

A just energy transition for the good of health

A policy report from the
UK Health Alliance on Climate Change

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UK Health Alliance
on Climate Change

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The UK is currently poised on a transformational opportunity to develop our energy system and the way in which we use energy that has the potential to deliver a better, fairer and healthier society. Our governments, industries, public institutions and people must take this opportunity to clean the air, protect us from the threats of climate change, and create the jobs and infrastructure that will stimulate a positive cultural and societal shift that is good for health and the environment.

The UK Health Alliance on Climate Change represents health professionals across the UK who are concerned about the threat to health from the climate and nature crisis. The World Health Organisation (WHO) has declared climate change to be the major threat to global health. The world is seeing harm to health from floods, wildfires, heatwaves, severe storms, spread of infectious diseases, and shortages of food, water, and land, driving forced migration and conflict. Mental health is severely affected, and air pollution, which largely results from the burning of fossil fuels, kills seven million people a year. Health professionals are calling for urgent action to mitigate and adapt to these threats and to promote the benefits that could flow to health by taking action.

In this policy report, we highlight six recommendations to establish the UK as a global leader in the green energy revolution that will define this generation and provide UK citizens with healthier environments to live and work.

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Find out more: For any questions or queries about this policy report, or to discuss it further, please get in touch: info@ukhealthalliance.org

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Foreword

by Richard Smith CBE FmedSci, Chair of the UK Health Alliance on Climate Change

Global consumption of fossil fuels has increased eightfold since I was born in 1952, and global consumption of oil, gas, and coal is still increasing. Around four-fifths of the world's energy supply comes from fossil fuels. Yet, as this report outlines, fossil fuels are causing major damage to health now, and that harm is set to increase dramatically if we cannot end what António Guterres, Secretary-General of the United Nations, calls our "addiction to fossil fuels." We need, he said, to "jumpstart" our move to renewable energy.

Fossil fuels harm health in multiple ways. They are the main cause of global heating, leading to extreme weather events such as heatwaves, wildfires, drought, floods and the spread of infectious diseases, damage to mental health, shortages of arable land, food, and drinkable water, and forced migration. Fossil fuels are also the main cause of air pollution, which kills millions each year and harms not just our lungs but every part of us, including our brains and unborn children. Fossil fuels are also the main cause of the destruction of biodiversity and our only home, the planet.

We have an alternative: renewable energy from the sun, wind, and tide. Two minutes of the energy reaching the earth from the sun would be enough to meet the energy needed by all of humanity in a year. Calculating the cost of energy is complicated, but generally, the cost of energy from sun and wind is cheaper than that from oil, gas, or coal, and coming down rapidly. Investing in renewable energy will create many more new jobs than jobs that are lost from reducing dependency on fossil fuels.

Because of the harm to health and the planet from fossil fuels, the International Energy Agency, UN Climate Change Conference, and UK Climate Change Committee all agree that there should be no new oil and gas production beyond what has already been committed. Yet the UK government is allowing new exploration in the North Sea and, much worse, subsidising fossil fuels to the tune of nearly £16 billion a year. Although renewable energy accounts for about a third of the UK electricity supply, it is only about 5% of the total energy supply. Emissions from refineries and oil and gas production actually increased from 2021 to 2022, and the UK has little chance of meeting its legal commitment to achieve net-zero by 2050 if it does not dramatically increase the energy supply from renewable sources. Fortunately, the new government has plans to do so.

Even better than increasing energy from renewables is reducing demand for energy. Around a fifth of UK energy is used to heat homes. but most UK homes are energy inefficient. Many homes, often the homes of more vulnerable people, are also damp. There is huge scope to improve housing and health, reduce health inequalities, and provide good jobs by improving the energy efficiency of homes. Transport is also a huge consumer of energy, and encouraging walking and cycling and improving public transport again can reduce energy consumption and improve health.

This report makes only six recommendations, the main one being to end UK dependency on oil and gas, and if the recommendations are implemented we will in the UK see improved health, more jobs (themselves good for health), and reduced harm to the planet. The report concentrates on the UK, but one of our recommendations is that the UK government meet its international commitment to support countries more vulnerable to the effects of climate change because this is a global problem that cannot be solved in one country.

The UK was once a leader in climate change and the ecological crisis, but it has lost that position. If the government follows our recommendations it will regain that leadership and improve the health of the UK population.

Recommendations for the UK government and devolved nations*

1



End UK dependency on oil and gas

End government subsidies, investments, new licences and consent for fossil fuel exploration, extraction and sales; redirect funds to renewable energy sources and technologies; and implement policies to achieve a just transition.

2



Revise and strengthen the government's strategy for achieving net zero

Deliver a revised, strengthened net-zero strategy with robust policies to achieve significant emissions reductions across all sectors of the economy, ensuring a credible plan is published to decarbonise the energy system and encourage uptake of green energy retrofit government schemes.

