



Paper 8/3 Skills and Education session 2

For information

1. Purpose

1.1 To provide Commissioners with background information on agenda item 4, an information gathering session exploring the role of skills and education in securing a just transition to net-zero.

2. Background

2.1 This note provides detail of the participants who have been invited to give evidence as part of this session along with a list of suggested questions. Further background information is also included in the Annex to help inform the session.

What	Agenda item 4: skills and education information gathering session 2
Who	<p>Dr Stuart Fancey, Director of Research and Innovation, Scottish Funding Council</p> <p>Dr Eurig Scandrett, Just Transition Partnership rep, University and College Union</p> <p>Kate Signorini, Deputy Director, Open University Scotland</p>
Why	<p>An opportunity to examine the role of skills and education in securing a just transition to net-zero.</p> <p>A selection of possible questions are included below:</p> <ul style="list-style-type: none"> • Do you think the skills and education system in Scotland is currently capable of developing the workforce needed to achieve net-zero emissions? • What lessons can be learnt from previous skills transitions that are of relevance to the transition to net-zero? • What do you see as being the immediate and longer-term issues posed by COVID-19 on the skills and education system in Scotland? • What opportunities might there be for investment in skills and education to support a green recovery from COVID-19? • How can the supply of skilled labour be matched to uncertain demand in areas such as energy efficiency, low-carbon heat and electric vehicles? • Could the transition present opportunities to address existing labour market inequalities, with respect to gender for instance? How might skills and education help with this? • How can the skills transition be paid for - what is the responsibility of companies or individuals and what is the responsibility of Government? • How does the net-zero skills transition fit with other big skills transitions – i.e. digital? • Are the skills and education systems in Scotland coordinated sufficiently? Are they both sufficiently focused on the challenge of delivering net-zero?

	<ul style="list-style-type: none"> • What are the current gaps in relation to skills and education that Government will have to fill for the net-zero transition? • What are some of the barriers to people engaging in lifelong learning – how might these need to be addressed to ensure an inclusive transition to net-zero? • Is there currently sufficient understanding of the types of skills etc that will be needed to deliver net-zero? Do businesses understand future skills that will be needed to take advantage of the opportunities of the net-zero economy?
Additional background information	<ul style="list-style-type: none"> • Annex A: submission from Open University Scotland • Annex B: submission from University and College Union

Annex A – submission from Open University Scotland

Social justice and equality of opportunity are at the heart of everything The Open University does. We are committed to extending opportunities for educational success to everyone who wishes to realise their ambitions, and that our high-quality education is accessible to all, regardless of age, income, qualifications or geography. The Open University has always operated an open entry policy.

The Open University in Scotland is funded by the Scottish Funding Council for the learning and teaching of students resident in Scotland. We have over 17,000 students currently studying in Scotland, 75% of whom are in full or part-time employment.

Our students range from school age to 90 with the median age of our undergraduate entrants at 27. We run the [Young Applicants in Schools Scheme](#) (YASS) for pupils in their final year of secondary school and in 2019/20 we had over 1,200 YASS students across all 32 Scottish education authorities.

19% of our new undergraduates live in Scotland's 20% most disadvantaged areas; and we're proud to say we now recruit more students from the most deprived areas than the least deprived areas. 23% of our students declare a disability and almost a quarter of our undergraduate entrants live in remote and rural parts of Scotland.

The size and scale of the University, with over 168,000 students across the UK, throughout Europe and worldwide, allows it to offer a broader curriculum and wider access to educational innovation including our long-standing, strategic partnership with the BBC.



As a distance learning provider, our students study with us in their homes or workplaces, rather than being present on a campus. By its very nature, our model of delivery is inherently environmentally sustainable, and the University is striving to achieve even higher standards.

