



University of
Nottingham
Institute for Policy and Engagement

Delivering a just energy transition

Report of the University of Nottingham's
Policy Commission on the Just Transition
to Net Zero



Chair's foreword



One of the recently formed government's defining commitments has been its pledge to put Britain on the path to net zero. The Government has made early commitments to deliver this mission, launching GB Energy as a nationally owned venture, easing the way for new onshore wind projects, and creating a National Wealth Fund to drive clean energy investment.

The significance of a shift to net zero has implications beyond the imperative of tackling climate change. It represents a reshaping of our economic future. The promise of new technologies, the revival of traditional industries with green methods, the creation of jobs and supply chain contracts, and investment in communities nationwide is an opportunity for long-lasting, transformative growth.

But like any major transformation, the road to net zero is not without its challenges. The questions of cost, disruption, and uncertainty are real. For many, the future remains unclear—some see it as a threat to livelihoods, and others to their communities. These concerns are deeply rooted, particularly in places like Nottinghamshire, where the scars of past energy upheavals still run deep. The closure of Ratcliffe-on-Soar, Britain's last coal-fired power station, is a poignant reminder of how carbon intensive industries once shaped our national identity.

How do we reconcile the urgent need for a low-carbon future with the equally pressing concerns of those who fear the impact of such sweeping changes? The task ahead isn't simply about technology but about people—about ensuring that the shift is fair, inclusive, and sustainable. We need to ask hard questions: who will benefit? How can we mitigate the effects on those communities most affected? And what structures are required to ensure this transition doesn't leave parts of the UK behind?

These are the questions that the University of Nottingham's policy commission has sought to address. I am proud to be an honorary professor at this world-leading institution, where this critical work has been undertaken. I am deeply grateful to my fellow commissioners, whose insight and dedication have shaped this report.

Our recommendations are not a panacea. But they provide a vital framework for policymakers, offering the tools needed to navigate the complexities of this generational shift. It is a challenge to which we must rise—both for the future of our nation and for the world.

Lord Watson of Wyre Forest

Deputy chair's foreword



Today, the global average surface temperature is already around 1.3°C above preindustrial levels, prompting the heatwaves and other extreme weather events we are all experiencing. Adaptation and mitigation can play a valuable role. However, we must also work to limit global warming to 1.5°C through enabling a rapid transition to a net zero world.

The transition will take place across a very broad range of sectors and will not only affect the environment but also profoundly change economies and our society.

Whilst we need to act fast to tackle climate change, we will need to do so taking into consideration the impact on all parties, particularly the most vulnerable and marginalised who are likely to experience those changes more deeply. These groups have many urgent and conflicting priorities, and therefore are also less likely to embrace the need to transition.

Delivering a net zero transition in a just manner is a double-edged sword for policymakers. Policies need to promote clean energy yet provide easy access to cheaper (for now) greenhouse-gas emitting energy to secure basic human needs like food, water, shelter and education.

Achieving a just transition will require steady political leadership that can manage a highly complex, often contradictory, and tremendously significant juggling act, in an increasingly volatile world.

The policy commission on a just transition, undertaken by the University of Nottingham, aims to address this challenge. We hope our work inspires real progress towards meeting net zero in a just and sustainable way.

Professor Lucelia Rodrigues



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Introduction

The need to move to a net zero economy is an (almost) universally acknowledged imperative. Our future security and prosperity depends upon society moving away from carbon-intensive energy sources and industries.

We have made great strides towards developing the technologies needed to achieve this transition. The University of Nottingham and its industry partners are driving innovations that will transform our power grids, agriculture systems and transportation infrastructure into zero-carbon powerhouses.

Technological innovation is a necessary but not sufficient condition for a successful transition. We must also consider the impact on people and places on the journey to net zero.

As a research-intensive global university and champion of innovation in the East Midlands and the UK, we wish to contribute to discussions and help deliver solutions. That is why we convened a cross-sector policy commission to examine these challenges and advise the newly formed government on ways it can shift the narrative and take meaningful action towards ensuring a net zero transition is delivered in a fair, just way.

Led by Lord Watson of Wyre Forest and the University of Nottingham's Professor Lucelia Rodrigues, this group of leaders from industry, environmental organisations, trades unions and academia gathered to hear expert evidence and decide on key recommendations for UK policymakers.

This report focusses on the challenges facing the UK energy transition, and offers six policy recommendations:

- 1 Establish a positive narrative around the move to a low-carbon future
- 2 Establish clarity on transition end points, impacts and timetables.
- 3 Articulate a clear and consistent mandate for the public sector, built around a set of principles for a just transition.
- 4 Utilise industrial strategy to deliver a just transition.
- 5 Reform skills delivery to align with transition requirements.
- 6 Focus planning reform on demonstrating benefits as well as pace.

All these recommendations are rooted in a simple truth: we can only achieve a just transition if we work together. We invite you to review these recommendations and we look forward to engaging with you as we advocate for their implementation.



What do we mean by a just transition?

Fairness must be at the heart of the UK's transition to a net zero economy. Choosing a fair path – one which shares the benefits and opportunities and mitigates the adverse impacts – is a necessary condition to achieving net zero.

Without a demonstrably equitable path, policy decisions will lose public consent, and without public consent the transition will not happen. A commitment to a just transition will help ensure that as we accelerate our efforts to achieve net zero, no one is left behind or marginalised by the pace of change.

There are many challenges to defining what a just transition is, and a clear risk that if policymakers attempt to craft a perfect definition and glide path before acting nothing will get done. This report suggests that instead government adopts a set of principles that it applies when taking decisions to ensure that issues of equity and fairness are at the heart of policy.



The Commission's suggested principles for decision-making would be:

- Does the decision help ensure the benefits of the transition (particularly jobs) are distributed widely and fairly across the UK.
- Does the decision support development of domestic low-carbon infrastructure and associated supply chains.
- What are the costs and benefits of the decision and where do they fall geographically, sectorally and demographically.
- Are impacted communities involved in making the decision, and what support will be available for them to manage the impact.
- Has the decision been made in consultation with social partners and industry.
- Has the decision been made to address not only direct impact, but also larger equality issues.

This list is intended to open a debate on what the principles should be rather than standing as a last word. However, the commission is clear that a principles-based approach is the right way forward, and an agreed-upon set of principles should be written into impact assessment and evaluation methodologies for policy proposals and business cases through a duty on the public sector. This will ensure the issue is properly considered, and the trade-offs and rationale transparently presented to the public.

Summary of recommendations



Recommendation 1

Establish a positive narrative around the move to a low carbon future

The framing of the discussion around net zero is too often focused on the costs and challenges involved, and not enough on the opportunities. The case for net zero is that it offers individuals security, continued prosperity and a liveable future which the counterfactual - carrying on as we are - does not. These benefits are not abstract principles or “luxury beliefs”.

To shift the debate government needs to present an inspiring, granular and practical narrative which doesn't pretend there are no challenges but keeps its eye on the prize. This approach is consistent with the 'securonomics' framework set out by the new government.



Actions

- **Ensure clear and consistent messaging across all communications**, explicitly positioning the transition as fundamental to a successful, healthy, and prosperous future for the UK.
- **Launch a government-backed publicity campaign**, alongside a consultation on the principles framework for a just transition (see recommendation 3). This will showcase the transition as a national opportunity that delivers clear benefits, backed by real life examples from across the UK.
- **In parallel, run a set of regional roadshows**, co-designed and delivered with leaders of devolved governments and combined Authorities as well regional and local stakeholders, to highlight the opportunities at a granular, local level.



Recommendation 2

Establish clarity on transition end points, impacts and timetables

Public perception of the transition as something directly relevant to their lives will be essential. Alongside a recast narrative a set of ambitious and practical milestones, timeframes and end points for the transition will support the coordination of the public sector, regional development and industry in the timely delivery of a transition.

Publication of these plans will build trust and allow for effective accountability. This will also give affected populations the opportunity to shape and own delivery regionally.

Delivering this will require a ‘social partnership’ style cooperation at national, regional, and local levels, led by the UK government (or devolved administrations), drawing on political, industry, union, community, and academic representatives.



Actions

- **Agencies and decision-making bodies should be required to set out transition timelines**, milestones and endpoints. This will feed into established planning requirements that give the greatest scope for maximising benefits and minimising impacts in each area.
- **Collaborating with the devolved nations**, combined authorities and local leaders, the government should convene stakeholders in adversely affected regions and sectors to form transition taskforces. These would establish and own the response in areas such as skills, training, and supporting infrastructure.
- **Establish Transition Outreach Teams to work with civil society groups** in communities affected by transition. These teams will focus on tailoring engagement and support to meet specific needs.



