

energise

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"Read all about it (online)" Last year we surveyed **energise** readers to ask if you wanted to go back to printed copies of the newsletter. The answer was a resounding 'no'. So Energise is going fully digital from now on ...



Staring into the retrofit skills gap

CSE's **Ian Preston** is frustrated by the government's failure to understand where the bottleneck in the UK's retrofit supply chain lies ...



In light of the current eye-watering increases in the cost of energy, the Association for the Decentralisation of Energy (ADE) wrote to the Department for Business, Energy & Industrial Strategy demanding urgent action to reduce the energy consumption of UK homes.

The government's reply was very telling. The minister duly repeated the

government's position, namely that they want to see an expansion of the retrofit sector and are looking at ways of encouraging people to make home improvements or retrofit measures like wall insulation and heat pumps.

What leapt out at me was the absence of three words: "training", "skills", "jobs". And this is beyond frustrating.

Because, as CSE and other organisations have repeatedly

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We need to make an apprenticeship in one of the building trades an attractive option for a broad range of school leavers.

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told the government, the sticking point is not at the household (demand) end of the chain but at the service (supply) end. Until this message gets through, the current retrofit log-jam will only get worse. (We wrote something similar in the last edition of **energise**: I'm going to start shouting louder now!)

In sum, there simply aren't enough skilled or qualified people to do the work across all trades and roles. Not enough builders. Not enough electricians. Not enough heating engineers. Not enough heat pump installers. Not enough joiners, plasterers, retrofit surveyors and energy assessors.

And in these circumstances, stoking the fires of consumer demand will simply drive up prices and frustrate homeowners. This is exactly what happened with the Green Homes Grant in 2021. This £1.5bn programme was abandoned just six months after its launch after upgrading a mere 47,500 homes out of the 600,000 originally planned. The Public Accounts Committee said the weaknesses in the scheme

could damage future efforts to deliver net zero.

The Green Deal which preceded the Green Homes Grant was similarly disastrous.

The government needs to understand that pouring money into the supply chain via short-term grants will not translate to business growth.

The retrofit sector is different

In their defence, that approach has succeeded in the past, for example with electric cars and solar panels where generous grants stimulated both supply and demand.

But both these industries are very different from the retrofit sector where thousands of medium, small and micro businesses supply the market with scores of different trades, from plumbers to ventilation fitters.

And most of them, by and large, have plenty of work. They certainly have little appetite for investing in training or taking on apprentices to service a what may be a temporary demand generated by a government scheme that is withdrawn at a

moment's notice.

So we're staring into a skills gap – or more accurately a skills chasm. It is this issue that the government needs to address with a strategy that creates an army of 'retrofit technicians' – the skilled builders we need to meet the net zero challenge. And local government can help too.

And we must redouble our efforts to make learning a trade an attractive option for a broad range of school leavers.

I have a vision of thousands of enthusiastic young people leaving school and training up to be joiners, plasterers, retrofit assessors and so on. Without this, the chances of the market responding in the way government expects – money-in-growth-out – are vanishingly slim.

Ian Preston is CSE's Director of Household Energy Services. This article first appeared in *Business Green* (paywall).



Back in April, Ian spoke on Channel 4's *Dispatches* programme 'Why Are Your Energy Bills So High?'. The programme featured real-life stories and some of the phone calls to our advice line from increasingly desperate members of the public, and investigated the impact of the collapse of many energy companies taking place at the time. *Dispatches* attracts an average viewing figure of 900,000. This is a wide-reaching programme, influential with policy makers and an informed public. The programme is still available on All4.

Two actions Ofgem can take now to help vulnerable energy consumers

When Ofgem, the UK's energy regulator, announced an unprecedented increase in energy bills in February 2022, it was clear that millions of people were going through struggle.

Ofgem lifted the cap on default tariffs to £1,971, the largest increase in energy bills on record and the second big rise in six months. Coming at the same time as cuts to benefits and rising inflation, the inevitable result is millions more people across the UK

being unable to keep their homes warm.

As CSE energy advisor, Elliot Clark says; "Today's price rises will result in more people switching their heating off. Someone called our advice line on the morning of Ofgem's announcement to say that they wouldn't be able to put the heating on anymore. They're frightened of going into debt. This is going to be the case for millions across the country."

