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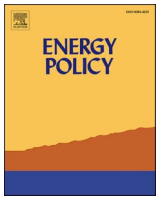

What does a just transition mean for UK oil and gas workers? Insights from a qualitative study

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ABSTRACT

The UK's offshore oil and gas industry is in long-term decline, placing workers at risk of job loss and career disruption. While policymakers have committed to ensuring a 'Just Transition' for fossil fuel workers, there is limited understanding of what this should look like in practice. This study presents qualitative findings from 37 semi-structured interviews with UK offshore oil and gas workers and industry stakeholders. It explores employment conditions in the sector and identifies barriers to obtaining quality work in renewable energy and beyond. Participants reported chronic job insecurity, mental health impacts, and obstacles such as skill mismatches, certification barriers, and perceived stigma when seeking alternative work. Drawing on the concepts of justice and decent work, the study proposes a UK-specific definition of a Just Transition for oil and gas workers. This is characterised by access to secure and fulfilling work that aligns with workers' skillsets and pay levels, enables control over work and career decisions, and retains the challenge and enjoyment of previous roles. The findings highlight an urgent need for targeted policy to address stigma, streamline reskilling pathways, and reduce bureaucratic barriers. Clearer definitions and tangible support are essential to deliver a meaningful Just Transition for this workforce.

1. Introduction

The net zero transition involves decreased reliance on high carbon-emitting fossil fuels, and increased use of lower carbon energy sources. But the speed and scale of the net zero transition may disadvantage some groups of people (Carley and Konisky, 2020; Henry et al., 2020). The Just Transition movement addresses this risk, aiming to stop certain people being 'left behind' as the net zero transition happens (Barry, 2019, p5). The Just Transition is defined as '*a fair and equitable process of moving towards a post-carbon society*' (McCauley and Heffron, 2018, p2). Different groups have different priorities for the transition (Tarasova, 2024) and there is a need for more clarity of what a Just Transition really means for specific groups (Stark et al., 2023; Wang and Lo, 2021). Fossil fuel workers have long been a focus of Just Transition efforts (Healy and Barry, 2017). Yet, there is still little knowledge about what would actually represent a Just Transition for fossil fuel workers.

This study gives voice to workers and industry stakeholders in the UK's offshore, upstream oil and gas industry. The oil and gas workforce is facing a declining and evolving energy sector, and reduced job opportunities (RGU ETI, 2025; OEUK, 2024). Creating effective policy decisions for this group must involve social dialogue, involving the views of those impacted, as well as top-down decision-making (Shibe and Gibbs, 2025a a,b; Sokołowski and Heffron, 2022; Harrahill and Douglas, 2019). Not doing so risks creating injustice: for example, the failure of UK policy to generate onshore shale gas extraction was attributed partly to not taking into account the views of the communities impacted (Bradshaw et al., 2022). Furthermore, localised policy specific to certain areas is important to reduce the risk of injustice (Healy and Barry, 2017; Galgoczi, 2020; Gazmararian, 2024). Therefore, to create effective policy for UK oil and gas workers specifically, it is important to give them voice.

This follows the precedent set by a small but growing number of studies presenting empirical data from fossil fuel workforces and their surrounding communities, in the UK, Ireland, Australia and the USA (e.g. Greenberg et al., 2025; Egan et al., 2024; Gazmararian, 2024; Banerjee and Schuitema, 2022; Cha et al., 2022; MacNeil and Beauman, 2022; Sicotte et al., 2022; Cha, 2020; Carley et al., 2018; Graff et al., 2018; Goddard and Farrelly, 2018; Olson-Hazboun, 2018). Two such studies have been conducted on the UK's oil and gas workforce. Gibbs and Shibe (2024) interviewed eight workers about impending job losses

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at Grangemouth refinery, a downstream petrochemical processing plant which was a major employer in Scotland's central belt and closed permanently in 2025, with the loss of 400 jobs. we concluded that there is no Just Transition yet evident for Grangemouth workers, with few suitable alternative employment opportunities available (Gibbs and Shibe, 2024; Gibbs and Shibe, 2024). A survey of over 1300 offshore workers by Jeliazkov et al. (2020) highlighted the workforce's worries about job security and future employment prospects, and disappointment about the support available. Both studies indicate the urgent need for academic attention for these workers.

To our knowledge, this study is the first to seek to propose a more tangible definition of what a Just Transition *should* look like for UK oil and gas workers, drawing on qualitative data from this group. This study addresses two research questions. What is the employment context for workers in the UK's upstream oil and gas industry? Secondly, what would a Just Transition look like for these workers?

2. The UK's oil and gas industry context

The UK has significant natural energy resources, the majority of which are offshore in the forms of hydrocarbon underneath the North Sea, and wind energy (RGU ETI, 2021). In the UK, most activity is offshore in the North Sea near Aberdeenshire, where most hydrocarbon reserves are stored; and 'upstream', focused on extraction (BEIS, 2019). Therefore, the upstream, offshore oil and gas extractive industry is the focus of this study.

