



Just Transition Commission

A national mission for a fairer,
greener Scotland





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The Just Transition Commission

Professor Jim Skea (Chair)

Professor Skea was appointed Chair of the Just Transition Commission in September 2018. He has research interests in energy, climate change and technological innovation. He is Co-Chair of Working Group III (Mitigation) of the Intergovernmental Panel on Climate Change and was the Scottish Champion of the UK's Committee on Climate Change until December 2018. Between 2012 and 2017 he was UK Research Council's Energy Strategy Fellow.

He is internationally recognised as a leading climate scientist. In 2004 he was awarded an OBE for services to sustainable transport and in 2013 he was awarded a CBE for services to sustainable energy.

Lang Banks representing WWF Scotland

Lang Banks has worked for global conservation organisation WWF for over a decade and has been integral in their work addressing issues relating to climate change, clean energy, and marine protection. Lang was appointed Director of WWF Scotland in 2013 and is a key player in WWF's UK and international network where he advises on communications and campaigns. A biologist by study, his interest in the natural world stems from childhood and has led to him becoming an influential and dedicated environmentalist.

The Just Transition Commission

Colette Cohen OBE

Colette became the Chief Executive Officer of OGTC in August 2016. OGTC is an industry-led organisation based in Aberdeen, backed by the UK and Scottish governments, and working closely with the local universities. Its purpose is to support the oil and gas industry to develop and deploy technology to accelerate the transition to an affordable net-zero North Sea. OGTC is committed to a culture of innovation and helping to attract the next generation of engineers and scientists to the energy industry.

Colette was Senior Vice President for Centrica Energy's Exploration and Production business in the UK and the Netherlands until July 2016. Her career began with BP in 1991 and she has worked for ConocoPhillips in the North Sea, Norway, the US and Kazakhstan.

Professor Mike Danson

Mike has varied research interests including regional economic development, regional development agencies, enterprise development, microbreweries, basic income, early-onset dementia, community ownership and management of land and other resources.

Since 1997, he has authored over 250 research papers, many published in international scientific journals and books. His research work is frequently presented at international conferences. Mike is Professor Emeritus in Enterprise Policy, Heriot-Watt University, Visiting Professor in the Centre for Energy Policy, Strathclyde University, Chair of Citizen's Basic Income Network Scotland and Vice Chair of the Reid Foundation.

The Just Transition Commission

Richard Hardy

representing Prospect Union

Richard is the National Secretary for Scotland and Ireland at the trade union Prospect, representing members in Government, Energy, Defence, Nuclear Creative and Heritage Sectors. He is a member of the STUC's General Council, and has worked on Scottish Government stakeholder bodies including the Longanet Taskforce, the Sustainable Renewal Advisory Group and the Tourism Taskforce.

Richard is an experienced Senior Trade Union Official with a demonstrated history of working across a variety of employment sectors. He was previously a Negotiations Officer with Prospect for over 16 years and has worked in nearly every sector of Prospect across the UK. Richard has been based in the Edinburgh office since 2015. Prior to joining Prospect, Richard worked in Government IT.

Charlotte Hartley

representing 2050 Climate Group

Charlotte is a Trustee of the Board at 2050 Climate Group. 2050 Climate Group engages, educates and empowers Scotland's young people to take action on climate change. The group's ambition is to start a social movement of passionate, active young people who are equipped with climate change knowledge and leadership skills so that our generation can lead the way to a sustainable, low carbon society.

Charlotte works for Pale Blue Dot Energy, (a Storegga Group company), the project developer of the Acorn Carbon Capture and Storage (CCS) and Hydrogen projects in Aberdeenshire.

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Norman Kerr OBE

Norman recently retired as Director of Energy Action Scotland in May 2020, having previously been Development Manager and Deputy Director since 1996. Prior to this he worked with Heatwise Glasgow for 12 years as Production Unit Manager delivering the organisation's energy efficiency programmes.

Norman was Deputy Chair of the Scottish Fuel Poverty Advisory Panel and the Scottish Fuel Poverty Partnership Forum, having previously been Deputy Chair of the Scottish Fuel Poverty Forum and a member of the Scottish Rural Fuel Poverty Task Force and the Scottish Fuel Poverty Strategic Working Group.

He was a trustee of the Aberdeen Combined Heat and Power Company and a member of the NEA Executive. He served on the stakeholder engagement groups for both Distribution Network Operator companies in Scotland and was a member of SGN's Consumer Engagement Group.

Rachel McEwen

Rachel is SSE'S Chief Sustainability Officer, and is responsible for its sustainability strategy, climate change policy, community funds and corporate heritage. She is a non-executive director of Scottish and Southern Electricity Networks, the SSE subsidiary that owns and operates the electricity distribution and transmission networks in the north of Scotland. Rachel was Chair of the Leadership Group of Living Wage Scotland between 2014 and 2018 and is a board member of both the Fair Tax Mark and the Poverty Alliance.

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Dave Moxham

representing
Scottish Trade Union Congress

Dave is a Deputy General Secretary of the STUC leading on campaigns and communications. Dave has policy responsibility for the public sector and voluntary sectors, transport, energy and climate change, civil justice and courts reform. He is a board member of the Scottish Poverty Alliance and co-chair of the Scottish Living Wage campaign. He has served on a wide range of Scottish Government working groups.

Kate Rowell

Kate Rowell is Chair of Quality Meat Scotland, a non-departmental public body representing the Scottish Red Meat Industry and funded by levy collected from farmers and processors. She has been on the Board of the organisation for four years and took the Chair in October 2018.

Kate is also a livestock farmer and fully qualified veterinary surgeon, running an 750-hectare upland farm in the Scottish Borders in partnership with her husband. She has a keen interest in sustainable farming and in promoting the environmental and social benefits of maintaining and developing family farms across Scotland.

The Just Transition Commission

Tom Shields

Tom is CEO of Spring Rise, a consultancy providing support to chemical processing, waste recycling and renewable energy industries. He was previously the Managing Director of KemFine UK Ltd., a speciality chemicals business, served as the Chairman of the Scottish Enterprise Forth Valley Board, and was acting chair of the Chemical Sciences Scotland Industry Leadership Group. He currently sits on the UK Government's Carbon Capture, Usage and Storage Council, and is a non-executive Director of NECCUS, an industry-led alliance focussed on industrial decarbonisation in Scotland.

Professor Karen Turner

Karen is founding Director of the University of Strathclyde's Centre for Energy Policy. The Centre conducts internationally leading research on the public policy challenges of decarbonising our economy. Her work focuses on understanding how a just transition may be delivered, and addresses key questions about distributional effects, employment and GDP.

Karen has a number of advisory roles with national and international policy bodies. She has contributed to the CCUS Cost Challenge Taskforce, had a leading role on the Royal Society of Edinburgh's inquiry on 'Scotland's Energy Future', leads the 'Energy, Policy, People and Society' theme across the Scottish Energy Technology Partnership, and was a co-author on the European Zero Emissions Platform report 'Role of CCUS in a Below 2 Degrees Scenario'.

Foreword from the Chair

When we started on this journey at the beginning of 2019 we lived in a very different world. Covid-19 has changed our lives, and underlined the importance of shared efforts in response to global challenges that affect us all. As we cautiously emerge from the pandemic, we should remember this lesson.

One of the main messages emerging from our work has been that fairness and climate ambition must go hand in hand. We are in no doubt that climate action can bring multiple benefits, including quality green jobs and improved social inclusion. But past experience leaves us in no doubt that for these benefits to be realised, we *must* plan and be prepared to take decisive action.

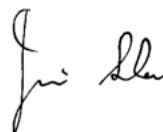
Failing to tackle the climate emergency would result in social and economic upheaval; the scale of suffering would eclipse the challenge we face, here and now, in planning for a just transition for Scotland. Taking sustained action at pace depends on consensus, and it must be underpinned by basic principles of fairness. The pathway to net-zero emissions may be ambitious, but it can be a unique opportunity to build a Scotland that is healthier, fairer and greener.

Delivering this vision is not a task for the Scottish Government alone, however. It must be a national mission, based on collective endeavour. The building blocks are in place. We have ambitious and comprehensive Climate Change legislation, with just transition at its heart. There is a growing consensus of the need for urgency and we have great examples of businesses and other organisations in Scotland pivoting their operations towards alignment with net-zero.

I would like to thank those who have contributed to our work over the last two years; the dedicated secretariat for long hours spent supporting the independent spirits who made up this Commission; the Commissioners themselves, who despite coming from different backgrounds and representing very different constituencies have worked collegiately, always striving for consensus; and finally the many people who have shared their views with us, attended meetings and events, or submitted written evidence.

At the end of this year Scotland will be front and centre of the international stage as COP26 comes to Glasgow. Our nation's approach to just transition is something we want to be proud of, an experience we can share with our overseas guests. A new Government will take office in May, facing many challenges. Recognising the just transition to net-zero as a national mission opens so many opportunities, helping heal the harms of the pandemic, while resetting our pathway to net-zero. The advice in this report is intended to be aspirational, while remaining in line with our remit to deliver practical, affordable and realistic recommendations for action.

It gives me great pleasure and personal satisfaction to commend this report to the next Government, and to you.



Professor Jim Skea

Introduction



Introduction



The imperative of a just transition is that Governments design policies in a way that ensures the benefits of climate change action are shared widely”

Climate action, fairness and opportunity must go together. Taking action to tackle climate change must make Scotland a healthier, more prosperous and more equal society, whilst restoring its natural environment. We want a Scotland where wellbeing is at the heart of how we measure ourselves and our prosperity. We know that the scars from previous industrial transitions have remained raw for generations. We know that some more recent aspirations for green jobs have not delivered on all the benefits promised for Scottish workers and communities. We need rapid interventions to fully realise the potential (and mitigate the potential injustice), associated with the net-zero transition.

The Commission started its work in early 2019, with a remit to provide practical, affordable, actionable recommendations to Scottish Ministers. We have travelled the country, listening to people’s views about the kind of transition that is needed to tackle our contribution to climate change. When the pandemic arrived, we continued these conversations online. It is clear there is huge appetite across Scotland for a just and fair approach to tackling climate change that truly leaves no one behind, whilst strengthening Scotland’s wellbeing. In this report, we have tried to distil what we have learned throughout the course of this work.

Much has changed since we started our work: the Scottish Parliament passed new legislation in 2019, setting a target of net-zero emissions by 2045. In December 2020, the Scottish Government published an updated Climate Change Plan setting out how it intends to meet these new targets. Both of these provide important context, which we have used to frame this report.

The extent of Covid-19’s impact on society is yet to be fully understood. In addition to the devastating health impacts, the pandemic may well continue to influence travel patterns, the way we work, the speed of the digital revolution and the structure of global supply chains in the years ahead. Our Green Recovery report (July 2020) – highlighted evidence that while the whole country had accepted the need for collective action and sacrifices, the most disadvantaged in our society had borne the highest cost of the pandemic. We recommended a range of immediate actions to address this in a green recovery, which still stand as building blocks for a just inclusive climate action.¹

Our understanding of net-zero has also developed since we started our work. There is an ever-growing consensus around the urgency of this goal and recognition that tackling climate change is also vital for long-term prosperity. We have seen great examples of businesses, communities and consumers benefiting from action on climate change here in Scotland. The financial costs associated with meeting our climate change targets are now believed to be lower than previously estimated.² But the distribution of costs and benefits is unlikely to be equitable or fair without careful attention.

¹ <https://www.gov.scot/publications/transition-commission-advice-green-recovery/>
² [Sixth Carbon Budget – Climate Change Committee \(theccc.org.uk\)](https://www.thecc.org.uk/sixth-carbon-budget-climate-change-committee)

Introduction



Without broad-based support, and in particular without the buy-in of workers and communities, progress towards net-zero will not be achieved. A successful transition will need to be underpinned by a strengthening of social partnership working in Scotland, with Government, business, trade unions and communities coming together to work towards a shared goal.

Internationally, just transition has often been associated with mitigating injustices after they have arisen;³ it has usually been concerned with transitions in the energy sector and the impact on workers arising from developments such as the phase-out of coal power generation. Our work has taken a broader approach, seeing just transition as a crucial concept for consumers, people and place; it is based on ensuring social justice across a range of settings, including (but not limited to) energy sector workers.

In our interim report we summarised the challenge, and what we mean by a just transition, as:

“The imperative of a just transition is that Governments design policies in a way that ensures the benefits of climate change action are shared widely, while the costs do not unfairly burden those least able to pay, or whose livelihoods are directly or indirectly at risk as the economy shifts and changes.”

This has guided us through our work. We have explored how the transition to net-zero can be used as a positive opportunity to tackle existing inequalities and to build a society that prevents injustice from occurring in the first place. This vision of a just transition seeks to identify how climate action can build our collective wellbeing.

The scale of the challenges posed by ending our contribution to climate change can feel daunting: sweeping structural changes will affect many facets of our day-to-day lives. But it is clear that building social justice into climate action should not be seen as a burden, or an optional element of the transition. We must tackle climate, social and economic challenges at the same time. We can take positive steps towards building a net-zero country that is also a fairer country.

Recognising the transition as a collective endeavour can be a powerful catalysing force for national renewal as we emerge from the harms caused by the COVID-19 pandemic. We need to meet our climate change targets, and pursue the promise of good quality green jobs, revitalised communities, and improved health. These are all attainable goals and are well worth striving for.

³ [Just Transitions: a comparative perspective – gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/consultation-papers/collections/documents/Just-Transitions-a-comparative-perspective.pdf)

Introduction

This report sets out our view of some of the key challenges that need to be addressed if we are to deliver a just transition here in Scotland. It recommends practical steps that could be taken. We have tried to include examples – mostly good but sometimes salutary lessons – that we can learn from. Quotes from our call for evidence are included as a powerful reminder of the potential this transition offers. Case studies give a flavour of what has already been achieved. Finally we look ahead to the future of just transition in Scotland and consider what arrangements may be needed to maintain momentum behind this agenda.

Our work over the last two years has resulted in a range of recommendations for Scottish Government, and others. However, we can summarise our call to action in four simple messages:



1. Pursue an orderly, managed transition to net-zero that creates benefits and opportunities for people across Scotland. Delivery of this must be a national mission

Fundamental changes to the way we live, work and do business could have a positive impact on Scotland's overall economy. The impact will differ widely across sectors and regions. **Just transition roadmaps will give direction and confidence, driving investment that brings jobs, skills and value to Scotland; stakeholders will work together on robust plans; government business support will be more explicitly linked to emissions reductions, stronger local supply chains and Fair Work. These fundamentals can be a catalyst for action across the public and private sectors.**



2. Equip people with the skills and education they need to benefit from the transition

Scotland's citizens need to be supported to take up new opportunities and adapt to changes that could affect them. **We need a flexible and accessible skills and education system that can meet the needs of a net-zero economy and address inequalities. Specific interventions will be needed for some, such as those in carbon-intensive industries, farmers and land managers and small businesses, particularly in construction and transport.**



3. Empower and invigorate our communities and strengthen local economies

An inclusive green recovery from the pandemic ensures people have a say in climate action and strengthens local economies. **A just transition is shaped by Scotland's citizens, not imposed on them. It energises social partnerships and local democracy and develops places and communities that are designed for net-zero and improved wellbeing. It empowers consumers to choose local products, such as sustainably produced food and drink.**



4. Share benefits widely and ensure burdens are distributed on the basis of ability to pay.

Our current approach to funding decarbonisation is not fit for purpose. The adoption of new technologies and new ways of buying and selling electricity will rapidly increase as we move to net-zero. Smart innovations and modifications in transport, housing and energy systems will not all be universally accessible and may exacerbate existing inequalities. **A just transition refocuses on wellbeing; it uses the power of government intervention and public finance (such as the Scottish National Investment Bank and public pension funds) to drive action; it explores new funding methods for local projects; it fully explores the distributional impact of taxes; it ensures new technologies and services are delivered in a way that works for people, and improves the lives of the most vulnerable in our society.**

Where we are now



Where we are now

Before thinking about what we may need to do to deliver a just transition to net-zero, it is important to take stock of the current context in Scotland, and focus minds on what we seek to achieve with this report.

