Just Transition Commission

2024

Investment for a Just Transition

A Starting Point

Contents

Cover image: The Commission met with apprentices at Peterhead

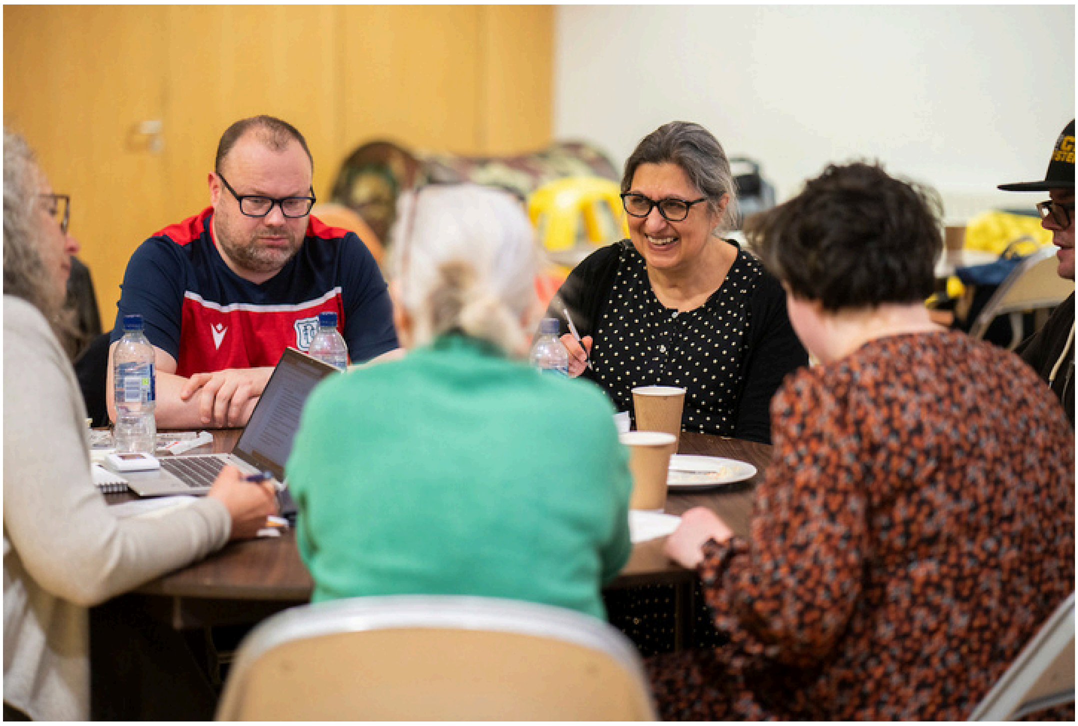
Introduction

Adequate investment is essential to make the just transition real across every community and sector in Scotland. At an early stage in its work the Commission identified investment as a priority cross-cutting theme. We convened a roundtable in Edinburgh in late 2023 bringing together key actors, organisations and decision-makers from the worlds of finance, policy, labour and civil society, groups that rarely meet in the same room. The objective was to define the core elements of the investment needs for Scotland's just transition, take stock of existing investment models, and identify key challenges and opportunities. Key messages arising from the session were included in the Commission's annual report for 2023. This is the full briefing, which also takes stock of areas of progress in the intervening period.

A consistent theme of this Commission's work to date has been the need for the commitment to a just transition to be translated into a detailed, innovative and measurable set of strategic policies, actions, collaborations and investments. This briefing is intended to provide a starting point for the extensive further work required in this critical, and still underdeveloped, area.

In this briefing, major elements of the investment challenge are broken down across four critical sectors:

- Energy
- Transport
- Built Environment and Construction
- Land Use and Agriculture

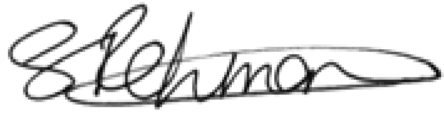


Co-Chair Satwat Rehman at a round table event in Dundee

As indicated by the briefing's subtitle, "a starting point", it is intended as a resource to help set the agenda for extensive further work, rather than an exhaustive treatment of the subject.

This briefing sets out the challenge ahead for policymakers and financial institutions as well as the Commission's key messages to the Scottish Government in developing plans to fund a just transition in Scotland. It distils key findings and insights from the Commission's roundtable as well as a record of the format and participants. The briefing also brings together an overview of a number of relevant initiatives across public and private sector with a section covering what we have called "building blocks". While most of these are at a relatively early stage in delivering against Scotland's just transition investment requirements, they nonetheless provide positive signs of the kind of innovative activity that is needed on a larger and more co-ordinated scale.

Professor Dave Reay
Co-Chair
Just Transition Commission



Satwat Rehman,
Co-Chair
Just Transition Commission

The challenge

From a just transition perspective, how this investment is delivered will be critical: quality is as important as quantity in terms of access to finance, the cost of capital, the geographical location of investment as well as the environmental and social performance of the investment. Furthermore, like other sectors of the Scottish economy, our financial industry will need to be transformed to help support the equitable delivery of climate targets and ensure sectoral and regional just transition plans are supported with investment.

A critical step at this juncture is to establish a shared understanding of the current state of play in terms of existing investment models and the institutional landscape, to identify the changes that will be required, and the proper roles and responsibilities of public and private institutions if the policy priority of achieving a just transition is to be adequately funded. The Scottish Government's just transition plans for key sectors provide a critical opportunity for leadership and co-ordination to move this agenda forward, provided the investment sections for each are adequately strategic, rigorous and detailed. A clear, high-quality prospectus for just transition investment has the potential to generate significant long term value for Scotland, including by making the most of opportunities to support the delivery of just transition outcomes presented by new initiatives at UK level, including the National Wealth Fund and Great British Energy.

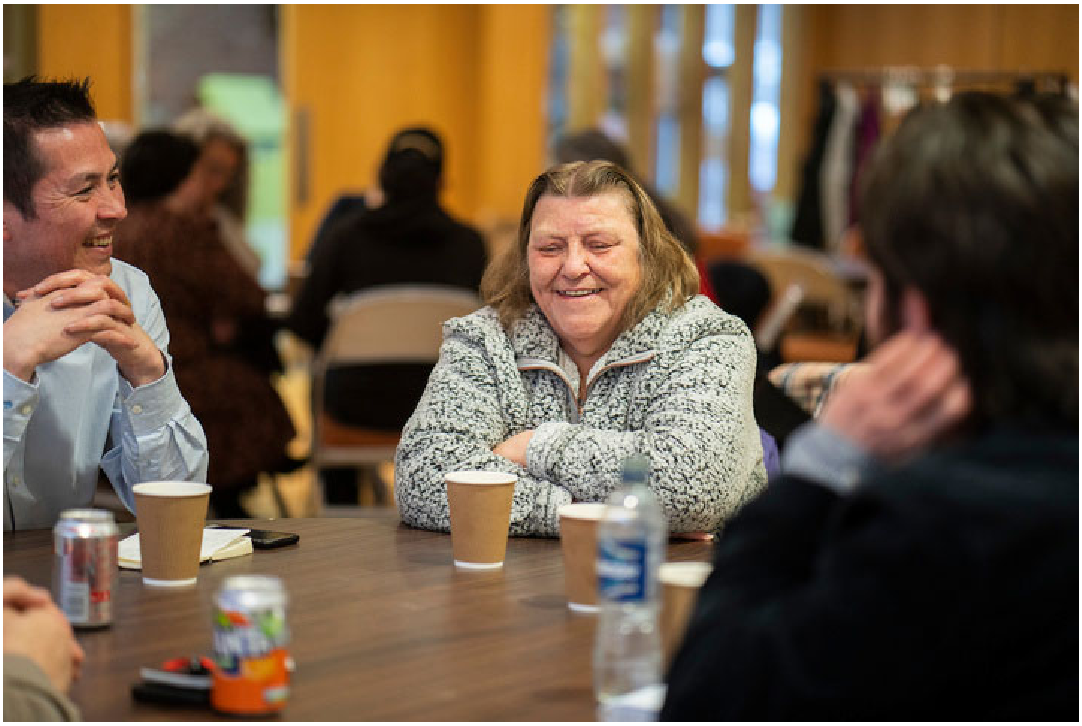
Data profile

This section collates some “headline” figures and estimates from a variety of sources, to provide a snapshot of the scale and structure of core elements of the investment challenge for achieving a just transition in Scotland. For the methodology supporting these figures please consult the source documents.

- Scotland has one of the lowest rates of investment in the OECD at less than 10% of GDP[1].
- Scotland must increase low-carbon investment five-fold to meet its net zero target, with additional capital investment starting at 3.5 billion per annum from 2025 peaking at over 6 billion in 2035 and remaining above 5 billion per annum to 2050[1].
- To deliver the Global Biodiversity Framework commitments, significant and increased investment in nature restoration is needed to enable Scotland to adapt to climate change as well as mitigate its impact. The amount of investment needed is not yet clear, given the complexities and under development of nature finance but needs to double by 2025 and triple by 2030 globally.[2]
- The Climate Change Committee estimates Scotland will need an additional £5-6 billion of investment in low carbon infrastructure each year, every year from 2030[3]
- The Scottish Fiscal Commission estimates that the Scottish Government would need to spend an average of £1.1 billion pounds a year to meet net zero, around 18 per cent of its capital budget[4].
- The need for public investment on mitigation in devolved areas is greater in Scotland per person per year than the rest of the UK. The average additional capital investment required per year by the Scottish Government is £1,136 million, in the rest of the UK it is £9,582 million (in 2024 prices). This is equivalent to £207 per person per year by Scottish Government compared to £149 per person per year in the rest of the UK[5].
- There is expected to be an additional £145 billion invested in Scotland between 2020 and 2050. This equates to £41 billion invested by the public sector[6]