Recommendation 3

Articulate a clear and consistent mandate for the public sector

In order to align the whole public sector behind a fair and equitable path to net zero, the government should set out a framework of guiding principles for a just transition. These principles would form a mission statement for how government departments and the wider public sector will assess and evaluate policy and investment decisions.

These principles should be embedded in impact assessment and evaluation requirements, such as the Green Book. Further the commission recommends that the government create a duty on the whole public sector and its partners to consider a 'just transition' in decision making and investment.



Actions

- **UK government to consult on a set of Just Transition Principles** to inform policy development and decision making and to provide reassurance that fairness and equity are built into decision making.
- Set out the full range of governmental and public sector bodies to be covered by the Principles, aligning their respective mandates through legislation.
- **Undertake a review of supporting or relevant policy tools**, such as the Treasury Green Book, statutory duties of local authorities, or the lending mandates of key institutions such as the UK Infrastructure Bank, to ensure they allow for delivery of a full consideration of social value consistent with a just transition.



Recommendation 4

Utilise industrial strategy to deliver a just transition

The new administration has placed a refreshed industrial strategy as key to deliver economic growth. Within this the 'green economy' has been identified as a crucial sector for support, which will help accelerate the transition to net zero.

The commission recommends this is taken one step further. It should be made explicit that the industrial strategy is consistent with and works to support a just transition to net zero.



Actions

- The government should learn from international examples, such as the US Inflation Reduction Act, to ensure **industrial strategy** is consistent with and supports the just transition to net zero.
- Ensure initiatives like **investment zones and enterprise zones** help draw in investment and development that will accelerate the transition. Deliver this through the Industrial Strategy Council and alongside business, local and combined authorities and metro mayors.
- Support targeted and accelerated development of key green sectors and technologies in the UK through the creation of a new **dedicated net zero research and development body** or the adaption and evolution of an existing agency.



Recommendation 5

Reform skills delivery to align with transition requirements

The transition to net zero will create new jobs in new technologies. However, for an individual working in a carbon intensive sector this may well feel like an opportunity for someone else. Securing the support of those who might see their future blighted will mean offering practical pathways into the new jobs.

Skill acquisition is at the heart of this. Skills bodies and initiatives should be aligned around the transition mission. A pragmatic definition of a “green job” should be developed which recognises that skilled workers in carbon intensive sectors will already have some or all of the skills needed for net zero.



Actions

- UK Government to propose and consult on a **definition of ‘green jobs’**. This will need to be pragmatic and recognise skill transferability. This will be vital to underpin coordinated planning for delivery of skills needed sectorally and geographically.
- Provide direction on the future of ‘green skills’ through the proposed **Office for Clean Energy Jobs** or by empowering a revitalised and expanded Green Jobs Delivery Group. Use this to ensure wider skills policy is aligned with and supports delivery of a just transition.
- Through the above bodies, develop a **targeted suite of policies** specifically designed to aid the transition of workers affected by the changes on which transition outreach teams (recommendation 2) can draw.
- Use the jobs and skills opportunities presented by the energy transition as a **tool to address existing economic or social inequalities**.



Recommendation 6

Focus planning reform on local and regional benefits as well as pace

It is widely acknowledged that reform of the planning system is necessary to deliver economic growth and the transition to net zero.

The commission believes that aligning planning reforms with the principles of a just transition will help build consent for a reformed, faster planning process, reassuring communities that planning reform is about purpose as well as pace.



Actions

- Consult on and **co-design** with relevant stakeholders an **improved framework** (legal and voluntary) for driving enhanced community benefits from developments.
- Explicit consideration should be given to **delivering community benefits** that offer an enduring legacy for host communities, **beyond construction** or one-off payments or improvements.
- Placing an emphasis on the **importance of character and heritage** when considering what **developments and deployments** should be undertaken to help maintain an element of continuity and evolution rather than abrupt change.



Methodology

The commission sought to undergo a comprehensive approach to gather, analyse and produce recommendations relevant to a just transition. The commission undertook the following:

- Initial research and stakeholder consultation
- Workshops featuring relevant and expert witnesses
- Analysis of research gathered during the commission
- Comparative policy analysis
- Drafting of report
- Final report and dissemination

The specific objectives were to explore:

- How fairness can be at the heart of decisions made and policies enacted in a just transition.
- How benefits from the transition are realised and distributed.
- How impacts are minimised and mitigated.
- How we work in fairness with the communities and workforces at the heart of the transition.
- How people to feel the transition works for them and that they have a fair stake in its delivery and outcomes.

Enshrining these objectives allowed us to build a framework where issues often unaddressed by net zero policy proposals were directly considered and incorporated into the recommendations.

Throughout the process, we sought to ensure all witnesses and commissioners were drawn from a diverse range of backgrounds to ensure the final report and process of writing the report was informed from multiple experiences, as the topic requires.



Recommendation 1

Establish a positive narrative around the move to a low carbon future

Action 1

Ensure clear and consistent messaging across all communications, explicitly positioning the transition as fundamental to a successful, healthy, and prosperous future for the UK.

The transition to net zero is complex and will impact on many aspects of everyone's lives. As a result, maintaining popular consent will be essential to a successful transition. Too often the debate is framed – by advocates as well as critics – in a negative way, with the focus on what needs to be stopped or might be lost, rather than what might be gained. The counterfactual to transitioning to net zero is not things staying more or less as they are: it is increased insecurity, discomfort, and disruption nationally and globally. The transition is about gaining, not losing, security, stability and prosperity. Witnesses consistently raised the absence of this case being made at a national level and counterintuitive rhetoric from some specific key policies¹ which can be rectified through renewed focus on narrative.

This process has begun in recent months, with Labour setting out a general election platform based, in part, on promotion of the transition² which they now have mandate to carry into government^{3,4}. There is an opportunity now to build upon this and be ambitious in the transition's place in the wider policy agenda. Environmental arguments for the move to a low carbon economy should not be the primary focus. This is not because they are any less compelling or crucial but because this is a battle that has largely already been won. Shifting the emphasis of public perception to one that sees the transition as intrinsic to the nation's economic future and well-being and to their own quality of life is crucial. Through this people can more clearly see an element of self-interest and reward in the changes that will come.

Given this, the transition should be placed very firmly within the 'securonomics' framing that the Chancellor Rachel Reeves has previously set out. Outlining the concept in a speech last year, Reeves characterised it as focused on:



*prioritising economic strength and resilience in the face of our uncertain world. Addressing the challenges of the future, and finding the opportunities within them.*⁵



The transition is clearly one of those challenges – bringing uncertainty but also opportunity, including the “decent jobs” of the future, that the Chancellor went on to highlight in the same speech.

None of the above is intended to suggest that the very real impacts or difficult decisions that the transition will bring for communities, regions and industries should be ignored. These need to be explicitly acknowledged and support visibly and consistently channelled to those most affected.

But these must be placed clearly and consistently in ministerial speeches, comments, HMG press releases, legislation, policy consultations etc. in the overall context of the transition as both essential and a net positive, one that ultimately will deliver far more than it takes away.



Action 2

Launch a government-backed publicity campaign, alongside a consultation on the principle’s framework for a just transition (see recommendation 3). This will showcase the transition as a national opportunity that delivers clear benefits, backed by real life examples from across the UK.

Several witnesses argued that too often the transition was presented through the prism of alleviating negatives rather than the potential gains it can bring. This has previously served as a justification for slowing down or stopping certain policies, creating the risk of an erosion of support for the larger body of measures and actions necessary to deliver the transition.

Shifting the overall narrative from what will be lost through transition to what will be gained will need to be backed up with a sustained communications campaign operating nationally, regionally and locally. This was advocated in the *Independent Review of Net Zero* by former government minister and MP, Rt. Hon Chris Skidmore MP⁶. As we set out below, the involvement of a wide range of stakeholders in ‘on the ground’ elements of any campaign will be vital.

However, there is a strong logic for the initial impetus to come from national government, to ensure the just transition is positioned as part of securing UK’s future economic strength rather than something that puts it at risk. Government leadership will help ensure consistency of the core messaging across a wide range of departments and policy areas, as well across UK geographies and sectors.

Utilising the resources and expertise of the Government Communication Service, in line with the OASIS framework⁷, the appropriate unit or officials within the Department for Energy Security & Net Zero (DESNZ) should scope and deliver a multi-channel public communications campaign.