In this section we describe the opportunities and challenges of a just transition from the perspective of individual sectors, heavily informed by the evidence we have collected over the last two years. We have included quotes throughout from our open call for evidence to help place our narrative in its proper context.

Looking at individual sectors has its limitations – after all, the world does not work in neat silos – and understanding how systems interact is key. This is recognised in the updated Climate Change Plan, which combines sectoral policies and proposals with discussion of the need for a coordinated, holistic action.⁴

Referring to specific sectors helps speak directly to particular groups of stakeholders. However, we stress that addressing many of the issues highlighted here requires working across traditional boundaries. We return to these points in subsequent sections.



The future of our energy system

Our energy sector has changed massively over the last decade and will continue to evolve as we move towards net-zero. The clearest expression of this is our electricity system, where carbon intensity has fallen by nearly 90% between 2000 and 2018. We've seen the shift away from coal power generation and increase in renewable energy which has seen us decarbonise, while being able to produce more electricity than we need here in Scotland.⁵ The energy system will continue to change: the updated Climate Change Plan sees continued growth in offshore wind generation and the roll-out of technologies that remove greenhouse gases from the air.

The sector has long been a source of well-paid employment, offering skilled opportunities for many across the country.⁶ This must continue to be the case and there are real growth and export opportunities associated with the continued deployment of renewable energy and low-carbon technologies. From a just transition perspective there are clear challenges to manage in the years ahead. Many of these will be emblematic of the manner in which the success or failure of a just transition in Scotland will be judged.

⁴ <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

⁵ [Scottish Energy Statistics Hub \(shinyapps.io\)](https://www.shinyapps.io/scottish-energy-statistics/)

⁶ Scottish Government Growth sector briefing estimates employment stood at 71,000 in 2019, with median earnings higher than the Scottish average: [Growth sector statistics – gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/growth-sector-statistics-2019/)

Where we are now

In the North Sea, we will see growth in decommissioning and activity to repurpose infrastructure for a net-zero future, with a decline in the demand for oil and gas and associated traditional activity. The Climate Change Committee have said they anticipate domestic oil consumption for the UK in 2050 to be over 80% lower than pre-pandemic levels. Demand for natural gas is also expected to fall, although potentially not at the same rate. There will still be a place for domestic supply in a net-zero economy, but a just transition must mean managing the inevitable decline in demand.⁷

The number of jobs supported by the oil and gas sector is still significant. However, the sector was hard hit last year by a combination of low oil prices and low demand resulting from the pandemic. This has an impact on people and businesses across Scotland, but much of the impact is focussed on the north east. Recent data has shown the decline in payroll (PAYE) employment in the north east has been at nearly twice the rate of that seen across Scotland as a whole.⁸

This serves to emphasise the imposing and immediate, strategic challenge facing us. We need to rapidly set out how we will create the conditions for an orderly transition and, in the space of a generation, replace the value and economic gain that has been supported by the oil and gas industry for decades. This is complicated by the fact that many of the policy levers key to delivering a managed transition are reserved to the UK Government.

Scotland's carbon-intensive industries possess a heritage of innovation and problem solving, both of which could be harnessed to develop creative and workable solutions to the net-zero challenge. This is particularly true of the North Sea oil and gas industry. However, it will be important to strike a balance between supporting the industry in adapting to a just transition and maintaining an emphasis on the importance of decarbonisation.

Royal Society of Edinburgh – opportunities / challenges of the transition⁹

We will need to drastically increase the pace of change, and create the conditions that will help businesses throughout the supply chain diversify. This is already happening with many examples of businesses expanding their operations towards new markets and technologies. The supply chain will need time to invest, and demand will need to be there for their services. Initiatives such as the Energy Transition Fund will help in this space, and can be built on and strengthened in the years ahead.¹⁰ In parallel, we need to be considering how to help and support people currently working in the sector adapt to a new future and enable them to put the skills they have developed in oil and gas towards driving our net-zero transition.

⁷ [Net Zero - The UK's contribution to stopping global warming - Climate Change Committee \(theccc.org.uk\)](https://www.theccc.org.uk/reports/net-zero-2025/)

⁸ See figure 8 [Earnings and employment from Pay As You Earn Real Time Information UK - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/economy/earningsandemployment/articles/earningsandemploymentfrompayasyouearnrealtimeinformationuk)

⁹ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=royal&uuld=851529738

¹⁰ <https://www.gov.scot/news/gbp-62-million-fund-for-energy-sector/>

Where we are now

Offshore wind capacity will continue to grow with opportunities to build on successes to date in design, operations and maintenance. But, so far, we have not maximised domestic economic opportunities from the creation of a strong local manufacturing supply chain. Some companies based in Scotland, particularly in design, operations and maintenance, have had success in the renewable sector.¹¹¹² Many others have been able to enter export markets and grow their business abroad.¹³ This has been based on the efforts of many in Government and industry, and should not be disregarded. Continuing to grow this very healthy segment of our supply chain can support a just transition in our energy sector.

The growth in renewable energy here in Scotland has allowed many companies to expand, and provide good quality jobs across a strong supply chain. But this has been combined with a great deal of disappointment that, to date, we have been unable to create a thriving, competitive manufacturing base for renewables. The significance of our lack of a strong local manufacturing supply chain is reinforced when we consider that the operation of offshore wind will support far less labour than oil and gas production.



¹¹ [Subsea 7 awarded renewables contract offshore Scotland](#)

¹² [Petrofac wins first Scottish wind farm supply work in 'multi-million' deal - News for the Oil and Gas Sector \(energyvoice.com\)](#)

¹³ <https://www.scottishrenewables.com/news/402-scotlands-green-energy-export-impact>

Where we are now

Our failure to create and sustain alternative high skill, high wage, mass employment threatens to undermine trust in efforts to pursue a just transition amongst Scottish workers and their communities. There are significant concerns amongst some workers, communities and their representatives that, based on experiences to date, the transition will not lead to substantive new opportunities, and will be anything but just in the way it impacts them. As we outlined in the introduction, climate action will not be sustained without addressing these concerns head-on.

The reasons for failing to create a thriving manufacturing base are many and well-rehearsed. They include a lack of investment in fabrication and construction alongside lack of progress towards improving ports and harbour infrastructure identified over a decade ago.¹⁴ Through the course of our work, we heard concerns about an uneven playing-field, with Scottish-based companies competing against overseas manufacturers who are often state-subsidised.¹⁵ We can also point to the Contracts for Difference price stabilisation mechanism, which while incredibly successful in driving cost down, neglects domestic capital content and employment standards.

In the immediate term, what is the opportunity for changing this situation? We are near the now-or-never point for fixed-bottom offshore wind, and quick action would be needed to carve out a share of manufacturing content for the upcoming round of projects. The UK Government has consulted on changes to the CfD mechanism. This offers some hope, but direct government support would still be needed to make Scottish business competitive. The current ScotWind leasing round offers another possible lever to help nurture the domestic supply chain, though its resolution is uncertain following the recent announcement to delay the process.¹⁶

Scotwind leasing will deliver a step change in offshore energy generation over the next two decades, providing significant opportunity for making progress toward our net-zero targets and a range of economic development opportunities ... Scotland's deeper waters, for example, offer tremendous potential for floating offshore wind development and innovation.

Crown Estate Scotland – opportunities of the transition¹⁷

The deployment of offshore floating wind turbines and tidal technology, whilst slightly further into the future, offers promise given the many crossovers with oil and gas. From experience, we can't simply assume this promise will materialise. Scotland currently hosts two demonstrator projects for floating wind but the supply chain content tells the same story as for offshore wind – overseas content in manufacturing and construction, with domestic content restricted to operations and maintenance.¹⁸ The situation is similar for other emerging technologies.

¹⁴ <https://www.gov.scot/publications/scotlands-offshore-wind-route-map-developing-scotlands-offshore-wind-industry/>

¹⁵ <https://www.gov.scot/publications/just-transition-commission-meeting-papers-april-2019/>

¹⁶ [ScotWind Leasing application timings extended | News, media releases & opinion | Media centre | Crown Estate Scotland](https://www.gov.scot/publications/scotwind-leasing-application-timings-extended/news-media-releases-opinion/media-centre/crown-estate-scotland)

¹⁷ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=crown&uuld=338843428

¹⁸ [Hannon et al. 2019. Offshore wind ready to float: global and UK trends in the floating offshore wind market.pdf \(strath.ac.uk\)](https://www.strath.ac.uk/research/centres-and-groups/energy-centre/publications/hannon-et-al-2019-offshore-wind-ready-to-float-global-and-uk-trends-in-the-floating-offshore-wind-market.pdf)

Where we are now

All of the above illustrates the challenge of declining employment in oil and gas. The opportunities presented by continued growth in renewable energy are still there. But we will need to work at pace to capture an increased share of manufacturing, while continuing growth in areas of success to date. As a nation we need to be a supplier of net-zero solutions, and not restrict ourselves to being a buyer from other nations if we are to fully capitalise on the opportunities. At the same time, skills traditionally in demand in the oil and gas sector will need to be supported to transition to the wider energy sector and, indeed, other areas of the economy.

With electricity providing zero-carbon energy for many household energy needs, the distribution of costs and benefits associated with localised flexible, renewable electricity must be fair. There is much potential for exciting innovation in the consumer market for energy. New and emerging ways of buying and selling electricity (such as time of use tariffs and peer to peer trading) have the potential to offer savings for consumers. Such innovation will be vital for delivering a net-zero electricity system that is affordable.

A successful transition would result in communities of well-informed, respected consumers, who are able to engage with future energy systems, empowered by confidence in the corresponding safety nets.

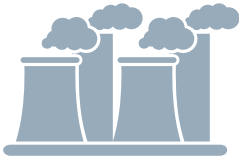
Citizens Advice Scotland – positive vision for 2045¹⁹

However, if left to the market, such innovation comes with potential for new injustice,²⁰ and possibly even higher costs for some. Protection is needed for those who may be left behind because they are unable to take advantage of these new types of tariff. Accessing such innovative products requires finance, time, IT skills, or even something as simple as a good broadband connection. Plenty can be done to address this and ensure everyone gains from the shift to smart, zero carbon energy, but it will require concerted action from government, regulators and companies to make it happen.

Alongside this, the way our future energy system is paid for is another possible source of injustice. For example, to date, additional charges have been added to electricity bills. This penalises less well-off consumers who often have no choice but to use electricity for heating and spend a greater proportion of their incomes on energy. There is emerging consensus of the need to find a better way of paying for and delivering the energy system we need to reach net-zero.

¹⁹ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=advice&uuld=273956149

²⁰ <https://www.cse.org.uk/projects/view/1359>



The future of our industrial base

Scotland retains an industrial base in sectors such as chemicals and food and drink, providing jobs across the country. Retaining – and growing – manufacturing as we move to a net-zero economy can be a good example of just transition in action.

The story of how Scotland lost much of its heavy industry through the 70s and 80s is well known and an example of how not to manage structural change. There was little in the way of a “just transition” for communities and families reliant on coal mining as pit closures swept the country. Decades later the impacts of this can still be felt.

We need to be aspirational, and aim for Scotland to be at forefront of net-zero industrial revolution. Focusing solely on the challenges facing existing industry can sometimes obscure the opportunities the transition to net-zero will bring Scotland. High value-added jobs in design, research and innovation will be needed to develop the solutions needed to meet net-zero. There are new and exciting areas for development, where Scotland could be well positioned to lead and build competitive advantage by being a “first-mover”. These include re-purposing our industrial facilities, thermal electricity generation and infrastructure to support Carbon Capture and Storage and Hydrogen. In the nearer term, we must build on our existing domestic manufacture in energy efficiency materials, heat pumps, and electric buses.

Recent developments bringing Scotland’s first biorefinery to Grangemouth, where it sits alongside traditional heavy industry, are an example of the kinds of exciting opportunities that will arise.²¹ Capturing carbon at power stations and industrial sites and storing it far off the coast underground is another example: by 2030, early estimates suggest that between 7,000 and 45,000 UK jobs could be associated with Scotland securing a 40% share of the carbon storage element of a European carbon market.²² The groundwork is in place for advancing this ambition, as can be seen in the work of NECCUS – a not-for-profit alliance of Government, industry and academia – around which momentum has been growing. This group has been successful in winning public and private funding to develop a roadmap for the transition of Scotland’s high emission industries to a net-zero economy.²³

The north east of Scotland, and particularly Aberdeen, will require investment in projects and a skilled workforce that facilitate a just transition in the region ... An area of economic opportunity and research revolves around the governance of hydrogen in terms of investment, storage, heating and transport ...

Aberdeen University Centre for Energy Law – opportunities / challenges of the transition²⁴

²¹ <https://www.celtic-renewables.com/celtic-renewables-biorefinery-sparks-boost-for-scotlands-green-economic-recovery/>

²² <http://www.evaluationsonline.org.uk/evaluations/Search.do?ui=basic&action=showPromoted&id=689>

²³ NECCUS is a not-for-profit alliance of Government, industry and academic aiming to create fully-funded projects that will deliver decarbonisation of Scotland’s high carbon industries <https://www.neccus.co.uk/about/>

²⁴ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=aberdeen&uid=49962804

Where we are now

A key challenge is the need to retain and decarbonise our existing industry, while creating policy that allows for new opportunities to grow. This will involve mobilising investment, changing regulation, stimulating innovation and creating a holistic plan and vision that enables new industries to flourish. Many of the levers sit with the UK Government in this space. However, there is still much the Scottish Government can do to place us in a leadership position. On-going commitment – such as currently offered by the Scottish Industrial Energy Transformation Fund – will help give the best possible chance that our net-zero transition both protects and creates jobs in our industrial sectors.

Decarbonising industry has been linked with a threat of offshoring emissions and jobs, as we “transition out” of some activities. Energy intensive industries remain an important source of employment in Scotland. Manufacturing as a share of the economy may have fallen over the last several decades, but it still employs around 180,000 people and accounts for roughly half the value of Scotland’s exports.²⁵ Much of this is concentrated in particular geographic areas, where there may be fewer alternative employment options.