Our response was to urge

Ofgem to take two actions to support its most vulnerable consumers, which are in line with its statutory remit and its existing consumer vulnerability strategy.

Firstly, to require energy suppliers to proactively contact customers who are self-disconnecting from their energy supply.

Energy suppliers know how much their customers are spending and have up-to-the-minute information for those on smart meters. This should alert them to vulnerable households where less energy than expected is being used. That household

should be approached directly, and offered support, or, where appropriate, referred to agencies like CSE for specialist help.

Secondly, Ofgem should publish all the commitments suppliers have made – for example, what they are doing about customers who self-disconnect. This would allow them to be held accountable for their promises.



 BRIGHT
GREEN
FUTURE

Applications open for Bright Green Future



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I think overall it helped me connect with what I wanted and how I wanted to show up and create change in the world

We're looking for the next generation of environmental leaders to join our next Bright Green Future cohort.

Applications are now open to join out free UK-wide environmental leadership and empowerment programme for 10-19 year olds'.

We particularly welcome applications from people of colour because we want to tackle the lack of diversity in the environmental sector and ensure a diverse mix of voices are represented. Over the six-months, our students are part of an inclusive group of 25 young and likeminded people who want to see a change in the world.

Since 2016, we've inspired more than 200 young people to be changemakers and create a positive impact.

Find out more about the programme

and how to apply on the Bright Green Future [website](https://www.brightgreenfuture.org.uk). You can also get in touch at bgf@cse.org.uk and follow us on [Twitter](#) and [Instagram](#).

Thank you to National Grid ESO and the Blgrave Trust for their recent and ongoing support for the programme and to Good Earth for their donations.

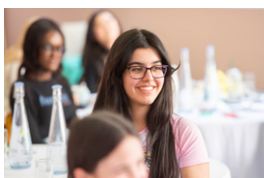
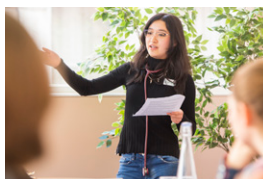
Watch our short video on the programme below:



What you'll be doing:

- Experiencing an immersive residential of engaging workshops and talks, time spent outdoors and connecting with the other young people on the programme.
- Creating and running an inspirational campaign workshop on an environmental topic of choice, in a team with four of five other students.
- Joining interactive career webinars to meet different people working in jobs that are having a positive impact.
- Learning about different sustainability topics in an accredited online course and sharing learnings in monthly discussion groups.
- Celebrating your achievements and graduate from the programme.

► Manchester, March 2022: graduation day for the last Bright Green Future cohort. These photos show our students presenting their campaign group projects.





Reassessing community engagement by wind developers

How should onshore wind developers engage with the community hosting the wind farm? What benefits should local communities get?

A CSE report produced on behalf of the Department for Business, Energy & Industrial Strategy released at the end of last year addresses good practice in community engagement and the process for agreeing a suitable community benefits package.

Its publication comes at a time of considerable change in the context for onshore wind. Planning rules introduced in 2015 made it challenging for onshore wind projects to gain planning consent.

This is despite overwhelming public support for the technology. There were only eight applications for new onshore wind sites in England in the period 2016-20 compared to 237 in 2011-15.

CSE's research shows these barriers pose a challenge to meeting the UK's climate commitments and to establishing a more resilient local energy system. They also mean that communities across England are missing out, as CSE's Keith Hempshall, describes [in his blog](#) (extract below).

CSE's Nicky Hodges, one of the lead authors said: "To reach net zero, we must generate more energy from renewable sources, and onshore wind is a critical component in this. Our work has

generated new case studies and updated evidence showing how developers and communities can engage with each other in a constructive and meaningful way from feasibility stage onwards. The report identifies what can contribute to agreement of a suitable community benefits package. These good-practice insights inform the updated guidance and should prove valuable to future onshore wind policy-making."

