

Just Transitions and Structural Change in Coal Regions: Central and Eastern Europe

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Publication date:
2022

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in ResearchOnline](#)

Citation for published version (Harvard):
Jafry, T, Watson, E, Mattar, SD & Mikulewicz, M 2022, *Just Transitions and Structural Change in Coal Regions: Central and Eastern Europe*. Glasgow Caledonian University, Glasgow.

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Just Transitions and Structural Change in Coal Regions Central and Eastern Europe

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January 2022

A just transition is both the process and the end goal of transitioning towards a more sustainable economy, ensuring that workers and communities are considered at all stages. The transition must be fair, just and equitable for all.

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1. Event Summary

On the 5th of October 2021, the Centre for Climate Justice, at Glasgow Caledonian University, along with the British Embassy in Hungary, hosted a 1-day virtual conference to discuss how coal-phase out in Central and Eastern Europe can be managed in a just, sustainable and equitable way. The conference drew on the UK's experience of transitioning away from coal, with a focus on key lessons learned, through presentations by experts from trade unions, industry, academia and finance. These presentations offered practical knowledge, critical insights and reflections on a range of topics relating to just transitions, including alternative growth models, communication and engagement with local communities, reskilling and transitional employment. The conference included four sessions exploring the different scales of decision-making: local, national, and international, and concluded with a panel session that brought speakers from each of the previous sessions together to discuss lessons for the future.

2. Key Considerations for a Just Transition

1. **Early dialogue with workforce and communities is key:** Listen to needs and concerns of workers, and clearly communicate the opportunities for good new jobs.
2. **Consider the supply chain:** Examine existing supply chains and determine whether there are opportunities to maintain or create supply chains to new industries.
3. **Reskilling and retraining workforce:** Careful planning is essential to ensure that workers with scarce skills do not leave the industry.
4. **Invest in replacement power:** Ensure a plan is in place for alternative, green power supply.
5. **Invest in the local community:** Engagement and investment in the local community are necessary to mitigate social costs of coal-phase out, namely youth migration out of the area which significantly damages the local economy.
6. **Build up decommissioning skills:** The process of closing mines is a highly skilled process.
7. **Reuse infrastructure:** Reusing infrastructure as well as reusing skills of individuals is key.
8. **Set up a Just Transition commission/taskforce:** A dedicated body committed to co-designing transition plans with communities and stakeholders is best practice.



The urgency to reduce carbon emissions is more vital now than it ever has been before. A Just Transition away from coal reliance that is fair, just and equitable is the way to achieve this

Professor Tahseen Jafry, Centre for Climate Justice



3. UK Coal Transition Background

3.1 Lessons from the UK: Local Community Perspectives

Coal mining played an important role in driving economic development in the UK (Fernihough & O'Rourke, 2021). Before World War I, there was an estimated 1.1 million miners in the UK working in over 3,000 coal mines across the country producing 292 million tons of coal a year (Fothergill, 2021). Coal mining shaped much of the political and geographical landscape in the UK as well as helped shape the communities associated with mining. Today, the coal mining industry in the UK employs less than 699 people. This transition was difficult for many communities as the coal industry provided the backbone of their local economy and social services, and impacted jobs, healthcare, housing, and social facilities. When the industry declined, the local economy and social services followed (Coalfield Regeneration Review Board, 2010). Through the years, many post-coal mining communities in the UK have expressed that they felt abandoned and forgotten – and various social indicators have also painted a bleak picture; higher levels of poverty, unemployment, and higher mortality rate, along with fewer school leavers going onto higher education (Coalfield Regeneration Review Board, 2010). As older generations contend with the long-term health impacts of coal mining, young people face a lack of employment opportunities (Bright, 2012). These challenges are referred to as the “double jeopardy” faced by post-coal communities (Coalfields Regeneration Review 2010).

