GRID LOCKED

UNISON
the public service union

How UK energy policy fails working families

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Gridlock:

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Energy may be a hot topic of political debate right now, but for UNISON, energy is an essential public service without which not much else could function. So, it's important we lead the debate on how we must move to a fairer, more equitable system that recognises the critical importance of getting to net zero and of supporting our members working in the energy sector.

Record energy price increases in 2023 have hammered family finances, all while many energy companies' profits have boomed. The UK is the fifth richest nation in the world, but we've got the most energy inefficient housing stock in Western Europe. If our advice on energy policy had been heeded a decade ago, we wouldn't be in this crisis, and we wouldn't be watching many more coming our way.

We have long called for a national programme of energy efficiency measures, delivered door to door, free to those who cannot afford to pay, and interest free finance for those able to pay. As yet this has not happened, and we are paying the price for this.

This report is our warning, once again, that without action today, we are creating major problems for tomorrow and creating an elitist energy economy. Not a just one.

Today, greener homes are beyond the reach of many because of inadequate levels of government help, and the way it's distributed. To turn this around, increased public investment is an absolute priority and we need to ensure that low and middle-income households are also able to decarbonise their home.

We surveyed our members and 75% of those who responded to the survey said they could not afford to take up any of the current government's incentives. And so, the money available goes to those who don't need it, exacerbating the inequalities we already see, and creating an ever more elitist energy system. This must change. The UK must unlock the potential of green jobs recovery and ensure we meet our environmental targets.

And UNISON energy members must be part of building that fairer system - fit for the future, with good quality unionised jobs, and everyone working together towards achieving net zero. Just imagine, looking back in years to come and saying, "we helped make that happen - we made a difference".

Christina

Introduction

The UK's transition to renewable energy systems is crucial to combating climate change and refocusing the economy on sustainable jobs for all workers.

But due to inadequate, inconsistent, and often chaotic government approaches, the transition has favoured wealthier households over lower-income families at every turn. Research indicates that people on higher incomes are more likely to have already switched to renewable energy technologies such as solar power, heat pumps and electric vehicles (EVs) – and more likely to have benefitted from lower bills and feed-in tariffs or other incentives.

This report explores the reasons behind this unacceptable disparity and casts new light on the drastic need for better central government policy and improved support for lower income households.

Net zero and confusing government policies

Through the Paris Agreement and COP21 in 2015, the government signed up to a legally binding target to achieve net zero carbon emissions by 2050. In reality, net zero means a 100% reduction in carbon emissions against 1990 levels.

But progress in encouraging businesses and households to switch to cleaner energy systems has been painfully slow. A June 2022 report by the Committee on Climate Change (CCC), the government's independent advisers on emissions, warned: 'A thorough review of progress finds scant evidence of delivery against these headline goals so far. There are some bright spots of progress, but in most areas the likelihood of under-delivery is high.'

The UK lags behind comparable economies – such as Germany, France and Spain – on key indicators and, according to the CCC, is already at risk of missing the 2050 target. Moves to scale-up renewable energy production to feed into the national grid, such as greater use of onshore wind farms, have been stymied by planning disputes and the UK economy's stubborn reliance on carbon-heavy gas and oil.

Ministers' flagship domestic de-carbonisation plan, the Heat and Buildings Strategy, also failed to include an equality assessment. This oversight neglected to consider the impact on vulnerable communities, exacerbating existing inequalities. The strategy was criticised by the CCC, which has demanded more investment in energy efficiency and low-carbon heat improvements for fuel-poor homes.

This report aims to show how the government's web of short-term policies and complex patchwork of support packages – many of which have already been withdrawn, amended, or replaced with cheaper options – has left millions of households without sufficient support as they face soaring energy bills.

Worse still, UNISON's research shows that the UK's approach has left millions of households on middle and lower incomes unable to afford the huge upfront cost of switching to clean energy systems. Most progress so far has focused, by default or design, on wealthier households who are the least vulnerable group in society and most able to cope with higher energy prices.

This needless situation has put net zero at risk, threatens thousands of energy sector jobs and could hinder UK economic growth. It has created an inequitable and unjust two-speed transition to renewable energy – with the poorest households and workers missing out.