3



Invest in people to meet the demand for green jobs

Establish clear public targets for green skills creation, with a particular focus on those regions and groups most at risk of job loss and support the industry to develop green skills through investments and incentives for training and apprenticeships.

4



Improve infrastructure and access for active travel and clean transport

Implement targets to reduce motorised road traffic in line with net zero targets and upscale investment in high-quality infrastructure to enable and promote walking, wheeling, cycling, and public and shared community transport use

5



Enable a low-carbon, climate-resilient health service

Provide sufficient capital investment and funding to decarbonise NHS infrastructure, estates, and services, accelerate the transition to electrification of the NHS fleet, and deliver public transport and active travel routes to NHS sites for staff, patients and visitors combined with actions to deliver resiliency in health and care services.

6



Demonstrate leadership by delivering domestically and meeting global obligations

Demonstrate global leadership by delivering ambition domestically through accelerated action to phase out fossil fuels, increasing investment, development and use of renewable energy, and stepping up to meet international financial commitments to pay for the UK's global contribution to the climate crisis.

*The UK government and the devolved governments must act collectively to meet their objective of reducing greenhouse gas (GHG) emissions across the UK to net zero by 2050. The powers needed to do this sit with the UK government and the governments of Northern Ireland, Scotland and Wales. The four nations have different emissions profiles and varied approaches to achieving net zero, but the choices they make must ultimately deliver net zero at the UK level.

Why fossil fuel dependency is bad for our health

Fossil fuels – coal, oil and gas – are the primary drivers of climate change. The burning of these fossil fuels accounts for more than 75% of global greenhouse gas emissions and almost 90% of all carbon dioxide emissions.¹ These emissions get trapped in the earth's atmosphere and heat the planet, changing weather patterns and disrupting the balance of nature. This poses huge risks to human health and the resilience of health systems. The UK energy system is currently heavily dependent on fossil fuels, which brings multiple health risks.

Air pollution

Pollutants are produced and released into the atmosphere when we use fossil fuels for heating, transport, power generation and industrial processes. These hazardous substances include sulphur dioxide, nitrogen dioxide, particulate matter (PM), carbon monoxide and mercury, which are all harmful to both the environment and human health.²

Health is at risk from both short-term (hours and days) and long-term (years) exposure to air pollutants. Short-term exposure can impact lung function and breathing, exacerbate asthma, increase hospital admissions and mortality.³ Repeated exposure over months and years can reduce life expectancy due to respiratory diseases, cardiovascular diseases, and lung cancer. Long-term exposure has also been associated with dementia, diabetes, poor birth outcomes and cognitive decline.⁴ Certain pollutants, such as particulate matters (PM_{2.5} and smaller) can affect almost every single cell, tissue, and organ in the body. Exposure to both indoor and outdoor pollution is significantly higher in areas of deprivation, and in areas of higher ethnic diversity, leading to increased risk of social and racial injustice through poorer health outcomes.⁵ Air pollution is associated with increased risk of mental ill-health, including anxiety and depressive disorders.⁶

In 2020, exposure to outdoor air pollution contributed to 27,000 deaths in the UK. 9% of these were directly related to burning coal.⁷ The UK government has recognised air pollution as the greatest environmental risk to public health. Research has shown a direct link between air pollution and hospital admissions and GP appointments⁸ and the total cost to the NHS and social care systems as a consequence of the health impacts of air pollution are estimated to be £1.6 billion from 2017–2025.⁹

Fuel poverty

National Energy Action estimates that in January 2024, 6.5 million households in the UK were experiencing fuel poverty.¹⁰ The increasing cost of oil and gas for fuel, which most UK households depend on for heating and transport, combined with reduced income and wealth has contributed to rising rates of fuel poverty in the UK. This is further exacerbated by the low standard of energy efficiency across older housing stock, which can be poorly insulated and be more expensive to heat.

Households with the least disposable income typically spend a higher proportion of their income on heating and fuel (the bottom income decile spend 7.3% of their income on gas and electricity, vs 2.4% for the top income decile).¹¹ Households with dependent children, single-parent households, households with multigenerational occupancy, and people living with a disability are more at risk of experiencing fuel poverty. Minority ethnic households are also more likely to be in fuel poverty than white households.¹¹

Children living in cold, damp homes are more susceptible to respiratory tract infections and asthma, negative mental health symptoms, and missed school days. In adults, cold home environments are associated with increased risk of respiratory conditions, cardiovascular disease, dementia, stroke and other circulatory problems. Cold homes can also exacerbate existing medical conditions including diabetes, asthma and musculoskeletal and rheumatological conditions.¹¹



Extreme weather

Climate change, caused by global heating as a consequence of greenhouse gas emissions in the atmosphere, is resulting in an increase in the frequency of heatwaves, wildfires, heavy rainfall and flooding in the UK, which threatens the health of the population and strains the health service.