Beyond material concerns, prolonged strike action to mine closures across the UK in the late 1970s and early 1980s divided many communities on political and social grounds. This divide is still felt by many communities today. Some of the current youth, born well-after the mining strikes, still experience tension between those who joined the strikes and those who did not, and this divide can be drawn along geographical lines and by family association (Bright, 2012). In this way, post-coal mining communities in the UK are sites of “collective memory” characterised by a sense of struggle that goes back decades. Sociologists accurately predicted that the closure of coal mines would result in environmental, social, health, economic, cultural, and educational challenges for many post-mining communities (Strangleman, 2018). While a number of regeneration projects in post-coal mining communities have been pursued by the UK and European Union, some with success, a full recovery from the collapse of this industry has not been realised, and the extent of recovery shows a great degree of variation between communities (Beatty et al., 2007; Pittman, 2019).

The lessons learned from the UK's experience is the need for a managed transition – and, at the heart of this process, engaging local communities. Local communities should be meaningfully involved in decision-making processes to ensure the needs and perspectives of communities form the foundation of any proposed solution (Jafry, 2021). It is recognised among UK experts that understanding what an energy transition will mean for a local community is a necessary step for a just transition and vital to deliver effective solutions (McCauley & Heffron, 2018; Robins et al., 2019). There are various practical actions that have been pursued in the past in regions phasing-out coal, such as investment in alternative industries, retraining workforces, and offering new educational pathways and vocational training for young people, but the effectiveness of these solutions to achieve their intended goals has always depended on alignment of such solutions with the needs and perspectives of communities. A just transition can only be achieved “by seeking recognition and participation” of those who stand to benefit and those who face the risks of an energy transition (Stevis & Felli, 2015).

3.2 Lessons from the UK: National Contexts

The late 1970s and 1980s was a significant period for the shift away from coal with the closure of many coal mines in UK. This period was a politically contentious time and peaked with major miner strikes across the UK from 1984 to 1985. Deep coal mining eventually came to an end in the UK in 2015 with the closure of Kellingley, Yorkshire. As coal mining declined, coal imports began in the 1970s and imports exceeded exports for the first time by 2001. In 2019, annual coal production in the UK fell to an all-time low of 2.2 million tonnes, less than one fifth of production recorded in 2013 (BEIS, 2020a).

There has been a steady decrease in coal imports since 2006, with cheaper natural gas displacing coal as a means of electricity generation and renewable energy capacity steadily on the rise (BEIS, 2020b). In the UK, the 'dash for gas' was pursued as an option to improve energy security in the UK and lower the cost of electricity generation (Bassi et al., 2013). Overall, national demand for coal power has fallen by 87% since 2013. This is in part due to government initiatives for renewable and nuclear power and carbon pricing favouring gas over coal power, with gas power producing less emission per GWh compared to coal (BEIS, 2020b). Today, coal contributes less than 5% of the UK's electricity generation and its use is predominantly concentrated in winter months when electricity demand is higher (BEIS, 2020a).

It should be noted that the UK's shift away from coal mining in the 1970s was not motivated by climate change or environmental concerns. Despite this, the decarbonisation agenda gathered pace from the 1990s following the establishment of the United Nations Framework Convention on Climate Change (UNFCCC). Since 1992, the UK has developed its own climate change policy and legislation, drawing from the UNFCCC's initial guidelines and EU directives. The UK Climate Change Act 2008 (CCA) set the world's first legally binding and long-term emission reduction targets, introduced carbon budgets to monitor progress on mitigation targets, and established the Climate Change Committee to oversee this process. The CCA achieved emission reduction in electricity generation and marked the beginning of the end for coal power. It is important to acknowledge that this progress was also achieved when the UK's economy was growing (Fankhauser et al., 2018). However, the decarbonisation of electricity generation is considered 'low-hanging fruit' as the UK is now entering a more challenging phase of emission reductions; tackling emissions from heat generation and transportation, and the intention to move away from high carbon industries embedded in the UK economy. Therefore, it will be important to have buy-in from all sectors across the UK for decarbonisation to be effectively pursued (Fankhauser et al., 2018).

