

ESSAY COLLECTION

# North Sea Transition



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# CONSERVATIVE ENVIRONMENT NETWORK

**The Conservative Environment Network (CEN)** is an independent forum, Parliamentary caucus, and grassroots organisation for conservatives who support conservation and decarbonisation.

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# North Sea Transition

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*The Rt Hon Anne-Marie Trevelyan MP*

## *Ministerial foreword*

Anne-Marie Trevelyan was appointed as Minister of State (Minister for Energy, Clean Growth and Climate Change) at the Department of Business, Energy and Industrial Strategy on 8 January 2021. She was appointed as the UK International Champion on Adaptation and Resilience for the COP26 Presidency on 7 November 2020, and previously served as the Secretary of State for International Development from February to September 2020. Anne-Marie was first elected as Member of Parliament (MP) for the Berwick-upon-Tweed constituency at the 2015 general election.

The UK was the first major economy to embrace a legal obligation to achieve net zero carbon emissions by 2050 and in doing so end our contribution to climate change. Covid-19 has presented us with unique challenges, but has also presented an opportunity to grow back greener. That recovery must be clean to make our economy match-fit for tomorrow's challenges. The announcements made in our Ten Point Plan for a Green Industrial Revolution and Energy White Paper provide a clear market signal to developers, investors, and the broader supply chain that the UK intends to lead the way in low-carbon technologies.

Wednesday 16<sup>th</sup> June 2021 marked six months since the publication of the Government's Energy White Paper, which set out plans for a historic transformation of the UK's energy system for a cleaner, greener future – including fully decarbonising our electricity generation by 2050 and supporting up to 220,000 jobs by 2030. We have made significant progress since: commencing a major programme of retrofitting homes and public buildings to be more energy efficient; establishing a UK Emissions Trading Scheme; and publishing the landmark North Sea Transition Deal.

I am delighted that we have agreed a deal that will deliver benefits to both the oil and gas sector and our efforts on climate change. It will support approximately 40,000 high-quality direct and indirect supply chain jobs, deploy £14-16 billion in joint public and private investment to 2030, a 60 megaton reduction in UK greenhouse gas emissions, and support for the regions through a voluntary industry commitment to 50% UK content in energy transition projects. Not only will the deal support existing companies to decarbonise in preparation for a net zero future by 2050, it will also create the right business environment to attract new industrial sectors to base themselves in the UK, develop new export opportunities for British business, and secure new high-value jobs for the long-term.

The Industrial Decarbonisation Strategy, published on 17 March, included £31 million investment in important offshore and onshore engineering studies connecting industrial sites across East Scotland with access to world-class, safe carbon storage resources in the North Sea. This will play a significant part in decarbonising the North Sea sector. The new strategy will be underpinned by supporting existing industry to decarbonise and encouraging the growth of new, low-carbon industries in the UK to protect and create skilled jobs.

It will also give business long-term certainty to invest in home-grown decarbonisation technology rather than outsourcing industrial activity to high-emission countries around the world.

We have also made significant progress since the publication of the 10 Point Plan in November 2020. On 4 May, the UK broke a new wind power record – with both onshore and offshore wind turbines generating 48.5% of the electricity grid in England, Scotland, and Wales. Carbon capture and storage and hydrogen projects across the UK that will help industry to decarbonise and provide a green recovery from the Covid-19 pandemic have been awarded £171m in funding, representing another significant step towards the Government’s net zero ambitions.

We are focused on investing in the UK’s most important asset – our workforce – to ensure that people have the right skills to deliver the low-carbon transition and thrive in the high-value jobs this will create. To ensure we have the skilled workforce to deliver net zero and our Ten Point Plan, we have launched the Green Jobs Taskforce, working in partnership with business, skills providers, and trade unions, to develop plans for new, long-term and good quality green jobs by 2030 and advise what support is needed for people in transitioning industries.

In the coming year, we will set out further plans for reducing emissions across all the UK’s major economic sectors as well as our overall Net Zero Strategy ahead of COP26, which will clearly set out our pathway to achieving net zero emissions by 2050.

**The Rt Hon Anne-Marie Trevelyan MP**

Minister of State for Energy, Clean Growth and Climate Change  
and COP26 Champion on Adaptation and Resilience



*Baroness Altmann CBE*

## **Saving up for the future: how to finance the North Sea Transition to clean energy**

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Baroness Altmann is a Conservative Peer and an award-winning expert on later life issues – particularly pensions and retirement policy, investment, savings and social care funding. She has an economics doctorate from LSE and an institutional asset manager in the City for many years. She has worked on all aspects of pensions and pensions policy, advising governments, regulators, industry bodies, corporates, finance firms, trustees and consumer groups, and was Minister of State for Pensions from 2015 to 2016. She is on several advisory Boards, including pension fintech Cushon, Huntswood Group and social enterprise business SalaryFinance.

Finance will be essential for decarbonising the UK's energy sector, as it is for most economic activities. The Government needs to put the right frameworks in place to attract private finance to renewables projects and other net zero technologies. Simultaneously, large companies that have assets which are at risk of being negatively impacted by climate change or climate policies must plan for the transition to protect their workers, shareholders, and supply chain partners. This is a particularly crucial issue for the UK, which hosts both a major global financial centre and one of the biggest and most advanced oil and gas sectors in Europe.

Oil and gas companies have significantly more fossil fuel assets on their balance sheets than are likely to be compatible with the Paris Agreement objective of limiting global warming to 1.5°C or 2°C.

This ‘production gap’ between fossil fuel production and our climate targets is set to grow as fossil fuel exploration continues. We only have twenty-nine years to reach net zero globally, but oil platforms can have a lifespan of more than forty. So growing the number of fossil fuel assets either means we miss our enshrined carbon targets, or the assets become ‘stranded’ by the transition, risking the financial viability of companies and the jobs that rely on them.

Of course this isn’t a problem unique to the United Kingdom. Globally, to be aligned with the Paris temperature objectives, production of coal, oil and gas needs to decrease by 11%, 4% and 3% respectively every year until 2030, but a UN Environment Programme report estimated that production of each of these fuels will instead grow by 2% annually. As host of COP26 and as a country with relatively low national economic dependency on fossil fuel production, failure to address our own production gap would undermine the Government’s clear foreign policy priority, expressed in the Integrated Review of Security, Defence, Development and Foreign Policy, to lead the world on climate change.

The global collapse in demand for fossil fuels, largely due to Covid-19, caused turmoil in the oil and gas industry across the world. Here in the UK, 12,000 job losses in the North Sea oil and gas sector have been estimated. But the decline of the domestic industry predates the pandemic; our reliance on energy imports has been steadily rising for decades and is now back up to 1970 levels. This is unlikely to be reversed post-Covid due to global economic trends away from oil and gas in favour of ever more competitive and cheap renewable energy.

Combined with the political commitment to net zero which necessitates phasing down fossil fuel production, financing of more oil and gas infrastructure in the North Sea heightens the risks of those assets becoming stranded.

In the economic recovery from Covid-19, the Government is prudently embracing the global trend toward renewables, backing floating and fixed offshore wind in particular as part of the Prime Minister's plan to become the "Saudia Arabia of wind power". It can and should be more ambitious with our move away from fossil fuels by smoothing the flow of capital towards innovative clean energy solutions, and harnessing investor pressure to nudge traditional energy companies in a greener direction. Green finance can help us turn the North Sea story from one dominated by the decline of industry, to one about a new prosperity for communities and for future generations, by harnessing offshore wind.

While many new businesses, such as Tesla, have already engaged in the fight against climate change, the current oil and gas companies can be part of the solution too. The sector recently agreed a North Sea Transition Deal with the Department for Business, Energy and Industrial Strategy to reduce their scope one and two emissions by 50% by 2030. This is an important step in tackling their emission footprint. The next step, however, is shifting their portfolios of assets and investments over to clean energy. This is where finance can play a key role.

The Government, determined to be a leader in sustainable finance, has already made some progress on this. Last year, the Chancellor announced the UK's intention to be the first G20 country to mandate climate disclosures by large companies and financial institutions across our economy by 2025, with many coming into force by 2023, going beyond the Taskforce for Climate-related Financial Disclosures' recommendations.

All of the UK's principal financial regulators now have an explicit mandate to consider climate-related risks and trends in their decisions. Further, the Pension Schemes Act 2021 has made the UK the first major economy to make the TCFD's recommendations a statutory requirement for pension schemes.

There's no doubt that these are trailblazing measures which set examples for other countries to follow, and we ought to be proud of them. But they remain just the first steps we must take. Mandatory climate risk disclosure, for example, improves the information available to investors when deciding where to put their capital, and to current shareholders when scrutinising a company's financial performance. But they can't deliver the transition to net zero on their own, and not necessarily in an orderly fashion that safeguards investors from risks and workers from potential unemployment, nor facilitate the investment required for net zero projects.

I hope that the Government will build on mandatory climate risk disclosure by moving towards mandatory climate transition plans. This would ultimately require all listed companies to develop strategies for aligning their investments and activities with the goals of the Paris Agreement. As recommended in a recent Policy Exchange report, these strategies could be put to a distinct shareholder vote at a company's Annual General Meeting. This seems to be an appropriate regulatory approach, as the associated risks faced by listed firms, including financial services companies, should be of primary interest to the company's long-term shareholders.

This is better than simply calling for divestment from polluting businesses. A stock's value isn't destroyed by being sold, therefore the climate impact of the company's operations will not necessarily be improved by such actions.

It seems to me that divestment simply risks the stock being bought by another investor who may not care about the environment or climate change, but intends to benefit from short-term gains without worrying about the underlying long-term business. Selling a share on climate grounds is simply giving up power to pressure a company to divert its investment into green energy production.

I do recognise that the divestment movement has had an important impact on raising awareness of the role of finance in tackling climate change, but meaningful improvements on the ground are more likely to be achieved through climate-concerned, environmentally-conscious investors engaging with fossil fuel companies and pushing them to change their strategies. Oil majors such as BP and Shell have recently responded to investor pressure to publish climate strategies which, while not perfect, mark a significant step forward.

Through mandating companies to establish climate plans with roadmaps for becoming sustainable, we can also harness the skilled workforces and capital of oil and gas companies, to deliver a successful and fair transition for North Sea communities. Mandatory climate plans would be another arrow in the Government's quiver for COP26 in Glasgow. Given our prowess in financial services due to the City of London's position at the apex of the global financial system, such a policy may inspire and embolden other countries to do the same, thereby expediting the flow of global finance away from fossil fuels and towards renewable energy.

Greening the financial system is crucial if we are to transition away from fossil fuels to a cleaner, more resilient future. Government must work with the private sector to improve planning for climate change and the net zero transition, and in the process safeguard the stability of our financial system and the livelihoods of workers.

It will be popular too: the Make My Money Matter campaign has caught people's attention because they care about how their savings are being invested and their environmental impact. The Government has made an excellent start in getting our financial sector ready for net zero, but now we need to make it happen in practice. Mandatory climate plans are a logical next step.