The exact scope, media, and content will need to be developed in partnership with stakeholders, but we would recommend it include consideration of the following:

- breadth of campaign scope to communicate the national opportunity the transition represents as well as the granularity needed to demonstrate the local and regional benefits
- Branded campaign content to include real-life case studies and examples of where and how the transition is already delivering benefits and opportunities to make it tangible and relatable
- Targeting of channels and content to reach key geographies, sectors, and demographic groupings of particular relevance and importance in the transition, alongside more generalised communications
- Use of partnership marketing with local and regional government and trusted, established organisations within these target groupings, to help deliver greater audience reach and message effectiveness
- Clear signposting to key supporting information and schemes (national, regional, and local; public and private) to demonstrate the measures in place to help people, businesses, and organisations to realise the opportunities highlighted

Action 3

In parallel, run a set of regional roadshows, co-designed and delivered with leaders of devolved Governments and Combined Authorities as well regional and local stakeholders, to highlight the opportunities at a granular, local level.

Central government is the right place for the campaign to start, but to build credibility its design and delivery should be shared with a broad range of stakeholders. The ambition should be to ensure that people feel they have a direct stake in the transition. Broad cross-sector engagement will show the public the transition is supported by people and organisations they trust. These champions will help guide the public through what it means for them, rather than simply telling them what to believe.

Building on the targeted elements of the wider publicity campaign, the next step should be a series of regional roadshows. These should be initiated again by the UK government but collectively with a broad sweep of relevant groups and organisations (see below).

The make-up of those involved will vary, depending on the exact location and the existing players in the area, but we would suggest the stakeholder groups listed below are considered for involvement in each locality:

- Local government and, where relevant, combined authorities
- Higher and further education establishments and wider skills providers
- Trade unions
- Established organisations in the same/similar policy space (e.g. net zero hubs⁸)
- Relevant civil society organisations and established community groups
- Business groups (e.g. local and regional chambers of commerce)
- Established sectoral organisations (e.g. clusters, trade bodies, or regional groupings)

The roadshows should have the primary aim of bolstering the campaign through promotion of specific opportunities the transition has already delivered locally and regionally or will offer going forward, ensuring that the key audiences in the area are reached and engaged.

These roadshows will also be a vehicle for listening to what the key concerns, needs and requirements are in that area. This will be a vital platform for the actions suggested in the next four recommendations, providing insight into local issues and concerns.

The commission would recommend trialling this approach in one area of the country before it is rolled out more widely. Although other areas would also be suitable testing grounds, we would offer the East Midlands as a perfect pilot environment. This region boasts a strong mix of engaged stakeholders, multiple relevant projects already underway, has a key regional focus on future deployment of low and zero carbon technologies, and is home what was the last coal plant in the UK (which will become a repurposed site driving green industries) and the UK's first nuclear fission plant at West Burton.

Case study on the importance of establishing a positive narrative

In response to the 2022 heatwave, Charles Ogunbode focused on the intersection of health, well-being, and community engagement in Nottingham. Recognizing the disproportionate impact of extreme heat on vulnerable populations, particularly those from minority ethnic backgrounds, Ogunbode initiated a comprehensive study to assess community resilience and health outcomes during this climate crisis.

Ogunbode engaged local residents through workshops and surveys, fostering dialogue about their experiences and coping strategies during the heatwave. His work emphasises the importance of community narratives in understanding how individuals navigate environmental challenges. By highlighting personal stories and local knowledge, he aimed to create a more positive narrative around climate adaptation.

His findings revealed critical insights into the health risks faced by marginalized groups and the effective strategies they employed to stay safe. Ogunbode advocated for community-led interventions, emphasizing the need for accessible cooling centres and health resources tailored to local needs.

This approach not only strengthened community bonds but also contributed to the broader Just Transition framework, promoting equity and sustainability. Ogunbode's work illustrates how engaging communities can transform challenges into opportunities for collective action, ensuring that all voices are heard in the fight against climate change and its health implications.

1 <https://www.gov.uk/government/speeches/pm-speech-on-net-zero-20-september-2023>

2 <https://labour.org.uk/change/make-britain-a-clean-energy-superpower/>

3 <https://www.gov.uk/government/publications/policy-statement-on-onshore-wind/policy-statement-on-onshore-wind>

4 <https://www.gov.uk/government/news/boost-for-new-national-wealth-fund-to-unlock-private-investment>

5 <https://labour.org.uk/updates/press-releases/rachel-reeves-securoconomics/>

6 <https://assets.publishing.service.gov.uk/media/63c0299ee90e0771c128965b/mission-zero-independent-review.pdf> , Recommendation 889

7 <https://gcs.civilservice.gov.uk/guidance/marketing/delivering-government-campaigns/guide-to-campaign-planning-oasis/>

8 E.g. <https://www.midlandsnetzerohub.co.uk/>



Recommendation 2

Establish clarity on transition end points, impacts and timetables



Action 1

Agencies and decision-making bodies should be required to set out transition timelines, milestones and endpoints. This will feed into established planning requirements that give the greatest scope for maximising benefits and minimising impacts in each area.

Setting out precise timescales for something as multi-faceted as the energy transition brings with it obvious complexities. The sheer number of sub-sectors, organisations and stakeholders, uncertainties, and regional differences involved makes exact timelines and endpoints difficult to pin down.

However, the absence of an outline timetable makes the planning needed to deliver a just transition all but impossible to achieve. As we set out above, in the absence of a sense of demonstrable fairness around the transition, support ebbs, resistance grows, and it becomes considerably harder to deliver the transition itself.

We heard from witnesses – particularly from the trade unions – that the setting of clear timelines around the closure of existing assets can allow for the forward planning needed. The closure of EDF Energy’s Cottam coal-fired power station in Nottinghamshire was cited as a positive example, where the early identification of an end date gave sufficient time to build in mitigating activities, such as reskilling or alternative placements for the workforce. This contributed to that specific piece of the transition proceeding in a way that was seen as fair to those affected. (It was also noted that Cottam was a strong example of cooperation amongst various stakeholders, something which feeds into the thinking on our next action below.)

Scaling from a single plant to a wider region or sector brings challenges but is achievable with the right levels of expertise and engagement. The UK Government is best placed to initiate or undertake this piece of work. This could be driven from within DESNZ itself, although the Commission felt it could be given as a discrete piece of work to an established body in the sector, with the Climate Change Committee one obvious and well-equipped candidate.

In terms of the scope for the work we would suggest two important considerations. First, whilst accepting the kind of uncertainties mentioned above, the work would need sufficient granularity to support the planning needed (as discussed below) in areas such as workforce impacts, skills, infrastructure, and funding, both in terms of what will be transitioned away from - and when - and what could potentially replace it - and when.

Secondly, the potential timelines and endpoints should be viewed not only through a sectoral or sub-sectoral prism, but also crucially through a geographic one. We heard from witnesses and discussion with organisations such as Just Transition Scotland that early and proactive consideration of the issue from a local or regional perspective is vital. This is true for practical and planning purposes but also, importantly, from a psychological point of view, speaking to people's sense of place and making it more real and relatable as an issue.

Taken together, and with a wider, more detailed scope built around them, these should produce the outline timescales needed to hand over to the multi-stakeholder taskforces proposed below, allowing them to take up the planning on a jointly owned and delivered basis.

Action 2

Collaborating with the devolved nations, combined authorities and local leaders, the government should convene stakeholders in adversely affected regions and sectors to form transition taskforces. These would establish and own the response in areas such as skills, training, and supporting infrastructure.

Given the breadth of the task above, it is right that the initial impetus and scoping should come from the UK government. However, as with the recommendation on the regional roadshows, joint ownership with and involvement from a wide range of stakeholders would need to be established quickly.

Bringing these stakeholders together into a series of transition taskforces, centred around the key affected energy sectors and regions, would allow for this rapid devolution and build a social partnership to plan the action needed.

The same range of stakeholders set out above should make up the pool from which the taskforce members are chosen, with the UK government taking a convening role but independent chairs appointed from the wider membership on formation. The exact make-ups of each taskforce will vary but the principle of inclusivity and diversity of representation should inform appointments. Underpinned support and direction from the relevant minister at DESNZ, the taskforces should be empowered to focus on the concrete actions needed to mitigate impacts and deliver opportunities and benefits.

Precisely what they consider will vary across sectors and regions, but we would suggest these as core to their remit:

- Mapping of likely regional/sectoral impacts from the transition
- Assessment/breakdown of potential opportunities
- Workforce planning
- Skills growth and support, including reskilling and redeployment
- Regional development and infrastructure requirements
- Investment and funding needed
- Enabling policies (e.g. planning)

By setting out the challenges and opportunities for a given region or sector in a joined-up manner, alongside the steps and support needed to address or realise them, it will be easier to show that the interests of those potentially impacted are informing decisions being made. It will also produce a blueprint to inform the more specific actions and interventions (e.g. around industrial strategy, skills, or planning) that we set out below.

