “need”.

This surprising finding is one of the headline results presented in a new report ‘Understanding fuel expenditure’, written by Ian Preston and Vicki White of CSE with Donald Hirsch of Loughborough University, and commissioned by Consumer Focus.

The report shows that this ‘under-consumption’ is found in both rich and poor homes, with at least 80% of households in all income groups consuming “too little” electricity, gas or oil.

“This is important because it suggests a disconnect between the model used by policy-makers to predict energy use, and what households actually do,” said Ian Preston.

“What we don’t know is why so many people are consuming less energy than expected. Is it because they’re happy to under-heat their homes, or because they leave some rooms unoccupied, or because they’re away from home a lot? Maybe it’s because they can’t afford it.

“And this is the main point. A full understanding of fuel poverty requires

information about actual spending on fuel.”

The report was commissioned by Consumer Focus as part of their engagement with the Hills Fuel Poverty Review – the ongoing Government process designed to take a fresh look at the fuel poverty target and definition.

“Low income consumers tend to either cut back on fuel expenditure, and as a result suffer cold homes, or try to maintain fuel expenditure and then either go into fuel debt or forego expenditure on other essential goods and services,” said William Baker of Consumer Focus.

“We therefore commissioned this piece of work to investigate these issues further, particularly with respect to the relationship between consumers’ actual fuel expenditure and so-called ‘required fuel expenditure’.”

Download the report from [www.cse.org.uk/news/view/1587](http://www.cse.org.uk/news/view/1587)



The cupboard under the stairs tells an interesting tale of lower domestic energy use than assumed by policy-makers. What’s going on?

## CSE wins bid for £300,000 from National Lottery

Award will help banish the cold for thousands of older people

CSE has been awarded funding of £298,613 to build on the ongoing Older Person’s Energy Network (OPEN) project which improves the lives of older people in the former county of Avon.

This new funding will allow us to support some 3,000 people who are at risk of ill-health, depression and social isolation as they cannot afford to heat their homes.

Simon Roberts, Chief Executive of CSE, said: “The challenge faced by older people to keep their homes warm in winter is intensifying. Without help, many will have no choice but to go cold rather than run up bills they can’t afford.

“And with the cold come dangers of chronic ill-health, misery and social exclusion – who invites friends round to a home where you need to wrap up in a blanket and coat to keep warm?”

OPEN will target the most vulnerable households in the West of England and support them with home visits, in-depth advice, case-work and follow-up support around energy, housing and finances including energy efficiency measures, benefits entitlements, fuel-debt repayment plans and improvements to homes in disrepair.

You can read the full project profile on our website at [www.cse.org.uk/open](http://www.cse.org.uk/open)

## ‘Step in the right direction’

Our reaction to the Hills Review

The headline item from the Hills Fuel Poverty Review published last October was Professor John Hills’ stated intention to change the definition of fuel poverty.

The current definition (that a household is in fuel poverty if it needs to spend more than 10% of its income on fuel to

maintain a reasonable standard of warmth) doesn’t necessarily reflect people’s incomes and the pressure that fuel costs put on their wider finances.

The proposed new definition seeks to address this by looking at a household’s disposable income **and** at the amount of heating it needs. In policy-speak

it will combine a threshold of poverty as a proportion of ‘after-housing costs’ income with a measure of high energy requirement expressed in monetary terms relative to the wider population.

CSE’s Ian Preston is broadly in favour of this shift. “A definition of income that’s both ‘equalised’ and takes into account housing costs better reflects how much cash people really have available to spend

on fuel,” he said.

“Note, too, that the new definition neutralises the impact of fuel price rises, so it is no longer the case that an increase in the cost of gas or electricity casts millions more into fuel poverty. Henceforth households will be judged as fuel-poor relative to other households, not by the proportion of income spent on fuel.”

For more details, see [www.cse.org.uk/hillsreview](http://www.cse.org.uk/hillsreview)



# Talking about the Green Deal

Conference explores ways to make the Green Deal work to the benefit of local communities and local businesses

**A**round 100 delegates attended a free event organised jointly by CSE and Severn Wye Energy Agency (SWEA) in October 2011 which explored the opportunities and challenges presented by the Green Deal.

It was, in the words of CSE's Chief Executive, Simon Roberts, "a great chance to share what we've already learned and to look at future approaches to Green Deal and low carbon refurbishment. It's clear from the feedback that people found it really useful and are keen to be involved in our work in this area as it develops."