UK oil and gas extraction has been a major economic contributor since production from the first North Sea oil fields commenced in 1967 (BEIS and OGUK, 2021). However, production from the UK's mature North Sea basin has been in decline since the turn of the millennium due to depleting hydrocarbon reserves (Kemp, 2012, 2019). Remaining oil and gas fields are smaller, and therefore increasingly complex and expensive to use (Acheampong et al., 2021). While demand for oil and gas remains high, domestic production is at a record low, and is no longer meeting domestic requirements (OEUK, 2024; DESNZ, 2025). Further declines are forecast (OEUK, 2024): North Sea Transition Authority (NSTA) estimates indicate that oil and gas production could be halved between 2025 and 2030 (OEUK, 2025).

With the continuing decline in oil and gas industry activity comes a decline in employment. Oil and gas still makes up the vast majority of offshore energy employment (RGU ETI, 2025). However, it is steadily declining. Direct and indirect employment in UK offshore oil and gas production was around 115,000 jobs in 2024, 40% lower than 2024's total figure of 191,000 (RGU ETI, 2025; OEUK, 2024). The decline is expected to continue. By the early 2030s, estimates range from 71,000 direct and indirect jobs in oil and gas if the net zero transition is managed well; down to 57,000 if production decline is more rapid (RGU ETI, 2025). In this worst case scenario, RGU analysis highlights this implies an average of 400 jobs lost every two weeks (RGU ETI, 2025). Redundancies have already been announced for 2025 and 2026 by organisations such as Harbour Energy and Chevron (Harvey, 2025; Williamson, 2025).

In theory, there are multiple pathways that could partially replace lost employment in upstream oil and gas, including in decommissioning, adjacent low-carbon activities, and opportunities the wider economy. In the UK, recent policy and industry strategies frequently position offshore renewables as a prominent source of future job growth (HM Government, 2023; Offshore Energies UK, 2022; RGU ETI, 2024; RGU ETI, 2025). UK forecasts suggest that renewable employment could rise from 39,000 in 2024 to between 84,000 and 153,000 by 2035, depending on the scenario (RGU ETI, 2025). These positive forecasts are supported by analysis of international data, from mainly Western countries, concluding that renewable energy can generate a relatively high number of jobs compared to oil and gas, and drives net national employment (Hanna et al., 2024; Silva et al., 2024).

But the timing of job creation is an obstacle. Jobs in offshore renewables are not likely to absorb the volume of jobs being lost in oil and gas until the late 2020s (RGU ETI, 2025). Therefore, sufficient opportunities do not yet exist for workers currently being displaced from oil and gas. Furthermore, such estimates do not seem to account for the economic cycles of upturns and downturns which have long characterised UK oil and gas industry activity and employment opportunities (Mackie, 2004). Thus, the mismatch between the timing of job creation in renewables, and the decline of oil and gas industry activity, which is simultaneously, gradual and volatile, cast doubt over the reality of a smooth transition of the UK's oil and gas workforce to equivalent work in offshore renewable energy.

There is a further assumption in offshore energy sector plans that the majority of the oil and gas workforce will voluntarily transition to renewable energy employment. But this does not account for the individual will and career plans of each worker. Jeliazkov et al.'s (2020) study of upstream UK oil and gas workers revealed that a significant proportion of workers would consider exiting the energy sector to find more stable work, as well as potentially moving to renewable energy. Therefore, the transition of the oil and gas workers to renewable energies remains an assumption rather than an established outcome. It remains an empirical question whether these jobs in renewable energies will materialise in sufficient volume, in the right places and timeframes, and on terms that workers view as comparable to their previous employment and in line with their own career plans.

Even if sufficient jobs are created at the right time for oil and gas workers to move into renewables; and even if they are willing to do so; there is the further issue of skills transferability. Policy analyses estimate that a large share of the offshore workforce possesses skills that could, in principle, be adapted low-carbon energy activities (RGU ETI, 2021, 2023). Yet the extent of transferability is contested. US analysis suggests relatively few fossil fuel workers move into clean-energy roles, and those that do face both substantial retraining and a significant paycut (Curtis et al., 2024; Greenspon and Raimi, 2024; Raimi and Greenspon, 2025). Reskilling support therefore remains central to a Just Transition for fossil fuel workers (Calvillo et al., 2025; Mark et al., 2024; OPITO, 2022; Pollin and Callaci, 2019). Efforts are underway in the UK to reskill oil and gas workers: an energy sector Skills Passport was released in early 2025 to help workers transfer more flexibly between oil and gas and other offshore energy projects as needed (Scottish Government, 2025). However, no assessment of the impact of this initiative is yet available, and the current state of reskilling UK oil and gas workers for renewable energy work is not clear.

