



UNIVERSITY OF LEEDS

CLIMATE CHANGE, GREEN ECONOMY AND WORK:

the perception of
workers in Germany
and the UK

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The authors are members of the Centre for Employment Relations Innovation and Change, CERIC, which is home to researchers who contribute through high quality research, teaching and knowledge transfer to contemporary national and international debates around the changing dynamics and future of work, employment and labour markets. It was launched by founding directors Professor Mark Stuart and Professor Ian Kirkpatrick in 2005 <https://business.leeds.ac.uk/research-ceric> Leeds University Business School, University of Leeds, Leeds LS2 9JT

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INTRODUCTION

The climate crisis is a reality that cannot be ignored any longer. In an attempt to stay below 1.5 degrees of global warming, countries have responded by setting targets to decarbonise within the next decades.

Net zero targets are now legally binding in 131 countries (Hoehne et al 2021). The (technological) pathways to achieve net zero are debated (Likaj et al., 2022; Nature Sustainability Editorial, 2021; Sterner et al., 2019), as are the ways that decarbonisation will affect work and employment, and what the appropriate responses should be to help workers navigate the green transition (Felli, 2014; Rätzell and Uzzel, 2011).

What is often missing from these debates is how workers themselves view these challenges. To fill this gap, we asked workers how they perceive the green economy, about their experiences with decarbonisation at work so far, and about their hopes, ambitions, and fears regarding the transition to working in a net zero economy. We aim to understand if they feel “ready” to work in a ‘greener’, post fossil-fuel economy? If not, what barriers do they face and what solutions do they see as important to help in work transitions? We also aim to understand what policies have most support from workers in a transition to a low carbon economy.

To this aim, we investigate how workers perceive the extent and consequences of climate change as well as their expectations, hopes, and concerns regarding the socio-ecological transformation. We want to understand what they demand, particularly from government but also from companies, to ensure a just and fair transition. We also aim to explore what they are prepared to do themselves to help achieve net zero.

This report presents pooled data from two surveys of workers in two of the highest carbon emitting countries in Europe - Germany and the UK – that have both committed to become net zero in 2045 and 2050 respectively¹.

The survey was undertaken with a total of 4,003 workers (2,001 in the UK and 2,002 in Germany) and is representative of the UK and German working population (employees in employment and the self-employed) in different economic sectors, by age and ethnic groups, gender and region. The research was conducted online between March and April 2022. The sample was collected using the Skopos propriety panel and the respondents were incentivised in the form of a small amount of high street voucher credits for their time².

The analysis explores differences between the two countries and occasionally between two core groups: (i) union members and non-members and (ii) workers located in relatively high-emission sectors and those in relatively low-emission sectors³.

This report is a concise version of two longer versions analysing the countries separately. We focus here on presenting the descriptive data. The sections presented focus on climate awareness, climate action, climate policy, decarbonisation at work, skills for and work in the green economy and Just Transition principles.

¹ Germany with 746 million tonnes CO₂ being the largest emitter, (Umweltbundesamt, 2023), followed by the UK with 426 million tonnes per year (Department for Business, Energy & Industrial Strategy, 2023))

² The data was run through quality analysis that checked indicators such as flatlining questions (responding the same answer to all questions) and the quality of open responses.

³ Differences were tested using a Chi Squared test for statistical differences in response distributions. The sectors defined as relatively high emitting are: agriculture, forestry, fisheries, mining and quarrying, manufacture, electricity, gas, steam or air conditioning, construction, transport and logistics or warehousing. In the following analyses, employees in these sectors are referred to as those working in ‘Higher Carbon’ sectors.

CLIMATE AWARENESS

Climate awareness is seen as a necessary, though not sufficient, condition for climate action and support for political measures to reduce greenhouse gas emissions (Baiardi and Morana, 2021; Dohm et al., 2021).

Awareness tends to have cognitive, emotional and behavioural components (Tallon, 1997). Cognitive dimensions relate to the rational understanding of a phenomenon, affective dimensions to the emotional responses in relation to the information and/or experiences, while behavioural dimensions refer to the proactive responses. Climate awareness can be considered as a specific case of environmental consciousness which refers to “the understanding of the threat to the natural basis of human life caused by humans themselves, combined with the willingness to remedy it” (German Advisory Council on the Environment (1982, p. 445). Climate awareness then includes: (i) a basic knowledge of climate change, causes, consequences and ways to mitigate; (ii) the perception of climate change as something threatening; (iii) a willingness to take action against it; and (iv) proactive individual measures to address climate change (Dunlap and Jones, 2002; Franzen and Vogl, 2013). In the following sub-sections, we present results for these different dimensions of climate change awareness.

KNOWLEDGE OF CLIMATE CHANGE AND CLIMATE SOLUTIONS

Climate-conscious action requires a certain level of knowledge regarding the causes and consequences of climate change, as well as the possibilities in combating this development. We asked employees in Germany and the UK how well-informed they are about climate change. Results are displayed in Table 1.

Table 1:

Statements:	% of survey respondents	
	UK	Germany
I am very or fairly well informed on the causes of climate change	79%	81%
I am very or fairly well informed on the consequences of climate change	81%	83%
I am very or fairly well informed on the different ways we can tackle climate change	77%	76%
I am very or fairly well informed on what needs to happen in my industry/sector to reduce CO ₂ emissions	65%	62%
I am very or fairly well informed on what needs to happen at my workplace to reduce emissions	64%	61%
I am very or fairly well informed on my local authority's plan to address climate change/shift to a 'greener' economy	53%	56%

N=4003

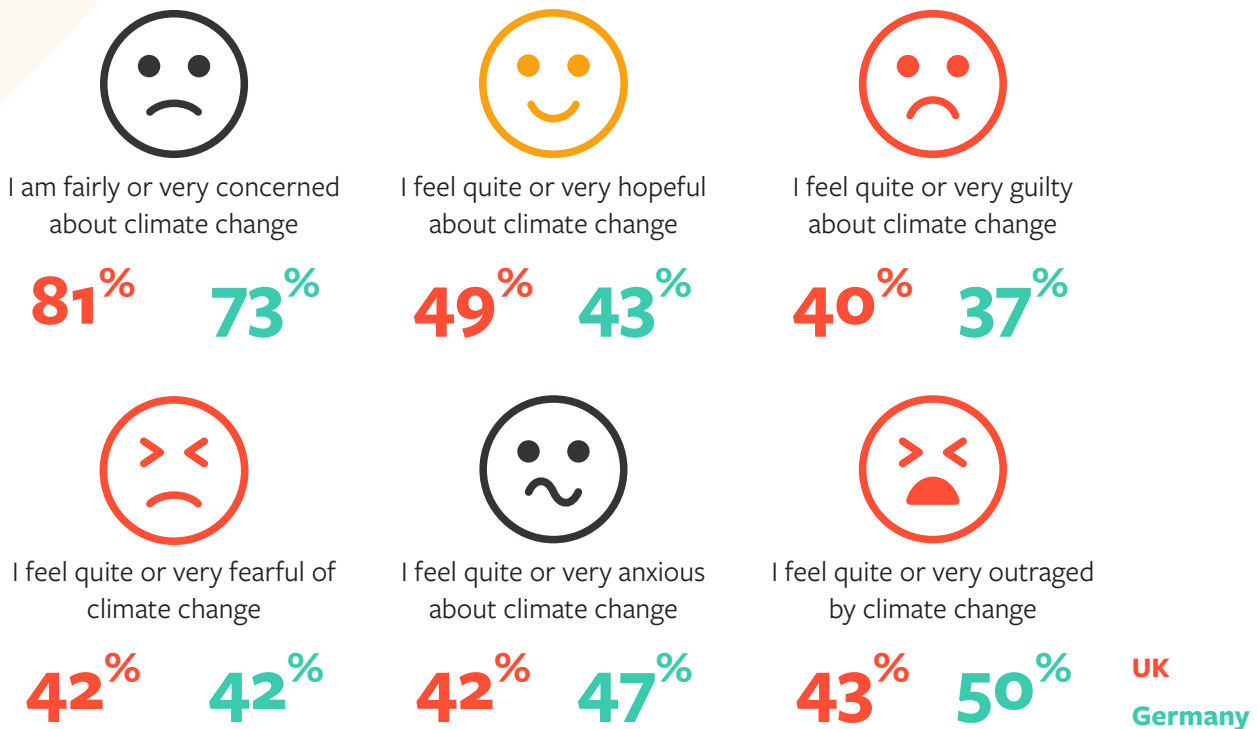
The majority of workers consider themselves well informed about the causes and consequences of climate change as well as what needs to happen to decarbonize the sectors they work in and their workplaces. A much smaller proportion of respondents know what is happening at community level to shift to a greener economy. There are no major differences between workers in the UK and Germany regarding the degree to which they feel informed. A slightly higher share of British workers say that they know what needs to happen in their sector or at their workplace to reduce CO₂ emissions. In Germany, a slightly higher share workers feel more informed about the causes and consequences of climate change.