Aside from the level of employment, which is significant, these industries can support relatively high-wage jobs both directly and indirectly. Evidence for Scotland’s Chemicals sector, for example, demonstrates that it supports higher than average wages both directly and through its supply chain.²⁶ Industrial decarbonisation must happen in a way that maintains competitiveness and, as far as possible, retains these jobs through the transition.

It is important to recognise that companies will come under pressure to decarbonise not just due to national-level targets on climate change. There is growing pressure on companies and investors to disclose how activities and assets will impact (and be impacted by) climate change. Climate-related financial disclosures will become mandatory for some organisations in the near future,²⁷ helping to drive investment toward net-zero compatible activities.

The risk of offshoring – both of jobs and emissions – is felt by many to be a real danger. There is plenty of evidence that key process industries in Scotland are especially subject to strong competition from abroad and compete largely on the basis of price. In the absence of global markets for more costly ‘green’ products, an increased push for decarbonisation without a supportive policy framework risks a decline in domestic manufacturing and job losses.

Simply exporting the emissions and associated environmental impacts of the essential products society requires does not represent a sustainable solution to a global challenge.

Mineral Products Association – challenges of the transition²⁸

²⁵ <https://www.gov.scot/publications/decarbonising-scotlands-industrial-sectors-sites-paper-discussion-scottish-energy-intensive-industries/pages/2/>

²⁶ <https://pureportal.strath.ac.uk/en/publications/industrial-decarbonisation-regional-industrial-activity-and-the-q>

²⁷ <https://www.gov.uk/government/publications/uk-joint-regulator-and-government-tcfd-taskforce-interim-report-and-roadmap>

²⁸ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=mineral&uid=202339950

Where we are now



While managed decarbonisation will always be the preferred solution, we do need to recognise the risk of these aspirations being overtaken by global market forces. For a just transition, policymakers will need to be flexible. The primary aim must be to support industry to decarbonise, and capture any benefits as a nation that result from being a “first mover” in this global shift. But as a last resort, policymakers must also be prepared to step in to provide support to people and places should we see industrial employment decline here in Scotland, despite our best efforts.

We need to remember there are still important links between industry and place and that people need to feel that the transition is being done *with* them, rather than *to* them. Industrial sites are linked to the communities that host them in many ways. Links may have been stronger in the past when industrial employment dominated local labour markets, but they are still there and they are still important. Opportunities for genuine social partnership – bringing business, trade unions, communities and government together – will either need to be developed, or strengthened where they already exist.

Grangemouth has an opportunity to act as a demonstrator for net zero transition in Scotland. There would be new, cleaner industries and innovation centres developing the technology such as; CCUS, hydrogen and community energy, that will enable the transition at pace. We will work with our communities and industry to generate support for these plans.

Falkirk Council – positive vision for 2045²⁹

²⁹ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=falkirk&uuld=434516611

Where we are now

If despite our best efforts, offshoring of jobs should occur at significant levels, we will also have to consider place-based funding to diversify regional economies. During our work we heard concerns that current funding sources, such as through City Region Deals, was not sufficient on its own to support diversification in areas reliant on carbon intensive industry. There are industries that are of particular national significance to Scotland, and policy and funding will need to recognise this. Ongoing uncertainty around the UK Government's Shared Prosperity Fund makes it more difficult to design and plan for future place-based support schemes to support a just transition.

Just transition must embed economic opportunities in communities to ensure a place-based approach which links together the distinct business, labour market, natural, environmental and social assets, opportunities and challenges of any area.

Scottish Enterprise – opportunities of the transition³⁰



Our buildings and how we heat them

Delivering a just transition for Scotland is not just about managing the impact on workers in carbon-intensive sectors. Our broad perspective on just transition recognises the net-zero transition as an opportunity to advance a range of social justice issues in our country, including the need for improved housing. While the scale of the challenge is not in doubt, the transition is a great opportunity to deliver on jobs and warmer homes, in more sustainable, healthier communities.

While emissions from our buildings have fallen over the last couple of decades, they remain high with the vast majority of households still heated by gas boilers. The updated Climate Change Plan sees a rapid roll-out of energy efficiency measures over the next decade alongside adoption of alternative heat technologies, such as heat pumps, heat networks and, potentially, hydrogen. This in itself is ambitious, and there is the added challenge of managing such rapid work alongside statutory targets for reducing fuel poverty. Policy is fast moving in this area, with the Scottish Government recently launching the Heat in Buildings Strategy consultation which touches on many of the issues we raise here.³¹

Improving the energy efficiency of our housing stock offers a genuine opportunity to improve people's lives. It can be easy to get drawn into focusing solely on the challenges associated with decarbonising our buildings. But pushing on and accelerating the pace of our current energy efficiency programmes, particularly those targeted at the most vulnerable, presents the rare opportunity of a triple win. It benefits the climate, it improves the health and wellbeing of people, and can create and sustain jobs across the

³⁰ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=dunlop&uuld=144016286

³¹ <https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings-consultation/>

Where we are now

economy.³² How we pay for this is crucial, with public and private finance needed. But it is important to remember that improving health and wellbeing through better housing could lead to reductions in expenditure elsewhere.³³

Our heating system was no longer efficient and was costing us too much money to run. The house was constantly cold and having a small child always led to worrying about staying warm, so we knew something had to be done. Being a single parent and receiving this help makes it one less thing to worry about bill wise because it has reduced hugely ... It has made a huge impact on me and my child and makes me very happy knowing I get to come home to a warm house.

Recipient of Warmworks Scotland support³⁴

For new buildings we must use levers such as the planning system and building regulations to prioritise the creation of homes that are warm, safe and affordable to run, no matter what level of income the residents have. The pandemic has magnified the influence good housing and place has on wellbeing. We must not return to building housing developments that embed high-carbon ways of living and do not support our wellbeing.

Communities that are not designed for “people” are being disproportionately impacted by what is happening now (the pandemic) and will not be adaptive to climate change and the situation will only get worse if the centralisation of services continues.

Architecture and Design Scotland – opportunities / challenges of the transition³⁵

We need to take urgent action to decarbonise heating while ensuring that fuel poverty does not increase and taking account of consumer issues, such as overall cost. Far too many people in Scotland still live in fuel poverty, and are forced to choose between heating their home and other basic necessities. Scotland has a statutory target to reduce fuel poverty to no more than 5% of Scottish households by 2040. Costs vary, but in general it is currently more expensive to run a low-carbon heating system than alternatives such as gas boilers. Rural and islands communities are especially vulnerable to changes to the cost of heating due to the prevalence of housing stock with poor energy efficiency in these areas, combined with limited choice of feasible heating systems.

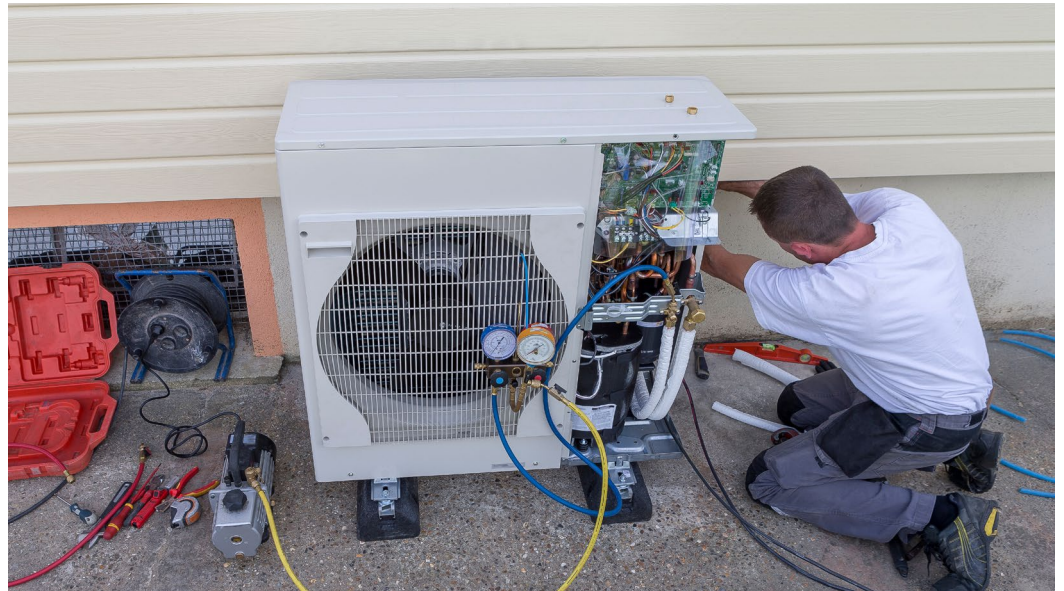
³² <https://strathprints.strath.ac.uk/63819/>

³³ [Fuel Poverty \(Target, Definition and Strategy\) \(Scotland\) Bill and Fuel Poverty Strategy: health impact assessment – gov.scot \(www.gov.scot\)](https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=warmworks&uuld=456942083)

³⁴ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=warmworks&uuld=456942083

³⁵ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=architect&uuld=545688795

Where we are now



So there is a challenge here for policymakers to design finance and regulatory frameworks that deliver reduced emissions from our housing stock, while not pushing more households into fuel poverty. Some recent proposals for accelerating this transition include rebalancing of levies from electricity consumers to gas consumers.³⁶ But care is needed with any such changes to fully work through the distributional impacts. In our interim report we called on the Scottish Government to undertake such analysis of its heat decarbonisation policies, which we were pleased to see was committed to in the updated Climate Change Plan.³⁷ Understanding the impact of national policies on households will be the first step in delivering a heat transition that works for consumers and protects vulnerable households.

There is a need to win hearts and minds, and to design solutions that work for people. Getting to net-zero will not just be about choosing what technologies to pick. It will be just as much about engaging with people and helping to change social attitudes. Reducing emissions from our buildings will be more disruptive and noticeable than decarbonising our electricity supply.

In many hard-pressed families, there is no recognition of net-zero. They will have many other issues to deal with. They could feel further alienated or excluded from moves towards net-zero if it isn't well communicated.

Energy Action Scotland – groups affected by the transition³⁸

³⁶ <https://www.current-news.co.uk/news/utilities-call-for-gases-thumb-to-be-taken-off-the-scale-with-changes-to-levies>

³⁷ <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

³⁸ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=energy+action+scotland&uuld=181318477

Where we are now

This will mean developing new business models that keep costs down and avoid high installation charges, whilst supporting heat decarbonisation. Examples include Heat as a Service, which the Scottish Government is exploring as a potential route to low-carbon heating in Scotland.³⁹ In some cases the public sector may have more of a role, such as in the roll-out of District Heat Schemes. Further investigation may be needed to determine the most cost-effective models for such schemes. We saw an example of such a scheme when we visited Aberdeen Heat and Power, a not-for-profit organisation originally established by the Council, which is providing affordable heat to thousands of households and other users.⁴⁰

The transition has been carefully planned, involving stakeholders, and engaging with householders and communities to identify the tailored solutions to suit the people, properties, and the opportunities in the area/neighbourhood. In this way, householders, landlords and tenants are supportive of the transition, understand what they need to do, by when, and why, and receive financial and handholding support to ensure they are not disadvantaged.

Existing Homes Alliance – positive vision for 2045⁴¹

The move to low-carbon, smart heating, can bring benefits to consumers. The most effective way of delivering this potentially disruptive change is to work with people. Designing and testing solutions with households will always be preferable to imposing solutions on them. Our approach to this challenge needs to have people at its heart. The backlash against implementation of new regulations on smoke and carbon dioxide alarms shows how this can go wrong, and we must not risk the same happening for our transition to net-zero.⁴² Strong and agile consumer protections will also be needed to keep up with the pace of change in the heat market while ensuring no households are stranded with failing technologies.

³⁹ <https://es.catapult.org.uk/consultations/call-for-interviewees-heat-as-a-service-as-a-potential-route-to-low-carbon-heating-in-scotland/>

⁴⁰ <https://www.gov.scot/binaries/content/documents/govscot/publications/minutes/2019/08/just-transition-commission-community-engagement/documents/aberdeen-heat-and-power-visit-november-2019/aberdeen-heat-and-power-visit-november-2019/govscot%3Adocument/Just%2BTransition%2BCommission%2B-%2BAberdeen%2BHeat%2BAnd%2BPower%2Bvisit%2B-%2BNovember%2B2019.pdf>

⁴¹ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q__text=existing+homes&uuld=305207831

⁴² <https://www.thefpa.co.uk/news/scottish-fire-alarm-laws-delayed-for-a-year>

Where we are now

While consumer issues dominate much of the discussion in this area, the workforce transition is also crucial. Mobilising investment in heat and energy efficiency will create jobs and new opportunities, both in installation, construction-related trades and manufacturing.⁴³ In terms of installation and maintenance, increasing support will be needed to help people upskill to access these opportunities and keep pace with the rate of roll-out needed for new heat technologies.

Several sites in Scotland already manufacture heat pumps, while programmes like Energy Efficient Scotland have potential to support thousands of jobs across the country. If nurtured with supportive supply chain policies, this could grow and more than offset any decline in activity associated with the current heat supply chain. The development of the Heat Pump Sector Deal is one such initiative that can be a catalyst for growth in this space.⁴⁴

Challenges for plumbing and heating businesses may be things such as employment, skills and training. As with any transition, it will be required that the workforce be mobilised and upskilled... Financial support to join schemes and gain education would also be beneficial to businesses looking to make a transition.

Scottish and Northern Ireland Plumbing Federation – opportunities / challenges of the transition⁴⁵

But this shift needs to be managed. There are thousands of registered Gas-Safe engineers in Scotland, many of whom are employed in small and micro enterprises. This group needs to be supported, in order to develop the necessary skills to take on the work of installing and maintaining new heating systems. The transition may also be an opportunity to raise working standards. Concerns have been raised about the construction industry, in particular, as a sector that needs to do more to embed Fair Work. Where public money is being spent supporting retrofit programmes Government should not shy away from being prescriptive about working practices.⁴⁶

... there are considerable opportunities to build on the success of existing programmes in this context. The apprenticeships and training provided under the Scottish Government's Warmer Homes Scotland (WHS) scheme is a useful example here. The programme's objectives include that WHS will 'provide benefits to the wider community through vocational training and employment opportunities'.

Energy Savings Trust – opportunities of the transition⁴⁷

⁴³ <https://www.gov.uk/government/publications/heat-pump-manufacturing-supply-chain-research-project>

⁴⁴ Heat Pump Sector Deal Expert Advisory Group: terms of reference – gov.scot (www.gov.scot)

⁴⁵ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=plumbing&uuld=830038020

⁴⁶ Fair Work Inquiry into the Construction Industry, The Story so far – Mary Alexander – The Fair Work Convention

⁴⁷ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=trust&uuld=483600932



How our transport system works

The ways in which Scotland's transport system must change to meet net-zero will impact on many people's daily lives. While recognising the challenge of this, when combined with changes we must make to our buildings, there is real opportunity to build a transport system that improves our health and wellbeing as a nation. Rather than focus on the challenge posed by decarbonisation, we argue that the net-zero transition presents an opportunity to do things differently.