Community Engagement and Benefits for Onshore Wind in England: Qualitative research on good practice by Nicky Hodges, Karen Smith, Dr Sarah Becker and Keith Hempshall from CSE, and Sophy Fearnley-Whittingstall (SFW Communications) and Jenny Hazzard and Sarah McArthur (ITPEnergised).

"The UK is a very windy place, but our vast potential to produce cheaper local electricity from onshore windfarms remains untapped, due in part to planning rules.

Our research outlined above shows these barriers not only pose a challenge to weaning ourselves off fossil fuels, they also mean that communities across England are missing out.

There are many ways in which onshore windfarms can contribute to creating

more resilient, inclusive, and prosperous local communities, from investment into the local economy to improved community infrastructure and the strengthening of biodiversity.

As one community representative in Scotland told us: "The windfarm in our neighbourhood has brought benefits. Every house in the community has broadband, there is funding to support winter fuel payments, and we have a new play park for the youngsters."

In another example, support from Tirgwynt windfarm in Mid Wales has saved the village school in Carno from closure and funded a new school building. And at Kype Muir, a windfarm south of Glasgow, the developer contributes 1.5% of the revenue from the windfarm to a community fund that provides £442,000 a year for improving local employment and skills, including in tourism and rural diversification.

In all cases, community engagement is key. At CSE, we believe more nuanced public

engagement processes are vital if we're to roll out renewables at the scale needed to reach net zero targets. What's more, better processes will yield community-benefits funding tailored to local needs.

Keith Hempshall is director of local and community empowerment at CSE. This is a shortened version of a blog published [here](#).



Poorer households pay the price for market failure

From April 2022, people all over the UK saw huge increases in their gas and electricity bills as the energy price cap rose.

As the government scrambled to tackle the impending fuel poverty crisis, analysis from CSE revealed the true cost of extortionate increases in standing charges and the disproportionate impact this has on people on low incomes.

Predictions at the time suggested the average household energy bill would rise by £693 a year, or £708 a year for repayment meter customers who are typically on low incomes. Yearly bills for the average customer on a default tariff would rise from £1,277 to just under £2,000. This is chilling news for millions of people already struggling to heat their homes.

A major contribution to the increase in energy bills is the standing charge.

The standing charge was originally designed to collect fixed costs associated with supplying a building with electricity or gas regardless of how much is used. For example, every customer needs an electricity meter, so this represents a fixed cost per account. The standing charge also includes the costs of maintaining the distribution network – the ‘pipes and wires’ in energy industry shorthand.

But since 2012 Ofgem has allowed

energy companies to recover more and more via the standing charge – not just fixed costs, but some variable costs, too.

For example, standing charges now include costs associated with the recent collapse of many energy suppliers.

Market failure

Over 30 energy companies have collapsed over the past year, almost all of them new entrants whose high-risk business model was based on luring customers to switch by offering excessively low rates. When the wholesale price of energy increased, these companies were unable to recoup their losses thanks to the price cap, and bankruptcy followed.

CSE believes that it is unfair that all households should pay for this market failure equally through the standing charge.

This is because poorer households switch less often than richer ones so, as a group, benefitted less from the lower prices that these new suppliers were offering before they crashed. If the government insists on reclaiming these costs via our bills, then they should be collected at the unit rate, and not through the standing charge.

On top of this, standing charges have a disproportional impact on low-income

In addition to calling for a redesign of standing orders to make them fairer, CSE urges the government to adopt three other policies:

1. **A national insulation programme for England** that delivers solid wall insulation to fuel poor households while also boosting employment and training.
2. **Reinstate the separate price cap for prepayment meters.** Britain’s 4 million prepayment meter customers pay more for the gas or electricity than direct debit customers who are normally richer.
3. **Funding for a national network of local energy advice providers** to support the most vulnerable households.

households. This is because they generally use less energy, so the standing charge (the fixed element of their energy cost) represents a larger proportion of their bill.

While an annual energy bill of £2,000 is difficult for many households to deal with, it only represents 6% of a wealthier household’s income compared to 12%

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It is unfair that all households should pay for this market failure equally through the standing charge
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for a low-income household. This is really significant for people on already low incomes, who are already having to make tough choices about paying for energy or other essentials like food. They simply can’t cover any additional costs.

