

Environmental Audit Committee

Oral evidence: Green Jobs, HC 903

Wednesday 3 March 2021

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[Watch the meeting](#)

Members present: Philip Dunne (Chair); Dan Carden; Mr Robert Goodwill; Helen Hayes; Ian Levy; Caroline Lucas; Cherilyn Mackrory; Jerome Mayhew; John McNally; Dr Matthew Offord.

Questions 67 - 112

Witnesses

I: Charlotte Bonner, National Head of Education for Sustainable Development, Education and Training Foundation; Iain Patton, Chief Executive Officer, Alliance for Sustainability Leadership in Education; Meg Baker, Director of Education, Students Organising for Sustainability UK; Graham Petersen, Secretary, Greener Jobs Alliance; and Lee Jowett, Fellow, National Association for Environmental Education, and Sustainable Schools Co-ordinator, Leicester City Council.

II: Richard Kendall, Executive Director, Humber Local Enterprise Partnership; Samantha Smith, Director, Just Transition Centre; and Kevin Bentley, Chair, Local Government Association's People & Places Board, and Conservative Councillor, Stanway & Pyefleet Division, Colchester, Essex County.

Written evidence from witnesses:

- [Education and Training Foundation](#)
- [Alliance for Sustainability Leadership in Education](#)
- [Greener Jobs Alliance](#)
- [Local Government Association](#)

Examination of Witnesses

Witnesses: Charlotte Bonner, Iain Patton, Meg Baker, Graham Petersen and Lee Jowett.

Q67 **Chair:** Welcome to the Environmental Audit Committee for the second hearing in our inquiry into green jobs. We have two panels today, the first focused on the education sector, the beginnings of the job creation pathway, and the second looking at the sustainability of transition.

I am going to invite our five panellists from the first panel to briefly introduce themselves and to explain the relevance of their role and the organisation they represent to our discussions today.

Charlotte Bonner: My name is Charlotte Bonner. I am the national head of education for sustainable development at the Education and Training Foundation, which is the expert body for professional development and standards in the further education and training sector in England.

Iain Patton: My name is Iain Patton. I am the chief executive of the EAUC, which is the sustainability leadership alliance for universities and colleges in the UK.

Meg Baker: I am Meg Baker. I am acting director of education at Students Organising for Sustainability UK. We are the National Union of Students sustainability charity.

Graham Petersen: Good afternoon. I am Graham Petersen. I am a steering group member of the Greener Jobs Alliance, which is a coalition of trade unions, student organisations and NGOs. We have been quite active around the issue of skills at work.

Lee Jowett: Good afternoon, my name is Lee Jowett. I am a fellow at the National Association for Environmental Education, which is a national charity that oversees environmental education, and also sustainable schools co-ordinator at Leicester City Council.

Q68 **Chair:** I am going to start with a first question to Graham. Today is an interesting day for us to be talking to you. You may or may not have had an opportunity to consider what the Chancellor has been saying in relation to helping boost employment generally following the Covid pandemic, but in particular towards the green economy. Could you set the scene for us a little and give us an indication of your perception of the skills gap in environmental sectors?

As a Committee, we have had evidence from certain sectors—like the motor industry, like the construction trade where we are doing an inquiry into energy efficiency in homes—that there need to be some significant changes in the way in which young people are educated and existing workforces are reskilled in order to manage the transition. What is your perspective about how the Government are encouraging, or otherwise, this move?



Graham Petersen: Yes, I did manage to catch some of the Budget presentation and it was good to hear the Chancellor talking about a commitment to green growth and skills. What is really needed is a detailed policy framework on how we are going to try to close this skills gap that you refer to. A number of key sectors that are going to be very important for reducing carbon emissions are reporting these skills gaps.

This isn't a new thing. Your Committee reported back in 2013 that the Government were failing to mainstream sustainability and skills into industrial sectors. I was on one of the working groups that looked into that on behalf of the Green Economy Council, and we supported the view that the EAC had taken.