Politicians from all parties must act quickly to reverse this disparity and put the UK on an equitable path to net zero. The Labour Party too has been slow to outline a detailed vision for a future based on sustainable energy for all. Labour has also said little about protecting existing jobs in the oil and gas industries while the UK transitions to clean energy, which further threatens to undermine working families and embed inequalities. The shadow chancellor's recent backtracking on its green prosperity investment plans also don't bode well for the future, UNISON says.

Britain is at risk of creating an elitist clean energy economy – one that entrenches advantages for the wealthy at the expense of those on lower incomes. We must not let that happen. Working families, the UK and the wider world deserves better as we seek a low-carbon and sustainable future for all.

Rising fuel poverty

Fuel poverty in the UK has increased while energy prices have soared in recent years. The charity National Energy Action (NEA) has estimated that the total number of households across the UK in fuel poverty could reach 7.5 million this year – up from around 4 million in the summer of 2020.

The UK government uses a more conservative

measurement of fuel poverty than NEA. But, according to a House of Commons research briefing published in March 2023, the government predicts that the number of households in fuel poverty could increase to 3.5 million across England in 2023. By neglecting to prioritise assistance to lower-income families, ministers have failed to do anything about the widening gap between the haves and have-nots.

Gas dependency and rising bills

The UK's heavy reliance on gas for heating, electricity generation and industrial processes has had detrimental consequences for households, the environment and the nation's energy security.

While transitioning to renewables could reduce energy bills, the government's mismanagement has hampered progress. Despite falling costs associated with green levies, policy costs under the energy price cap continue to burden consumers and these costs present a greater burden to low-income households.

By not adequately incentivising the shift towards low-carbon heating alternatives, or prioritising energy-efficient home insulation, the government's Heat and Buildings Strategy has missed opportunities to reduce bills for households, particularly for those on lower incomes.

To rectify this situation, the government must prioritise equality impact assessments, increase support for vulnerable communities and households on lower and middle incomes and significantly enhance funding for energy efficiency initiatives, without any upfront costs. Only through these measures can the UK achieve a just and sustainable transition to a green economy.

The unjust impact of government initiatives

To illustrate the problems with the government's approach, UNISON has surveyed 1,500 public sector workers about their attitudes towards current energy provision and their appetite for switching to greener, lower carbon systems that could help tackle climate change.

The survey participants were all homeowners, 46% have a mortgage and 54% own their homes outright.

Some 62% of those surveyed said their annual earnings were either below, or in the same earnings bracket as, the UK's median salary of £27,756. More than four in ten (47%) earn less than £25,000.

This means most of UNISON's survey respondents were drawn from the middle and lower-income groups that the government has struggled to co-opt into clean energy schemes.

UNISON survey results

— **79% are concerned about global warming** and climate change

— **92% are worried about energy costs,** while a worrying 39% have already struggled to pay their energy bills

— 85% of respondents have double or triple-glazing in their homes already, while 63% have cavity wall or loft insulation

— **41% say their homes are draughty and remain difficult to heat,** while 80% did not know the EPC (energy performance certificate) rating for their property

— **87% say their property has a gas-powered heating system**

— **The remaining 13% with non-gas heating systems,** have oil-based systems, electric heating, heat pumps, solar panels, wood-fired heating, and kerosene**.**

Of the small number of respondents with clean energy technology already installed at their property, 49% have solar panels and/or battery storage system for heat or water. A further 38% have an electric vehicle charging point, and 15% of this group revealed they have an air source heat pump. Ten per cent have hydrogen-ready boilers.

But the most shocking responses to UNISON's survey concerned respondents' ability to pay for expensive clean energy heating, transport and power systems amid the cost-of-living crisis.

— **48% are worried that if their boiler or energy system were to break down,** they could not afford to pay for repairs

— **53% could not afford to pay for a new energy system** if their current one were to break down beyond repair

— **77% say they're not able invest in heat pump technology** – even if they were to receive the government's maximum £5,000 grant for an air-source pump system

— **66% agree with the statement 'I want my home to be more energy efficient,** but I feel my financial position prevents me from doing so'

— **A further 61% agree with the statement 'I am frustrated that I cannot make my home more energy efficient** because I cannot afford to do so'

— **74% agree with the statement 'I'd like to switch to cleaner energy,** but there's not enough financial support available from the government'.

