



THE TRUE PATH TO NET ZERO:

HOW THE UK SHOULD APPROACH
REDUCING ITS CARBON EMISSIONS

NOV 2021

IBN | Independent
Business
Network

The Independent Business Network

The Independent Business Network speaks for the overwhelming majority of the business community to seize the opportunities Brexit provides. As a business organisation we seek to ensure that following the COVID-19 pandemic British businesses are able to grow and recover from the lockdown.

We believe that Brexit Britain should be pro-enterprise and work to break down the power of monopolies and their domineering influence on public policy and the regulatory landscape. We believe that family owned and family run businesses must have a greater voice in public policy.

The majority of businesses in the UK are family owned or family run. Including the self-employed they constitute 85 per cent of the private sector and they employ almost 55 per cent of all workers. These businesses are the backbone of our economy and we must ensure that following the pandemic they are allowed to flourish so that we can generate the wealth for the public services and investment we need.

The IBN works to ensure the best possible business environment for our supporters, through lobbying, research papers, articles in the press and via our social media. This research paper is a contribution to creating that environment.

Decisions made at COP26 may have a profound impact on the British economy and on family run and family owned businesses. It is vitally important that family run and family owned businesses have a voice representing them in the debate around decarbonising our economy.

When the Government wants to speak to a constructive business voice the Independent Business Network is ready and eager to engage.

Foreword

The drive to reduce carbon emissions has been defined as one of the most crucial challenges facing humankind. Of course there is generally a balance to be struck in all things. Every action has consequences and the surest thing in history is the law of unintended consequences.

There is no doubt that the earth's climate has fluctuated naturally over the centuries, indeed over the millennia. The current consensus of establishment opinion is that the climate is changing for the worse and that this is being contributed to by carbon emissions generated by people. From the perspective of business it is vitally important that received wisdom on what has become an almost religious belief system is constantly challenged in the proper tradition of scientific method; hypothesis and investigation, not least because the policies flowing from climate change assumptions require significant change and cost. The imperative for the UK government and the business community is to drive to find the least cost and least disruptive ways to achieve viable goals.

It is also important to recognise that the UK could become 100 per cent green, achieve net zero and yet not deliver any meaningful improvement in global carbon emissions. At the same time pursuing such a policy could lead to major economic disruption for the UK, undermine business competitiveness and impoverish our people. Without the participation of countries like China, India and the USA, who generate by far the greatest amount of carbon, and the cooperation of fossil fuel producing nations like Saudi Arabia and Russia, Britain's efforts will be fruitless. It is the height of hypocrisy for British politicians and elites to offshore manufacturing to polluting nations such as the likes of China, along with the jobs and prosperity that go with them and then claim to have reduced emissions. There appears to be no enthusiasm amongst the nations that count to participate in carbon reduction and yet the new puritans at home continue to push for perfection.

The Independent Business Network is supported by family owned and/or run businesses. Collectively this category of business are the largest employers and the backbone of the economy. Some are entrepreneurs of new and dynamic businesses who will go on to be serial founders. Others are long established. All take the long view, seek long term patient capital and are committed to Britain and the communities they engage with.

This report seeks to find a truly sustainable path to carbon reduction providing a package of measures which, over realistic timescales, will reach the goal and will do so at least cost, maximising energy security, business growth and opportunity, which is surely what the government should be pursuing.

Lastly, I wish to express my thanks to guest author and contributor Richard Ollington of Radiant Energy Group for his work on chapter 3, 'The Nuclear Option'.

John Longworth
Chairman, Independent Business Network

1. Introduction

The United Nations Climate Change Conference is taking place in Glasgow in November 2021. World leaders, as well as industry leaders and civil society will gather for a conference to determine the global response to Climate Change and the measures necessary to ensure that should there be significant climate change it does not pose such a dangerous risk to our way of life. World leaders will finalise their action plans to cut carbon emissions in line with the Paris Agreement.¹ This paper will focus on the impact of the UK's Carbon-neutral targets will impact on family run and family owned businesses.

In February 2020, Rt Hon. Alok Sharma MP was appointed as President of the Conference.² The former Governor of the Bank of England, Mark Carney was appointed as Climate Finance Advisor³ and Nigel Topping was appointed as the British Governments High Level Climate Action Champion for COP26.⁴ There is almost near universal consensus in the UK among policy makers and legislators for the UKS carbon targets.

COP26 has several key objectives. The first is to secure net zero by the middle of the century and to encourage countries to bring forward their own plans for achieving this. The British government has enshrined in law its objective of slashing Carbon emissions by 78 per cent by 2035.⁵ Another crucial element is the protection of communities and natural habitats and in 2019 the British Government published its own guidance on protecting the natural environment.⁶

Another key area for this year's conference is mobilizing finance. The ambition has been set for developed countries to raise at least \$100 billion in Climate Finance to meet net zero. The British Government has established International Climate Finance⁷ to meet this objective and to help developing countries respond to the challenges and opportunities of climate change.

The UK is a global leader in reducing carbon emissions and is halfway to meeting its net-zero emissions target.⁸ In 2020 in the UK carbon emissions declined at their fastest rate on record, largely due to reduced activity as a result of the Coronavirus pandemic. The United Kingdom has decarbonised faster than any other developed country and has cut its emissions 1.8 times more than the EU average since 1990.⁹ The British Government has set an objective of making the UK a science and technology leader to solve threats emanating from Climate Change.¹⁰

1 <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

2 <https://www.gov.uk/government/news/alok-sharma-becomes-full-time-cop26-president-and-kwasi-kwarteng-is-appointed-as-secretary-of-state-for-business>

3 <https://www.bankofengland.co.uk/news/2020/january/mark-carney-appointed-by-prime-minister-as-finance-adviser-for-cop26>

4 <https://www.gov.uk/government/news/nigel-topping-appointed-uk-high-level-climate-action-champion>

5 <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

6 <https://www.gov.uk/guidance/natural-environment>

7 <https://www.gov.uk/guidance/international-climate-finance>

8 <https://www.carbonbrief.org/analysis-uk-is-now-halfway-to-meeting-its-net-zero-emissions-target>

9 <https://www.economist.com/britain/2021/02/15/how-britain-decarbonised-faster-than-any-other-rich-country>

10 <https://www.gov.uk/government/publications/the-uk-as-a-science-and-technology-superpower>

The last decade has been one of the hottest on record and so the importance of securing successful outcomes at COP26 is key. In order to achieve their objectives, the British Government and governments around the world are going to have to ensure that business can continue to operate without suffering any burdensome extra costs and without differential disadvantage to particular economies. We have seen that major carbon emitting economies such as China have decided not to participate. The government has published their Energy White Paper,¹¹ and it recognizes the particular challenges businesses will face and the need for businesses to be able to achieve a return on any green capital investments. In 2019 the total investment across the UK in low carbon projects was £10 billion out of a total of £390 billion.¹²

Under the Climate Change Act 2008¹³ the government is required to set five-yearly Carbon Budgets. The Carbon Budget published in 2020¹⁴ claims that the cost estimate for achieving net-zero by 2050 will be approximately 1 per cent of GDP over the course of the next thirty years. The budget also highlighted that huge capital investment will be required to achieve the target and therefore the government is going to need to ensure that macroeconomic policy makes that level of investment profitable. It is not clear whether or not these estimates will prove to be accurate.