Action 3

Establish transition outreach teams to work with civil society groups in communities affected by transition. These teams will focus on tailoring engagement and support to meet specific needs.

The taskforces will address practical planning to ensure that the transition is seen as fair and delivers opportunities. However, this will need to be accompanied by constant dialogue and engagement through the process of transition, listening to real time experience and iterating plans to reflect reality rather than imagining they can simply be rolled out.

Many witnesses, including Dr. Charles Ogunbode from the University of Nottingham (see case study on p. 17), emphasised that recognising the very different ways in which the transition impacts different groups and sections of society will be central to ensuring the transition is seen as fair. In practice it is more accurate to talk about *transitions* rather than a *transition*. This is true both for the energy transition but also far more widely, in areas such as transport, housing, agriculture and adaptation.

Given this, engaging the perspectives of different groups, for example urban or rural populations, ethnic minorities and the economically disadvantaged, is vital. We would recommend, therefore, that transition outreach teams are established to lead this process.

The same open and consultative approach of other actions should be adopted in forming the teams to undertake this engagement. We would suggest that there is a small core team drawn from officials in DESNZ to fulfil a convening, facilitation, and secretariat function. Beyond that core team, based on what we heard from witnesses on what has worked before and also echoed in the Skidmore Review⁹, established and trusted groups within the communities or sections of society should also be fully engaged. This will help ensure that community engagement is targeted, maximised, and meaningful, that the right issues for the right groups are on the table, and that the language and framing are appropriate for each case.

The basis of the engagement will need to be carefully framed at the start to define what is 'in scope' and to ensure that trust is preserved. Most importantly, it needs to be clear that the overall direction in terms of the transition is set, but that engagement will be used to ensure that the specific requirements, concerns, issues, and needs of the groups targeted are fed into the design and implementation of the relevant policies and decisions. This should be done both with mitigation of negative impacts and equitable distribution of new opportunities. Authentic engagement will also serve as an ongoing feedback mechanism to ensure lived experience is reflected in thinking about the wider transition and net zero work across government.





Recommendation 3

Articulate a clear and consistent mandate for the public sector



Action 1

UK Government to consult on a set of Just Transition Principles to inform policy development and decision making and to provide reassurance that fairness and equity are built into decision making.

Many different areas of policy will need to be aligned and targeted to deliver a just transition. Securing that alignment requires a lodestone that will help ensure that decisions taken by the myriad of relevant departments, agencies, bodies, and institutions are coordinated and coherent.

There are lessons to be learned from the devolved governments. The Scottish government passed the Climate Change (Scotland) Act 2009¹⁰ to establish its ambition, and the independent Just Transition Commission has been in place since 2019.

The Welsh Government has set out its approach to a just transition¹¹, tying it closely to its flagship Well-Being of Future Generations (Wales) Act 2015¹². The Northern Ireland Assembly has embedded the principle of a just transition in its Climate Change Act (Northern Ireland) Act 2022¹³, which sets out the intention to also establish a commission to lead on the issue.

As has been noted by the devolved governments^{14,15,16} there is no single, universal definition of a 'just transition'. A just transition will mean different things, have different impacts and unfold in different ways across specific communities or sectors. Any definition runs the risk of being inflexible to circumstance, or too complex to drive change or even impossible to agree.



The commission believes that instead a set of Just Transition Principles should be established to guide decision-making across the public sector. This is the most pragmatic and readily implementable approach, and most likely to be useable by and applicable to the widest range of relevant bodies. It also builds on the approach most commonly adopted or proposed by other governments, including the devolved administrations.

We would recommend that both this overall approach and the proposed principles themselves are consulted on by the UK government. However, based on what we heard from witnesses and what has been included in similar approaches by other governments, we would suggest the below for inclusion in the proposed principles to be consulted on:

- Does the decision help ensure the benefits of the transition (particularly jobs) are distributed widely and fairly across the UK
- Does the decision support development of domestic low-carbon infrastructure and associated supply chains
- What are the costs and benefits of the decision and where do they fall geographically, sectorally and demographically
- Are impacted communities involved in making the decision, and what support will be available for them to manage the impact
- Has the decision been made in consultation with social partners and industry
- Has the decision been made to address not only direct impact, but also larger equality issues.

While the scope of this report is focused strongly on the energy transition this is a recommendation with clear applicability to the wider transition.

Action 2

Set out the full range of governmental and public sector bodies to be covered by the principles, aligning their respective mandates through legislation.

To give the principles effect, the government will need to decide which organisations and public bodies will be bound by them, and who will take the overall lead role for driving the just transition.

There are a number of possible candidates to take the lead role for the energy transition. Two of the most obvious are the Climate Change Committee and GB Energy. The commission felt that the committee – given its non-sector specific remit – is perhaps a more suitable candidate for the role of driving a just transition on a whole economy basis. With an expansion of the committee's mandate this offers a simpler solution, one that avoids potential conflicts of interest for GB Energy and the complexity of delegating responsibility to multiple bodies.

Looking at the energy transition in particular there is an imperative to balance the oft-competing demands of a speedy and successful energy transition with the need to deliver the domestic benefits and opportunities required for it to be seen as fair.

Therefore, the commission recommended that the responsibility for driving a just transition in energy sits explicitly with the new administration's Energy Mission Board¹⁷.

The board, bringing together as it does the relevant ministers and senior officials involved in the energy transition, is well positioned to offer overall drive and focus on a just transition, and to navigate the trade-offs on questions of 'quick vs. just'. Given its membership and makeup, the board would be best placed to commission the work of defining those state agencies and bodies (including GB Energy) essential to the energy transition for which the new principles would apply.



Establishing principles to guide the UK government's push for a just energy transition will require alignment with the approaches of the devolved administrations and England's combined authorities. As set out above, the devolved administrations either have or are putting in place their own guiding principles and lead bodies in the same space, whilst many of the key policy areas (e.g. skills, planning) are devolved or shared nationally or regionally.

Given this, the government's proposed new Council of Nations and Regions¹⁸ should be given the lead responsibility for aligning the approaches of the national governments and regional authorities on a just transition, driving cooperation across all parts of the UK to maximise the benefits and opportunities delivered, and resolving issues in the relevant policy areas.

Action 3

Undertake a review of supporting or relevant policy tools, such as the Treasury Green Book, statutory duties of local authorities, or the lending mandates of key institutions such as the UK Infrastructure Bank, to ensure they allow for delivery of a full consideration of social value consistent with a just transition.

As well as being used to instil a sense of mission within government around a just transition through incorporation into the mandates of the relevant organisations, the principles should also be incorporated into policy and decision-making tools used by public bodies. The Energy Mission Board, as part of its new suggested remit leading on a just transition within the sector, should oversee a review of policies to be updated or revised to take account of the principles. However, based on our evidence sessions, we would offer the below for consideration as part of this process.

A consistent theme voiced by witnesses was the important role local authorities will have in helping achieve a just transition. Nottingham City Council, for example, is committed to achieving carbon neutrality by 2028. Equally clear though was the concern over the lack of resource and funding that the authorities have to put this into effect, despite an obvious desire across the country to address something of such vital importance to the communities they serve.

Several witnesses supported a statutory duty for local authorities to help protect funding for action in this area. This was echoed in the Skidmore Review¹⁹ which (based on evidence from local authorities themselves) called on local authorities to be given a statutory duty to take account of the UK's net zero targets. To give this duty meaningful effect, this should mean incorporating the principles for a just transition into their decision-making and funding allocation.

Another area identified was the need for state institutions and bodies to allow the social value of transition activities to be best supported and realised. We would recommend the mandates for the UK Infrastructure Bank (UKIB) and the National Wealth Fund should be examined to ensure its approach on factors such as its lending cycle are best structured to support a just transition.

Germany’s KfW²⁰ bank was raised as a good example to follow here, and was cited for its long lending cycles, “patient capital” approach, and willingness to take greater risks to grow projects which offered greater “social return over traditional value”. Its genesis in the post-war rebuilding of Germany and the Marshall Plan were suggested as a model for the ethos and approach needed to secure a just transition. Applying the principles to the mandate of bodies such as the UKIB and National Wealth Fund would have huge potential for delivering a just transition.

Finally, several witnesses spoke of the need for changes to the Treasury Green Book²¹ and its (and government’s wider) approach to cost-benefit analysis. Witnesses welcomed the recent revisions to allow non-monetisable costs and benefits to be considered, and the explicit references to social and environmental benefit. However, there were concerns that in practice it remained overly focused on the short-term, too fixed on “traditional” (e.g. monetary) value or costs, and failed to take full account of the huge social and environmental consequences of climate change and the concomitant benefits that action on the transition could deliver.