Finally, the survey revealed a lack of public knowledge about government incentives to switch to clean energy systems – indicating ministers have failed to communicate the benefits effectively. Some 73% of survey respondents agree with the statement 'I don't know enough about the government support that is available to make my home greener'.

Just 4% agree with the observation 'the energy-saving schemes promoted by the government are affordable, easy to understand and applicable to me', while 69% disagree.

UNISON's survey exposes the unjust and expensive nature of government plans to get UK households to switch to clean energy – and how ministers must do more to support households on lower incomes. It also highlights how ministers must do more to communicate the benefits of clean energy systems and promote the support that currently exists. Failure to do so risks missing the 2050 net zero target, and the reinforcement of existing and inequitable green energy initiatives.

Solar Powered Energy

The adoption of solar and battery powered energy systems – a key part of the shift from carbon-heavy fossil fuels – has been disappointingly low, particularly among lower-income households.

In 2021, the UK's electricity grid operator identified three pathways to achieve net zero emissions. Two required a tenfold increase in rooftop solar or photovoltaic (PV) panels by 2050, while the third envisaged a fivefold increase.

What's the cost?

The cost of solar panels with energy-storage batteries has dropped considerably over the past decade. But the combination of technology and installation still represents a significant upfront investment.

According to a report in The Guardian in March 2023, a solar energy system that features a 4kW array of panels plus a high-quality 9.2kWh home battery costs around £11,000-£13,000, once the inverter and other items are added. Trade bodies claim costs can be lower, with basic packages costing £7,000.

Households purchasing a solar panel system today would typically recoup their outlay after five to seven years. They'd also save around £1,200 annually in Smart Export Guarantee (SEG) revenues and energy bill savings.

What's the government offer/support?

— **The feed-in tariff (FIT) scheme.** The FIT paid people for generating their own electricity from solar panels, wind and hydro turbines. It was responsible for the sharp increase in the installation of solar energy after 2010, but closed in 2019.

— **Energy company obligation 4 (ECO4).** Launched in April 2022, it's the latest government scheme to support low-income households by creating more energy-efficient homes. ECO4 aims to ensure large energy companies support income-restricted households through local authorities. The government has committed £4bn to ECO4 until March 2026. Those eligible can apply for partial or fully funded solar panel grants.

— **LA Flex (local authority flexible eligibility).** An extension of ECO4 which gives local authorities powers to widen eligibility criteria. Under LA Flex, people can qualify for free funding covering the cost of solar panels for electric heating systems. Aimed at those in, or at risk of, fuel poverty and vulnerable during cold weather.

— **Green deal.** Initially, green deal was a government scheme giving households loans for energy-efficient improvements. But the government stopped financing the scheme in 2015. Private investors ensured the Green Deal Finance Company offered loans again from 2017.

— **The smart export guarantee (SEG) doesn't offer grants directly** but provides an alternative way for households to save money on installing a solar energy system – by getting energy firms to pay homeowners for unused solar electricity.

— **Pay 0% VAT on solar panels until 2027.** In his spring statement 2022, the then chancellor Rishi Sunak announced VAT on 'energy-saving products' would be 0%.

How many households have switched to solar – and why?

According to 2023 Microgeneration Certification Scheme (MCS) data, 1.2m UK homes currently have solar panel installations, that's 4% of the country's 29 million homes.

Since the end of the FIT scheme, installations have slowed despite the soaring cost of fossil fuels during the cost-of-living crisis. High gas prices, and lower solar installation costs, have encouraged some homeowners to switch. But few lower-income households.

Yet, according to a 2022 survey by The Eco Experts website, 62% of people in the UK want the government to replace gas with green energy. So, an appetite for change exists.

Currently, the UK ranks 11th in the world among solar energy-producing countries – lagging behind comparable states such as Germany (4th), Italy (6th) and Spain (10th).