Since then our view is that, although there is more about the issue of green skills, there is still a huge gap and the Government still need to do a lot more. One of the organisations linked to us brought out a paper yesterday, "An emergency plan on green jobs for young people" by Friends of the Earth. That highlighted the things that are going to be needed, particularly around the issue of green apprenticeships, if we are going to achieve the kind of emissions target reductions that the Committee on Climate Change are referring to.

One final point, in terms of the recommendation as to how we can start doing that, what would be really important to realise the Chancellor's ambition and commitment would be to set up a network of national and regional centres of excellence for zero carbon skills at further education colleges. Also, to look at things around apprenticeships, particularly, about how you address problems of diversity and the fact that there are certain disadvantaged groups who are not properly represented in the apprenticeship system.

Q69 **Chair:** The new Secretary of State for BEIS, before he was appointed, declared—on the establishment of the green jobs task force in November—the ambition for 2 million green jobs. There have been various attempts to quantify what this means. Evidence that we had at our first session was along the lines of: most of the economy is going to be changing the way it functions at the moment and, therefore, we should not be thinking in terms of particular jobs being characterised as green jobs because all jobs are going to become capable of functioning in the new economic environment in which we will be living.

Do you think that is a fair characterisation, and does it need to be about how it is looking to transition people from one skill to another skill in order to be effective in the economy and to meet the demands of businesses in the future?

Graham Petersen: Yes, the proposals that we are talking about are important across the whole economy. That is one of the reasons why we are called the Greener Jobs Alliance, because we feel every job needs to be made green. Although there are some jobs that are going to make



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more of a contribution to the green economy than others, everyone has to look at the potential for reducing emissions in their sector.

If we look at what is needed, there does need to be a comprehensive view taken at the industrial sector level as to: what are the upskilling requirements? Where are the potential job losses and where is the potential job creation? That can only be done if there is a detailed dialogue not just with employers but with trade unions as well, because if we are serious about the just transition, and it is a principle that the UK Government signed up to in the Paris Agreement—I know you also talked with Sue Ferns, and she talked about it in the first session—it has to be given real meaning. In other words, the workers who are potentially going to be made redundant will have their jobs and terms and conditions impacted, and they have to have a say in this. That is particularly in the area of skills: what skills are they going to need in order to make sure they have the job security that is needed?

The recommendation I would make here is to use a lesson that we have seen in health and safety in this country, the cross-party approach in the Health and Safety at Work Act, which provided for trade unions to have a legal right to be consulted on this issue. We think that workers and their unions need to be consulted about skills and the future job implications at all levels. That is workplace, sector, regional and at national level.

There is a very good example that is going to be launched this month in Yorkshire and Humberside where the trade unions there have been instrumental in bringing together employers, the educational establishments and others, research bodies, to set up a climate commission. We think that is a model that should be rolled out in other parts of the country. It may need regulation and support from the Government to do that.

Q70 Chair: That is very interesting, Graham. If you have not already done so, perhaps you can write to us to give us some details about that Yorkshire initiative.

Iain, you have proposed a national skills committee to deliver a low-carbon skills strategy. Could you explain why you think that is necessary and what they should both look like?

Iain Patton: If I could step back a little bit, education is so often forgotten as a critical element of change, and the change we need. You do not need me to remind you of climate breakdown and biodiversity. The pandemic has only exacerbated the economic and social inequalities. The whole world is changing. We are in the fourth industrial revolution, with artificial intelligence, automation and blurring of boundaries between biology, technology and the physical world.

We are in a complex world, and the world of work needs to meet that complexity. We do not need a workforce that is overwhelmed by it or can only operate in siloes. That is essentially what we have. We need people



who can embrace this complexity and find opportunity. This has to be an opportunistic agenda. I have a great quote from John Dewey about the library categorisation system, “If we teach today’s students as we taught yesterday’s, we rob them of tomorrow.” Learning and teaching is not evolving quick enough. It has to catch up. We need a much more interdisciplinary approach. We need a more rounded individual with greater people skills and climate literacy.