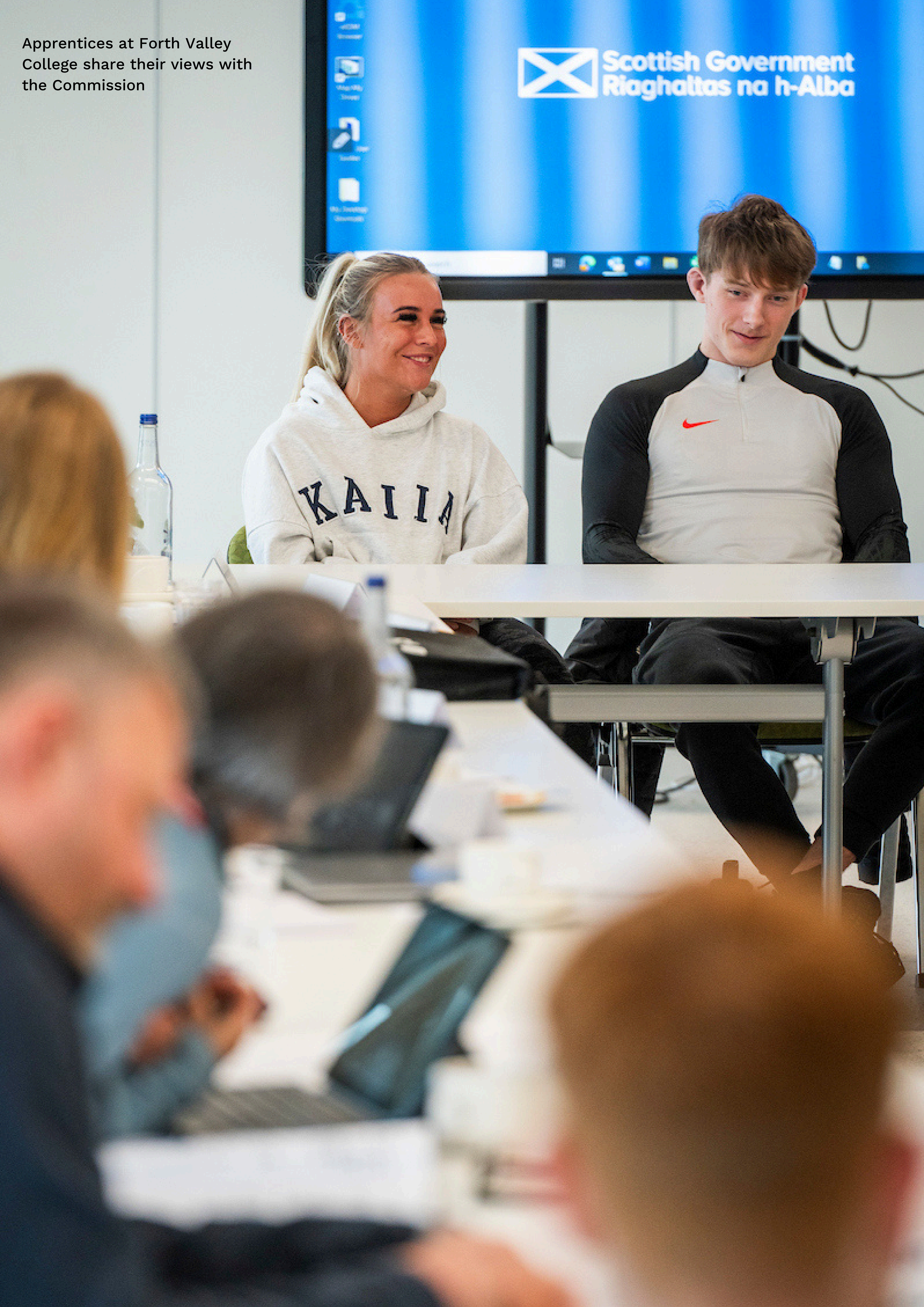
[1] “What is the role of investment in delivering a just transition?” by Laurie Macfarlane, Future Economy Scotland(2023) Link
[2] “State of Finance for Nature 2022”, UNEP, ELD (2022) Link
[3] “The Sixth Carbon Budget The UK’s Path to Net Zero”, Climate Change Committee (2020) Link
[4] “Fiscal risk from lack of clarity on climate change spending” Scottish Fiscal Commission (2024) Link
[5] “Fiscal sustainability Perspectives: Climate Change – Summary”, Scottish Fiscal Commission (2024) Link
[6] “Fiscal sustainability Perspectives Climate Change”, Scottish Fiscal Commission (2024) Link

- Gross National Income (GNI) has remained below GDP throughout the period from 1998 to 2021, reflecting the primary income deficit over this period. In 2021, Scotland's GNI was estimated at £170.9 billion, whilst Scotland's GDP in the same year was measured at £181 billion. In total, the 2021 data reveals a net outflow of income from Scotland in the region of £10 billion[7].
- The capital cost of converting the Scottish building stock to zero emissions by 2045 has been estimated at £33 billion[8].
- The Climate Change Committee has estimated additional investment of around £10 billion a year for the UK on adaptation will be required for the period from 2020 to 2030.[9] Adaptation financing need in Scotland is estimated to be £1.8 billion by 2030.[10]



Roundtable with Dundee residents on transport issues

[7] "Rewiring Local Economies: Community Wealth Building for a Just Transition", Miriam Brett, Future Economy Scotland (2024) Link
[8] "Investor Panel: Mobilising international capital to help finance the transition to Net Zero", The Investor Panel (2023) Link
[9] "Investment for a well-adapted UK", Climate Change Committee (2023) Link
[10] "Climate adaptation finance: Insights and opportunities for Scotland", Adaptation Scotland(2023) Link



Apprentices at Forth Valley College share their views with the Commission

Key messages

1. New and Innovative investment models are needed

Scotland's just transition will not be funded by the current approach. The imperative of the just transition is being recognised by public and private financial institutions (for example in the Scottish National Investment Bank's mission). But if investment provision is left to the market alone, we will see an unjust and ineffective transition. The just transition for Scotland is fundamentally about place and a key insight at the roundtable was that "international finance doesn't care about place." A different set of models, regulations, conditionalities and incentives is therefore urgently required so that public and private finance can combine to achieve long-term social and economic value, value that benefits communities and workers. Achieving a just transition will require the Scottish Government to take a proactive role in stimulating investment in the economy, nurturing new and emerging industries and scalable propositions, as well as becoming the driving force in co-ordinating efforts with local government and investors. Scotland's financial sector could also develop distinctive capabilities in just transition investment, which could have international relevance. The Commission recently set out the need for an investment plan for the Grangemouth ecosystem; such plans will also be required for the North Sea transition and other high-emission areas of economic activity to safeguard the long-term future of workers and communities.

2. Finance for Net Zero is not the same as investment for a Just Transition

Financial institutions in Scotland and across the world are making commitments to achieve net-zero portfolios. But work to get to this goal through a just transition is far less developed. The conflation of these related but separate objectives risks obscuring the specific elements of Scotland's journey to a low carbon economy that will determine whether key changes are fair and equitable. Justice cannot be a second order consideration. To support public and private investment in a just transition, the Scottish Government's plans for sectors and regions should set out a credible list of just transition investments aligned with strategic outcomes and approach to measuring their impact. These should in turn help form the building blocks to establish robust just transition pathways which complement the net zero pathways that have shown effective cut-through with investors and companies. The Scottish Government could use future bond issuance as a way to show how the just transition can come to life as part of its capital raising for the future.

3. It's time for strategic clarity on roles and responsibilities

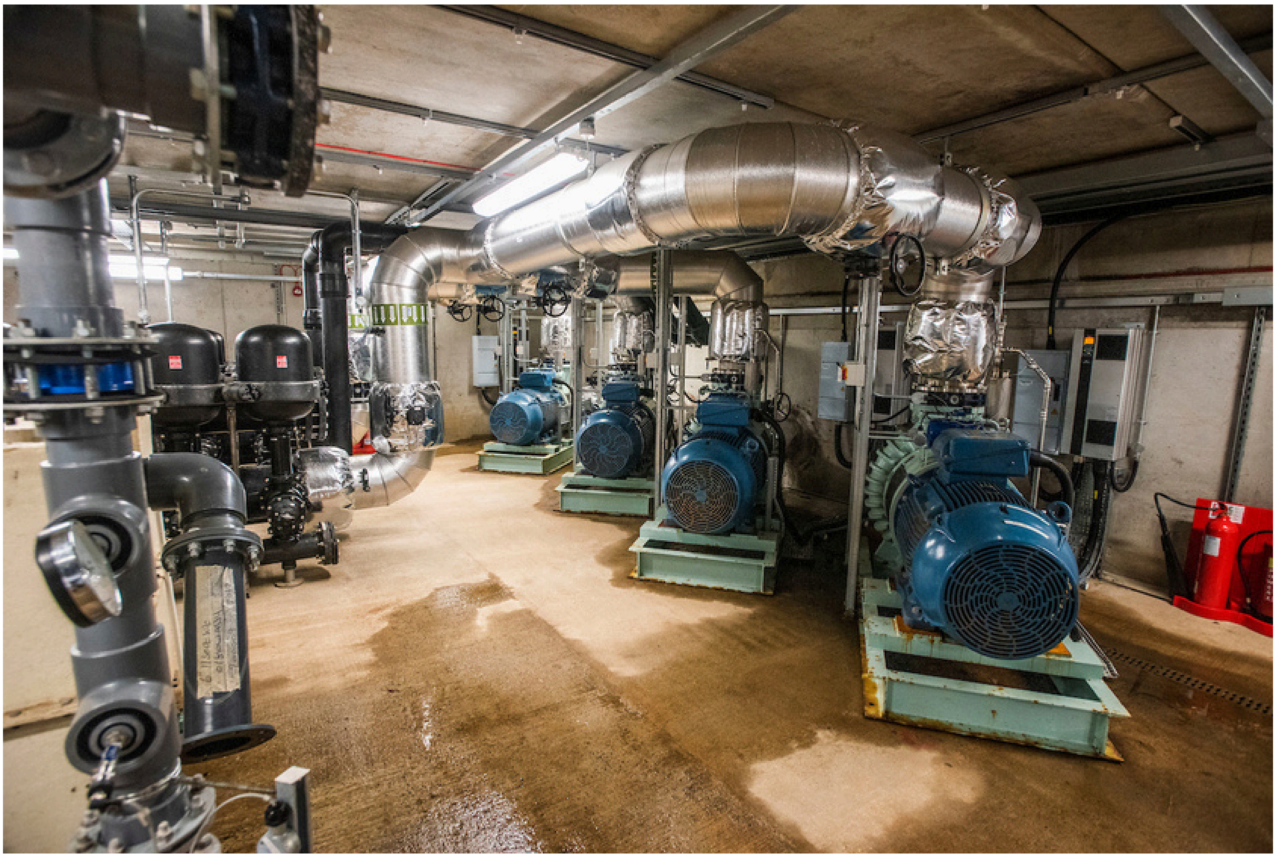
Clarity and precision is required to define and map out strategic planning and public body delivery functions for just transition investment, including the Scottish Government (for example its Just Transition Fund), COSLA and enterprise agencies, the Scottish National Investment Bank as well as the UK Government, the UK Infrastructure Bank and the British Business Bank. The Scottish Government must take on primary responsibility for driving this agenda, via regular meetings and progress updates to track performance, flag risks and issues arising. This will help consolidate efforts that could otherwise be siloed, align expectations and support effective collaboration, and communicate key decisions and progress reporting across different portfolios and levels of government as well as the private and philanthropic sectors. Developing the appropriate investment plans for just transition will require extensive capacity and technical expertise. Just transition planning should therefore be established as a priority area of focus for the new Investment Strategy and Delivery Unit announced in the 2023-24 Programme for Government, providing direction to the Just Transition Unit as part of the whole-of-government approach to climate action and inclusive economic development.