CLIMATE CHANGE CONCERNS AND EMOTIONS

Climate change awareness is also comprised of emotional responses. This is often referred to as climate affect in academic literature (Dunlop and Jones, 2002). Feelings and emotions impact the perception of, and actions taken against, climate change in various ways (Brosch, 2021). Concern about climate change combined with a sense of hope often promotes environmentally friendly engagement and behavior (Ojala, 2012). While anxiety and outrage are negative emotions, they are considered to have different activating effects, with anxiety being more inhibiting (or leading to issue avoidance), whilst anger or outrage is more motivating and associated with positive climate behavior and engagement (Stanley et al., 2021).

We asked respondents to assess the extent to which they felt concerned about climate change and the strength of emotions towards the issue. Results are presented in Table 2 below.

Table 2:
Concern about Climate Change



N=4003

Table 2 shows that the majority of workers are very or fairly concerned about climate change, with an 8 per cent higher share concerned about climate change in the UK than in Germany.

Regarding emotions towards climate change, between 37 and 50 per cent of workers have strong (very or quite strong) feelings about the climate crisis. The differences between the two countries are quite notable. In the UK, a higher share of workers are hopeful compared to Germany. In Germany, a higher share are anxious and outraged by climate change but feel slightly less guilty.

The lack of hopefulness is problematic because it can lead to resignation, or a sense of fatalism and lack of commitment to personal activities (Ojala, 2012). Two-thirds of the employees feel little to no guilt regarding climate change. Only 11 percent in Germany and 14 percent in the UK report being strongly affected by feelings of guilt. In light of debates surrounding the role of industrialized nations as contributors to climate change (IPCC, 2023), as well as geographical and intergenerational justice issues (Kempfert, 2021), findings regarding a lack of guilt are interesting. These results suggest that the majority of the working population in the UK and Germany either does not observe these debates or, if they do, they do not feel personally addressed by them. The fact that "only" 50 per cent of the respondents in Germany and even less 43 per cent in the UK expressed outrage is an important finding and poses interesting questions relating to whether the set of emotions felt predisposes workers to be more or less active on climate issues. We return to this in the next section. Overall, the data reveals a complex set of emotions amongst workers that cover both positive and negative sentiments that need to be recognised when communicating climate issues as factors that can both motivate and inhibit action. We turn to climate action below.

THE URGENCY OF CLIMATE ACTIONS

Climate change is already having an effect through extreme weather events leading to consequent financial or social effects (Konisky et al., 2016; Baiardi and Morana, 2021). In Germany, effects are visible through heatwaves, heat records and resulting droughts (Bundesministerium für Bildung und Forschung, 2022) but also through the devastating floods in 2021 that killed 180 people (Bundeszentrale für politische Bildung, 2021). In the UK, it is mainly flooding that dramatically shows the impact of the climate crisis, although droughts in the South of the country, heat extremes affecting health, the road and rail network and crop growth have also been intensifying (Arnell et al 2021). We asked workers when, if at all, the first major impacts of climate change would be felt. The results are shown in table 3.








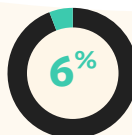


Table 3:
Point in time of effects of climate change

Statements:	% of survey respondents	
	UK	Germany
We are seeing the effects of climate change now	48%	52%
We will see the effects of climate change before 2030	18%	18%
We will see the effects of climate change before 2050	12%	12%
We will see the effects of climate change after 2050	5%	6%
We will see the effects of climate change never	4%	4%
I don't know	13%	9%

Half of the employees consider that we are already seeing the effects of climate change now and a further fifth believe we will see the effects by 2030. This means a majority of the working population in both countries are aware of the actual, imminent or near future impact of climate change. Only a small minority expect any negative impacts of climate change to be in the distant future or do not believe there will be any impact at all.

The concerns about and perceptions of the impacts of climate change are also reflected in attitudes towards the urgency of acting against climate change. Table 4 shows the answers of respondents regarding measures of urgency.

Table 4:
Climate Change Response

Statements:	% of survey respondents	
	UK	Germany
Climate change should be addressed with extreme urgency	 28%	 33%
Climate change should be addressed with a high level of urgency	 38%	 37%
Climate change should be addressed with a moderate level of urgency	 24%	 19%
Climate change should be addressed with a low level of urgency	 5%	 6%
There is no urgency to address climate change.	 5%	 6%

N=3798

More than two thirds believe that we should act with extreme or high levels of urgency. In Germany, the proportion of those who consider extreme or high levels of urgency is 4 per cent higher than in the UK. Just over one-in-ten workers in both countries indicate that there is a low or no urgency to taking action against climate change. The remaining fifth (19 percent Germany, 24 per cent UK) attribute a moderate level of urgency to climate change. Significant overlaps can be observed between these responses and those regarding the perceived impacts of climate change. Of those respondents in Germany who consider that climate effects are already visible, 89 per cent want to see climate change addressed with extreme or high levels of urgency. In the UK, this was 85 per cent.

PERSONAL ACTIONS ON CLIMATE CHANGE

It is one thing to perceive climate change as a threat, express concern, and expect actions from the government. However, it is another to translate these affective and cognitive aspects into concrete actions (Kollmus and Agyeman 2002).

Engaging in discussions with others about climate change, alongside expressing thoughts and feelings, can be seen as a small initial step towards climate-conscious behaviour. Whether and how often employees discuss climate change at home and in the workplace is summarized in Table 5. There is not much difference in the degree of active dialogue with others on climate issues between the two countries. Most workers (83 per cent in Germany and 79 per cent in the UK) discuss climate change at least occasionally with their families, with more than a quarter even more frequently. On the other hand, 16 per cent in Germany and 21 per cent in the UK of respondents report that they never discuss climate change.