A national skills committee or commission is basically recognising the scale of change that is required, and it is recognising the context that we are in with the Prime Minister’s commitment to a green, net-zero future for the economy. The great news is that we can recover from the pandemic and address the climate crisis in the same action by aligning skills with economic regeneration. The national skills committee or commission would create a low-carbon skills strategy. Its role is to co-ordinate the implementation of that. That needs to be a very inclusive group. This cannot be done piecemeal or by incremental change, even of education. Education cannot evolve quickly enough.

We need this whole Government approach, which then works with local authorities, businesses, education organisations, unions and, critically, young people. Young people are calling for change and they have more skin in the game than you or I do. They bring a new perspective, a new urgency and a new clarity of desire for this. The national skills commission would develop a low-carbon skills strategy. That has to be one and the same as, and integrated with, a new industrial strategy with a net-zero strategy. We cannot have these things operating in siloes or isolation, so by having a national skills commission it is recognising the enormity of change but also the enormity of opportunity.

Chair: Your call for the young to be involved in this is a nice segue for John McNally to ask his questions in relation to the start of this process of developing skills.

Q71 John McNally: My first question is to Meg, followed by Lee. How can we better understand how the education system teaches sustainable knowledge and skills? I have been reading here and it says, “Current learner exposure to teaching on the most overtly sustainability-focused courses is reported as low, with only 36% of a sample of 8362 higher education students saying they have experienced teaching on ‘understanding how human activity is affecting nature’, 35% saying they have experienced teaching on ‘using resources efficiently to limit the impact on the environment and other people’ and 40% saying they have experienced teaching on ‘looking’—I am not sure what that actually means—“at global problems from the perspective of people from around the world’ at any point in their education to date”, which I think is remarkably low.

Meg, in the first instance, could you outline the extent to which sustainability is already taught throughout the UK’s educational sector. Once Meg has finished, could you come in Lee, please?



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Meg Baker: The data you are quoting is from our national survey, which is consistently similar. Good to hear you quoting that data. We have basically been conducting the same survey for the last 10 or 11 years now. We are finding that students are consistently saying that they are not getting as much experience or exposure to sustainability education within their tertiary education experience as they might expect.

Let me give you a bigger picture of how students and learners are experiencing sustainability within the UK. At the moment, there are two perspectives that we need to capture here. One is: where is sustainability within taught education—because it has to be—and where is it happening, because of policy and because of curriculum structures, and what are we hearing from students and learners in terms of their experiences of this? One factor is that there is very little inclusion of sustainability and climate education in any education policy at the moment. That is why the Teach the Future campaign, which we host and support, is calling for a climate emergency education Act, which is absolutely key to addressing this.

What we are seeing is this continuation issue in students' taught education. When they are at primary school they are exposed to quite a lot of sustainability and engagement with climate education through their different learning experiences. Then, as they go into secondary education, the focus is far more on exams and students needing to be able to achieve learning outcomes that are based purely on the exam profiles that their curriculum is built around. This siloed way of working results in the students becoming less engaged with the agenda and less engaged with sustainability. When they go on to university and they focus more on specialist subject areas, those specialised subject areas are also not necessarily engaging with sustainability in this holistic way.

We have asked students how they are experiencing it and how they know this. What we have found is that for students in schools, so school pupils, 4% of 3,000 pupils surveyed say they feel that they know a lot about climate change, so only 4% of 3,000 pupils, but 68% of them are saying that they want to learn more about the environment and climate change. That is a big factor. How are teachers able to address that? If pupils are saying that they want it, we need to know if teachers feel equipped to be able to do that.

In a survey we carried out in 2019, 75% of teachers said they feel they have not received adequate training to educate students about climate change and 69% of teachers think there should be more teaching about climate change in UK schools.

Let's just talk about universities, because it is important to cover higher education as well. What we found is that 65% of students in universities in 2020 said that they would like to learn more about sustainable development.