The need to support UK oil and gas workers to achieve a Just Transition has been recognised by policymakers. Helping the oil and gas workforce to access quality work in the evolving energy sector is a stated priority of the UK Government's 2023 Net Zero Strategy and the North Sea Transition Deal (HM Government, 2023; BEIS and OGUK, 2021; OPITO, 2022); and the Scottish Government's Just Transition Commission (2025).The Green Jobs Taskforce highlighted that delivering net zero will require coordinated action across education, training and employers, and emphasised the importance of ensuring that workers and communities currently reliant on high-carbon activities can access good-quality alternatives (Green Jobs Taskforce, 2021). In the offshore context, the industry's Integrated People and Skills Strategy sets out a plan to deliver the government's North Sea Transition Deal commitments of supporting the workforce to transition to other work in lower-carbon energy production, and to reskill appropriately (BEIS and OGUK, 2021; OPITO, 2022).This is not only in service of the workforce: there is widespread recognition that the energy sector needs to retain valuable North Sea oil and gas expertise, and harness their human capital for renewable energies (RGU ETI, 2023, 2024).

But despite these coordinated efforts, there is a lack of evidence about their impact on the workforce. There is still no evidence of a Just Transition for North Sea oil and gas workers; and no clear pathway to create one (Just Transition Commission, 2025). Just Transition efforts lack clarity: they need to be made more tangible, and involve

collaboration with the workforce (Shibe and Gibbs, 2025b). Efforts towards a Just Transition for UK oil and gas workers are more urgent than ever (RGU ETI, 2025). This paper aims to add depth and clarity to Just Transitions efforts for North Sea oil and gas workers, by giving voice to the offshore workforce about their experiences of the employment context.

3. A just transition for UK oil and gas workers

Just transition scholarship emphasises that transitions are not purely technical substitutions but contested political-economic processes that redistribute risks, benefits and power (Newell and Mulvaney, 2013). Thus, exploring a Just Transition involves analysis of "who wins, who loses, how and why' … and who will bear the social costs of decarbonising energy sources and economies' (Newell and Mulvaney, 2013, p133). Consistent with this view, we treat the 'just transition' as a normative and contested concept which requires empirical elaboration.

Energy justice is often conceptualised through three tenets: distributive, procedural and recognition justice (McCauley et al., 2013). Distributive justice concerns how the benefits and burdens of the energy transition are spread across different groups and communities. Procedural justice concerns whether decision-making processes are inclusive, transparent and allow affected groups meaningful voice. Recognition justice is concerned with whether those impacted are acknowledged and respected. In this study, these tenets provide sensitising concepts to examine whether workers are experiencing a Just Transition: are they benefiting or losing out? Are decisions being made that incorporate their voices? Is the impact on workers who have lost oil and gas employment being recognised?

There is limited empirical exploration of what a just transition should look like for oil and gas workers in practice. A just transition for the fossil fuel workforce has been commonly associated with access to 'decent work' since its explicit inclusion in the 2015 Paris Agreement (UNFCCC, 2015). According to the International Labour Organization (ILO), decent work is defined at a global level by sufficient income and safe working conditions; respect for human rights at work; opportunity for social dialogue between employees and employers; and social protection (e.g. support to cope with societal challenges such as rising cost of living) (UNFCCC, 2016).

More broadly, decent work has been conceptualised as work that is 'fair, dignified, stable, and secure' (Blustein et al., 2016, p2). In the UK context, fair or decent work has been conceptualised through dimensions echoing the ILO definition such as job security, fair pay, physically and psychologically safe working conditions, and worker voice. But UK-based research further suggest that decent work in this context involves elements like control over work and career decisions, job satisfaction, and opportunities for progression (Dodd et al., 2019; Fair Work Convention, 2016; Taylor, 2017). This suggests that the concept of decent work in the UK is, therefore, more elaborate, and integrates higher order privileges, than the global concept of decent work proposed by the ILO. The decent work construct is used in this study to view what respondents understand as acceptable and desirable employment to replace lost oil and gas work.Thus, a key aim of this study is to understand how a Just Transition should manifest for UK oil and gas workers, and whether this is aligned with the ILO's decent work concept or involves other factors.

4. Methodology

A qualitative research methodology was chosen to explore the study's research questions which address social processes in a complex and changing industry (Morgan and Smirchich, 1980). Data were collected via semi-structured interviews, which were conducted virtually by the first author using Teams and Zoom, and recorded with participants' consent. 37 interviews were conducted in total, comprising two groups of participants. 24 interviews with current or former UK oil and gas workers ('Group 1'); and an additional 13 interviews with industry stakeholders ('Group 2').