4. Action is required to join up and leverage local capacity

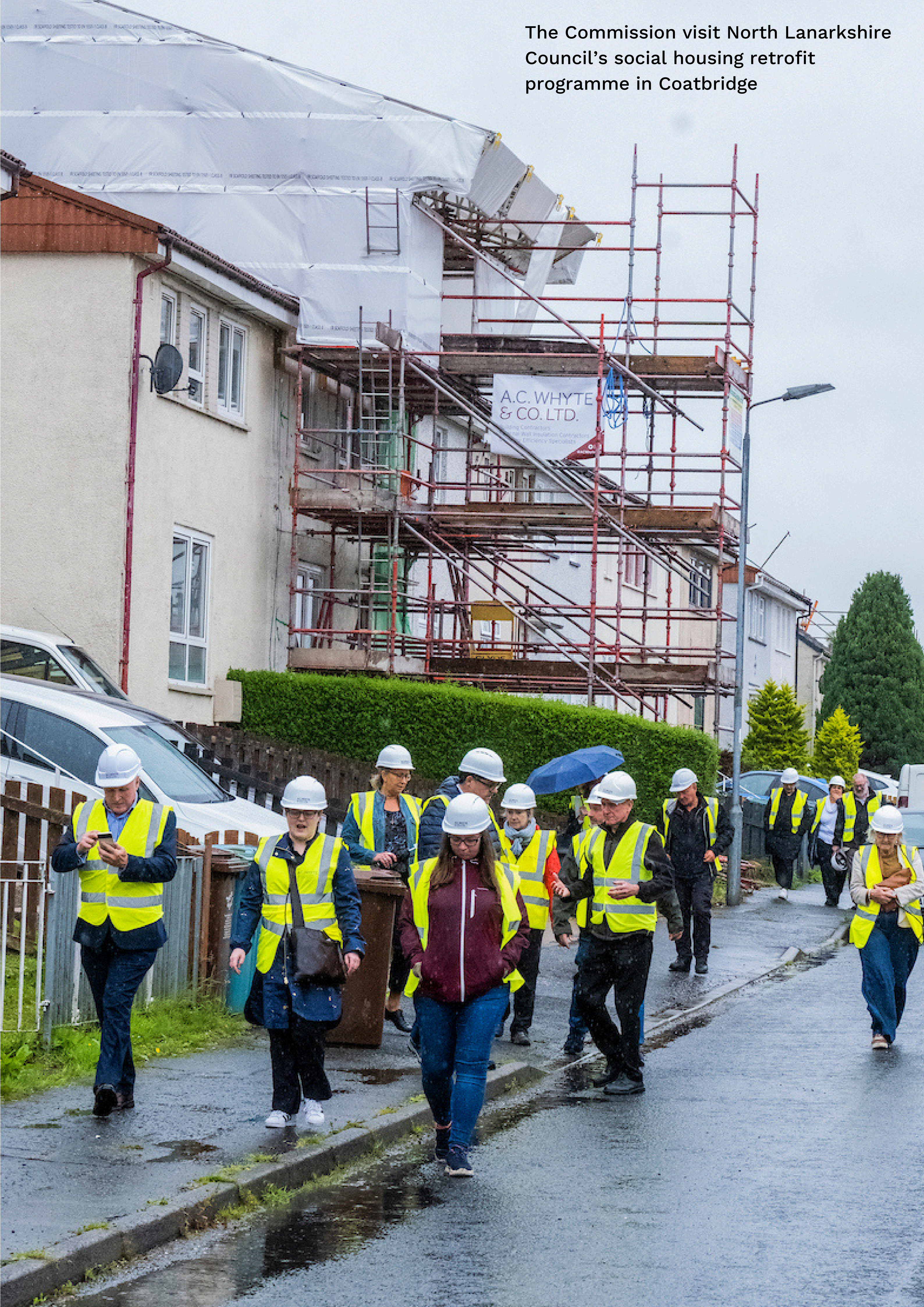
The place-based nature of the just transition means that a key risk in this area is a lack of local authority capacity, after many years of hollowing out of public sector capacity and skills. There is a clear need for a central strategic co-ordination function to provide join-up, leadership and support to local government, leveraging and expanding existing capacity to promote local leadership and provide requisite technical support. A key opportunity is the creation of coherent investment strategies for local government pension schemes geared towards just transition delivery. Alongside local authority leadership, a core feature of a successful just transition will be a thriving community ownership and investment sector for a variety of sectors and assets.

5. The costs of failure is sky high, given the scale of the opportunity for Scotland

The short- and medium-term capital figures associated with achieving a just transition may look daunting in the current fiscal context. But investment planning at all levels of government must also factor in the cost of failure, whether in terms of adverse health outcomes, loss of ecosystem services, loss of jobs, loss of supply chain and manufacturing opportunities or the potential for many decades of lost growth and increased economic leakage. Short term “savings” will be hugely costly to Scotland if these ultimately stymie fair economic development at this critical juncture. Attention needs to be placed on the just transition outcomes that can be generated from a long-term green industrial policy, combining public, private and community resources.



Equipment beneath the River Clyde at Queens Quay District Heating Network



The Commission visit North Lanarkshire Council's social housing retrofit programme in Coatbridge

Sector-by-sector breakdown

In order to bring into focus key elements of the challenge Scotland faces in delivering the investment required for a just transition, four Commissioners with specialist expertise were given the challenging task of presenting to the roundtable a short, sharp “state of the sector” analysis highlighting strategic requirements, opportunities and risks for each of the four core economic sectors currently the subject of Scottish Government just transition planning efforts. These were Rachel McEwen (Energy), Stephen Good (Built Environment and Construction), Jillian Anable (Transport) and Steven Thomson (Land Use and Agriculture)

Energy

Rachel McEwen

In a global context, Scotland and the UK has a highly mature and investable energy sector. This is due to: investment-grade energy policy, mature planning regimes, low levels of corruption and policies that remove price risk for both investors and consumers. In combination, this has made the UK one of the most attractive places in the world for private investment in new renewable energy capacity. In Scotland, this is increased due to our natural resources.

However, the scale of finance and investment which will be required over the coming years is significant, perhaps up to £50bn for electricity infrastructure in the next decade.

From a Just Transition perspective, there are a number of core challenges:

1. How can the benefits of this investment be shared widely and fairly?
2. Opportunities for increased supply chain content in the past might have been missed, however, given the scale of change, there remains a significant economic opportunity here if the right package of policy, regulation and incentives can be implemented.
3. The scale and impact of voluntary community benefit represent significant opportunity for shared benefit. Practical barriers remain for both communities and local governments wanting to invest in renewable energy and these need to be tackled as a matter of priority.
4. The use of income in the crown estate from Scotwind and the need to link this revenue with the strategic delivery of just transition outcomes.
5. How can scarce public money best be deployed to support and enhance community and local authority ownership?

It matters that projects and technologies have sufficient investment, but key for a just transition is how this investment happens, that is, the quality of investment. How do we prioritise investment in skills, transition workers to low carbon jobs in an orderly and fair way, incentivise supply chains, and deliver meaningful community benefit, community ownership and shared ownership?

Ineos and Petroineos senior management met with the Commission during its visit to Grangemouth.

Built environment and construction

Stephen Good

There are many areas where bold and radical finance solutions could help unlock opportunities and overcome challenges we face across the built environment.

Firstly, how do we best use the existing pipeline of investment in infrastructure (including new homes) that the Scottish Government already channels into construction and the built environment – currently circa £4bn/yr? How do we make sure that scale of investment is driving the desired net zero and just transition outcomes? It's not very exciting, but one answer lies in procurement. More specifically it's both procurement innovation (the process) and procuring for innovation (the outcome).

It's vital that we radically shift from our business-as-usual procurement models that often prioritise lowest cost outcomes, to innovative procurement models that are focused on achieving best value outcomes. You can define "value" anyway you want – obviously this could include Net Zero and just transition objectives. Key is using procurement levers (and this is where public sector clients might be best placed to lead the way) differently to deliver the outcomes Scotland needs. Business-as-usual certainly won't help us achieve Net Zero in time, justly or otherwise.

Secondly, how to tackle the energy efficiency and heat decarbonisation retrofit challenge of our existing buildings, which will require huge investment? It is worth emphasising that our existing buildings will not come close to meeting the needs of many of us, particularly those already living in poor quality housing and experiencing extreme fuel poverty, if all we do is swap out a gas boiler for a heat pump. The cheapest energy is the energy we don't use, so reducing our demand for energy, given the UK has the leakiest buildings in Europe, requires us to go big on improving the performance of our building fabric too.

But we need to get real about the costs. The Scottish Government has estimated £33bn is needed to decarbonise Scotland's homes and buildings. We have approximately 2.6m homes and 230k non-domestic buildings, so if you do the basic maths, that's about £11.5k/building. That might just about cover the installation cost of a heat pump in an easy-to-treat property. To meet the tougher end of the net zero objectives, we'll need likely four times that investment, so circa £45k/building to do it once and do it properly. Which is more like £130bn, not £33bn. So we need to get really serious about the costs of achieving Net Zero, who's going to pay, and how.

There are some innovative, whole system, neighbourhood led, community owned, fair and equitable models being developed, and whilst complex to set up, with brave, bold leadership, these kind of community wealth building solutions could be the kind of radical, innovative, fair and just solutions that places ownership of the transition to net zero back into the hands of Scotland's citizens and communities.

So there are without question significant challenges, but the hidden win in all of this is jobs. And massive job opportunities at that. The Construction Industry Training Board estimates we'll need 28,000 additional skilled workers in construction by 2028. The CCC identified construction as one the most potentially positively impacted sectors by Net Zero in terms of jobs. If you adopt a place-based model, that could mean lots of local jobs in local communities right across the country doing essential work that helps families out of fuel poverty, improves the quality and comfort of our buildings, increases fuel security, and improves the physical and mental health of Scotland's citizens.