We also argue that it is, in fact, those who consume the most energy who should contribute more as their use has greater impact – for example in upgrading substations for car-charging.

By moving some energy supplier costs from the standing charge to the unit rate, the bills of people in fuel poverty could be reduced and those who consume more energy, and are responsible for higher carbon emissions, will pay more.

This is an extract from [a much longer piece](#) we published in response to the precipitous rise in energy bills in the spring of 2022.



Unprecedentedly high numbers of people are approaching us for energy saving or financial advice

COST OF LIVING CRISIS

This year has seen a significant rise in the number of calls to our energy advice line. And the people we're helping are in ever more desperate circumstances.

Here are some of their stories (names have been changed) ...

John is on a very low income and is recovering from a stroke.

He is very confused and believes he's being overcharged by his energy supplier, and is very frustrated and worried about debt as a result. We're currently supporting John, but at the time of writing it is not yet clear if his gas and electricity suppliers have failed to come round and take meter readings. In the short term, we've got John a Surviving Winter Grant worth £200 and he's on our waiting list for more in-depth casework.

Wendy was referred to us by a food bank that she'd been using.

She has several physical health needs and is solely reliant on benefits (Personal Independence Payment and Employment and Support Allowance). She is unable to cope with rising fuel costs and struggling to make ends meet. Her debts are piling up and she's suffering from severe anxiety including feelings of suicide. We are working with her energy suppliers to get her fuel debt made more manageable.

Rebecca is a single parent with a 13-year-old daughter who has Down's Syndrome and a weakened immune system

meaning they need to keep the house warm as the daughter gets ill easily. Rebecca is currently on benefits and struggling to keep up with rising bills. Before calling us she'd spent £50 topping up her meters over an 8-day period which isn't sustainable.

Rebecca lives in private rented accommodation, and while the landlord is happy for her to arrange her own energy-efficiency improvements, they aren't proactively helping her. We supported her with prepayment meter vouchers, and have referred the property for loft insulation, heating controls and, if ECO3 funding comes through, a boiler upgrade.

Emma was in £1,800 debt with her energy supplier.

She has received letters from her supplier which she found upsetting, and has also had the bailiffs visit her home in relation to other debts. When she called CSE's advice line she was severely distressed and feeling suicidal.

Our advisor organised a conference call with the supplier to get authority on the account. Following numerous calls, we have negotiated agreement with the supplier for the payments to be taken direct from her benefits as the client would prefer this. We have made a foodbank referral and also been liaising with social services about wider issues.



Landlords in Mendip given support to improve their homes' EPC ratings

CSE, in partnership with Mendip District Council in Somerset, won funding of just short of £50,000 to support landlords with the least energy efficient properties to improve their properties and meet their legal obligations.

The project specifically targeted homes that had an Energy Performance Certificate (EPC) rating below band E, in other words the homes most likely to be cold and damp.

Our approach was two-pronged. On one hand we worked with Mendip council to support local landlords to improve their EPC ratings through education, training and events. On the other, CSE gathered information on EPC ratings across the district, which the council could

use to investigate and take appropriate enforcement action on private landlords who do not meet the Minimum Energy Efficiency Standards (MEES) regulations, and whose tenants, therefore, were living in homes that fell below an acceptable standard.

Sonia Pruzinsky, CSE Project Manager said: "CSE tackles the root causes of cold homes. This involves increasing people's awareness of energy efficiency, helping to insulate or improve homes and working with local councils. We are really pleased to have partnered with Mendip council to support the compliance and enforcement of the MEES Regulations, securing positive

outcomes for both landlords and tenants. We're well placed to get started; as one of the UK's leading energy advice providers, we have lots of experience working with landlords along with access to data to help identify the most at-risk properties."

The funding for this project came from the Private Rented Sector (PRS) MEES Compliance and Enforcement Funding competition, launched by the Department for Business Energy and Industrial Strategy (BEIS). The competition saw local authorities bid from a £4.3m pot dedicated to helping them engage with the most difficult to reach landlords with the worst performing properties.

Cllr Richard Pinnock, Portfolio Holder for Housing Services and Governance, said: "We're pleased to have secured this funding, and delighted to be working with CSE whose knowledge and experience of the rental sector means Mendip landlords are in safe hands."

