IPPR Fair Transition Unit

FROM MISSED CHANCES TO GREEN ADVANCES

THE CASE FOR A GREEN INDUSTRIAL STRATEGY

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IPPR's Fair Transition Unit (FTU) was established in June 2022 as a new landmark initiative to carry forward the work of IPPR's cross-party Environmental Justice Commission and award-winning work on environmental breakdown.

The FTU's mission is "to accelerate progress in reducing emissions and restoring nature and secure a fairer, more just and thriving society". To realise this mission, the FTU delivers projects, programmes and support to others focused on securing a fair transition to net zero and the restoration of nature.

The Environmental Justice Commission drew on views and recommendations from citizens from across the country in a way that has genuinely shaped policy thinking and had tangible policy and media impact. Building on this legacy, the FTU puts the public at the heart of its work through extensive public deliberation.

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SUMMARY

The transition to net zero is *the* economic opportunity of the 21st century. But claims of UK leadership in capturing the economic benefits of the transition to a green economy are wide of the mark.

While the UK has made considerable progress in reducing emissions, it has failed to ally these environmental gains with comparable economic ones.

EMISSIONS PROGRESS BUT ECONOMIC STAGNATION

- The UK's territorial CO_2 emissions have fallen by 46 per cent since 1990, the most in the G7. Progress is less positive when looking at consumption emissions, which only fell by 14 per cent between 1996–2019.
- The environmental goods and services sector's contribution to the UK's GDP (3.9 per cent) is roughly two-thirds the sector's contribution to the EU's GDP (5.8 per cent) and is two and a half and over three times smaller than in Denmark (10.9 per cent) and Sweden (11.5 per cent) respectively.
- The UK employs fewer people in renewable energy as a proportion of its working age population than most other European countries. For example, in the wind industry if the UK was performing as well as Denmark it could enjoy an additional 98,000 jobs, or as well as Germany, an additional 20,000 jobs.
- UK public investment commitments into low-carbon technologies are among the lowest in the G7. The UK is neither investing enough in the net zero transition, nor is it maximising the economic potential in terms of GVA and jobs from the investment it is making.

IT DOESN'T HAVE TO BE THIS WAY

- As many as 1.6 million jobs could be created in the transition to a green economy.
- Key green growth opportunities such as electric vehicles, heating and insulation could deliver between £37 and £57 billion of annual UK GDP by 2030, representing 1.6–2.4 per cent in UK GDP.
- But this will only happen with coordinated, long-term public policy, substantive public investment, and dedication to working in partnership with industry, workers and trade unions, and local communities.

Upcoming research from IPPR will explore the UK's comparative advantage in the green economy, the shape of a UK green industrial strategy, the policies that need to be put in place sector by sector, where investment and policy should be directed, and what effective engagement with stakeholders should look like.

THE UK MUST CORRECT COURSE IN THE RACE TO NET ZERO

The global race to net zero is worth $4.7 trillion per year by 2050 in investment into clean energy (IEA 2023a). In more tangible terms, that means global wind capacity more than trebling and EVs rising to 60 per cent of all global car sales by 2030 (IEA 2021; IEA 2022); power grids in all advanced economies fully decarbonised by 2035; and 50 per cent of global heating demand met by heat pumps by 2045 with global installations growing by 20 per cent year on year through 2030 (IEA 2023a). This is a mammoth task, but it's also *the* growth opportunity of the 21st century.

With the introduction of the Inflation Reduction Act (IRA), the US has propelled itself forward in the race, the EU is responding in kind, while China has already built almost as much wind and solar power capacity as the rest of the world combined (Irwin-Hunt 2023). Yet as an international consensus forms on the need for robust green industrial strategy to reduce emissions and maximise economic benefits, the UK stubbornly refuses to take part. As Britain falls behind, and especially as the EU begins to introduce import tariffs on high-carbon products, there is a serious risk to the UK's global competitiveness.