There will be risks however, three primary risks are likely to be pace, scale, skills.

The Scottish Government ambition set out in the Built Environment and Construction just transition plan discussion paper is to decarbonise at least 1 million homes by 2030. That's only six years from now. 1 million homes in six years is about 166,000 per year, or around 614 per day (assuming a typical 260 day working year), or 82 per hour. We're currently installing around 5,000 zero carbon heating systems per year, (that's just heating systems and doesn't include building fabric energy efficiency works). That's 19 per day or about 2.5 per hour. So we need to be doing about 30 times as much as we do at the moment. And we are not training enough people to meet the current demand, never mind this scaled-up demand that's coming.

As noted above, upskilling, reskilling and multiskilling the existing workforce, whilst simultaneously attracting an entirely new workforce into the built environment sector presents a sizeable opportunity. There isn't a street in Scotland from Shetland to Stranraer, that won't need skilled, competent people to carry out the retrofit works that the citizens of Scotland will need.

In addition this could create local supply chains and local jobs, a growing economy, and show international leadership (and probably creating export opportunities to boot).

We're not going to be world leaders in heat pump manufacturing, no matter how hard we might wish that to be the case. That ship sailed 20 years ago in in other countries that weren't addicted to cheap oil and gas. Where the opportunity lies though is in the people-powered, neighbourhood-led, energy efficient retrofit of existing communities.

So how do we unlock this opportunity? Some tangible asks.

1. Implement the Heat in Buildings Bill
2. Although the optimum time for piloting these new approaches was 10 years ago, we are where we are, so move quickly to establish a pilot programme to trial the recommendations at scale.
3. Monitor and evaluate them effectively and have clear routes to mainstream the successful ones rapidly.

An apprentice in the construction industry speaks to the Commission on site in Coatbridge.

Transport

Jillian Anable

There are still significant hurdles to overcome before we get to how to fund transport decarbonisation as there are no current credible pathways in existence.

Transport needs to provide safe, affordable access for everybody and not exist as a luxury only for the rich. Improving access (to jobs, training, education) for the poorest in society is fundamental to sustainable economic development. But whether it is EV adoption or public transport infrastructure, we need to build infrastructure ahead of demand, in places where it is not yet commercially attractive but where it is required to give consumers confidence in switching – and enable a just transition.

We need to put this infrastructure in before we can start to raise revenue through disincentives and levies or taxes in order to put ‘sticks on top of carrots’ in order to maximise that investment and achieve net carbon reduction.

<u>Underpinning and appraisal framing</u>
The current transport appraisal framework grossly undervalues just outcomes of affordability, inclusivity and public health, long term gains on job creation as well as climate resilience despite being equal – if not greater - in priority with travel speed. This continuously justifies shifting investments in faster but more expensive modes, such as automobile and air travel at the expense of slower but more affordable, inclusive, healthy and resource-efficient modes such as walking, bicycling and public transport.

So we have to incorporate just transition thinking in how we assess the relative value being created by investment and procurement decisions.

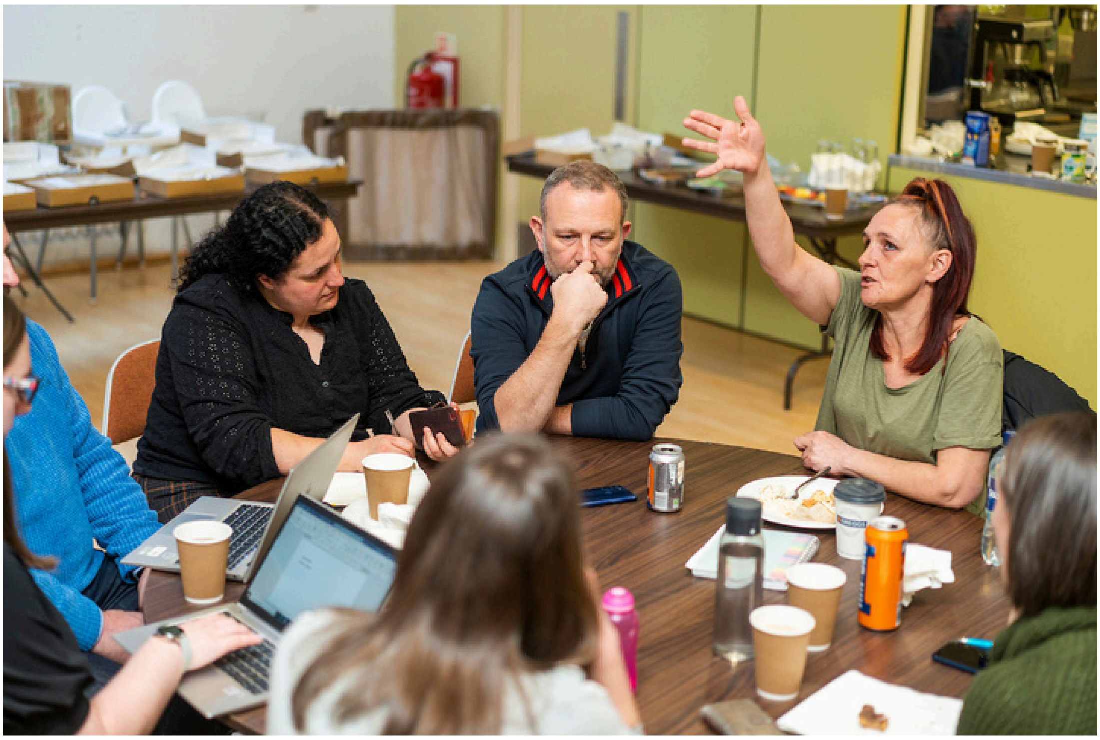
And this includes decision frameworks to stop investing in the bad stuff, e.g. implicit or explicit support for private motorisation such as fuel price subsidies and significant investment in new expressways and other highway infrastructure.

And maintaining what we have – adopting "fix it first" priorities and "least cost planning,", which favour maintenance and demand management measures, making better use of existing transportation infrastructure including retrofitting roads to provide safe space for pedestrians and cyclists as well as a redesign to give priority to public transport (e.g. bus only lanes).

Local scale

Many of the solutions as well as the innovative solutions for raising revenue are at the local level. Yet the current funding system available to local government encourages piecemeal, short-term approaches to planning and investment. This is not conducive to scaling up, with public private partnerships requiring longer term certainty, and it widens inequalities via opportunistic rather than strategic investment. Likewise, the privatised delivery model is a barrier to local democratic initiatives and investment.

Finance is also about how to give people a say in how public money is spent in their local area. We should all get a say on the transport needs where we live and how this investment is allocated. For this, plans have to be credible and transparent. Yet there are no credible conditions for any form of travel reduction.



Roundtable with Dundee residents on transport issues

Innovative mechanisms
I would like us to discuss what the options might be for locally-raised income aligned with just principles. What would this look like? Here are five potential innovations.

1. Local Climate Bonds – regulated investment products launched by Councils offering local people an opportunity to invest in their area in a way similar to crowdfunding and to make a return from doing so, while communicating action and engaging with citizens as investors.
2. Public transport payroll levy, paid by larger employers - this is one of the main funding sources for public transport in France. Employers would benefit from a payroll levy because excellent public transport would increase the catchment from which they could attract employees. The levy would enable better transport to city centres, which would make them more productive, and it would improve access to jobs for people in less prosperous towns and rural areas.
3. Higher parking charges - parking is grossly underpriced particularly in out of town retail and workplaces. Yet parking revenues could finance sustainable transportation programs and community amenities.
4. Eco levies – as with any levies the distributional impact of these depends on how the revenue is spent. The main groups to benefit from an Eco Levy would be young people, older people, those on a low income and women, all of whom are bigger users of public transportation.
5. Used Electric Vehicle loans, Electric bike loans – not means tested and targeted to support low income groups.

What is needed to create an enabling environment for such things? Climate-proof all investments? Eliminate all dirty spending? Centre equity in all investment decisions? Establishing a set of common methods, tools and standards across the finance system could certainly help.

Land use and agriculture

Steven Thomson

Background
There is significant pressure on the agriculture and land use, land use change and forestry (LULUCF) sectors to decarbonise as they contributed 19.6% of Scotland's emissions in 2022. However, agriculture and land management are complex, where nature plays an important role in determining short and long-term business and environmental outcomes. Production cycles range from seasonal (e.g. salad crops), to those spanning several decades (e.g. trees). Moreover, large numbers of small producers and a small number of major processors and retailers further lead to asymmetric power in supply chains.

Agriculture and forestry have been heavily supported by the Government for over 80 years in recognition of market failures, the risks associated with long production cycles and commodity market volatility, and low relative returns on investment. Increasingly Government are cognisant of the requirement to treat investments in 'public goods' and ecosystem service provisioning (e.g. nature restoration, clean water, clean air, peatland and wetland restoration) differently in their investment decisions.

There remain significant challenges to delivering public good aspirations from land whilst still delivering on food production as the buying power of Government support budgets has been significantly eroded by inflation over the last 20 years. Hence, there is increasing urgency to develop models that provide opportunities for private sector investment at scale. Whilst there are some established, and emerging, markets for natural capital (e.g. Peatland Code, Woodland Carbon Code, Defra's biodiversity credits), there remains uncertainty from suppliers (land managers) and buyers (institutions) due to unfamiliarity and perceived risks.

Woodlands
Whilst there has been increased woodland planting in Scotland in the last decade, the Scottish Government's targets are not being achieved, with some indication that some projects are not going ahead due to 'skills capacity in the sector'. There has been significant reduction in the Scottish Government's woodland creation budget for 2024/25 that has led to issues for those in the supply chain – most notably in nurseries that had ramped up sapling production to meet growing demand but are now having to destroy surplus stock.

Long-term budget commitments are required to ensure businesses have confidence to invest in sectors aligned to decarbonisation. Innovative ways of drawing in private sector funding to add value to public sector finance (such as Scottish Government's Forestry Grant Scheme (FGS) and the private sector Woodland Carbon Code) is needed across all land management sectors. However, to support growth it is also essential that there is investment in forestry skills and training and also in developing career pathways and well paid jobs in the sector, including in the processing and added value sectors.

Peatlands

Peatland emissions in Scotland are significant (6.3Mt CO_2e) so re-wetting and restoration is rightly a priority. Restoration is largely being delivered through NatureScot's Peatland Action programme, alongside the Peatland Code that draws in private sector investment. Accelerating the amount of peatland restoration must be a national priority, yet there remain just transition concerns over crofting and agricultural tenancy interests and grazing rights over carbon and grazing on restored peatland.