The Green Book is a complex and multi-layered policy tool, so it will take time to embed revisions across the wider public sector. However, it will be important for HM Treasury and those evaluating business cases to demonstrate clearly that they take the non-monetisable, social and environmental costs and benefits seriously.

We would further recommend that the principles, once agreed, are used to inform a further review of how the Green Book is responding to the demands of the transition, and, in particular, whether just transition considerations are adequately accounted for in its guidance around factors such as “non-market valuation and unmonetisable values”²² and “place based analysis”²³.

10 <https://www.legislation.gov.uk/asp/2009/12/contents>

11 <https://www.gov.wales/just-transition-framework>

12 <https://www.gov.wales/well-being-of-future-generations-wales>

13 <https://www.legislation.gov.uk/nia/2022/31/contents/enacted>

14 <https://www.gov.scot/publications/transitions-comparative-perspective/>

15 <https://www.gov.wales/sites/default/files/consultations/2023-12/consultation-just-transition-framework.pdf>

16 <https://www.niassembly.gov.uk/globalassets/documents/raise/publications/2022-2027/2024/aera/3224.pdf>

17 <https://www.gov.uk/government/news/first-mission-board-focuses-on-immediate-action-to-make-britain-a-clean-energy-superpower>

18 <https://www.gov.uk/government/news/deputy-prime-minister-kickstarts-new-devolution-revolution-to-boost-local-power>

19 Ibid, 740-751

20 <https://www.kfw.de/kfw.de-2.html>

21 <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020>

22 <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020#a1-non-market-valuation-and-unmonetisable-values>

23 <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020#a2-place-based-analysis>



Recommendation 4

Utilise industrial strategy to deliver a just transition



Action 1

The government should learn from international examples, such as the US Inflation Reduction Act, to ensure its **industrial strategy** is consistent with and supports the just transition to net zero.

The tension between the consequences and benefits of a rapid energy transition for ‘UK plc’ has been recognised by the new Labour administration. In its outline industrial strategy, published before the general election, the party stated, for example, that *“in areas like offshore wind where there is a developed market, there is a case for intervention to capture more of the economic value²⁴.”*

Witnesses to the commission, including but not limited to the trade unions, put the issue more starkly. The failure to wrestle with issues of a “cheap” transition, for example relying on Chinese solar panels or offshoring manufacturing for UK wind farms, risked jeopardising support net zero because many of the benefits flow offshore.

Policies set out by Labour, such as the ‘British jobs bonus’²⁵, potentially offering up to £500m a year for “clean energy developers” who deliver “good jobs”, are a direct response to this challenge. The proposals urgently need to be refined and implemented to show the government is committed to a transition that grows domestic jobs and skills as well as carbon reductions.

The Inflation Reduction Act²⁶ (IRA) in the United States has been much discussed as a model to follow. Based largely around tax credits for investment in new facilities and subsequent production, the size of the credits available is in part determined by factors such as domestic content (for example, steel), location of the projects in “energy communities” (brownfield sites impacted by the transition away from fossil fuels), or in “low-income communities”.

Significantly, the IRA links credits with wage and apprenticeship requirements, an attempt to ensure not just jobs, but good jobs, are enabled by the transition. This was flagged as crucial by several witnesses to our commission. The longevity of the credit, extending a decade after the IRA’s implementation, provides incentives for both the start-up and production phase of a project. This sends a strong signal to potential investors, offering stability and certainty.

Details on how the ‘British jobs bonus’ will work are yet to be set out, but we recommend that the state applies the approach set out above. An explicit linkage to the delivery of UK economic benefits would clearly demonstrate commitment. This could also be achieved through the awarding of contracts for difference, development support or co-investment from GB Energy, and wider government procurement decisions.

Action 2

Ensure initiatives like **investment zones and enterprise zones** help draw in investment and development that will accelerate the transition. Deliver this through the Industrial Strategy Council and alongside business, local and combined authorities and metro mayors.

The new Labour administration has been clear that it sees the transition to a low carbon society as intertwined with future prosperity, with the now Secretary of State for Business & Trade, the Rt. Hon. Jonathan Reynolds MP stating in the foreword to its pre-election industrial strategy document



economic growth is not in tension with net zero targets...Tackling them together will create wealth.”²⁷

The creation of jobs, skills, and supply chain opportunities underpinning growth will not only require clear and meaningful incentivisation (as we cover above), but it will also need wide-scale coordination. This can be done by strategically channelling efforts into geographical areas identified as having ‘high growth potential’ for certain green industries²⁸. In these regions, the necessary infrastructure, expertise, supply chains, skills, and research combine to effectively capitalise on the UK’s existing competitive advantage in key net zero sectors.



Interventions can be strategically anchored in geographies where productivity gaps exist alongside factors that enable growth. For example, we know that the Midlands suffers a £20 billion productivity gap²⁹, while attracting above average private investment in R&D and below average public investment³⁰. This implies the benefits of public spending could be leveraged further in this region.

Additionally, the UK’s strength has become concentrated in the service and finance industries, contributing to a regional wealth gap between the southeast and rest of the country. Yet growth in manufacturing was five times³¹ higher than in services between 1997 and 2021. The Institute for Public Policy Research, in the research referenced above, has identified three green manufacturing sectors that would help drive high value jobs and growth to the north: green transport, wind manufacturing, and heat pumps. It is worth noting that already no sector supports more jobs through foreign direct investment than transport manufacturing³², providing a strong foundation for a forward-looking industrial strategy.



To this end, a greater level of support needs to be placed on energy transition activities in enterprise zones and investment zones. This will bring focus and support to the range of transition-enabling stakeholders, businesses, and layers of government in a given region. Building on the work of existing clusters – including at the University of Nottingham’s Zero Carbon Innovation Centre³³ (see box on page 29) – this enhanced approach should be focused around existing areas where there is potential for significant concentrations of net zero related activities, businesses, and research focus.

We propose expanding the following offers within the enterprise and investment zones:

- Targeted tax relief on business rates, Stamp Duty Land Tax and capital allowance, amongst others
- Support on and simplification of planning requirements within the zones through the use of Local Development Orders or similar tools
- Support on access to and availability of land
- Assistance on, and funding for supporting and enabling physical and digital infrastructure
- Coordination on, and funding for development of R&D capacity and capability in the area

In focusing on these areas of support, the zones would be able help deliver the recommendations made by the transition taskforces. The zones would also represent a strong locus for coordinating the relevant areas’ interests and overlapping issues in related policy areas such as the proposed creation of a Local Power Plan³⁴, the development of a strategic spatial energy plan³⁵, and the government’s potential next steps on the implementation of the recommendations of the Harrington Review on Foreign Direct Investment³⁶.

Action 3

Support targeted and accelerated development of key green sectors and technologies in the UK through the creation of a new **dedicated net zero R&D body** or the adaption and evolution of an existing agency.

For the UK to further establish its position as a leader in the energy transition, the industrial strategy will need to have a clear focus on the role of research and development (R&D). For example, we know that manufacturing is linked to two-thirds of R&D activity³⁷, and that in the last 10 years, R&D was responsible for attracting roughly 15% of foreign direct investment to the UK. Thus, it is clear R&D is not only a cornerstone of the UK economy, but it will also be critical to establishing a technological edge in the areas needed to decarbonise. Centring net zero R&D will increase the chance of the UK being first to market for a range of climate technologies.

One witness to the commission highlighted Innovate UK’s Catapult Network as a model of state support that has successfully enabled universities to better serve industry R&D need. This is a model which could be expanded and focused on the R&D needs of the just transition.

The University of Sheffield’s Advanced Manufacturing Research Centre (AMRC) is recognised for providing access to industry-leading equipment and helps plug the gap between where university and industry research operate: the ‘mid tech readiness’ range. The centre makes it easier for early-stage technologies to reach markets. Its value to industry is evidenced by the investments made. Overall³⁸, it has driven £260m of capital investment to the region from international firms such as Boeing, Rolls-Royce and McLaren. Further, it generates £55.6m in Gross Value Added per year and supports approximately a thousand well-paying jobs.