Heatwaves

The incidence of high summer temperatures in the UK is currently 10–25% higher than it would be without climate change; the likelihood of very hot summers with more frequent heatwaves is predicted to be 50% more likely by 2050.¹² Summer temperatures above 25°C are likely to increase everywhere across the UK; the south of England will be particularly impacted. Extremely hot nights, which are currently rare in the UK, will become a more common occurrence. Urban centres in the south, particularly London, will be at increased risk due to the urban heat island effect.¹³

Heatwaves are linked to sharp increases in deaths. For example, during five heat periods between June and August 2022, about 3000 excess deaths were recorded in England and Wales.¹⁴ Older people are particularly vulnerable to adverse health impacts of heat exposure. With its ageing population, this puts the UK at particular risk from climate change-related adverse health outcomes. The UK Health Security Agency (UKHSA) reported significant excess deaths in the 65 years and over group during the 2022 heatwaves. Very young children are also vulnerable to heat-related deaths, with health impacts including dehydration, asthma and kidney disease.¹⁵ Heat exposure in pregnancy is linked to premature births, low birth weight and stillbirth.^{16,17} Heat stress can adversely impact mental health.¹⁸ Disrupted sleep patterns due to heat can contribute to mood fluctuations and increase stress, exacerbate pre-existing mental health illnesses like depression and anxiety, or cause new ones to emerge. Psychosis, hallucinations, and other neuropsychiatric symptoms can occur in cases of severe heatstroke, and those with schizophrenia are at an increased risk of mortality during heatwaves.¹⁹ These risks are set to worsen – UKHSA projects annual heat-related deaths to reach over 21,000 by the 2070s in a high-warming scenario.

Heatwaves place additional pressure on NHS infrastructure, ambulance and services. The incidence of overheating at NHS sites in England has almost doubled in the last five years (from 2,980 recorded incidences in 2016–7 to 5,554 in 2021–22). These overheating periods have resulted in failure of essential equipment, disruption of IT and laboratory services, occupational health risk to staff, and the cancellation of surgical procedures.^{20,21}

Heatwaves increase the risk of transport disruption and changes to human behaviour, which has been associated with increased incidence of violent crime.²² Extreme heat impacts the welfare of animals, including pets. Using the five domains model of animal welfare, which is used to examine the physiological and behavioural responses of animals to environmental stressors, climate change harms and has a significant impact on both wild and domesticated animals across all five welfare domains which includes nutrition, environment, physical health, behaviour, and mental state.^{23,24,25}

Drought

It is predicted that prolonged hot, dry weather will increase the likelihood of drought across all parts of the UK. England and Wales are particularly vulnerable. These dry spells are predicted to increase in severity as global temperatures rise above 1.5C, resulting in reduced water availability for crop growth and the security of local food production.²⁶ Drought has been shown to increase the levels of psychological distress and can worsen mental health, particularly in the first three years of exposure²⁷ These impacts will also be felt across the world, threatening food security and health on a global scale.

Wildfires

In the UK, a combination of long spells of dry weather, which increases the accumulation of dry grass and wind, is leading to more frequent wildfires. These events present a direct fire risk to life, homes and infrastructure. Smoke from these fires results in respiratory and cardiovascular conditions for those affected.²⁸ Wildfires are predicted to increase by 50% by 2100 with impacts across the UK.²⁹

Flooding

Flooding is a significant climate change challenge facing the UK.³⁰ Vulnerability to high rainfall events and widespread flooding poses danger to life, damage to infrastructure and travel disruption. Levels of daily rainfall and the risk of river flooding are expected to increase across the country. In October 2023, storm Babet brought exceptional rainfall to parts of the UK. The Met Office issued two red warnings for rain, the wettest day on record was reported, and multiple flood warnings were issued. At least seven people were reported to have died as a result of the storm, hundreds of homes and businesses were flooded, roads and schools were closed, crops and livestock were lost, and tens of thousands of homes were left without power.³¹ The storm was one of multiple named storms that occurred in the final quarter of 2023, the like of which will become more frequent with climate change.

Essential services like health and social care, as well as other critical infrastructure, are exposed to the increasing risk of flooding, which can lead to disruption and cancellation of services. In the year April 2021–March 2022, there were 176 incidents of flooding across NHS England sites, the majority of which occurred in general acute hospitals (sites that provide inpatient medical care and other services for surgery, acute medical conditions and injuries). The East of England and London were the worst affected.³²

Flooding can undermine the delivery of health and care services and coverage of care to vulnerable facilities, such as care homes. At present, roughly 10% of UK hospitals are located in areas of significant flood risk, with a further 495 emergency services, 2474 GP surgeries and 2187 care homes at risk in England. Under both mild and more intense warming scenarios, the number of hospitals at risk is predicted to increase.³³

People who experience flooding are more likely to have symptoms of depression, anxiety and posttraumatic stress disorder (PTSD), even two years after the flood event.³⁴ Elevated symptoms of mental health disorders are reported in those who have lived in the vicinity of a flood event, and observing the loss of health and social care services was a significant stressor associated with this flood-related mental health burden.³⁵

Biodiversity loss

Climate change, overexploitation, and pollution harm the natural environment on which life depends, and the loss of biodiversity is a major threat to human health.

