

Ensuring fairness in the net zero transition



Summary

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UK industry is changing. Decisions are being made across the economy to modernise and futureproof processes and products, moving towards more globally competitive businesses with lower climate impacts. However, the need for the trajectory to be fair to all those affected is often overlooked in decision making, leading to public resistance to change.

The modernisation of the Port Talbot steelworks is one example where insufficient planning to mitigate the impacts on workers and communities, and involve them in decision making, is having negative consequences. While the UK steel industry has already declined due to deindustrialisation and globalisation, under current plans a further 2,800 jobs will be lost at Port Talbot in the shift to lower emission, less polluting technology.

But what could have been done to avoid this, what should a ‘just transition’ entail and what is the government’s role?

In this policy insight, we draw on three case studies which highlight the importance of inclusive strategic planning around industrial change. The examples we discuss are:

- the managed decline of the coal industry in Germany’s Ruhr region through economic diversification;
- the transition of the Swedish steel industry to become a world leader in green steel production;
- the closure of Redcar steel plant in the UK, leading to social and economic harm.

Lessons from these case studies can be directly applied to industrial circumstances across the UK, most pressingly to the steel industry's transition in Port Talbot and Scunthorpe, and the decline of the North Sea oil and gas industry.

Here are our five recommendations for a fair and well managed net zero transition:

- 1. Put fairness for workers and communities at the heart of an industrial strategy**, by:
 - creating a just transition commission as a sub-body of the industrial strategy commission, emulating the Scottish government's approach.
- 2. Create concrete pathways for workers in industries expected to decline**, towards new high quality, well paid, secure jobs, ideally in the same or adjacent sectors.
- 3. Use public investment to economically diversify and support local economies**, to build prosperity and resilience, reducing reliance on single plants or industries.
- 4. Devolve strategic planning and power to local authorities**, creating the right conditions for change and directing public investment to where it will have the most beneficial impact.
- 5. Ensure stakeholder involvement and transparency in decision making and implementation**, including workers and local people, by:
 - making public support for industrial transformations conditional on a just transition plan involving workers in its development;
 - legislating for worker representation on the boards of large companies.

Introduction

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Seventy seven per cent of Intergovernmental Panel on Climate Change (IPCC) experts predict a global temperature increase of at least 2.5°C this century.¹ This makes the transition to a green economy, to mitigate against the worst effects of climate change, an urgent priority.

The future trajectory for the UK is being shaped by decisions to meet international and legally binding commitments to achieve a net zero carbon economy. It entails rapid and widespread changes in how we live and the economic processes we depend on. The easiest parts of the transition have already been realised. But addressing more difficult challenges is giving rise to tensions between the need for change and the potentially negative impacts it could have on workers, local communities and marginalised groups. These possible negative impacts stand in stark contrast to the reality of the huge economic benefits the UK is already reaping from the low carbon economy.

The 2,800 job losses expected at Port Talbot steelworks and the decline of the North Sea oil and gas sector are current flashpoints for this tension, and have been increasingly dominating news headlines. Similar debates are being heard in France over agriculture and in the US over oil and gas.

If these changes are made without sufficient attention to how they affect livelihoods and communities, the understandable perception that ‘net zero’ should be resisted will continue to grow. If this narrative were to take hold more broadly, it could slow down economic progress and action on climate change, with serious consequences for the wellbeing of everyone in the UK.

However, if industrial transitions are managed well, this perception could be avoided with greater understanding of the green economy’s scope to stimulate local prosperity, secure good livelihoods and build more resilient communities. Currently, policy makers are not prioritising the social impact of environmental policy. They need to bridge this gap to gain political and public support for the scale of change required.

The concept of a ‘just transition’ has become shorthand for a range of different ideals. At its core, it is about ensuring fairness across countries and societies through the move to a more sustainable economy. Globally, it entails limiting temperature rises which are disproportionately affecting poorer countries that have been

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historically less responsible for causing climate change. And, locally, it means preparing the ground for change, sharing the benefits and responsibilities of the transition, while considering its economic, cultural and social impacts.

Debate around a just transition in the UK has tended to focus on the threat of high job losses, in steel and the oil and gas sector. However, most industrial changes do not lead to heavy job losses, and there is huge potential to create new green jobs. A recent landmark study on the 2019 election in Spain showed that a just transition agreement for coal phase out, agreed with workers and their unions, gave a significant electoral boost for the incumbent party.² When done well, just transition agreements are popular and vital for gaining public support for policy change.

What is a ‘just transition’?