Speakers included senior representatives from DECC and Scottish and Southern Energy as well as experts from CSE and SWEA. You can download all presentations from [www.cse.org.uk/greendealevent](http://www.cse.org.uk/greendealevent).

The conference was designed specifically for South West local authority officers, local councillors and social landlords. It took place at Bristol's Watershed Media Centre, and was funded by CSE and SWEA with a contribution from Scottish and Southern Energy.

In the evening it was the turn of

community organisations. This separate-but-similar event, run in partnership with Bristol Energy Network, focused particularly on what the Green Deal could offer community energy groups and social enterprises.

"We had over 70 delegates, which is testament to both the sheer number of energy groups in and around Bristol and also the fact that so many of us are just not sure how the Green Deal is going to work," said Bridget Newbery, from CSE's Local and Community Empowerment team.

"There was definitely some scepticism in the room, particularly about whether this scheme will live up to the ambitious rhetoric which accompanied its launch. But I also heard a lot of positive comments from people determined to use the Green Deal as a vehicle for making the cuts in carbon we need and bringing down fuel bills."

Jake Barnes from Bristol Energy Network said: "Community groups may be 'resource poor', but they can be much more effective at engaging their local neighbourhoods than installers and energy companies, and this could make a critical difference to the success of the Green Deal."



**Main picture:** CSE's Phillip Morris answers questions from the audience. **From top:** Steve Ives from DECC joins in the debate; Green Doors' Kate Watson and Scottish and Southern Energy's Steven Millward; Simon Roberts (left), Catrin Maby of SWEA (middle) and Cllr John Cordwell from Gloucestershire County Council (right); and delegates enjoying lunch

## Shaping policy

Our response to the Government's Green Deal consultation, which sought the views of stakeholders on Green Deal and Energy Company Obligation (ECO) policies that are to be implemented in secondary legislation, is available on our website at [www.cse.org.uk/greendeal](http://www.cse.org.uk/greendeal)



# Solid wall insulation: barriers to uptake

A new CSE report evaluates the experiences of householders who have undertaken the process of solid wall insulation

**A** newly published study by CSE attempts to add to the understanding of why people are reluctant to undertake solid wall insulation measures in their homes.

*An evaluation of solid wall insulation in fuel poor households in the private sector* comprises a qualitative evaluation of the experience of householders living in homes that underwent solid wall insulation.

Dr Nick Banks was one of the authors of the report. "Whilst the technical challenges of solid wall insulation are widely acknowledged, there has been little exploration of the human barriers to uptake. These are likely to be substantial, given the disruption involved and the impact of measures on building appearance."

It's an important issue because without a significant increase in the number of 'hard-to-treat' homes insulated in this way, the UK will not meet carbon reduction targets in the

**Disruptive? You bet. The picture below is testament to that. But solid wall insulation can markedly improve the look of a property (same house, finished, right) and the lives of people living in hard-to-heat homes (story, far right)**



domestic sector. Furthermore, solid wall insulation remains one of the best ways of combatting fuel poverty for householders in 'hard-to-treat' homes living off the gas grid.

The householders featured in the study were all part of Freedom from Fuel Poverty, a successful scheme that CSE designed and delivered in the Bath area.

This interim report presents the headline findings to date with recommendations for practitioners, policy-makers and others interested in the uptake of solid wall insulation systems.

**The report was funded by eaga Charitable Trust and co-authored by Dr Nick Banks and Vicki White. Download the report at [cse.org.uk/news/view/1592](https://www.cse.org.uk/news/view/1592)**



How a CSE solid wall insulation scheme gave this story a happy (and warmer) ending

*"I was reading my child a bedtime story and I could see the condensation coming out of his mouth, like smoke ... that's when I realised we had to do something about our energy."*

These are the words of Steve, speaking on BBC Radio Somerset in 2011 and describing his family's experience of living in a cold, solid-walled home, and of the huge fuel bills that still didn't make the house warm. When he realised the cold was even intruding on the moments he treasured most with his children, Steve realised he had to act.

Luckily help was at hand. A pilot scheme run by CSE in partnership with Bath and North East Somerset Council was offering solid wall insulation and PV panels to householders in severe fuel poverty.

CSE's Mike McClelland ran the scheme: "The cold bedtimes were the trigger that made Steve realise that the short-term disruption of installing solid wall insulation would be worth it for the long-lasting benefits of being able to keep his family home warm at a cost they could afford."