Decarbonisation in the UK has often been framed as an opportunity to create new jobs and businesses through renewable energy technologies and decommissioning. It is estimated that decommissioning of coal mines, and oil and gas facilities in Scotland could be valued at around £10 billion over the next decade alone (McCauley, 2018). However, there is growing resentment for decarbonisation agendas that lacked social protections among workers in the fossil fuel industries and their communities (Abraham, 2017; Weller, 2018). The need to connect macroeconomic policy, the decarbonisation agenda, and social protections for workers and communities facing the dismantling of their livelihood, or an unequal burden to overhaul household energy systems, has manifested in the concept of Just Transition. Through national bodies, like the Just Transition Commission, and legalisation, such as Prosperity for All: A Low Carbon Wales (2019), there are numerous examples of the UK pursuing national policies to ensure a transition to a low carbon economy is fair and does not result in furthering socio-economic inequalities.

3.3 European Policy Considerations

In 2015, the world has set out ambitions in the Paris Agreement to limit greenhouse gas emissions and prevent the worst impacts of climate change. Over 100 countries, representing 53% of global GDP, have set or are in the process of setting a target of net zero emissions by 2050, including the UK (ECIU, 2021). However, there has also been an increasingly strong policy focus on ensuring this transition to net-zero is just (Muttitt & Kartha, 2020; Sabato & Fronteddu, 2020).

The call for a just transition began as a trade union movement in the 1970s as a challenge to the growing narrative that environmental regulations threatened jobs in the heavy industries (Ciplet & Harrison, 2019). It was a message that a healthy economy and a clean environment can and should co-exist. By the late 1990s and early 2000s, the concept had been adopted by the International Confederation of Free Trade Unions (ICFTU) and saw widespread adoption by national trade unions in the UK, namely the Trade Union Congress (TUC). It was during this period that trade unions lobbied for just transition policies to be included in the Kyoto Protocol:

...workers will demand an equitable distribution of costs through 'just transition' policies that include measures for equitable recovery of the economic and social costs of climate change

ICFTU's position statement at COP3 (Kyoto 1997)

The trade union's efforts to influence the Kyoto Protocol were ultimately unsuccessful, but the call for a just transition had cemented the involvement of trade unions in climate change international policy forums at the UN and, by late 2000s, 'just transition' featured in the agendas and programmes of the UN Environment Programme (UNEP), International Labour Organization (ILO), and the International Organisation of Employers (IOE), among others. By 2015, the concept had entered mainstream policy debates at the international level and the Paris Agreement 2015 stated signatories would take "...into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities". It was also in 2015, that the Just Transition Principles were first published by the International Labour Organisation (ILO). The guidelines had 3 key elements: i) plan and invest in sustainable jobs, ii) address inequality and fuel poverty, and iii) design and deliver low carbon infrastructure. A strong emphasis is placed on consensus building for pathways to decarbonisation. Underpinning this emphasis is the focus on social dialogue as an integral part of the institutional framework for policymaking and implementation at all levels.

In recent years, 'Just Transition' gained significant traction in international climate policy debates following COP24 in 2018. The Solidarity and Just Transition Silesia Declaration signed by 50 countries during COP24 in Katowice called to alleviate the impact of decarbonisation policies on coal workers and their communities (Jenkins et al., 2020) and, at the time, was strongly pushed by the Polish presidency in given the role of coal in the country's economy. The European Union's 'Just Transition Mechanism', which aims to mobilise between €65-75 billion over 2021-2027, and European Bank for Reconstruction and Development's Just Transition Initiative, which aims to protect vulnerable countries and regions during the energy transition, are tangible outcomes of these policy debates. In November 2020, the Financing a Just Transition Alliance (FJTA) was established in the UK to bring together banks, investors, and other financial stakeholders to embed just transition principles in financial decision-making at all levels. Through these initiatives, there is a growing standard at international levels for just transition to be used as a framework for decarbonisation.