Table 5:

Personal actions

% of survey respondents

	UK	Germany
Discussing climate change		
I frequently discuss climate change with my family	29%	28%
I frequently discuss climate change with work colleagues	22%	21%
I occasionally discuss climate change with my family	50%	55%
I occasionally discuss climate change with my work colleagues	48%	56%

Action

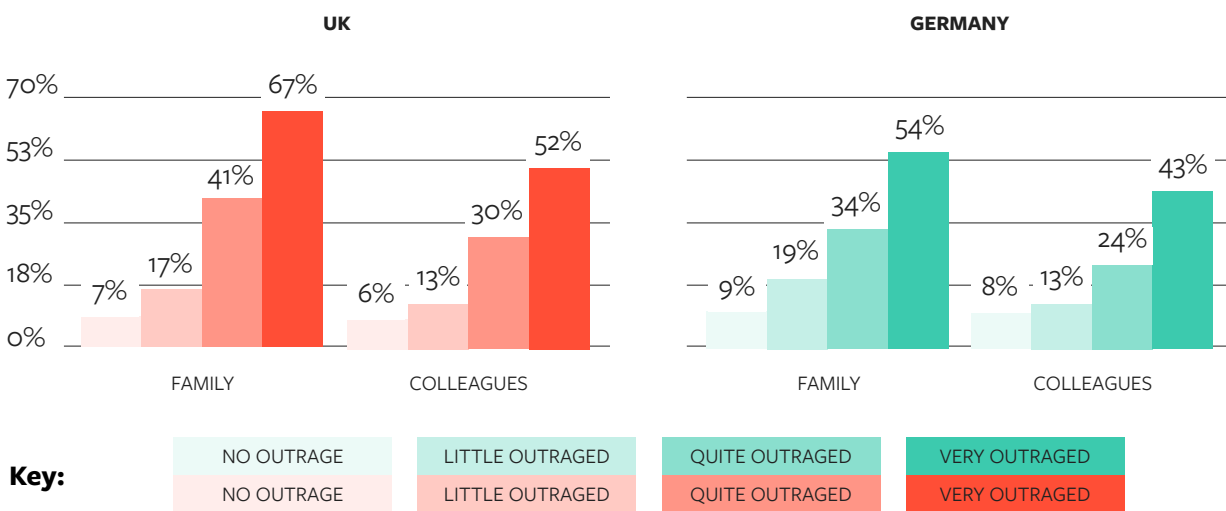


Another behavioural act of climate awareness is the pro-active engagement in activities that reduce carbon emissions. Results for different actions at the household, workplace, union and community level are also displayed in Table 5 above. It is very interesting to note that a majority of workers are active in trying to reduce their carbon footprint. However, most do this at the household level and to a much lesser degree at the workplace, at community level or within trade unions. The situation is the same in both countries.

In light of previous findings around the role of emotions for pro-environmental behaviour (Ferguson and Branscombe, 2010, Stanley et al., 2021; Miller et al. 2009), we looked at the relationship between different spheres of climate change action – both discussing climate change and pro-active behaviour – and different degrees of feeling outraged when thinking about climate change.

Figure 1 shows the share of workers discussing climate change often with their family or colleagues for the four levels of outrage. There is a clear positive link between feeling outraged about climate breakdown and discussing climate change with family and colleagues. While only 9 per cent of those workers who feel no outrage at all discuss climate change often with their family in Germany (7 per cent in UK), 54 per cent of those feeling very outrage do so in Germany (67 per cent in UK). Similarly, 43 per cent of workers feeling very outraged discuss the topic often with their colleagues in Germany (52 per cent in UK), compared to only 8 per cent of those feeling no outrage at all (6 per cent in UK).

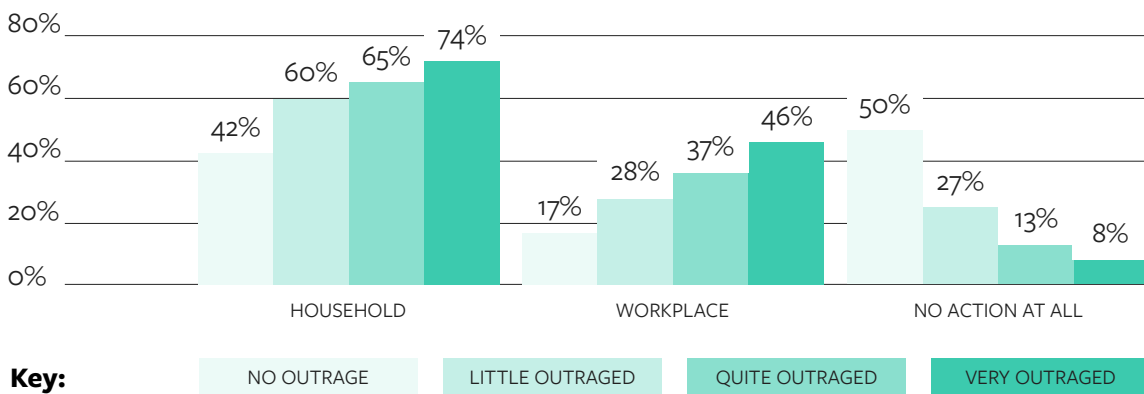
Figure 1:
Discussing climate change often and feelings of outrage when thinking about climate change.



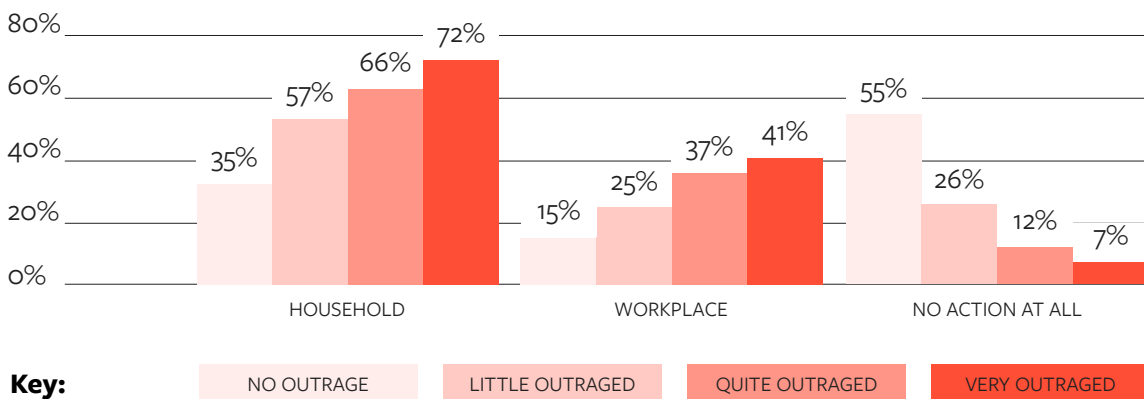
In line with these findings, there is a positive trend between feelings of outrage and taking climate change action (see Figure 2). The share of workers taking actions at home to reduce their carbon footprint is twice as high among those feeling very outraged (72 per cent) compared to those feeling no outrage at all (35 per cent). Similarly, whereas only 15 per cent of respondents who felt no outrage at all are engaged in action in the workplace to reduce emissions, 41 per cent of those who feel very outraged state that they are engaged in action at the workplace. Conversely, more than half of workers not feeling outraged (55 per cent) are not engaged in any type of climate action, compared to 7 per cent of those very outraged. Overall, more than nine in ten workers that report feeling very outraged are involved in some kind of climate change action. Outrage when thinking of climate change can thus be seen as a strong motivator to action. On the other hand, half of those not feeling outraged still engaged in some type of action. This implies that there are also other factors influencing pro-environmental behaviours. We will return to two of these potential factors – world views and free-market beliefs – in section on page 20/21.