The priority we have given to car users for many decades will need to shift to other modes of transportation. Tough decisions on infrastructure and regulations will be needed if we are to meet Scotland's ambition to reduce car miles travelled 20% by 2030.⁴⁸ The transport system has been particularly affected by the Covid-19 pandemic, making planning ahead difficult. Public transport has been hard hit, with no guarantee passenger numbers will immediately bounce back even once the threat of the pandemic declines.

We should not shy away from tackling the many undesirable features of our current transport system. These range from health problems caused by air pollution to the way it can reinforce problems of social exclusion.

The transition offers an opportunity to build a low-carbon transport system that actively promotes equality, allowing people convenient access to the services they need. Good, affordable transport can enable people to access jobs, education and recreational opportunities. All of this helps build wellbeing and can contribute to raising household income and lifting people out of poverty. This is already recognised in the National Transport Strategy,⁴⁹ which is underpinned by four principles – reduced inequalities, improved climate, inclusive growth, and improved health and wellbeing. Delivering on this vision will go a long way towards making Scotland a healthier, fairer country and can be a demonstration of just transition in action.

... public transport disproportionately ... serves young people, women, black and ethnic minorities and people living in poverty. Therefore any money invested in expanding and improving public transport will disproportionately benefit these groups, and therefore actively address existing inequalities.

Get Glasgow Moving – groups affected by the transition⁵⁰

⁴⁸ As set out in the Scottish Government's Climate Change Plan update. <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

⁴⁹ [National Transport Strategy 2](https://www.gov.scot/publications/national-transport-strategy-2/)

⁵⁰ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&__text=get+glasgow+moving&uuld=335988110

Where we are now

A fair low-carbon transport system will need to recognise the different needs of communities and users, and focus firmly on people not cars. For example, rural communities have very specific transport needs and challenges. Similarly the rights and needs of people living with protected characteristics, such as disability, must be respected. Building a transport system fair for everyone will need to be based on the principle of participation, and giving marginalised groups affected by any changes a voice. Renewed effort will be needed, and fresh energy must be injected into existing accessibility strategies if we are to build a low-carbon transport system that addresses this.

...it will be essential to ensure that people and communities are not left behind as we transition to net-zero. In particular, communities and individuals whose life chances are restricted by poverty and ill health. Also people with a disability who must have improved access to the opportunities that most people enjoy including access to employment, education, training, healthcare and links to friends and family.

Strathclyde Partnership for Transport – groups affected by the transition⁵¹

We need to balance the way costs and benefits are distributed as we transition to a low-carbon transport system. Emissions from transport are not distributed equally among the population. A large proportion of flights are taken by a relatively small group of individuals and car ownership follows a clear income gradient, at least for urban areas.⁵²

Rural and remote car users may not have public transport options, yet may have little choice but to switch to electric vehicles (EVs) – and while overall costs are expected to fall below that of fossil fuel vehicles this decade there are higher upfront costs with EV's.⁵³ This is a critical point when thinking about how to reduce emissions from transport. If managed well, building a low-carbon transport system can improve social inclusion. But equally, the changes might simply deepen existing inequalities.



51 https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=strathclyde&uuld=585856847
52 <https://bettertransport.org.uk/sites/default/files/pdfs/Air%20Traffic%20Controls%20report.pdf#page=25> and <https://www.transport.gov.scot/publication/transport-and-travel-in-scotland-2019-results-from-the-scottish-household-survey/motor-vehicles-traffic-and-driving/>
53 <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-UKs-transition-to-electric-vehicles.pdf>

Where we are now

Deliberate action is needed to balance the costs and benefits arising from the move to low-carbon transport. Existing incentive schemes that provide a discount and loans for new purchases, have not made EVs accessible to low-income households. We welcome the introduction of the Scottish Government's Low-Emission Zones support fund, which offers incentives for low-income households to take more polluting vehicles off the road and move towards more sustainable travel modes.⁵⁴ Such schemes will be vital to protect those least able to pay as low-emission zone requirements are tightened in the future.

... a comprehensive national plan of preventative spending on active travel will save the country money through mental and physical health improvements. Quality of life will improve by joining this up with planning decisions, and with investment in the planning, design, management and maintenance of green spaces by Councils.

Unison Scotland – opportunities of the transition⁵⁵

Carefully designed policy interventions are needed to ensure current inequalities in mobility and accessibility are not deepened by the transition. Road space will need to be reallocated from car user towards other modes, offering the prospect of cleaner air, less congestion, fewer road traffic accidents and improved population health.⁵⁶ Many of these steps will lead to changes in the way we use and own cars, but they are needed if we want a low-carbon transport system that improves access and equity.

An electric vehicle-centred transition could have an adverse effect on economically disadvantaged communities, further embedding existing inequalities ... People living in areas of the highest disadvantage are also more likely to be negatively impacted by air pollution and road safety. This underlines the need for the transition to deliver a balanced transport system, in which active travel and public transport should be prioritised.

Sustrans Scotland – groups affected by the transition⁵⁷

And we still need to understand and manage the impact of the mobility transition on jobs. In our Green Recovery report we talked about public transport and the potential for investment from Government to support good quality jobs in both manufacturing and operations. That very much remains the case, and we are pleased to see some of the commitments Government has made in this area. Other fledgling opportunities exist, such as the potential to manufacture trains at the former site of Longannet power station and efforts being made to develop the former Michelin site in Dundee. Good quality employment is currently offered through our railways and public transport, with on-going modal shift offering the prospect of increasing this.

⁵⁴ <https://energysavingtrust.org.uk/grants-and-loans/low-emission-zone-support-fund-for-households/>

⁵⁵ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=unison&uuld=968206988

⁵⁶ <https://www.theccc.org.uk/publication/ucl-sustainable-health-equity-achieving-a-net-zero-uk/>

⁵⁷ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=sustrans&uuld=746906591

Where we are now

However, the mobility transition will also need to take account of wider impacts on employment. For example, the motor trade in Scotland employs thousands, but the shift to electric vehicles will fundamentally change the skills needed to service cars and may even reduce overall demand for motor services.⁵⁸ Like other sectors, active support for retraining and upskilling will be needed to both ensure no-one is left behind, and so we have the workforce we need to enable our transition.

40% of the responses ... stated more training opportunities should be made available to people. Respondents cited specific training opportunities, such as the lack of skills in most local garages for repairing EVs. Some of the respondents expressed concerns on the impact that the transition to a green transport system could have on people's livelihoods.

2050 Climate Group⁵⁹



How we use and manage our land

Our land will be vital in delivering our climate change ambition, providing us with sustainably farmed local produce, vastly increased woodland cover, and restored peatlands, which in turn will all improve biodiversity. With more integrated approaches to land use, the net-zero transition presents opportunities to look afresh at how the potential of Scotland's land can be maximised. The transition will mean more and more is demanded from our land. The scale of change needed is made clear by the Climate Change Committee – the way we use as much as a fifth of our current agricultural land may need to change in order to reach net-zero.

How our land is managed, and who benefits from it, has attracted a great deal of interest in Scotland. We have an unusually concentrated pattern of land ownership, when compared with other nations,⁶⁰ with many arguing that the status quo is both unfair and a barrier to realising the full potential of our land. The level of investment needed to bring about the transition to net-zero is likely to intensify this debate. Bringing about such sweeping changes may risk new injustices emerging, but equally may introduce fresh impetus for reform and a fairer way of managing our land and spreading the benefits widely.

We need to acknowledge and manage competing priorities for how land is used. Scotland has plenty of experience of disagreements about how land use decisions are made, both historically and in the present day. There is a perception that communities are often not adequately consulted on decisions that affect how the land around them is used.⁶¹ There are tensions that can arise from competing agendas such as between recreational uses and woodland expansion in rural settings. Similar tensions can be found in urban settings too, where economic development interests can be at odds with community benefit. Across Scotland, there is a common perception that land is not necessarily used in the best interests of communities.⁶²

⁵⁸ <https://www.climateexchange.org.uk/media/4565/cxc-identifying-the-economic-impact-from-ulev-uptake-march-2020.pdf>

⁵⁹ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&q_text=2050&uuld=852911752

⁶⁰ [5dd7d77021f04_Report-to-Ministers-Scale-and-Concentration-Land-Ownership-FINAL-20190320.pdf](https://www.landcommission.gov.scot/downloads/5dd7d6fd9128e_Investigation-Issues-Large-Scale-and-Concentrated-Landownership-20190320.pdf) (landcommission.gov.scot)

⁶¹ https://www.landcommission.gov.scot/downloads/5dd7d6fd9128e_Investigation-Issues-Large-Scale-and-Concentrated-Landownership-20190320.pdf

⁶² <https://www.gov.scot/publications/attitudes-land-reform/pages/1/>

Where we are now

With ever greater demands being placed on our land, there is a need for robust governance frameworks for preventing conflicts, resolving them when they arise and, in general, encouraging a more participatory approach to land use decisions and management. Some of the building blocks for this are in place following development of Scottish Government guidance on engaging communities and the Land Rights and Responsibilities Statement by the Scottish Land Commission.⁶³ Five Regional Land Use Partnership pilots were also recently announced, with the aim to “*help national and local government, communities, land owners and stakeholders work together to find ways to optimise land use in a fair and inclusive way – meeting local and national objectives and supporting the journey to net zero*”.⁶⁴ However, frameworks and governance arrangements will need to be reviewed and strengthened as we transition to net-zero.

Increasingly, there is also recognition that many land use decisions made over the last few decades have had a negative impact on biodiversity. Investing in peatland and woodlands can (and must) be done in a way which also supports the restoration of our biodiversity, recognising that this may require a shift in what society currently attaches value to.



Huge investment in restoring peatlands, tree planting and woodland management is required – we need to ensure the benefits that can arise from this are felt widely by rural communities. A just transition will need to account for the current injustices associated with land use in Scotland, and the wider challenges faced by many rural communities. Large amounts of investment will need to flow into land management, from both private and public sources.

⁶³ <https://www.gov.scot/publications/guidance-engaging-communities-decisions-relating-land/> and <https://www.gov.scot/publications/scottish-land-rights-responsibilities-statement/>

⁶⁴ <https://blogs.gov.scot/rural-environment/2021/02/05/working-together-to-maximise-the-potential-of-our-land/>

Economic benefits from Scotland's land resources should be shared more equitably within local communities as a matter of social justice, while also ensuring that the wider public benefits generated by these resources are safeguarded and promoted.

Community Land Scotland – opportunities of the transition⁶⁵

Part of ensuring a just transition must be about making sure the benefits of investment in carbon sequestration are felt as widely as possible. Without careful design and meaningful engagement there is a risk that benefits may flow mainly to large landowners and opportunities for community benefit will be missed.

Many in the agriculture sector have concerns that the net-zero transition will see people lose their livelihoods and fundamentally change their way of life. We need to reduce emissions from agriculture, while leaving no one behind. The challenge in the sector is sometimes framed as a zero-sum game which can discourage engagement: often the perception is that for emissions to reduce, some types of farming will have to change and some farmers will find it harder to adapt. However, a suite of mitigation measures are available, many of which should be rolled out immediately which will not only reduce emissions, but also improve efficiency, animal health, productivity and in many cases save money in the long-run.⁶⁶

Scottish farmers and crofters should be supported and empowered to make decisions that are best for individual businesses, for climate change targets and for the wider environment

National Farmers Union Scotland – positive vision for 2045⁶⁷

A just transition for agriculture will need to incorporate raising awareness of the challenges a changing climate will bring to the farming sector, such as more extreme weather, flooding, droughts, crop and livestock health impacts, as well as identifying ways in which the sector can adapt to these challenges and achieve emissions reductions. Action over the next ten years will be crucial. Clarity about what action is required and how support can be accessed is essential to ensure these changes can be made fairly.

Compared with other sectors, relatively low proportions of those working in agriculture have formal qualifications or engage in regular Continuing Professional Development and there will be a need to work with farmers and land managers in order to develop new skills.⁶⁸ We need a new model of farm advice, with advisory services upscaled and upskilled to help farmers and land managers identify suitable climate action for their land holdings and the funding streams to deliver them. Fairness may also mean supporting generational change within the industry, with farmers who wish to retire or leave the sector being helped to do so in a fair and dignified way. We will need

⁶⁵ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=community+land+scotland&uuld=581561592

⁶⁶ <https://www.farming1point5.org/reports>

⁶⁷ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=ruth&uuld=311714733

⁶⁸ <https://www.gov.scot/publications/scottish-survey-farm-structure-methods-2016/pages/0/>

Where we are now

to encourage new entrants into the sector and work to remove some of the barriers they face. Similarly, we need to address any barriers that prevent tenant farmers participating in carbon sequestration programmes.

There are opportunities to strengthen the Scottish food brand by producing affordable quality food with a low-carbon footprint using sustainable methods ... Scotland could see a more integrated approach to land management, with more focus on multiple uses/benefits of land.

Scottish Tenant Farmers Association – opportunities of the transition⁶⁹

Margins are often low and the UK's exit from the European Union (and withdrawal from the Common Agricultural Policy) has increased uncertainty and unease regarding the future of agriculture in Scotland. However, the upcoming reform of the subsidy mechanism for the sector brings an opportunity to redirect money towards activity that better protects and maintains our land, and supports more sustainable food production. Recent work by NatureScot has demonstrated the opportunities arising from a shift towards subsidies targeted at nature and climate outcomes, particularly for those farm systems, such as hill sheep and crofts, on the margins of economic viability and under-rewarded by the current model of rural support.⁷⁰ This, alone, will not deliver a just transition and we will also need to rebuild the connection between consumers and local produce, through integrated food policy, to reward farmers who implement more sustainable methods.

⁶⁹ https://consult.gov.scot/just-transition-commission/just-transition-commission-call-for-evidence/consultation/view_respondent?show_all_questions=0&sort=submitted&order=ascending&_q__text=tenant&uuld=372365188

⁷⁰ <https://www.nature.scot/naturescot-research-report-1201-evidence-post-brex-it-agriculture-case-studies-alternative-payments>

Delivering a just transition



Delivering a just transition



Scotland has an opportunity to use the transition to net-zero as a catalyst for building a fairer, healthier, greener country. In the previous sections we set out what we see as some of the key challenges and opportunities. These considerations have framed the following recommendations.

Our vision is for a transition that is not solely about mitigating injustices that may arise because of climate change. We also seek to capture opportunities to address existing inequalities, making urgent climate action a driver of positive change that improves wellbeing. Delivering on this requires bold action. People need to see and experience the transition as being fair; pushing ahead without giving attention to a just transition will see progress stalled. Achieving climate targets and a just transition cannot be separated.

Where possible, we have tried to make recommendations that build on existing programmes of work, many of which we have already referred to above. There is much activity already happening that can contribute to a just transition. We urge policymakers to enhance existing work and mechanisms to deliver against the challenges and opportunities we have highlighted here. Where there are gaps we have not hesitated to recommend new initiatives. We recognise that this is a complex area. With all of this action, we will need to carefully assess impacts and have suitable monitoring strategies in place to see that the desired outcomes are being achieved (and that we are avoiding unintended consequences). We make further recommendations about scrutiny in the final section of the report.