“**Workers and their families should not be worse off as a result of the transition.”**

The concept of a just transition originated from North American trade unions during the 1970s and has since evolved significantly. According to the International Labour Organization, it is a move towards an environmentally sustainable economy, providing decent work for all, social inclusion and the eradication of poverty.³ An environmentally sustainable economy is one that provides for the needs of the present generation without compromising the ability of future generations to meet their needs. On a global level, to be considered fair, the transition should align with the goals of the Paris climate agreement.

A just transition is a complex and broad concept. In this policy insight, we focus on social and employment aspects at a national scale.⁴ We have used five principles, standard in academic literature, to analyse our three case studies and make our recommendations, the first two are forms of justice and the other three are practical factors in ensuring effective justice:^{5,6,7}

- **Procedural justice** This means using transparent decision making processes, which engage the whole spectrum of stakeholders fairly, allowing local communities to participate and workers to raise objections.
- **Distributional justice** This is the fair allocation of specific costs and benefits between societal groups, ie workers and their families should not be worse off as a result of the transition.

Practical factors:

- **Anticipatory** From technology to workers’ families, communities and culture, change takes time. Long term strategy allows businesses to manage investments intelligently, and workers and communities to help shape the transition, building cohesive momentum for change.
- **Location and structural change** This considers the geography of change connected to the transformation and decline of certain industries. Industrial clustering and economic diversification can help to make communities more resilient to change.
- **Integrated approach** Change is not just economic, but also social and cultural, and policy approaches should tackle all aspects. Decision making should be devolved so that local needs can be met more effectively.

Lessons from the past

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Our three case studies of industrial change are the transition away from coal mining in the Ruhr region in Germany, the shift to green steelmaking in Sweden and the closure of the Redcar steelworks in the UK. These examples provide valuable lessons in how to manage a just transition well in the UK context.

Moving away from coal in the Ruhr



At its peak in 1957, the coal mining industry directly employed 600,000 people in Germany, 473,000 in the Ruhr region.^{8,9} Coal mining was the economic and social backbone of the Ruhr, with around 70 per cent of the region’s working population employed in the coal and steel industries. However, the liberalisation of coal prices in 1958 started the industry’s decline. In 2007, a hard coal phase out law was introduced and, by 2011, only 11,000 were employed in the industry. By 2018, there were none.¹⁰

The transition can be split into two phases, between the 1960s and mid-1980s, and then from the mid-1980s to the present day. The first phase was characterised by protectionism, trying to preserve the status quo which slowed the transition. The coal industry was thought to be too big to fail. It was also extremely costly to the German state: huge financial subsidies were given to the industry and redundancies were generously funded by the federal government.

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Rising unemployment in the 1970s, and the realisation that the declining coal and steel industries could not be directly replaced, led to the second policy phase focused on economic diversification, shifting from a coal-based economy to a knowledge and innovation based one.

Long term plans managed employment decline through early retirement and retraining schemes, mostly switching to metal industries. The government set up the well funded Ruhr action programme and used a bottom up approach to encourage research and development, ecological restoration, cultural development and entrepreneurship. The fund invested in colleges and universities, with a focus on more deprived areas.

Public investment also led to a boom in tourism, with a 95 per cent increase between 1990 and 2011, with some industrial sites converted to celebrate industrial culture, including a mining site which is now on the UNESCO world heritage list.¹¹

Throughout this period, procedural justice was vital to success. By law, Germany's corporate structure involves workers, who make up a third of supervisory boards. Between this and strong unions, executives and politicians were encouraged to co-operate to find acceptable solutions for all stakeholders. Furthermore, power over economic diversification for cities was devolved to local authorities, allowing them to develop in their own way, with Dortmund becoming a technology centre, and Essen becoming one of the greenest cities in Europe.

From the mid-1980s onwards, integrated and anticipatory policy managed the decline of the coal industry, with public investment in structural change completely altering the Ruhr. Devolution of power and the involvement of workers and their unions in decision making gave rise to a reasonably cohesive transition with co-determination central to success.

Growing Swedish green steel

“There was early recognition of the need for greener operations, with a government approved strategy and roadmap.”



Sweden's iron and steel industry makes up ten to 12 per cent of the country's total domestic greenhouse gas emissions, and is its highest emitting industrial sector.¹² There was early recognition of the need for greener operations, with a government approved strategy and roadmap in place from 2015. This long term, transparent plan was hugely beneficial to the industry, allowing for informed and strategic investment in people and technology, and the involvement of employees and their unions meant plans were discussed and negotiated over time.