► If you're a landlord and need help improving the EPC of your property and accessing available grants, email [Sonia Pruzinsky](mailto:Sonia.Pruzinsky@mendip.gov.uk) or visit www.mendip.gov.uk/landlords.





Helping Liverpool council develop its 2030 Net Zero Action Plan

Liverpool City Council has published the action plan that will enable the city to become net zero by 2030, and we're proud to have played a significant part in it. This is the latest example of where we've created a bespoke net zero plan for a local authority, focusing on the capabilities, opportunities, and challenges of a specific area.

Place-based net-zero planning is complex – there's no one size fits all – so we help councils design the best climate strategies for their local energy systems using the tools, resources, and expertise that we've built up over many years.

In particular, we provided Liverpool council with the technical modelling and assessment for the decarbonisation of heat in buildings and energy supply, while our project partners Eunomia did the same for transport and waste.

In parallel, CSE undertook the analysis of non-technical factors and stakeholder engagement – equally important in net-zero planning but often overlooked.

This comprised of extensive research and a series of stakeholder workshops to assess what factors will affect the rate of progress for Liverpool's key areas for decarbonisation. The framework we designed and adopted provides a comprehensive analysis through five lenses: technical; capabilities and initiative-taking; commercial; policy and regulations; and socio-cultural. This kind of engagement gives us – and the council we're working with – a deeper understanding of the possibilities and expectations in their area, and gives the net zero plan a greater chance of success.

[Click here](#) for more information on this project. To find out how we can help your net zero plans, contact [Julia Oggioni](#), a Senior Project Manager in CSE research and analysis team



Strategic support for heating and cooling infrastructure planning

Energy planners interested in receiving free strategic support to establish or improve heating and cooling infrastructure can apply to Act!onHeat for advice on planning, pre-feasibility and finance.

Expressions of interest for the next application round can be submitted [here](#). (The first application call earlier this year attracted candidates from Germany, Belgium, Netherlands, Bosnia, Serbia, Austria, France and Italy.)

CSE is a delivery partner for Act!onHeat, an EU-funded project that aims to accelerate the take-up of strategic heating and cooling developments. These are large, complex and expensive undertakings for which

few councils or municipalities possess the necessary resources or experience. Act!onHeat will offer this, with the help of specific tools such as Hotmaps and THERMOS.

CSE's Martin Holley said: "Transforming how we produce and use energy so we produce less carbon requires action at a massive scale. It needs to come from government policy, industry practice, and local authority and community action. Low-carbon district heating systems have a critical role to play, and Act!onHeat will enable more municipalities to play their part."



CSE is a partner in Act!onHeat, along with Fraunhofer Institute, eclareon GmbH, TU Wien, Creara, e-think and ICLEI Europe. Act!onHeat has received funding from the European Union's Horizon 2020 research and innovation programme.





Nurturing the energy champions of tomorrow

Britain's schools have a key role to play in our progress to a low-carbon future. This is not only because they are large users of energy, accounting for over a third of total UK public sector building emissions*, but also because the education of future generations about the energy transition is critical to its success.

Since 2018 CSE has been involved with Samsung, Lancaster University and MyUtilityGenius in a project called Energy in Schools which has created an innovative energy management platform for schools – with pupils and teachers involved at every level.

It combines the need for schools to manage their energy use and to provide learning for students of all ages. As a consequence, the [Energy in Schools website](#) is tailored to different categories of school energy user: facilities managers, teachers and pupils.

A feature of the project has been the use of the BBC's micro:bit technology which when used alongside smart metering gives staff and pupils an in-

depth view of how their school uses energy and where and how they can take action to use energy more wisely.

Micro:bits are small devices used to teach computer coding, and can be programmed to sense temperature, light and movement, for example to identify hot and cold spots in school buildings, or to find out how temperature changes during the course of the day.

A range of resources can be found on the Energy in Schools website including:

- Cross-curricular lesson plans (Key Stages 2 and 3) on climate change, carbon intensity, battery storage etc.
- Integrated computer coding of micro:bits.
- Energy champion activities to put learning into practice in school.
- School energy consumption presented in different formats for use by teachers, pupils and facilities staff to monitor and reduce fuel use.