Agriculture

Delivering a Just Transition in the agriculture sector is vital, and the Scottish Government's future agricultural support model is designed to deliver more public benefits (particularly lower greenhouse gas emissions and nature restoration through regenerative farming practices). However, the lack of future support scheme details to date means many farmers and crofters cannot make 5-10 year investment plans with any confidence. Just transition concerns over the proportionality of compliance costs on smallholders and how policy impacts on common grazings remain.

Whilst carbon literacy is improving as a result of increased uptake of carbon-auditing, there remains some sectoral scepticism on climate science within the sector, particularly with regards to grassland sequestration and methane as a flow gas. There are increasing requirements for carbon audits to be undertaken for many banks' lending to agriculture, for processors and retailers. However, a lack of transparency and joined-up, consistent approaches for carbon auditing tools leads to confusion and potential gaming in the system.

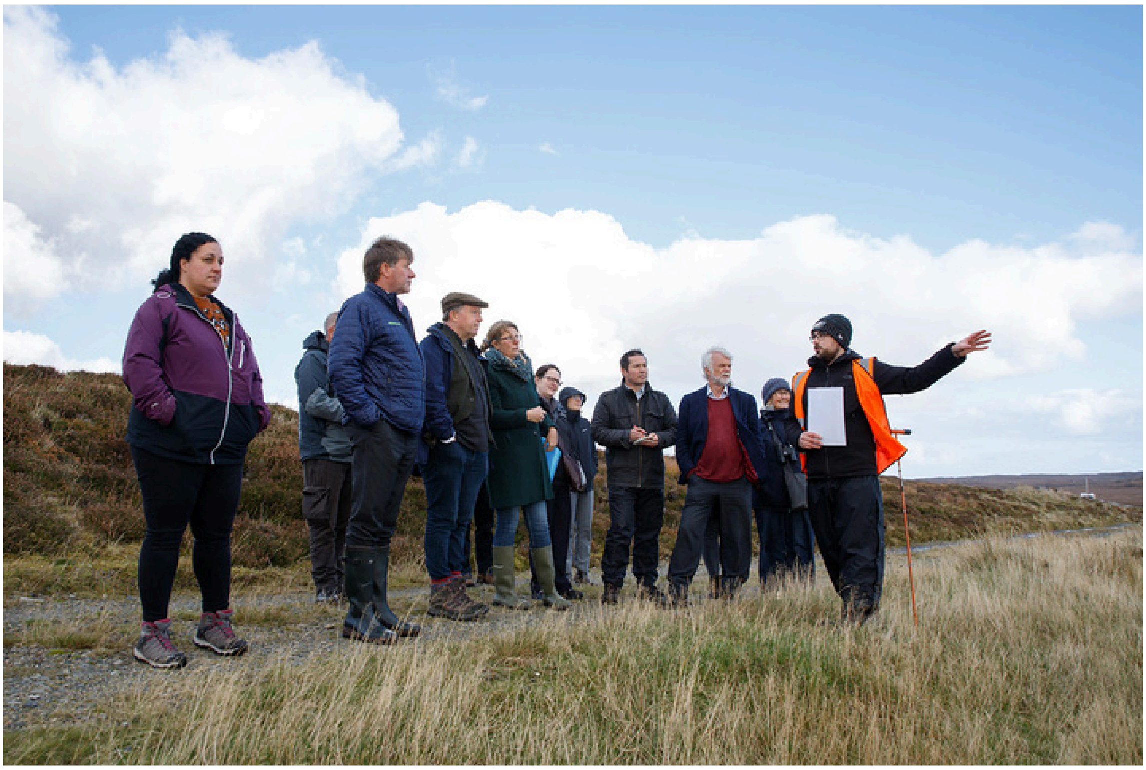
Private sector Scope 3 reporting may require faster change within the sector than agricultural policy can deliver. There are concerns that any food sector requirements to lower Scope 3 emissions will fall to the agriculture sector, and the sector will simply have to bear the associated costs, with limited (if any) incentives through higher product prices. It is, thus, important that public sector support underpins a just transition as the food sector applies pressure to reduce emissions associated with food production.

Opportunities

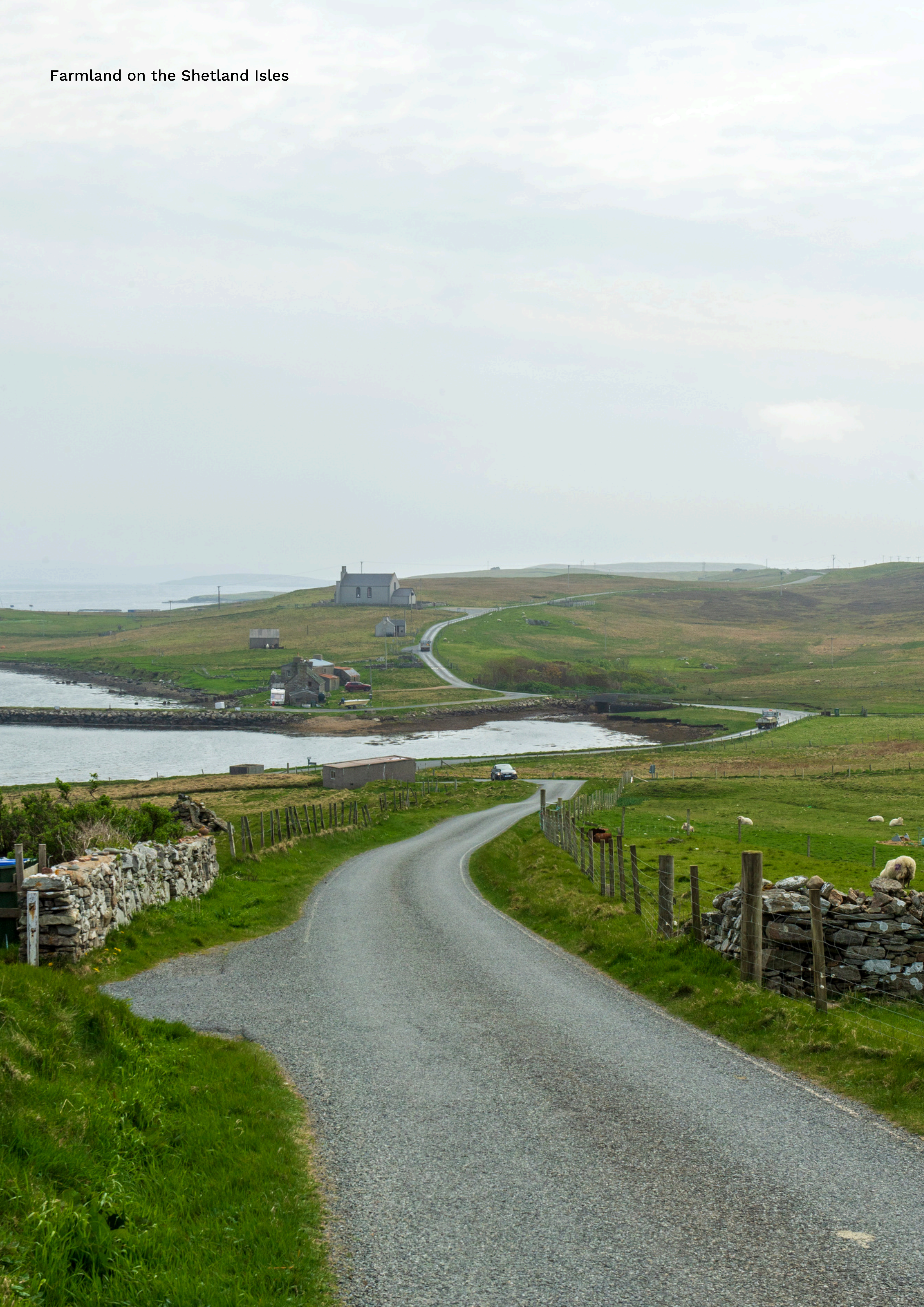
There remains significant opportunity for private sector investment in the agri-tech sector. Agri-tech is producing some transformative solutions (e.g. zero tillage, methane inhibitors, low methane breeding, electric and hydrogen tractors, robotics and sensors, AI) that can underpin a just transition.

There is also the high risk of undeveloped and unregulated nature finance models, which are already impacting on land values (see this report from the Scottish Land Commission). Natural Capital markets have been disruptive in Scotland already – leading to tensions with traditional land managers. Recent land value inflation was caused by a surge in demand for land for afforestation, rewilding and insetting emissions. Concerns over gamekeeper, tenant farming, and agricultural workforce displacement in some localities demonstrate the need to focus on a just transition in sectors where the effects of transition are spatially dispersed. New models of agricultural tenure, shared farming, etc. are required to provide entry level opportunities for the next generation of land managers across Scotland. Fiscal incentives to land owners providing new tenure / shared farming opportunities could accelerate investment into land management – providing the fiscal incentives (e.g. capital gains tax rollover relief) also have strategic Net Zero, nature positive and just transition conditionalities attached).

Finally, to deliver a just transition for land managers in Scotland against the backdrop of diminished real term support budgets it appears that private sector investment will be required. Identifying the scalable investment opportunities will be vital. These could be delivered through private sector markets, or through new blended finance opportunities using private sector capital to deliver enhanced public sector, targeted land management support that delivers on nature restoration and / or climate change mitigation. Such an approach could limit duplication of administrative effort, but would need to consider how to allocate credits between the investor and land manager. This model could reduce perceived risks and improve budgetary support to help land management transitions.



An innovative peatland restoration program at Loch Orasaigh, Isle of Lewis



Farmland on the Shetland Isles

Insights and findings

Strategic approach

- The quality of spending is as important as achieving the quantum target in shaping the degree to which the transition is fair.
- Climate policy recognises the need to transform the financial sector to mobilise the money required to meet targets (the Climate Change Committee has identified the need for a fivefold increase in Net Zero investment by 2030) both in terms of regulation and how financial institutions act.
- Both Scotland and the UK currently have very low investment rates within the OECD. This is partly because despite having a globally significant financial services sector, financial institutions have tended to favour the production and trading of financial assets rather than productive investments such as lending to SMEs.
- The objective of attracting inward investment (FDI) can lead to domestic capital formation, but a strategy built solely around this aim will not be sufficient to deliver either Net Zero, nature restoration or a just transition. A significantly more active and innovative approach is required from government to close the investment gap, including measures such as equity stakes, profit-sharing mechanisms and municipal ownership of economic activity that can support community wealth building.
- Whereas just transition is fundamentally concerned with place, there was shared recognition that “international finance doesn’t care about place” and that focusing on the needs of a specific place as it experiences the climate transition is “talking a different language to those with investment purse-strings”. The challenge of delivering investment to support a just transition is therefore about structuring opportunities for international finance flows where required, but also about effective tax and regulation to tackle economic leakage and protect the needs of local communities, rather than promoting an extractive model.
- Strategic lessons need to be learned from the failure so far to create significant numbers of manufacturing jobs in Scotland from investment in renewables.
- Significant areas such as adaptation, major infrastructure and habitat restoration (including peatland) are public goods, sub-commercial in character, and therefore significantly more difficult for the private sector to invest in at scale.