Figure 2:
Climate change actions and feelings of outrage when thinking about climate change

UK



Germany



CLIMATE POLITICS AND POLICY

The preliminary findings indicate that at least two-thirds of workers: (i) are concerned about climate change, (ii) consider their countries are already experiencing its impacts or expect to do so within the next eight years, and (iii) support taking urgent action against climate change to a high degree. However, who do employees see as having the greatest responsibility to act now, and which proposed actions do they support? Respondents were asked to assess (on a scale of 1: highest degree of responsibility to 5: lowest degree of responsibility), who, among the following five actors, bear the greatest responsibility for combating climate change:

- National/Federal Government
- Local/municipal government
- Companies
- Individuals
- Groups and organizations at the community level

The results are shown in table 6.

Table 6:

Responsibility to address climate change

% of survey respondents

Who has greatest responsibility to address climate change?	UK	Germany
Central government (through public investment, taxation and regulation)	43%	39%
Local government (through support for green business, jobs and training)	16%	14%
Business (through private investment in green technologies and services)	17%	25%
Individuals (through 'greener' consumption and behaviours)	18%	16%
Community groups and organisations (through locally based 'green' initiatives)	6%	7%

In both countries, the highest responsibility to act against climate change is given to central governments through public investment, taxation and regulation. This is followed by businesses that should invest in green technologies and services. The expectation that business will take responsibility for addressing climate change is 8 per cent higher in Germany than in the UK; one in four workers think business has the highest responsibility. National government is clearly considered the main actor, however.

We asked workers what particular policies they support. Table 7 summarizes the support for policies.

Table 7:**Climate policy proposals****% of survey respondents**

Carbon reduction policies: strongly and somewhat in favour	UK	Germany
High levels of public investment to insulate existing homes	68%	62%
Use public money to subsidise renewable energy such as wind & solar power	63%	66%
Fund integrated publicly owned transport systems	63%	65%
Increase the 'carbon price' on companies so that emitting CO ₂ becomes more expensive	61%	47%
Reduce working hours without loss of pay to reduce emissions relating to work	58%	56%
Focus more investment into the caring economy and less on industrial	59%	57%
Introduce a 'carbon border tax' on imports based on the amount of carbon emissions generated	57%*	48%
Bring energy production into public or community ownership	57%*	52%
Ban the use of gas-powered heating boilers for domestic housing	43%	35%

N=4003

* Share of missing values slightly exceeded 10 per cent

There are some significant differences in the type of climate policy proposals that workers in the UK and Germany support. Insulating homes has the highest priority for UK workers, whilst subsidising renewable energy has the highest priority for German workers. Investment in public transport is a high priority for workers in both countries. Importantly, all three suggestions involve public funding.

In terms of other carbon reduction policies, the responses from UK and German workers are fairly similar with the exception carbon taxes and carbon import taxes, for which UK workers are much more likely to favour. Considering increases in carbon prices, 61 per cent of UK workers are in favour compared to 47 per cent of German workers. Support for the ban of gas-powered heating boilers for domestic housing is also smaller in Germany than in the UK. Only 35 per cent and 40 per cent respectively support a ban of gas boilers –this was a year before the so called “Heizungsgesetz” was introduced by German government. The Heizungsgesetz was an attempt to reform the Building Energy Act (“Novelle des Gebäudeenergiegesetzes”). The proposed law stipulated the phase-out of fossil-fuel-based heating by prohibiting the installation of these types of boilers for any from 1 January 2025. It was much contested by the German public and led to a major crisis for the coalition government which in turn led to a watering down of the reform granting much longer transition periods.

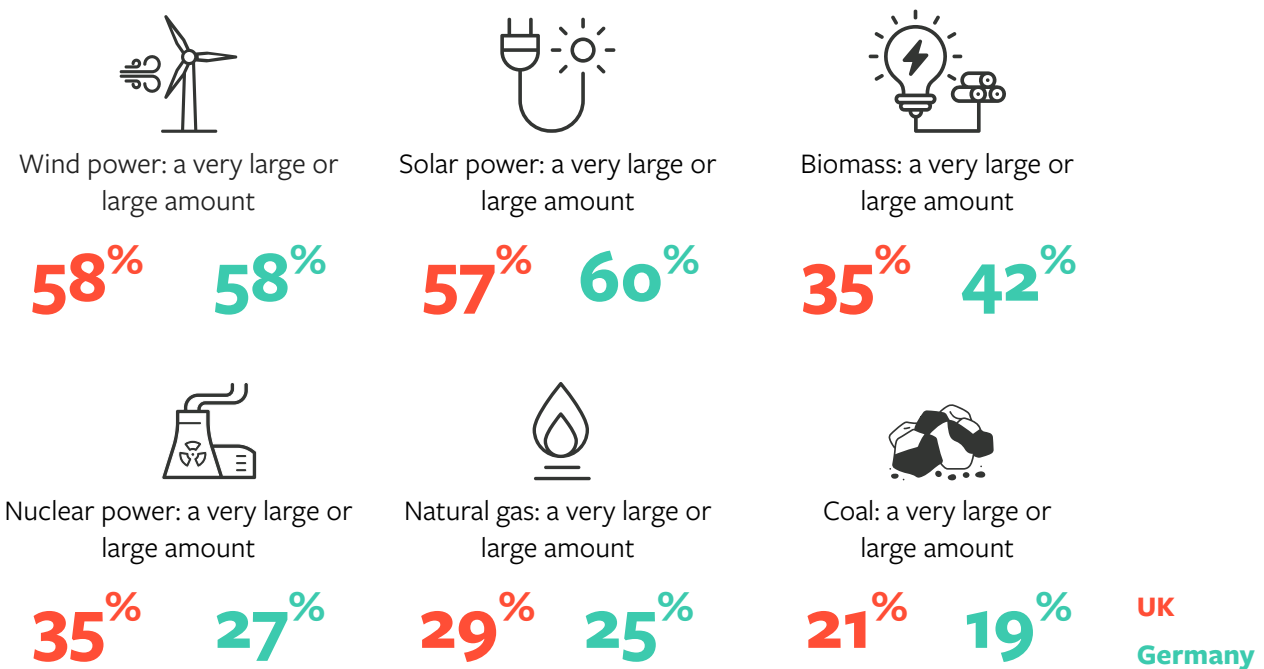
ENERGY PRODUCTION

Energy consumption contributes significantly to CO₂ emissions, particularly in the industrial sector (Industrial Energy Research, 2022; Umweltbundesamt, 2022b). Actions and proposed legislation for decarbonization in highly emitting industrial sectors such as Emissions Trading Schemes and carbon pricing, in addition to energy efficiency measures, aim to promote rapid reduction of carbon emissions stemming from fossil fuels. Both renewable energy sources and hydrogen and in some cases nuclear energy are expected to replace fossil fuels in the long term. However, how do workers perceive these sources of energy.

Table 8 presents the preferences of respondents regarding various energy sources for electricity generation. It is important to note that these results may have been influenced by the timing of the survey in April 2022, two months after Russia’s invasion of Ukraine and the subsequent global energy crisis, which sparked discussions about energy security and independence. In Germany, dependence on Russian gas led to a rapid and significant increases prices.

Table 8:
Energy sources **% of survey respondents**

How much of the electricity used do you think should be generated from each of these energy sources?