During the extraction of fossil fuels, biodiversity is harmed through conversion, degradation, pollution and disturbance of habitats. After extraction, the conversion, distribution and use of fossil fuels further impacts biodiversity through destruction of habitats and pollution.³⁶ Climate change driven by the burning of fossil fuels is resulting in sea level rise, coastal erosion and flooding. This not only risks health and well-being through physical injuries, drowning, increased incidences of food and water-borne infections and poor mental health outcomes but also risks the loss of livelihoods, infrastructure, and food and water security. Marine and terrestrial animals and plants may also be damaged or destroyed during extreme weather events.

Oceans are responsible for absorbing 30% of all carbon dioxide (CO₂) emissions and more than 90% of the excess heat generated by these emissions.³⁷ Higher levels of atmospheric greenhouse gas and heat are leading to acidification and warming of the oceans respectively, which in turn is harming marine life. The rich biodiversity of the oceans offers substantial opportunities for discoveries and innovations in medical research. For example, coral reefs are a key source of marine products and could lead to the development of novel pharmaceuticals. Damage to this vast reservoir of potentially useful resources can be disadvantageous to health.

The negative impacts on human health include loss of lives and livelihoods, access to water and food insecurity, the spread of infectious diseases, increases in non-communicable diseases, and reduced capacity to develop new medicines derived from nature. These impacts are disproportionately borne by socio-economically and geographically disadvantaged groups.

As with climate change, fossil fuels and the food system are the main causes of declining biodiversity. Tackling these would improve human and environmental health. A UK Health Alliance on Climate Change report on Biodiversity, Climate Change and Health explores the link in detail with recommendations for action.³⁸



A cleaner energy system and a better, fairer and healthier society

We are on the cusp of a transformational change to release ourselves from the current dependency on fossil fuels – coal, oil and gas – to one powered by natural energy – wind, wave and solar.

In 2019, the UK government set a target date of 2050 for the country to have achieved net zero emissions, and it has pledged to reduce emissions by 68% by 2030 compared to 1990 levels. The next five years are critical in phasing out fossil fuels while accelerating progress on renewable energy, building the infrastructure to support fossil-free homes and environments, upskilling the workforce to create hundreds of thousands of new jobs, and demonstrating leadership on a global scale.

End UK dependency on oil and gas

UK infrastructure and energy systems are currently heavily dependent on fossil fuels. The UK's ambition to be net zero by 2050 requires a significant reduction in demand for fossil fuels supported by the development of clean energy solutions to decarbonise the energy supply.

The International Energy Agency, UN Climate Change Conference, and UK Climate Change Committee have all said there can be no new oil and gas production beyond what has already been committed if we are to reach net zero emissions by 2050 and keep global temperature increases within the 1.5C limit. Expanding oil and gas licences and opening new oil fields are incompatible with achieving these targets and risk creating stranded assets that could harm local and regional communities as the demand for fossil fuels become obsolete.³⁹

Fossil fuel dependency also makes local communities vulnerable to highly fluctuating energy prices, which forces people into fuel poverty and ultimately undermines the socioeconomic and environmental conditions on which good health depends.

For years, the UK has lagged on a move to renewable sources of energy. In 2020, renewables made up 29% of the UK electricity supply, but accounted for just 5% of the total energy supply. The Climate Change Committee has reported that emissions from refineries and oil and gas production increased from 2021 to 2022 and has downgraded the government's progress on renewables. The new Labour government has committed to change this by accelerating the transition away from volatile fossil fuels to clean, homegrown power by 2030 and a commitment not to issue new licences for North Sea oil and gas exploration. However, the government has also claimed it will not revoke existing licences, including the Rosebank oilfield.

The UK entrenches dependency on fossil fuels through subsidies, estimated to be a net total of £15.9 billion in 2022.⁴⁰ Instead, subsidies could be used to promote activities that benefit the long-term health and well-being of local populations, such as incentives and infrastructure for renewable energy production and access. Doing so could help alleviate energy poverty in the longer term, reduce the high levels of air pollution that continue to harm the health of local populations, reduce pressure on the NHS and address inequalities.