*Sir Bernard Jenkin MP*

## **A fossil fuel non-proliferation treaty: learning from other forms of international cooperation in the battle against climate change**

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Sir Bernard Jenkin has served as a Member of Parliament since 1992, having been elected as the Member of Parliament for North Colchester in 1992, North Essex in 1997, 2001 and 2005, and Harwich and North Essex in 2010, 2015 and 2017. He is currently Chair of the House of Commons' Liaison Committee. Bernard's political interests include foreign affairs and defence, terrorism and security, trade, small businesses, the UK's relationship with the EU, the constitution and the environment.

World leaders have a huge amount invested in the COP process. The central idea is very simple: the UN will get national governments to sign up to national domestic carbon emissions targets to limit global warming to “well below” 2 degrees Celsius.<sup>1</sup>

Unfortunately, it will not work. Despite the existing targets and aspirations, the carbon dioxide concentration in the atmosphere is going up at an increasing rate. Since the baseline of 1990, global emissions have roughly doubled.

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1. As agreed at COP21 (Paris) in 2015 along with an aspirational target of 1.5 degrees, thanks in no small part to the lobbying of Pacific Island states and the UK's support for the “coalition of high ambition”.

As the UK gears up for COP26 in Glasgow, now is the time to examine the history and problems with the existing approach; and to explore additional mechanisms for limiting climate change, building on successful forms of international cooperation: free trade and nuclear non-proliferation.

The United Nations Framework Convention on Climate Change (UNFCCC) was ratified in 1994. Its “ultimate objective” was to achieve “stabilization of greenhouse-gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”<sup>2</sup>

The first step to implement the Framework Convention was taken in the Kyoto Protocol in 1997. Developed countries, which did not then include China, had to accept caps on carbon emissions within their borders. Developing countries were supposed to take measures to reduce emissions but did not need to apply caps.

The US never signed up. Japan and Canada gave up early. The protocol had to be ratified by at least 55 countries, covering 55% of global emissions in 1990. Russia’s entry got Kyoto over the line, but only on paper: its emissions were in freefall anyway as inefficient Soviet-era energy-intensive industrial production collapsed after the fall of the Berlin Wall.<sup>3</sup> Western Europe was de-industrialising too, moving towards service industries. These reductions had little to do with Kyoto.

The agreement missed the big driver of global emissions: the use of coal in developing countries. Since the mid-1990s, coal has risen from supplying around 25% of the world’s primary energy to almost 30%.<sup>4</sup>

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2. William Nordaus. *The Climate Casino*. 2013. 193
  3. Dieter Helm. “The Kyoto approach has failed”. *Nature*. 2012. <https://www.nature.com/articles/491663a>
  4. International Energy Agency. *Global Energy Review 2021*. <https://www.iea.org/reports/global-energy-review-2021/coal>

The protocol as first designed would have covered two-thirds of global emissions in 1990; the actual scope in 2012 was barely one-fifth.<sup>5</sup>

There is a topsy turvy game of climate politics, where business leaders and politicians gain political capital for trumpeting their “green” credentials, while global carbon emissions continue to climb. The UK brought emissions down 44% overall between 1990 and 2019, and by two-thirds in the power sector.<sup>6</sup> However, national commitments under the UNFCCC are set for territorial emissions, not carbon consumption. This means goods produced abroad but consumed within the UK do not count towards UK carbon emissions. Neither does international aviation or shipping. From 1990 to 2005 Professor Dieter Helm estimates that, while the UK’s reported carbon emissions fell by around 15%, UK carbon consumption went up by around 19%.<sup>7</sup>

The 2009 Copenhagen meeting was designed to negotiate a successor agreement for the post-Kyoto period. It ignored the flaws of the previous system. The resulting accord adopted a global 2 degrees target. Countries were unwilling to make binding commitments and were concerned about the division of costs; the meeting concluded without a substantive agreement to limit emissions.

At Paris, the main world players were meant to set targets that would jointly keep global warming below 2 degrees. Most countries came up with their own proposed national targets. They are voluntary, not legally binding, and they do not add up to the 2 degrees target.

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5. William Nordhaus. *The Climate Casino*. Ibid. 248
  6. “UK enshrines new target in law to slash emissions by 78% by 2035.” 2021 <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>
  7. Dieter Helm. “Too Good To Be True? The UK’s Climate Change Record.” 2007. <http://www.dieterhelm.co.uk/assets/secure/documents/Carbon-record-2007.pdf> Helm also criticises the Climate Change Committee estimates of carbon consumption in his latest book. Dieter Helm. *Net Zero*. 2021. 8

China has promised to peak its emissions by 2030 and to get to net zero by 2060. The rising number of coal power stations puts 2030 in doubt, though many new coal-fired power stations have been built as part of measures to stimulate the economy and they have not been running at full capacity, because of the poor economics of coal. Even so, at China's current CO<sub>2</sub> emissions growth rate, by 2050 there will be four times China's current carbon emissions, compared to 2020.<sup>8</sup>

President Biden's jobs plan trumpets its green credentials but spreading \$1trn of spending over eight years comes to around 0.5% of current GDP annually. That is far short of any reasonable estimate of the investment needed for decarbonisation.<sup>9</sup>

John Kerry has warned the EU against implementing a carbon border adjustment tax. However, this says more about the domestic constraints of US politics than it does the scale of the threat from climate change.

Speaking at an International Energy Agency conference Raj Kumar Singh, India's minister for power, said "2060 sounds good, but... I would call it, and I'm sorry to say this, but it is just a pie in the sky." He then singled out developed countries with far higher emissions per capita than India. Efforts to mediate the global North-South divide will define COP26.<sup>10</sup>

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8. Dieter Helm. COP26: Too much hype, too little substance. 2021 <http://www.dieterhelm.co.uk/natural-capital/environment/cop26-too-much-hype-too-little-substance/>
  9. Adam Tooze. "America's race to net zero: Does Joe Biden's climate plan go far enough?" New Statesman. 2021 <https://www.newstatesman.com/world/north-america/2021/04/america-s-race-net-zero>
  10. Matt McGrath. "Climate change: Net zero targets are 'pie in the sky'". BBC. <https://www.bbc.co.uk/news/science-environment-56596200> Quoted in. Dieter Helm COP 26. See above

Fossil fuel production is a classic example of the prisoner's dilemma. Countries that voluntarily reduce fossil fuel production for domestic use, with all the access to cheap energy and jobs it brings, put themselves at a disadvantage to other countries that decarbonise more slowly.

Efforts to decarbonise Europe have increased energy prices, both via emissions trading and subsidies for renewables. Europe buys a lot of renewable technology and electric cars. China has cheap energy costs and loose environmental legislation. For all the talk in the UK and Europe of pursuing a “green industrial strategy”, production of wind turbines, photovoltaic panels and batteries is concentrated in China.<sup>11</sup>

Several solutions have been floated to combat climate free-riding, most notably the idea of a “climate club”, proposed by Nobel Prize-winning economist William Nordhaus.<sup>12</sup> Countries that sign up to the climate club would apply a single carbon tax based on the social cost of carbon. Free riders would be punished by a common external tariff, sufficient to prevent carbon dumping.

Such neat technocratic solutions are difficult to achieve in practice.<sup>13</sup> There is a large volume of economic literature on the cost-benefit analysis of climate change. Think tanks produce ingenious ways of transitioning to electric vehicles. However, unless nations cooperate and take collective action to stabilise the carbon concentration in the atmosphere, all is for naught. We should seek to understand how technocratic utopias can become effective, if flawed, realities.

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11. Dieter Helm. Cost of Energy Review. 2017. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/654902/Cost\\_of\\_Energy\\_Review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/654902/Cost_of_Energy_Review.pdf)
  12. William D. Nordhaus. Prize Lecture. 2018. <https://www.nobelprize.org/uploads/2018/10/nordhaus-lecture.pdf>
  13. Nordhaus is chastised for his pragmatism.

Global systems of free trade, derided by many environmentalists, provide useful insights. It is first worth noting that progress takes time. The General Agreement on Tariffs and Trade (GATT) was signed in 1947 but it was only in the 1990s that globalisation really began to take off.

Until the late 1990s, only about 30 percent of the developing world was catching up with the economic frontier; the rate of catch-up was about 1.5% per capita per year.<sup>14</sup> Since the late 1990s, nearly three quarters of the developing world started catching up, at an accelerated annual pace of about 3.3% per capita.<sup>15</sup>

This remarkable success story, in many ways unparalleled in human history, was cobbled together with uncomfortable trade-offs. The battles over the nature of the European Common Market are case in point. German free marketeers negotiated the Spaak Report prioritising the four freedoms, goods, capital, services and labour, over the more interventionist model of the coal and steel community.

The Treaty of Rome, signed in 1957, however, left open the issue of agricultural subsidies. Addressed in 1962, with the Common Agricultural Policy (CAP), the end state of the EEC was more mixed, including politically determined prices as well as variable import levies and export subsidies for major products.<sup>16</sup>

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14. Arvind Subramanian and Martin Kessler. "The Hyperglobalization of Trade and Its Future". 2013 <https://www.piie.com/sites/default/files/publications/wp/wp13-6.pdf>
  15. Although developing country growth slowed during the global financial crisis (2008–12), the rate of catch-up with advanced countries was not materially affected and remained close to 3 percent.
  16. Quinn Slobodian. *Globalists: The End of Empire and the Birth of Neoliberalism*. 2018. 190.

Free trade in agriculture has never been adequately addressed. Questions of “natural capital” could encourage us to revisit these settlements. Brazil has asked for payment to stop burning the Amazon. China, in its agreement with the US, has made transfers a clear principle.

In the UK, agriculture is about 0.6% of GDP. A third of that output is direct subsidies and another third is the pollution and other costs agriculture causes, from red diesel to nitrates and pesticides in water systems, to carbon and air pollution.<sup>17</sup> A global system of subsidies for natural capital would be unpopular with the National Farmers’ Union but could generate buy-in from the global south.

Another imperfect but vitally important development in the second half of the 20th century was nuclear arms control, in particular the Nuclear Non-Proliferation Treaty (NPT). Unlike the gradualist system of global free trade, it was negotiated in just three years.

There were five nuclear powers when the NPT was signed in 1970; there are only nine today. The additional countries are divided between those who signed the treaty and are in breach, like North Korea and Iran, and those countries who never signed, like Israel, India and Pakistan.<sup>18</sup>

One country unilaterally disarmed (South Africa) but the remarkable success has been that so few new countries have sought to acquire nuclear weapons technology. This is because each signatory could have confidence that other countries would refrain from proliferation.

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17. Dieter Helm. “British Agricultural Policy after BREXIT.” 2016. <http://www.dieterhelm.co.uk/natural-capital/environment/agricultural-policy-after-brexite>

18. This includes Israel who are undeclared.

There are still more than 10,000 nuclear warheads on Earth, so current arsenals are still large, but they are about one-fifth the size of what they were a half-century ago.<sup>19</sup>

The so-called “Additional Protocol” has created the right for inspectors to go to places where they suspect misconduct, even if those sites are not officially declared by the country in question. It has had at least some effect in the attempts to enforce agreements with Iran.