Renewable energy proposals - solar, wind, and biomass - have the most support among workers. Coal is the least popular source whilst solar and wind power are the most popular. Slightly more workers in Germany support renewable energy than in the UK. Yet in both countries, fossil fuels as an energy source are still supported by a fifth to almost a third of workers. Differences are noted in that German workers are much more likely to favour biomass whereas UK workers are more slightly more likely to favour natural gas and significantly more likely to favour nuclear power as part of the energy mix.

A specific question was asked as to whether nuclear power should be considered as a source of green, renewable energy. While the level of emissions generated in nuclear generation are low, many believe the broader environmental threat from the production of nuclear energy needs consideration. Significantly more German workers say that nuclear power should not be considered a green source of energy: 50 per cent compared to 30 per cent of UK workers. In contrast 45 per cent of UK workers say that it should - compared to only 36 per cent of German workers. A quarter of UK workers said that they did not know compared to 14 per cent of German workers. The difference in support may not be surprising given Germany's decision in 2002 to phase out nuclear energy production and its acceleration after the Fukushima disaster. In the UK, the government continues to support the development of nuclear power and currently plans for a quarter of energy production to be from this source by 2050.

VALUES AND ATTITUDES ABOUT THE ENVIRONMENT

Worldviews and value orientations are a key driver of support for environmental policies and pro-environmental behaviour (Chwialkowska et al., 2020; Karp, 1996). Individuals holding worldviews which attach a higher value to care for others have been shown to be more supportive of environmental policies compared to those who favour care for oneself and the individual (Bretter and Schulz, 2023; Stern et al., 1995). In our survey, we included several questions relating to worldviews taken from Kahan et al.'s (2011) cultural cognition scale, and question on free-market beliefs taken from Heath and Gifford (2006).

Table 9 suggests a majority of workers in both countries agree that they don't support the free market at the expense of environmental needs (53 per cent in the UK and 60 per cent in Germany) and a similar number of workers (44 per cent and 46 per cent respectively) believe that the free-market system is likely to promote unsustainable development. While this is not a societal majority, there is a significant proportion of workers who are sceptical of the free market for environmental reasons. This is an astonishing result for the UK, a country that is typified as a liberal market economy and followed policies promoting free markets and low state intervention since the 1980s. For Germany, it is less surprising given the electoral support for the Green Party. This has risen to up to 32 per cent in some federal governments where the Greens have advocated for internalising the costs of environmental damage to the economy.

Table 9:
Values

% of survey respondents

Free-market beliefs

UK Germany

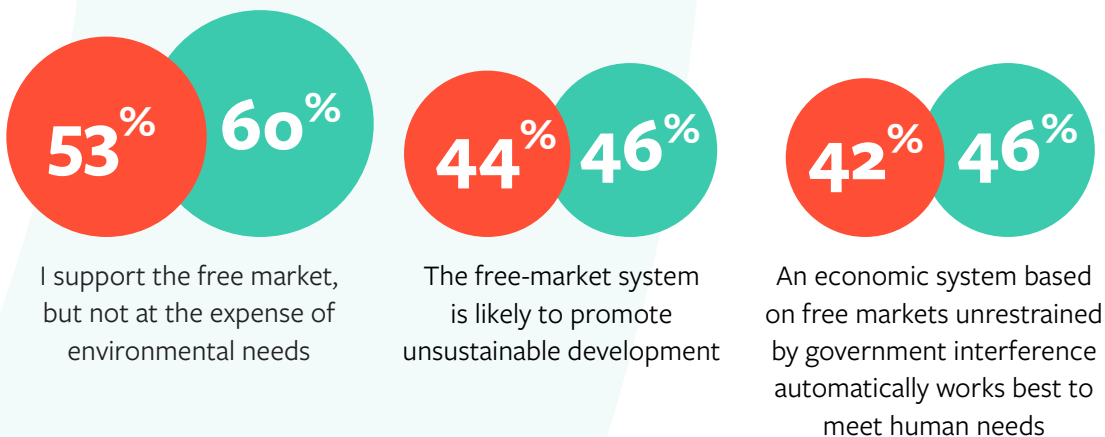


Table 9: Values		% of survey respondents	
		UK	Germany
Worldviews	We need to dramatically reduce inequalities between the rich and the poor, whites and people of colour, and men and women	70%	68%
	Our society would be better off if the distribution of wealth was more equal	69%	70%
	Sometimes the government needs to make laws that keeps people from hurting themselves	67%	60%
	The government interferes far too much in our everyday lives	46%	48%
	The government should do more to advance society's goals, even if that means limiting the freedom and choices of individuals	47%	49%

N=3811-3868

Workers were also given a set of statements about government and society. Two thirds of the surveyed workers believe the distribution of wealth should be more equal and that there is a need to 'reduce inequalities between the rich and poor, whites and people of colour, and men and women'.

Notably, UK workers were much more likely than German workers to respond positively to the statement that 'sometimes a government needs to make laws that keep people from hurting themselves' (67 per cent compared to 60 per cent).

THE PERCEIVED CO-BENEFITS (AND DIS-BENEFITS) OF TAKING CLIMATE ACTION

Understanding how workers view the wider benefits and potential drawbacks of moving towards a greener economy is also important. Perspectives on these so-called ‘co-benefits’ (Stern, 2005) also shapes support for public policy and commitment to personal actions (Bain et al 2016; Abildtrup et al., 2023). We therefore asked workers for their views on the likelihood of certain impacts happening as a result of the green transition.

Table 10:

Outcomes of a greener economy on society

% of survey respondents

In principle, how do you think that changes towards a ‘greener economy will affect society? Extremely and somewhat likely	UK	Germany
	Improved air quality	75%
Improved soil and water quality	67%	62%
Increase health and wellbeing	67%	59%
Improve the transport system	53%	49%
Better energy security	69%	56%
Make the cost of living more expensive	67%	67%
Increase inequality and poverty	45%	51%
Reduce living standards	44%	50%

The majority of workers expect positive outcomes from a green transition in terms of improving health and well-being, improving energy security, and improving air quality. Interestingly, British workers are more likely to assume positive outcomes: e.g. 75 per cent of workers in the UK expect better air quality, compared to 65 per cent in Germany.

However, there is also a high proportion of workers who expect that climate action would have negative effects: two-thirds of workers (UK and Germany both 67 per cent) believe this would increase the cost of living. Workers are ambivalent about the consequences of the transition: they do expect a higher rate health and wellbeing but also anticipate some negative economic and social outcomes. While the green transition is generally portrayed in positive terms (to avert the worst of effects of climate crisis, and in relation to employment opportunities and improved environments), negative effects are mainly seen in terms of the potential economic and social costs.

EXPECTED IMPACT OF THE LOW CARBON TRANSITION

When it comes to employment, less than half of workers think that the low carbon transition to a greener economy will bring green jobs to their community and even less think that these jobs will be of better quality (table 11).

Table 11:
Outcomes of a greener economy on local community **% of survey respondents**

Effects of a 'greener' economy on local community: extremely or somewhat likely



N=3614-3658

DECARBONISATION AT WORK

Before asking about engagement in decarbonisation actions at work, respondents were asked ‘do you work at a site that produces high levels of carbon emissions?’ Interestingly, 30 per cent of workers in each country state that they do not know the answer, suggesting that around a third of workers do not have a sense of the carbon footprint of the organisation they work for.

We then asked workers if they are aware of any action employers have taken to address climate change through decarbonisation efforts. 22 per cent of workers in both countries replied ‘don’t know’ to the question ‘Has your organisation made any changes to try and reduce carbon emissions?’ Table 15 shows that in the UK, 20 per cent of workers indicate their employer has taken significant action to reduce carbon emissions, compared to 14 per cent in Germany. However, when combining this figure with the percentage of workers who report that their organisation has taken some action, 62% of workers in the UK report climate action in their workplace compared to 57% of workers in Germany.