3.4 COP26: Consigning Coal to History

The unprecedented reference to fossil fuels and the emphasis on “phasedown of unabated coal power” in Glasgow Climate Pact at COP26 has been the strongest signal from any previous climate summit yet that the world is bound to consign coal to history. With 28 new members joining the Powering Past Coal Alliance (PPCA), including 7 countries (Ukraine, Chile, Singapore, Mauritius, Azerbaijan, Slovenia, and Estonia), nearly two-thirds of OECD and European governments have now joined PPCA with a commitment to phase out coal by 2030. Additionally, the ‘Global Coal to Clean Power Transition Statement’ signed by 46 countries (representing 267GW of operating coal capacity) included first-time commitments by some of the major coal users, notably Poland and Indonesia, to not build or finance new coal power and work towards phasing out coal altogether. Yet, there was also a clear signal that this ambition to transition away from coal must be fair, with the Glasgow Climate Pact also recognising “the need to ensure just transitions that promote sustainable development and eradication of poverty, and the creation of decent work and quality jobs”. The outcomes of COP26 speak to an increasingly evident global trend, with more and more political and financial commitments to ending coal-use. As this transition looms, it is vital that governments, industries, scientists, workers, and communities understand their role in this transition, recognise the range of social and economic factors at play, and learn from past experience to ensure the transition away from coal is a just one.

4. Just Transition from Coal: Local Legacies

The first session of the virtual conference was chaired by Professor Tahseen Jafry, Director of the Centre for Climate Justice, which focused on local legacies and considerations for a just transition away from coal. Delegates heard from the following speakers: Bill Adams, TUC Regional Secretary for Yorkshire and the Humber region, Mike Macdonald, Negotiations Officer at Prospect Union, and Dr Ewan Gibbs, Lecturer in Global Inequalities at the University of Glasgow.

Mike MacDonald spoke on the importance of building a professional core workforce that has the capacity to expand. He highlighted that many workers from a coal background have vital skills that are essential and sought after in other areas of industry like advanced manufacturing, renewable power, or work on developing energy networks. Often the workforce has the majority of core skills needed for these jobs and would only require a small amount of retraining. If a just transition is to be successful, the importance of providing good quality jobs for the workforce must be underlined. There are examples in the UK where new job creation has not worked. For example, distribution and call centres that were intended to replace jobs for coal workers were not the skilled work that the workforce was looking for.



The future after coal can protect communities, can increase skills and can be used to improve energy infrastructure for a just transition. For success, this requires hard work and collaboration with others

Mike MacDonald, Prospect Union



Dr Ewan Gibb specialises in global inequalities and gave insights from his research on coal mining in Scotland. He provided an overview of the transition away from coal in the country and highlighted the importance of early engagement and dialogue with workforce to explore opportunities for retraining and reskilling. Dr Gibb also underlined the importance ensuring that there are jobs in the renewable sector that lie in manufacturing, not just generation.

The importance of social dialogue between unions and governments was echoed by Bill Adam from TUC, who underlined that a clear plan for a transition is vital for a just process. He highlighted that, while he welcomes the transition towards clean energy, it is important to acknowledge that the closure of coal decimated Yorkshire and other parts of the UK. This has resulted in wide range of socio-economic issues for the region that could have been avoided with clear and intentional planning. He also noted that it is important to have a government strategy, and long-term investment and to bring workers and trade unions along on the journey.

A recurring theme of this first session was the importance of being honest, and for those in positions of power to have a clear and concise message for workers and communities, as well as engage in dialogue early in the process.

5. Just Transition from Coal: National Drivers of Change

The second session of the virtual conference focused on the national drivers of change in the UK that led to the transition away from coal. Professor Tahseen Jafry provided a brief overview of the previous session, highlighting the need for a managed, sustainable and just transition to avoid some of the struggles that have been experienced in the UK over recent decades. Delegates then heard from Professor Steve Fothergill, Professor at the Centre for Regional Economic Social Research, Sheffield Hallam University, and Professor Tim Strangleman, Director of the Work, Employment and Economic Life Research Cluster, University of Kent.