The government has faced criticism for failing to provide businesses with clarity over what policy changes are going to impact on them.¹⁵ Businesses provide the basis for the UK economy, for jobs, wealth creation and for tax receipts and yet the majority is not engaged with government on the carbon neutral agenda.¹⁶ It is vitally important the government engages with business more comprehensively because as the Office for Budget Responsibility has highlighted, the costs of achieving net-zero by 2050 are going to be enormous, in particularly in respect of energy, buildings and industry¹⁷ of which there will be a direct impact on businesses.

11 <https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future>

12 <https://www.instituteforgovernment.org.uk/blog/chancellor-needs-confront-costs-net-zero>

13 <https://www.legislation.gov.uk/ukpga/2008/27/contents>

14 <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf>

15 <https://committees.parliament.uk/oralevidence/2151/pdf/>

16 <https://www.britishchambers.org.uk/news/2021/08/carbon-footprint-a-mystery-to-9-out-of-10-small-businesses>

17 <https://obr.uk/the-chairmans-presentation-on-our-third-fiscal-risks-report/>

2. The UK and International Comparisons

The UK is the fifth largest economy in the world and accounts for around 2.2 per cent of global GDP,¹⁸ and is responsible for approximately 1 per cent of global carbon emissions.¹⁹ While the UK is an important economy in the world with significant interests it is not one of the nations primarily responsible for the emission of carbon in the modern economy.

In working to reduce global carbon output legislators and policy makers will need to focus their attention on those countries emitting the largest share of carbon in the world to have any real chance of reaching global emissions targets. While some smaller countries have continued to reduce their carbon footprint, larger countries such as China, Russia, India and the United States continue to be responsible for by far the largest proportion of global emissions.

The reasons for the huge increase in emissions from countries particularly in Asia are due to the urbanisation boom and huge demand for construction materials and infrastructure. As countries develop, urbanisation is an inevitable consequence and some of the fastest levels of urbanization are in those fast growing developing economies where environmental standards are poorer.

It is also a fact that those nations who have some of the largest emissions targets have effectively exported their carbon emissions to major emerging economies through offshoring production. For example, the west's dependency on cheap imports from countries such as China, Indonesia and more recently, India have been an example of this. Indeed, while offshoring production, countries have also arguably offshored potential wealth creation to these countries, many of whom now enjoy faster growing economies than the UK. There does however remain an important policy question of how global economies reduce their carbon emissions without pushing the populations of those developing nations into more extreme poverty, putting at risk their delicate democratic systems of government.

Aside from concentrating national efforts on simply focusing on green energy, such as wind, tidal and solar, which are unreliable and have high costs and short life spans for investment, there are a number of other alternative measures that can be introduced. These can ease the country into a low carbon future and maintain the dynamism of the economy, along with measures to mitigate the irreversible effects of climate change which may occur.

It has been estimated that the cost of decarbonising the British economy will reach around £164 billion over three decades.

¹⁸ <https://www.statista.com/statistics/270452/united-kingdoms-share-of-global-gross-domestic-product-gdp/>

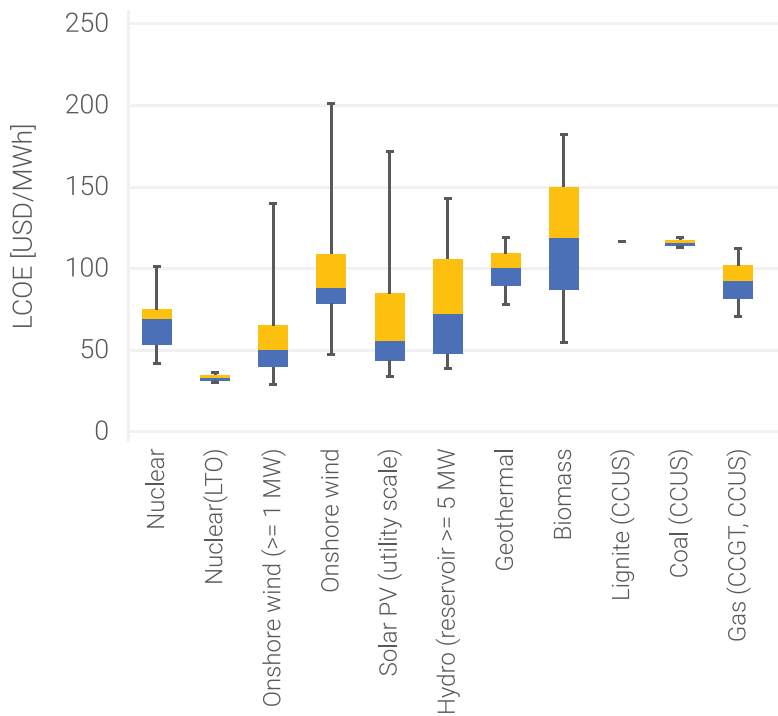
¹⁹ <https://commonslibrary.parliament.uk/uk-and-global-emissions-and-temperature-trends/>

Country	CO2 Total Emmissions (Mton)	% World total	2021 Population
China	11,535.20	30.34%	1,444,216,107
United States	5,107.26	13.43%	332,915,073
India	2,597.36	6.83%	1,393,409,038
Russia	1,792.02	4.71%	145,912,025
Japan	1,153.72	3.03%	126,050,804
Germany	702.60	1.85%	83,900,473
Iran	701.99	1.85%	85,028,759
South Korea	651.87	1.71%	51,305,186
Indonesia	625.66	1.65%	276,361,783
Saudi Arabia	614.61	1.62%	35,340,683
Canada	584.85	1.54%	38,067,903
South Africa	494.86	1.30%	60,041,994
Mexico	485.00	1.26%	130,262,216
Brazil	478.15	1.26%	213,993,437
Australia	433.38	1.14%	25,788,215
Turkey	415.78	1.09%	85,042,738
United Kingdom	364.91	0.96%	68,207,116
Italy	331.56	0.87%	60,367,477
Poland	317.65	0.84%	37,797,005
France	314.74	0.83%	65,426,179