Focusing on those workers who are aware that some or significant decarbonisation plans are in place within their organisations (2,389 respondents), workers were then asked if they had been engaged in consultation on those plans. Only 24% of UK and 18% of Germany workers felt that they had significant influence on decarbonisation plans, and 20% across both countries had received significant relevant training. Table 12 shows the results.

Table 12:

Employer actions on decarbonisation N=4003

% of survey respondents

Statements:	UK	Germany
My organisation has made significant changes to reduce carbon emissions	20%	14%
My organisation has made changes to a certain degree to reduce carbon emissions	42%	43%
Consultation on plans – in workplaces where workers aware of them (N=2,223)		
Management has consulted with employees to a significant extent about plans to decarbonise	28%	23%
Management has consulted with employees to a certain degree about plans to decarbonise	48%	54%

Table 12:**Employer actions on decarbonisation****% of survey respondents**

Statements:	UK	Germany
Influence on plans – in workplaces where workers aware of them (N=2,300)		
I have the opportunity to participate in or influence my employer's decarbonisation plans to a significant degree	24%	18%
I have the opportunity to participate in or influence my employer's decarbonisation plans to a certain degree	44%	49%
Training on plans – in workplaces where workers aware of them (N=2,336)		
I have received significant training that is relevant to achieve plans to decarbonise	20%	20%
I have received training some training that is relevant to achieve plans to decarbonise	35%	40%

Interestingly, where workers indicate that some form of decarbonisation planning is evident in their workplace, a greater proportion of UK workers say that they have had a significant level of consultation on those plans compared to German workers (28% and 23% respectively). 48 per cent of UK workers and 54 per cent of German workers say that consultation has happened to a certain degree, meaning that overall there is a higher level of consultation with German workers.

When asked about the degree of influence that workers feel that they have on decarbonisation plans, more UK than German workers think that they have significant influence, yet more German workers state that they have had some influence. The proportion of workers stating that they have had no influence is equal at 32 per cent.

Equal proportions of workers in both countries report that they have had a significant amount of training relating to the decarbonisation plans of their organisation (UK 20 per cent and Germany 20 per cent). It is notable (and statistically significant) that the proportion of workers who have received some training on decarbonisation plans is higher in Germany than in the UK.

WORKING IN THE GREEN ECONOMY

Green jobs can be defined in different ways. One approach is a relatively narrow definition of jobs in the newly emerging ‘green economy’ sectors such as renewable energy, low carbon heating and related services (Local Government Association, 2020; Office for National Statistics, 2023).

A second broader definition includes nature restoration, low carbon transport and energy efficient construction. A third definition includes health and social care as well as emergent sectors such as second-hand retail, and the repair of electronic goods that have a neutral or positive impact on nature (Diski, 2022; ILO, 2016). In exploring green employment, our surveys included this broad range of definitions.

Overall, 21 per cent of workers in the UK and 27 per cent per cent in Germany consider that they already work in a green job or green sector. Removing those working in education and health and social care sectors, this falls to 16 per cent for the UK and 17 per cent for Germany. While education, health and social services and welfare are not “green” per se, they are considered important sectors to grow in a sustainable economy (e.g. Buch-Hansen and Nesterova, 2023; Jackson, 2017). The reasons stated for being interested to work in the green economy are about job quality and meaningfulness.

Table 13:
Reasons for being attracted to the green economy
(workers already in green sectors)

What attracts you to working in the green economy?	% of survey respondents	
	UK	Germany
The work is interesting	54%	55%
My skill base	42%	36%
Good pay and conditions	42%	32%
I like having a job that helps to reduce or halt climate change	29%	25%













N=954

As noted above, 80 per cent of UK workers and 74 per cent of German workers surveyed do not currently work in green sectors. Of these, 42 per cent of workers in the UK and 40 per cent of workers in Germany express an interest in switching jobs into green sector employment. The most popular green sectors were: environmental protection, renewable energy production, recycling and waste management.

Table 14:
Interest in work in the green economy
(not already in green sectors)

Would you be interested working in one or more of the following sectors? (% of workers not currently working in green sectors)	% of survey respondents	
	UK	Germany
Environmental protection or restoration	45%	42%
Renewable/Low-Carbon Electricity	39%	30%

Table 14 continued:**Interest in work in the green economy (not already in green sectors)****% of survey respondents**

Would you be interested working in one or more of the following sectors? (% of workers not currently working in green sectors)	UK	Germany
Recycling/waste management	 37%	 25%
Education, health and social care	 32%	 37%
Alternative fuel production	 30%	 23%
Low-emission transport and electric vehicles	 29%	 19%
Energy efficient construction	 27%	 24%
Low-carbon professional services	 26%	 20%

N=3,051; multiple answers possible

For the majority of those who say they would be interested to switch, the most common reason is to have a job that is interesting - over 70 per cent state this, with significantly more UK workers indicating this response. A substantial number of workers state they would like to have a job which helps to halt climate change. German workers are much more likely to state that their existing skills base would be a reason to work in green sectors, and more UK workers than German workers indicate that good pay and conditions would be a reason. It is important to note that in both countries this is a possible motivation for only a third of workers.

Table 15:**Reasons for being attracted to the green economy
(workers interested to switch into green sectors)****% of survey respondents**

What attracts you to working in the green economy?	UK	Germany
The work is interesting	77%	72%
My skill base	30%	40%
Good pay and conditions	35%	31%
I like having a job that helps to reduce or halt climate change	40%	37%

N=1256

We asked those workers not currently employed in the green economy what would hold them back in making a switch. For German workers, the perception of poor working conditions and low pay are much more significant factors than the barriers to switching reported by UK workers. This suggests that pay plays a much bigger role for Germany workers than British. In contrast, more workers in the UK compared to Germany indicate issues relating to skills and training: the cost of retraining, the time needed to retrain and an understanding of whether existing qualifications and credentials are suitable for green sector work are seen as issues.

Table 16:

Reasons for holding back a to switch into the green economy (%workers not currently working in green sectors)

% of survey respondents

Do you think any of the following would hold you back in a possible move into a job in the green economy?	UK	Germany
The cost of retraining	27%	21%
Poor working-conditions	15%	24%
Lower levels of pay than my current salary	33%	40%
The time needed to retrain	31%	22%
The need to relocate	35%	31%
Lack of careers advice on my options to switch into a green job	19%	17%
Not sure if my existing qualifications/certificates will be valid	30%	25%

N=3051 (1471 for Germany and N= UK 1580) Multiple answers were possible

SKILLS AND TRAINING FOR TRANSITION TO WORKING IN THE GREEN ECONOMY

We also asked about expectations of how a transition will impact employment. When asked about potential individual consequences, a quarter of workers assumed that they would have to change jobs, or even relocate. 4 out of 10 workers assumed that they would have to learn new skills. Slightly more UK workers felt more positive that they could get a job with better pay and conditions than German workers, although this is around only a quarter of all workers across the two countries.

Table 17:

How will a greener economy effect you?