Given this, we would recommend that either a new and dedicated energy net zero R&D body is created, building on some of the programmes in the Net Zero Innovation Portfolio³⁹, or that the remit and mandate of an existing UK body, such as the Advanced Research & Innovation Agency (ARIA)⁴⁰, is adapted to deliver the same dedicated focus. ARIA is an interesting model to consider, as it was founded on principles that drew on the ‘ARPA/DARPA’ model in the US. The Advanced Research Projects Agency (ARPA), founded in 1958, later becoming the Defence Advanced Research Projects Agency (DARPA), is widely seen as one of the most successful R&D initiatives in the world, as well as a leading example of industrial policy that sought to “advance the technological frontier”⁴¹. It has also been successful in contributing to the commercial development (and associated benefits) of a huge number of breakthrough technologies across the decades, from global satellite navigation to miniaturised GPS receivers and autonomous vehicles.

The success of ARPA/DARPA is attributed to a number of factors⁴², many of which could be applied in the UK to growing net zero R&D, making it a strong contender to take on the role. Perhaps most obviously, it has a clear sense of mission which delivers a clarity of purpose, that fits with the net zero challenge. This is something also echoed in ARIA’s own language, which chimes with what is needed to deliver a just transition: “ARIA’s mission is to unlock scientific and technological breakthroughs that benefit everyone. Our success will be measured by the lives, industries and communities transformed by ARIA’s work.”⁴³

Other factors, such as flexibility on hiring (including the ability to bring in experts from outside government), operational freedom, a bold approach to risk and reward, and strong links with industry and academia are all elements that should be considered in thinking about the scope and approach of such a body in the UK.

It is also illustrative that the ARPA approach is already being adapted to the energy transition or net zero challenge in the US, with the creation of an ARPA-E⁴⁴ and initiatives such as Net-Zero Game Changers⁴⁵. An ‘ARIA-NZ’ would potentially be a game changer in the UK.

Case study for an industrial strategy

The East Midlands faces a significant challenge with low productivity, partly due to underinvestment in R&D, which has contributed to an estimated £20 billion gap in the regional economy. However, the region's strength in industry-partnered R&D, particularly in low-to-zero carbon propulsion technology, positions it well to compete in the estimated £10 trillion global net zero market⁴⁶.

With alignment across major international firms like Rolls-Royce, Alstom, and Toyota, a strong network of supply chain SMEs and research capacity provided by the University of Nottingham's Zero Carbon Innovation Centre, the region is recognised for its high growth potential in green transport innovation and manufacture. For this growth to be realized, the government must attract private investment and encourage knowledge transfer across sub-sectors such as aerospace, trains, and vehicles.

There is clear evidence of a strong return on public investment in this area. For example, in 2024, public funding in zero carbon propulsion research at UoN resulted in a fourfold increase in total investment, two-thirds of which was from international sources. A previous program, Aerospace Up, supported 200 SMEs, with 90% reporting increased revenue, achieving a 13-to-1 return on public investment overall. The university is now in discussions with the new Mayor to create an industry-aligned R&D centre focused on zero carbon propulsion, enabled by the East Midlands Investment Zone.

24 <https://labour.org.uk/wp-content/uploads/2022/09/Industrial-Strategy.pdf>, p.12

25 <https://labour.org.uk/updates/press-releases/starmers-energy-ambition-how-labours-british-jobs-bonus-will-create-jobs-and-boost-investment-into-scottish-and-uk-energy-heartlands/>

26 <https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook/>

27 *Ibid*, p.3

28 https://innovationcaucus.co.uk/app/uploads/2023/08/Clusters-Part-2_Case-Studies-FINAL-08-Aug-2023.pdf

29 <https://www.productivity.ac.uk/news/the-midlands-productivity-challenge/>

30 <https://www.nesta.org.uk/data-visualisation-and-interactive/design-future/>

31 <https://www.ippr.org/articles/manufacturing-matters>, p.5

32 <https://www.ey.com/content/dam/ey-unified-site/ey-com/en-uk/newsroom/2024/07/ey-uk-attractiveness-survey-07-2024.pdf>, fig. 7, p.11

33 <https://www.nottingham.ac.uk/zero-carbon/home.aspx>

34 <https://labour.org.uk/wp-content/uploads/2024/03/Make-Britain-a-Clean-Energy-Superpower.pdf>, p.13

35 <https://www.gov.uk/government/news/new-publicly-owned-national-energy-system-operator-to-pave-the-way-to-a-clean-energy-future>

36 <https://www.gov.uk/government/publications/the-harrington-review-of-foreign-direct-investment>

37 *Ibid*, p.5

38 https://www.amrc.co.uk/files/document/500/1664447805_AMRCEconomicReport.pdf

39 <https://www.gov.uk/government/collections/net-zero-innovation-portfolio>

40 <https://www.aria.org.uk/>

41 <https://www.piie.com/publications/piie-briefings/2021/scoring-50-years-us-industrial-policy-1970-2020>

42 Defense Advanced Research Projects Agency: Overview and Issues for Congress, Congressional Research Service, <https://sgp.fas.org/crs/natsec/R45088.pdf>

43 <https://assets.publishing.service.gov.uk/media/66a388fa0808eaf43b50d7eb/aria-annual-report-and-accounts-2023-24.pdf>

44 <https://arpa-e.energy.gov/>

45 <https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/04/fact-sheet-biden-harris-administration-makes-historic-investment-in-americas-national-labs-announces-net-zero-game-changers-initiative/>

46 <https://www.oxfordeconomics.com/resource/the-value-of-the-green-opportunity/>



Recommendation 5

Reform skills delivery to align with transition requirements

Action 1

UK government to propose and consult on a **definition of ‘green jobs’**. This will need to be pragmatic and recognise skill transferability. This will be vital to underpin coordinated planning for delivery of skills needed sectorally and geographically.

The term ‘green job’ is widely used but there is little agreement on what a green job is or how it can be used to shape policy. As witnesses to the commission pointed out, it can even vary for one person in one profession: is a welder working on a wind farm one week and on an oil rig next in a green job or not? Some jobs will be essential for the early phase of the transition to a low carbon infrastructure across society (e.g., installers of solar panels and heat pumps), while others will be a permanent part of a decarbonised economy (e.g., manufacturers of green transport vehicles).

Where there is more consensus is the centrality of skills in delivering the transition and the vast demand for new roles that will be needed. Figures on the scale vary from study to study but by way of illustration, PWC estimated a skills gap in green energy jobs of c.200,000⁴⁷, while the Climate Change Committee – broadening the definition to “low-carbon sectors” – stated that estimates of potential new jobs went as high as 725,000⁴⁸. When thinking about how the transition can

be viewed as a net positive by those affected, whether on a sectoral or a geographical basis, ensuring those skills and jobs are equitably accessible will be crucial.

Delivering that volume of jobs and skills across such a variety of sectors and regions in a way that is both inclusive and fair will be impossible without some definitional focus and parameters to serve as a framework. We would recommend that the government consult on establishing an official definition and range for ‘green jobs’.

There are several precedents on which to draw. In particular, the main report of the Green Jobs Taskforce⁴⁹ (which we touch on further below) should be utilised, as should the engagement and work undertaken by the Office for National Statistics⁵⁰ (which, itself, drew on the Green Jobs Taskforce work), and started to publish “experimental estimates of green jobs”⁵¹.

A factor that makes a settled position so important is the need for a more granular understanding of the geographical perspective. Better defined, the skills groupings needed for the energy transition could be crossmatched with the work undertaken in the regions, either ongoing or as a result of some of the other recommendations made in this report (e.g. the transition taskforces or the enhanced focus on the energy transition with investment and enterprise zones) to see how this maps onto impacts and opportunities across the different parts of the country. This would increase the chances of ensuring the benefits from the transition are felt nationwide.

Action 2

Provide direction on the future of ‘green skills’ through the proposed **Office for Clean Energy Jobs** or by empowering a revitalised and expanded Green Jobs Delivery Group. Use this to ensure wider skills policy is aligned with and supports delivery of a just transition.

As well as an agreed definition of green or clean energy jobs, there is a need for clarity on who will lead for the government, how this will be delivered, and how it will be aligned with the wider focus on skills from the new administration.

There has already been a lot of work done, for example by the Green Jobs Taskforce. This was in turn handed onto the Green Jobs Delivery Group⁵², which then devolved much of its work to at least six task and finish groups, with a “Net Zero and Nature Workforce Action Plan” mooted for publication in the first half of this year. Most recently, DESNZ announced it had met with trade unions to “explore plans” for a new Office for Clean Energy Jobs⁵³, whilst Skills England has also been launched “to bring together the fractured skills landscape and... boost the nation’s skills.”⁵⁴

First, therefore, the government should establish who will be the lead agency charged with coordinating skills delivery in this area, its remit and membership. The Green Jobs Delivery Group, either through its steering group or task and finish groups, had a wide-ranging membership which covered



businesses, trade associations, skills and training providers, local government, trade unions, and civil society. Whichever body is selected by government, this open and inclusive approach should be continued, with an additional focus on involvement from the combined authorities and wider regional representatives.