There is one fundamental difference between supporting nuclear disarmament and reducing carbon emissions: that is that if you avoid spending money on nuclear weapons, you can spend the money on more productive things, but if you accept targets for reducing CO2 emissions, it will cost your economy, at least in the short term. Nevertheless, the nuclear NPT was born out of international recognition of an existential threat to civilisation from nuclear weapons proliferation. By facing climate change as a threat of comparable magnitude, if not immediacy, a similar approach can be explored in respect of the extraction of fossil fuels under a supply-side treaty. The treaty would not detract from the UNFCCC process: if it could be agreed, it would in fact provide substantial underpinning of the Paris Agreement.<sup>20</sup>

Even if the reduction of carbon emissions falls short of the Paris climate goals, the fall in demand for fossil fuels may be so rapid that it leads to a disorderly collapse of many fossil fuel producers.<sup>21</sup>

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19. Michael E. O’Hanlon et al. “Experts assess the nuclear Non-Proliferation Treaty, 50 years after it went into effect.” The Brookings Institute. <https://www.brookings.edu/blog/order-from-chaos/2020/03/03/experts-assess-the-nuclear-non-proliferation-treaty-50-years-after-it-went-into-effect/>
  20. Geir Asheim et al. “The case for a supply-side climate treaty: The Paris Agreement can be strengthened by a treaty limiting global fossil fuel supply”. 2019. [The case for a supply-side climate treaty | Science \(sciencemag.org\)](https://www.sciencemag.org/2019/08/geopolitical-implications-future-oil-demand)
  21. Paul Stephens “The Geopolitical Implications of Future Oil Demand”. 2019. <https://www.chathamhouse.org/2019/08/geopolitical-implications-future-oil-demand>

The biggest incentive for a fossil fuel exporter state to join a supply-side treaty would be the prospect of producing progressively smaller volumes at prices which would be supported by constricting supply.<sup>22</sup>

The hardest nuts to crack would be countries that produce a lot of fossil fuel for domestic consumption. A strong supply-side treaty, backed by the kind of authority, institutions and inspection regime used in the nuclear NPT, would make life difficult for go-it-alone free-riders through appropriate sanctions.

A well-designed supply-side treaty would create a new market in fossil carbon. Parties to the treaty would receive freely allocated tradeable extraction permits. Such permits should be quantified in terms of carbon extraction units (CEUs), with the number in global circulation being dictated in the first instance by an agreed global fossil carbon budget.

The unit price of fossil carbon extraction units (CEUs) could well find a level where it would be economic to develop geological sequestration/storage schemes to generate carbon sequestration units (CSUs), that could be traded for existing or additionally issued CEUs.<sup>23</sup> This would make voluntarist rationales for CSUs such as carbon take-back obligation redundant.<sup>24</sup>

The first major challenge for negotiation of such a treaty regime would be determining the global fossil carbon budget, effectively agreeing the risk of exceeding the Paris goal of “well below” two degrees.

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22. Geir Asheim et al., *op. cit.*

23. Paul D. Zakkour et al. “Progressive supply-side policy under the Paris Agreement to enhance geological carbon storage”. 2020.  
<https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1803039>

24. <https://carbontakeback.org/>, including Margriet Kuijper et al. “Carbon Takeback Obligation A Producers Responsibility Scheme on the Way to a Climate Neutral Energy System”. 2020. (for Dutch Ministry of Economic Affairs and Climate Policy, Energiebeheer Nederland, Nogepe and Equinor)

The second major challenge would be agreeing the basis for allocation of CEUs. An equitable and transparent allocation of CEUs could be proportional to countries' populations. Those countries without fossil fuel reserves would be free to sell their CEUs at a time of their choosing.

An important intermediate step towards any supply-side treaty would be a global registry of fossil fuel production, reserves and resources licensed for exploration.<sup>25</sup> This alone would apply political pressure to high-capacity free-riders who continue to produce unsustainable amounts of fossil fuels, though poorer less developed countries in this situation would demand offsetting benefits.

As we approach COP26, now is the time to learn from earlier mistakes. Kyoto and successor UN treaties have gifted the UK a good deal of political capital, but they have done little to halt climate change.

Free trade and nuclear non-proliferation demonstrate that treaty frameworks can create positive incentives. We should not be afraid of trade-offs. The 1.5 degrees target may be dead in the water but that should not prevent us from setting and achieving practical goals. As the NPT illustrates, progress is rarely perfect.

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25. Rebecca Byrnes, for The Fossil Fuel Non-Proliferation Treaty Initiative "A Global Registry of Fossil Fuels White Paper", 2020. <https://static1.squarespace.com/static/5dd3cc5b7fd99372fbb04561/t/5f5827f7547462083e8a4aa5/1599612937202/A+Global+Registry+of+Fossil+Fuels+%E2%80%93+White+Paper.pdf>



*Maurice Golden MSP*

## The North Sea and the Union: why staying together is vital for the transition

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Maurice is a Member of the Scottish Parliament for the Scottish Conservatives and represents the North East of Scotland. He was elected in 2016 and is a champion of the Circular Economy. Prior to being elected, Maurice led the Circular Economy Programme for Zero Waste Scotland having joined the organisation in 2011. He has fifteen years' experience working in the waste and energy sectors previously working for Ofgem and Consumer Focus. He is a Fellow of the Royal Society for the encouragement of Arts, Manufactures and Commerce, an Associate Member of the British Veterinary Association and a Chartered Waste Manager.

The UK was the first major economy in the world to set a legally binding target of net zero by 2050, and the Scottish Conservatives were proud to support the 2045 target for Scotland. Nowhere will the net zero transformation be more apparent than the North Sea oil and gas sector, which has powered the UK for more than a generation. The threat of Scottish independence, however, means a successful and fair transition is not guaranteed: thousands of jobs and billions in potential investment are at stake, with a danger of whole communities being negatively affected.

Fortunately for the oil and gas industry, this drive for net zero has coincided with the emergence of a new outward-looking Global Britain: a country determined to start a green industrial revolution as it builds back better from the pandemic.

One which offers the sector a chance to seize opportunities, develop skills, and launch the technologies that will power the planet for decades to come.

We have already seen some early signs of this dynamic new approach. A series of trade agreements have been signed with countries around the world in the political equivalent of a heartbeat after leaving the EU. The incredible success of Britain's vaccination programme was made possible through partnering with private enterprise and taking the necessary risks - supporting early research, investing in production facilities and moving fast to place orders.

Scottish nationalists are quick to talk down Global Britain as it does not align with their inward-looking separatist agenda. The reality is that the UK's track record provides reassurance to an industry completely upending its business model to reach net zero. On decarbonisation itself, the UK is decarbonising at a blistering pace – averaging 3.7% annually this century – the fastest of any major economy. That has seen emissions fall by a staggering 28% since the Conservatives came to power in 2010.

Contrast that with the SNP's record. They missed their own legal emissions reduction target for the last three years; Scotland's recycling rate is worse now than it was in 2016; they are on course to miss their renewable heat target; and they have failed to meet their own biodiversity targets, with one in nine species in Scotland being threatened with extinction.

Protecting the environment is extremely important to voters, but it is jobs that ultimately hit home with individuals and communities. Here again the UK's track record speaks for itself with over 450,000 people working in low-carbon jobs thanks to the actions of the Conservative Government in Westminster, which recognises the need to prioritise local jobs and supply chains.

In Scotland, meanwhile, there was a stunning failure to capitalise on the transforming energy landscape by the SNP Government, despite our vast potential. The enormous expansion of wind power in the early part of this century saw Alex Salmond promise 28,000 green jobs by 2020, but fewer than 2,000 materialised, with most going abroad. It still remains uncertain whether the SNP's promised green jobs will be seen here in Scotland at all.

The SNP have a dismal track record in delivering Scottish jobs thanks to their approach of focusing on headlines at the expense of delivery and detail. Hugely expensive state interventions that generated photo opportunities have seen ferry construction run years behind schedule and the Bi-Fab decommissioning yard slip into administration. This can be contrasted with the Scottish Conservatives' proposals to use public procurement to favour local suppliers to help retain community wealth and build circular economies. Yet this has been met with indifference from the nationalists.

This all points to a lack of any serious strategic low-carbon vision for Scotland. And the over reliance on state intervention will not create a dynamic and flexible low-carbon economy that can compete on a global stage.

This lack of vision is all the more striking given the size of the prize. At least 60% of North Sea oil and gas platforms will be decommissioned by 2030 – generating up to £7.7 billion of economic activity and sustaining as many as 18,000 jobs. However, a combination of economic shock from the pandemic, fragmented field ownership and fluctuating commodity prices has made it hard to set long-term targets. And where the British Government has been proactive in smoothing the path – firstly through a sector transition deal – we hear little from the SNP, whose Circular Economy Bill is missing in action.

But where the SNP have no answers, the United Kingdom has stepped up with an ambitious 10 Point Plan for a green industrial revolution. It contains a welcome commitment to create a quarter of a million green jobs as part of the drive to ‘level up’ the whole country. Exactly the reassurance North Sea workers in my region who are worried about the future need.

Of particular relevance to Scotland’s North Sea workers and communities are four key commitments: expansion of offshore wind capacity, development of floating offshore wind (FLOW) and carbon capture and storage (CCS), and kickstarting a mass market for hydrogen.

The first of these will see offshore wind capacity quadruple to 40GW by 2030 – enough to power every home in Britain. Crucially, the expansion will support up to 60,000 jobs, which oil and gas workers are well placed to fill given their highly transferable skill sets. The expansion also makes the electrification of offshore platforms easier by tying them to offshore generation – allowing emissions to be cut.

FLOW will be important in helping the Government to deliver its promise of powering every home with wind by 2030. A new £92 million fund aims to unlock the ability to situate turbines in deeper waters with stronger and more consistent winds and deliver the 1GW of FLOW by 2030 target (much of the UK’s FLOW capacity will be based around Scotland). That will be of practical benefit, of course, but it is also a sign of Britain’s intent not to wait but to set the pace for others to follow.

CCS will be critical to Scotland’s emission pathway. Given the unique geographic availability of disused North Sea oil and gas fields to act as carbon storage sites, it provides the potential to turn the North Sea into an international carbon sink. £1 billion of UK Government funding will establish CCS clusters at sites including Grangemouth with up to 50,000 jobs supported across the UK.

Again, oil and gas workers are well suited and polling suggests they are enthusiastic for these jobs. As a bonus, existing infrastructure can be repurposed: a pipeline used in construction is worth five times as much as its scrap value.

On the hydrogen front, the UK is currently committed to producing 5GW in low-carbon hydrogen by 2030. Production will use gas reforming in conjunction with CCS, which puts the North East of Scotland in a prime position to be at the centre of this new industry. This is an industry which could still be producing as much as a third of Britain's hydrogen supply by 2050 even as green hydrogen comes online.