Since the 1980s, Professor Fothergill has also had another role as the National Director of the *Coalfield Communities Campaign (CCC)*, an association that represented and campaigned for regeneration funding for more than 80 local authorities in present and former coalmining areas in England, Scotland, and Wales. Since the demise of the coal industry in the UK, the CCC was renamed in 2007 as the *Industrial Communities Alliance* which campaigns for regeneration projects in other industries such as steel, chip building, and textiles. Professor Fothergill noted that the transition away from coal in the UK was not properly planned (except in more recent years) and, therefore, there remains a strong need to fund regeneration projects for the coal communities that suffered from the transition in the past. Despite this, Professor Fothergill explained that there are lessons that can be learned from the UK's experience, notably, the importance of deliberately planning a transition to avoid a situation where the economies of former coalfield areas must be re-built, often over a very long period. He concluded that it is possible for large economies to shift away from coal and that electricity markets can be constructed to help deliver this transition.

Professor Tim Strangleman outlined that the UK experience is one of the best places to learn from what happened during the deindustrialisation of the coal industry. He explained that it is important to understand deindustrialisation as a process, not a one-off event. This process has social, cultural, political, education, environmental, health, and economic considerations all at play. There is often a legacy from the industry that can be important culturally for the communities associated with that industry, as has been observed in former coal mining communities. Professor Strangleman explained this legacy should also be considered throughout the process of transitioning away from coal. However, it is worth noting that this legacy can be negative as well as positive, and that there can be multi or intergenerational impacts of both the legacy and the closure process. Professor Strangleman underlined the importance of drawing on well-researched experiences and existing scholarship, highlighting that some communities feel that they had been over-researched. These communities already knew what the challenges and legacy of deindustrialisation were as these were well-publicised issues, but action was needed to address them instead. As such, Professor Strangleman advised delegates to be aware of the 'half-life' of deindustrialisation and to be attentive to the socio-cultural factors associated with the deindustrialisation process.

A good transition must be moral, socially just and rooted in the community


Professor Tim Strangleman, University of Kent

6. Just Transition from Coal: European Policy Considerations

The third session of the virtual conference focused on European policy considerations for a Just Transition away from coal, and was chaired by Professor Tahseen Jafry. The session included following speakers: Sabrina Muller, Policy Analyst in Sustainable Finance at the Grantham Research Institute on Climate Change and the Environment, Chris Radojewski, Programme Adviser at the Powering Past Coal Alliance (PPCA), and Dr Michael Kattirtzi, a former Researcher at the University of Edinburgh specialising in UK Energy and Electricity Markets.

Sabrina Muller underlined that a well-managed transition can boost development and create high quality jobs, contribute towards reducing inequalities, improve the health of citizens, as well as mitigate climate change. If poorly managed, a transition can result in stranded workers and stranded assets, and therefore, emphasised that planned and orderly transitions are more likely to be just.

She highlighted many countries are introducing Just Transition initiatives, with the European Union leading in this effort, and that financial institutions are increasingly recognising their role in a Just Transition. There are many reasons for financial institutions to be part of a Just Transition, namely to respect social standards, minimise systemic risks in transitions, support sustainable development and deliver positive impacts. However, she explained that many financial institutions lack the tools and policy to guide this. In response to this, the Financing a Just Transition Alliance (FJTA) was set up to provide guidance for the financial sector on Just Transition issues. Sabrina Muller offered the following advice for the finance sector:

- 
1. Public sector pension funds and business support should align with the just transition,
 2. Funding should be directed to local projects,
 3. The public sector should target funding to build up resilient supply chains locally
 4. All public funding for climate action should be conditional on Fair Work terms
 5. SMEs should be supported to invest in their workforce
 6. Any added costs for consumers linked to decarbonisation should be connected to ability to pay.