Linked to the data you were quoting, 36% of students are saying that university is the place that they have studied that has encouraged them the most to think and act to help the environment and other people. It is highlighting that university is not the space in which that is happening. A lot of the feedback from these surveys is that it is mostly happening in primary but, if we are seeing a drop off, how are we ensuring that the transition to a green economy is going to be remotely achievable?

We need to see a holistic approach to embedding sustainability in a joined up way through the whole education sector, across all academic disciplines, not in a siloed way. It currently sits in GCSE geography, which is not compulsory, and it sits within science, but only the very basics of climate science.

Lee Jowett: Echoing what Meg has said so far, I work with 115 schools in Leicester. We deliver environmental education across all our schools, so primary, secondary and colleges. Primary schools have a very joined-up curriculum. It is quite diverse in what they deliver. They have a national curriculum, certainly for maintained schools, but they are much more flexible in how they deliver it. For example, we work with some schools that do problem-based learning and they will spend an entire term focusing on fair trade, for example, and all the issues around fair trade. We have a lot of schools that work around forest schools and understanding about environmental impacts and things.

In secondary school, absolutely, it drops off. The word I would use is "compartmentalised." It is very much down to exams. We see some good examples in schools, where we see schools still doing forest school activities right up to 16-year-olds, but it is quite inconsistent because it is not a national picture. The work we do highlights some of those issues. We have some good examples in some of our schools and we have some that are not as good. Part of it is because there is not a national picture.

Certainly, the concept of sustainability disappeared in the most recent curriculum changes. I think there was a perception that it will still be taught and we will still deliver it. Using that phrase "sustainability," when I talk to Year 6s, they can talk about eco and environmental things but there is a missing link to talking about sustainability. I would say it is inconsistent. That is my take home from that.

Q72 **John McNally:** My second question is to Charlotte, followed by Meg. There is a consistent theme running through this: who is going to train the trainers? That is probably the fundamental question.

The Aldersgate review talks about, "Embedding sustainability into all subjects will help to ensure that students working in sectors not typically thought of in net zero delivery will be equipped with the knowledge to further decarbonisation—such as agriculture, engineering, hospitality or media." You can see where the broader picture begins to come from.

What is education for sustainable development, and how can it become a



central pillar of all education rather than just be perceived as an add on?

Charlotte Bonner: Just to add a quick piece of information to the previous question. One of the things the Education Training Foundation is currently doing is mapping exactly where—*[Inaudible]*—specifications and occupational standards across FE provision, with a focus on high-enrolment qualifications. We should have that data available to us within the next month. If you would be open to that, I will happily write to the Committee with that information.

Regarding education for sustainable development, it is all about empowering learners to take informed decisions and responsible actions so that they can meet environmental integrity, economic viability, justice society goals now as well as in the future. It is about lifelong learning and it is increasingly seen internationally as an integral part of quality education, too.

The thing you picked up on, John, is that there is a difference between education about sustainable development and education for sustainable development. Both are very important. The former helps to develop specialists in sustainability, but we absolutely need the latter to ensure that all learners have the knowledge, the skills, the values and the attributes to be able to play a role in the creation of a just and sustainable future.

That is not to say that everyone needs absolute expertise across the whole breadth of sustainability, but instead that learners have sustainable development knowledge that is relevant to their subject area, whether that is law or marketing, construction, programme management or social care, and they know how it relates to their subject and their future life choices and career pathways. It is not just about the knowledge; it is about the developing of skills and ability to give learners the ability to act on that knowledge. It is about new ways of thinking. It is about promoting learning skills that are resilient to change and are future-proofed, so that people are equipped to face the sustainability challenges that we will face in five or 10 years' time, just as much as they are to solve the sustainability challenges that we face now.

On making education for sustainable development a central pillar, it is very important that these themes are considered strategically and explicitly in education delivery. Opportunities come across all elements of the system, whether that is in the curriculum, partnerships and community engagement that education institutions initiate, through how we operate our educational estate and our operations. There are benefits that can be seen across the whole spectrum from early years through to higher provision. That is often described as "the golden thread" of sustainable development being woven into the education system.