It is encouraging to see that these initiatives are squarely in line with the Committee on Climate Change's recommendations. Their Sixth Carbon Budget called for the transformation of Britain's energy systems which includes CCS and hydrogen, and the response from the industry has been positive with the chief executive of Oil and Gas UK saying, "*... the UK's changing oil and gas industry is stepping up*".

The work has already started with the Chancellor committing another £34 million to the North East of Scotland. This will support a globally competitive hub for clean energy, including hydrogen, and the recent North Sea Transition Deal which will help the industry and its workforce diversify away from oil and gas.

These efforts are part of a £12 billion investment in net zero that will ultimately unlock three times as much private sector investment by 2030. That will be a huge vote of confidence in the long-term success of the North Sea, Scotland and the UK.

This is why Scotland benefits from the economic might of the Union: as a G7 country, the British economy can absorb the early risk needed to attract that investment. An independent Scotland could not possibly justify that level of risk relative to its economy.

Even now, investment into Scotland faces the needless barrier of uncertainty caused by continual threats of another independence referendum. We should instead be focusing on building back better after the pandemic together with the rest of the United Kingdom.

This makes it all the more important that this Conservative Government strives to create opportunities for individuals and businesses rather than creating uncertainty, burdens and barriers. To build a culture that rewards those willing to experiment and push the envelope of success.

And success means more than just managing the decline of the oil and gas industry. It means setting the bar high to ensure the transition to a low-carbon economy is a fair one for every North Sea worker, family and community.

All this is achievable through the great advantage Scotland has: being part of the United Kingdom. Scotland must focus on delivering projects best suited to Scottish needs by utilising areas where Scotland has a comparative advantage. For example, linking renewable opportunities with our oil and gas industry expertise whilst still benefiting from projects and supply chains operating across the UK. Those who would prefer to gamble our workers' futures on independence should remember that it has always been a bad bet to wager against the United Kingdom.



*Laura Sandys CBE*

## **Closing gaps and building bridges: how to migrate the oil and gas sector to low-carbon energy**

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Laura Sandys CBE is a CEO of Challenging Ideas and a former Conservative MP for South Thanet. She is a policy expert on energy, digitalisation, food and wider Net Zero strategies publishing several reports on the energy transition. She has co-chaired a report on a Just Transition (the IPPR's Environmental Justice Commission) addressing the need to design energy policies around those who have the most to lose.

Many talk about the demise of the North Sea economy. This is totally wrong. The North Sea is one of our greatest natural assets. It has been the source of our energy today and in the past, but it is also the wellspring of the energy of the future – wind.

So the North Sea Transition is not about abandoning the skills, businesses and opportunities of the North Sea but of capturing its extraordinary potential so that it is fit for the future.

Throughout all economic and societal transformations, there are winners and losers. What we must learn, however, is that we do have the power, agency and ability to mitigate the impacts on the losers – and possibly even deliver a win-win outcome for those who feel most at risk.

The risk of losing out during our transformation to a low-carbon economy is never more evident than for those who work and operate in the North Sea in the oil and gas sector: those thousands of companies and their employees who work as part of the oil and gas supply chain are concentrated in a few key constituencies.

We have, I hope, learnt from what happened in mining communities. Whatever its size, closing down a community's whole economic activity strikes a devastating blow to people's lives and, just as importantly, to the wider local economy. We also learnt that quick fixes to get these communities to "bounce back" were illusory and they are still living with the consequences.

So it is incumbent on us to combine accelerated, effective and determined action to decarbonise with very clear bridges for these communities to restructure, adjust, repurpose and reskill to become not just resilient to climate policies, but to thrive.

Through the work the Institute for Public Policy Research (IPPR) has done through the Environment Justice Commission (that I am privileged to co-chair with Caroline Lucas and Hilary Benn), we tasked ourselves to examine the thorny issues and what is needed to support the migration of jobs and businesses from the fossil economy to the low-carbon nation we need.<sup>1</sup>

The first thing to say is that we shouldn't double down on the increasingly uneconomic business model of conventional oil and gas production. That's why our commission backed reform to the oil and gas regulatory regime that currently requires maximum economic recovery from the North Sea basin.

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1. IPPR, *Net Zero North Sea*, 2020. <https://www.ippr.org/files/2020-12/net-zero-north-sea-nov2020.pdf>

Instead, we should align extraction with our commitments under the Paris Agreement, focus our people and investment on the industries of the future, and look forward with optimism.

There is good news, and of course more challenging issues that need to be addressed.

On the positive side, the communities that will be most impacted are not resistant to change and recognise the importance of combating climate change, though they're rightly not up for taking a disproportionate hit to their prospects on behalf of us all. The climate juries that IPPR ran in Tees Valley<sup>2</sup>, South Wales<sup>3</sup> and Aberdeen surprised us with their determination to combat climate change (and they were not selected from the usual suspects!)

But where is the plan to provide the bridge from one economic model to another?

The skills transfer is interesting and shows that offshore wind, offshore grids, carbon capture and storage (CCS), hydrogen production and greening industrial processes have many parallels to the skills existing in the oil and gas sector. This isn't to say, however, that at both the individual and also SME level there doesn't need to be retraining support, loans for new equipment and support for management to understand new business opportunities. These support packages need to be tailored to different areas of business.

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2. IPPR, Tees Valley and County Durham Climate and Fairness Panel, 2021, [https://www.ippr.org/files/2021-02/1614076566\\_ejc-cj-teesvalley-feb21.pdf](https://www.ippr.org/files/2021-02/1614076566_ejc-cj-teesvalley-feb21.pdf)
  3. IPPR, South Wales Climate and Fairness Panel, 2021, <https://www.ippr.org/files/2021-03/south-wales-climate-and-fairness-panel-briefing-march21-rfw.pdf>

The economic opportunities are significant. The creation of new industry sectors is a big job creator, and these new industries to a greater or lesser extent will be underpinned either by strong and progressive targets and regulation, often backed by government financial underpinning. Therefore, the migration from the oil and gas sector whether as an individual or a business is somewhat de-risked.

We can also learn from our experience in the North Sea. We quickly became an international centre of excellence for oil and gas and exported technology, people and services. These leaders in the sector can again become significant drivers of exports in the new economy. Many of the medium sized companies in these communities have international networks already and can pivot to exporting offshore wind and grid products and services.

There is also quite a lot of decommissioning work still required. The journey for the oil and gas sector in the North Sea is far from over – industry experts calculate the cost of decommissioning will be around £15 billion, which means lots of jobs and opportunities.

So the future could look bright for the former oil and gas sector in a decarbonised world.

We cannot, however, dismiss or hide that there are significant challenges ahead for our communities currently reliant on a legacy sector; and that both national and local governments have an important role that needs to be sensitively handled, bringing people along with them.

Key components of a successful North Sea Transition require a deep acknowledgement of the challenges and real risks of blighted communities.

First, there must be an open and transparent debate with the communities impacted now. Anxiety exists within communities who have enjoyed a stable economic model for decades. If co-created, a roadmap to a greener future can be shaped that establishes clear and explicit bridges with understandable staging posts along the way. This transition cannot be done to people – it must be done *with* people. Citizens do have a veto on net zero.

Second, the Government must show commitment. It is extremely welcome that the Government is moving forward on CCS, hydrogen and offshore integrated grid projects. There can be no doubt in anyone's minds that these projects should be realised as quickly as possible. These will become the “anchor” investments – and build confidence in the local economies that their investment and location is right for success into the future.

Third, we must remember that one size doesn't fit all. Economic ecosystems are very specific with highly tuned interactions between the supply chain, people's skills, and businesses capabilities. The Government should not create a Whitehall plan, but truly and deeply rely on the local economic partnerships with local authorities and yes, the public, to tailor their needs, drawing on specific assets and risks. Government should lead and enable the North Sea Transition, but local areas must design and deliver it.

Finally, we must avoid downgrading jobs. There is far too much talk about how many retrofitting jobs there are in the new world that all those oil and gas workers can take up. This transfer requires whole new skills, but we mustn't forget that these communities and many of the North Sea sector jobs are well paid and improving energy efficiency in homes is not going to take up the economic slack. Simplistic statements about the number of jobs are not going to be good enough – they must be good, well paid, and skilled roles.

Personally, I believe that there are great jobs in the decarbonised world, but politicians must be careful to not just look at quantity but also quality of them.

So the key to success in migrating these local economies which are dependent on oil and gas today requires long-term bridges that can accelerate decarbonisation, provide pathways to decarbonise and allay the anxieties of workers, small businesses, larger businesses, and the dependent communities.

There are six crucial bridges:

1. **Government investment:** The Government's 10 Point Plan and Energy White Paper highlights the range of investments planned. These need to be accelerated and seen as long-term with no room for slippage or salami slicing.
2. **Clear definition between central and local roles:** Central government must provide the framework, leadership, regulation, resources, and targets to local areas that must be in control of designing and delivering. Of course this is a partnership, but centralised solutions will erode trust and not accommodate local nuances and needs.
3. **Co-create the strategic journey:** We should engage local people and businesses in the design of local industrial strategies. This would be a requirement for any government support.
4. **Low-carbon skills and business academies:** We should establish skills academies almost immediately in each area that focus on migrating low and high skilled workers to the new economy. In addition, these academies should support SME business owners to pivot their business models to take advantage of low-carbon economic opportunities.

5. **Local decarbonisation funds:** Localities should be allocated significant transformation funds to provide companies with loans to invest in low-carbon processes. Big money is going into the “big projects”, but it is the smaller companies that end up losing out.
6. **Local supply chain obligations:** In return for the large investments it makes, the Government is going to have to require that local businesses benefit through content obligations.

The North Sea is crucial to the future of our low-carbon energy transformation. It has been the source of the fossil fuel system and now will be the source of our crucial wind resource. We need to thank the North Sea sector and all those who have in the past and will into the future work and support a resilient and now decarbonised energy system.



*The Rt Hon Dame Caroline Spelman DBE*

## Levelling up North Sea communities: learning the lessons from the closure of coal mines in the 70s and 80s

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Dame Caroline Spelman was the Conservative MP for Meriden from 1997 to 2019, and was Secretary of State for Environment, Food and Rural Affairs from May 2010 to September 2012. She negotiated the Sustainable Development Goals for the UK at Rio 2012. She co-chairs Onward's *Getting to zero*, a major cross-party programme of research to understand the political and practical challenges to achieving net zero by 2050, and to develop policies to help people and places who may be disrupted in the transition.

The retreat from coal mining in the 1980s left deep fissures in communities, and in some parts of the country stigmatised the Conservative Party for a generation - a rubicon that was finally crossed en masse at the 2019 General Election, over 35 years later. As we transition to a green economy, we must not repeat the mistakes of the 1980s. We need robust and actionable policy proposals to help rebuild the economies in the North of England and Scotland. If it is done right, renewable energy technologies like hydrogen, offshore wind, and carbon capture - key technologies essential to reach net zero emissions - can be the economic lifeblood of those communities.