Any agency charged with coordinating delivery of the skills needed for a successful just transition will also need to look at skills at all levels, from entry level through to degree level and beyond, and the “skills ladder”, to ensure that people are able to move up during their career. This will mean close involvement from the further and higher education sectors to ensure the supply of high-level skills needed in the sectors and places they are needed, and that provision is fully linked with work-related routes such as apprenticeships.

The specific requirements of the energy transition will need to be fully factored into the wider decisions on skills policy. We would highlight three specific areas for particular focus:

- Ensuring the newly established Skills England works closely with the agency leading on delivering the skills element of the energy transition, and the need for alignment of Skills England’s work with the government’s industrial strategy.
- Ensuring the proposed broadening of the Apprenticeship Levy to become a Growth and Skills Levy (allowing firms to use a percentage of their levy contributions to fund training wider than just apprenticeships) aligns with the needs of the transition.
- Building future skills considerations related to the transition into the Department for Education’s ongoing Curriculum and Assessment Review⁵⁵, especially given the focus in the review on ensuring young people are equipped for a “*world where social, technological, commercial and environmental conditions are rapidly changing.*” This will help ensure that the longer-term skills pipeline needed to help deliver the transition is also built into the government’s thinking.

Action 3

Through the above bodies, develop a **targeted suite of policies** specifically designed to aid the transition of workers affected by the changes on which transition outreach teams (recommendation 2) can draw.

A key focus for the body charged with leading on the skills within the energy transition needs to be to support those individuals and sectors most adversely effected by the move away from fossil fuels and associated industries or sectors.

This is essential for the transition to be seen as truly fair and to avoid repeating the inter-generational shocks of previous transitions, such as with the coal industry in the 1980s.

Here we set out some of those proposals or initiatives that were raised by witnesses and which we would recommend are considered to assist those impacted by the transition:

- To make it as easy as possible for workers to transition from one sector to another, the UK government needs to work with industry to introduce energy skills passports, recognised and supported by all relevant sectors. This is an area where some initial or exploratory progress has already been made⁵⁶, but the government needs urgently to build on this start.
- Removing barriers in the way of retraining. Consideration needs to be given to offering paid time-off to retrain, financial support for associated costs through a dedicated fund (such as the Green Training Fund proposed by the IPPR⁵⁷), or, as we heard from witnesses, some kind of extension of the government-backed short-time working or ‘furlough’ schemes seen during COVID-19 to allow for retraining without complete loss of income.

- As the TUC highlights in its report on the subject, “The German ‘Kurzarbeit’ scheme, perhaps the best known short-time working scheme, includes restructuring as one of the situations in which short-time working support can be paid.”⁵⁸ The energy transition, with its widespread but also specific impacts, would seem to be just such a ‘restructuring’ where targeted government support for such a scheme would be sensible, proportionate, and justified.
- As the Just Transition Commission in Scotland has proposed for the closure of Grangemouth⁵⁹, there should be tailored support in the geographic areas where the impacts of the transition will be most heavily felt. We believe that this can be achieved in part by implementing the recommendations in this report. For example, the transition taskforces, with their membership drawn from key regional stakeholders, will be best placed to identify what this kind of targeted assistance needs to look like. Equally, embedding something in the investment or enterprise zones like the Net Zero Academies⁶⁰, proposed by the think tank (and commission witness) Onward, would provide the vehicle for delivering some of this skills support and uplift.



Action 4

Use the jobs and skills opportunities presented by the energy transition as a **tool to address existing economic or social inequalities.**

Finally, it will be important to look at the demography of the energy workforce as the transition takes effect. Although up-to-date comprehensive figures are hard to find, especially with female representation in the workforce, what numbers there are⁶¹ back-up what we heard from witnesses, namely that women and people from ethnic minorities remain very underrepresented in the energy sector. Regional inequalities also exist in job opportunities across the country. As the Institute for Public Policy Research (IPPR) puts it, “the decline of manufacturing has led to fewer, worse-paid job opportunities for those with meaningful skills but without university degrees”.

Scaling up the manufacture of ‘green products’ could help reverse this trend by bringing opportunities beyond London and adjacent areas where the finance and services sectors are clustered. IPPR identified three relevant areas where the UK has a competitive advantage: wind; green transport; and heat pump manufacturing⁶².

The energy transition offers, therefore, an opportunity to build a future workforce that looks far more like the overall population it is drawn from and locates good, lasting job opportunities more fairly across geographies.

We would recommend that the lead government body on clean energy skills has the promotion of a diverse workforce built in as an explicit component of its remit, with a dedicated workstream or Task and Finish Group focused on the issue, to coordinate action across the various sectors and regions. Equally, the curriculum review referenced above should include a specific focus on broadening the participation in those subjects of particular importance to the transition, including, but not limited to, STEM.

There should be consideration of direct financial incentives for businesses to bolster this. As proposed by several witnesses to the commission, we would therefore recommend that a funding premium is made available through the new Growth and Skills Levy for apprenticeships or wider training programmes taken up by underrepresented groups to try and drive both wider promotion and uptake of these opportunities.

47 <https://www.pwc.co.uk/press-room/press-releases/Energy-transition-constrained-by-c200000-jobs-PwC-GJB.html>

48 <https://www.theccc.org.uk/2023/05/24/net-zero-offers-real-levelling-up-but-government-must-get-behind-green-jobs/>

49 <https://www.gov.uk/government/publications/green-jobs-taskforce-report>

50 <https://consultations.ons.gov.uk/external-affairs/defining-and-measuring-green-jobs/>

51 <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/experimentalestimatesofgreenjobsuk/2024>

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Recommendation 6

Focus planning reform on local and regional benefits as well as pace

Action 1

Consult on and co-design with relevant stakeholders an **improved framework** (legal and voluntary) for driving enhanced community benefits from developments.

Early action⁶³ from the new administration has shown its determination to tackle planning issues that have slowed the pace of the energy transition and that need substantial reform to keep the transition from foundering. Still, ongoing opposition in key areas of the country – both to new energy projects⁶⁴ and supporting infrastructure⁶⁵ – shows that the points where planning policy meets real people and places can be fraught.

The issue of how communities benefit from transition-related projects continues to loom large and was a point frequently raised with the commission by witnesses. There needs to be a shift in thinking around benefits for those who host infrastructure, moving explicitly and unapologetically towards admitting a *quid pro quo*. While this will not be a panacea for mitigating opposition, communities hosting something for the sake of the nation should receive benefit for doing so. On this, the government therefore needs to take a more coordinated and directional role, rather than it being left solely to individual developers.

The new administration's focus on pace needs to be visibly and tangibly matched by a concomitant emphasis on benefits. We saw the beginnings of action on this under the last government in several areas. It indicated it was minded to accept the case for reduced electricity bills and wider community benefits for those living close to "transmission infrastructure"^{66,67} (e.g. pylons and power lines), that it intended to publish guidance on "wider community benefits" on a voluntary basis whilst also exploring options for a mandatory approach, and that it would "take ownership"⁶⁸ of the Community Benefits Protocol, developed by Renewables UK for onshore wind and covering suggested pound-per-megawatt payments, in-kind benefits, and wider socio-economic benefits.

The government can drive benefits into communities and speed up the planning process by bringing these different strands together and coming forward with a comprehensive set of policy proposals around community benefits. This needs to be done by a cross-planning regime, whether via a Nationally Significant Infrastructure Project (NSIP) or local planning authorities. It should also be done on a cross-technology basis, moving away from a technology-by-technology approach.

We would also recommend that the government explicitly commit to moving towards implementing a mandatory approach to drive consistency, fairness and equality from community to community. This approach should aid community understanding of the nature and scale of benefits that would be available for a given project or class of infrastructure. It could build on the specific work done in relation to NSIPs by the Planning Advisory Service⁶⁹ around sharing of information, including on community benefits. Expanding this out to develop – as was suggested by several witnesses – an openly accessible database that sets out best practice and examples around community benefits would minimise information inequality between developers and communities. It would also more clearly show the opportunities presented by hosting clean energy infrastructure.

Finally – and, we recognise, contentiously – is the issue of the weighting given (or not) to community benefits in determining planning decisions. The current arrangements mean community benefits are not material considerations in reaching a decision. We heard concern in witness sessions that putting community benefits on a statutory footing and making them a factor in determining decisions will lead to perceptions of bribery or developers buying consent. Equally though, for an issue of such importance and prominence that will only grow in relevance as the transition gathers pace, to have no statutory role for community benefits seems like an omission that at least needs further discussion and consideration.