The risk of not taking that holistic approach is that it is seen as niche or specialist or only as a priority for some or, worst case, a tick box. Given the urgency of climate change, climate justice and broader sustainability



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goals, we need widespread uptake of ESD across the education system now. How to do that? You mentioned that teacher competencies are taken for granted. You get huge policy documents about green jobs where teacher competencies are not mentioned. I believe it is one of the biggest levers for change, so integrating ESD into initial teacher training but also continued professional development for the workforce, curriculum reform, leadership and governance development, inclusion in regulatory and inspection requirements as well as a link to investment and funding. They are all enablers that will get the education system to embrace this agenda and move with it.

John McNally: Meg, would you like to follow on from Charlotte? I don't know if it is just me, but I am not picking you up very clearly, Charlotte.

Meg Baker: I do not want to repeat what Charlotte has just said but, in terms of understanding what education for sustainable development is, it is important to see this as not being an academic discipline. It is a way of teaching and learning, and it is ensuring that every single learner is a sustainability learner. That then translates into ensuring that, in the long term, our whole population understands what sustainability means in the context of their personal and professional lives.

The purpose of education for sustainable development is about trying to transform and reform how we do education. As Charlotte says, it is about embedding values thinking. It is ensuring that students have the competencies to be able to be reflective on their own values, understand different perspectives, so that we can tackle the climate and ecological crisis that we are currently facing in a way that delivers climate justice so that we are not working in siloed ways. We will work in a joined up way.

What we are talking about here is a lack of joined-up thinking, which is the problem that we are currently experiencing. We need to make sure that the way we tackle it is done in a joined-up way, which is what education for sustainable development aims to do. It aims to join up educators to understand what sustainability looks like in the context of their disciplines, whether it is a vocational course, whether it is an academic discipline, whether it is a professional context. Then, when we see people as our future leaders, any individual working sees what the actions they take, and the decisions they make, look like in the context of sustainability, so that it can be for the betterment of both people and the planet, and so that we do not continue to make the mistakes that have led us to the climate and ecological crisis that we are seeing now. Scientists are warning about it getting worse, so we need to address this through our education system.

How do we do this? We need to ensure that we upskill educators, upskill industry trainers and upskill teachers. Everybody who is working to train and educate people needs to be upskilled in this so that they understand how the lens fits to their specialism. It is not about trying to make sure that everybody knows all the precise science of climate change; it is



ensuring that they understand this is a problem and how their specialism can support addressing it.

- Q73 **John McNally:** Thank you very much, I agree entirely. That moves us on nicely to my last question, which is for Iain Patton. I think this question demonstrates the inequalities—I hope you agree with me, Iain—that we are speaking about. We have certainly looked at the less privileged people in our society and how they access further education. The Aldersgate Group wrote to us that, “Further education and higher education institutions all around the UK should be enabled to play a role in developing local skills and deliver green jobs, through collaboration with businesses and investors.” Nobody would disagree with that. “Currently, research funding is disproportionately targeted, with the ‘Golden Triangle’ between Oxford, Cambridge and London receiving over 55% of health-related research funding in 2015 and 47% of business enterprise research and development. It is therefore essential that businesses and investors are encouraged to create a partnership with universities all around the UK.”

With that in mind—it sounds like you have one hand tied behind your back—how can local and regional partnerships be created to ensure education providers are responding to the skills needed in their area when I am hearing from the Aldersgate Group about all this prejudice towards the “Golden Triangle”?

Iain Patton: I agree entirely. It is an uneven playing field. Who is best placed in their local region to be part of the solution? It is local universities, local colleges in partnership with local businesses, local authorities, and enterprise development agencies, bringing to bear the innovation and enterprise hubs of colleges and universities in a much more integrated way.

Your previous question was about the value of national climate skills commissions. What I would see them doing is having a critical role in rolling out capacity, funding and policy into the regions. You cannot just leave it to the regions to respond in a vacuum. Funding isn’t equally distributed, as you have just pointed out. We need more of that research funding to go into the north-east, the north-west, Scotland and so on.