In the 1980s, as a result of a declining competitiveness of UK coal on the global market and a long-term decline of the coal industry, the country went through a mini-decarbonisation drive - it's own 80s version of the dash for gas: a concerted, strategic effort to transition away from coal. While more than 1,000 collieries were working in the UK during the first half of the 20th century, by 1984 only 173 were still operating. With the rise of China, India and other developing markets, our supply was just not cost competitive on the global market. State subsidies - which by 1982 were operating at a loss per tonne of £3.05 - could only keep the mines going for so long. Margaret Thatcher steadily wound down subsidies and favoured gas as our primary source of electricity generation.

The result of this was hundreds of thousands of well-paid jobs dissipating in a matter of years - the average wage of a coal miner was £8,630 per annum, 18.3% above the national average. In 1981 there were 4.5 million people living in coalfields - areas which were dependent on the coal industry for at least 10% of male employment - making up 8% of the UK population at the time. The coal mining industry employed 229,000 people across these coalfields in Yorkshire, County Durham, Lancashire, the East Midlands and Wales in 1981. However, in 2005, a study by Beatty et al. found that this had fallen by 97%, representing a loss of around a quarter of all male jobs in affected areas.

The political repercussions of this were considerable. Just 15 out of 80 seats located in coalfields voted for Margaret Thatcher in the 1983 election. This poor performance would become entrenched over the ensuing decades. A good case study of this is the constituency of Bassetlaw, which had its coal operations wound down considerably in the 1990s, with the nearby Harworth mine finally closed in 2006. In 1992, I fought this constituency against a Labour majority of 10,000.

I went down all the coal mines during that election campaign and have never drunk so many cups of tea in the hospitable coal mining communities, but they were never going to vote for me. The enduring memory of the mine closures, and its association with the Conservative Party, was a clear reason for this. It took until 2019 until the electorate here felt able to return a Conservative MP, Brendan Clarke-Smith.

There are lessons to be learned from the contrasting recoveries of different coalfields. In the Yorkshire coalfield, recovery has been strong. As of 2004, 55,000 non-coal jobs had been created there since 1981, accounting for 83% of those lost due to the decline of the industry. By comparison, the South Wales coalfield had replaced just 19% of lost jobs over the same period.

There was no single factor behind the disparity. The Yorkshire coalfield, for example, benefits from being surrounded on all sides by motorways, along with its central location in the UK. Once suitable infrastructure was in place, it became an attractive area for investment. Whereas by contrast, the South Wales coalfield suffers from difficult terrain and isolated communities, which mean it is much less attractive to investment.

Like the 1980s, some places are set to lose out from the net zero transition, in particular North East Scotland and those regions reliant on the North Sea oil and gas industry. As Onward's Greening the Giants report unveiled, Scotland relies on the oil and gas industry for eleven thousand jobs (0.46% of total) and the extraction industry for 1.2% of its total GVA. Some constituencies such as Aberdeen South have as much as a tenth of its jobs in this industry (9%).

Given the fast-changing economics of energy, the end of the road for extraction-based industries in the North Sea is on the horizon. This presents an existential moment for many of these aforementioned jobs and the communities that rely on them. At a time when support for separatism remains high, it is crucial that the Scottish Conservatives - the strongest unionist party north of the border - are not seen as abandoning these communities in the way we were seen to abandon coal mining communities in the 1980s.

Capitalising on net zero opportunities to offset the disruption felt by the decline of traditional fossil fuel industries is crucial to ensure these communities are not emptied out and 'left behind'. This will come in the form of decommissioning in the short term, and emerging technologies in the long term.

Firstly, almost £19 billion of expenditure on decommissioning is likely to take place in the UK over the next decade, the majority of which will be in Scotland. It is important that the full opportunities of this are grasped and that these jobs are prioritised for the workers currently employed by the oil and gas industry in the North Sea.

Secondly, greenhouse gas removal is set to be responsible for one sixth of carbon emission abatement by 2050, according to the Climate Change Committee. There is significant potential for Aberdeen and the North East to benefit economically from its rollout, and to transition jobs from the extraction of fossil fuels to pumping emissions back underground. Onward's analysis of CCC data shows that around 16% of industrial carbon capture and storage (CCS) rollout could take place in Scotland.

The challenge the Government is now grappling with is how to ramp up deployment of these technologies north of the border. As we set out in an Onward report in March, there are two key policy mechanisms which could help achieve this.

Firstly, the UK Government should establish a Net Zero Delivery Taskforce, to bridge the gap between R&D and commercialisation for crucial net zero technologies such as CCS and hydrogen. The enormous success of the Vaccine Taskforce has shown that such a model can work. Such a taskforce would have the power to negotiate directly with companies on behalf of the taxpayer, speeding up development and commercialisation, and commission trials to test them at scale. The size of the opportunity to be a first-mover in these markets cannot be overstated: the International Energy Agency predicts that the global CCS market could be worth over £100 billion by 2050.

Secondly, the UK should build on the success of the Contracts for Difference (CfD) scheme, which has helped to drive down the cost of offshore wind by almost 70% since 2013, by expanding the mechanism to hydrogen and CCS. CfDs have a track record of success: they protect the confidence of investors, increase uptake and promote efficiency improvements, which lower costs. There is no reason why the CfD mechanism cannot be used once more to create competition between developers in these emerging markets and increase the rate at which they are deployed by industry.

Finally - and possibly the greatest challenge - is how the Government can give workers the tools and skills they need to transfer over into these new industries. This key question is one which Onward's Getting to Zero programme - of which I am a co-chair - looked at in its recent report, *Qualifying for the race to net zero*.

The report demonstrated just how large the net zero skills gap is not just in the industrial sector, but the construction sector, too: analysis showed that at present the retrofit workforce is just a fifth of the size it needs to be (17%) in order to get on track for the Government's 78% emissions reduction target by 2030.

The skills for offshore industries of the fossil fuel age are often symbiotic with those of the future. For carbon capture, offshore and subsurface expertise are heavily valued in today's oil and gas industry. Scaling up these technologies and reducing their costs will rely on large-scale engineering and project management capabilities, which are a good match for oil and gas companies and their workforces. We crucially need to uncover what skills are transferable, identify which people hold these skills and put in place a framework for job transition going forward. This is the purpose of our recent Onward paper and it is an integral part of the net zero puzzle.

We cannot allow history to repeat itself. Lessons need to be learnt and opportunities need to be seized as we transition to zero carbon industries in the North Sea. If it is executed right, our net zero mission can bring jobs, growth and prosperity to those communities, solidifying the party's presence north of the border and safeguarding our precious union for years to come.



*Siobhan Baillie MP*

## Skilling up: why levelling up and the North Sea Transition needs a net zero workforce

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Siobhan Baillie is the MP for Stroud in Gloucestershire; she was elected in 2019. She was previously the Councillor for Frognaal and Fitzjohn's ward, in the London Borough of Camden, and is on the Advisory Board for Onward. She is a solicitor and has a wide range of experience in the private, public and charity sectors.

Net zero cannot happen without know-how. We have a green skills emergency.

Existing workers who in some cases are already losing their jobs due to Covid-19 or the chronic instability in the oil and gas sector can be brought over to new industries like wind, low-carbon hydrogen and energy efficient homes. Meanwhile, young people want work which is good for themselves and the environment.

The pandemic forced the country, indeed the world, to slow down. This has allowed an opportunity for a clear-eyed look at green skills for the future recovery. Using colleges, apprenticeships, schools and drawing on the Prime Minister's commitment to improving further education skills is not only desperately necessary – it is obvious.

Other essays in this collection reflect upon the wider global economic trends we are now witnessing take hold in favour of sustainability. For our own domestic transition to be successful though, we must overcome the green skills challenge.

There is a huge skills gap in the UK for net zero industries. For example, only 5% of mechanics know how to fix an electric vehicle. In 2019, there were only 3,500 workers who could install energy efficiency measures. We need to increase the workforce to 50,000 by 2030 and we have not really started. It is estimated that we need an extra 20,000 engineering graduates per year.

I meet vocational further education (FE) students all the time who want to start businesses that are actively fixing environmental issues now and for the future. Yet they often do not know where to start. Traditional careers seem safer.

Separately, there's a challenge to reskill those who work in existing industries which will be affected by the transition. Fossil fuel production in the North Sea creates very skilled, well paid workers who are sorely needed to make a success of the transition. Yet they will require support to jump into their next jobs.

We have no time to lose. Job losses in the UK oil and gas sector have a negative impact on the local economies of North Sea oil and gas hubs, especially Aberdeen, which is home to over 80% of direct oil and gas jobs in Great Britain. Covid-19 and the oil price rout in 2020 saw 4,500 job losses. One trade union boss has predicted another 8,000-12,000 further cuts. All this came after the 2014-2016 oil price crash, from which many supply-chain companies had only just recovered.

While most of the North Sea oil and gas jobs are in Aberdeenshire, the supply chains spread across the UK. The loss of jobs, without a 'skills bridge' to help those affected find new employment, have second order effects. The impact is felt in Aberdeen, the North East and East of England, but also across the rest of the country. North Sea oil and gas is not just about those on the rigs. It is also about people who bring it ashore by working on the pipelines, and those in the Midlands, for example, who drive it to its destination in tankers. A lack of planning to avoid cliff edges means we will risk jeopardising our levelling up agenda. The creation of skills academies, like those introduced in 1998 for upskilling workers to meet planned expansion in exploration activities in the UK Continental Shelf, is just one method to provide those bridges.

It is worth noting, however, that a large number of fossil fuel workers would be happy to make the move already. This is perhaps because of the instability of fossil fuel production, the rapid rise of renewable energy, or even the desire to not have to work away from home for weeks at a time. Others may wish to work in a sector which benefits future generations more. In a 2020 survey, four in five oil and gas workers said they would consider moving out of their current role and into another part of the energy sector.

Closer to home, our houses account for approximately 20% of the UK's greenhouse gas emissions. The desire to learn and earn from addressing this issue is vast. Having spoken to many Green Homes Grant customers and suppliers, I know the demand is also there. Training programmes are popping up - but not quickly enough following the decision to scrap the Green Homes Grant. We are now waiting on a successor scheme in the Spending Review to understand how millions of homes each year will receive the attention they need and within that, how can we ensure there are enough skilled people to meet the demand.

One of the key concerns for workers is whether jobs in the low-carbon economy will match the pay in the oil and gas sector, or even of plumbers, mechanics, and engineers. It is tough to take a leap into the unknown, particularly when you want to get on the housing ladder, feed your family and plot career progress.

Fortunately, research from the Institute for Public Policy Research has found that high and mid-level skills in low-carbon sectors will have similar levels of pay as those in oil and gas production. Within the context of the Prime Minister's 10 Point Plan for a green industrial revolution and the huge amount of investment in renewables, there is hope. Renewable energy and clean industries are where the future lies, just as gas overtook coal before.

There is a myriad of opportunities for these workers, either to directly transfer with their current skill set or retrain. Wind power may first spring to mind due to the UK's 40GW by 2030 target, the majority of which will be met in the North Sea.