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3. The Nuclear Option

Primary to the UK's green ambitions will be the cost-effective decarbonisation of processes requiring heat and power, the source of 82 per cent of the country's greenhouse gas emissions²¹. Generating electricity from steam, nuclear energy is an efficient source of both heat and power. By contrast, wind and solar require the production and combustion of hydrogen to produce heat; a process that is only 46 per cent efficient²². The long-term operation (LTO) of nuclear power plants has proven to be the lowest-cost low-carbon source of electricity on a Levelised Cost of Electricity (LCOE) basis, 65 per cent lower than Gas with Carbon Capture and Storage (CCS) and 36 per cent lower than onshore wind²³. Hidden from LCOE metrics are costs associated with energy intermittency, dispatchability and connections to the grid, all costs that nuclear outperforms wind and solar on.



Source: International Energy Agency, Projected Costs of Generating Electricity, 2020 Edition

On a national-scale, proof of nuclear's cost-efficient driver of energy decarbonization can be seen in a comparison of France's Messmer Plan (1974) vs Germany's Energiewende (2000) wind and solar focused initiative. In the 18 years since their respective start France reduced its emissions per unit of energy at a rate six times faster than Germany²⁴.

21 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957887/2019_Final_greenhouse_gas_emissions_statistical_release.pdf

22 <https://www.rechargenews.com/markets/why-using-clean-hydrogen-for-heating-will-be-too-difficult-expensive-and-inefficient-report/2-1-960777>

23 <https://www.iea.org/reports/projected-costs-of-generating-electricity-2020>

24 https://drive.google.com/file/d/1fdOF8_Ro6cLCGvRPh9xnwaEPdcUw1uz/

Where Germany's Energiewende is forecast to cost €1,100 billion²⁵, France's build-out of 56 nuclear reactors cost an inflation adjusted €130 billion²⁶. Affecting the businesses community is the cost of electricity, where the consumer cost of electricity in Germany is 30cents/kWh, the highest in Europe, in France the cost is 40 per cent less at 19 cents/MWh²⁷. Similar evidence of nuclear's relative effectiveness in achieving rapid energy decarbonisation is observed in Sweden, Ontario and South Korea²⁸.

Dovetailing the UK's reforestation and biodiversity ambitions is nuclear's dense and environmentally-friendly use of land. Requiring 300-600 times more land area per unit of energy, solar and wind projects negatively impact the potential for reforestation in the UK, a country where land is in limited supply²⁹. Environmental campaigners cite the nature reserves at Dungeness and Sizewell as case studies in how the construction of nuclear power plants directly drives greater local biodiversity³⁰.

Nuclear is preferential for the generation of a large number of high paid and long-term UK jobs. Hinkley Point C has signed contracts with 3,600 British companies, will employ 74,000 British people in its construction, with 900 permanent on-site roles for the 60+ year lifespan of the plant³¹. Nuclear industry salaries average 50 per cent higher than the wind industry and 30 per cent higher than the gas industry³².

Following the decommissioning of 14 of the UK's 15 existing nuclear reactors and the construction of Hinkley Point C, nuclear energy is forecast to account for 18 per cent of UK electricity in 2030^{33,34}. Partly in response to the 2021 energy crunch which was driven by both record high gas prices and low winds across Europe, the UK Government has expressed its interest in the construction of 20 small modular reactors (SMRs) and 6 conventional reactors as a source of secure, low-cost and low-carbon energy³⁵. To maintain the low-cost attribute of nuclear the UK should prioritise the mass-production replication of existing power plant designs, as done with EDF Energy's Sizewell C where a resultant 20 per cent cost saving is forecast³⁶, and the reduction in bureaucratic hurdles which historically have driven delays and cost overruns in the industry.

25 <https://www.politico.eu/article/the-good-green-german-gets-sticker-shock/>

26 https://www.ccomptes.fr/sites/default/files/EzPublish/Coûts_nuclear_power_sector_summary.pdf

27 <https://strom-report.de/electricity-prices-europe/>

28 <https://environmentalprogress.org/big-news/2017/11/7/the-power-to-decarbonize>

29 https://www.researchgate.net/figure/Land-Use-by-Wind-Solar-PV-and-Nuclear_fig2_335192552

30 <https://zionlights.medium.com/nuclear-and-nature-the-love-story-no-one-wants-to-tell-50ceb0890a40>

31 <https://www.edfenergy.com/media-centre/news-releases/five-years-22000-workers-britain-are-work-hinkley-point-c>

32 <https://yaleclimateconnections.org/2021/09/how-much-do-energy-industry-jobs-pay-a-look-at-the-data/>

33 <https://researchbriefings.files.parliament.uk/documents/CBP-8176/CBP-8176.pdf>

34 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931209/Annex-J-total-electricity-gen-by-source_EEP2019_ods

35 <https://www.thetimes.co.uk/article/energy-panic-ushers-in-new-nuclear-age-s3qprxzkv>

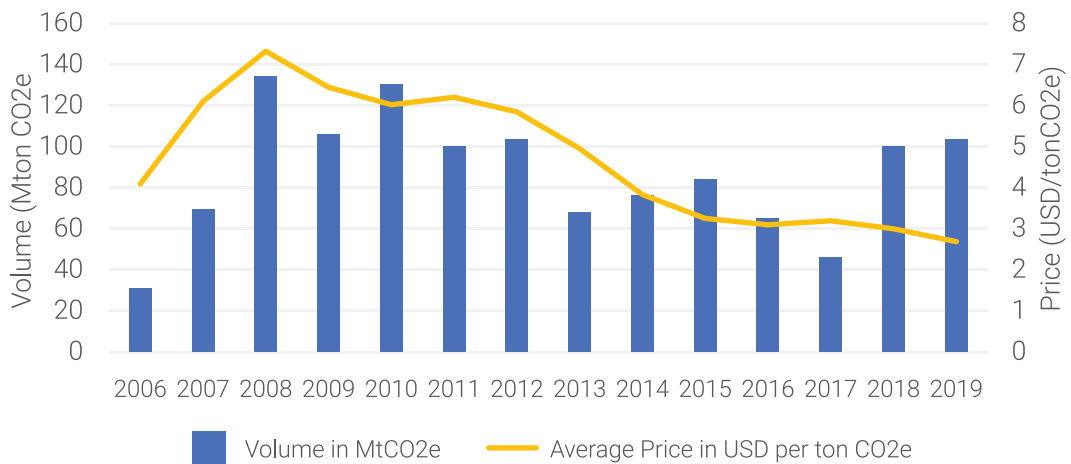
36 <https://www.world-nuclear-news.org/C-EDF-Energy-expects-20-cost-saving-for-Sizewell-C-18011801.html>