Group 1 participants, individual were recruited primarily via social media, (primarily Reddit, LinkedIn and Facebook); and snowball sampling. Group 1 was made up of 13 geoscientists, who represent just over half of this group; three engineers, three individuals in operations and logistics, one offshore medic, one electrician, one accountant, and one computer-aided designer. Participants were aged between 32 and 62. The average participant age of 45 aligns with the 44.1 average age in the UK's offshore industry (OGUK, 2021a). 22 Group 1 participants were men, with only two women interviewed. This reflects the male-dominated nature of the industry: just 3.4% of offshore workers are women (OGUK, 2021a). Most participants were White and only one participant was Black; this again reflects the demographic make-up of the industry (OGUK, 2021b). Reflecting the high skill level of the oil and gas workforce (Allan and Ross, 2019), Group 1 participants were highly educated. 21 participants were educated to university level, including six PhD holders. The three participants not educated to university level all held relevant professional qualifications. While these demographics are representative of the UK's oil and gas industry, this may impact the transferability of findings to other industries which have a different demographic composition.

13 interviews were conducted with Group 2, industry stakeholders. Potential participants were identified on LinkedIn and internet searches. One contact shared details of the study with an industry mailing list, which attracted several participants. Group 2 included HR managers, trade union officers, skills experts, an employment lawyer, and an academic, and three other individuals with industry experience. Demographic information was not collected for these participants, as they were interviewed about the industry and not about their own personal experiences.

The interview data were transcribed and anonymised, and then analysed using template analysis (King, 2004). The researchers drew on Braun and Clarke's (2006) phases of thematic analysis to identify patterns in the data, while devising a template to organise developing codes and themes (Brooks and Turley, 2015). This enabled the researchers to manage a large volume of qualitative data from 37 interviews, and to discuss emerging ideas with participants as data collection progressed.

The primary researcher coded each anonymised transcript. Initial codes were deductive, based on the literature (e.g. relating to the decline of oil and gas) and inductive, based on emerging findings (e.g. mental health). After five transcripts, an initial coding template was developed and applied to subsequent analysis. The template was amended after coding approximately every five transcripts, and coding hierarchy developed to identify higher level themes and relationships. The template was finalised when the researchers judged it to represent the key themes and the detail of the interview data. Analysis continued beyond coding, and into the writing-up phase, where themes and subthemes continued to evolve to provide a direct answer to the research questions.

To enhance the rigour of analysis, the research team undertook three methods of data triangulation. Firstly, during analysis, codes and themes were continually compared to findings from industry publications, and to the first authors' field notes from interviews; and discussed as a research team. Secondly, developing themes were presented to participants in later interviews to ask for their feedback. Thirdly, as interviews were conducted during the 2021 industry downturn triggered by the global pandemic, a potential limitation of the study is the age of the data. The researchers therefore contacted participants with a copy of the findings asking for feedback in June 2025. All respondents agreed that the findings were an accurate depiction of industry issues, and remain relevant in 2025.

5. Findings

Three themes were identified during data analysis: 'UK oil and gas employment context'; 'Barriers to alternative work'; and 'A Just

Transition for UK oil and gas workers'. These three themes, and their subthemes are analysed, accompanied by illustrative quotes, in this chapter.

5.1. UK oil and gas employment context

The UK's upstream oil and gas industry was described by participants as a challenging and changing context for its workforce. This is analysed in three subthemes: the decline and evolution of the industry; the long term cyclicality and low job security of UK oil and gas; and the personal consequences of this for the workforce.

5.1.1. Decline and evolution

The UK oil and gas industry is in clear decline as hydrocarbon reserves deplete. Participants were clear that the UK's oil and gas industry will exist in some form, albeit reduced, as long as it is making money. However, opportunities for work and careers in the UK oil and gas industry are inexorably declining.

Participants supported the idea that harnessing North Sea oil and gas expertise is critical for the evolving energy sector. Many of the workers interviewed expressed ambitions to move into renewable energy, decommissioning and other areas of the energy sector; and industry stakeholders agreed that there will be significant job opportunities in the future. However, for now, there is a disparity: renewable energy jobs do yet not exist in sufficient numbers to absorb the volume of oil and gas workers losing work now. This is congruent with industry literature, which forecasts significant job creation only from the late 2020s onwards (OEUK, 2024; RGU ETI, 2025). This is particularly acute during industry downturns when more workers are suddenly on the employment market.

Furthermore, participants also described a lack of success in getting the alternative jobs that do exist in the energy sector, particularly in renewable energy. Despite forecasts, there is growing scepticism that significant job opportunities will ever materialise.

> *'there's a humongous amount of talk … there's a humongous push for renewable sectors to use oil and gas guys … [but] I know the guys from drilling side, they've really struggled to get a job.* '(S, driller)

5.1.2. Cyclicality and low job security

Employment in the UK's oil and gas industry is driven by cycles of upturns and downturns, driven by fluctuations in oil prices. During upturns, industry activity and therefore employment is high, with relatively plentiful jobs available. But downturns can hit swiftly. This instigates swift rounds of redundancy and few alternative employment opportunities. This cyclical nature means that the industry is characterised by low job security. The downturns of 2015 and 2020 impacted many people in the industry, with many people experiencing multiple redundancies in the space of a few years.