A recent survey of oil and gas workers by Greenpeace found offshore wind was the most popular sector that oil and gas workers said they would be interested in moving into, with the right education and training. The skills required are mostly mechanical, electrical, and technical, but there'll also be a need for those with knowledge in marine biology, geophysics, hydrography and oceanography. Prevalent oil and gas companies which operate in the North Sea are particularly interested in floating offshore wind (FLOW): they were beaten to the post in fixed offshore wind by Ørsted and Siemens, but FLOW is a new sector with lots of promise for those who invest now.

Blue and green hydrogen will also provide new careers. The 10 Point Plan predicts support for up to 8,000 jobs in this sector by 2030, potentially unlocking up to 100,000 jobs by 2050 in a high hydrogen net zero scenario. As an industrial sector, hydrogen would also require engineers, mechanics, electricians, builders, and planners. It is worth noting that 52% of Conservative seats are likely to require hydrogen to decarbonise their industrial base. As much of the infrastructure currently used by the gas industry will be applicable to hydrogen, it would be one of the easier sectors to transfer gas workers to.

In Gloucestershire, we are putting forward a superb South West backed bid to create the world's first Fusion Power plant. This would enable us to hold the Spherical Tokamak for Energy Production (STEP), a next generation tokamak fusion reactor. Putting to one side the world-leading stuff, this project would create 1000 skilled apprentices and draw on skills from across the country to break ground in 2030 and produce fusion in 2040.

However, the above is a step beyond what many workers and industries already apply themselves to. Perhaps the easiest transition for many in the North Sea sector would be in carbon capture and storage (CCS), decommissioning, and subsea network projects. The CCS industry, which will be tied to the hydrogen sector and a potentially valuable exporter to countries seeking to sequester their captured carbon from industry, will undoubtedly benefit from the existing oil and gas expertise in geology, drilling, monitoring, and offshore infrastructure construction. Research from the thinktank Onward found that as many as 80,000 jobs could be directly supported by CCS by 2050. It's an industry we can specialise in, but we'll need the workers for it.

Meanwhile, moving forward with decommissioning of wells and deploying the existing engineering base to offshore wind projects will help to sustain workers in a way that is compatible with net zero. Not only are the skills required for both highly and quickly transferable existing roles, for Scotland this is also a substantial export opportunity. The sector is regarded as having world-leading expertise due to the maturity of the North Sea basin.

As reflected upon earlier in this essay, we must address the huge skills gap - which cannot be overcome by retraining existing workers alone. We need to train the next generation to thrive in a net zero economy.

I have long championed FE colleges and I see them playing a key role in the green skills emergency. Already at the heart of communities, they understand what jobs and careers are available. They have relationships with local employers and Local Enterprise Partnerships. Youngsters and returners can invest their time doing courses that lead to something tangible.

Encouraging schools and colleges to specialise in net zero subjects such as maths and physics and develop skills plans to fit their regions' needs would help develop a pipeline of talent. According to Onward's Getting to Zero report, over half of net zero occupations will require STEM skills. This could begin happening now, although it will be necessary to support this ambition by investing more resources in further education and continuing to promote apprenticeships to show that the effort is worthwhile. We sadly know that many parents love FE colleges - but for other people's children. This must change.

Thankfully, the Government gets this. The last time there was a skills strategy, coal powered over 40% of our electricity but this Conservative Prime Minister wants a UK that is fighting fit and delivers at pace.

He recognises that this means not obsessing about 50% of folk attending university and forgetting the rest. As a result, we have serious skills-focused legislation going through Parliament right now.

The Skills and Post-16 Education Bill significantly reforms FE and colleges, including statutory underpinning for local skills improvement plans, improved teacher training and brings employers further into the FE system. The Bill strengthens intervention powers for the Secretary of State for Education and provides a flexible loans system for true lifelong learning.

I am hopeful that we will hear a lot about the lifelong loan guarantee. Aiming at encouraging more modular provision, on the job training and part-time study that suits reskilling and employers, learners will be given four years' worth of loan funding. They will be able to transfer credits between FE and HE providers too. This would transform opportunities for millions of people.

These plans will help to reduce the skills gap and may also help with brain drain. We know that people have a heightened sense of place following the pandemic. If we can provide the skills an area needs now or in the future, they will not be forced to look elsewhere for employment.

My challenge to Government, employers, FE colleges and schools is to make the green skills emergency really lead the skills and careers agenda. The Government is already enacting policies aimed directly at environmental change: the North Sea Transition Deal, the Aberdeen City Deal, and skills policies like the Kickstart Scheme. Most encouragingly for net zero, the Green Jobs Taskforce, which was commissioned by the Government, recently published its report to support 2 million green jobs by 2030, with recommendations to unlock the low-carbon employment opportunities of the future.

There is a long way to go though. The country needs many more people with net-zero know-how without delay. Those in the fossil fuel industry should be helped to redeploy their skills. Those seeking to skill and reskill in every constituency in this great country can play a part in tackling climate change.

Some will always shout that we are not going fast enough or far enough and that the UK is a terrible place regardless of the environmental races we are leading. We must ignore the doomsters and get on with creating change. Equipping the current and next generation to lead fulfilling and prosperous careers which benefit their communities, the country and the world is something we can excel at and export.

The enforced pandemic pause is nearly over. The desire for a green recovery is here. Now is the time to tackle the green skills emergency.



*Andrew Bowie MP*

## **Aberdeenshire and the North Sea: reimagining the UK's oil and gas capital**

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Andrew Bowie has represented the people of West Aberdeenshire and Kincardine as their Member of Parliament in Westminster since June 2017. Andrew has served as the Prime Minister's Parliamentary Private Secretary (PPS), and in August 2019 Andrew was appointed Vice Chair of the Conservative Party, with a remit covering the Union and youth within the party.

Nowhere is the North Sea's oil and gas sector so embedded as in the North East of Scotland. It's vital to the Scottish and UK economy, contributing billions while supporting some 270,000 jobs, and is crucial to the country's energy security. But now it's time to build back better after the pandemic. We need the oil and gas sector's talented workers - and its capital - for us to make the transition to a net zero economy a reality. And the sector is up for the challenge.

Increasingly competitive and stable clean industries are providing alternative, future-proof revenues for investors and the high paying jobs that skilled oil and gas workers deserve. With the right policies, we can deliver more certainty for North Sea workers and put them at the forefront of the whole country's net zero efforts.

It's of the utmost importance that the net zero transition maintains and enhances the prosperity of the North East of Scotland, a region I'm proud to call home and represent in the House of Commons. While it's undoubtedly true that the production and use of fossil fuels has been bad for the planet, it has also powered our communities' economic growth and progress until now. This is the case not just here in the UK, but in general for the whole human race. The tremendous advance in living standards which has been sustained since the industrial revolution has been fuelled by fossil fuels: first coal and then also oil and gas.

This is why in the House of Commons I've welcomed what this and previous Conservative Governments have done to support the North Sea oil and gas industry which Aberdeenshire and Scotland is so uniquely dependent upon: £2.3 billion in direct investment; the creation of the Aberdeen Energy Transition Zone, Oil and Gas Technology Centre and a global underwater hub; the establishment of the Oil and Gas Authority; and the provision of fiscal stability in the North Sea to make it the most attractive basin in the world in which to invest. This has kept the sector (which contributed £16.2 billion in GVA to the Scottish GDP and supported an estimated 105,000 jobs in Scotland in 2019) afloat in tough times.

However, the pressing need to cut emissions means we must upgrade our energy system to one supplied predominately by renewables, potentially supported by other zero carbon power such as nuclear. While this means extracting less oil and gas from the UK Continental Shelf, it doesn't mean the end of the North Sea. The deal we must strike with Aberdeenshire and other North Sea communities is that upgrading won't mean an end to investment, but rather a redoubling of it.

This is why I welcomed the North Sea Transition Deal which was unveiled in March 2021. The deal included the sector setting early targets to reduce emissions by 50% by 2030 through £16 billion in investment by that same year. This huge investment will be split between replacing fossil fuels with renewable energy, carbon capture and storage (CCS), and creating low-carbon hydrogen production.

Perhaps even more importantly, however, is that the sector will voluntarily commit to ensuring that 50% of its offshore decommissioning and new energy technology projects will be provided by local businesses, helping to anchor jobs to the North East of Scotland and other parts of the UK.

The deal followed the Prime Minister's 10 Point Plan, which will support up to 40,000 direct and indirect supply chain jobs in decarbonising UK Continental Shelf production and in the CCS and hydrogen sectors. We will reduce greenhouse gas emissions in the industry to ensure that the North Sea is a net zero basin by 2050.

While the North East of Scotland, especially the constituency which I represent, West Aberdeenshire and Kincardine, is practically synonymous with the oil and gas industry, renewables and low-carbon industry offer a brighter future. The very nature of oil and gas means it is an unstable industry to work in. The oil price crash of 2014 to 2016 saw the price of a barrel drop by an eye-watering 70%, resulting in thousands of job losses. Supply chain companies were only just recovering when the pandemic hit, which itself is leading to thousands more jobs being lost both upstream and downstream.

Furthermore, as discussed in greater detail in other essays within this collection, the industry is particularly exposed to risks from the net zero transition, with new projects at risk of becoming stranded assets as the shift away from fossil fuels accelerates globally.

It's worth noting there is already a firm downward trend in terms of oil and gas production from the UK Continental Shelf, which has declined by over a third from 1990 to 2018. The reality is that North Sea oil and gas will struggle against cheaper wind power as we pursue our goal to become the 'Saudi Arabia of wind'.

The volatility of oil and gas markets and these transitional risks may explain why Shell recently announced 330 job cuts (the majority in Aberdeen) as part of its global restructuring. However, Shell also announced that it would heavily invest in green hydrogen (which requires renewable energy) and CCS as part of its ambitions to reach net zero by 2050. BP shares this ambition and, as the CEO, Bernard Looney said, a "tremendous opportunity" lies in innovating and experimenting to cut emissions and develop new technologies. The race is on.

For a successful transition, we need to mirror the ambition of the private sector and progressively shift government support from fossil fuels to cleaner industries in and around the North Sea, and help workers to cross the bridge to net zero industries. A net zero basin will require significant private investment and new technology, but industry cannot do it by itself and needs the UK Government to provide the infrastructure and incentives. A great local example of the kind of cooperation we need between state and business is the Acorn CCS Project between Saint Fergus and Grangemouth, which is being supported alongside four other CCS projects across the UK.

Some North Sea workers will be able to transfer their skill set directly to these new low-carbon industries. For example, Westhill is the subsea capital of the world, with more subsea engineering companies per square mile than any other place on the planet. Its workforce will be crucial for wiring up new offshore wind farms to power our energy needs in the future.

Those companies may be called upon to connect the new Forth Hub, which is set to begin construction in 2023 and employ 1,000 workers directly and support about 2,000 more in supply chains around the country.

But there'll also be room for new projects and new kinds of work. The aforementioned Acorn Project will help us to scale up the infrastructure required to capture CO2 and bury it deep beneath the North Sea. Its twin, the Acorn hydrogen project, will also develop the UK's 'blue hydrogen' (hydrogen produced via natural gas with carbon capture and storage) production capacity, ready to provide low-carbon hydrogen for transport and industry. It's exactly the kind of exciting project we need to be replicating across the North Sea to scale up new low-carbon industries and decarbonise the UK Continental Shelf.