RUNNING IN THE WRONG DIRECTION

The UK may even be running in the opposite direction. The prime minister's recent announcement to delay the ban on the sale of petrol and diesel cars, delay the phase out of gas boilers, and scrap energy efficiency standards for landlords was met with dismay from environmental groups and industry figures alike (Mitchell and Forrest 2023). While framed as a 'proportionate response' that does not 'impose' costs on households, it was actually an abdication of government responsibility to offer more support with upfront costs, thereby delaying households' access to technologies like electric vehicles, heat pumps and insulation that can substantially *lower* people's living costs (CCC 2020).

The government is also letting down workers. Just last month, the government announced a steel deal for Port Talbot that, on current reading, will decarbonise one steel plant but lead to thousands of job losses. This is not what a fair transition that delivers economic opportunity should look like and instead suggests the UK government is repeating the mistakes of the 1970s and 80s with the closure of the coal mines (Murphy 2023).

AN OPPORTUNITY TO BE SEIZED

It's not too late to correct course. As many as 1.6 million jobs could be created in the transition to a green economy, many of which will require skills from the existing workforce and others which can be supported in retraining if the government provides meaningful support (IPPR EJC 2021). The Confederation of British Industry (CBI) recently estimated that promoting key green growth opportunities such as electric vehicles, heating and insulation could deliver between £37–£57 billion of annual UK GDP by 2030, representing 1.6–2.4 per cent in UK GDP and 14–20 per cent of the total GDP growth between now and 2030 (Roberts 2023). But this will only happen with coordinated, long-term public policy, substantive public investment, and dedication to working in partnership with industry, unions, local communities, and workers themselves.

EMISSIONS PROGRESS BUT ECONOMIC STAGNATION

From an emissions perspective, the UK has, comparatively, made good progress in reducing emissions. The UK's territorial CO_2 emissions have fallen by 46 per cent

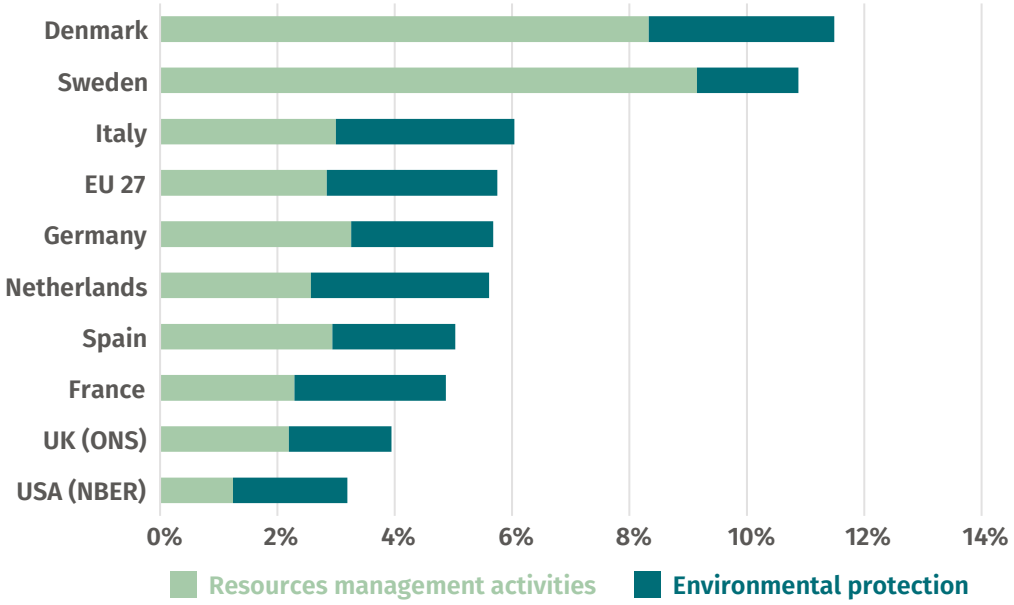
since 1990, the most in the G7. Progress is less positive when looking at consumption emissions, which only fell by 14 per cent between 1996 and 2019[1] (CCC 2023).

The UK is broadly on track to decarbonise the vast majority of the power system by 2035 – although the disastrous fifth contracts for difference (CfD) auction[2] risks derailing this growth – but much less progress has been seen since 2010 on buildings and transport. Industrial emissions have also fallen but as we discuss below, this is largely due to deindustrialisation, not decarbonisation and has essentially recategorised some territorial emissions as consumption emissions. The evidence suggests that the prime minister's most recent intervention will also put the UK even further off track from meeting its legally binding sixth carbon budget (Carbon Brief 2023).