While our remit asks us to deliver recommendations to Scottish Ministers, we identify others who have a crucial role in supporting action, or taking a lead. Successful delivery of a just transition will be a **national mission**, a truly national endeavour. Scottish Government has a vital role to play and must show leadership, but action will be needed from the private sector and all across Scottish society.

Our recommendations are grouped under **four key messages**. Under each of these, we include **headline recommendations** or **desired outcomes** in bold. These are followed by a range of policies and proposals on how they might be delivered, with actions directed at a range of actors. We then include a brief summary of why we feel each recommendation is particularly relevant to just transition.

Some of our recommendations are broad, and we recognise that further development is needed to translate them into actionable policy. In these cases, the headline recommendations are intended to give a sufficient steer on intended outcomes to assist implementation. See below, for a summary table of all of our recommendations.

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In addition to all of the recommendations made here, there is a broader message for all citizens of Scotland. We can all contribute by trying to make choices that support a just transition, wherever we can. We can and should make businesses and other organisations aware of what we want from them. We can and should be involved in our local communities, and through our democratic systems, sharing our views and ideas. We can decide where we want to spend (or invest) our money, giving encouragement to the businesses who are already making the shift.

Delivering a just transition

No.	Recommendation
Key message one: Pursue an orderly, managed transition to net-zero that creates benefits and opportunities for people across Scotland	
1	Ensure sufficiently developed roadmaps exist for the net-zero transition in Scotland, including for key technology options.
2	The public sector must be more prescriptive and strategic in its use of funding streams to build strong and resilient local supply chains
3	All levers should be used to achieve increased local content and more competitive Scottish offshore wind projects.
4	All public funding for climate action should be conditional on Fair Work terms
5	Just Transition plans for high-emitting industrial sectors of the Scottish economy and include clear milestones out to 2045.
6	Develop a position on the role of a carbon border tax to mitigate against the threat of offshoring emissions and jobs.
7	Establish a Just Transition Plan for Scotland's land and agriculture and include clear milestones out to 2045.
Key message two: Equip people with the skills and education they need to benefit from our transition to net-zero	
8	Lay the groundwork for a flexible, accessible skills and education system that can meet the needs of net-zero while addressing existing inequalities in the labour market.
9	Create a skills guarantee for workers in carbon-intensive sectors..
10	Support small and medium sized enterprises to invest in their workforces.
11	Equip farmers and land managers with the skills, training, and advice they need
Key message three: Empower and invigorate our communities and strengthen local economies	
12	Conclude the Local Governance Review at the earliest possible date
13	Implement Green Participatory Budgeting with agreed target levels of funding
14	Launch a call to action for engagement with Regional Land Use Partnerships
15	Apply the lessons learned from Scotland's Climate Assembly across the development of all policies for tackling climate change
16	Empower and resource local authorities to deliver a just and green recovery
17	A new "Sustainable Scotland" brand should be created to support Scottish agriculture deliver climate action and to empower consumers to choose sustainably produced food and drink

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No.	Recommendation
18	Scottish Government, local authorities and developers must commit to creating communities that embed low-carbon lifestyles, while improving our health and wellbeing
19	A statutory public interest test should be developed for any changes in land ownership over a certain threshold
Key message four: Share the benefits of climate action widely; ensure costs are distributed on the basis of ability to pay.	
20	Decisive action must be taken to ensure that all consumers are able to benefit from the increasing availability of new ways of buying and selling electricity
21	Any additional costs for consumers associated with emissions reduction must be linked to ability to pay.
22	The power of public sector pension funds and business support funding must be directed towards ensuring companies align with the just transition to net-zero
23	New methods for funding the transition should be developed that mobilise finance towards local projects
24	We must move beyond GDP as the main measure of national progress. For a just transition to be at the heart of Scotland's response to climate change, Scottish Government must champion frameworks that prioritise wellbeing.



Key message one: Pursue an orderly, managed transition to net-zero that creates benefits and opportunities for people across Scotland

1. To move us from strategy development to delivery at pace, the Scottish Government must ensure sufficiently developed roadmaps exist for the net-zero transition in Scotland, including for key technology options.

- a. Develop clear delivery plans and roadmaps setting out how net-zero will be met. These should not be narrowly linked to funding commitments, but address wider enablers such as governance, regulation, the creation of demand, supportive legislation, along with business and finance models.

This is needed to allow the private and public sector to plan, invest in skills and capacity, and lay the foundations for supply chain development in Scotland. We will need substantial levels of investment to reach net-zero. Investors need a high-degree of confidence in our direction of travel and future pipelines of work. We heard this message time and time again from businesses and their representative bodies through the course of our work.

As examples of what we mean by moving from strategy to delivery, we note the Scottish Government's position on offshore wind, hydrogen, and low-carbon heat. The Scottish Government has estimated 8-11GW of offshore wind could be developed by 2030; the Hydrogen Policy Statement⁷¹ has committed to growing production to at least 5GW by 2030, and the heat in buildings strategy aims to substantially increase annual installations of low-carbon heating systems.⁷² These are positive statements of intent, which we welcome. Using road maps to set clearer direction of travel towards these ambitions will help lay the groundwork for Scotland to be at the forefront of the innovation needed for the net-zero transition.

⁷¹ [Scottish Government Hydrogen Policy Statement - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/hydrogen-policy-statement/pages/default.aspx)

⁷² <https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings-consultation/>

2. To deliver maximum public benefit from public money, the public sector in Scotland must be more prescriptive and strategic in its use of funding streams to build strong and resilient local supply chains.

- a. Continue to build on the enterprise agencies' good work in mapping supply chains for low-carbon technologies, keeping these up-to-date and expanding them to cover new and emerging areas (Scottish Industry Directories⁷³). Applicants for funding should be required to demonstrate how they will use these directories to develop their supply chains. For significant funding bids, a full supply chain statement should be considered.
- b. Develop consistent, transparent and public criteria that allows swift funding decisions to be made. This must recognise that, in order to deliver best value from public funding, we must take into account the wider social and economic benefits that arise from the use of local supply chains. Such clarity is needed to allow industry to leverage and match funding at pace.
- c. Align broader support for innovation with other funding streams from Scottish Government and enterprise agencies' to develop expertise in the whole-life cycle delivery of projects. Drive investment in innovation which accelerates the delivery of Scottish capability in new energy low carbon solutions or the transformation of the existing energy sector to a net-zero future. This should build on experience from both the recently announced Hydrogen Accelerator and Energy Transition Alliance.⁷⁴⁷⁵

Much can be made of the role of Government in creating conditions to encourage investment. But care must be taken not to place too much confidence in a top-down model of economic development, reliant on a small number of corporate actors. For the transition to be just, and for it to gain any traction with workers and communities, we must be prepared to attach conditionality to funding streams to build and strengthen local supply chains that nurture competitive advantage. This is not a call for protectionism, but rather a more holistic way of defining best value in public sector funding.

Support for inward investment and efforts to make Scotland a good place to do business should ultimately be seen as part of a deal between the public and private sectors. The public sector provides the right conditions and seed funding for low-carbon technologies, while the private sector commits to building local supply chains through their operations. A number of funding streams already support deployment of low-carbon technologies in Scotland.⁷⁶ The above actions should be taken to embed just transition considerations in funding, finance and business cases and ensure these bring with them appropriate supply chain development.

⁷³ [Scottish Industry Directories](#)

⁷⁴ [Hydrogen Accelerator – Scotland's Hydrogen Accelerator \(st-andrews.ac.uk\)](#)

⁷⁵ <https://ore.catapult.org.uk/stories/energy-transition-alliance/>

⁷⁶ These include the Emerging Energy Technologies Fund, the Scottish Industrial Energy Transformation Fund, the Green Jobs Fund, the Energy Transition Fund, and the £1.6 billion announced for Heat and Energy Efficiency

3. The Scottish Government must use all available levers to achieve increased local content and more competitive Scottish offshore wind projects.

- a. Continue to make the case to the UK Government for reform of Contracts for Difference, so that it is contingent on a proportion of local content in the capital stage of projects.
- b. Leverage the upcoming ScotWind leasing round to both improve the competitiveness of the Scottish offshore wind industry and deliver higher social value.

The UK Government is currently reviewing the support for renewable energy offered through Contracts for Difference. The outcome of this review could help support a thriving supply chain for renewables. Scottish Government must continue to press the case for Contracts for Difference to be reformed so that it is contingent on a proportion of local content in the capital stage of projects. Compliance against any targets should be enforceable, and a transparent method of measuring local content should be established to enable this.

The Scottish Government should also use the leverage offered by upcoming ScotWind leasing round to both improve the competitiveness of the Scottish offshore wind industry and deliver higher social value for projects in Scottish waters.

CASE STUDY – BIFAB

Burntisland Fabrications Ltd (BiFab) grew by delivering major fabrication works to the offshore oil and gas industry. The company comprises of three sites – two in Fife, and one in Lewis. It was hoped that Scotland’s burgeoning offshore wind sector would offer fresh opportunities for diversification.

Despite some successes, the yards struggled against growing competition from facilities abroad, initially in Europe, and latterly Asia. With the threat of administration looming, workers from the BiFab yards marched on the Scottish Parliament in November 2017, securing financial support for the business from the Scottish Government.

But the yards continued to struggle to win business, and eventually entered administration at the end of last year. We wrote to the Scottish Government at the time, reaffirming the importance of standing by the workers and leaving no stone unturned in pursuit of strengthening the supply chain for renewables here in Scotland.⁷⁷

The yards are now under new ownership, and hopes are renewed they will be able to service upcoming offshore wind projects. While just one example, the case of BiFab serves as an important reminder: if the transition does not result in tangible opportunities, the concept of just transition will be damaged for workers. This reaffirms the importance of maximising the opportunities of climate action, to the benefit of communities across the country.

4. To avoid a race to the bottom in our net-zero supply chain and embed quality work across the economy, all public funding for climate action must be conditional on Fair Work terms.

- a. Apply Fair Work conditions to all climate change funding, as outlined in our interim report.⁷⁸ This is already in line with Scottish Government commitments, but we would urge all agencies and partner delivery organisations to also apply this rigorously. Where possible, existing national sectoral collective bargaining agreements should be used as a basis for setting expected minimum labour standards.
- b. Consult the Fair Work Convention ahead of the next statutory Climate Change Plan in 2023 to help inform the development of monitoring indicators tracking progress towards a just transition.

⁷⁷ [Government support for the renewable supply chain: letter to Ministers from Professor Jim Skea – gov.scot \(www.gov.scot\)](#)

⁷⁸ Defined as Investment in skills and training; no inappropriate use of zero hours contracts; action to tackle the gender pay gap, genuine workforce engagement including with trade unions, paying the real Living Wage. Conditionality must keep pace with changes in Fair Work practice, as developed by the Fair Work Convention

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Certain sectors that will be vital to delivering net-zero targets have traditionally displayed low levels of Fair Work.⁷⁹ Using public money to raise standards will be vital for a fair jobs transition and can also help the skills aspect of the transition. Scotland spends less on retraining than competitor nations. The public sector alone cannot rectify this and so prioritising and supporting employers who provide Fair Work (and who are more likely to support the development of their employees) makes sense.

5. Just Transition plans for high-emitting industrial sectors of the Scottish economy must be created at the earliest possible date with clearly measurable milestones and decision points that align with the Climate Change Plan out to 2045

- a. Scottish Government must require, and help facilitate, the development of a shared vision for individual high-emitting industrial sectors out to 2045, identifying the key technology options and infrastructure needed to deliver this (building on recommendation 1). Existing forums such as NECCUS could be effective in driving forward progress, if supplemented by engagement with trade unions. Priority for this action should be attached to those sectors making the most significant contributions to emissions and employment, or offer the most significant opportunities in a net-zero economy.
- b. Build on this vision to develop phased, sequenced action plan that gives sufficient direction to public and private investment. This should identify key decision points that will enable the transition. Where possible, make public funding sufficiently long-term to provide certainty and clarity.
- c. Commit to co-ordinated action across the public sector in Scotland to support transition planning, including through enablers such as the skills and planning systems, enterprise and infrastructure spending. In recognition of the vital role of UK Government in this space, engage proactively to ensure policy is suited to the unique characteristics of Scottish industry (in line with recommendation 6).
- d. For sectors that make particularly strong contributions to their regional economy,⁸⁰ build links between transition planning and place-based economic development programmes. For example, this should include funding aimed at diversification and strengthening of local economies, with communities engaged as partners for change.
- e. Outline what commitments will be made by the public sector to people and places at risk of being left behind, should just transition planning fail to achieve a managed transition that protects and grows employment (recommendation for this is in the next section).

⁷⁹ [Fair-Work-in-Scotland-Report.pdf \(fairworkconvention.scot\)](#)

⁸⁰ Such as central Scotland for chemicals and north east for oil and gas

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Our intended outcome for this recommendation is the development of a shared understanding of how the transition is to be managed for specific circumstances. Our interim report highlighted the heightened risk of injustice emerging through an unmanaged transition. While recognising the split between devolved and reserved competencies in supporting industrial decarbonisation, it is imperative that do all we can to create conditions for a managed transition.

Planning for net-zero needs to happen across a variety of sectors, and at different levels, right down to that of individual companies. Through the course of our work we saw examples of sectors at varying levels of development with regards to their thinking on the net-zero transition. Where such thinking is undeveloped, or not aligned with our ambitions on climate change, there is a need for Scottish Government intervention to stimulate the creation of plans that will help support a just transition. Existing forums that support industrial decarbonisation along with wider engagement with trade unions must drive forward progress where this is the case.

CASE STUDY – LEARNING FROM PREVIOUS TRANSITIONS

The Commission partnered with SEFARI Gateway to undertake a study of lessons learned from managing previous transition processes. In Dr Annabel Pinker's report, lessons were drawn from the analysis of cases from five countries, using both industrial and land-based contexts.⁸¹

One of the cases analysed was that of the Ruhr valley, a leading industrial region in Germany which declined through the 60s and 80s, gradually transitioning to a knowledge economy with growing renewable energy generation. The story of how this restructuring happened can be seen to follow a series of inter-dependent waves. Initial efforts were heavily focused on restoring and preserving jobs lost in traditional industries. However, this shifted over time as efforts focused on much more active structural change and support for strengthening the role of SMEs, by promoting technology transfer and diversification.

A series of lessons can be drawn from the case of the Ruhr valley, and other episodes of structural change:

- **Planning and investment:** develop early strategic planning, to diversify economic activity and address issues beyond job substitution and retraining, looking at, for example, new infrastructure, new industries and educational initiatives.
- **Engagement:** develop processes for stakeholder participation in planning, and broaden them so they do not focus only on workers in carbon-intensive sectors. New projects must speak to people's imagination and help reorganise aspirations.
- **Policy development:** embed just transition across every bit of relevant legislation, regulation and planning. Recognise that while centralised strategic planning is needed, transitions are context-dependant and accordingly need to draw on local knowledge.

A key question for the creation for sectoral Just Transition plans will be how they will be implemented, and what levers are available to Scottish Government to incentivise disparate actors to play an active role in their creation. While voluntary approaches should be explored, the Scottish Government must consider the full range of levers at its disposal to incentivise collaboration.⁸² Over time, it is vital that such sector plans sit within an overarching industrial strategy.