Sabrina Muller, Grantham Research Institute on Climate Change and the Environment



Chris Radojewski, from the Powering Past Coal Alliance (PPCA), echoed the comment made on the likelihood of a planned transition resulting in a just transition. The membership of the PPCA have made a commitment to achieve a coal phase-out in an inclusive way and ensure support for workers and their communities. The PPCA are campaigning for a global moratorium, or delay, on the construction of new coal-fired plants and promoting a shift in investments from coal to clean energy. The PPCA have a wide membership, especially in Europe, and Radojewski highlighted that it was encouraging to see the momentum building across Europe for shift away from coal. However, he notes that 97% of the EU's remaining 50GW coal capacity is not covered by a phase-out commitment. He spoke on the importance of setting a phase-out date, particularly for

countries that have not already done so, to allow planning to begin on how to phase-out coal in a just way.

Dr Michael Kattirtzi explained that the role of the 'Big Six' (the UK's six largest utility companies) in the country's energy situation underlines the importance of taking into consideration the extent of centralisation of an electricity system in decarbonisation policies. Dr Kattirtzi said that he felt a just transition commission was an important tool, especially for policymakers to engage with, that could enable and expand the types of voices heard on these issues.

7. Examples of Good Practice

The Cottam Power Station Closure (UK).

This was a £90 million turn over business.

Staff were redeployed into low-carbon generation in other areas of electricity sector with skill shortages.

Retiring workers was not in the best interest of the individual or of the economy.

Despite much scepticism, all employees who wanted redeployment were offered jobs elsewhere in the electricity industry. This also helped suppliers build links with renewable energy businesses.

Site infrastructure was retained and workforce reskilled.

Mike MacDonald, Prospect Union

Scotland's Just Transition Commission

An independent Commission was set up in Scotland in 2019 to communicate with and co-design transition plans with communities and stakeholders. Findings from the Commission were communicated to Scottish Government ministers. The Commission engaged widely with businesses and sectors that will be affected by the transition towards Net Zero in Scotland.

The Commission's aims are outlined below:

1. Pursue an orderly, managed transition to net-zero that creates benefits and opportunities for people across Scotland. Delivery of this must be a national mission.
2. Equip people with the skills and education they need to benefit from the transition.
3. Empower and invigorate our communities and strengthen local economies.
4. Share benefits widely and ensure burdens are distributed on the basis of ability to pay.

(Scottish Government, 2021)

8. Practical Tips

Engage with employers: Run workshops and networking events to find out what the industry is looking for in terms of workforce. This is a key exercise to find out about redeployment opportunities and bring all the stakeholders together for long-term discussions (MacDonald, 2021).

Just Transition Commission: Government representatives can push for a Just Transition Commission that would help inform policy and decision-making in the finance sector that could facilitate a fair and equitable just transition (Muller, 2021).

Draw on experience: Research previous transitions and existing scholarship to gain insight that would be relevant for your country's situation (Strangleman, 2021).

Retraining for Green Jobs does not have to be limited to the energy sector: There are many industries and enterprises where there are and will be green jobs available (Fothergill, 2021).

Fair Work Terms: All public funding for climate action should be conditional on Fair Work terms.

Plan for the future of the job market: Long-term planning is really important to avoid an unsustainable low-wage economy (Strangleman, 2021).

Partnership for replacement growth: Work with stakeholders to promote local solutions. Key to this is to develop employer networks to reskill staff (MacDonald, 2021).

Consumer Consideration: Any added costs for consumers linked to decarbonisation should be connected to their ability to pay (Muller, 2021).