The project also explored schools' experiences around getting smart meters installed, energy procurement and fuel bill

information, plus current practices and attitudes within schools to managing and reducing energy consumption. What we discovered was extremely revealing.

A particularly striking example is a London primary school where monitoring software showed that electricity use remained high after everyone had gone home from the day. It turned out that the electric heating was left on overnight, costing the school up to £30 a day.

Meanwhile in a Somerset primary school where students had placed temperature sensors in classrooms, sharp-eyed energy champions browsing the Energy in Schools website spotted that the temperature in their classroom was going up out of hours and that the gas boiler was firing. The boiler timer settings were reset accordingly.

And a head teacher in another school used graphs from the Energy in Schools website to convince a disbelieving boiler engineer that the boiler settings needed adjusting, and saved their school £5,000 a year. Good work, everyone!

* For this, and for evidence that the government understands the centrality of schools to UK climate change targets, see the Department for Education's policy paper, ['Sustainability and climate change: a strategy for the education and children's services systems'](#) (April 2022).



Meet CSE's new expert in socially inclusive energy transitions ...

Dr Charlotte Johnson has joined CSE in a new role as the Head of Research Programmes. Charlotte joins from University College London's Energy Institute where she was a Senior Research Fellow studying energy transitions with a strong focus on social inclusion.

She has worked on a range of interdisciplinary research and innovation projects, consultancies for government and industry, and public engagement projects.

Charlotte is leading CSE's [Smart and Fair?](#) research programme, a ground-breaking initiative that explores social justice in the future energy system.

"I'm very excited to join CSE and lead this innovative programme of work," she said. "CSE is an

organisation that has long championed social inclusion and its research team has an excellent record of delivering tools and analysis for decision-makers that improve outcomes for the most vulnerable in society.

"Smart and Fair? is focused on ensuring that the UK's low carbon transition is built on principles of justice and equality. As the energy system becomes smart to get to net zero carbon emissions, it needs to do so in a way which is fair in order to maintain public support for change."

For more about CSE's exploration of social justice in the future energy system [click here](#).



CSE's carbon calculator now reaches more communities

Impact, CSE's community carbon calculator, is a free, online tool that provides communities with easy-to-understand data and eye-catching visualisations about where most carbon emissions in their local area come from.

It supports local climate emergency plans, through identifying the best climate actions at community level. This means that local climate actions focus on the big-emissions sectors rather than spending time on well-meaning but low-impact activities.

It's recently been taken to the next level with a series of updates and improvements and now covers not just England but Scotland and Wales, too.

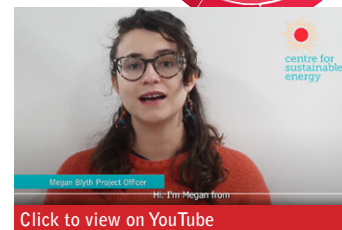
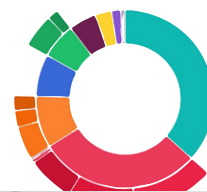
And while the old version was limited to parish-level carbon footprint data only, the latest version reaches town councils and urban wards.

impact-tool.org.uk

Impact draws on more than 30 datasets to estimate the total greenhouse gases produced directly and indirectly from everyday human activities and has been used by thousands of people and around 300 local councils.

Check out the short video below in which CSE's Megan Blyth explains how others have used the tool to benefit their communities.

Read a selection of stories from local councils and community groups that have used the Impact Community Carbon Calculator, [here](#).



Click to view on YouTube

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This newsletter is produced twice a year and distributed free. Request a copy by emailing info@cse.org.uk.

We also have an e-news that comes out monthly (roughly). Sign up at www.cse.org.uk/enews



The Centre for Sustainable Energy is a charity supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes. We do this by sharing our knowledge, practical experience and policy insights.

For over 40 years, we've supported people to take effective action on energy in their homes. We help communities and local councils to understand energy issues, set priorities, and put plans into action. Our research and analysis focus on making the energy system greener, smarter and fairer.



www.cse.org.uk

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