The whole UK needs the oil and gas industry to be successful in transitioning. We must support the companies that are doing the right thing and investing in our low-carbon future. We need to maintain local supply chains, local capability and, ultimately, local jobs. We should ensure the North Sea's attractiveness to investors through the maintenance of a steady and sensible fiscal regime for many years to come. The workers and expertise of the oil and gas sector which is so strongly tied to Aberdeen City and Shire, more than anywhere else in the country, will be vital to making a success of this vision.



*Simon Clarke MP*

## Opportunities for Teesside in the North Sea Transition: how industry is leading the way towards a clean energy future

Simon Clarke was elected as Member of Parliament for Middlesbrough South and East Cleveland in June 2017 and re-elected in December 2019. He was appointed as Exchequer Secretary to the Treasury in Summer 2019, before moving to the Ministry of Housing, Communities and Local Government as Minister of State for Regional Growth and Local Government, a post he held from February to September 2020.

Here in Teesside, the Conservatives are showing how to level up through net zero. Over the past few years, there has been a series of net zero-related investments announced, which promise to bring new industries to Teesside such as low-carbon hydrogen, offshore wind, and capture capture and storage (CCS). The North Sea Transition will bring jobs and opportunities to our community, which has a long and proud industrious history.

Teesside provides a model for how to support communities affected by the North Sea Transition towards clean energy. The Government has co-invested in low-carbon projects, and provided tax incentives for new industries through awarding Teesside freeport status.

This has unlocked significant private-sector investment in the area, creating jobs and opportunities for young people seeking to start their careers and for workers in incumbent industries alike. Teesside shows that we can reach net zero while maintaining our dynamic market economy: the state is the enabler and the private sector the deliverer.

This combination of the Government and the market is the key to bringing new industries to our area. It's little wonder that so much investment is being pumped into Teesside, given how adaptable and resourceful Teessiders are: if the Government provides the incentives, framework, and the enabling infrastructure, they will get net zero done. This is the Conservative vision for reinvigorating Tees Valley after decades of stagnation under Labour, which is no doubt why Ben Houchen was rewarded with a landslide majority in the recent local elections.

The announcement of Teesside getting a freeport in the March Budget is a welcome example of this vision: it'll help to reinvigorate Teesside's position as a major industrial cluster and create 18,000 skilled, good-quality jobs within 5 years, grow the local economy by £3.4billion, make these new clean industries more competitive, enable the reshoring of supply chains, and attract foreign direct investment. The transition won't be led by public spending alone, but by creating the right environment for low-carbon businesses to thrive.

There are many examples of where this approach could pay dividends for Teesside. For instance, following a £3 million investment from the Government, we will soon be home to the UK's first hydrogen hub. It's set to support 10,000 new jobs across the region and wider North East over the next 30 years, and more widely will be key to unlocking the national low-carbon hydrogen economy. Just after the hydrogen hub was announced, BP declared its intentions to build the country's largest blue hydrogen production facility.

Our burgeoning clean hydrogen production industry could place Teesside back at the forefront of the maritime sector, which experts expect will be decarbonised by hydrogen.

Teesside is also an attractive place for investors in the renewables sector, due to its geography and infrastructure. The recent £95 million investment to upgrade Teesport will mean that Teesside, along with the Humber estuary, will have the capacity to house up to seven manufacturers, support up to 9 GW of offshore wind and directly create some 3,000 new jobs. The Dogger Bank Offshore Wind Farm will be directly served by a brand new manufacturing plant for offshore wind turbine blades, which is due to start production in 2023 and is being built by GE, which will support 750 direct jobs and around 1,500 indirect jobs.

CCS is another industry which Teesside is getting ahead in, enabled by infrastructure investment from the Government but delivered by businesses. Net Zero Teesside, a project which seeks to scale up this nascent technology to deliver the UK's first decarbonised industrial cluster by 2030, recently moved on to its next phase of development after it secured £52 million in government funding. The funding provides the basis for companies to plan and retrofit their machinery with CCS, helping to scale up the technology. Both the capture of carbon and its sequestration in the North Sea will be highly exportable industries, and will provide opportunities for current oil and gas workers to find new work in a growing industry.

Finally, as I wrote in CEN's *Net Zero Northern Powerhouse* essay collection last year, with the right policies in place Teesside could be in the vanguard of the UK's clean steel sector. Vast amounts of steel will be required for eight of ten of the points in the Prime Minister's 10 Point Plan for a Green Industrial Revolution.

We should aim to produce a greater share of this steel here in the UK, and if we're going to meet our net zero target, it must all eventually be low-carbon.

As with CCS and offshore wind, clean steel will require the Government and the private sector to work together. Government should deploy its Clean Steel Fund for demonstration projects, harness the tax incentives being created through the new freeport, and replicate its successful 'Contracts for Difference' scheme, while our steel sector should bring forward innovative proposals for green-hydrogen-powered blast furnaces and electric arc furnaces that can attract private-sector investment. We are in a prime position to meet the high demand for low-carbon steel as the UK and countries around the world transition to net zero.

As all this shows, there is a huge amount of economic potential from the North Sea Transition if we can create the right conditions for the private sector to innovate and invest. Most important of all, however, is the social benefits for Teessiders. In the past, workers from the Tees Valley would fly out to oil and gas rigs every week and be away from their families for long periods, whereas these new clean industries enable good paying jobs that are closer to home. The transition is making families and communities stronger.

The recent North Sea Transition Deal shows that the Department for Business, Energy and Industrial Strategy knows that the future lies in renewables and low-carbon industry. In the coming years, we can be even more ambitious, demonstrating not only our ability to move quickly towards clean energy but also to grow our economy and allow the private sector to drive the transition forward.

Globally, the economic trends are firmly in favour of clean energy. The International Energy Agency's 2021 global energy review found that renewables are set to provide more than half of the increase in global electricity supply this year, and "remain the success story of the Covid-19 era". Demand for zero-emission energy grew by 3% in 2020 and is set to increase across all key sectors – power, heating, industry and transport – in 2021. The IEA's pathway to net zero for the global energy sector, published in May, found that by 2050 fossil fuels will fall from almost four-fifths of total energy supply today to slightly over one-fifth.

These ever more competitive clean industries can provide less risky returns for investors and high paying jobs for workers in Teesside and other North Sea ports and cities, ensuring the workers there don't face a cliff edge as fossil fuel production winds down.

The North Sea Transition is only just beginning, but there are more steps the Government could take to grow these nascent low-carbon markets. It could work with various industries to set up demonstrator projects for new and exciting technologies, whether it's for clean steel production as seen in Sweden or zero-carbon shipping.

A long-term offshore wind strategy with a new 2050 target, as recommended by the Climate Change Committee, would also help. Such a strategy could include a clear timetable for auctions, so that developers can bring forward new projects in a timely manner and invest in the UK supply chain. Seventy-five gigawatts of offshore wind by 2050, for example, would require up to 7,500 turbines, most of which would undoubtedly be located in the North Sea, and, with the right procurement rules, could be made by Teessiders, too.

Teesside is proving that decarbonisation is a chance for prosperity and economic growth rather than decline. It sits at the centre of the North Sea Transition, which is rightly being seen as an economic and political opportunity. To take full advantage, targeted support and infrastructure must be put in place as soon as possible. The Government must go with the grain of the global economic trend towards clean energy and work with the private sector to deploy the power and agility of the free market to spur on clean industry. This will ensure that North Sea workers and their families do not get left behind as the fossil fuel sector winds down, but can thrive as we move to a net zero world.



*Richard Graham MP*

## **Global Britain and the North Sea: embracing new trading opportunities**

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Richard Graham has been MP for Gloucester since 2010. Since 2011 he has served David Cameron, Theresa May and Boris Johnson as the Prime Minister's Trade Envoy to the ASEAN EC, Indonesia, Malaysia and the Philippines. He was previously a PPS to Ministers in the Foreign and Commonwealth office when William Hague was Foreign Secretary. Richard is Chairman of the Westminster Foundation for Democracy and a member of the Joint Committee for National Security Strategy. He chairs the All Party Parliamentary Groups for Indonesia, China and Marine Energy and is an elected member of the board of the Conservative Party.

The Integrated Review, *Global Britain in a Competitive Age*, highlights tackling climate change a British foreign policy priority. I want to bring alive elements of this policy, and in particular some of the opportunities for the UK from it – both as the longest serving Prime Minister's Trade Envoy in the House of Commons and as Chair of the Marine Energy All-Party Parliamentary Group.

First the context of the UK's climate change policy. We submitted the most ambitious climate change target at the Leaders Summit on Climate in April this year (a 78% reduction in emissions by 2035, relative to 1990), in order both to stretch our own ambition and also to set an example as hosts of the COP26 Climate Change summit.

The specific opportunity through the North Sea Transition (from oil and gas production to offshore wind, with a target of 40GW target for offshore wind capacity by 2030) should help confirm our position as the world's leading harvester of wind energy, boosting our role in technologies to shape the coming decades.

However although our domestic benefits, as prices continue to drop through the increased scale of wind energy, are considerable, by and large businesses headquartered elsewhere (like Siemens) have developed the exportable manufactured components: leaving us to export the regulatory service and financing (including the Contract for Difference or CfD auction structure) elements.

The situation is different for marine energy, where fewer countries have our strength of tides and waves to harness, energy generation is still recent and in many cases unproven, and the technologies that have emerged from businesses like Orbital Marine Power and Simec Atlantis should prove relevant to marine nations from Canada (who have already bought Nova Innovation turbines) to Indonesia (where the Wallace Gap is responsible for some of the strongest water movement in the world).

So a commitment to provide bidding opportunities specifically for marine energy at the next round of CfD auctions would be good news for innovative marine technologies, often led by research from the Orkney based European Marine Energy Centre (EMEC), and good for the diversity of our green energy sources. And this in turn then has the potential over time both to generate export revenue and help partner countries develop their marine energy: so playing a part in global carbon footprint. There are real win-win benefits from the UK's renewable innovation, both here and abroad.

Which brings me to another highlight of British strategy in the Integrated Review, in which environmental issues are also vital: the Indo-Pacific pivot.

As Asia continues to grow, typically in non pandemic times at twice the pace of the West, so carbon emissions rise with increased industrialisation. It is not just the numbers of new coal fired power stations in China and those financed elsewhere in the region through (for example) the Beijing based Asia Infrastructure Investment Bank (AIIB) and the Belt and Road Initiative (BRI), although these are a significant cause of concern. Across the Indo-Pacific, urban populations are rising and so is pressure on the world's ability to meet climate change goals. There are real tensions between the region's economic and environmental needs, but the severity of the recent floods in both Europe and China (similar to what my constituency of Gloucester faced in 2007) remind politicians that the global environment is not something that can be tackled tomorrow – it is something that has a huge human cost today.