The University has exceeded its target of cutting CO2 emissions by 34% in 2020 against a 2005/06 2005 baseline, in fact we have cut CO2 by almost 54% since 2005 across all our sites. As of 1st June 2020, all the OU's electricity across all nations and locations now comes from sustainable sources i.e. solar, wind and hydro. The University's Go Green programme aims to achieve environmental and financial savings across the University by empowering staff to take action on energy, waste, water and travel. Go Green is intended to be an integral part of staff behaviours in the future to enable the University to manage its energy needs and energy costs.

The Open University offers significant climate change related curriculum at both undergraduate and postgraduate level, and as free open educational resources on [OpenLearn](#). Careers relating to environment and climate change are promoted to OU graduates on our [careers website](#).

The Open University is also a mass communicator of free, informal learning both nationally and globally through its [OpenLearn](#) website, iTunesU, the OU channel on YouTube and [FutureLearn](#) - a private company jointly owned by The Open University and The SEEK Group. The OpenLearn website gives the public free access to learning materials from the OU. These materials either come from our modules or are developed to support television and radio programmes co-produced with the BBC and provide expert comment on topical issues. All OpenLearn courses are also available on Google Play and Amazon for Kindle.

Our free learning resources on OpenLearn were accessed by over 1.6 million visitors in April this year.

As part of our Covid-19 response, we worked at speed with the Scottish Government and Skills Development Scotland to develop a new portal for furloughed workers on [myworldofwork.co.uk](#) which attracted 120,000 visitors in its first month since launching in April.

The University's [OpenSTEM Labs provide users with access to laboratory and field investigations in a distance learning context](#). The OpenSTEM Labs currently have four distinct zones, three of which connect users to equipment and data via authentic, web-based interfaces: the OpenScience Laboratory, the OpenEngineering Lab and the OpenScience Observatories. The fourth zone houses the University's teaching labs which are used to give our students exposure to 'at-the-bench' practical skills where required.

Blue Planet II was a ground-breaking BBC/OU co-production and OU academics were consultants for the series. Since its first broadcast, a huge wave of interest has developed concerning ocean sustainability, particularly in terms of marine plastics and climate change. Again OpenLearn has a wealth of information on the [Blue Planet](#) series. We look forward to another natural history series to be presented by Sir David Attenborough in co-production with the BBC in autumn 2020.

[OpenLearn Create](#) is an innovative open educational platform where individuals and organisations can publish their own open content, open courses and resources. It allows The OU in Scotland to co-create open educational resources with partners, such as the Carers Trust and Parkinson's UK.

Building on research into the carbon impacts of HE teaching models, the innovative [SusTEACH toolkit](#), was designed to support the planning of more sustainable courses, modules and qualification programmes. This includes tools and resources for lecturers and students as well being incorporated into a free OpenLearn course on '[The environmental impact of teaching and learning](#)'. The toolkit provides support for embedding sustainability practices among students and teachers, thereby supporting HE institutional transformation.

The Open University in Scotland welcomes the renewed focus upon lifelong learning, upskilling and reskilling contained in the FutureSkills Action Plan and the Enterprise and Skills Strategic Board's Strategic Plan. Our modularised courses and qualifications, MOOCs, microcredentials and open learning provide the ideal route to reskill and upskill Scotland. Utilising the SFC Upskilling Fund, we are collaborating with Skills Development Scotland, Partnership Action for Continuing Employment (PACE), sector and community partners to provide access to OU learning and skills development.

Annex B – submission from University and College Union

The University and College Union (UCU) is the largest trade union in the post-16 education sector in the UK, representing over 120,000 academic and related members across the UK, and is the largest union in the higher education sector in Scotland. UCU is an affiliate of the Campaign Against Climate Change.

UCU Scotland has been committed to the principle of just transition since 2016, and a member of the Just Transition Partnership since its inception. UCU Scotland has organised its own event on just transition, in conjunction with Aberdeen Trade Union Council, on how this might affect the higher education sector and the role which higher education can play in collaboration with other sectors. UCU Scotland is a signatory to the [Just and Green Recovery](#).