The main barriers to adoption of UK solar energy by individuals on lower incomes are cited as:

— **High initial costs.** While the price of solar panels has dropped in recent years, the initial investment in panels and storage batteries remains substantial for individuals with limited financial resources. Without more significant government or local authority financial support, lower-income households will struggle to pay, even if they were to make long-term savings via reduced bills.

— **Limited access to financing:** Traditional lenders, such as banks, are often hesitant to provide loans or finance agreements to households with lower incomes or poor credit histories.

— **Rental and tenancy constraints:** The prevalence of rental properties among lower-income households poses an additional challenge. Tenants generally have limited control over property modifications – making it difficult to install solar panels or battery systems. Meanwhile, landlords responsible for installation costs lack incentives to invest in renewables due to the limited financial benefits passed onto them.

In April 2022, an article in the US technology magazine Wired exposed the current low levels of UK state support for those wishing to switch to solar power – especially among low-income households.

It stated: 'Despite the government reducing the VAT on solar panels from 5% to zero this April, and some local authorities supplying grants for them, the onus now is overwhelmingly on individuals to foot the bill for solar panels. In other words, only people who can afford the hefty upfront cost of solar panels are able to insulate themselves from high energy prices.

'While homeowners who can afford solar panels are lessening the shock of the energy crisis, it's those people who can least afford it who are being hardest hit.'

Yet the charity National Energy Action reported that April 2022's energy price hikes put 2 million more households into fuel poverty – taking the total to 6.7 million households.

UNISON's survey and solar power

Of those surveyed who declared their property had already been fitted with a low-carbon energy technology, 49% reported they had solar panel and battery storage systems. But the study generally revealed low take-up of low-carbon energy system, including solar power. For example, 87% of respondents declared that they still rely on a gas-powered heating system.

The upfront cost of buying and installing solar panels and batteries was regularly cited as a significant barrier for many households. One respondent summed up the situation perfectly: 'I would like solar panels but wouldn't be able to afford them.'

Heat Pumps

Currently, 80% of UK heat demand is supplied by natural gas and 25% of UK greenhouse gasses come from household energy use – primarily heating rooms and water. That situation cannot continue if the UK is to meet its legally binding target of net zero carbon emissions by 2050.

Air or ground source heat pumps (ASHPs or GSHPs) are low carbon technologies that provide efficient, sustainable heating systems for homes or businesses. Heat pumps offer clean alternatives to the UK's dependency on carbon-heavy gas or oil-fired boilers.

The government has said that, to reduce the country's reliance on fossil fuels, by 2025 builders will be banned from fitting conventional gas or oil boilers in new-build homes. It also plans to ban the sale of new gas boilers completely by 2035.

Instead, the government has set a target to install 600,000 heat pumps annually by 2028.

GSHPs extract natural heat from the ground, while ASHPs draw heat from the air even at sub-zero temperatures. Both use refrigerant gases, which boil at low temperatures, to heat water for radiators and water systems. The carbon emissions involved are significantly lower than gas or oil-based systems (and can even be zero-emission). Pumps use electricity to convert heat.

Heat pumps enable households or businesses to generate cheap, renewable heat and potentially save money on energy bills over the long term. The Climate Change Committee, the government's official adviser, expects that the UK cannot meet its 2050 net zero target without widespread adoption of heat pumps or similar renewable heating systems. But heat pumps carry hefty upfront installation costs – and these have acted as a major disincentive for lower-income households, especially during the cost-of-living crisis.

Because heat pump systems deliver heat at lower temperatures than gas boilers, they need to be run for longer periods to heat homes comfortably. But this means a well-insulated home or building is also essential or the heat the pump generates escapes too easily.

What's the cost?

The average cost of a retrofit heat pump system is around £15,000.

Most of the cost to households is in labour and installing radiators – not the pump. However, this does not compare favourably with the £3,000 cost of a boiler swap, or the £8,000 households would pay for an entire boiler swap and system upgrade.

Energy bill savings gained from heat pumps vary considerably, depending on how well insulated the home. Poor heat pump installations can cost up to 25% more than an old inefficient boiler. But a well-installed system can be up to 32% more efficient to run.