Differentiating just transition from net zero

- Successful delivery of the investment required to decarbonise the economy and adapt to climate change carries no guarantees that this will achieve a just transition. Closing the investment gap for a just transition therefore includes a distinct range of plans and actions that go beyond making investment in Net Zero easier.
- Just transition is not an additional cost but an approach that fosters positive economic development and the creation of long-term social and economic value.
- The supply chain for the current energy system depends on oil and gas revenues, and investment will need to be found to "bridge" this sector across to revenues from renewables.
- Just transition investment strategies will necessarily highlight the major long term savings they can deliver, and responsible economic stewardship requires these savings and their potential reallocation be taken seriously at the level of strategic fiscal planning. For example, Stop Climate Chaos have shown savings to the NHS alone of 42p on each £1 spent addressing fuel poverty due to improved health outcomes.
- The financial sector also needs to innovate how risk and return are assessed to better price in long-term social, environmental and economic gains and the severe costs they save.
- The speed of planning and consenting processes was cited as a blocker, frequently causing delays and inhibiting investment.
- Contracts for Difference may help deliver Net Zero but are unlikely to support a just transition, since they are designed to achieve a lowest cost outcome for the individual consumer without accounting for the wider benefits of UK companies paying tax and creating high quality jobs.
- Quote: "There is a danger Net Zero creates jobs, but does not support humans and their communities."
- A risk to sustainable public support for spending on mitigation, adaptation and just transition unless the requisite public finance is raised in a way that is demonstrably fair, with wealthier groups, and particularly those that have accumulated most wealth via the greatest emissions, being seen to pay proportionately for the measures that are now required. The redirection of existing finance, e.g. subsidies for fossil fuel extraction, was proposed as one example.

Monitoring and evaluation

- For initiatives geared towards just transition delivery to attract ESG investments, the impact investing community will require to see clear, measurable returns and impact.
- The mismatch between short financial return periods for private investment and the very much longer delivery period of ecological restoration must be addressed though new mechanisms that embed and monitor progress towards long term action.
- A well-defined set of metrics and indicators that define just transition in concrete and specific terms will be essential if just transition initiatives are to attract private finance at scale via just transition pathways, bond issuances or other instruments.
- Meaningful progress on just transition M&E promises to unlock other strategic challenges, including investment, since credible indicators are currency for stakeholders.
- Work is required to quantify justice elements of Net Zero so that companies can be assessed in detail and justice remains part of the picture, alongside carbon and nature, for investment decisions around Net Zero. Numbers of workers transitioning from high carbon industries, union density, levels of community benefit and proportion of local content provide a starting point.

Roles and responsibilities

- Government can enable longer-term planning and investment across the economy by establishing policy stability, setting out clear, credible plans, taking necessary strategic decisions and avoiding delays and uncertainty.
- A recurring theme was the lack of clarity around the ownership within public sector bodies of well-defined roles and responsibilities for delivering the required investment. Quote: “Who does what? I don’t think we know. It’s a messy financial landscape and we need to invest time and effort to fixing that. Right now it is unclear whose responsibility it is to strategise and deliver on this.”
- A particular gap was identified in relation to the work required to develop a structured just transition investment pipeline/portfolio, working with local authorities, communities, business, enterprise agencies and central government. This is likely to be a limiting factor on the capacity of the Scottish National Investment Bank, for example, to maximise its positive impact against its mission vis-à-vis just transition. A new Biodiversity Investment Plan is expected in September 2024.

- There is work needed to prioritize areas of economic development needs guided by just transition principles, alongside other complimentary principles such as community wealth building and a wellbeing economy.
- Currently there is a risk that positive projects and programs, including national initiatives and local authority efforts, lack strategic coherence and join-up, operating in silos rather than working together in a more co-ordinated, consistent and efficient fashion.

Capacity

- The current lack of sufficient capacity for high quality economic planning at both national and local level was identified as an urgent strategic need to be addressed, particularly following years of hollowing out of local authority capacity. A critical threat to LHEES success is under-resourcing.
- During the UK's membership of the EU, Scotland benefitted from structural funds that came with technical assistance as standard. Currently there is a clear gap to be addressed in terms of technical assistance to the public sector in closing the investment gap for just transition.
- This includes local government pension schemes, which have significant funds to invest (£50bn approx.) but lack the required in-house expertise to find good projects to support that are linked strategically to just transition. There is currently also no requirement for workers themselves to have a say in investment decisions. There are significant opportunities to pool expertise and co-ordinate efforts jointly towards just transition as a strategic mission.

Workshop overview

The Commission convened a workshop in central Edinburgh on September 27 2023 on the topic of “Investment for Scotland’s Just Transition”. Participants included key actors from private financial institutions (including Natwest, Scottish Widows, Lloyds, Baillie Gifford and Blackrock), the public sector, (including Scottish Government, Scottish National Investment Bank and Scottish Enterprise), and others, including the Scottish Fiscal Commission, Energy Consumers Commission, Local Government Pension Scheme Advisory Board, Just Transition Partnership, Scottish Trades Union Congress Future Economy Scotland, Edinburgh Climate Change Institute, Scottish Taskforce for Green and Sustainable Finance, Oxfam and the Institute for Public Policy Research.

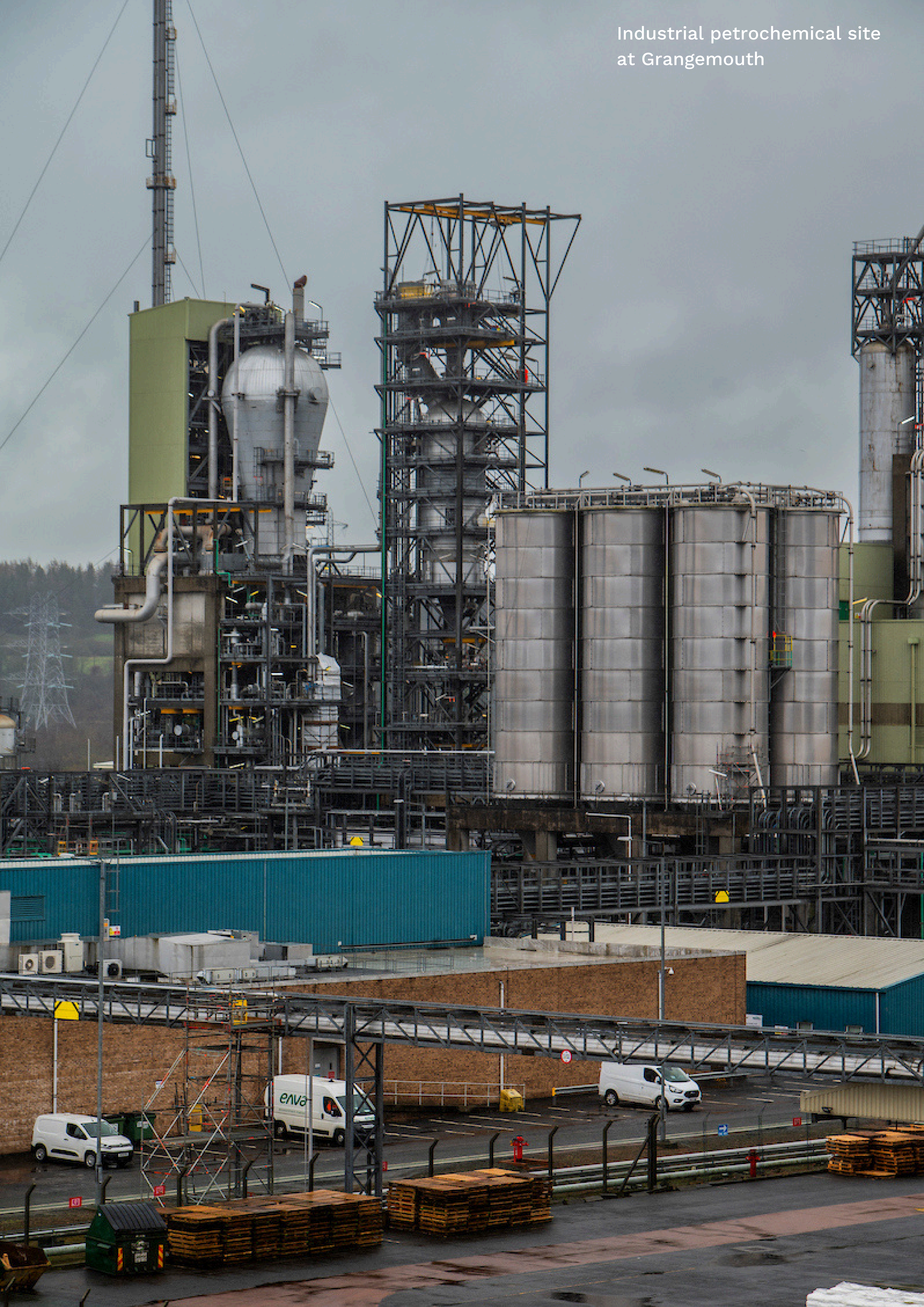
The purpose of the event was to bring together cross-sectoral decision-makers to help define the core elements of the challenge ahead in financing a just transition and the role of investment in Scotland.

This was the final Commission meeting chaired by Jim Skea, who had recently been elected to lead the UN IPCC. Attendees heard from Professor Nick Robins on the distinctions between investment for just transition and established green finance, as well as opportunities for Scotland to set a lead. Following this, Laurie Macfarlane (Future Economy Scotland) presented on the role of investment in a just transition. Attendees then discussed the investment challenge, before the session opened up for initial reflections in roundtable format.

The second session was opened by Cabinet Secretary for Transport Net Zero and Just Transition, Mairi McAllan with reflections on the earlier discussion. Commission expert sector leads then provided a sector-by-sector breakdown (see following section) of the investment challenge across energy, built environment and construction, transport and land use and agriculture. Katie Swan-Nelson facilitated a discussion on the key challenges faced by the different sectors.