4. Carbon offsetting

If leaders and decision makers in Westminster are going to carry the support of the British public with them in the decarbonisation agenda, then circumstances are going to have to allow individuals and businesses to reduce their carbon footprint in a cost-effective way. Ever increasing taxation and burdens on individuals and businesses will stifle competitiveness, drive away innovation and place extraordinary costs on an economy struggling to recover from the pandemic and facing additional strains at the present time. It will also do little to reduce global carbon emissions and still less mitigate any climate change that transpires.

The world will certainly not reach a point in the near future where no carbon is emitted as a result of human activity. Human activity will generate some carbon. Therefore the need for a comprehensive carbon offsetting plan for the country, and indeed for business is required if the country is to reach its objectives in respect of climate change. It is also arguable as other nations carbon emissions increase that the British carbon objectives will need to be revisited and reviewed.

Around the world, carbon offsetting emissions trading systems are being established. These are market-based instruments that create incentives for reductions in carbon emissions. Traditionally, governments set a cap on the level of emissions allowed and create permits, which can be purchased or traded with among businesses. This will certainly increase demand for regional credits.



Source: Based on data provided in **Ecosystems Marketplace, 2020**

In the UK, Corporate Social Responsibility (CSR) has been a feature of commercial life for centuries. Entrepreneurs undertook measures to increase the standard of living and working conditions for employees, including social security schemes to improve the efficiency of their workforce. The Companies Act 2006³⁷ gave company Directors the duty of dealing with the environmental and social impacts of their Company, although it does

37 <https://www.legislation.gov.uk/ukpga/2006/46/contents>

not stipulate the spending levels for CSR, which has resulted in companies adopting a voluntary approach to CSR activities of their firm.

The primary and arguably sole responsibility of business should be profit generation as a return on capital. To achieve this, CSR is often necessary for the business to meet market demands. Anything else required to meet the demands of society should be legislated for otherwise it risks causing inefficiency in business to the detriment of all.

The British Government is implementing the Carbon Offsetting and Reduction Scheme for International Aviation,³⁸ as from 2021 aviation is required to offset additional carbon emissions from the baseline.³⁹ At present, aviation accounts for approximately 2.5 per cent of global emissions. However, emissions from aviation and other sectors such as shipping and global energy are set to increase in the years ahead.⁴⁰ Government is starting with the regulation of airlines and it is therefore anticipated that demand for emission trading systems will grow from non-regulated sectors, especially given that many large companies are making broad and bold zero-carbon pledges.⁴¹ The British Government replaced its participation in the EU trading scheme with a UK emissions trading scheme.⁴²

Voluntary Offset programmes are not used in compliance markets and as a consequence they are, on the whole, cheaper than a regulated programme. Voluntary carbon offsets are a source of experimentation and innovation that offer a platform to engage corporate positioning. It is also on the whole more inclusive than a compliance market as the number of participants in the scheme can be increased easily. This presents the UK with an interesting opportunity to position itself on leading climate action and exporting financial services. The British government has committed itself⁴³ to supporting the Voluntary Carbon Markets Integrity Initiative.⁴⁴ In 2020, the global carbon market grew by 23 per cent, reaching a value of \$272 billion.⁴⁵

The British Government should seek to maintain the voluntary offset programmes in the UK. There has been a rapid increase in credit issuances and retirements over the last couple of years and this is especially the case for nature based credits. If this growth continues the market could double in the next two years.

38 <https://www.gov.uk/government/consultations/implementing-the-carbon-offsetting-and-reduction-scheme-for-international-aviation/implementing-the-carbon-offsetting-and-reduction-scheme-for-international-aviation-corsia>

39 **Note:** The baseline is currently defined as an average of carbon emissions in 2019 and 2020

40 <https://acp.copernicus.org/articles/19/14949/2019/acp-19-14949-2019.html>

41 <https://www.environmentalleader.com/2020/12/unilever-microsoft-11-more-companies-join-the-climate-pledge/>

42 <https://www.gov.uk/government/publications/participating-in-the-uk-ets/participating-in-the-uk-ets>

43 <https://www.gov.uk/government/speeches/establishing-the-principles-necessary-for-transparent-functioning-voluntary-carbon-markets>

44 <https://vcmintegrity.org>

45 <https://www.spglobal.com/platts/en/market-insights/latest-news/coal/012721-global-carbon-market-grows-20-to-272-billion-in-2020-refinitiv>

5. Reforestation

The deforestation of large parts of the world's natural rainforests is of concern. Deforestation has taken place throughout history to make space for agriculture and animal grazing, as well as for sourcing wood for manufacturing, fuel, and construction. Around 2000 years ago approximately 80 per cent of Western Europe was forested; today the figure stands at around 34 per cent.⁴⁶ Trees were cut down for timber and agriculture and this accelerated during the 17th and 18th centuries as increased demand for ships drove an ever-increasing need for timber.

In the 21st century the greatest deforestation is taking place in tropical rainforests, notably in Western Africa, South-East Asia and South America. In the UK, the Government has announced their objective of planting 7000 hectares of woodland per year until the end of this Parliament,⁴⁷ set out in the England Trees Action Plan 2021-2024.⁴⁸ However, while the plan does indicate the need for greater opportunities for private sector involvement and investment in the planting of trees and woodland, it fails to outline in any substantial detail how investors and business can be engaged to actively participate in the delivery of the strategy. The Forestry Commission⁴⁹ revealed in the summer of 2021 that the Government is failing to meet its tree planting objectives.⁵⁰ Given that in the British Isles one of the main impacts of climate change will be increased flooding and erosion, the failure to plant an adequate number of trees will only exacerbate the problem.