At current heat pump prices, a small annual energy bill saving of £200 a year means it would take 75 years to recoup the average upfront cost: a timeframe deemed too long by many families. But carefully insulated homes, with well-fitted heat pumps, have the potential to save significantly more from annual bills.

Ground source heat pumps (GSHPs) generally require a lot of outside space for installation, because part of the system needs to be buried in the garden. Consequently, installation costs can be far higher – with prices reaching £35,000. Air source heat pumps are easier and cheaper to instal.

Households seeking to minimise their carbon footprint often buy solar panels, and battery storage units, to fuel their heat pump systems. But The Guardian recently reported that the average price of a family-sized solar panel system with batteries is around £11,000 to £13,000.

The average cost of a heat pump service (between £150 to £300) is also currently higher than for gas boilers (£60 to £90).

What's the government offer/support?

Under the Boiler Upgrade Scheme (BUS), the government is offering grants to those switching from fossil fuel to cleaner energy heating systems.

The grants available are: £5,000 for air source heat pumps; £6,000 for ground source heat pumps; and £5,000 towards a biomass boiler. BUS grants are available to people in England and Wales.

The BUS scheme initially earmarked £450m over three years (2022-25) to cover the cost of installations across 90,000 homes. However, it has been extended to 2028 due to poor initial uptake – without ministers announcing any extra grant funding.

In Scotland, grant funding for heat pumps is up to £7,500, or £9,000 for homes under the rural uplift.

In Northern Ireland the Boiler Replacement Scheme allows households with an income of £40,000 or less to receive a grant of up to £1,000 to help replace old boilers.

How many households have switched to heat pumps – and why?

A report by the House of Lords Environment and Climate Change Committee has described the UK's uptake of heat pumps as 'disappointingly low' and 'failing to deliver on its objectives'.

Preliminary estimates suggest the UK installed just 60,000 heat pumps in 2022 – the lowest rate in Europe and just 10% of the government's annual target for 2028. Around 55,000 heat pumps were fitted in 2021. Over the same period, 1.5 million people installed new gas boilers.

According to 2021 figures from the European Heat Pump Association, the UK installs the fewest heat pumps per household in Europe, at an estimated 2.1 per 1,000 households – although the figure has increased since. That compares unfavourably with Finland (69.4 per 1,000 households), Norway (62.2), Sweden (39.3), Italy (19.5) and Germany (5.8).

During the first year of the BUS (2022-23), the government earmarked £150m of vouchers worth up to £6,000 to fund 30,000 heat pumps. But according to Ofgem, the scheme received 15,768 applications and just 9,981 grant vouchers were redeemed.

Since an online portal for the BUS opened in November 2022, demand has increased. In January 2023, Ofgem estimated there were an estimated 7,641 installations: a steady monthly increase.

So, why the slow adoption of this greener alternative to gas or oil-based heating?

An assessment by City University in London, published in March 2023, stated: 'The upfront cost may seem like an obvious reason why. Even with the grant, installing an air-source heat pump can cost thousands of pounds more than a new boiler.'

Even after receiving the maximum BUS subsidy for an air source heat pump, families face an additional cost of around £10,000 to buy and install an effective system. During the current cost of living crisis, lower income families are far less likely than those on higher incomes to be able to afford the cost.

City University's study suggested: 'The government could arguably increase the subsidy.'

Research in 2021 by Greenpeace concluded that the UK needs 'incentives, tax changes and support for consumers, especially those on low incomes' to scale-up heat pump use. The environmental campaigners reported: 'Grants should cover the entire cost of heat pumps for low-income households. For everyone else, grants should be offered at a level which aims to make the upfront costs of installing a heat pump and complementary energy efficiency measures the same as replacing a gas boiler.' But even after the introduction of the BUS grants, the UK is a long way from assisting lower-income households in that way.

Greenpeace also called on the government to set aside £5bn for direct heat pump support – significantly more than the £450m earmarked so far – as well as £7bn for complimentary energy efficiency projects. 'This government investment should leverage private investment from relatively better off households, accelerate heat pump installation down the cost curve, and be fair to poorer households,' the charity said.