The UK is one of the best places in the world for the generation of wind power.⁴¹ This presents a twin opportunity: Firstly, it means that the UK has an opportunity to transition from a fossil fuel dependence to a clean energy system. Secondly, the UK has a commitment to ‘levelling up’ and many of those areas are areas of former heavy industries and are in or close to areas of high wind-potential. With significant central government support and leadership, and by ensuring that the costs and benefits of this transition are fairly distributed, there is the potential for the UK to transition to a low carbon energy system while improving the well-being of communities in previously marginalised or ‘left-behind’ communities.



Recommendation 1

End government subsidies, investments, new licences and consent for fossil fuel exploration, extraction and sales; redirect funds to renewable energy sources and technologies; and implement policies to achieve a just transition.

An example of bad practice: Cut emissions, not trees

In an attempt to move away from fossil fuels, the UK has deployed a range of technologies to move towards renewable energy. Many old coal power plants now burn biomass instead to generate electricity, accounting for 8.6% of the total energy supply in 2022.⁴² This biomass is made up of wood pellets imported to the UK – much of this biomass is from trees cut down in forests overseas. This is known to harm the climate⁴³ and biodiversity,⁴⁴ as well as pose risks to human health. Drax power station in Yorkshire burns several million tonnes of wood pellets every year. It is the UK's largest single source of CO₂ emissions and one of the top five emitters in Europe of PM₁₀ from power stations emitting PM₁₀.⁴⁵

The wood pellets imported to the UK are produced in countries in Europe, in Canada, and in the United States. In the southeast US, wood pellet mills are often located near, or in, “environmental justice” communities (places with higher levels of poverty or people of colour). Wood pellet facilities are more than twice as likely to be located in these types of communities, which can harm the health of local residents and exacerbate pre-existing health inequalities due to the large quantities of sawdust and air pollutants they produce, alongside toxic volatile organic compounds (VOCs).⁴⁶

The cutting of trees also harms nature and wildlife. Biomass imported from the US is endangering at least 26 bird species in one of the 36 biodiversity hotspots in the world.⁴⁷ Burning of cut trees to produce energy releases a significant amount of CO₂. The offset by planting new trees cannot be claimed for decades until they are fully grown because younger trees do not absorb as much carbon as fully grown forests.⁴⁸

The Climate Change Committee has also said industrial bioenergy is not sustainable or compatible with net zero goals and that the current support through subsidies for large-scale biomass generation should not be extended after they expire in 2027.⁴⁹ However, the UK government is considering extending these bioenergy subsidies until 2035.⁵⁰ This will cost billions in taxpayers money. Research shows that the bioenergy with carbon capture and storage (BECCS) solutions for achieving net zero goals endorsed by the UK government can increase costs by £100 billion and a single BECCS plant in the UK could cost £43 billion over its lifetime.

Large-scale use of biomass as a ‘deemed source of renewable energy’ is associated with health, environmental, climate, justice and economic costs. This is not the sustainable, renewable solution the UK government should be transitioning to.



Revise and strengthen the government's strategy for achieving net zero

National governments have the power to make the greatest impact on climate change as they set the direction and ambition of the policy response. To reduce the UK's dependency on fossil fuels, the government must design and deliver credible plans across a range of sectors.

A decarbonised energy system is critical to reducing fossil fuel dependency, but it must be managed in a way which does not exacerbate health inequality and maximises the potential health benefits – estimated as over two million years of life granted by 2050.⁵¹ Fuel costs in the UK are 30% higher than the EU average and the housing stock is among the least energy efficient. More than a third of UK households are at risk of fuel poverty, living in poorly insulated homes that they cannot afford to heat, with evidence suggesting cold homes cost billions a year through increased costs to the NHS, higher caring costs, lost productivity, carbon emissions – and bigger bills. Children living in the UK miss 80% more school days due to damp homes than the EU average. Ethnic minorities are more likely to be living in damp housing and be in fuel poverty. There were almost 5,000 excess winter deaths in the UK in 2023 caused by people living in cold homes.⁵²

The Climate Change Committee has advised that homes must be insulated to EPC grade C over the next decade in order to reduce carbon emissions in line with legally binding targets. The UK is not on track to meet this target; there has been a 90% reduction in loft, cavity, and wall insulation installation since 2013.

Transitioning homes off gas boilers to heat pumps is essential to decarbonise the energy system. Heat pumps, powered by low-emissions electricity, are three to five times more energy efficient than gas boilers.⁵³ They also have the potential to cool as well as heat a home. However, uptake in the UK is stagnant compared to other EU countries, ranking 20 out of 21 EU nations. This is partly a consequence of the comparatively high cost of electricity relative to gas in the UK due to higher levies placed on electricity, which makes switching from gas to heat pumps difficult for households.^{54,55}

Renewables, excluding biomass, currently contribute about 30% of UK electricity energy supply. The UK government has set targets to generate four times more offshore wind power by 2030, and five times more solar power by 2035.⁵⁶ However, it is currently unclear how this will be delivered and there are too many barriers in place to enable sufficient progress. Homegrown renewable energy sources such as wind, wave and solar, backed up by electricity storage and flexibility, will help decarbonise the energy system, reduce energy bills and provide security for the UK against volatile energy prices. Clean energy will also reduce the high levels of air pollution that continue to harm the health of local populations (especially the health of the most vulnerable) and reduce pressure on the NHS.⁵⁷

The UK Climate Change Committee has consistently warned of the absence of a strategy or plan for delivering a decarbonised, resilient electricity system by 2035⁵⁸. Past policy decisions to slow down investment in green technologies (e.g. solar or energy efficiency) or delivery failures may have meant opportunities to make bills cheaper have been missed⁶⁴. It is critical we instead grasp these opportunities and ensure effective policy implementation going forward.