However, from an economic perspective, the UK is failing to make the most of the progress it has made towards a net zero. The UK suffers from lower levels of economic activity in green industries. Compared to other advanced European economies and the USA, environmental goods and services[3] have made up a much smaller proportion of UK GDP as figure 1 shows. Now that the USA has introduced the IRA, environmental goods and services are set to become a much bigger part of the economy, leaving the UK at the bottom of the pile.

FIGURE 1: ENVIRONMENTAL GOODS AND SERVICES CONTRIBUTE LESS TO THE UK ECONOMY THAN COMPARABLE ADVANCED ECONOMIES.

Output from environmental goods and services sector as proportion of total GDP by country in 2019



Sources: EU data from Eurostat (2023), UK data from ONS (2023), and experimental USA data from Fixler et al (2023)

1 According to the most recent data available.

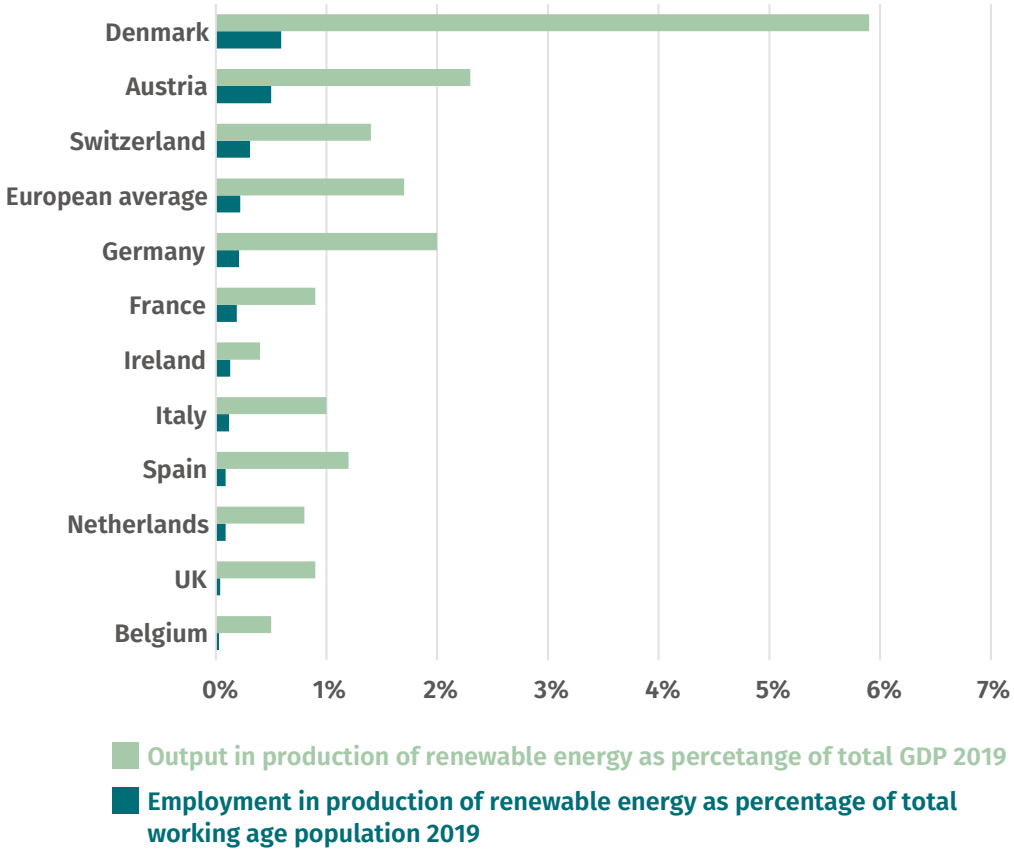
2 The CfD is a fixed price for electricity agreed at an auction between renewable generators that tops up payments when the wholesale price falls below the agreed 'strike price'. In the most recent (fifth) auction, the government ignored warnings from the wind industry that the cap price of £44/MWh was too low due to inflation and supply chain pressures in the sector resulting in no wind generation being procured from the auction (Hakimian 2023).