9. Participating organisations



British Embassy
Budapest

British Embassy in Budapest

Website:

<https://www.gov.uk/world/organisations/british-embassy-budapest>



University for the Common Good

**Centre for Climate Justice,
Glasgow Caledonian University**

Website:

<https://www.gcu.ac.uk/climatejustice/>



Prospect Union

Website: <https://prospect.org.uk>



**University
of Glasgow**

University of Glasgow

Website: <https://www.gla.ac.uk>



Trade Union Congress (TUC)

Website: <https://www.tuc.org.uk>

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Sheffield Hallam University

Sheffield Hallam University
Website: <https://www.shu.ac.uk>



University of Kent
Website: <https://www.kent.ac.uk>



Powering Past Coal Alliance (PPCA)
Website: <https://www.poweringpastcoal.org>



Grantham Research Institute on Climate Change and the Environment
Website: <https://www.lse.ac.uk/grantham-research-institute>



THE UNIVERSITY of EDINBURGH
University of Edinburgh
Website: <https://www.ed.ac.uk>

If you would like to watch the virtual conference in full, the recording is available through the following link:

[A Just Transition from Coal Exploring UK experiences with Central and Eastern Europe](https://youtu.be/Kg4kyc_teHw) | youtu.be/Kg4kyc_teHw

For more information on the GCU Centre for Climate Justice and the work we do, please visit our website at the following link:

[Centre for Climate Justice at GCU](https://gcu.ac.uk/climatejustice) | gcu.ac.uk/climatejustice

References

- Abraham, J. (2017). Just Transitions for the Miners: Labor Environmentalism in the Ruhr and Appalachian Coalfields. *Undefined*, 39(2), 218–240. <https://doi.org/10.1080/07393148.2017.1301313>
- Bassi, S., Rydge, J., Seong Khor, C., Fankhauser, S., Hirst, N., & Ward, B. (2013). A UK “dash” for smart gas. <http://www.cccep.ac.ukhttp://www.imperial.ac.uk/climatechangehttp://www.lse.ac.uk/grantham/>
- Beatty, C., Fothergill, S., & Powell, R. S. (2007). Twenty Years on: Has the Economy of the UK Coalfields Recovered?: *Http://Dx.Doi.Org/10.1068/A38216*, 39(7), 1654–1675. <https://doi.org/10.1068/A38216>
- BEIS. (2020a). *Department for Business, Energy and Industrial Strategy - UK Coal Production and Imports from 1990 to 2019*. UK Energy In Brief Report. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904503/UK_Energy_in_Brief_2020.pdf [Accessed: 14 July 2021].
- BEIS. (2020b). *Department for Business, Energy and Industrial Strategy (BEIS) (2020b) Electricity Supplied by fuel type 1990 to 2019*. UK Energy In Brief Report. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904503/UK_Energy_in_Brief_2020.pdf
- Bright, N. G. (2012). ‘Sticking together!’ Policy activism from within a UK coal-mining community. *Journal of Educational Administration and History*, 44(3), 221–236. <https://doi.org/10.1080/00220620.2012.683395>
- Ciplet, D., & Harrison, J. L. (2019). Transition tensions: mapping conflicts in movements for a just and sustainable transition. *Https://Doi.Org/10.1080/09644016.2019.1595883*, 29(3), 435–456. <https://doi.org/10.1080/09644016.2019.1595883>
- Coalfield Regeneration Review Board. (2010). *A Review of Coalfields Regeneration Coalfield Regeneration Review Board*. www.communities.gov.uk
- ECIU. (2021). “Net zero: the scorecard.” <https://eciu.net/analysis/briefings/net-zero/net-zero-the-scorecard>
- Fankhauser, S., Averchenkova, A., & Finnegan, J. (2018). 10 years of the UK Climate Change Act The governance and implementation of the SDG 13 on climate change View project. In *The London School of Economics and Political Science, Grantham Research Institute on Climate Change and the Environment, Centre for Climate Change, Economics and Policy*. www.cccep.ac.uk
- Fernihough, A., & O'Rourke, K. H. (2021). Coal and the European Industrial Revolution. *The Economic Journal*, 131(635), 1135–1149. <https://doi.org/10.1093/ej/ueaa117>
- Fothergill, S. (2021). *Session 2: Just Transition from Coal: National Drivers of Change*. Virtual Conference, hosted by the Centre for Climate Justice and the British Embassy in Hungary. Centre for Climate Justice. https://www.youtube.com/watch?v=Kg4kyc_teHw&t=14914s
- Jafry, T. (2021). *Climate Just Transition in Wales: Developing a Framework for Action Policy Briefing*. www.wcpp.org.uk
- Jenkins, K. E. H., Sovacool, B. K., Błachowicz, A., & Lauer, A. (2020). Politicising the Just Transition: Linking global climate policy, Nationally Determined Contributions and targeted research agendas. In *Geoforum* (Vol. 115, pp. 138–142). Elsevier Ltd. <https://doi.org/10.1016/j.geoforum.2020.05.012>
- MacDonald, M. (2021). *Session 1: Just Transition from Coal: Local Legacies*. Virtual Conference, hosted by the Centre for Climate Justice and the British Embassy in Hungary. Centre for Climate Justice. https://www.youtube.com/watch?v=Kg4kyc_teHw&t=14915s
- McCaughey, D. (2018). Reframing decommissioning as energy infrastructural investment: A comparative analysis of motivational frames in Scotland and Germany. *Energy Research and Social Science*, 41, 32–38. <https://doi.org/10.1016/j.erss.2018.04.018>
- McCaughey, D., & Heffron, R. (2018). Just transition: Integrating climate, energy and environmental justice. *Energy Policy*, 119, 1–7. <https://doi.org/10.1016/j.enpol.2018.04.014>
- Muller, S. (2021). *Session 3: Just Transition from Coal: European Policy Considerations*. Virtual Conference, hosted