Concerns about delivering the UK's net zero agenda go beyond the energy system. The UK's Climate Change Committee assessed that the Carbon Budget Delivery Plan (CBDP) does not contain credible plans for most of the emissions cuts needed to meet both the UK's 2030 Nationally Determined Contribution to the Paris Agreement and the Sixth Carbon Budget, set to commence in 2033.^{58,59} And in May 2024, following a legal challenge brought about by Client Earth, Friends of the Earth and Good Law Project, the High Court found the strategy doesn't meet the legal obligations to the Climate Change Act 2008.⁶⁰

It is vital that the UK has a clear and credible plan for reducing its emissions, with a just transition that ensures that both the costs and benefits of net zero are fairly shared, with the poorest protected by well-designed policies.

Recommendation 2



Deliver a revised, strengthened net-zero strategy with robust policies to achieve significant emissions reductions across all sectors of the economy, ensuring a credible plan is published to decarbonise the energy system and encourage uptake of green energy retrofit government schemes.



The role of the health sector in addressing the fossil fuel industry's unhealthy influence on policy and regulations

Across a wide range of industries, including tobacco, sugar-sweetened drinks, food, alcohol, gambling, transport, asbestos, pesticides and fossil fuels, there is a robust evidence base establishing that commercial actors have been found to pursue opportunities to maximise their profits, at the detriment of human health, wellbeing, ecological and climatic integrity.

A wide body of evidence demonstrates the various strategies and tactics deployed by these actors and are found to be used repeatedly across sectors.⁶¹

Termed the 'Commercial Determinants of Health' these have included:

- deliberately misleading citizens regarding the harms their products cause;
- spreading doubt about the risks of harm and its causes (which leads to delays in regulation);
- using front groups or funding targeted advertising and campaigns in order to do so;
- influencing education of the public, professionals, and children and young people;
- aiming to create 'health halos' or 'green-washing' to increase their social legitimacy, involvement in policy-making, and presenting industry actors as 'part of the solution' and capable of self-regulation (including through Corporate Social Responsibility projects);
- influencing research and academic institutions to create bodies of evidence favourable to the industry's interests while attacking and undermining independent researchers;
- promoting voluntary or self-governed regulatory frameworks over mandatory/

imposed regulatory frameworks, influence via 'revolving doors', and lobbying policy-makers directly (as for example over the windfall tax in 2023).⁶²

It has been argued that they have had a cumulative, cross-industry effect: 'spreading misinformation, shaping 'personal responsibility' and 'nanny state' narratives, weakening regulation and undermining science and policymaking.'⁶³

In the context of fossil fuels and the climate crisis, these actions are a barrier to effective action if not acknowledged and addressed and have major health implications. Such actors should have no role in making or influencing policy.

Previous experiences of successfully addressing other public health threats with strong commercial determinants focus (such as tobacco, infant formula and sugar-sweetened beverages) offer valuable lessons for work on fossil fuels and a just transition. There is a strong need for the health community to clearly make these arguments, and to become skilled in how to effectively counter industry influence and harmful practices.

The health sector should ensure that appropriate lessons are learnt from policy areas such as tobacco control, food and drink, and gambling with regard to the fossil fuel industry as a key commercial determinant of health; educate health professionals, policy makers, and the public about these issues; and recognise the central importance for health of preventing conflicts of interest and reducing industry influence on policy and regulation.

Invest in people to meet the demand for green jobs

The growth in clean energy has opened up new economic opportunities in the UK. In 2020, more than 200,000 people were employed in the UK's low carbon and renewable energy economy, which had a turnover of £41.2bn. A further 400,000 jobs are estimated over the next 25 years, which will be spread across the UK.⁶⁴ The offshore wind sector alone currently invests around £10bn into the UK economy each year, supporting 31,000 jobs, which is expected to rise to 97,000 jobs by 2030 with £17bn a year of investment.⁶⁵ The number of jobs being created in the UK renewable energy industry is growing four times faster than the overall UK employment market. However, research has shown that more than one-third of the roles are based in London and the South East.⁶⁶

The phase-out of fossil fuel industries must be accompanied by opportunities for those who work in the sector to make the transition to renewables. It is estimated the UK is facing an estimated shortfall of 330,000 workers in the renewables sector⁶⁷ and must accelerate the development of the workforce to meet the needs of our changing energy environment and to ensure we are not faced with a situation whereby thousands are left out of work through reduction of oil and gas industries at the same time as gaps in skills needed for renewables.