3 Defined as the economic activities contributing towards tackling climate change and protecting the environment including renewable energy production, energy management, and environmental protection activities such as tackling air pollution and forest management. NB activities around electric vehicles and decarbonising transport are regarded as tackling air pollution and therefore contained within the environmental protection category.

Diving deeper into the renewable energy sector specifically, despite accounting for just under half (48 per cent) of all electricity production in the UK in Q1 of 2023 (DESNZ 2023a), as figure 2 shows, renewable energy production contributes much less to overall GDP and employment in the UK than other European countries with comparably sized economies.

FIGURE 2: THE UK EMPLOYS FEWER PEOPLE IN RENEWABLE ENERGY AS A PROPORTION OF ITS WORKING AGE POPULATION THAN MOST OTHER EUROPEAN COUNTRIES.

GDP and employment in renewable energy production as a percentage of total GDP and employment by country in 2019

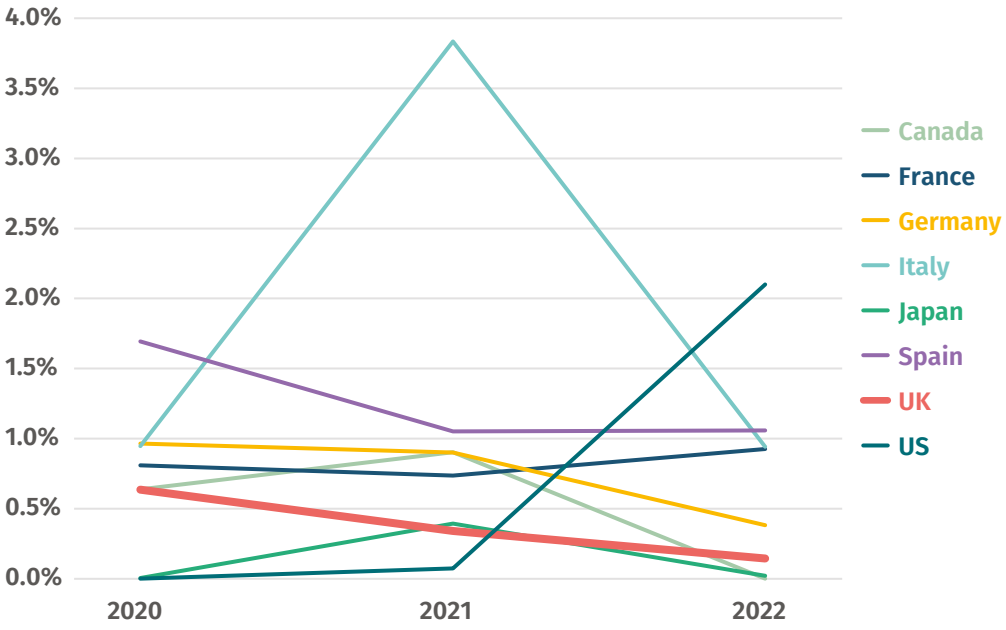


Source: ONS (2022)

Finally, despite claims of UK leadership on reaching net zero, public investment commitments into low-carbon technologies are among the lowest in the G7.

FIGURE 3: THE UK GOVERNMENT IS ONE OF THE LEAST AMBITIOUS COUNTRIES IN THE G7 (AND SPAIN) ON SPENDING COMMITMENTS INTO LOW-CARBON TECHNOLOGIES[4]

Government spending by year of announcement into supporting low-carbon technologies from 2020–2022 as a percentage of nominal GDP by G7 country (and Spain)



Sources: IEA 2023b; IMF 2023 [adapted by IPPR]

THE WIND INDUSTRY IN THE UK: A CAUTIONARY TALE

The failure to translate leadership in deployment into economic benefits is perhaps most evident in the UK's wind industry. The UK is the second largest installer of offshore wind in the world, after only China. Even with an effective moratorium in place since 2015,[5] the UK is also still the eighth largest installer of onshore wind (IRENA 2023a). However, despite strong deployment figures, the UK has squandered the opportunity to create domestic manufacturing supply chains and the associated jobs.