In the workshop’s closing session, Ann Pettifor facilitated a discussion on the tools and options available for developing solutions, roles and responsibilities, and the next steps for policy and market options.

For a full list of participants see Annex A.



Industrial petrochemical site at Grangemouth

Building blocks

This section provides a non-comprehensive overview of a number of initiatives of the kind that will have a significant role to play if effective, high-quality investment for Scotland's just transition is to be delivered. These include community ventures, public bodies, government programs, advisory groups and financial institutions. As 'building blocks' these represent examples of the kind of innovative activity which is now required at a larger scale and with greater strategy

Scottish National Investment Bank

The Scottish National Investment Bank is a development investment bank, established and funded by Scottish Ministers, who are the sole shareholders. It is both a public body and a public limited company, and is operationally independent from the Scottish Government. The Bank's board is responsible for how it delivers against its missions. The Bank has been established to operate commercially and invests in Scottish business, projects and communities to deliver environmental, social and financial returns for the people of Scotland.

The Bank's missions, set by the Scottish Government following extensive consultation, are intended to address long term, persistent challenges facing Scotland. These are defined by the Bank as follows:

- Net zero: Address the climate crisis, through growing a fair and sustainable economy
- Place: Transform communities, making them places where everyone thrives
- Innovation: Scale up innovation and technology, for a more competitive and productive economy

The Bank's articles of association also notes promoting the just transition principles (as defined by the Climate Change (Scotland) Act 2009) as an object of the Bank.

Since launching in 2020, the Bank has committed over £645 million of long-term strategic investment and has crowded in a further £1 billion of private capital. The Bank's portfolio has now expanded to 35 businesses and projects.

The Bank has established a set of "Just Transition principles" that guide its investment decisions in this context. To date the Bank has committed over £320 million to its net zero mission, including a number of projects that directly address the Just Transition such as in the offshore wind supply chain, port infrastructure at Port of Ardersier and Port of Aberdeen, energy storage technology, and EV charging infrastructure.

In 2024, SNIB released an insight report setting out how it is implementing the just transition across its three missions of promoting net zero, place and innovation. Alongside this, the bank has now built up a diverse portfolio of just transition investments. As a leading impact investor, SNIB has the potential to shape the market standard in terms of channelling investment to the just transition, influencing other investors and businesses, and generating measurable outcomes for workers and communities.

A stronger link needs to be developed between the Bank's activities and the Scottish Government's just transition outcomes, and the delivery of the sectoral and regional just transition plans. A review of the Bank's approach in delivering against its stated mission as regards just transition could help maximise its impact across a range of critical areas for just transition success, for example, community and local authority development of renewable energy.

A fleet of electric bin lorries in Dundee

Just Transition Fund

The Just Transition Fund (£500 million across ten years) aims to support businesses, workers and communities in the North East and Moray to create jobs, support innovation, and secure the highly skilled workforce needed to deliver a just transition to net zero.

The Fund's geographical remit covers Aberdeen, Aberdeenshire and Moray. To be eligible for funding support organisations must be headquartered in and benefit these areas directly, with projects clearly demonstrating impact against just transition outcomes for example jobs, skills and education, environmental protection and restoration and fair distribution of costs and benefits.

£75 million has been allocated through the Fund since 2022 comprised of a £50 million capital grant programme and a £25 million allocation to the Scottish National Investment Bank to be invested on a commercial basis, in line with the Bank's Investment Strategy and its missions.

Examples of projects supported through the Just Transition Fund include:

- £9.8 million in support of the Supply Chain Pathway and Energy Transition Challenge Fund which supports supply chain companies across the region's energy sector to enter the low carbon industry. 25 companies have been supported through the Challenge Fund element of the project to date, leveraging in over £6 million in private sector investment.
- £2.5 million in support of Just Transition Participatory Budgeting in the region supporting 98 community projects and engaging and empowering 29,000 people to date in the voting process, enabling them to have a direct say on how money is spent within their local areas.
- £1 million in support of the Pilot Energy Transition Skills project assessing the energy transition skills landscape to 2030 to identify gaps and demand, and design pilot training programmes to support the net zero transition. 15 new courses (and 22 existing courses) and over 700 fully funded training places have been delivered.

Under the Memorandum of Understanding between the Scottish Government and the Commission, twice yearly progress updates on the fund are shared with the Commission. The Commission's advice can also be requested on strategic matters related to the Fund, including objectives, strategic approach, process, criteria, monitoring and evaluation. Ongoing strategic review of the Fund's scope, approach and M&E work will be required to ensure it delivers maximum impact against the Scottish Government's just transition outcomes.

Lloyds Bank

Just transition is a key cross-cutting theme that informs Lloyds Bank's environmental sustainability strategy. When setting sector-based targets and identifying and assessing the strategic levers and actions, just transition considerations are prioritised and used to determine if a lever should be included or excluded. Their sustainable financing framework, which launched in 2024, also includes social eligibility criteria to support and promote financing of activities and opportunities that seek to achieve positive social outcomes for target populations, including those living below the poverty line, people with disabilities and unemployed people.

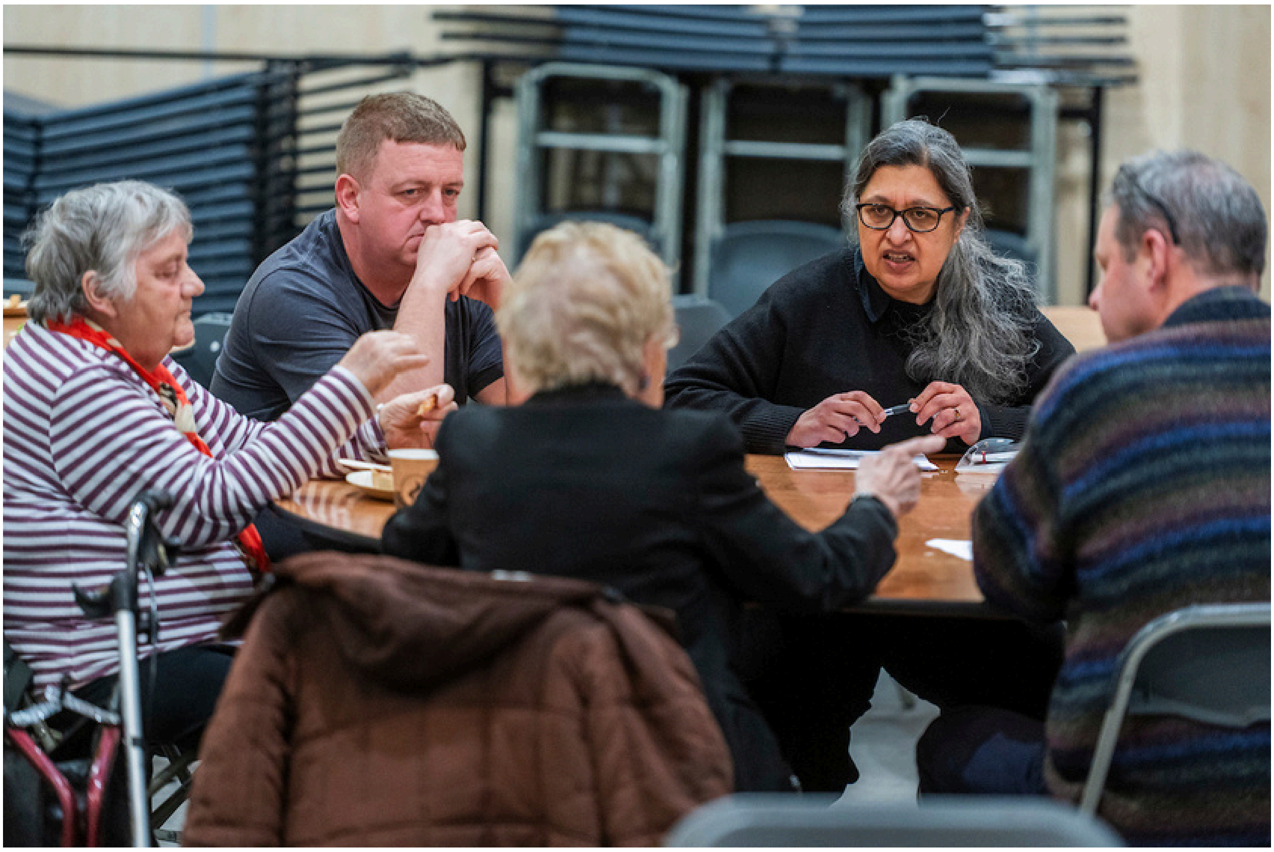
Lloyds also operate within a number of external working groups, committees, roundtables and workshops, with the aim of collectively informing and developing guidance on the just transition and the role of financial institutions in supporting an inclusive transition. For example, they are members of the LSE Grantham Research Institute's Financing a Just Transition Alliance.

Lloyds also recently published a report 'Credible Transition Plans: reporting vs reality' which examines the areas of alignment and tension between corporates and institutional investors in the development of credible transition plans. The report, which surveyed UK-based sustainability executives and institutional investors*, found that many corporates (47%) feel unable to set bolder sustainability targets within their transition plans because they don't want to "go too far and fail". It also noted that, increasingly, investors are looking to credible transition plans as part of the investment process. Their report details the top net zero blockers and the key steps needed for corporates to develop credible but ambitious transition plans.

Lothian Pension Fund

Lothian Pension Fund's Statement of Responsible Investment Principles sets out its approach to climate change and to responsible investment. Much of their activity is focussed on climate change, in particular, pushing for improved transparency of corporate carbon emissions and transition plans, advocating for more ambitious targets and policy implementation by governments, and researching and supporting the deployment of new capital into projects set to benefit from the transition.

They have also joined the Advance initiative which seeks to advance human rights and positive outcomes for people through investor stewardship.



Grangemouth residents share their views with the Commission about the future of the town.

Local Heat and Energy Efficiency Strategies

Local Heat and Energy Efficiency Strategies (LHEES) are long term plans for an entire local authority area to decarbonise heat and improve energy efficiency. LHEES will be the principal mechanism for achieving locally-led planning of the decarbonisation of heat in buildings and tackling fuel poverty. They will ensure that this is relevant and tailored to the specific needs of communities, allowing for a strategic approach to large-scale delivery of heat decarbonisation.