by the Centre for Climate Justice and the British Embassy in Hungary.
https://www.youtube.com/watch?v=Kg4kyc_teHw&t=14915s

- Muttitt, G., & Kartha, S. (2020). Equity, climate justice and fossil fuel extraction: principles for a managed phase out. *Climate Policy*, 1024-1042.
https://doi.org/10.1080/14693062.2020.1763900/SUPPL_FILE/TCPO_A_1763900_SM2358.DOCX
- Pittam, D. (2019, March 6). Miners' strike: The decades-old feud that still divides communities - BBC News. *BBC News*. <https://www.bbc.co.uk/news/uk-england-nottinghamshire-47401859>
- Robins, N., Gouldson, A., Irwin, W., Sudmant, A., & Rydge, J. (2019). *Financing inclusive climate action in the UK: An investor roadmap for the just transition*. https://pcancities.org.uk/sites/default/files/Financing-inclusive-climate-action-in-the-UK_An-investor-roadmap-for-the-just-transition_POLICY-REPORT_56PP.pdf
- Sabato, S., & Fronteddu, B. (2020). *A socially just transition through the European Green Deal?*
<https://ssrn.com/abstract=3699367>
- Scottish Government. (2021). *Just Transition Commission A national mission for a fairer, greener Scotland*.
<file:///C:/Users/EWATSO206/Downloads/transition-commission-national-mission-fairer-greener-scotland.pdf>
- Stevis, D., & Felli, R. (2015). Global labour unions and just transition to a green economy. *International Environmental Agreements: Politics, Law and Economics*, 15(1), 29-43. <https://doi.org/10.1007/s10784-014-9266-1>
- Strangleman, T. (2018). 'Mining a productive seam? The coal industry, community and sociology.' *Contemporary British History*, 32(1), 18-38. <https://doi.org/10.1080/13619462.2017.1408532>
- Strangleman, T. (2021). *Session 2: Just Transition from Coal: National Drivers of Change*.
https://www.youtube.com/watch?v=Kg4kyc_teHw&t=14915s
- Weller, S. A. (2018). Just transition? Strategic framing and the challenges facing coal dependent communities: <https://doi.org/10.1177/2399654418784304>, 37(2), 298-316.
<https://doi.org/10.1177/2399654418784304>