⁸¹ [Just Transitions: a comparative perspective - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/documents/2022/04/Just-Transitions-a-comparative-perspective-gov-scot-2022-04.pdf)

⁸² Such as grant funding, planning system, local taxation, pollution control etc.

6. Scottish Government should develop a position on the role of carbon border taxation to mitigate against the threat of offshoring emissions and jobs.

- a. Develop a position on the potential and scope of a carbon border tax, taking account the unique characteristics of Scottish industry and wider impacts on the economy, and engage with the UK Government around the future development of any such scheme.

Increasing attention is being paid to the role of carbon border adjustments to protect domestic industry against competition from those subject to less ambitious climate policy requirements. The Climate Change Committee has raised a carbon tax as a possible intervention for the UK Government to consider. We also note that discussions are currently taking place at the EU level.

During the course of our work, we often heard about the potential for such a measure, but acknowledge that the potential for unintended consequences of such interventions must be taken into account. Carbon border taxation (or any carbon pricing) will have a significant impact on a range of prices, and potentially jobs. Distributional impacts need to be explored as well as the need to balance competing priorities (protecting industry as it reduces emissions and protecting low-income households). While reserved to the UK Government, the Scottish Government cannot be a bystander in any debate and must develop a position in the interests of the Scottish economy.

7. The Scottish Government must establish a Just Transition Plan for Scotland's land and agriculture with clearly measureable milestones aligned with the Climate Change Plan out to 2045, recognising the structural transformation already underway as a result of the pandemic, climate change and upcoming reform of rural support schemes.

- a. Investigate potential for increasing support offered through the Agriculture Transformation programme. This needs to include provision of tailored advice and crucially, scope for a cash injection that some farmers will need to cope with the upfront costs associated with some mitigation measures.⁸³ Alongside this, the regulatory baseline should be strengthened to create a more level playing field for those who are doing the right things already.
- b. Inject fresh impetus into programmes that promote new entrants into the agriculture sector in recognition of the aging workforce, and the new ideas and productive practices that new entrants often bring with them.

⁸³ Support for retraining and reskilling of those dependant on land-based industries is covered further under key message two, and builds on and supports this point.

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- c. Develop financial support for people in the agriculture industry nearing retirement who decide to leave the industry as a result of changes being introduced. The level of this should be set by Government but consulted on and negotiated with industry bodies.
- d. Change planning regulations to allow older people leaving the industry to remain on their property, and not be forced to move from the locality where many will have spent the majority of their lives.

Delivering a just transition for rural Scotland faces distinct challenges. Funding support for agriculture will be reformed by 2024, with promises of rewarding a more holistic approach to stewardship of the land. But this is set against a backdrop of wider changes brought about by the pandemic, including the impact on tourism and changing patterns of work.

There is a need to inject clarity on the journey rural Scotland must embark on to meet net-zero, and set out how the transition will be just. The updated Climate Change Plan recognises the transition agriculture must make and outlines a range of industry-led sub-sector groups to discuss emissions reduction. The output of these groups must be brought together as an overarching plan that sets out how a just transition will be achieved.



Key message two: Equip people with the skills and education they need to benefit from the transition

8. Lay the groundwork for a flexible, accessible skills and education system that can meet the needs of net-zero, while addressing existing inequalities in the labour market.

- a. Review how climate change is embedded in learning across all school ages. This should build on the experience of the Learning for Sustainability programme to ensure all children are taught about climate change, and that teachers are equipped with the necessary training needed to do so.
- b. Leverage the transition as an opportunity to help address existing labour market inequalities. This can be achieved by building on existing sector initiatives that aim to increase employment of women, BAME and disabled people recognising that this is the socially just, and economically sensible thing to do.⁸⁴
- c. Address the gender imbalance in STEM subjects and careers in digital skills jobs, and the recruitment practices of industry employers, particularly with regard to entry-level jobs.⁸⁵ Public procurement contracts should include binding clauses for greater equality and diversity in modern apprenticeships.⁸⁶
- d. Explore changes to funding so that Universities and Colleges are supported to introduce new courses related to climate change, even where applicant numbers may initially be low.
- e. Undertake research to better understand the impact of under-utilisation of skills on achieving a just transition to net-zero in Scotland. Where any issues are identified, interventions should be designed that will encourage and facilitate employers to utilise existing skills in the workplace.

Climate change is one of a number of structural shifts that will affect our labour market, alongside wider trends such as digitalisation and the impact of the UK's exit from the European Union. Some have estimated that 10% of all jobs in Scotland could face some retraining needs as a result of the transition

⁸⁴ [Proposal \(citb.co.uk\)](#)

⁸⁵ [Just Transition Commission: background report – gov.scot \(www.gov.scot\)](#)

⁸⁶ As proposed by the Equality and Human Rights Commission, and successfully pursued previously with the Glasgow Commonwealth Games Legacy Strategy [Exploring positive action as a tool to address under-representation in apprenticeships \(equalityhumanrights.com\)](#)

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to net-zero, with variation around the country.⁸⁷ Businesses in Scotland – like the rest of UK – have historically invested less in skills development than competitor countries.⁸⁸ Research has also consistently demonstrated the underutilisation of existing skills in Scotland.⁸⁹

Persistent gender disparities exist in relation to digital and STEM skills,⁹⁰ both of which are key to delivering a net-zero economy. If we look at specific industries such as offshore wind, we see that as recently as 2019 only 16% of the workforce are women.⁹¹ A recent study found ‘environment professionals’ to be the second least racially diverse occupation in UK.⁹² These issues will need consistent attention over a number of years, if we are to build a more inclusive workforce across key net-zero sectors.

We need to identify ways to build a more flexible, responsive, accessible skills and education system that can deliver an inclusive transition. Relying on the post-school education and skills system and employers to address this would be difficult and expensive. The behaviours and skills that will become increasingly important over time should be nurtured in early years education, as far as possible.

9. Scottish Government, working with its agencies, should establish a skills guarantee for those whose livelihoods are negatively affected by the transition to net-zero enabling them to seek employment in low-carbon sectors.

- a. Establish a long-term commitment to support retraining for workers in carbon-intensive sectors, beyond the horizon of the pandemic, in recognition of the strategic importance of utilising the skills of our workforce for meeting net-zero. Direct public funding should be combined with careers guidance support, to ensure that the burden of retraining costs do not fall solely on those impacted.
- b. Advertise the offer ‘on-the-ground’ to ensure a high degree of visibility, and promote it through social partnership with trade unions and industry. Employers should actively promote the service to all workers in advance of any redundancy or significant strategic change process. Recognising the importance of the wider supply chain, the service must be open to the self-employed too.
- c. Achieve the labour mobility we need to deliver a just transition by taking action to increase the portability of skills, across the energy sector in particular.

⁸⁷ [Green economy: how the transition to net-zero could affect UK jobs across the country | Place Based Climate Action Network \(pncities.org.uk\)](#)

⁸⁸ [\(Date\) \(gla.ac.uk\)](#)

⁸⁹ For example, [UKCES Employer Skills Survey 2015: UK report – GOV.UK \(www.gov.uk\)](#)

⁹⁰ Science, Technology, Engineering, Mathematics

⁹¹ [Offshore wind Sector Deal – GOV.UK \(www.gov.uk\)](#)

⁹² [The-two-sides-of-diversity-2.pdf \(policyexchange.org.uk\)](#)

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Carbon-intensive sectors continue to support a large number of jobs, and are especially important contributors to certain regions such as the north east and central Scotland. The economy will shift and change as we transition to net-zero. New opportunities will emerge, while employment in certain sectors may decline. Some workers in carbon-intensive industries will find it relatively easy to move towards new opportunities. However, certain occupations may be at risk of being left behind in the absence of support.

Alongside targeted support for retraining, action to increase the portability of skills within the energy sector will be fundamental in achieving improved labour mobility. This could be delivered in several ways: the idea of a skills passport was frequently suggested to us during our work. Workers and their representatives frequently told us about the problems caused by differing qualifications between offshore sectors, with the significant costs of gaining these typically borne by the worker.⁹³

Work is underway through the Energy Skills Alliance to address some of these issues. We hope this engages widely, across carbon-intensive and low-carbon sectors. Scottish Government, working with UK Government and bodies such as the Health and Safety Executive, must press industry for speedy action on the portability of skills between sectors and make clear the importance of this as a demonstration of industry's commitment toward Scotland's ambition to deliver a just transition. The cost of portability of skills must not fall solely on workers.

10. Support small and medium sized enterprises to invest in their workforces and drive a just transition to net-zero.

- a. Examine the effectiveness of existing sectoral and regional outreach mechanisms in informing business owners, managers and workers of the training opportunities available to them.
- b. Boost funding opportunities to help smaller companies release their business owners, managers and workers for training.
- c. Identify opportunities to support accreditation regimes that create incentives for small companies to invest in training themselves, building on the good example set by the Energy Efficient Scotland programme and the power of public procurement.

Small and medium sized enterprises (SMEs) are the lifeblood of the Scottish economy, making up 99% of all private sector businesses and supporting 56% of private sector employment.⁹⁴ They will be key to driving our transition to net-zero and delivering a just transition. As an example of this, many of the

⁹³ [Oil+and+Gas+Trade+Union+meeting--+November+2019.pdf \(www.gov.scot\)](#)

⁹⁴ [Businesses in Scotland: 2020 - gov.scot \(www.gov.scot\)](#)

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actions needed to support the widespread roll-out of energy efficiency and low-carbon heat will be undertaken by small construction businesses. The servicing of electric vehicles will have an impact on the demand for services currently offered by the motor trade, often small businesses.

Small businesses, including the self-employed, consistently identify more barriers to accessing training than larger firms.⁹⁵ To address this, Skills Development Scotland and Scottish Government should continue to build on the commitments in the Climate Emergency Skills Action Plan⁹⁶ and review the areas above.

CASE STUDY – A.C WHYTE SKILLS ACADEMY

A.C Whyte are based in East Renfrewshire and specialise in delivering major refurbishment and external wall insulation projects throughout the UK. They work closely with Local Authorities and Housing Associations to improve energy efficiency of social housing, as well as supporting clients to access funding for upgrades that will improve the energy efficiency of privately owned properties.

In 2018, A.C Whyte launched their flagship Skills Academy in partnership with West College Scotland to support securing a long-term, sustainable workforce. A.C. Whyte and have since announced their second Academy with South Lanarkshire College in early March of this year. The Skills Academy curriculums are industry-led and provide a diverse group of students with the opportunity to learn the skills and techniques to become fully qualified external wall insulation installers, who graduate with a recognised qualification. They are also guaranteed a permanent job with A.C. Whyte on successful completion of the course.

Examples like these, where SME's have taken ownership of their skills needs, should be celebrated. Many more such examples will be required if we are to have the workforce needed to reach net-zero, and the public sector will need to focus on making it as easy as possible for businesses to do the right thing and invest in their workforce.

11. Equip farmers and land managers with the skills, training and advice they need to deliver the sustainable land management required to reduce climate impact and address the nature emergency.

- a. Develop on-going professional development so that it is increasingly targeted at better efficiency and emissions reduction.

⁹⁵ [PRAXIS Edition 5 WEB PDF 1.pdf \(oe.ac.uk\)](#)

⁹⁶ [climate-emergency-skills-action-plan-2020-2025.pdf \(skillsdevelopmentscotland.co.uk\)](#)

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- b. Explore the potential for regular professional development to be a precondition for accessing the new rural support mechanism post-2024.
- c. Building on current good practice, the Farming for a Better Climate service should be expanded.
- d. Scale up rural advisory service and upskill rural advisors to deliver a programme of advice tailored to delivering emissions reductions. This should increase the provision of one-to-one advice. Specialist ecological, climate and integrated land use expertise and advice should be widely available to identify farm level interventions and support farmers to deliver changes.

Scotland's farmers and land managers face many of the same challenges faced by smaller companies, as outlined above. New further and higher education courses are needed to train the next generation of land managers in climate-friendly farming techniques. They need support to upskill and adapt to new techniques that will help us respond to climate change, biodiversity loss and our need for sustainably produced food.

CASE STUDY – FARMING FOR A BETTER CLIMATE

Farming for a Better Climate works with a number of “climate change focus farms” across Scotland, providing a hub of information and ideas and support for farmers seeking practical ways of reducing the carbon footprint of their farm, and adapting to a changing climate.

Stephen and Sheena MacKenzie were participants in the second round of climate change focus farms, working closely with two other focus farms in the region. All three farms had extensive upland ground, supporting sheep and beef cattle on their holdings. Through the project, Stephen and Sheena explored a range of measures, including improving soil quality, grazing patterns, reducing reliance on inorganic fertilisers, and changes to their livestock operation.

Through the initiative, Stephen and Sheena reduced total emissions from their farm by 18% over the duration of the project, while saving around £9,000 across their business.

Continued effort across the sector will be needed, but initiatives like this demonstrate the potential of collaborative working for both reducing emissions, and delivering a just transition.



Key message three: As we take climate action we need to empower and invigorate our communities and strengthen local economies

12. In recognition of the vital role it could play in empowering communities and giving them greater control over how we transition to net-zero, Scottish Government and COSLA⁹⁷ must work together to conclude the Local Governance Review at the earliest possible date.

- a. Speedily conclude the Local Governance Review, taking bold action to agree concrete steps that will support participation and local democracy.
- b. Recognise the role of Community Councils – or any equivalent resulting bodies from the review – as a key part of our social infrastructure, and investigate the potential for increased powers and resources to be directed at community level to ensure any new arrangements support wider participation and become more representative of local people.⁹⁸
- c. Set out measures to raise capacity across the country, recognising the importance of local circumstances and differing stages of development that exist.

Most people will experience national climate change policies through the impact they have on local services, such as how and when their waste is collected, the transport options available to them and increasingly, what options are available to them to heat their home. Reaching our emission reduction targets implies far-reaching changes to all of these things.

Without finding ways to give greater power to communities over decisions that affect them, opportunities to find the most effective solutions for local circumstances will be missed. Throughout the pandemic, we have seen the impact that communities and the community sector can have, stepping in to deliver vital support and often working innovatively in incredibly challenging circumstances.

⁹⁷ Convention of Scottish Local Authorities

⁹⁸ [Strengthening Community Councils: Exploring how they can contribute to democratic renewal in Scotland | What Works Scotland](#)

We need to capitalise on this as we emerge from the pandemic, and turn the power and attention of communities towards delivering a just transition to net-zero. Any efforts to increase participation in climate policy are likely to need strong, empowered, local democracy across the country, supported by organisations such as Development Trusts and local Trades Councils.

13. To place people at the centre of local climate action, Scottish Government and COSLA should implement Green Participatory Budgeting with explicit recognition of just transition principles, and agree to target levels of funding.

- a. Set a target level of funding allocated through Participatory Budgeting for projects that support a just transition to net-zero. This builds on the current agreement between Scottish Government and COSLA to work towards allocating £100 million through Participatory Budgeting.