The impact of a downturn is particularly strong in Aberdeen, given the prevalence of direct and indirect employment, and on other industries in the area. Some functions are more affected than others: for example, speculative exploration work conducted by geoscientists and drillers is quick to be cut off when oil price drops. But workers of all levels of seniority are affected. Many oil and gas workers are on temporary contracts, and are constantly at risk of not having their contract extended. But job insecurity affects even workers on permanent contracts who may be made redundant during downturns, the many workers on temporary contracts are more immediately at risk. Many workers have experienced multiple cycles of upturns and downturns during their career, and shared stories of sudden redundancies which came out of the blue. As Participant P recalled,

> '*Turned up my check-in one day and there's 16 hours of us about to fly out and we're all checked in, boots, put our survival suits on, somebody walked in from HR from the office and gave us all our letters and told us to go home, we all got made redundant on the spot …. they gave us the letters - opened them at the time, we just get told we're getting made redundant and we went okay.*' (P, offshore medic)

Even during upturns, the industry has a prevalence of insecure contract work, with many workers on short-term contracts. This pervasive low job security creates a power inequality between employers and the workforce. Workers are increasingly expected to be flexible in terms of location and pay in order to secure work. Industry stakeholders described employers' efforts to be supportive during the process of redundancies; but some workers described perceiving a lack of duty of care for employees made redundant.

> '*You're just chucked out. But then they want you back in a drop of a hat … You can buy a long term rail ticket. They end your job … they don't help you out, and you're just on your own. Then they want you back again. I've literally got no money to buy a rail ticket, you know, that's how bad it can get.*' (Q, computer-aided designer)

As a result, many workers described their search for more stable work in other industries. One HR representative acknowledged that the industry has been '*extremely wasteful in terms of our talent'*. R, a trade union representative, reflected on the negative impact of the industry's cyclicality and low job security: *'this boom and bust approach can't go on …. we're failing workers, we're failing society'* (R, trade union officer).

5.1.3. Consequences of low job security for the workforce

In this environment of low job security, workers must cope with job insecurity; and the semi-regular reality of unemployment during downturns. One participant described thriving on the unpredictability of the industry. But for most, the stress of continual low job security, and the experience of actual job loss, creates a risk of mental health issues.

Mental health is particularly threatened by actual job loss. Several workers described the mental health 'spiral' triggered by the event of job loss, which worsens over time. This has a spiralling effect when unemployment continues indefinitely. The longer someone is out of work, the harder it can be to find work again: time erodes mental health required to find reemployment, as well as the risk of losing up to date skills.

> '*Losing my job has hit my self-esteem, and hit my ability to earn money, no end … the consequences of the downturn have been enormous for me, just lack of confidence, lack of self-esteem, hit my income*' (BB, geoscientist)

The high pay once associated with lucrative oil and gas lifestyles now represents a chance for save up for likely periods of unemployment.

> '*I'm under no illusions that we get paid really, really well. And the reason we get paid really well is because you're going to be working for, like this well, this job goes till July, then I've got nothing planned after that. So you get paid well, because potentially that could be it for your year.*' (S, driller)

Many workers without significant cushions of savings described seeking underemployment, defined as '*working in a job that is below the employee's full working capacity*' (McKee-Ryan and Harvey, 2011, p963). For some, this involved seeking posts within oil and gas for which they are overqualified; while others took work in bars or supermarkets. Participants described taking underemployment either to keep them going financially, or to distract themselves from unemployment, as described by Participant A.

> *"I'm literally applying for a … temporary post in the Post Office for Christmas … What I'm trying to do is find something casual enough that I don't even have to report it on my CV'* (A, project management)

Ultimately, workers who cannot cope with the mental health or financial implications of the industry's low job security, may exit the industry and seek employment in other industries. Therefore, the oil and gas industry's low job security was understood to pose a risk to retaining

the workforce's valuable expertise for the evolving energy sector.

5.2. Barriers to finding alternative employment

This theme analyses three barriers that oil and gas workers described encountering in their search for alternative employment: skills, bureaucracy and stigma. Findings focus largely on accessing work in renewable energies, often around Aberdeen, as this was the transition most commonly raised by participants. However, barriers to accessing work in other industries outside the energy sector are also presented where relevant.

5.2.1. Skills

Skills was a common topic raised by participants describing their efforts to find alternative employment. Most participants agreed that they possessed a high degree of skills transferable to renewable energies, echoing analysis by RGU ETI (2021). Participants also spoke about identifying and leveraging transferable skills relevant to other industries, such as public sector and telecoms work.

However, most workers perceived at least some degree of reskilling required to transition out of oil and gas work. Three reskilling challenges were identified. Firstly, even when workers have or can access appropriate formal education and training, many renewable energy employers seek hands-on or in-role experience on that specific type of offshore installation. As Participant B reflected, '*no amount of university or formal education will help you*' when hands on experience is required. But practical experience in renewable energies and decommissioning is hard to access for the oil and gas workforce. Therefore, the lack of hands-on experience provides a barrier to entry in other energy sector roles, even for highly experienced oil and gas workers.