To allay public fears about heat pumps or reduce ambiguity, the UK government could introduce greater standardisation in performance reporting for manufacturers – so the public can see the benefits more clearly – and simplify planning permission requirements.

But there is an emerging consensus that policy changes must be accompanied by more state support for lower income households.

UNISON's survey

Of those surveyed who declared their property had already been fitted with low-carbon energy technologies, 15% said they had an air source heat pump. But the study generally revealed poor take-up of low-carbon energy systems – including heat pumps. Some 87% of respondents revealed they still rely on a gas-powered heating system.

Unsurprisingly, the main barrier to adopting heat pumps is the upfront cost. UNISON asked homeowners whether they were in a financial position to take advantage of the government's £5,000 to £6,000 grants aimed at mitigating the cost of heat pumps. But 77% of respondents said no.

So, the survey indicates how the excessive cost of buying and installing heat pumps – likely to cost £10,000 even after the government grant – remains a significant disincentive for those on lower incomes.

For example, 66% agreed with the statement: 'I want my home to be more energy efficient, but I feel my financial position prevents me from doing so.'

Hydrogen Gas and Boilers

UNISON also supports expanded use of hydrogen gas as a low-carbon energy source for the future. Hydrogen gas – a cleaner alternative to methane – offers significant potential for the UK to meet its 2050 net zero target and protect thousands of existing jobs across the gas sector and wider energy market.

The government has launched a plan to create a world-leading hydrogen economy, with the aim of supporting more than 9,000 jobs and unlocking £4bn worth of investment by 2030. This hydrogen strategy aims to achieve 5GW of low-carbon hydrogen production by 2030 – equivalent to replacing natural gas in powering around three million homes a year, as well as fuelling heavy industry.

This will primarily be achieved using hydrogen boilers, which work in a similar way to natural gas boilers by burning gas via combustion, which in turn creates hot flue gases to heat water.

UNISON believes that, realistically, any mixture of renewable and low-carbon energy systems designed to achieve strict net zero targets within 25 years is likely to involve the use of hydrogen gas. For example, it has the potential to help swiftly de-carbonise intensive industries such as chemicals, oil refineries, power generation and heavy transport – greatly reducing emissions.

A thriving low-carbon hydrogen sector could be worth £900m by 2030. Beyond that, the sector has the potential to create 100,000 jobs and be worth up to £13bn by 2050.

Electric Vehicles (EVs)

Switching to electric vehicles (EVs) represents a crucial step in combating climate change, achieving sustainable transport systems and meeting the government's target to achieve net zero by 2050.

According to a House of Commons Library briefing, *Electric Vehicles and Infrastructure,* published in February 2023, the transport sector accounts for 25% of all UK greenhouse gas emissions. Of those, more than half (52%) come from cars. So, ensuring the switch to carbon friendly EVs is critical to reducing UK emissions and improving air quality.

To try to achieve net zero, former prime minister Boris Johnson announced in 2020 that the sale of new petrol cars would be phased out by 2030, and that all new cars should be 'zero emission' by 2035.

But the switch to EVs, which carry higher upfront costs, has been slow. At the end of September 2022 just 2.5% of all licensed road vehicles in the UK, and fewer than 20% of new cars sold, were plug-ins. The adoption of EVs has also favoured the wealthy. As Reuters reported in 2021, 'significant social and economic barriers will have to be overcome' to make the net zero target a reality.

What's the cost?

While prices for electric vehicles have dropped in recent years, they remain far higher than conventional vehicles. According to a 2019 National Audit Office study, prices for zero-emission vehicles before subsidies were still £13,000 higher on average for 2020.

According to the www.buyacar website, in October 2022 a new electric Peugeot 208 cost around £30,000 compared with under £20,000 for the petrol version – a difference of more than 50%. Meanwhile, the price of some new electric SUVs, such as the Audi Q4 e-tron, start at £50,000, more than the price of many two-bedroom homes in Stoke-on-Trent.