Steve got in touch, and through the Freedom from Fuel Poverty scheme was able to have his home insulated and his family life improved.

And as he concludes in his interview: "Now the heating hardly needs to be on to keep the place warm and we can afford to do things normal families take for granted."

**For more info, and to download the MP3 of Steve's interview, go to [www.cse.org.uk/warmerbedtime](https://www.cse.org.uk/warmerbedtime)**

## Hard-to-treat housing in England: we make data available on types, distribution and occupancy

As part of our work to explore ways to deliver the Green Deal and low carbon housing refurbishment at a local level and for local benefit, we recently undertook an analysis of English Housing Survey (EHS, 2007-08) data to understand a little more about the country's hard-to-treat housing stock.

We looked at various factors including dwelling type, rurality, household composition, income, tenure, connection to the gas grid and geographical situation. From this we've gained a broad overview of the types and distribution of hard-to-treat housing in England.

From this a series of types or 'nodes' have been identified, e.g. 'working-age couples and families in terraced houses in urban and fringe areas (solid wall)' for example, or 'single adults in



Some of the homes that the Green Deal hopes to improve. CSE's research shows that urban-fringe terraces like these show up as a distinct subset of hard-to-treat housing

electrically heated bungalows/houses in rural areas (off-gas)'.

Phillip Morris, who leads CSE's work around the Green Deal, said: "This research will be useful for organisations like ourselves (or councils, building firms and energy companies) looking to better understand the potential market for the Green Deal."

It's an 'internal' document and it's quite technical, but we're happy to share, and you can download the analysis from [cse.org.uk/news/view/1597](http://cse.org.uk/news/view/1597)



### Shortlisted for planning award

Our Low Carbon Bath project has been commended in the South West regional section of the Royal Town Planning Institute's 2011 National Planning Awards.

Low Carbon Bath was a ground-breaking initiative which engaged the local community in the planning process in the unique and sensitive context of a World Heritage Site.

And we're still in the running for a national award, for which we're shortlisted (with 33 others), so watch this space. For details, see

[cse.org.uk/lowcarbonbath](http://cse.org.uk/lowcarbonbath)

## CSE partners with Bristol City Council in free loft insulation delivery scheme

A thousand households across Bristol are being offered loft insulation that is not only free but is delivered directly to their home.

Insulating a loft from scratch, or even just topping up to the recommended depth of 270mm, means typically 25-35 rolls of bulky insulation which would cost hundreds of

pounds and require at least half a dozen trips to the DIY store for an average estate car – or more for a dinky little Citroen.

CSE's Phillip Morris said: "We think this is among the most generous DIY insulation schemes anywhere in the country, and saving a trip to the DIY store is an added bonus.

"This initiative is funded through the Carbon Emissions Reduction Target (CERT) which is an obligation on energy suppliers to help us make carbon savings in our home. But CERT won't be around after 2012, and

insulation materials will no longer be heavily

subsidised. People should take advantage of insulation offers while they still have the chance."

To find out more about the scheme, or apply (Bristol City Council area only), go to [cse.org.uk/bristoldiyinsulation](http://cse.org.uk/bristoldiyinsulation)



# Energy audits for community groups in Bristol and Somerset



We work closely with community groups in our local area (Bristol and Somerset), helping them to deliver more effective local sustainable energy solutions. Our services currently include: telephone and email advice; technical and on-site support (including energy audits, above); training and workshop delivery; printed resources; and event kits.

In the photos above, CSE's James Mullen undertakes energy audits at two community buildings in Somerton: a multi-purpose building known as the 'Parish Rooms' (top) and the local infants school (below). This energy audit was done through our Levels and Moors Energy project ([cse.org.uk/levelsandmoors](http://cse.org.uk/levelsandmoors)).

Check out the website for other CSE projects in this sector: Warm Streets Communities ([cse.org.uk/wsc](http://cse.org.uk/wsc)); Warming Bristol Communities ([cse.org.uk/wbc](http://cse.org.uk/wbc)); Western Power Distribution community chest ([cse.org.uk/wpdcc](http://cse.org.uk/wpdcc)); Bristol Volunteers Get Energy ([cse.org.uk/bvge](http://cse.org.uk/bvge)); Bristol Community Energy ([cse.org.uk/bristolcommunityenergy](http://cse.org.uk/bristolcommunityenergy)).