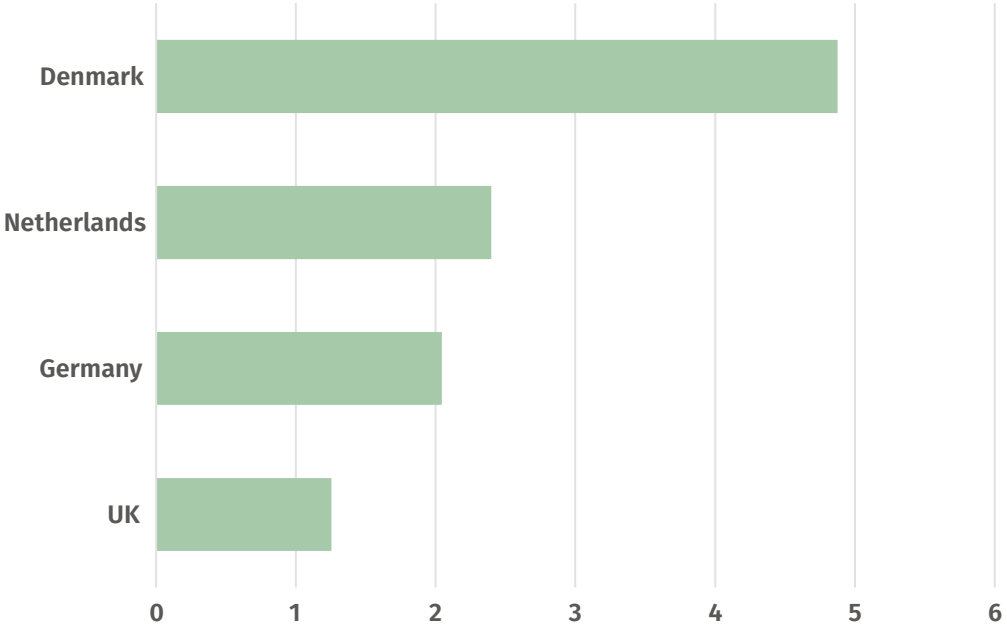
By contrast, Germany, Denmark, and the Netherlands have all substantially developed their wind manufacturing capacity and, in 2020, these three countries alone accounted for 70 per cent of exports of wind farm components (IRENA 2022a). Meanwhile, the UK is a net importer of offshore wind components and employs far fewer people for each MW of wind capacity installed than these exporting countries.

4 Data provided as of 2 June 2023.

5 As recent IPPR research shows, the UK has been installing onshore wind at an average rate of less than 1MW/year since 2015 (Singer Hobbs et al 2023).

FIGURE 4: THE UK EMPLOYS MANY FEWER PEOPLE PER MW OF WIND CAPACITY INSTALLED COMPARED TO NEIGHBOURING EXPORTERS.

Jobs in the wind industry per MW of wind generation installed by country



Sources: IRENA 2022b; IRENA 2023b [adapted by IPPR]

The high levels of employment in these neighbouring countries did not happen by accident. For example, despite being only being the 17th largest installer of wind capacity, Denmark has one of the world's largest wind turbine industries. This manufacturing base developed due to close coordination and long-term strategy between public research, investment, and industry, which has been in place since the 1980s.

If the UK had chosen to act with similar coordination and long-term thinking and employed the same number of people per MW as Denmark, **it could have employed 98,000 more people** to deliver the 27.1GW of wind power it reached in 2021. Even if it employed the same number of people per MW as Germany, **it would still have employed over 21,000 more people**.

This analysis from available data highlights what many businesses in the UK already know from their own experiences. The support for green manufacturing and development of domestic supply chains for offshore wind projects in the UK pales in comparison to that available in competing countries, as illustrated by the collapse of offshore foundation manufacturer, BiFab (McCartney 2020).