Secondly, participants described that a lack of certainty over the renewable energy jobs that will be available in the future, and the skills required to do them. This poses a challenge in their efforts to retrain and plan their long-term careers in the energy sector.

> '*Constantly, we hear about green jobs, and I keep saying to everybody, well give us a list of these green jobs. And nobody can do it. Or, let us see the new jobs that are there. We constantly get members coming back to us and saying how do you transition into renewables? And there's nae roadmap there for them to actually do that …* ' (I, trade union officer)

Thirdly, certain workers may need more support in leveraging and adapting their skillset to move to alternative work. In particular, geoscientists with a high level of education, often at PhD level, and niche experience in specific sections of the North Sea may find it more challenging to identify the experience and skills relevant to work in other industries. They may therefore need more support with identifying and leveraging their skillset for other roles across, and beyond, the energy sector.

5.2.2. Bureaucracy and stigma

For offshore oil and gas workers, bureaucracy was described as impeding access to work on renewable energy installations. Offshore workers require various certificates to comply with technical and health and safety standards. These certificates must be renewed at regular intervals, at a cost of several thousand pounds. Different certificates are required for oil and gas and renewable installations, despite overlap in content. Employers will pay for their staff, but unemployed or self-employed workers must pay for certifications themselves. This creates significant financial burden on the industry's large number of contract workers, and those who are unemployed.

P, an offshore medic, reflected on his reluctance to hold certificates in both oil and gas and renewable energies: 'they're *shooting themselves in the foot because a lot of people like me, won't do the course … so they're making it quite difficult for people like me to transition across*'.

The stigma of oil and gas stereotypes also represents a barrier to jobs in renewable energies. Several participants described being '*pigeonholed*' by potential employers due to their oil and gas background. They described feeling like their chosen career in oil and gas, and their association with polluting hydrocarbons, made them feel unwelcome in renewable energies. One person described feeling like the '*dirty cousin' in* comparison to the renewable sector, and another described a strong '*them and us'* mentality between renewable and fossil fuel companies.

Workers also described experiencing stigmatisation from employers outside of the energy sector. There is a perceived lack of reliability due to the oil and gas industry's historically and notoriously high salaries. During downturns, workers described being judged as disloyal, likely to leave and return to more lucrative oil and gas work when oil and gas activity picks up in the next upturn. This can harm their employment prospects, as described by Participant U.

> *'I found it impossible to change industries, because conversations with multiple recruiters … they all said to me the same thing. They said, you're only doing this because there's a downturn, the minute the oil industry comes back, you're going to leave.'* (U, geoscientist)

In a third form of stigma, several older participants perceived their age as a barrier both to obtaining replacement work across all industries where they might need to reskill. Even though it is illegal to making hiring decisions based on age, they felt that age would be obvious from their CV and that employers might perceive them as being harder to train up, and with fewer career development opportunities ahead of them. One older participant described feeling excluded from renewable energy specifically, due to the tendency of marketing materials to feature images of younger workers. The perception of potential age discrimination may therefore put some workers off applying for alternative. Notably, this issue was perceived and described by the oil and gas workforce only; the study did not include the perspectives of potential employers.

5.3. A just transition for UK oil and gas workers

The lack of action towards supporting the workforce to achieve a Just Transition was a topic of many interviews. One Trade Union participant, for example, described their frustration at the volume of Zoom meetings about the Just Transition, and the lack of corresponding action. As Participant R reflected,

> '*it's a lack of leadership … there's nobody taking ownership of it ….. Everybody sitting in these, these groups, and there's no collaborative approach … no, joined up piece … the transition'll happen, but there'll be nothing just about it unless we sort it, unless we change it*' (R, trade union officer).

This final theme captures the authors' interpretation of what a Just Transition for UK oil and gas workers would look like. Participants spoke about what they enjoyed about the oil and gas industry, and what they feared losing as employment opportunities decline. Therefore, this theme is largely evidenced by interpreting what participants described losing as their oil and gas opportunities decrease.

Firstly, many workers described the great enjoyment they found in their jobs and the exciting, challenging world of oil and gas. The industry is highly demanding, both in terms of work and personal sacrifice - particularly for offshore workers away from home for long stretches. But participants also describe the excitement they felt in the unique and physically challenging offshore environment. This can result in a reluctance to leave and pursue other opportunities in less exciting industries. Therefore, a level of challenge and enjoyment was interpreted as important feature of a Just Transition. As Participant B reflected,

> *'It's not for everyone but very few other industries have such a balance of technical and physical work challenge these days … we are given a challenge … during the following days or weeks where 24 hours of focus is given to the job and when it is complete, you do get a sense of accomplishment, which I think becomes quite addictive … With the work life*

balance we have and the lifestyle we can afford as a result, overall I think many people love to hate the industry. It's hard to describe, but many people would be lost without it'. (B, engineer)

Secondly, a Just Transition would involve work at the appropriate level for someone's skillset, and, correspondingly, their pay level. This was evidenced by participants describing being disadvantaged in their job search by their higher skill level, and having to accept underemployment. Participant F, an electrician, reflected feeling '*penalised*' by the extensive experience on their CV when applying for work below their skill level.