If you are a community group in Somerset or the former county of Avon and would like our support for your energy project, email us at [communities@cse.org.uk](mailto:communities@cse.org.uk)

## CSE pressure for community energy risk fund finally pays off

Announcement of new rural renewable energy fund

**M**ore than two years of work by CSE is paying dividends, following the announcement of Government plans for a new £15 million Rural Community Renewable Energy Fund.

This encouraging news, revealed in the Chancellor's autumn statement, will mean Government support for communities to meet the upfront cost of developing renewable energy projects and thus remove a major barrier to community-driven renewable energy project development.

CSE's Chief Executive, Simon Roberts has been promoting this sort of initiative to government for several years. He said: "Although the details have yet to be finalised, this is great news. It means there will be a fund to lend to communities to help them pay for the 'at risk' costs of project development, like environmental impact assessments and planning applications.

"There's been a huge gap in provision until now, so it's good that the Government has been listening and is responding so positively. This fund has the potential to transform community perceptions of renewable energy development, from being something 'done to them' by outside interests to something they can be involved with and own on their own terms."



The Rural Community Renewable Energy Fund aims to transform opportunities for communities to drive their own renewable energy developments/ Photo shows the installation of a community hydro electric scheme in Settle, Yorkshire

# Power, pride and profits to the people

CSE will manage a support programme for large-scale community renewable energy projects funded by The Co-operative

In many parts of Europe energy projects are part of the fabric of community life. In Denmark, Germany, and The Netherlands hundreds of thousands of people are members of large co-operatives, or similar community bodies, which own, manage and profit from renewable energy facilities like wind farms or biomass plants. In the UK, however, this simply isn't the case.

But a new programme, managed by CSE on behalf of The Co-operative, intends to change that. The **Community Energy Challenge**, launched in February 2012, aims to provide

a jump-start for communities with ambitious renewable energy projects in mind.

Community groups who pass the selection criteria will receive 12-18 months of enterprise development, mentoring, technical advice and community facilitation from CSE, enabling them to initiate co-operative renewable energy projects at a significant scale (e.g. valued at £1m to £3m and/or rated in excess of 500kW).

In addition to CSE's support, the groups can also tap into further backing from The Co-operative Enterprise Hub and The Co-operative Bank. The goal

is to enable the communities to achieve the next stage: have the projects up and running.

CSE's Chief Executive, Simon Roberts, said: "The Co-operative's timely intervention represents a notable breakthrough. The Community Energy Challenge gives communities the opportunity to get serious about developing the larger-scale renewable energy projects that generate real pride and profits for local people."

For more details, and to download an expression of interest form and guidance notes for applicants, go to [www.cse.org.uk/challenge](http://www.cse.org.uk/challenge). Closing date: 29 Feb 2012



CSE will mentor the successful community groups, provide technical advice and help with the community consultation. Top: a community-owned wind farm in Oxfordshire. Above: a CSE community energy training event in Truro

## Positive response to CSE's free training for local community groups

Throughout 2011 (and due to continue into 2012), CSE ran a series of free training events aimed at equipping community groups across Somerset and the former county of Avon with the information and knowledge to launch their own energy projects.

A range of subjects has been covered, including 'small wind and community solar', 'consulting and engaging with your community', 'energy basics for individual volunteers', 'Solar PV', and 'renewable energy essentials'.

A particularly successful and popular session was

'legal structures for community groups', held in both central Bristol and Street, Somerset, and led by the Co-operative Development Agency and Somerset Co-operative Services. This training took members of local community groups through the process of deciding which structure was best for their group – a necessary precondition for seeking funding.

Another well-attended event was a solar-focused open afternoon for community energy projects at Bristol's Tobacco Factory (see photo).

Bridget Newbery is CSE's Senior Community Projects

Manager and explains how the courses came about. "The content is shaped by what community groups told us they needed: this includes financing (63% of respondents), particularly in relation to the feed-in tariff and renewable heat incentive, followed by community consultation (44%), renewable energy (38%), legal structures (38%) and concerns around planning and permitted development (31%)."

Read more about our work for communities at [www.cse.org.uk/communities](http://www.cse.org.uk/communities)



## 2011 Somerset Community Energy Forum

CSE's third annual Somerset Community Energy Forum took place at Bridgwater's strikingly modern YMCA in November.

A morning of key-note speakers and case studies was followed by an afternoon of workshops on energy auditing, working with schools, funding, and setting up community draught-proofing schemes. A workshop of particular interest, delivered by Jo Hamilton and Ruth Mayne of Oxford University's Environmental Change Institute, looked at behaviour change and the unique role that communities have in the process of influencing individuals' attitudes and actions.