This strategy gave rise, in 2016, to the hugely successful HYBRIT project (Hydrogen Breakthrough Ironmaking Technology), a collaboration between steel company SSAB, mining company LKAB and energy company Vattenfall AB. This aimed to investigate the feasibility of fossil-free virgin steel production, taking advantage of Sweden's abundant supply of cheap, green electricity.

In 2021, LKAB committed £32 billion to fully shift production from iron ore pellets to emission-free direct reduced iron by 2045.¹³ As LKAB currently provides 80 per cent of the EU's iron ore, this will eventually reduce the annual emissions of steel production by 40 to 50MtCO₂, an amount equivalent to Sweden's total territorial greenhouse gas emissions.¹⁴ In 2022, SSAB announced plans to spend roughly £3.6 billion to convert its two remaining steel plants, blast furnaces to electric arc furnaces (EAFs) and shut down pig iron production, planning to offer fossil-free steel to the market by 2026.¹⁵ It should be noted that SSAB, LKAB and Vattenfall are majority or completely state owned, making this an interesting case study in state led derisking of green technologies.

The startup H2 Green Steel (H2GS) is an offshoot of the HYBRIT project. Production is due to start in 2025 and much of its initial planned output has already been sold. The collaborators of the HYBRIT project and H2GS are considered world leaders in green steel but it has only been possible through funding from the Swedish government, the European Investment Bank and the European Commission's Innovation Fund.

“Sweden is fast becoming a world leader in green steel production.”

So far, this transition has been considered transparent and inclusive. However, it is ongoing, and many challenges must still be overcome. For example, SSAB's plans to convert its blast furnaces to EAFs will inevitably require fewer workers.

Like Germany, Swedish law enshrines direct worker representation on company boards, giving them visibility in decision making. Sweden is also home to strong unions that hold political sway. The union IF Metall, which represents 77 per cent of blue collar workers in manufacturing sectors including steel, was instrumental in negotiations around the recent move of the hot rolling mill from Borlänge to Luleå, where two EAFs are being built.¹⁶ Although 200 jobs were initially under threat, an agreement was reached to prevent job losses through the creation of alternative employment, including a new sandwich panel production facility in Borlänge.

Through long term strategy, public investment and taking advantage of cheap, green electricity, Sweden is fast becoming a world leader in green steel production. Though still in its early stages, the anticipatory and inclusive nature of the planned changes has been effective in achieving a rapid transition so far.

Closing Redcar steelworks



The community of Redcar in north east England was built on steel. People were proud of this heritage and of the industry's impact locally and across the world: Sydney Harbour Bridge was made from Redcar steel. Built in 1979, the steelworks was the second largest in Europe, offering not only financial security for the community but a strong local identity.

The steelworks partially closed in 2009, reopened in 2011 under new ownership and then permanently shut in 2015. The closure was primarily caused by a steel price crash due to a glut of Chinese steel on the market, which made up 50 per cent of global output in 2016. The abrupt closure of the site resulted in 2,000 immediate job losses, with some estimates suggesting closer to 4,000 jobs overall were lost.¹⁷ For a town of 40,000, the sudden loss of high paying jobs led to long term economic and social harm.

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In response, a task force was formed, with the aid of £50 million in government funds.¹⁸ It aimed to bring together local authorities, trade unions, employer organisations and local MPs to support the area and those made redundant. For workers, the task force provided safety net funding, skills training and grants for those wanting to start businesses. For local businesses, it offered a wage subsidy to create 400 new jobs and a business support fund which created 1,084 jobs.¹²

However, throughout this process there was a lack of guiding strategy. There was no template for this kind of mass unemployment event, despite it being far from the first in the UK. Decisions were made by the government in Westminster, disempowering the local authorities carrying out the implementation, slowing down processes and ultimately resulting in an approach that was judged to have failed to meet local needs.

A survey conducted by the trade union Community showed that, although training provision was widespread, only 20 per cent of those that received it said it helped them to find a job.¹¹ And, while 80 per cent of Redcar’s former steelworkers were employed within a year, their wages had decreased considerably. The proportion earning over £30,000 dropped from 80 per cent to 35 per cent, and those earning under £20,000 rose from zero to 30 per cent.

The aftermath of the plant’s closure was one of loss for the community of Redcar. Eighty per cent of workers reported that it had a negative, lasting impact on them and their families, with widespread depression, strain on relationships and loss of identity.¹¹

With a lack of long term strategy for Redcar, support was reactive, solely economic and power was not adequately devolved. The result has been a transition which is neither distributionally nor procedurally just. Former steelworkers have been left worse off and the community has declined.