Of course, the cost of running an EV can be significantly lower than petrol vehicles. Particularly if cars are charged at home. A study by Compare the Market in 2022 found that the average total cost of running an EV – including fuel/charging, insurance, tax and maintenance – was £600 per year cheaper than petrol vehicles. At that rate, it would take 17 years before consumers would feel the benefit of paying £10,000 more for an EV.

What's the government offer/support?

The UK government has adopted a 'carrot and stick' approach to incentivising industry and the public to transition to EVs, attempting to force manufacturers to switch production to low-carbon models while encouraging greener consumer choices:

From 2024, ministers will introduce a Zero Emissions Vehicle (ZEV) mandate: annual targets for the percentage of manufacturers' new car sales that must be zero emission. But to hit targets, manufacturers need to sell more EVs to those on middle and lower incomes.

In 2011, the UK government announced Plug-In Car Grants worth up to £5,000 for EVs. But ministers soon reduced the grants. By 2021, it was worth a maximum of £1,500 for EVs costing less than £32,000. By June 2022, ministers had abolished the grant – leaving the UK as the only major European state offering no support for EV purchases.

Grants for electric vans and motorbikes are still available, but these have also been slashed. Buyers of small electric vans can receive a maximum grant of 35% of the price, capped at £2,500. The cap for bigger vans is £5,000.

In recent years, the UK government has tackled fears about the lack of EV charging points through grants to help meet installation costs. The current EV Chargepoint Grant covers up to 75% of the cost of home installation – capped at £350. But the full cost of installing a home chargepoint with a guarantee can reach £1,000.

The government has also made cash available to improve public access to chargepoints, including: £37m for the On-Street Residential Chargepoint Scheme (ORCS) in 2022/23; the Local EV Infrastructure Fund, which helps councils attract private investment; the Workplace Charging Scheme to help businesses and local authorities electrify fleets and support staff switches to EVs; and the Rapid Charging Fund to ensure fast chargers are installed on motorways and major roads.

Alongside ORCS and other grants, ministers have often devolved responsibility for delivering charging infrastructure to local authorities. Yet it seems the government has little confidence in local bodies. In March 2022, a Department for Transport briefing on the national roll-out of EV chargers stated: 'The government acknowledges this is a new and complex area for local authorities. This can lead to actual or perceived barriers to a successful rollout.'

How many households have switched to EVs – and why?

The switch to electric vehicles has been slow and the domestic market is still in transition. By April 2023, there were around 760,000 electric cars on UK roads and 445,000 plug-in hybrids.

At the end of September 2022, just 2.5% of all licensed road vehicles – and fewer than 20% of new cars sold – were plug-ins. But new EV registrations in 2022 were 40% higher than the year before – with a record number of 267,203 new electric cars sold.

But it is worrying that the adoption of EVs across the UK has, to date, favoured the wealthy and those with higher incomes. As Reuters reported in 2021: 'The bigger problem is the high upfront capital cost of buying fully electric vehicles compared with hybrids and traditional gasoline and diesel-fuelled cars, which is a major barrier for middle and lower-income households.

'Fully electric vehicles require a large capital outlay in exchange for longer-term reductions in operating costs, and that may put them beyond reach of many middle and lower-income groups.'

Most experts believe widespread adoption of EVs requires a well-supplied market for second-hand vehicles to make them affordable to middle and lower income households. But most new fully electric vehicles are still purchased by business or fleet buyers. So, it may take several years before the UK develops a mature second-hand market for EVs – putting progress towards net zero at risk.

Accessibility to charging infrastructure is also key to EV adoption. 'Range anxiety', the fear of running out of battery power, is a significant concern for individuals considering switching to an EV. This may be a particular concern among lower-income households, which often rely on a single vehicle for all transport. Unions can help to address this by advocating for workplace charging stations.

Currently, charging infrastructure is not equally distributed across the UK. Some areas, particularly those within lower-income communities, have limited access. In 2022, London, for example, had far more charging points (80 per 100,000 people) than Humberside (20 per 100,000 people).

As Reuters reported, some 30% of UK households – predominantly those on lower incomes – have no access to off-street parking, making charging an EV at home a big challenge. Consequently, lower income households are likelier to use more expensive public charging points, meaning they will not achieve the same annual cost savings as wealthier families.