% of survey respondents

How likely do you think that changes to a 'greener' economy will affect you in the following ways? extremely or somewhat likely

UK

Germany

I will need to change jobs

25%

24%

I will need to learn new skills

43%

41%

I will need to move away to find employment

25%

23%

I will get a job with better pay and conditions

30%

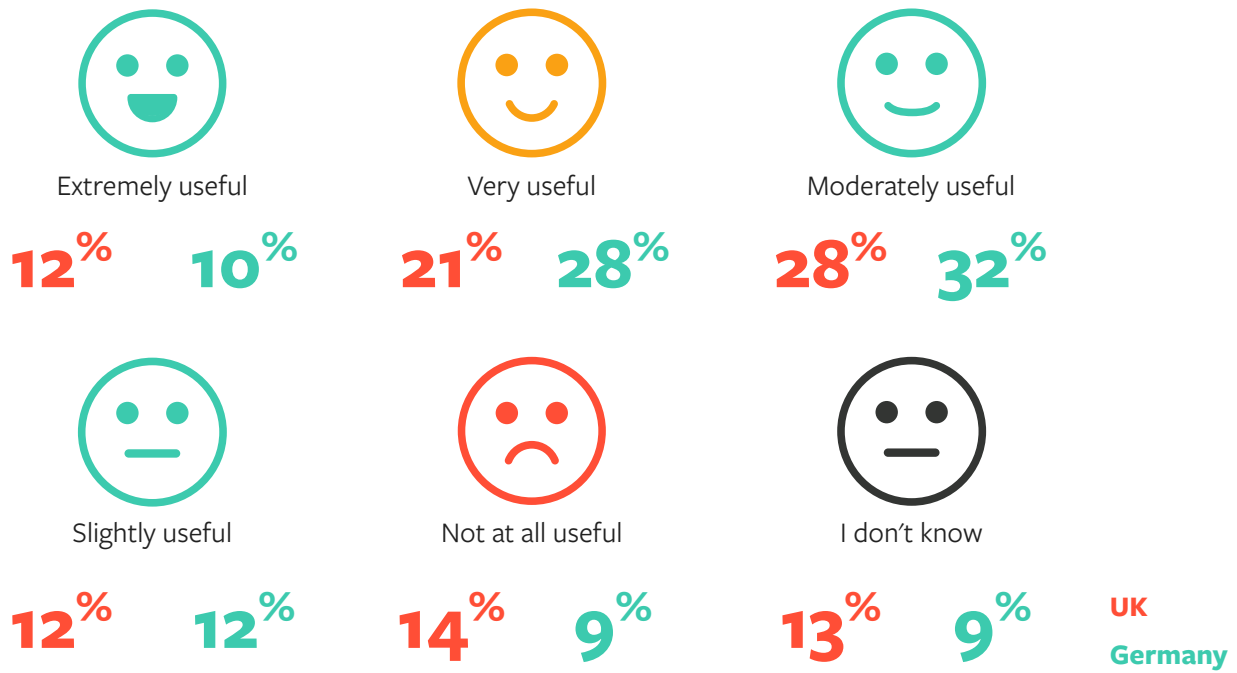
27%

N=4,003

When asked about current skill levels and how useful workers consider their existing skills base to be, three or four out of every ten workers believe they have an extremely or very useful skill basis. This number is significantly higher in Germany than in the UK. This difference in how workers evaluate their own skills (as shown in table 18) is possibly linked to different skills systems and employment relations and stronger record in employee training in Germany.

Table 18:
Is your current knowledge and skills useful for the green economy **% of survey respondents**

Do you think that your current knowledge and skills are (or would be) useful for working in the green economy?



N=4,003

MEASURES FOR A FAIR AND JUST TRANSITION

JUST TRANSITION SUPPORT POLICIES

We asked workers which types of just transition policies they would favour if jobs were at risk. Figure 3 shows the results, with respondents asked to rank the important of different measures on a scale from 1 (low) to 10 (high). The key areas of support for workers include some form of job guarantee with no forced redundancies, a policy to support the creation of decent jobs within similar pay and conditions and the creation of jobs in their local area. UK participants on average rate each measure more highly.

Figure 3:
Policies to support a just transition

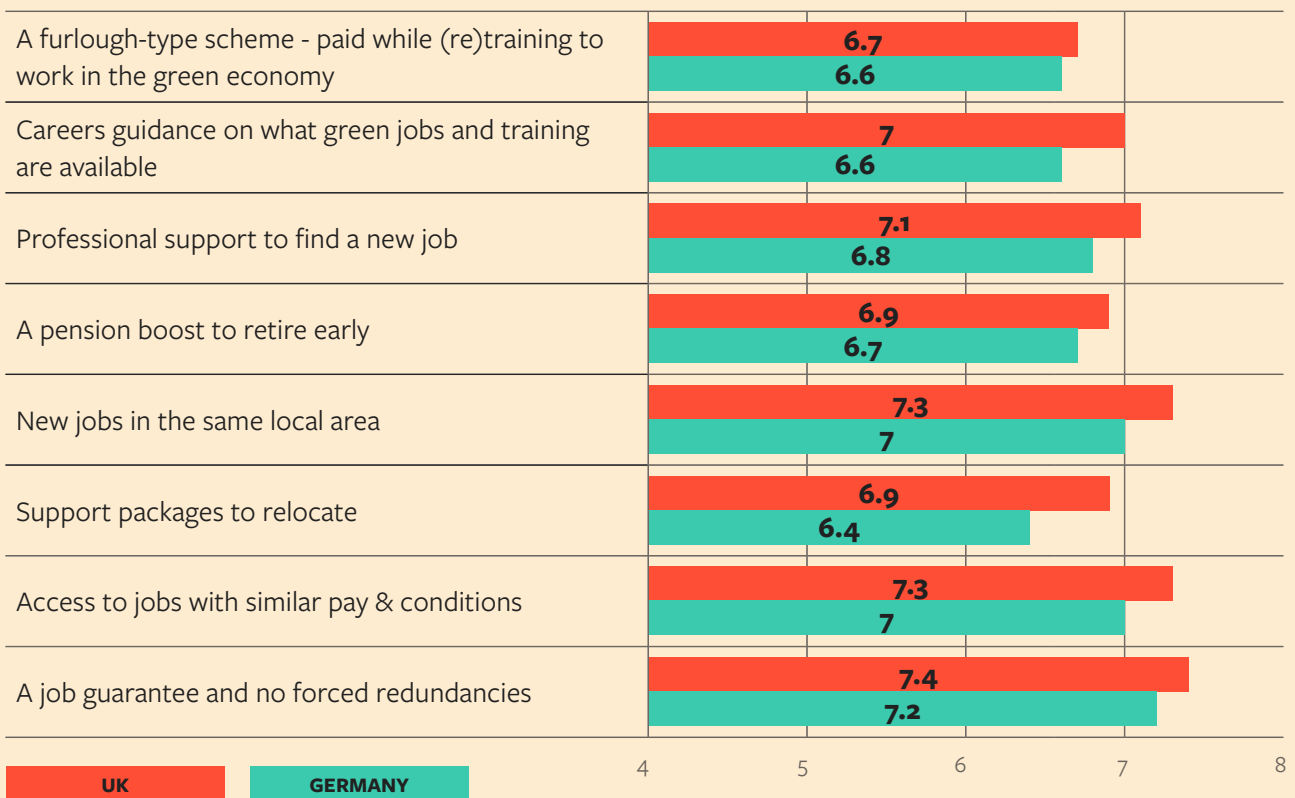
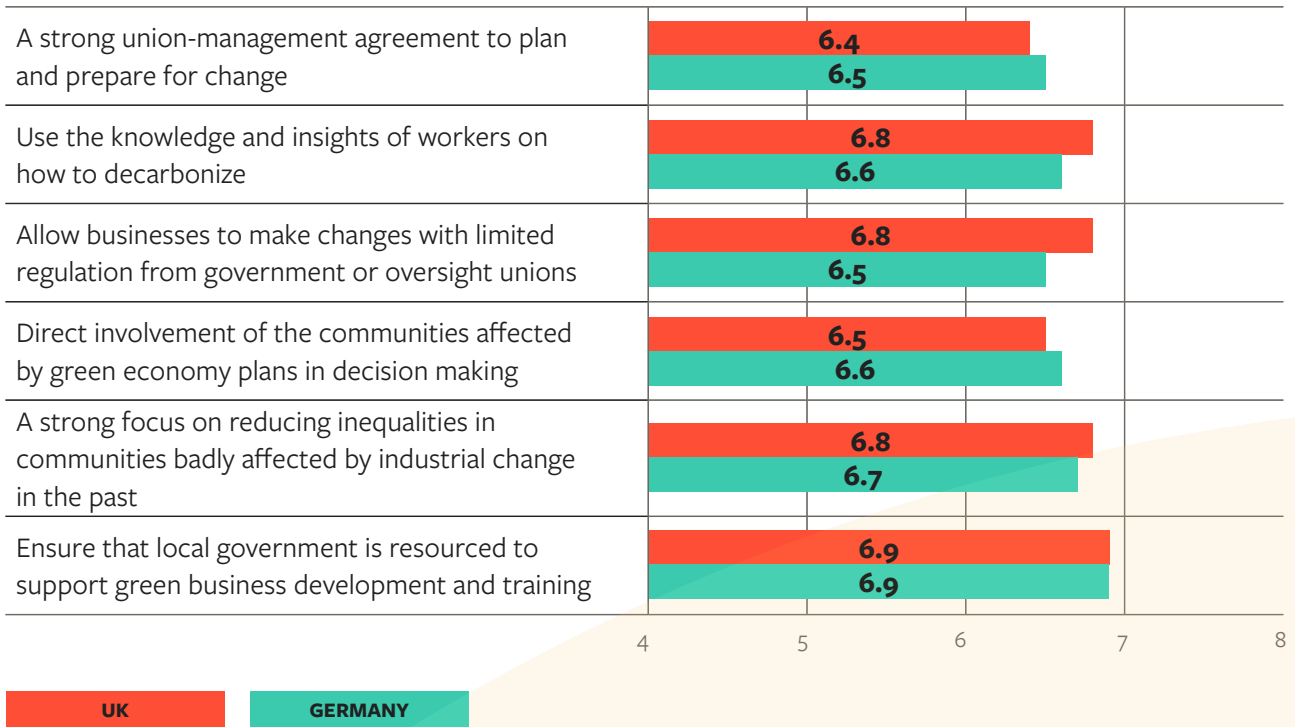