We need that policy infrastructure, and we need the skills revision engaged. Who better than a local college, working in partnership with local builders or the local car industry? I heard this week that only one in 20 mechanics is qualified to work on electric vehicles. There is a huge deficit here, but there is a huge opportunity to align. There are some great examples in the west of Scotland of colleges putting on programmes with local social housing builders. A win/win of successful courses and a guaranteed job at the end of the training, but a real contribution towards fuel poverty and social housing. If we empowered with policy, finance and the local skills agencies in a local way, we could have a much more flexible, responsive and agile approach to local needs.



What I have come across recently is something that the Economic and Social Research Council funded in Belfast, Edinburgh and Leeds; it is placed-based climate action networks. They have been so good at recognising that, to drive change in this area, you need all sorts of capacities and readiness across the policy, funding and training provision. That has been a very useful model.

There is something powerful in regional collaborations that are not just a passing fad but, as Graham mentioned, regional centres of expertise. There is great potential. We are finding now that the winding down fossil fuel world in Aberdeen has such expertise, which is being used in wind farm technology, or off the Humber, which is already developing regional specialisms in offshore generation. Regions definitely have a big part to play in this.

John McNally: Thank you very much. The speakers have been absolutely fantastic in the way they have answered those questions.

Q74 **Helen Hayes:** My first question is for Lee Jowett. Could you describe your role at the council, why it is unique and how it brings together diverse groups and institutions in your region to drive sustainability?

Lee Jowett: Thank you, Helen. I will try to be succinct, because I can probably talk all day about what I do.

I was a secondary school teacher for a number of years working on sustainability, so I led sustainability in a big secondary school in Sheffield. Leicester, as a city, has always supported environmental education. Leicester was the first environment city in 1990, and it was recognised by the Rio Earth Summit in 1992 as being a good example of environmental work generally.

In 2012, the service that was being delivered through ground work stopped due to funding, which was external. As part of that, the council wanted to ensure that environmental education continued to work with schools in the city. In 2014, it launched a new service, which was called Sustainable Schools Leicester. It is fully funded, so schools do not pay for this service. It is fully provided for all schools in the city. That means free schools, academies, private and local authority schools.

One of the rationales for it is that Leicester is a very young city. We are very diverse in terms of culture and heritage, but also in terms of age. One in six citizens in Leicester is in school, three to 19, so we know that we have a big impact in working with our schools. As a city, we have areas that we want to work on around recycling, energy, litter and things. We declared a climate emergency two years ago, and we see that education is a big driver in working with young people.

We are unique as a city. There are a number of local authorities that do something like us, but we very much work interdepartmentally within the council and also with partnerships, national charities and local organisations. We very much focus on eco-schools as an award. It has



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been recognised since 1992, and it is in about 70 countries. Leicester has the most green flag awards in England. That is recognition for external work through schools.

As I mentioned, we declared a climate emergency and we very much work around four key areas. The first one is about reducing carbon, particularly within our school estate. We engage young people, teachers and school leaders, as well as governors, and we look to showcase the work we are doing as well as proactively tackling climate change. We do that by bringing together partners in a number of ways. We have what is called an environment, health and wellbeing schools group.

In that there are about 30 individuals, some within the council, who particularly focus on things like public health, through biodiversity and things like Food for Life. It is very much a joint approach partnership. There is myself and our team, and there are two other colleagues who are externally funded, but we map across the city in how we work with schools on these projects. We are very much looking at engaging stakeholders in those areas.

Three key things that we have focused on is around carbon literacy. We have worked with the Carbon Literacy Trust nationally, and it is a day course but it is for children. We work with Year 4s, Year 5s, right up to sixth formers, around being climate and carbon literate. We also work with schools on an engagement programme called Best Energy, which is a holistic approach to looking at energy consumption with business managers right through to working with children in assemblies.