A single mature tree can absorb around 48 pounds of carbon per year.⁵¹ In 2019 the UK produced an estimated 454.8 million tons of carbon dioxide.⁵² To neutralise the impact of those emissions the UK would need to plant in the region of 21 billion trees. At present there are approximately 3 billion trees in the UK,⁵³ and around 13 per cent of the UK is woodland.⁵⁴ To triple the size of UK woodland space it would cost £77.4 billion and would result in approximately 9.4 billion tons of carbon being removed from UK emissions. Instead of relying on taxation by government to deliver such a radical change in tree planting in the UK, the Government needs to look elsewhere.

The Government clearly needs to open up dynamic private sector leadership in the planting of trees to meet its climate change targets. This will require an incentive for businesses to engage. Of course, not all businesses have a supply of land or farms on which to plant trees, but other opportunities for planting trees do exist. For example, Government could incentivise business to adopt and maintain trees in their locality and allow businesses to

46 <https://www.nationalgeographic.org/encyclopedia/deforestation>

47 <https://www.gov.uk/government/news/tree-planting-rates-to-treble-by-end-of-this-parliament>

48 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/987432/england-trees-action-plan.pdf

49 <https://www.gov.uk/government/organisations/forestry-commission>

50 <https://www.independent.co.uk/climate-change/news/tree-planting-rate-falling-england-climate-change-labour-b1900731.html>

51 <http://www.tenmilliontrees.org/trees/>

52 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957887/2019_Final_greenhouse_gas_emissions_statistical_release.pdf

53 <https://www.independent.co.uk/climate-change/news/how-many-trees-are-there-on-earth-10483553.html>

54 <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/woodlandnaturalcapitalaccountsuk/2020>

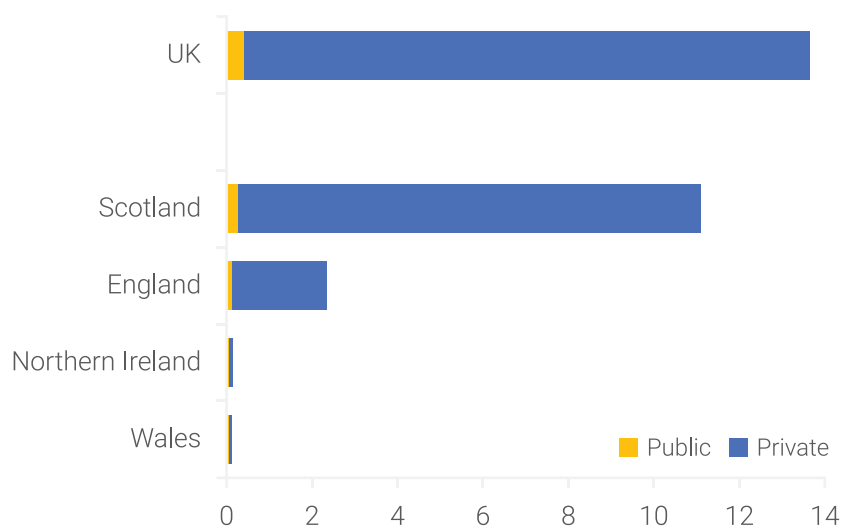
deduct those costs from their corporation tax or business rates. In addition, the planting of trees could also be included as a deductible given the huge social and environmental benefits the planting of trees has on the community.

The cost of planting a single tree is £12.90 including VAT. The Government's own objectives are to plant an additional 11 million trees before the end of this parliament at a cost of £141.9 million. If government were to remove VAT from tree planting it would reduce the cost by £2.15 per tree, saving £23.65 million on current figures and would allow for an extra 2.2 million trees to be planted. Crucially, this would also be a great incentive for individuals and businesses to plant more trees.

In planning, developers are already encouraged by local authorities to plant trees and have well developed green spaces in housing developments. These natural features can increase the value of developments; improve social, environmental and economic conditions in communities, as well as supporting the government's target of net zero. At present, in the UK, private landowners plant most trees,⁵⁵ and this is without any real commercial incentives. If the government were to explore how greater incentives for tree planting could be introduced into the tax system, a boom in tree planting could take place.

New planting by ownership, 2019

Thousand hectares



Source: Forestry Commission, **Forestry Statistics 2020, data downloads** chapter 1, table 1.13b

The deforestation of the world's great rainforests is contributing to increasing global carbon emissions. Fewer trees equal more carbon. This is reducing the natural capacity of the planet to capture carbon. Trees are the largest plants on the planet and they are crucial to storing carbon. They also provide other fundamental to supporting the world's plants and animal species and in stabilizing soil. Most importantly of all they provide every living creature on the earth with oxygen to breathe. In this sense, trees are a strategic natural asset and a commodity that can be traded.

55 <https://researchbriefings.files.parliament.uk/documents/CBP-9084/CBP-9084.pdf>

CO2 is essential to plant life on earth. If there is no CO2 or if levels were depleted to such a low level then life on earth for plants would cease, and consequently human life would cease. The irony of carbon reduction is that it is a matter of balance and not absolutism. There should therefore be an effort by developed nations to fund the reforestation of developing countries who may not be able to afford such measures to assist in reducing carbon emissions.

6. Home Insulation

In recent weeks and months, the issue of home insulation has increased in the public mindset largely due to the irresponsible actions of the extreme campaign group 'Insulate Britain.' Their dangerous tactics have put lives at risk and caused severe disruption to our transport infrastructure and the Independent Business Network condemns them for this. However, the substantive point of Home Insulation is one that could create significant employment, new skills and business opportunities for family run and family owned firms in the sector.

There are 29 million homes in the United Kingdom,⁵⁶ and estimates of that include 24.4 million in England, 700,000 in Northern Ireland, 2.6 million in Scotland and 1.4 million in Wales. Around 40 per cent of the UK's Carbon emissions come from households.⁵⁷ Much of the UK housing stock is extremely old. It has the oldest housing stock in Europe with a lot of homes dating from the Victorian period.⁵⁸ As a result the UK has some of the least energy efficient housing. The Institute of Engineering and Technology has assessed that nearly all properties in the UK will need an upgrade to ensure that they are more energy efficient.

In December 2020 the government published its energy White Paper⁵⁹ and set a national objective of ensuring as many existing homes as possible to hit EPC band C by 2035, where practical, cost effective and affordable." The big challenge of meeting this objective is the affordability element. The average price of home insulation in the UK is considerable⁶⁰ ranging from £8000 to £20,000. Yet, the average person in the UK has savings of around £11,000.⁶¹ The Government's targets are only going to be met if the market is competitive enough for consumers to be able to afford the investment.