Challenges for the UK

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The three examples cited highlight, above all, the importance of anticipatory, long term planning for industrial transitions. For the UK, this means a change in thinking, which has previously relied on market forces and minimal government intervention. This stance enshrines economic efficiency and freedom, with the view that what is good for business and the economy will ultimately benefit the country. However, it has exacerbated income inequality, increased offshoring of industry and given rise to situations like that in Redcar, a community formerly dependent on a single large industry that, under unfavourable market conditions, collapsed leaving the community struggling.

Market led approaches risk failure in situations where there are complex long term trade-offs, like the low carbon transition. Decisions to achieve it must consider a multitude of factors, such as the necessary and timely reduction of greenhouse gas emissions and environmental impacts, preserving the livelihoods and culture of workers and communities, government spending, and resource and energy security.

Two industrial transitions are now top UK news stories, and both warrant a more strategic approach: the steel industry, which has potential to grow; and North Sea oil and gas, which is in inevitable and necessary decline.

UK steel: failing to anticipate change

The UK's largest steelworks, at Port Talbot and Scunthorpe, are both due to transition soon from blast furnace production to EAFs. This will hugely reduce emissions but threatens high numbers of job losses. Tata Steel's £1.25 billion Port Talbot EAF transition plan, which has been given £500 million in government support, will lead to 2,800 job losses.¹⁹ The deal was reached behind closed doors, and workers and their unions were not explicitly consulted. The impending job losses have outraged workers leading to threats of strike action. This has contributed to the media narrative that the net zero transition is bad for jobs and working people.

Reminiscent of the Redcar plant closure, no anticipatory actions were taken, despite warning signs over the plant's long term future. The government and Tata Steel have now created a transition board, with £100 million in funds, in an attempt to minimise the impact on the area.²⁰ However, without economic

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diversification or a transition plan for workers, and limited options for skilled alternative work in the local area, difficult short term trade-offs must be made.

North Sea oil and gas: inevitable decline

The oil and gas sector in the UK is declining. Most fields have already been drilled, and what is left is becoming increasingly difficult and expensive to extract.²¹ Today, production sits at about 30 per cent of its peak in 1999 and it is predicted to decline to 16 per cent by 2030.²²

It is imperative that this industry’s output continues to decrease. According to the International Energy Agency, for a 50 per cent chance of staying below the danger threshold of 1.5°C of warming, there should have been no more investments in oil and gas production globally after 2021.²³ But this advice has not been followed, with new licences issued and significant government support and tax relief still being given, which has not led to the retention of jobs. Indeed, production has decreased by 13 per cent while the number of jobs has halved in the past decade.²⁴ The community of Aberdeen has experienced the worst impacts.

Aberdeen was one of the most prosperous cities in 2010 but has since experienced 9,000 job losses in the oil and gas sector. Each resident is estimated to be an average of £45,000 worse off than if Aberdeen’s economy had continued its pre-2010 trajectory, the largest decline in the UK over the period.²⁵

As in the Ruhr, Aberdeen has been reliant on a single industry forecast to decline. However, insufficient plans have been made to economically diversify or support the city’s workforce to weather the changes. Indeed, recent interventions, the North Sea Transition Deal and Integrated People and Skills Strategy, have failed to produce substantive change towards a just transition, and the Offshore Skills Passport, which would help recognise transferable skills between offshore industries, has been slow to progress. Workers have been left with few options for skilled local jobs and are having to pay for their own retraining.

Achieving well managed change

“A just transition goes beyond job retention; it is also about good quality jobs and training workers in transitioning sectors.”

Concerns about the impacts of the net zero transition on UK communities will continue unless strategic interventions are made to support them and the industries undergoing change. Steel, oil and gas, but also other sectors, such as automotive, chemicals, cement and home heating, are going to experience major transitions.

It seems unlikely that the decarbonisation of other heavy industries will result in job losses of the scale threatening the steel sector but, without policy support, companies might choose to invest in other countries where support is clearer and abandon their UK operations.

A just transition goes beyond job retention; it is also about good quality jobs and training workers in transitioning sectors, uplifting areas in need of investment, devolving power and involving workers and communities in decisions.

A new industrial strategy and government commitments to devolution are an opportunity for a new approach.

Our five recommendations for a fair and well managed net zero transition are:

- 1. Put fairness for workers and communities at the heart of an industrial strategy**, by:
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