We would recommend that consultation on this specific matter forms part of the wider government activity in this area.

Action 2

Explicit consideration should be given to **delivering community benefits** that offer an enduring legacy for host communities, beyond construction or one-off payments or improvements.

In line both with the multi-generational timescales involved in achieving the energy transition and the long life of much of the associated infrastructure, there needs to be a particular focus on ensuring that the community benefits on offer are similarly long-term. As well as legitimate material considerations, giving a community a longer-term stake – whether literal or figurative – in a new asset means that infrastructure can potentially come to be seen as a part of the long-term health of the community, rather than an imposition.

Decisions on precisely what community benefits to seek around an individual project need to rest with a given community. Still, the government should incorporate a focus on longer-term benefits into the suggested actions set out above and in its wider decision making. In practical terms that should mean that a strong emphasis and weighting on enduring benefits is built into any new voluntary guidance or mandatory approach. Mandating that developers, at a minimum, need to explore longer-term benefits with a community –

beyond one-off sums or initiatives – would help schemes such as such as ongoing per-MW payments into a community-administered fund be built into more benefits packages around new developments.

Consideration should also be given to how communities can best inform themselves in these discussions and understand what options might be available to them. As recommended above, an openly accessible database of best practice, case studies, and successful examples of community benefits would be of great use, and this should put a particular focus on these longer-term benefits, emphasising their value and legacy-building properties as well as the kind of schemes that could be considered. Additionally, an impartial advisory service for communities should also be established, to give them neutral guidance on options, approach, and issues to consider. The Planning Advisory Service⁷⁰ - with appropriately expanded resource and remit – would be one body that could undertake this service.

This kind of information and advice would be useful for both communities and developers considering community stakes or ownership options within a given energy scheme. We heard from witnesses, including Finance Earth⁷¹, about how these co-ownership models have worked well across the country, both from the perspective of developers or investors, who have seen a return, and communities, who have a stake in an enduring community asset. Clear sight of what has worked where and advice on how to emulate this success would be valuable in showing communities what can be achieved and the practical steps needed to get them there.



Image: Nottingham City Council

Action 3

Placing an emphasis on the **importance of character and heritage** when considering what **developments and deployments** should be undertaken to help maintain an element of continuity and evolution rather than abrupt change.

Economic aspects, as covered throughout this report, are clearly crucial – as one trade union witness to the commission succinctly put it, “work matters.” Still, there are other factors at play which may be less tangible but are no less real. One that came through consistently from witnesses was the importance of a sense of place. Infrastructure linked to the energy transition will inevitably impact how people feel about their community.

This is difficult to translate into concrete policy action and will always need to be balanced with the overall need for speed and success in the transition. Moreover, it is also something that cannot be readily factored into all developments associated with the energy transition. Pylons, as crucial as they undoubtedly are, cannot really be said to form part of any region’s industrial heritage or contribute to community pride. This is why the role of the harder-edged, more financially driven benefits is so important.

However, there are steps that can be taken to shape thinking, smooth some of the rougher edges, and form part of a largescale cultural shift. Some of the recommendations contained in this report – if followed and implemented – will play a useful role on this issue. For example, the proposed transition taskforces, through their full involvement of local and regional stakeholders who understand the area they live and work in and represent, can help ensure that the plans made and executed are sensitive to issues of local importance. Equally, as set out above, focusing on reskilling and retraining will help with a feeling of continuity and evolution associated with the transition, rather than it being seen as leaving people behind.

This line of thinking and planning also needs to play out in decisions around what developments are undertaken where. As can be heard in the way decarbonisation in industrial clusters is discussed, the ‘fit’ between a new energy development and the area’s history is an important consideration. Clean energy infrastructure on Teesside or the Humber is promoted for allowing for a continuation of the area’s ‘proud industrial heritage’ as much as it is for achieving net zero.

Many of the decisions about what goes where will come down to straight economics and business decisions. However, there are potential intervention points and levers to help ensure that considerations of continuity, fit, and history can be taken into account. This could be achieved through planned policy developments, such as the Local Power Plan⁷² proposed by Labour, wider investment and support provided by GB Energy for specific developments, or the strategic spatial energy plan being drawn up by the newly formed National Energy System Operator⁷³.

Case study for effective planning reform

In Nottingham’s underserved Meadows community, Dr. Lorna Kiamba has advanced an innovative initiative to integrate energy storage technologies aimed at reducing fuel costs and promoting sustainable energy use. Collaborating closely with local residents, Dr. Kiamba focused on developing and testing energy systems tailored to the community’s specific needs and circumstances.

Dr. Kiamba’s approach goes beyond technical implementation; she actively seeks to understand community sentiments regarding the proposed energy interventions. By conducting surveys and hosting focus groups, she gathered insights into residents’ lifestyles, preferences, and concerns. This feedback is crucial for designing solutions that not only lower energy expenses but also resonate with the daily realities of community members.

Through her work, Dr. Kiamba has identified key barriers to adoption, including mistrust of new technologies and financial constraints. By addressing these challenges and fostering a collaborative environment, the project is an excellent example of how local planning and consultation with communities can lead to effective and affordable energy solutions to progress the energy transition. The Meadows initiative illustrates the importance of local partnerships in developing effective energy solutions. Dr. Kiamba’s work is a testament to how community engagement can enhance the relevance and impact of technological advancements in energy storage, ultimately fostering a more resilient and equitable energy landscape.

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Disclaimer

The report is a product of a multi-stakeholder inquiry convened by the University of Nottingham. The report has been compiled with input from the commissioners, however, it does not necessarily reflect their or their employers' views.

How the University of Nottingham supports the just transition

The University of Nottingham holds achieving net zero as a core ambition to both our operations and our research, and that this should not come at the detriment of communities or disadvantage already vulnerable populations. As an institution, we are in an excellent position to help solve some of the huge challenges in achieving net zero and, through our research and innovative technologies, to support the acceleration of a just transition. We know the scale of change will require tough decisions which are likely to have significant impacts on vulnerable and financially excluded communities, but these communities will also be the hardest hit if we do not achieve our obligations, the impacts of which will be felt both globally and locally.



The University of Nottingham is host to a range of research looking at the urgent challenges of net zero. Our Zero Carbon Innovation Centre and Energy Institute are just two examples of how we drive innovative technical solutions to reduce carbon emissions and improve energy efficiency. Our research programmes explore renewable energy technologies, zero carbon aero propulsion technologies, energy storage solutions, smart grid developments, blue-green infrastructures, and sustainable practices in the built environment. Our research also looks at the wider societal changes that will need to happen to secure a successful and just transition to net zero – the economic, political, behavioural and cultural challenges, issues of global and inter-generational fairness – which we have brought together in our SHAPing Sustainable Futures Hub.

Through programmes and facilities such as our Zero Carbon Innovation Centre, we create globally significant, multi-disciplinary research which will position the East Midlands and the wider UK as a world leader in the development and deployment of innovation in green industries and advanced manufacturing, involving a wide range of cross-sector partners. All of this and more will be critical to achieving our Net-zero targets. By fostering dialogue between researchers, policymakers, industry and the public, the University is helping to build a collective understanding of the Just Transition Framework.

The government had been instrumental to enabling these actions and we've seen exciting advancements in our research as a result. Earlier this year, we saw the £70M investment into the East Midlands to support the opening of two new industry-aligned R&D facilities next year: a zero-carbon translation centre and a hydrogen propulsion lab adding to our other industry-aligned R+D facilities focusing on green chemistry, power electronics and advanced manufacturing. Essential investments like these will pave the way to accelerated high impact commercial and policy solutions which will help us realise net zero and meet our objectives at both a national and international level.

Universities can support the government's mission to be a clean energy superpower and help the UK to lead the way in sustainable development by translating zero carbon research into real-world solutions with industry and government. Together, we will attract and support top global firms, cultivate local innovation, train our people in the skills needed for the net zero transition, and serve as a global model for a flourishing zero-carbon economy.



HyDEX and the Energy Research Accelerator

The University of Nottingham is a core partner of the HyDEX and Energy Research Accelerator (ERA) programmes.

HyDEX is a three-year project (2022-2024) comprising of seven universities and industry partners. With funding from the Research England Development Fund, it supports and fosters the creation of a new hydrogen industrial economy in the Midlands. It is working with SMEs, commercial partners and multinationals to accelerate innovation, build markets and support the required skills transition. Each HyDEX partner is making their hydrogen facilities, research capabilities and expertise available to businesses in order to accelerate innovation in hydrogen.



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Special thanks are also extended to all the witnesses whose insights, examples and expertise provided the essential evidence to ground this report.

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