Thirdly, due to the industry's low job security, there is a lack of stability in working patterns and income. The search for more stable work was a core theme for people seeking replacement work beyond the oil and gas industry. This highlights that while stability, an element of 'decent' work, it has not been present for UK oil and gas workers. Creating more stability of work was therefore interpreted as an element of a Just Transition for UK oil and gas workers.

'all people want in the oil industry is consistency in employment and consistency in their income … I think a lot of people would be willing to take a pay cut if it were to remove the risk of being laid off … it's a huge problem in the industry' (B, engineer)

Finally, several participants described experiencing a loss of control over their work and career paths as oil and gas employment declines. For example, it is common to have to be flexible on pay, location and type of work. Furthermore, moving to another areas of the energy sector may constitute a career change, which many participants accepted as necessary. But even for those who accept it, there is a loss of control in their career decision-making. One participant described '*no control over my career, really. I feel, I feel completely trapped where I am now.'* One geologist reflected on the loss of identity caused by their involuntary career change:

'*it's interesting for me having been interested in into geology for since … I was 14 or 15 years old …. That's a fairly large part of my life that you now say, right, that's done and dusted. And I've got to go find something else to do now. So … there's a fairly fundamental change about who you are as a person'* (II, geoscientist)

Therefore, a Just Transition for oil and gas workers would also involve retaining control over the decisions made about their work and careers.

In summary, a Just Transition for UK oil and gas workers was interpreted as access to work which offers similar challenge and enjoyment to their oil and gas work; which is in line with their skillset and pay level; which involves some stability of working patterns and income, even if they did not experience this in oil and gas; and which enables the individual to exercise control over their work and career choices.

6. Discussion

This study followed in the spirit of qualitative studies providing empirical research on the reality of a Just Transition for workers (e.g. Greenberg et al., 2025; Egan et al., 2024; Gazmararian, 2024; Banerjee and Schuitema, 2022; Cha et al., 2022; MacNeil and Beauman, 2022; Sicotte et al., 2022; Cha, 2020; Carley et al., 2018; Graff et al., 2018; Goddard and Farrelly, 2018; Olson-Hazboun, 2018). To our knowledge, it is one of few pieces of empirical research focusing on hearing the voices upstream UK oil and gas workers, excepting Jeliazkov et al. (2020). This discussion of the significance of findings in relation to previous literature is organised by the study's two research questions. Firstly, what is the employment context for workers in the UK's upstream oil and gas industry? Secondly, what would a Just Transition look like for these workers? The discussion is framed in terms of both relevance for industry practitioners and contributions to academic literature.

6.1. The experience of workers in UK oil and gas

The first research question sought to explore the current employment conditions faced by UK oil and gas workers. The overall picture painted is bleak, with a workforce suffering low job security in a cyclical and declining industry, with corresponding impact on financial and mental health; significant barriers to accessing alternative employment pathways; and feeling unsupported by government and employers as their industry declines and evolves.

Several findings align with findings by Jeliazkov et al.'s (2020) study of offshore oil and gas workers: the negative impact of the industry's cyclicality and low job security; the consequent drive to find more stable employment, whether in renewable energy or outside the energy sector; and certain barriers to finding alternative employment, such as duplicated cost and effort in obtaining offshore certifications. This study adds two further insights to knowledge of how UK oil and gas workers are experiencing the employment context. Firstly, while concern over job security was acknowledged by Jeliazkov et al. (2020), this study goes a step further in explicitly labelling this as mental health risk to the workforce. Secondly, the perceived stigmatisation of oil and gas workers by employers in other industries – for their high pay, their association with pollution, and, in the case of older workers, for their age – is a new finding.

For workers who seek to move to others areas of the energy sector, such as renewable energies, findings highlight three specific skills-related barriers: the need for hands-on experience in offshore renewable installations, which excludes many tenured oil and gas workers; the need for support for workers who are most specialised and highly educated in niche topics to their skillset to alternative employment; and the need for more clarity over future job availability in renewable energy employment; and the skills required, to help them retrain. We highlight these barriers to bolster existing efforts to help the oil and gas workforce transition to alternative employment (Green Jobs Taskforce, 2021; OPITO, 2022; Scottish Government, 2025).