Investment in education for a just transition

There is evidence that investment in post-compulsory education is one of the key factors in a successful just transition. Cha, for example, highlights that the degree of success in retaining employment and living standards in the Ruhr valley's transition from coal and steel production was "investment in new universities and technical institutes".¹ By contrast, the higher education sector has seen a decline in investment over several decades, a trend which continues. In 2019, Audit Scotland noted that public investment in higher education had declined by 7% in three years and pointed out the under-funding of publicly funded education (by 8%) and research (by 20%) in the sector. This trend needs to be reversed, with a significant injection of public funds, in order to enable the tertiary sector to play its essential role in the just transition. Whilst a high proportion of this additional funding will be in the FE sector, there will also be a need for graduates and research in both the transitional phase of a just transition, and in the zero-carbon economy.

Investment in research for a just transition

Universities will need to play an important role in research into the just transition, with dedicated government research funding. Such funding should not be restricted to technical scientific and engineering areas, which can tend to reinforce commitments to technical, rather than political solutions in transition plans. The transition to a zero-carbon economy will affect all areas of social and economic life, and the implications are not fully understood. In particular research into the

¹ Cha, J.M. 2019. From the dirty past to the clean future: Addressing historic energy injustices with a just transition to a low-carbon future. In Jafry, T. (ed.) *Routledge Handbook of Climate Justice*. London and New York: Routledge

social and economic aspects of transition will require new funding streams in higher education. Commenting on the Just Transition Commission's interim report, Unionlearn's booklet *Cutting carbon, growing skills – green skills for a just transition* noted that "There is a crucial research role here for the education sector in collaboration with employers, unions and local and national authorities" in detailed mapping of jobs, skills, work and quality of employment conditions in order to plan for the just transition.

Just transition planning and outcome agreements

Outcome Agreements can be strong mechanisms for ensuring that universities retain their autonomy whilst delivering public benefit, guided by government policy, and can be deployed to encourage higher education to make rapid changes towards a just transition. As just transition plans are developed by state-led partnerships (including education providers and education unions), these can be linked to outcome agreements based on the gap between existing skills and the skills mix needed for the transition and the zero carbon economy beyond, nationally and broken down by sector and area.

Planning for education and skills for a society in transition

The skills and education required, and the means of delivering them, during the transition to a zero-carbon economy, may not be the same for those required in a zero-carbon economy. There will need to be a planned industrial strategy led by government in which education providers and the unions that represent them should be involved.

The education and skills needed in the just transition will not just be in the most directly affected sectors of engineering and construction (although these will be important). There will be increased demand in other sectors of employment, including the public sector. For example, given the contribution of agriculture and forestry to carbon budgets, a recent publication for STUC predicts 40,000 job-years in land based employment.² Research, education and training will be required in all areas of the just transition.

Education provision for a just transition needs to respond to three broad categories of workers: labour market entrants who will need to be diverted into an emerging labour market in the zero carbon economy; current employees in industries most affected, directly or indirectly, by the transition to the zero-carbon economy, who will be seeking a secure transition to alternative employment, including reskilling where needed; and workers exiting the labour market, including early retirees, who, in addition to financial security, will require of society social support including access to education. These three categories are likely to require different educational and skills provision. In particular the educational requirements of those workers exiting the labour market should not be neglected just because they are not perceived as directly contributing to the economy.

Education providers and employment conditions

The forms of delivery of education during the just transition will need increased flexibility of provision, including undergraduate and postgraduate, direct entry into different levels of study, part time and full time, expanding the availability and breadth of graduate apprenticeships, intensive block learning, online and blended learning, distance education, diversities of qualifications other than degrees. Universities are in a strong position to contribute to lifelong education. Such

² STUC 2020 *Analysis of Infrastructure Investment options for Economic Recovery* interim report

flexibility in delivery requires employment security for those workers delivering the education, which translates to sufficient numbers of securely employed higher education staff, including academic and related posts.