Links and downloads at [cse.org.uk/news/view/1601](http://cse.org.uk/news/view/1601)

# energise

## New video section on CSE website

The 47 short (4-10 minute) films on setting up community-scale renewable energy projects, made for CSE's PlanLoCaL project, now feature in an expanded resources section of our website. See [cse.org.uk/planlocalvideos](http://cse.org.uk/planlocalvideos). Ten of these are case studies of successful community energy projects. Other films cover the different renewable energy technologies, project management, funding, dealing with planning, consulting with the community, generating an income stream, re-investing any profits, and heritage and landscape. Also available at [youtube.com/csebristol](http://youtube.com/csebristol)

## CSE's response to planning policy consultation

*'The planning system should not be solely about development and economic growth, but primarily about the local control and management of resources in the most beneficial, efficient and effective way possible.'*

This, in a nutshell, is CSE's reaction to the draft National Planning Policy Framework published recently by the Department for Communities and Local Government. You can download our response from [cse.org.uk/news/view/1580](http://cse.org.uk/news/view/1580)

## Energy advice leaflets

Our suite of 18 energy advice information sheets are proving something of a hit. They are available at a small charge to local authorities, housing associations, community groups and similar organisations. And of course they're freely downloadable from [www.cse.org.uk/adviceleaflets](http://www.cse.org.uk/adviceleaflets)



## Staff news

The settled and stable ship of CSE has seen only a few comings and goings recently. **Louisa Haines** jumps ashore to spend more time with her young and growing family, while her place on board is taken by **Liz Beth** who will manage some of our projects around low carbon localism. Other additions to the crew include shipmates **Royston Sellman** and **Tom Wilcox**, and two extremely able graduate placements, **Miriam Davies** and **Maddy Gunn**.

Our vision is a world where sustainability is second nature, carbon emissions have been cut to safe levels and fuel poverty has been replaced by energy justice.

Why not join the 3,200 people who receive our monthly enews? Sign up at [cse.org.uk/enews](http://cse.org.uk/enews). Or join the 700-plus people who follow us on Twitter [@cse\\_bristol](https://twitter.com/cse_bristol) or [@cse\\_communities](https://twitter.com/cse_communities) or [@cse\\_HomeEnergy](https://twitter.com/cse_HomeEnergy)

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## Centre for Sustainable Energy

We are an independent national charity that shares our knowledge and experience to help people change the way they think and act on energy. *Switched on since 1979*



## Who's who at CSE

### Chief Executive

Simon Roberts OBE

### Household Energy Services

Phillip Morris Head of Household Energy Services (acting) | Sarah Jeffrey Head of Household Energy Services (on maternity leave) | Danni Barrett Energy Advisor | Liz Dagger Community Outreach Worker | Miriam Davies Graduate Placement | Helen Grimshaw Energy Advisor | Natalie Marino Energy Advisor | Michael McClelland Scheme Manager | Lisa Pinchen Senior Energy Advisor | Pauline Sandell Fuel Poverty Advisor | Verity Saunders Senior Project Manager | Mark Tyler Energy Advisor | Jamie Walters Energy Advice Project Manager | Paul Winney Senior Energy Advisor

### Local & Community Empowerment

Rachel Coxoon Head of Local & Community Empowerment | Liz Beth Low Carbon Localism Project Manager | Heather Crane Energy Advisor | Morgan Griffin Senior Energy Advisor | Madeline Gunn Graduate Placement | Bridget Newbery Senior Community Projects Manager | James Watt Energy Advisor | Anna Watts Lead Trainer

### Research & Analysis

Joshua Thumim Head of Research & Analysis | Dr Toby Bridgeman Senior Research Project Worker | Martin Holley Senior Technical Project Manager | James Mullen Technical Officer | Ian Preston Senior Analyst | Zoe Redgrove Researcher | Royston Sellman Senior Programmer | Tom Wilcox Programmer | Vicki White Researcher

### Development & Communications

Janine Michael Head of Development & Communications | Dr Nick Banks Senior Development Manager | Ruth Cole Senior Development Manager | Matthew Rees Communications & Publicity Officer | Jonathan Twomey Senior Development Manager | Tim Weisselberg Communications & Publicity Manager |

### Finance & Human Resources

Sarah Frankish Head of Finance & Human Resources | Kirsty Mitchell Office Administrator | Julia Stephens-Parr Financial Administrator



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