This means that our economic goals of increasing trade and investment links with the vast Indo-Pacific area - with opportunities to partner on traditional British strengths, for example in innovation cyber, insurance, infrastructure, and engineering – also extend to renewables and green finance. In fact renewables is a specific area for working groups in the new Joint Economic Trade Committee (JETCO) with Indonesia and part of the dialogue with Malaysia. The second largest foreign investor in renewable energy in Philippines is a British company, and British investors are generating significant solar energy in Vietnam.

In fact across South East Asia we're seeing more dialogue on decarbonisation than ever before. In late July 2021, I opened a seminar with the Ministry of Transport and leading bus transport provider TransJakarta in Indonesia to discuss electric and hydrogen options, and British businesses like Optare are active in the region.

Often finance is a key component of the speed at which different nations decarbonise. Boosted by our own giant green sovereign bond issuance this autumn, we should be able to help Asian governments issue their own green bonds through the London Stock Exchange (LSE). The UK continues to raise new assets for the Indo-Pacific region - I know of at least one c\$300m new fund to invest in Asian renewables coming to the market this autumn. At the same time UK Export Finance (which has announced it will soon phase out the underwriting of fossil fuel projects abroad) has beefed up its exposure available for renewable energy projects, with a minimum 20% UK content.

Global Britain is an open to the world approach. We're committed to work with countries in the region for solutions to difficult issues (like palm oil), as we did some years ago on the sources of sustainable timber from Indonesia. We have shared space on satellites to improve advance warning systems for tropical storms and disaster management and we will continue to work to enhance cyber defence systems and develop Smart Cities. We will defend and where necessary improve the international rules-based system we helped build, and work closely across the world on common transnational threats - like climate change and terrorism.

Above all, shouldering our share of burdens to make the world a better, more prosperous and more secure place is vital – and our presidencies of the G7 and COP26 summits show our commitment and leadership ambitions.

When we committed to ending UKEF support for fossil fuels, six other European countries, including France and Germany, did the same. When we became the first major economy to enshrine a net zero target, countries from across the world, including China, Japan and South Korea, followed. Alongside private sector-led innovation and vulnerability in our global supply chains, this has prompted a pick-up in pace in the race to low-carbon technologies and services.

So our climate and our trade objectives come together, with organisations like the UK ASEAN Business Council (UKABC) leading the way on dialogue with businesses about a greener future. This dovetails with the International Energy Agency (IEA) assessment that renewables accounted for 90% of new electricity generating capacity added globally in 2020, and that wind and solar are on track to match global gas capacity by 2022.

Away from the power sector, other low-carbon technologies will spur new industries too and rapidly gain global market share. The value of global hydrogen production will more than double in the next decade on the back of government and private sector net zero goals, from \$177.3 billion in 2020 to \$420 billion in 2030. Low-carbon steel and cement production are also set to see a sharp rise in investment. Carbon capture and storage will be essential for cutting emissions from the harder to abate sectors, with more plants coming online every year. And the new gold rush for critical minerals is beginning to step up as the world turns to battery technology to drive the shift away from oil and gas.

These examples of the wider global trend toward sustainability demonstrate the need to get ahead in low-carbon technologies and sectors, in order to remain competitive, and in our new FTAs we will increase tariff-free market access for British exporters to sell their clean goods and services around the world.

The Integrated Review states “our foreign policy rests on strong domestic foundations”. Our North Sea transition, new access for marine energy developments, changes in UKEF policy and FTAs, leadership at COP26 and a greater focus on low carbon exports all show we mean business – green business.



*Alexander Stafford MP*

## Blue Wall communities don't want fracking: the case for a permanent ban

Alexander Stafford is the Conservative MP for Rother Valley. His election in December 2019 marked the first time the seat had been won by a non-Labour candidate since the constituency's creation in 1918.

Alexander consistently champions the green recovery, having previously worked for both the World Wildlife Fund and Shell. As a member of the Business, Energy and Industrial Strategy Select Committee, chair of the ESG APPG, vice-chair of the Hydrogen APPG, and vice-chair of the Critical Minerals APPG, he is a great supporter of Britain's drive to reach net zero and to level up communities across the country.

The fight against fracking is of huge importance to the people of Rother Valley and other Blue Wall communities. Needless to say, I am resolutely and absolutely opposed to fracking in any form, as are the majority of residents across the North and the Midlands. My professional background consists of working for WWF and Shell on environmental issues, so I know all too well how harmful fracking can be to our countryside and local communities.

Fracking, or hydraulic fracturing, is the process of drilling down into the earth and injecting the rock with a high-pressure water, sand, and chemical mixture to release the gas inside. Although hailed in the United States as the answer to their domestic energy supply shortage, the United Kingdom was late to the party.

Thank goodness we were, for we have seen the harmful effects of fracking elsewhere and are rightfully horrified. We have had the advantage of seeing the dangers from across the pond – and we need to avoid repeating the same mistakes by continuing to oppose this backward-looking technology.

Fracking is overwhelmingly bad news for Rother Valley and similar constituencies in the Blue Wall. There are, of course, the safety arguments pertaining to contamination of local aquifers by chemicals which escape in the drilling process. The Environment Agency and the Health and Safety Executive do not have the capacity to watch over every fracking site in the country, and few of us would trust the fracking companies to self-regulate and report any breaches. This surely is not acceptable to anyone. The idea that these companies may poison the water sources of our communities is a terrifying one and not a risk that the Government is willing to take.

Equally disturbing are the seismic activity concerns caused by fracking. Professor Peter Styles, a geophysics expert, presented a report in the House of Lords on the difficulties in carrying out fracking beneath previously mined areas, which stretch up the spine of England and into Scotland. His findings were compelling. He points out that even minor faults have the potential to cause small earthquakes which would trigger the Seismic Traffic Light System threshold and halt fracking.

Many proposed fracking sites in the Blue Wall are located in areas of historic coal mining. They are riddled with old mine workings and fault lines already severely weakened by coal extraction, right beneath where they intend to frack. I do not think I need to stress how dangerous fracking in this area would be, and how such risks simply cannot ever be taken.

If contaminated water sources and earthquakes were not enough, fracking negatively affects the Blue Wall in other ways too. It is a colossal imposition on people's lives, causing much distress to local residents due to noise and pollution. Fracking sites are hives of industrial activity and, as such, the traffic movement associated with fracking can peak at up to sixty HGV movements per day. This is unthinkable on narrow rural lanes which are frequented by dog walkers, ramblers, horse riders and cyclists.

These rural lanes simply would not be able to cope with the vastly increased traffic demand. Proposals often include widening roads and cutting down hedgerows for these juggernauts to pass through, which would destroy local flora and fauna. It is clearly unacceptable that constituents' use of local roads would be usurped by large fracking companies. Furthermore, residents fear that the local authority would have to impose strict traffic controls on local people to minimise congestion and to mitigate risks to public safety.

It is expected that the operator would be responsible for decommissioning a fracking site at the end of its life cycle. However, in March 2019 the Public Accounts Committee highlighted substantial fears that the taxpayer will be left to foot the bill for clean-up costs if the operator goes out of business. This would clearly be an objectionable state of affairs given the wealth of the fracking companies.

Furthermore, our constituents have worked hard all of their lives to buy their homes, so it would not be fair for fracking to decimate house prices in the vicinity. Even laying the value of the houses aside, very few people would opt to live next to a new industrial site. This is particularly true in rural areas, where many residents have moved because they want to live in an idyllic location.

Support for fracking is at record low levels, with its unpopularity increasing among those who live closest to the sites. The Government's decision for a moratorium on fracking was a popular one both nationally and locally. However, despite the Government's clear moratorium against fracking, this has not stopped fracking companies from circling around potential sites like vultures, biding their time and waiting for the moratorium to be eased. They will be sorely disappointed. These giant corporates will never be allowed to frack in the Blue Wall.

The Government has been unequivocal in its opposition to fracking. The then-Communities Secretary declared in May 2019 in a statement that paragraph 209(a) of the National Planning Policy Framework, which concerned the benefits of shale gas, had now been quashed and was no longer relevant for planning purposes. In his response to my September 2020 debate in the House of Commons on fracking, the Minister unambiguously confirmed that fracking had no future in the United Kingdom.

Accordingly, local authorities must stop wasting taxpayers' money and their own time and resources on conducting traffic management plans and surveys of the proposed fracking areas. There is no prospect of fracking taking place in our country, so they must focus their efforts on providing vital services to residents and on supporting projects that drive forward the net zero transition.

From an economic perspective, fracking is a senseless commercial endeavour. Fossil fuel prices, such as those for oil and gas, have collapsed. The Prime Minister has announced a green energy revolution and around the globe there is consensus that renewables are the way forward. Even the United States is feeling the effects of a surging boom in renewable energy which are outcompeting fossil fuels.

The UK is focused on meeting its net zero target by 2050, and as such we are leading the world by hosting COP26 in Glasgow this year. Fossil fuel industries which contribute to climate change and have no plans to change, and therefore no commercial longevity, are history. Fracking is indeed a technology of the past and any new fracking sites in the UK would be a retrograde step. We must not waste any more time looking back, but instead look to the future.

I have campaigned stridently in the House for the UK's green recovery. Renewables have a strong economic and environmental rationale and enjoy huge public support. I am particularly enthused by clean hydrogen as the fuel of the future, which will power our cars, buses, and homes. I am supporting the opening of a hydrogen electrolyser factory on the border of Rother Valley, and I am urging the Government to release a bold hydrogen strategy. I have also engaged in the push for the Government to issue green bonds and to set up a green development bank, in a bid to make Britain the biggest green economy on earth.

I have always said that UK plc must steal a march on our competitors by exporting our green technology and knowledge to the rest of the world. By leading the green revolution, we shall create jobs, turbocharge business, and level up Blue Wall communities. We must act decisively, or risk losing out and falling behind.

I envision this new industry will be centred in Rother Valley and across the Blue Wall. I want, for example, renewable plants in Dinnington and Maltby and specialist training colleges in Thurcroft and Aston. I want hydrogen factories in Orgreave and distribution networks in Hellaby. The possibilities are endless and my ambition for Rother Valley and the Blue Wall is limitless too. Our areas have the industrial heritage, the expertise, and the desire. We just need to be given a chance.

We should not be focusing on yesterday's fossil fuel-based technology such as fracking. It would be poetic if Rother Valley and the Blue Wall were to transform from centres of dirty fossil fuels to hubs of renewable, green energy. This is the future I want for my constituency and the people who live there, and the Government is getting to work in order to provide it.

Given the new reality of the UK's energy sector, we must accelerate the decline in gas for electricity and heating by encouraging the uptake of renewables, green hydrogen, and heat pumps. We should also end the fracking companies' delusions once and for all by making our already cast-iron moratorium a permanent ban.

The writing is on the wall that fracking has no future in Rother Valley, in the Blue Wall, or in the United Kingdom, and it's conservatives that are leading the charge as Britain embarks on its green recovery and green economic revolution.

**CONSERVATIVE  
ENVIRONMENT  
NETWORK**