As the Reuters analysis concluded: 'The rollout of fully electric vehicles could entrench disadvantages for already deprived groups that cannot afford to upgrade.'

UNISON's survey

Of the UNISON members who declared their property had already been fitted with low-carbon energy technologies, 38% revealed their home had an electric vehicle (EV) charge point.

Why is a low-carbon future important to unions?

Unions consider it important for people to switch to clean, low-carbon energy systems such as solar power, heat pumps, hydrogen ready or hybrid boilers, and electric vehicles for many reasons. These include:

Economic recovery and job creation

Strong unions are vital to the UK's economic recovery. The transition to clean and decarbonised energy will help to tackle climate change. But it can also stimulate economic growth and create tens of thousands of jobs across the renewable energy sector and related industries.

If the UK embraces solar and heat pump energy systems, for example, workers can benefit from employment opportunities in installation, maintenance, manufacturing, and research. This expansion could help prevent unemployment – offering alternatives when jobs that rely on fossil fuels come under threat – and enhancing economic stability within working communities.

If the UK can establish a sustainable hydrogen economy, it can also retain skilled gas jobs and ease the transition to decarbonised heat.

The UK government sees Britain as a natural home for firms producing batteries for EVs, too, and unions have backed moves to support the development of EV-related jobs in car manufacturing and EV battery research, development, and production.

By advocating for the widespread adoption of clean energy, unions like UNISON can contribute to a sustainable economic recovery, the regeneration of areas in which jobs are created, and greater job security.

Skills development and training

The shift towards solar energy, heat pumps and electric vehicles necessitates a skilled workforce. Unions play a vital role in promoting skills development and training programmes to equip workers with expertise. This includes supporting apprenticeships and vocational training, which empower workers to access jobs across the renewables sector. It also includes potential re-training programmes for current workers in carbon-heavy oil and methane gas sectors.

Fair transition and collective bargaining

Unions advocate for a fair and just transitions to renewable energy systems, ensuring that existing workers' rights and job security are protected. Collective bargaining can be used to negotiate fair wages, working conditions, and job protection for individuals. This ensures the transition to solar energy is not only environmentally sustainable, but also socially and economically beneficial for workers.

Social justice

Unions represent working people and can play a crucial role in promoting social justice while ensuring the transition to a low-carbon economy is fair and equitable. By supporting the switch to cleaner decarbonised heating systems, unions can advocate for the rights and interests of workers, ensuring the transition does not impact disproportionately on low-income households.

Climate change mitigation

Unions recognise the need for a broad alliance to tackle climate change and the role of labour in making it happen. By promoting the adoption of clean and decarbonised energy heating systems like heat pumps, or green hydrogen boilers, they can contribute to reducing emissions and mitigate climate change.

Conclusion

Whatever measures are taken to decarbonise homes, and whatever technology is adopted for the significant task ahead – such as meeting the 2050 net zero target – the way that the government supports consumers will be the difference between success and failure.

As it stands, the UK is heading towards failure – with government support going to those who need it least, the section of the population who already have the finances to implement changes. The UK is currently overlooking its lower and middle-income households. In some circumstances, it is even making them pay for the zero-carbon adaptations of wealthier households.

This cannot be right.

The failure to implement a national programme of energy efficiency measures for all householders has already left the UK vulnerable to rising energy prices and the needless further emission of greenhouse gases. Rolling out affordable energy efficiency measures to all households would make a huge difference to millions of people – and that is before we even embark on a national programme of decarbonising heat in all UK homes.

We cannot wait a minute longer for the UK government to accept its responsibilities for a just energy transition for workers and households.

UNISON's latest survey has once again proved that there is a strong appetite for change. But lasting, beneficial change will not happen until the government steps in with a package of substantial financial support to fuel this appetite and make substantial progress to a greener future.

If not the present Government, then the next Government cannot afford to delay and wait to see if the market will resolve these complex challenges. We have waited long enough for little progress. So, if in another 5 years' time we are not on the right trajectory to decarbonise homes in a fair and equitable way, its likely we will not be on target to hit net zero in 2050.

The stakes really are that high!

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