In light of these new findings, and echoing previous publications on the UK's oil and gas industry (Just Transition Commission, 2025, 2025a, 2025b; Gibbs and Shibe, 2024; Jeliazkov et al., 2020), findings were interpreted to mean that oil and gas workers are not yet experiencing a Just Transition. This group are carrying a burden of the energy transition: they are experiencing significant job insecurity, a consequent risk to mental health, and high barriers to accessing alternative employment. The typically high levels of skill and pay in oil and gas do not protect them from these impacts. Our further interpretation is that oil and gas workers do not yet have procedural justice involving decision-making that incorporates their voices, which have seldom been reported in empirical literature; nor recognition justice, where the impact on workers displaced from oil and gas is being adequately acknowledged and addressed. This study's policy recommendations (section 7) are made with the aim of boosting procedural and recognition justice for the workforce.

6.2. A just transition for UK oil and gas workers: high quality replacement work

If UK oil and gas workers are currently suffering injustice as work and career opportunities decline in their changing industry, then what would a Just Transition look like? We draw on the concept of decent work to interpret what respondents understood as acceptable and attainable 'replacement' employment, and which therefore could represent a Just Transition. The ILO's global definition of decent work, which emphasises safety, adequate income, and human rights is often used as a shorthand for a Just Transition for oil and gas workers (UNFCCC, 2016). But these results suggest that this global aspiration may not be an appropriate way to define the Just Transition for UK oil and gas workers, who arguably do not even have access to 'decent' work to start with, due to the industry's low job security; and yet who enjoy

other privileges such as a high degree of challenge and satisfaction in their work.

Instead, findings echo the more complex, privileged and UK-specific definitions of good quality work in the UK (Dodd et al., 2019; Fair Work Convention, 2016; Taylor, 2017). These definitions draw attention not only to whether appropriate volume of replacement work exists; but whether workers perceive alternative roles as comparable in pay, job security, skills and characteristics, safety and wellbeing, and prospects for progression. Integrating this literature with the findings of this study, we therefore propose a definition of a Just Transition for UK oil and gas workers as:

> *access to work offering equivalent or improved benefits to lost oil and gas employment. Such replacement employment would involve control over their own work and career decisions; levels of challenge, enjoyment and remuneration in line with their previous employment; the opportunity to leverage their existing skillset, with appropriate* support *to reskill where relevant; and improved job security*.

Just Transition efforts should therefore be aimed at supporting oil and gas workers to access such high quality replacement work.

7. Conclusions and policy implications

Therefore, oil and gas workers are experiencing challenging employment conditions in oil and gas: the industry's long-term decline and cyclical nature create financial and emotional stress for the workforce, creating a risk for mental health. For workers seeking to move into alternative work, including offshore renewables and other parts of the evolving energy system, various barriers are standing in their way: stigmatisation by prospective employers; bureaucracy; lack of hands-on experience in new sectors; the need for support in identifying transferable skills for the most specialised workers; and the lack of clarity over the availability and nature of future jobs and careers. These are all issues which policymakers and industry are advised to address to support workers' transitions into viable, good-quality alternatives (where desired), rather than assuming a straightforward 'pipeline' into renewables. The following policy recommendations are intended to support these efforts.

Firstly, we recommend that policymakers adopt the definition of a Just Transition for UK oil and gas workers proposed by this study. This definition emphasises improved job security; control over their working lives and careers; support to retrain; and work which is in line with their previous skill levels, pay level, and levels of challenge and enjoyment. This would create more clarity of goal for Just Transition efforts for this specific group; and more effective pathways to assist workers in obtaining high quality replacement work.

Secondly, government and industry alike should focus efforts on reducing the risk of stigmatisation of oil and gas workers by prospective employers, within and beyond the energy sector. It is critical to tackle any risk of stigma in order to enable workers who wish to transition to access good-quality alternative employment, and to retain valuable offshore human capital within the evolving energy system. This may be achieved through explicit acknowledgement of the risk of this issue; recognising and promoting the capabilities of offshore workers to employers in other industries, and signalling pathways that value prior experience rather than penalising it.

Thirdly, policy should focus on tackling the barriers to reskilling and mobility identified. An important step will be devising ways to help workers gain hands-on, in-role experience in other parts of the energy sector. Reducing duplicated cost and effort of obtaining offshore certifications should also be prioritized. Support should also be offered to the most specialised workers in roles requiring specific knowledge, such as geologists, to help them identify and leverage transferable skills in their chosen industry.

Finally, transition strategies should provide clearer information about expected demand, timelines and skill requirements for future jobs in renewable energies. This would enable workers to make informed decisions now that will support them in retraining and career planning for the future, whether within or beyond the energy sector.

With these recommendations, we hope that this paper makes a concrete contribution to governmental efforts to shape a Just Transition for UK oil and gas workers. Tangible action to help support these workers is urgently needed.

CRediT authorship contribution statement

Kirsty Denyer: Writing – review & editing, Writing – original draft, Validation, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Yelena Kalyuzhnova:** Writing – review & editing, Validation, Supervision, Conceptualization. **Tatiana Rowson:** Writing – review & editing, Validation, Supervision, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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