Figure 4:
How important are the following in helping to ensure that the transition to a green economy is fair and effective?



Respondents in both countries ranked the adequate resourcing of local authorities as the highest option when asked about policies to ensure the transition to a green economy is fair and effective – an average score of 6.9 across both countries. Engagement of the communities impacted by de-industrialisation, alongside the engagement of all workers, also scored relatively high. The principle of letting employers plan for the transition is given a relatively lower score with little deviation from the average. The principle of the joint planning of green transitions with trade unions scored 6.4 in the UK, and 6.5 in Germany. The minor differences between the two countries are interesting. Despite a stronger codetermination tradition in Germany, there is considerable deviation around this average (2.6) with significantly more union members supporting this principle.

CONCLUSION

Differences between the UK and Germany are generally small

Germany and the UK are both high carbon emitting countries which have committed to become net zero within 22 and 27 years respectively. They both have different types of market economies, the UK being more liberal and Germany with a more coordinated approach; different types of employment relations, again with more coordination in Germany compared to a laissez-faire approach in the UK; and different skills systems, with a greater emphasis on vocational education and training in Germany, and a much weaker vocational training sector in the UK. Against this backdrop, the results of our worker survey are quite surprising. In many regards, there are very similar patterns and not much difference in how workers across the two countries respond to a range of issues around the climate crisis. In both countries, there is a high level of information with a sense of urgency and concern regarding the climate crisis, a call for greater government action and a clearly defined set of expectations on how a shift from a fossil fuel-based economy to a decarbonised economy should occur. The level of climate action is comparable in both countries. Workers are most active at the household level, and less so at company or community level. Four out of five of workers discuss climate change at least occasionally with their families, more than a quarter even more frequently, a fifth never discuss climate change. However, there are a few areas of difference which we outline below. In many cases, the differences are small - up to 5 per cent. However, there are large disparities in some.

Effects of climate policies

German workers are more anxious (+5 per cent), feel more outrage (+7 per cent) and are less hopeful (-6 per cent) than UK workers and recognize the urgency to address climate crisis more (+5 per cent).

While workers in both countries expect central government to bear the responsibility to address climate change, German workers expect more action from business (+8 per cent) and more often think that the free market should not come at the expense of environmental damage (+7 per cent). Interestingly, more UK workers agree to the question 'sometimes a government needs to make laws that keep people from hurting themselves' (67 per cent compared to 60 per cent).

UK workers expect more positive results from the transition in terms of air and water quality (+10 per cent for air and 5 per cent for water), health and well-being (+8 per cent), but also in terms of energy security and the transport system (+4 and +13 per cent respectively). Workers in Germany are more sceptical and fear to a larger extent the deterioration of living standards (+6 per cent) and the increase in inequality and poverty (+6 per cent).

In both countries, fossil fuels are still supported by a fifth to almost a third of workers. German workers are however, much more likely to support renewable energy, in particular biomass (+7 per cent) whereas UK workers are more likely slightly more likely to favour natural gas and significantly more likely to favour nuclear power (+8 per cent) as part of the energy mix. Significantly more German workers say that nuclear should not be considered a green source of energy: 50 per cent compared to 30 per cent of UK workers.

At the workplace

Given the participation and consultation rights in Germany, it is surprising to see slightly less German workers saying that they know what needs to happen in their sector or at their workplace to reduce CO₂ emissions (-3 per cent). Fewer state that their organisation has made significant changes to reduce carbon emissions (-6 per cent), that management has consulted with employees to a significant extent about plans to decarbonise (-5 per cent), or that they had the opportunity to participate in or influence their employer's decarbonisation plans to a significant degree (-6 per cent). It is only when it comes to training that more Germany workers state they have received relevant training to achieve decarbonisation plans (+5 per cent).

More workers in the UK indicate issues relating to working conditions compared to Germany (+9 per cent), and the time of retraining (+9 per cent) and an understanding of whether existing credentials are suitable for green work (+5 per cent) are seen as issues. For Germany, workers often fear lower income (+7 per cent).

Working in the green economy

When asked about current skill levels, including how useful workers consider their existing skills base to be for a green(ing) economy, around a third of workers consider they have an extremely or very useful skill basis. This number is significantly higher in Germany than in the UK: 38 per cent to 33 per cent. When asked if workers would consider switching to a job in a green sector, there is a huge interest in both countries: 42 per cent in the UK and 40 per cent in Germany. More German workers believe that their skill base would be useful for working in a green sector (+10 per cent). In the UK, more workers say that they are interested working in the green sector because the job would be interesting (+5 per cent), the pay would be good (+4 per cent), and that they like having a job that helps to reduce or halt climate change (+3 per cent).

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