This will include workers who formerly worked in fossil-fuel intensive industries becoming educators in higher education. There needs to be recognition of the value of former employees in the fossil-fuel intensive sectors as both educators and researchers, who should neither be disadvantaged in the labour market of university jobs, nor displace existing and early career educators in the sector. Moreover, terms and conditions in the higher education sector will need to be attractive for skilled workers exiting the fossil fuel sector in order to take advantage of their expertise in educational settings.

Many reports on just transition emphasise the importance of consulting and engaging with communities and workers affected. The skills required for engagement, community development and workplace organising are essential for a just transition, and require investment in both the education of, and employment of community workers and trade union organisers.

The international challenge of just transition

Climate change is a global emergency. Whilst Scotland can and must play its part in a just transition to a zero carbon economy in Scotland, this needs to be contextualised in the inter-connections throughout the world, in particular the impact of Scotland's economy and policies in transition on other parts of the world. This includes the provision of education to international students, who might boost demand for courses and skills development for which there is an inadequate domestic market, and encouraging the recruitment of university employees from an international pool. Scottish higher education has a strong tradition of international collaboration, which is put under strain by immigration policies which restrict access to employment and education for workers and students from outwith Scotland and the UK and which make such workers and students feel unwelcome in Scotland. UCU welcomes the re-introduction of the post-study work visa, and supports measures to relax immigration controls and remove surveillance of employees and students from outwith the UK.

The role of union environment representatives

There is an important role in the just transition for trade union environment representatives in all sectors. Such representatives require initial and ongoing training, as well as protected rights, comparable to those legal entitlements afforded to safety representatives. Environment reps currently often play an important role in 'cultural' environmental change, such as cycle to work strategies, but are constrained in negotiating for more structural environmental improvements, such as aligning procurement or investment policies to the just transition to the zero carbon economy.

Markets will not deliver a just transition

The demand for graduates in the just transition and the zero carbon society must be planned for. Basing education on current employer demand, market prediction and too much faith in entrepreneurship, will lead to a deficit in the professional skills and undermine the just transition. The current business model for higher education is not conducive to just transition because of the legacy of underfunding, which has driven universities to seek additional funding from market sources (fee paying students, commercialisation activities, privately commissioned research). However, various commentators have pointed out that any achievements in just transition in both

market-oriented and social democratic economies, has required state intervention.³ The market simply will not deliver just transition.

Universities have, however, been increasingly market-orientated: led by student demand, comparative metrics, commodifying education and research, entrepreneurial and driven by capital investment. This has included in some areas, increasing influence in higher education of corporations, including those with vested interests in perpetuating the fossil fuel industry. This trend has been driven by a governance model in which the accountability of Vice Chancellors and Governing Bodies to social needs has declined. Certainly innovation and sensitivity to the labour market demand is part of the responsibility of higher education, but just transition will require the sector to be more flexible, to innovate outwith the market and to drive demand for the education required to live and work in a zero carbon economy.

Accountable governance in higher education

Thus, the current governance model for higher education is not conducive to just transition because of the weak accountability of governing bodies and Vice Chancellors. UCU has argued for greater trade union and community involvement in higher education governance and management, and this will help protect employment in the sector during just transition.

Industrial strategy and education policy for a just recovery

Strong leadership from the government and the public sector will be required for a just transition. This will include government incentives for higher education to provide research into labour market interventions, direct funding of student places at undergraduate and postgraduate level, and expanding public sector employment to absorb surplus labour due to just transition. Demand-led educational provision is inadequate on its own. Higher education unions need to be part of developing and planning the industrial strategy which will deliver just transition.

Lessons could be learned from the rapidly deployed public investment in response to the COVID-19 emergency, and applied to the climate emergency in a more planned way. Public money would be well spent in providing the bridge between employment in an economy heavily dependent on fossil fuels, to a zero carbon future. In contrast to the COVID-19 emergency, the just transition can be planned, and the delivery controlled. The post-lockdown recovery is an opportunity to enact the just transition.

³ Morena, E., Krause, D. and Stevis, D. (eds) 2020. *Just Transitions: Social Justice in the Shift Towards a Low-Carbon World*. Pluto Press