The transition away from oil and gas must protect workers, the community and the climate. Oil and gas workers in the North Sea have called for a number of actions to support them as part of a just transition.⁶⁸ This includes removing barriers that make it more difficult for them to move into the renewable industry, ensuring safety, job security and fair pay, and sharing the benefits of our energy system fairly with public investment in energy companies and communities.⁶⁹



Recommendation 3

Establish clear public targets for green skills creation, with particular focus on those regions and groups most at risk of job loss, and support industry to develop green skills through investments and incentives for training and apprenticeships.

Improve infrastructure and access for active travel and clean transport

Transport is the largest emitting sector in the UK, accounting for about 24% of emissions.⁷⁰ The majority (91%) of emissions from domestic transport is from road vehicles, more than half of which is from cars. Car trips under 5km make up 43% of all journeys and 23–28% of emissions.⁷¹

As well as burning fossil fuels in the form of oil, diesel and petrol, transport vehicles also emit harmful pollutants such as nitrogen oxides and particulate matter.⁷² 1,711 people were killed and 133,769 were injured on UK roads in 2022.⁷³ In the same year, 91 pedal cyclists were killed and 4,056 were severely injured in the UK. The built environment must enable safe and sustainable practices of active travel.⁷⁴

Switching to lower carbon modes of transport, including active travel (walking and cycling), public transport and shared mobility can reduce the number of vehicles on the road. The Government's Environmental Improvement Plan outlines a cross-government focus to fulfil a commitment that everyone should live within 15-minute walk of a green or blue space and a vision for half of all journeys in towns and cities to be cycled or walked by 2023.⁷⁵ However, there has not been sufficient progress on this in the UK.⁷⁶

Interventions that combine the promotion of active travel alongside public transport and reduced private car use can significantly improve population health while also reducing greenhouse gas emissions and air pollution.^{77,78} In 2021, people walking, wheeling and cycling resulted in 14.6 million fewer cars on the roads, which saved 2.5 million tonnes of greenhouse gas emissions and prevented 138,000 serious long-term health conditions.⁷⁹ Increased physical activity can reduce obesity and prevent type 2 diabetes, heart disease, stroke, hypertension, breast cancer, colorectal cancer, and other obesity-related co-morbidities. Studies have shown that a median increase in active transport from 4 minutes to 22 minutes can reduce the risk of diabetes and cardiovascular diseases by 14%.^{80,81} The health benefits of active travel include improved productivity and reduced pressure on the health service associated with air pollution, physical inactivity and social isolation.⁸²

Active travel routes also provide green corridors to help cool cities and enable people to connect with nature. More than one-third of people on low incomes and a similar number of disabled people do not have access to a car, and for many that do it is becoming prohibitively expensive to run.⁸³

When delivered in a fair and safe way, low-traffic and fifteen-minute neighbourhoods can offer a wide range of co-benefits to local communities, saving residents the need to drive to access services, encouraging active travel, and improving air quality and access to green spaces. There is high-level support from both residents and businesses in areas where low-traffic neighbourhood schemes have been introduced.⁸⁴ For example, 58% of Londoners support the introduction of LTNs, while only 17% are opposed.⁸⁵

In March 2023, the active travel budget in England was substantially cut, including a two-thirds cut to capital investment for active travel infrastructure from £300 million to £100 million. The Scottish government has committed to allocate £320 million (10% of the transport budget) to active travel by 2024–5 but is falling short of its target.⁸⁶ In the ten years since the Active Travel (Wales) Act

was passed, funding has increased to £73 million in 2023–4, but there has been little progress in increasing levels of active travel.⁸⁷ It is critical that funding for active travel is adequate to support the development and implementation of active travel plans; a failure to do so will adversely impact those on low incomes (who stand to benefit most) and limit the choice to travel healthy, cheaply and emissions-free.

To ensure that policy interventions aimed at achieving net zero reduce rather than widen inequalities, communities must be consulted and provided with targeted support to overcome any mobility barriers that could be introduced by policy changes, including by investing more in public and active travel combined with accessible transport options.

Recommendation 4



Implement targets to reduce motorised road traffic in line with net zero targets and upscale investment in high-quality infrastructure to enable and promote walking, wheeling, cycling, and public and shared community transport use.



Enable a low-carbon, climate-resilient health service

The NHS is a unique institution that touches on the lives of every person in the UK. But for the last decade, the NHS has been suffering a crisis of capacity as a consequence of workforce shortages and increasing population need. It is widely recognised that the NHS needs a dramatic change in order to meet the needs of today's society. As the impacts of the climate and nature crisis deepen, so too will the burden on our health service.