THE UK IS ALSO FALLING BEHIND IN OTHER SECTORS

The picture is similar or worse in other sectors which need decarbonising. In transport, the UK has a relatively strong manufacturing base for electric vehicles but its market share for Europe is eroding as other countries are providing more extensive support to their car industries. A recent CBI report suggests that by 2030, the UK could lose £3 billion of value through losing market share in both EV assembly and EV battery production (CBI 2023).

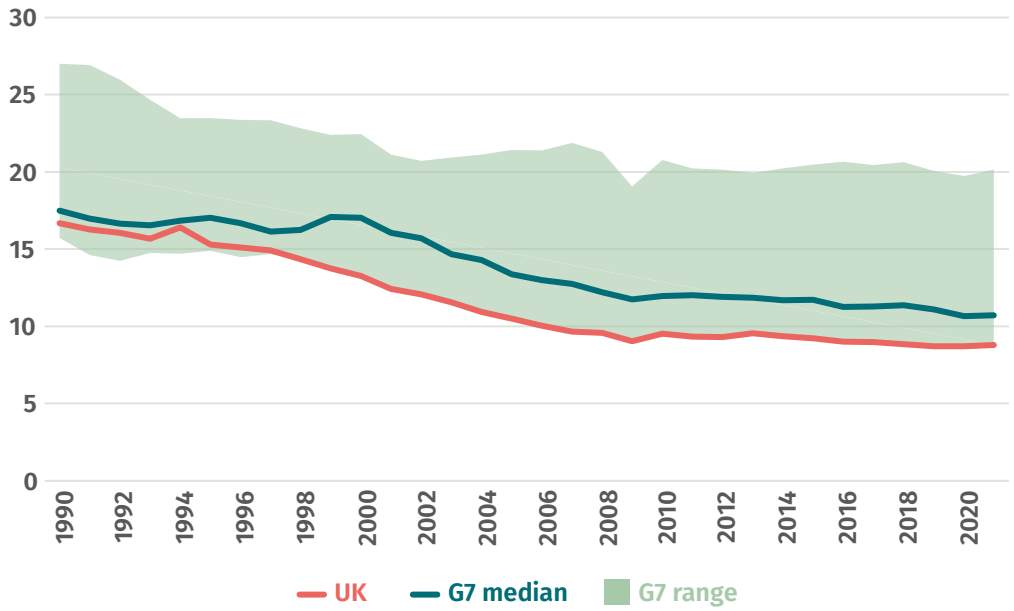
In other cases, such as heating for buildings and industrial decarbonisation, the UK does not have a leadership position and is falling further behind, despite the

enormous market opportunity in the UK. For heating, as previous IPPR research shows, the UK needs to be installing over 600,000 heat pumps into existing homes by 2028 but only installed around 45,000 in 2020. In the same year, Germany, Italy, and France installed 145,000, 230,000 and nearly 400,000 heat pumps (Emden and Rankin 2021).

For industry, many countries are putting substantial investment into industrial decarbonisation of key energy-intensive sectors. Germany for example is investing $53 billion into decarbonising its industrial sector (Leimbach 2023). Meanwhile in the UK, industrial emissions have declined but this is largely because of deindustrialisation, not decarbonisation and means some territorial emissions are simply recategorised as consumption emissions (DESNZ 2023b). As figure 5 shows, the UK has seen the sharpest decline in manufacturing since the 1990s out of all G7 countries.

FIGURE 5: UK MANUFACTURING HAS SEEN THE LARGEST DECLINE OUT OF ALL G7 COUNTRIES

Manufacturing as a proportion of GDP in the UK compared to G7 median and G7 range



Source: UNIDO 2023

LEARNING FROM THE PAST: THE IMPORTANCE OF INDUSTRIAL STRATEGY

The UK is neither investing enough in the net zero transition, nor is it maximising the economic potential in terms of GVA and jobs from the investment it is making.

It doesn't have to be this way. The transition to net zero remains a huge economic opportunity for the UK, but we need the investment and clear, long-term, robust industrial strategy to realise it.

Upcoming research from IPPR will explore the UK's comparative advantage in the green economy, the shape of a UK green industrial strategy, the policies that need to be put in place sector by sector, where investment and policy should be directed, and what effective engagement with stakeholders should look like.

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