LHEES has two parts:

- a long-term strategic framework for the improvement of the energy efficiency of buildings in the local authority's area, and the reduction of greenhouse gas emissions
- a delivery plan setting out how a local authority proposes to support implementation

As of 9 July 2024, 18 of 32 local authorities have confirmed publication of their final LHEES, and a further 8 have published draft versions of their LHEES.

The Scottish Government is working to align delivery programmes with the emerging LHEES Strategies and Delivery Plans. For example, they are working with local authorities to take the indicative heat network zones identified through LHEES and develop them into projects through feasibility and business case support. The Scottish Government has also indicated LHEES will be used as a prospectus for where government funding and private investment could be targeted.

Green Heat Finance Taskforce

Heat in buildings plays a substantial role in the creation of our carbon footprint and so must play a significant part in our transition away from fossil fuels. The Heat in Buildings strategy (2021) noted the capital cost of converting the Scottish building stock to zero emissions by 2045 is in the region of £33 billion.

In response to a commitment in the strategy, the Green Heat Finance Taskforce was established. The purpose of the Taskforce is to develop a portfolio of innovative financial solutions for building owners in Scotland for heat decarbonisation.

The Taskforce's work has been focused on understanding finance mechanisms that can support the retrofit of homes and buildings by helping individuals, businesses and organisations spread the upfront cost of installing energy efficiency measures and clean heating systems, such as heat pumps. In November 2023, the Taskforce published part one with recommendations focusing on financing options for individual properties. Recommendations for Scottish Government include:

- to develop an information framework for equity release products and raise understanding amongst professional advisors of the benefits of current products like green mortgages
- identify delivery structures that will facilitate the joint deployment of public funding and private sector capital
- review and publish the scope to utilise fiscal levers and taxation policy in Scotland to accelerate energy efficiency measures and zero direct emission heating systems.
- to explore the scope to develop and test property-linked finance (PLF) in Scotland, a model successfully used in other countries and which links retrofit finance to a property rather than an individual.

The second part of the Taskforce's reporting will be published later this year, with a focus on mechanisms impacting multiple properties through place-based mechanisms, heat network models and options to finance social housing retrofit.

First Ministers Investment Panel

The First Minister's Investor Panel was set up to explore how Scotland can attract investment that supports the transition to net zero and bring investor intelligence to policy and regulatory development early in the process. The Panel was co-chaired by the First Minister and Angus Macpherson and supported by membership from across private finance.

The Panel's final report included a series of 31 recommendations across strategic direction, investor engagement and delivery, emphasising that large scale private capital investment is needed to enable Scotland's just transition to net zero. The recommendations cover themes including more agile decision making and the upskilling of Ministers and officials, closer relationships with investors and a costed pipeline of infrastructure priorities. The Panel also called for:

- use of existing devolved powers to issue bonds in order to encourage regular engagement by investors, provide an opportunity to market Scotland's investment story, and allow the development of relationships with providers of debt, a track record and credit rating.
- A state sponsored conference on ScotWind with global investors, to also raise the profile of the broader investment landscape.

The Scottish Government's initial response to the Panel's 31 recommendations was published in November 2023. It notes that some of the recommendations will be delivered quickly, but others will require more detailed work. In the 2024-25 Budget , the Government noted that they are considering alternative sources of capital borrowing and that, subject to due diligence, bonds could provide options for infrastructure financing to be structured more effectively. A bond issuance is under consideration for the latter half of 2025-26, subject to due diligence.

Community energy

Over £200 million has been raised through community shares by more than 126,000 people since 2012.[11] Community shares allow supporters to invest in an enterprise or facility. In turn, the enterprise is owned and governed by the members and shareholders. Community shares have been used to finance many community run projects including shops, pubs, hubs, housing, renewable energy and food and farming initiatives. Community bonds are slightly different, as a bond issues are offers to the public to lend money to an organisation and bondholders are not members, and they have no voting rights in the affairs of the society.[12] Numerous community owned energy projects have had success via such financing models.

UistWind is a community energy project that is wholly community owned and generating for the benefit of the community of North Uist in the Western Isles,. The project overcame numerous development obstacles over many years, and over that period the Feed-In-Tariff rate had decreased significantly. Consequently, the amount of financing that could be secured from the principal lender was reduced, and secondary lenders could only offer much higher interest rates. The project's financial model showed to cover the capital costs and enable the project to move forward, alternative financing was required. A community share offer was launched in 2018 to raise a minimum of £350,000, and successfully raised £433,8500. UistWind was constructed and began generating in 2019. It has over 200 members who hold community shares in the community benefit society.

It is anticipated that this project will generate over £2 million over 22 years distributed through its community benefit fund. The funds raised will be used to support the people, community and charitable organisations in North Uist.

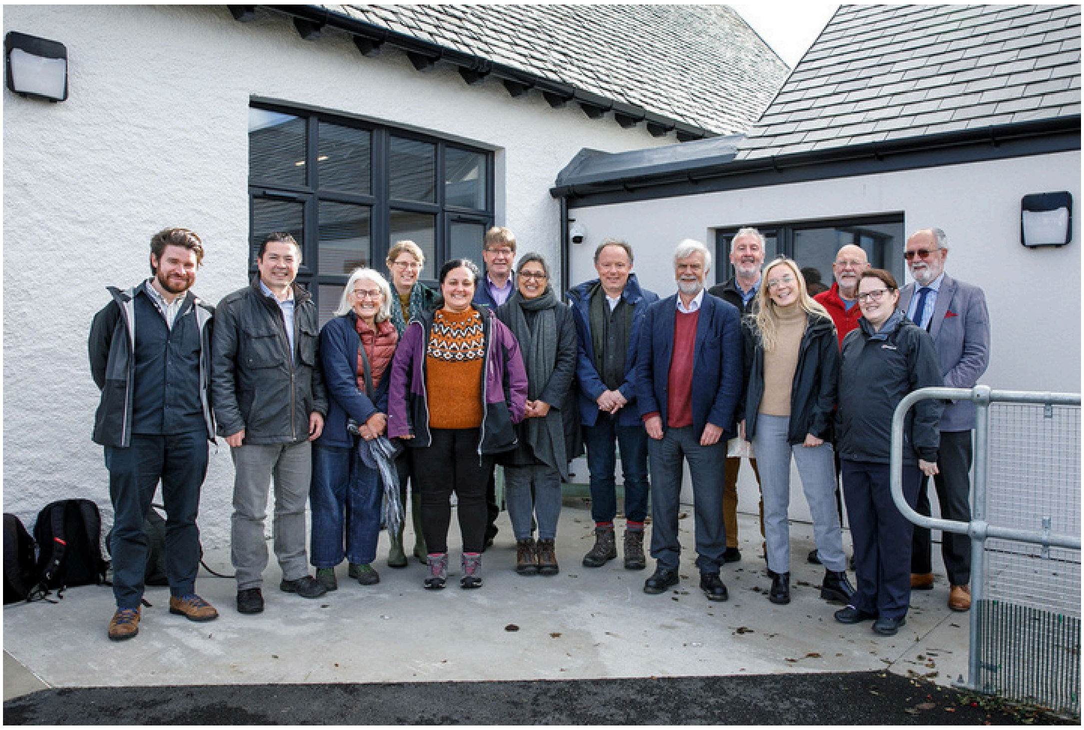
In addition to North Uist, there are a number of other community organisations that have been successful in raising funds through a community share offer or through community bonds:

- BroomPower – BroomPower is a community owned 100kW hydro scheme operated by Lochbroom Community Renewables Ltd. The Community Share Offer closed in August 2016 after raising £900,000 and the project started generating in 2017. In total, there are over 450 investors, with 54% being from the local area and 46% from out with. The surplus from the BroomPower scheme will is gifted to Ullapool Community Trust (UCT) for a Community Benefit Fund.

[11]Community Shares, Co-operatives UK, link
[12]Types of finance, DTAS Community Ownership Support Service, link

- Applecross Hydro – Apple Juice (Applecross) Limited is a Community Benefit Society which was formed by local people to fundraise, construct and operate a 90kw community hydro scheme. Apple Juice raised £803,700 through its community share offer. Apple Juice donates surplus income from the scheme back to the Applecross Community Company, providing a long-term income to be invested in projects for the benefit of the community.
- Glasgow Community Energy– Glasgow Community Energy (GCE) is a Community Benefit Society (CBS) set up in response to Scotland's declaration of a climate emergency. In 2020, the renewable energy co-operative successfully installed 91kW of solar panels on the roofs of two schools in Glasgow: Ashton Secondary School, Glendale Primary School / Bunsgoil Ghàidhlig Ghleann Dail. Wanting to go further they launched a community share offer so people all over Glasgow could get involved. Working with Energy4all, they raised over £30,000 raised through 152 individuals and 26 community organisations across the city. Profits raised are reinvested into local community projects through a Community Benefit Fund.

Linlithgow Community Development Trust successfully raised over £30,000 via community bonds to install solar panels at the local sports clubs. This has provided benefits to the community by offering savings in energy supply costs for the local clubs and creating volunteering and training opportunities for local young people.



The Commission at Point and Sandwick Trust, Isle of Lewis. The Trust built and operates the UK's largest community-owned windfarm

Climate Intelligence Service

The Scottish Climate Intelligence Service is being jointly delivered by the Edinburgh Climate Change Institute (University of Edinburgh) and the Scottish Government's Improvement Service to support all 32 local authorities to manage and deliver area-wide programmes of emissions reduction. SCIS is jointly funded by Scottish Government and 32 local authorities through COSLA. Its objective is to build capacity and capability across Scotland to deliver the Climate Change Plan by informing and embedding climate impact into decision making at local level. This has so far included the procurement of a national data platform which will support consistency of approach across Scotland, and which helps assess high level costs and benefits of the different measures and actions needed for net zero delivery. It will also allow SCIS to look at whether local plans are on track at the pace and scale needed.

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Annex A

- Just Transition Partnership, Matthew Crighton
- Scottish Fiscal Commission, Claire Murdoch, Head of Fiscal Sustainability and Public Funding
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- Green Investment Group, Adrian Barnes, Head of Green Analytics
- NatWest/RBS, Judith Cruickshank, Managing Director, Commercial Mid-Market RBS
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- Baillie Gifford, Sefton Laing, Senior Climate and Environment Specialist
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- Edinburgh University, Professor Christine Cooper, Chair in Accounting
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- Scottish Enterprise, Reuben Aitken, Managing Director
- South Scotland Enterprise, Martin Valenti, Energy Transition and Green Enterprise Director
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- Scottish National Investment Bank, Graham Watson, Head of Public and Government Partnerships
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Just Transition Commission