The NHS will need to manage increasing patient demand and the risk to infrastructure from climate-related extreme weather, as well as addressing its own contribution to greenhouse gas emissions. The NHS contributes about 5% of the UK's emissions and has committed to reaching net zero by 2040/45. The changes needed to deliver a sustainable health service will be transformative.

NHS England's 2020 report on Delivering a Net Zero Health Service set out a road map for achieving the goal of making the NHS net zero. Health services in Wales and Scotland have also set out their strategies for achieving net zero by 2045. Good progress has been made in reducing the NHS carbon footprint, however, concern has been raised that progress has been stalling and more support is needed. For example, in January 2023 it was reported that on average, NHS organisations consumed 75% of their energy from fossil fuels; an average of 83% of vehicles in the NHS fleet use petrol or diesel; and that most NHS organisations have not received funding for sustainability and decarbonisation.⁸⁸

The government must provide sufficient capital investment and resources to decarbonise the NHS estate through efforts such as the installation of rooftop solar panels and heat pumps, upgrading NHS buildings to energy efficiency standards, accelerating the electrification of the NHS fleet, adopting energy efficiency and waste saving measures, and ensuring all patients, staff and visitors have access to healthy, sustainable food and the means to travel to NHS sites on public transport, walking or cycling. These actions must be delivered in parallel with integrating climate-resilient measures to protect our vital health services from climate threats.

The wider societal benefits of the NHS adapting to meet net-zero targets would be significant. Upgrading the NHS electricity supply would require accelerated action on the national grid, for example, the benefits of which would extend to other sectors across the country. The engagement with patients, staff and visitors on the positive changes that energy-efficient and cleaner travel bring to the wider environment would have a cascading effect on individual and organisational change in other areas.⁸⁹

Recommendation 5



Provide sufficient capital investment and funding to decarbonise NHS infrastructure estates, and services, accelerate the transition to electrification of the NHS fleet, and deliver public transport and active travel routes to NHS sites for staff, patients and visitors combined with actions to deliver resiliency in health and care services.

Demonstrate leadership by delivering domestically and meeting global obligations

Wealthier nations have benefited most from the use of fossil fuels to build and power vital infrastructure and services. Low-income countries have benefited least but are now the most heavily impacted by the severe negative impacts associated with the burning of fossil fuels, particularly the impacts of climate change, destruction of nature, and air pollution. North America and Europe have contributed 62% of carbon dioxide emissions since the Industrial Revolution, whereas Africa has contributed only 3% [26]. It is estimated that the climate crisis has destroyed a fifth of the global domestic product (GDP) of the countries most vulnerable to climate shocks.⁹⁰ It is highly unjust that the most impacted nations have contributed least to global cumulative emissions.

Equity must be at the centre of the global response, with wealthier nations accounting for their cumulative, historical contributions, current emissions, and capacity to respond. In order to avoid catastrophic temperature rises, wealthier nations must cut emissions more rapidly and provide financial support to more vulnerable nations to enable them to develop resilience against existing and future climate impacts.⁹¹

At COP28, there was global consensus for “transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner” and although not-legally binding, it places an obligation on the UK to support the acceleration of the global transition away from fossil fuels. At COP28, the UK also signed the global renewables and energy efficiency pledge to triple renewable capacity and double the rate of energy efficiency improvements by 2030. The CCC has warned that achieving the associated 2030 Nationally Determined Contribution (NDC) will require the rate of emission reductions outside of the electricity sector in the UK to quadruple from that of recent years and that addressing these gaps in a transparent way is one of the most important ways for the UK to show climate leadership.

The loss and damage fund agreed at COP28 resulted in many developed nations committing to the fund to provide financial support for some of the irreversible losses and impacts that developing countries are facing from global heating. To date, pledges have fallen short of what is needed. The UK has pledged £60 million to the fund, however, Climate Action Network⁹² has warned that while UK support is welcome, the amount allocated comes from existing commitments and significantly falls short of what is needed. As a wealthy nation with a significant history of carbon emissions, the UK has a moral duty to address the inequalities between those responsible and those most impacted by the climate crisis. There is no justice in fossil fuel companies making enormous profits while vulnerable nations are left to pick up the cost.

International perception of the UK’s climate ambition has suffered from mixed messages following announcements on new fossil fuel developments, the failure to meet existing targets, and the softening of some net zero policies. It is important that the UK seeks to retain its position as a credible leader in climate action through a stronger delivery of domestic targets while supporting international goals.



Recommendation 6

Demonstrate global leadership by delivering ambition domestically through accelerated action to phase out fossil fuels and increasing investment, development and use of renewable energy and internationally, by stepping up to meet financial commitments to pay for the UK's global contribution to the climate crisis



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