Meeting our aspiration of a transition that has people and places at its heart requires the meaningful involvement of Scotland's citizens in decisions that affect them. One approach attracting attention in this space is Participatory Budgeting.⁹⁹ This involves members of a community deliberating on the allocation of public funding for a service area, and is an effective way of bringing together a range of service users to air competing needs and find consensus.

Any target level of funding will need to recognise the varying capacity that currently exists in local authorities across the country, but would serve as a powerful aspirational signal from which good practice could be developed and shared.

⁹⁹ Both in Scotland: [PB Scotland – Participatory Budgeting in Scotland](#) and internationally: [City of Lisbon's 'green' participatory budget secures €5 million for next budget cycle, after successful incubation by South Pole and EIT Climate-KIC](#)

14. Scottish Government should launch a call to action for people to get involved with the new Regional Land Use Partnerships in order to build consensus around how land is put to use for our net-zero transition.

- a. Launch a call to action for people – particularly rural land users – to get involved in the work of these Partnerships when they are initiated.
- b. Prepare clear guidance for these Partnerships to ensure consistency with the national net-zero transition.¹⁰⁰
- c. Ensure that these Partnerships are adequately supported and resourced to produce regional land use frameworks by 2023, and that the remaining Partnerships are established as a matter of urgency.

We have mentioned the need for robust systems of governance to manage land use in Scotland, bearing in mind that the transition to net-zero will see more and more demanded of our land. The introduction of Regional Land Use Partnerships has the potential to be a positive development in this space. Given the particular contribution these Partnerships could make to managing land use change equitably in rural areas, we urge the Scottish Government to ensure they are in place across the country before the future rural support scheme is established in 2024.

For these Partnerships to be effective in promoting a just transition, membership will need to be truly representative. These Partnerships are an opportunity to meaningfully engage with those actively work and manage the land, as well as those who are impacted by land use decisions.

15. Scottish Government must learn from the experience of deliberative forums such as Scotland's Climate Assembly, and apply the lessons widely across the development of policies for tackling climate change.

- a. Take prompt action to apply the lessons learned from the Assembly when it publishes its final report later in the year and consider opportunities to run similar 'mini-publics', or other innovative participatory approaches, as part of an overall strategy to broaden and deepen opportunities for people to participate in shaping climate policy.
- b. Develop a set of principles to underpin fair and inclusive climate action based on the Assembly's final report and embed these across policy development to drive just transition.

¹⁰⁰ [Frontiers | Land Use and Agriculture: Pitfalls and Precautions on the Road to Net Zero | Climate \(frontiersin.org\)](https://www.frontiersin.org/journal/10.3389/fenv.2023.1111111)

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Our interim report highlighted the potential for new participatory models such as the Climate Assembly to inform Scotland's transition to net-zero. The Assembly was given the open question, "How should Scotland change to tackle the climate emergency in an effective and fair way?". Such deliberative forums are useful for cancelling out the 'noise' that often exists in difficult debates around climate action. They can be helpful in agreeing important principles for action, based on the best available evidence and the priorities of communities across Scotland.

The Climate Assembly will report later this year and the Scottish Government must commit to applying the lessons learned to the development of climate change policy in Scotland. In particular, Scottish Government should use the final report of the Climate Assembly as a tool for understanding the essential principles that need to underpin fair and just climate action. Once developed these should be embedded across the policy development process to help drive a just transition, particularly leading up the next full statutory Climate Change Plan, due for publication in 2023.

CASE STUDY: SCOTLAND'S CLIMATE ASSEMBLY

Climate change legislation passed by the Scottish Parliament in 2019 required Scottish Ministers to establish of a Citizens Assembly. In our interim report we highlighted the potential of this in helping to inform and frame Scotland's response to climate change.

Comprising of around 100 members, selected to be broadly representative of Scotland's adult population, the Assembly was tasked with making recommendations around the question, 'how should Scotland change to tackle the climate emergency in an effective and fair way?'.

Several members of our Commission have provided input to the discussions of the Assembly, and the outputs when published should help further inform the delivery of climate action in Scotland that is firmly rooted in principles of fairness.

16. Scottish Government should empower and resource local authorities to deliver a just and green recovery in recognition of the need to rebuild and strengthen local economies.

- a. Establish the delayed Publicly-Owned Energy Company at pace with a broad remit. This must include capacity to provide technical assistance to local authorities and social enterprises looking to invest in energy projects. There is a window of opportunity with the passage of the recent Heat Networks Bill for this to have genuine social impact.¹⁰¹
- b. Explore financial vehicles that could facilitate investment in small-scale local climate action as part of community wealth building approach, including working with credit union bodies, social investor organisations, and Development Trust Association Scotland.
- c. Support sustainable produce by:
 - Launching a call to action (with support, and potentially new infrastructure) for farmers to build thriving local supply chains; and
 - Align the power of the public sector, including procurement, to support local, climate-friendly, healthy produce at every opportunity. The public sector feeds some of our most vulnerable in society, in schools, hospitals and prison, this is a chance to demonstrate what a Good Food Nation looks like, where people are interested in the food they eat and that quality, healthy food is available to those who need it.
- d. Identify opportunities to support community-managed, or owned, woodlands in a way similar to support given for community energy, to drive action and help spread the benefits of climate action.

Local action makes an essential contribution to the delivery of national priorities on climate change and can support a just transition. Through our work we saw many examples of this, with councils and social enterprises taking the lead and combining climate action with social impact. These included Aberdeen Heat and Power, a not-for-profit company providing district heat networks. We also learned about North Ayrshire's approach to a green recovery based firmly on Community Wealth Building principles, and East Ayrshire's National Energy Research and Demonstrator.¹⁰² Growing this "social economy" should be a fundamental part of delivering a just transition in Scotland.

¹⁰¹ [Remunicipalization, the low carbon transition, and energy democracy - Enlighten: Publications \(gla.ac.uk\)](#)

¹⁰² Centre for Local Economic Strategies outlines five pillars of effective Community Wealth Building: plural ownership, financial power that works for local places, fair employment, progressive procurement, and socially productive use of land and property.

CASE STUDY – NORTH AYRSHIRE COUNCIL COMMUNITY WEALTH BUILDING

North Ayrshire Council launched Scotland's first Community Wealth Building strategy in May 2020. It sets out how the council will work in partnership with local communities, businesses and wider regional anchor institutions to create a fairer local economy.

Earlier this year, the Cabinet of North Ayrshire Council approved the development of a solar PV farm, near Kilwinning, with the council funding £4.5 million of total £6.8 million project. The solar PV farm will provide opportunities for local suppliers, making best use of the public sector land, keeping finance in the area, while supporting wider ambitions around municipalisation.

Other initiatives are being progressed in a similar vein by the council. These include a tree planting strategy, along with the creation of a dedicated green jobs fund. All this is being done against a backdrop of the pandemic and challenging funding landscape for the public sector as a whole in Scotland. These projects remind us of the importance of locally-driven action, both for responding to climate change, and delivering an inclusive transition.

Local delivery will be vital for meeting our ambition in areas such as buildings and the natural environment. As we emerge from the pandemic, the Scottish Government should look to strengthen support to local authorities and community groups to enable them to tackle climate change and rebuild local economies.

17. A new “Sustainable Scotland” brand should be created to support Scottish agriculture in delivering climate action and empower consumers to choose sustainably produced food and drink.

- a. Work with Scotland Food and Drink to develop new branding which identifies domestic, sustainable and locally produced food, and its climate impact, either as part of existing brands or, more ambitiously, as part of an over-arching Scottish brand.
- b. Partner with an independent environmental organisation to develop metrics, validate, and provide confidence in this brand.
- c. Press the UK Government to reform country of origin labelling to further support the development of a trusted and respected Sustainable Scotland brand.

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- d. Bring forward the delayed Good Food Nation Bill in the new Parliament at the earliest opportunity. This will help to develop an integrated food policy that involves consumers in the transition and addresses the social, health, and climate challenges of our current food system.

Our farmers need to be supported through the transition, just like workers in other sectors. The risk of offshoring emissions is a real threat and must be avoided if we are to have a truly just transition. Increasingly, consumers are demanding sustainably produced food.¹⁰³ Empowering individuals to make positive choices would be a powerful signal and help reward climate-conscious farmers. It would also place Scotland at the forefront of consumer demands for sustainable produce, supporting our Food and Drink sector's exports. Given the importance of the UK internal market, building upon existing initiatives or adopting a UK-wide metric, such as that being developed by the Sustainable Food Trust, should be considered.¹⁰⁴

18. Scottish Government, local authorities and developers must commit to creating communities that embed low-carbon lifestyles, while improving our health and wellbeing.

- a. Partner with local authorities (at least one largely-urban and one rural authority) to pilot targeted expansion of access to free public transport in order to fully evaluate whether impacts on emissions and social inclusion would justify the cost of such a policy nationally.
- b. Include a clear and thorough definition of 20-minute neighbourhoods and their characteristics in National Planning Framework 4, along with a strong steer from Scottish Ministers to support them as a priority.
- c. Support planners with adequate provision of spatial data to help inform planning decisions supporting the principle of 20-minute neighbourhoods, and defend them against challenges.
- d. Enable participation and discussion regarding creation of 20-minute neighbourhoods, for both new and existing developments, using the Place Principle and Standard.¹⁰⁵ This should be strengthened through full implementation of recommendations 12 and 13.
- e. Place a duty on planners, when challenged, to publicly outline how decisions they have made are compatible with national planning guidance relating to 20-minute neighbourhoods.

¹⁰³ [The Modern UK Food Shopper Revealed. \(lr.org\)](#)

¹⁰⁴ <https://sustainablefoodtrust.org/key-issues/sustainability-metrics/>

¹⁰⁵ [Place Standard](#)

- f. Undertake a rolling programme of improvements to rapidly increase capacity and to entirely decarbonise all of the nation's existing public transport systems (bus, rail, and ferry), in order to widen access to more modern, reliable, sustainable alternatives to single-occupancy car use.

The pandemic has been a stark reminder of the important link between housing and health, and the inequality faced in the provision of quality housing, transport links and access to greenspace.¹⁰⁶¹⁰⁷ As we emerge from the pandemic we need a commitment to prioritise the creation of quality communities, firmly rooted in place-making principles. Continuing with sprawling, car-dependent developments on greenfield land cannot continue to be the norm. At the same time we also need to rethink the layout of our existing neighbourhoods.¹⁰⁸

During the course of our work we heard about the potential of 20-minute neighbourhoods, which aim to give people the ability to meet most of their daily needs within a 20-minute walk from their home. We were pleased that commitment to these was included in the last Programme for Government. The effective application of this policy offers much promise – in urban areas at least – to contribute towards a reduction of transport emissions while improving social inclusion. The actions outlined above will enable our planning system to support the development of 20-minute neighbourhoods by giving sufficient power to withstand challenge from developers, while holding them to account after decisions have been made.

Short-term measures must also be identified to support low-carbon lifestyles, and good public transport will underpin the 20-minute neighbourhood concept. Transport Scotland have made a number of commitments that will help, such as funding for bus priority infrastructure and we have welcomed these in previous reports. Given the trend of declining bus passengers, radical interventions to address this must be considered.

19. To hand power back to our communities, the Scottish Government should develop a statutory public interest test for any changes in land ownership above a certain threshold.

- a. Develop and implement a statutory public interest test for land transfers over a certain threshold, in line with proposals suggested by the Scottish Land Commission.¹⁰⁹

Forums for deliberating land use management will be vital and Regional Land Use Partnerships can be a key tool towards forging a consensus-driven

¹⁰⁶ [Better housing is crucial for our health and the COVID-19 recovery | The Health Foundation](#)

¹⁰⁷ [Covid-19 has highlighted the inadequate, and unequal, access to high quality green spaces - The BMJ](#)

¹⁰⁸ [transport for new homes report.pdf](#)

¹⁰⁹ [Legislative proposals to address impact of Scotland's concentration of land ownership - News - News & Events - Scottish Land Commission](#)

approach, particularly for rural areas. However, we recognise there is also need to give communities statutory power to influence major land use decisions that affect them.

This will be increasingly important, as more and more is demanded of our land through the transition to net-zero. We believe this would be a valuable way of placing power in the hands of communities, and complement governance forums such as the Regional Land Use Partnerships in helping to make sure we have a just transition for Scotland's land.



Key message four: Share the benefits of climate action widely, while ensuring that the costs are distributed on the basis of ability to pay

20. The benefits arising from the transition must not go to a privileged few: decisive action must be taken to ensure that all consumers are able to benefit from new ways of buying and selling electricity.

- a. Give Consumer Scotland a direct obligation to track key indicators regarding the distribution of costs related to the net-zero transition, including but not limited to electricity, heat and transport. This should identify any emerging consumer injustice or disproportionate allocation of costs, as they emerge.
- b. Partner with Distribution Network Operators to support (with funding and evaluation) a programme of pilot interventions in order to gather a greater understanding of how to increase take-up and widen access to participation in smart energy, in recognition of the many barriers that consumers may otherwise face.
- c. Review and align a range of enabling factors to ensure they support greater participation in the energy market, particularly by consumers who may otherwise be at risk of being left behind. This includes housing regulations, building standards, and broadband provision.¹¹⁰

¹¹⁰ The recent commitment to review the utility of EPC's as a measurement tool for energy efficiency is welcome in this regard: [Heat in buildings strategy - achieving net zero emissions: consultation - gov.scot \(www.gov.scot\)](#)

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- d. Address impacts on consumers in the next statutory Climate Change Plan, in a manner similar to that prescribed for workers, employers and communities in the legislation.¹¹¹ We envisage that this would require household distributional analysis of any policies and proposals that have a direct impact on consumers.

Our energy system will need to become smarter and more flexible if we are to meet our target of net-zero emissions in a cost-effective manner. New ways of buying and selling electricity will increasingly become available to consumers, such as battery storage and local peer-to-peer trading, alongside new technologies for heat and transport.

Through the course of our work we heard that many consumers are not actively engaged in the energy market. There are a number of reasons for this, including availability of finance, tenancy conditions (such as for housing associations), or even factors as simple as the lack of a good broadband connection. Because of this, there is a risk that new injustices will emerge as the energy market rapidly evolves. While recognising the split between devolved and reserved capacities in this space, Scottish Government can still take meaningful steps to make the transition more inclusive by taking the actions outlined above.

CASE STUDY – CENTRE FOR SUSTAINABLE ENERGY SMART AND FAIR PROJECT

The Centre for Sustainable Energy, supported by two electricity network operators, established the research programme “Smart and Fair?” in June 2019 aiming to explore social justice through the energy transition.¹¹²

Phase one of the research programme has concluded, and resulted in development of an analytical framework to help understand the nature of requirements being placed on consumers in order for them to benefit from smart energy offers, how these are distributed across the population, and the types of interventions that might be needed to reduce the likelihood of some being left behind by the market.

Analysis to date has revealed two important conclusions. Smart innovation in the energy market will bring with it new ways of generating unfairness and leaving people behind, but the innovation we need is unlikely to occur if we insist on every offer being fair from the outset.