At present VAT is applied at a reduced rate⁶² of 5 per cent on energy saving products. While it is greatly reduced from 20 per cent, to make it as easy as possible for the public to afford to insulate their homes, the government should explore abolishing VAT altogether on home insulation.

56 <https://www.theccc.org.uk/wp-content/uploads/2019/02/UK-housing-Fit-for-the-future-CCC-2019.pdf>

57 <https://www.theccc.org.uk/wp-content/uploads/2016/07/5CB-Infographic-FINAL-.pdf>

58 https://www.bre.co.uk/filelibrary/Briefing%20papers/92993_BRE_Poor-Housing_in_Europe.pdf

59 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945899/201216_BEIS_EWP_Command_Paper_Accessible.pdf

60 <https://www.thegreenage.co.uk/how-much-does-external-wall-insulation-cost/>

61 <https://www.nimblefins.co.uk/savings-accounts/average-household-savings-uk>

62 <https://www.gov.uk/tax-on-shopping/energy-saving-products>

Successive governments have committed themselves to insulating Britain's homes. The Government's Green Homes Grant was an enormous example of state subsidy, which monumentally failed. The National Audit Office found that only 47,500 homes out of an estimated 600,000 were supported at a cost of £256 million to the taxpayer.⁶³ Instead of subsidising, the Government needs to incentivise individuals to make the investments in their homes.

However, to date the British Government has no strategy, developed in partnership with business to deliver on its objectives. The Government needs to work with developers, to develop a privately funded led programme implementing a strategy to retrofit Britain's homes to ensure they are energy efficient.

The Government announced earlier this year that all homes would need to meet rigorous new energy efficiency standards. Despite the focus on climate change and the current energy crisis, only 16 per cent of Britons have plans to seriously improve energy efficiency in their homes.⁶⁴ This is largely due to the extraordinary cost of doing so. The estimated annual cost of insulating Britain's homes is £19 billion.⁶⁵ One area that the government could explore is that of removing stamp duty on properties that are meeting the highest standards on energy efficiency. In 2020/2021 the government received just short of £9 billion in Stamp Duty Land Tax.⁶⁶ The government could explore a Stamp Duty holiday for homes meeting highest energy efficient standards to encourage the retrofitting of homes in the UK.

The scale of the challenge is as great as the slum clearances that took place in the 1960s and 1970s and government should view this effort with the same determination, but ensuring all the while that the economies need to stack up.

63 <https://www.nao.org.uk/wp-content/uploads/2021/09/Green-Homes-Grant-Voucher-Scheme.pdf>

64 https://www.renewableenergymagazine.com/energy_saving/fewer-than-one-in-ten-uk-homeowners-20211013

65 <https://drive.google.com/file/d/1jt5FI-kinEXoqZtPDrCvnAVQ2EFn8Aea/view>

66 <https://www.statista.com/statistics/284328/stamp-duty-land-tax-united-kingdom-hmrc-tax-receipts/>

7. Clean Air in the Home Workplace

While reducing carbon emissions is the primary focus of COP26, other important environmental issues are also being focused. One of those issues is the question of air quality and clean air in homes, workplaces and communities. As governments focus on reducing carbon emissions the air is becoming cleaner. However, one of the key areas where quality of air still falls behind is in homes and workplaces.

The British Government has expressed its desire to increase house building to 300,000 a year by the mid-2020s in an attempt to deal with the United Kingdom's chronic housing shortage.⁶⁷ According to the House of Commons Library, in England alone it is anticipated that 345,000 new homes per year will need to be built to meet demand.⁶⁸

Robert Jenrick published the Planning White Paper in August 2020,⁶⁹ which proposes to reform Planning laws to make it easier for developers to build by limiting community involvement in the planning process.

When the COVID-19 pandemic hit the UK in 2020 the British Government instructed the population to remain at home. Working conditions were radically transformed with more people working from home and with many students and young people learning from home.

A research report by the House of Commons found that around 3.5 per cent of homes in England are overcrowded.⁷⁰ Overcrowding is a contributing factor to the levels of mould and humidity in homes which in turns diminishes air quality. COP26 has identified cleaner air and air quality as a significant objective.⁷¹

As employers offer more flexible working conditions, more and more workers are opting to work at home either on a full time or part time basis. 78 per cent of respondents to the Covid-19 Working from Home Survey preferred to work in the office for two days or less, with a third preferring to work at home full time.⁷² The climate of the British Isles means that for a significant part of the year homeowners and tenants have to keep their windows and doors shut due to the cold and poor weather. This is potentially the start of a very serious deterioration of home air quality in the short to medium term.

Research has found that the ventilation and air purification of indoor spaces is fundamental to stop the spread of coronavirus.⁷³ The John Hopkins Bloomberg School of Public Health

67 <https://www.gov.uk/government/news/government-announces-new-housing-measures>

68 <https://commonslibrary.parliament.uk/research-briefings/cbp-7671/>

69 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/958421/Planning_for_the_Future_web_accessible_version.pdf

70 <https://researchbriefings.files.parliament.uk/documents/SN01013/SN01013.pdf>

71 <https://ukcop26.org/uk-presidency/>

72 <https://www.strath.ac.uk/whystrathclyde/news/studyrevealsmostemployeeswanttokeepworkingfromhome/>

73 [https://www.gov.uk/government/publications/covid-19-ventilation-of-indoor-spaces-to-stop-the-spread-of-coronavirus/ventilation-of-indoor-spaces-to-stop-the-spread-of-coronavirus-covid-19#:~:text=Ventilation%20is%20the%20process%20of.COVID-19\).](https://www.gov.uk/government/publications/covid-19-ventilation-of-indoor-spaces-to-stop-the-spread-of-coronavirus/ventilation-of-indoor-spaces-to-stop-the-spread-of-coronavirus-covid-19#:~:text=Ventilation%20is%20the%20process%20of.COVID-19).)

found that Home Ventilation systems can reduce or prevent the spread of COVID-19.⁷⁴ UNESCO have said that pandemics are likely to increase in their frequency and severity.⁷⁵ Governments will naturally have to undertake measures to prevent as far as is possible the spread of new pandemics but policy changes need to take place now to ensure that the domestic market is prepared for future pandemics. The World Health Organisation has suggested that clearer air and air quality will be vital to helping health systems in all countries deal with the future risk of pandemics.⁷⁶

Poor air quality contributes towards people dying early. Kings College London found that air pollution could cause up to 36,000 deaths a year.⁷⁷ In 2019, Public Health England published a review with recommendations to improve air quality in future developments.⁷⁸

Poor air quality is linked to the numbers of people in the UK suffering with respiratory diseases. In the UK, it is estimated that the cost to the NHS, and therefore the taxpayer, for respiratory diseases stands at around £11 billion.⁷⁹

The Government published a Clean Air Strategy in 2019,⁸⁰ and have also set some of the most ambitious Climate Change Objectives in the G7.⁸¹ It is now universally agreed that combatting poor air quality is vital to meeting our Climate Change goals, managing and preventing pandemics and also to improving public health.