Smart and fair outcomes will not emerge from the market without deliberate and purposeful action from policymakers. Engaging in this kind of analytical work here in Scotland could be a productive first step in setting out how to do so.

¹¹¹ [Climate Change \(Emissions Reduction Targets\) \(Scotland\) Act 2019 \(legislation.gov.uk\)](#)

¹¹² [Smart and Fair? | Centre for Sustainable Energy \(cse.org.uk\)](#)

21. Any additional costs for consumers associated with emissions reduction must be linked to ability to pay.

- a. Recognising that action may be constrained by devolved and reserved competencies, the Scottish Government should proactively engage with the Department for Business, Energy and Industrial Strategy regarding the upcoming Call for Evidence¹¹³ that is intended to begin strategic dialogue on fairness in the energy system, along with any other changes to UK-wide environmental taxation.
- b. Continue to increase the pace of existing energy efficiency programmes, particularly those aimed at the most vulnerable, recognising that one of the most effective ways of preventing increased fuel poverty will be reducing the energy demand of our housing stock.
- c. Investigate how devolved Social Security powers could be used to fund transfers to vulnerable consumers, as a last resort, to ensure no-one suffers from fuel poverty directly as a result of the net-zero transition.
- d. Publish distributional analysis demonstrating that any revenue-raising powers devolved to local authorities to pay for climate action will be progressive.

To sustain climate action, it will be imperative that the transition is both fair and perceived as being fair. When it comes to paying for the transition, we believe this means ensuring that it is based, as far as possible, on ability to pay. Paying for decarbonisation via charges on consumer bills – as we have done to date – is increasingly recognised as regressive. Research has shown this method has resulted in lower-income households shouldering a disproportionate burden.¹¹⁴

However, we recognise that care is needed with many other suggested approaches, such as moving towards paying for decarbonisation through income tax. While more directly progressive, the wider distributional impacts would need to be fully considered. For instance, any resulting changes to consumer spending may have knock-on impacts on employment.

¹¹³ Committed to as part of the Energy White Paper [Energy white paper: Powering our net zero future - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/energy-white-paper)

¹¹⁴ [Full article: Reducing inequality resulting from UK low-carbon policy \(tandfonline.com\)](https://www.tandfonline.com/doi/full/10.1080/09638199.2021.1988888)

CASE STUDY – REFLEX ORKNEY

The ReFLEX Orkney project aims to demonstrate the capabilities of a renewables dominated smart energy network, using advanced software to balance supply and demand.

Orkney has huge renewable energy resources, already generating more electricity than it needs. Despite this, energy prices remain high for residents. With no connection to the gas network, and older housing stock, the island has high rates of fuel poverty.

Orkney's location means it is the ideal location to demonstrate the operation of a smart energy network. The opportunity to harness the excess renewable energy generated that is currently untapped, along with a will to increase the amount of low carbon energy and reduce fuel poverty, were some of the drivers for the Reflex demonstration project.

The Orkney energy revolution has been led, inspired and supported by the local community. The Orkney Renewable Energy Forum (OREF) and its membership have supported and been engaged throughout the ReFLEX project. OREF has provided a valuable forum for people to debate and discuss issues, and find solutions that work for the common good.

Balancing the overall costs of decarbonisation will depend to a large extent on actions taken by the UK Government. The conclusion of the HM Treasury net-zero costs review offers an opportunity to set out how this will be managed at a strategic level. In Scotland we must do what we can to ensure the distribution of costs associated with decarbonisation are based on ability to pay: where it is in our power, we must take action, and where it is not we should offer productive solutions.

22. The power of public sector pension funds and business support funding must be directed towards ensuring companies align with the just transition to net-zero.

- a. Commit all Scottish public sector pensions to a programme of corporate engagement that influences the companies in which they hold investments to develop public-facing, credible just transition strategies.
- b. Commit public sector pension funds to maintaining the highest level of ESG¹¹⁵ standards offered by independent organisations such as the UN Principles for Responsible Investment.¹¹⁶

¹¹⁵ Environmental, Social and Corporate Governance

¹¹⁶ [PRI | Home \(unpri.org\)](https://www.unpri.org/)

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- c. Work with Scotland's finance sector to spread corporate engagement on a just transition to privately-managed funds.
- d. Consider divestment as a strategy, if companies refuse to align business models with a just transition to net-zero (recognising this is a last resort, should constructive engagement fail to yield results).
- e. Establish a task force to bring together Government, business, and trade unions to propose new business models that are aligned with our national ambition on climate change. This would agree the characteristics expected of environmentally and socially sustainable businesses, with alignment to these standards a precondition for business support.

Reaching net-zero will require a huge reallocation of capital: companies that do not adapt will ultimately fail. If we are to have a managed transition, with social inclusion at its heart, we will need companies to take action. Investors have a vital role to play in ensuring that companies they hold investments in are fully aligned to this national mission. In Scotland, public sector pension funds hold significant levels of equity investments, while the Scottish Government provides various forms of funding for business support. The full power of both must be turned toward ensuring that companies in Scotland support a just transition to net-zero.

CASE STUDY – ROYAL LONDON ASSET MANAGEMENT

Royal London Asset Management (RLAM) manages assets of around £148 billion (as at December 2020). Throughout 2020, RLAM met with several electricity utility companies to discuss how they could contribute towards a just transition to net zero.¹¹⁷

Throughout engagement with SSE, they scrutinised the company's targets and alignment with national commitments to net-zero, as well as expectations of key technologies, strategies to influence public policy, and views on OFGEM regulatory plans.

RLAM proposed that SSE develop a Just Transition strategy, which was welcomed and committed to at its August 2020 AGM and published in November 2020. The strategy is the first of its kind and a testament to the impact active engagement and stewardship by investors can have as a key business driver.

It serves as great example of just transition in action, and we hope it is one that the Scottish public sector and others take on board in the lead up to COP26.

¹¹⁷ [Expectations for energy utilities' just transition strategies | Institutional | RLAM](#)

23. New methods for funding the transition should be developed that mobilise finance towards local projects.

- a. Work with local authorities to explore the potential for new innovative funding models, such as Community Municipal Bonds, that allow people to contribute towards climate action in their area.¹¹⁸
- b. Explore the scope to coordinate the aggregation of climate change projects across local authorities so as to offer suitable scale to investors. This should seek to learn from a growing number of examples internationally, such as Sweden.¹¹⁹
- c. Commit to refining the scope of the Scottish National Investment Bank's missions to ensure they are sufficiently focused, as our understanding of delivering a just transition continues to develop over time. The transition to net-zero must remain its overarching mission, in recognition of the pivotal role of the Bank in Scotland's public finance landscape.

Our third key message addressed the potential for local action to deliver climate action with wider social impact. Recognising that finance is often a barrier to driving forward local action, a number of actions should be taken to help finance flow to community level projects, and create opportunities for individuals who are able to contribute towards funding projects that advance a just transition.

24. We must move beyond GDP as the main measure of national progress. For a just transition to be at the heart of Scotland's response to climate change, Scottish Government must champion frameworks that prioritise wellbeing.

- a. Continue to develop and encourage the use of robust frameworks for measuring wellbeing, building on experience to date with the National Performance Framework. This would support joined-up Government action by having a shared analytical framework, as well as being a useful tool in informing debate about trade-offs that inevitably exist in setting policy.
- b. Current economic strategy must also be updated to reflect priorities on wellbeing, with a central focus placed on realising the opportunities presented by delivering a just transition.

¹¹⁸ [Report – Community Municipal Bonds: Turning words into action | Place Based Climate Action Network \(pcanities.org.uk\)](#)

¹¹⁹ [Green Finance and The Aggregation of Swedish Local Government Investment Projects | Sweden | UNFCCC](#)

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- c. Explore the potential for new legislation to achieve this ambition of a shared and embedded framework for measuring wellbeing, should efforts towards this ambition stall. This could learn from and build on the example that has been set by Wales.¹²⁰

Tackling the climate emergency and delivering a just transition is a challenge unlike any we have faced before. It requires us to complement traditional measures of success (such as GDP) with more holistic frameworks that attach greater value to environmental and social outcomes. This was one of the points that was argued for most consistently in submissions to our open call for evidence.¹²¹ While all of Government would benefit from this, we highlight two areas in particular as examples of current thinking in this space:

- The recent Dasgupta Review outlined why there is a need to look beyond GDP to address biodiversity loss.¹²² Investment in more woodland and peatland restoration will help tackle climate change, and monitoring the impacts this has on biodiversity will be vital.
- As the Infrastructure Commission for Scotland has highlighted, there is a need to update Scottish Transport Appraisal Guidance. The recent Strategic Transport Projects Review is a sign that this is moving in the right direction, but updated guidance outlining how to balance the objectives of net-zero, wellbeing and health should be produced.¹²³ In line with our Advice for a Green Recovery, any existing transport spend earmarked for increased road capacity should be redirected toward creating communities that embed low-carbon lifestyles.

¹²⁰ [Well-being of Future Generations \(Wales\) Act 2015 – The Future Generations Commissioner for Wales](#)

¹²¹ [Just Transition Commission call for evidence: analysis report - gov.scot \(www.gov.scot\)](#)

¹²² [transitioning-to-a-nature-positive-economy.pdf \(rspb.org.uk\)](#)

¹²³ [Investment focused on sustainable travel for a green recovery \(transport.gov.scot\)](#)

A look to the future



A look to the future

This report comes at a pivotal point. We are slowly looking to emerge from the the pandemic. We also look ahead to imminent Scottish Parliament elections and then COP26 later in the year, in Glasgow. Ending our contribution to climate change in a just and fair manner is a grand challenge of our time and can help define what kind of nation we want to be.

The eyes of the world will be on Scotland and COP26 will be a great opportunity to share our approach on just transition, while learning from others. But there is also a need to look beyond COP26, and put in place a framework to ensure the long term delivery of our ambitions.

As the life of this Commission draws to a close, we have considered the requirements needed to ensure just transition stays as a key organising principle for climate policymaking in Scotland, and becomes embedded across Government strategy.

We have focused our thinking on the functions and enablers that might be needed to continue momentum and drive progress. Our view is that the required functions fall into three areas: scrutiny, advice and awareness raising / campaigning. We believe that the following three actions will put in place clear lines of accountability for delivery, maintain focus behind this agenda, and help build momentum across society towards the delivery of this national ambition.

1. The next Scottish Government should make the Deputy First Minister, or at a minimum, a Cabinet Secretary responsible for a just transition to net-zero.

Meeting our legislative targets on climate change is a long-term mission, requiring clarity of focus and vision. Achieving this will only be possible with decisive action across Ministerial portfolios and through a national endeavour: action by the entire public sector, the private sector, civic society and also individuals. But clear lines of accountability are needed within Government, establishing responsibility for coordinating action, delivering on targets and driving this agenda forward.

We recommend the next Scottish Government identifies a senior member of the Cabinet to have a specific responsibility for a just transition to net-zero within their portfolio. One of their tasks must be to ensure that realising the opportunities of delivering a just transition is reflected in Government policy, including any update of overarching economic strategy (as outlined in recommendation 24). To be effective, this position would need to have the purview to work across government activity, provide strategic direction to policymaking and be empowered to drive delivery. They would be answerable for progress on not only emission reduction targets, but also demonstrating and maintaining progress towards legislative commitments made in relation to just transition.

2. Scottish Government must establish capacity for independent scrutiny and advice on the just transition provisions in our Climate Change legislation.

The next statutory Climate Change Plan is due to be published in 2023. This will be the first Plan that, by law, must contain assessment of the impact of emission reduction policies on workers and communities, and set out actions to manage these impacts.

For this to be meaningful, we recommend a robust measurement framework be developed that allows progress to be tracked. While this will be subject to development work over the coming years, we envisage such a framework would contain some of the following:

- **Employment:** including head count and FTE by different industries (carbon intensive and low-carbon), real income from employment by industry, wider measures of Fair Work, skills metrics, carbon intensity of employment. All developed to track shifts across an evolving industry landscape and with a capacity to see regional differences.
- **Household:** including real income for different income groups and geographical areas, distributional measures of income, and poverty indicators (absolute, energy etc.)
- **Programme level:** where actions in the next Climate Change Plan are directly relevant to just transition, appropriate indicators should be developed at programme level to demonstrate effectiveness.

The Scottish Government should also explore the provision of independent advice and scrutiny on the just transition aspects of the Climate Change Plan. This could serve a similar function to that currently provided by the Climate Change Committee, which provides annual progress reports on emission reductions to the Scottish Parliament.

3. The Scottish Government should launch a national call for action at COP26, that brings business, trade unions, and civic society together in a commitment to support just transition principles in Scotland.

We have made the point that delivering on the ambition contained in this report is a national endeavour, involving all aspects of society. The Scottish Government leads, but everyone must take action. Our interim report noted the opportunity presented by COP26 being held in Glasgow. There will be a unique chance to share experience and learn from others. We should also use the opportunity to inject fresh impetus and energy from across society towards delivering on a just transition to a better Scotland.

To do this, we recommend the Scottish Government develops a national call to action, to be launched at COP26. This should declare a common national vision and shared just transition principles to act as a catalyst for climate action with social impact. Businesses, trade unions, and civic society organisations would be invited to sign up and demonstrate their commitment to this national mission.

Glasgow hosting COP26 presents an enormously powerful, and precious, window of opportunity. A national call to action would help our nation appreciate Scotland's ambition in the international context, and would bring together disparate parties towards a shared collective goal of making Scotland a greener and fairer country.

Appendix – Timeline of Commission work plan, meetings and engagement activities¹²⁴

January 2019 – Inception meeting (Edinburgh)

April 2019 – Electricity (Kincardine)

June 2019 – Transport / Buildings / Public Sector (Glasgow)

July 2019 – Kincardine community meeting

September 2019 – Oil and Gas (Aberdeen)

September 2019 – Energy Institute Young Professionals Network event

September 2019 – Aberdeen Heat and Power visit

November 2019 – Land and Agriculture (Melrose)

November 2019 – Rumbletonrig Farm Visit

November 2019 – Agriculture and Land Use workshop

November 2019 – Oil and Gas Trade Union officers workshop

January 2020 – Energy Intensive Industries (Grangemouth)

January 2020 – tour of Grangemouth and surrounding area, including visit to Grangemouth High School

February 2020 – Interim report published, Call for Evidence launched

March 2020 – Interim report public event

April 2020 – Finance and Investment (online, planned for Edinburgh)

June 2020 – Skills and Education (online, planned for Inverness)

Advice for a Green Recovery Work engagement

July 2020 – meetings with stakeholders on communities, transport, oil and gas / north east, rural economy

July 2020 – Advice for a Green Recovery published

October 2020 – Eco-Congregation online event

November 2020 Participation and Transition Planning (Online)

November 2020 – Call for Evidence: Public event

December 2020 Innovation and Delivery at Scale (Online, planned for Orkney)

December 2020 – Orkney Renewable Energy Forum online town hall

December 2020 – Online event with Young Scot

January 2021 – call for evidence analysis report

February 2021 – Oil and Gas workers meeting

¹²⁴ This is only a summary of core Commission activity and does not reflect the full range of meetings and engagement events that Commissioners have undertaken through their role.



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