Causes of Poor Domestic Air Quality

As more people work from home the air quality in residential accommodation needs to become an important issue that government gives attention to.

- Around 14 per cent of the UK population still smoke⁸² and we know that levels of smoking are higher among the more deprived communities in the UK.⁸³ Smoking and passive smoking have a direct impact on the quality of life for individuals and families and contribute towards 78,000 people in the UK dying each year.⁸⁴
- Deodorants and Perfumes, as well as domestic air fresheners are also a source of poor air quality within homes and can be toxic towards human health. According to the National Centre for Atmospheric Science and the University of York aerosol products are contributing significantly to poor air quality.⁸⁵

74 <https://www.jhsph.edu/covid-19/articles/how-indoor-ventilation-systems-can-help-prevent-or-permit-the-spread-of-covid-19.html>

75 <https://en.unesco.org/news/pandemics-increase-frequency-and-severity-unless-biodiversity-loss-addressed>

76 https://cdn.who.int/media/docs/default-source/climate-change/cop26-health-programme.pdf?sfvrsn=cde1b578_5

77 <https://www.kcl.ac.uk/news/uk-air-pollution-could-cause-36000-deaths-a-year>

78 <https://www.gov.uk/government/publications/improving-outdoor-air-quality-and-health-review-of-interventions>

79 <https://www.england.nhs.uk/ourwork/clinical-policy/respiratory-disease/>

80 <https://www.gov.uk/government/publications/clean-air-strategy-2019>

81 <https://www.gov.uk/government/news/uk-secures-historic-g7-commitments-to-tackle-climate-change-and-halt-biodiversity-loss-by-2030>

82 <https://www.ethnicity-facts-figures.service.gov.uk/health/alcohol-smoking-and-drug-use/adult-smokers/latest>

83 <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/drugusealcoholandsmoking/articles/likelihoodofsmokingfourtimeshigherinenglandsmostdeprivedareasthanleastdeprived/2018-03-14>

84 <https://www.nhs.uk/common-health-questions/lifestyle/what-are-the-health-risks-of-smoking/>

85 <https://online.ucpress.edu/elementa/article/9/1/00177/116770/Global-emissions-of-VOCs-from-compressed-aerosol>

- Non-methane volatile organic compounds are emitted from chemicals found in everyday products are used in the home, such as paint, carpets and cleaning products. 81 per cent of people are at risk of respiratory problems due to air quality in their homes.⁸⁶
- Pollution caused by passing traffic and other vehicles is also a contributor. Research by LondonAir found that many homes close to major roads or in narrow streets lined with tall buildings elevated the concentration of pollution in homes.⁸⁷

The decarbonisation of the British economy could create up to 1.7 million new jobs by 2030 according to Onward.⁸⁸ The decarbonisation agenda now has cross party support and is crucial to the governments Build Back Better agenda.⁸⁹

The UK construction industry is set build 3.3 million homes in the next 14 years.⁹⁰ The home air purification industry could benefit to the tune of £1.35 billion over the same period creating tens of thousands of new jobs and other associated commercial opportunities.

86 <https://www.envirovent.com/help-and-advice/why-ventilate/indoor-air-quality/dehumidifiers-vs-home-ventilation/>

87 <https://www.londonair.org.uk/londonair/guide/BusyRoad.aspx>

88 <https://www.ukonward.com/greeningthegiants/>

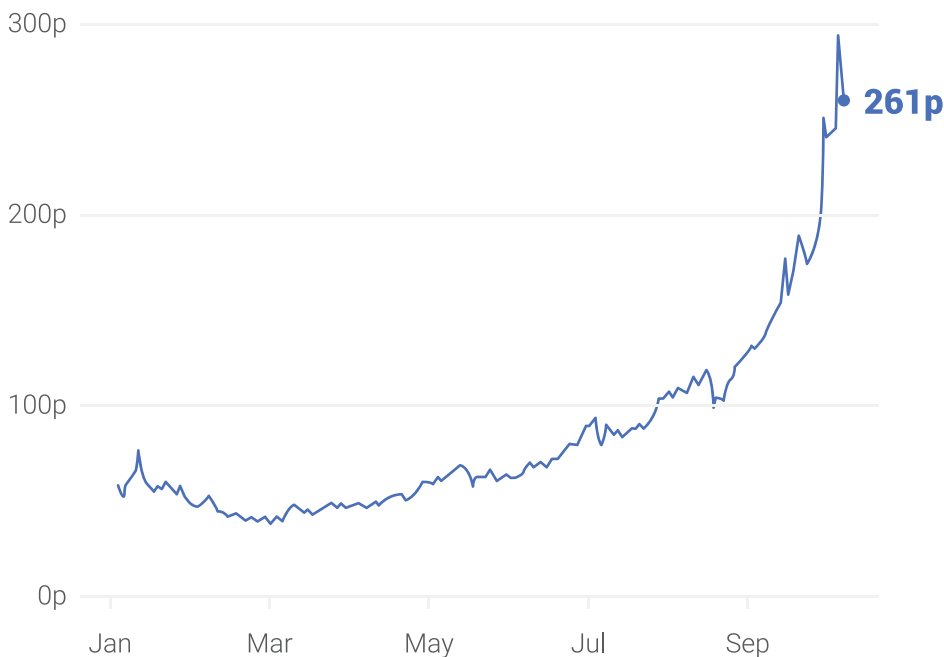
89 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/968403/PfG_Final_Web_Accessible_Version.pdf

90 <https://www.theb1m.com/video/top-5-construction-markets-by-2030>

8. Do not rule out Fracking

2021 has seen a significant increase in the cost of energy in the UK with forecasts that prices could increase further. Consumers have been warned that in 2022 an increase of up to 30 per cent could be felt by the spring.⁹¹ This will of course have a damaging impact on businesses that are not protected by the cap on energy, as households are.⁹²

Price per therm in 2021, pence



Source: Bloomberg. Last update: 7 October 11:30 BST ⁹³

There are measures in place to help households but the energy price cap to help consumers does not apply to businesses. There are a number of contributing factors to the high cost of energy this year. Supplies were depleted last year due to a particularly long winter, and, at the same time the global economies have started to re-open following lockdowns due to the pandemic which has placed additional pressures on supply.

In order to ensure business continuity and security the government should address explore how we can be more secure in our energy supplies and how we can source cheaper energy for consumers and for businesses. Despite the government moratorium, fracking could be a viable option given the huge deposits in northern England and the Weald Basin as demonstrated by the British Geological Survey,⁹⁴ as former Energy Secretary, Andrea Leadsom MP acknowledged “the huge potential of UK shale gas to provide a bridge to a

⁹¹ <https://www.ft.com/content/a0992398-9c1f-468c-ae8b-c434f1e3026f>

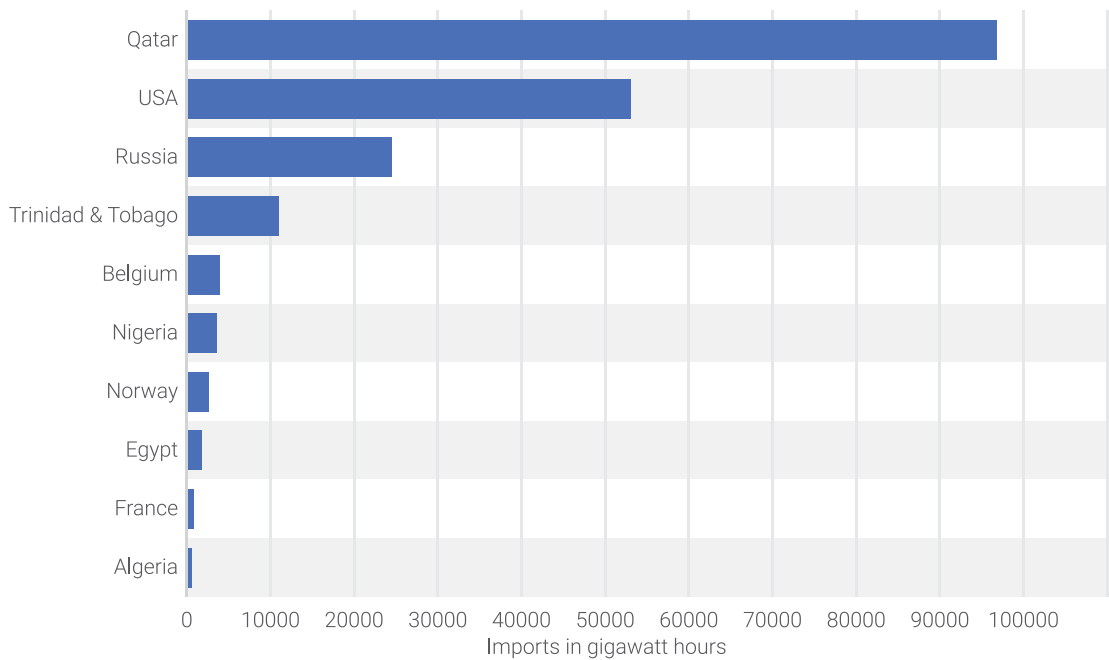
⁹² <https://www.ofgem.gov.uk/information-consumers/energy-advice-households/check-if-energy-price-cap-affects-you>

⁹³ <https://www.bbc.co.uk/news/business-58824121>

⁹⁴ <https://www.bgs.ac.uk/geology-projects/shale-gas/>

zero-carbon future”.⁹⁵ Fracking is dependent on drilling operations deep into the ground to reach rock formations called shale. High-pressure water pumps are then used to natural gas trapped inside. The borehole can be up to 10,000 feet in depth, which is encased to prevent collapse or water leakage.

In 2014, a report by UKOOG⁹⁶ found that the UK shale gas industry could generate £33 billion industry sectors by 2031 creating around 64,000 new jobs.⁹⁷ These include jobs in waste management, steel, rig manufacturing and specialist hydraulic equipment. Such a huge opportunity for job creation, energy security and supply should not be missed and the government should work with industry to explore whether in light of the current energy challenge facing the UK this is still a viable industry.



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At present the UK imports a significant amount of its gas from abroad. Alarmingly, a sizeable portion comes from Russia who has in recent years been an unreliable partner in international affairs. Such imports are cause of carbon emissions as a result of the vast distances over which the supplies are brought and there are also problems with the security of supply. Surely, the Government must endeavour to maintain a secure source of supply so that businesses and industry in the UK can continue to operate without serious disruption, or indeed risk of being cut off. Had the Government continued with natural gas from fracking, when the wind energy sources in the UK failed to generate enough electricity this year, the shortfall could have been met through fracking. This is also becoming more of an issue as North Sea gas is depleting with the Government forecasting that the UK could be importing as much as 70 per cent of its gas supplies by 2030.⁹⁹

95 <https://www.gov.uk/government/news/government-ends-support-for-fracking>

96 <https://business-hive.co.uk/wp-content/uploads/2014/05/here.pdf>

97 <https://www.gov.uk/government/news/getting-ready-for-shale-gas-supply-chain-estimated-to-be-worth-billions-as-new-environmental-measures-announced>

98 <https://www.statista.com/statistics/1121165/uk-Ing-imports-by-origin-country/>

99 <https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk>

In its letter to the Business Secretary in March 2021,¹⁰⁰ the Climate Change Committee acknowledged that even with current carbon reduction targets, the UK is still going to need to import some level of fossil fuels in the future to meet demand. Therefore, it would be sensible to produce those domestically through fracking while employing carbon capture technologies to mitigate any emissions.

British public opinion is, at present, quite hostile to fracking.¹⁰¹ This is largely due to fears about the risks associated with the industry stirred up by environmental campaigns, such as potential water contamination and earthquakes caused by hydraulic action. However, the United States pioneered this method and it transformed the American economy from one largely dependent on imports to being a net exporter. The British Government will need to determine whether it will continue to be reliant on imports in an increasingly unstable world, or whether it will take control of its own energy security.

¹⁰⁰ <https://www.theccc.org.uk/publication/letter-advice-to-the-uk-government-on-compatibility-of-onshore-petroleum-with-uk-carbon-budgets/>

¹⁰¹ https://www.exeter.ac.uk/news/documents/ASSIST_policy_brief-July-29-2019.pdf



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