Finally, we work on something called the climate emergency school fund, which is about changing the infrastructure of our buildings. It is very much about engaging the children and the young people in that, as well as senior leaders within schools. The key thing is that there are lots of national strategies and national projects happening with charities. By working locally with our schools, we find that we develop the strategies that have the biggest impact in Leicester. We are unique to a certain extent, but it is something that could be replicated. We find it has a positive impact with our schools in terms of what they are achieving.

Q75 Helen Hayes: There was a bit of discussion in a previous round of questions about the national curriculum and some of the changes that have been seen in recent years. Lee, are there aspects of what you do that would be easily scalable to become part of the national curriculum and, therefore, could be applied across the country?

Lee Jowett: Absolutely. As I said briefly before, sustainability was mentioned in the national curriculum until 2014 and there were a number of national strategies that existed. As a teacher, I completed something called a S3, which was around a sustainable approach to schools. That looked at curriculum, campus and community. It was a resource that schools could pick up and use, and it identified doorways around different sustainable areas. It was a very straightforward document that identified



what they were doing, what they were embedding and what they could be progressing further on. For me, it would be useful to look at a national approach that schools can use.

We worked with Ashden on a national programme called LESS CO₂. It developed lots of strategies with schools around developing ways of reducing carbon. That is something that could be scaled up nationally quite easily. The carbon literacy course is something that could easily be scaled up. It is a nationally recognised course. We have developed one specifically for children, which is an open access course. Again, that is something that could be easily integrated in lots of different ways.

The other key thing that we have learned from all this is looking at the ways we could develop that national strategy. Eco-schools is a nationally recognised award. Within the steps of eco-schools there are some that are extracurricular, but there is an area looking at how to develop and imbed the curriculum around eco-schools, which is externally validated. That is something that would be really helpful, as well as local councils having that support and that network of working locally with their schools, I believe.

Q76 Helen Hayes: Lovely, thank you very much. My next question is also for Lee, and then for Meg Baker.

I think I know the answer to this, but it is for the record and for the whole Committee. Why does your association believe that sustainability literacy should be considered foundational in the same way as numeracy and literacy?

Lee Jowett: One of my colleagues talked about a gold thread of sustainability. I talk about a green thread. We know that young people and students have a passion for this now. We have that Greta effect. Children as young as three know who David Attenborough is and some of the challenges. We are starting to see that climate awareness is happening, and we think the idea of being climate literate is important in those next steps.

We think all jobs in the future will be green jobs. Yes, we will have specialist jobs, like ecologists or maybe solar panel engineers, but every job in the future will have an awareness of the green agenda, let's say.

From the work we have done with schools, we know at every level—from young people to adults, school leaders, headteachers and CEOs of trusts—that there is a real need for this area and there is a skills and knowledge gap. What we have looked at so far, around attitudes and knowledge skills, is that it needs to be developed as a national approach, because it has an impact on every element in schools.

We know that with children and young people who may not engage at school, some of the sustainability agenda really gets them interested and on board. We know it increases standards and certainly, given the post-



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Covid work around health and wellbeing, it is something we know will have a long-term benefit for young people.

Briefly, around the carbon literacy course that we have developed, which we are offering to any schools, it is training young people as well as university students about that cross-linking. It has local knowledge about climate change, which is one of the issues that we are identifying. A lot of children see the big problem of climate change but do not see how it affects them locally. That is a key thing.

We think climate justice is very important. A new concept that has been identified is climate anxiety. Young people and children, in particular, are aware of climate change and they do not know what to do about it. It is a big, scary thing. Working with children through this course, they take action locally. They work with their parents. They do exhibitions and work, and it empowers them to make those changes. It is important for them. They see the challenges, they see the problems and they want to do something about it.

Meg Baker: I do not want to sound repetitive, but this is a real issue. Right now, we are facing a climate and ecological crisis. In 2018, or was it 2017, the Intergovernmental Panel on Climate Change released a special report on the catastrophic impacts that we are going to face on this planet if global temperatures rise higher than 1.5° above pre-industrial levels.

Just to take that from a climate science perspective and put it into why it is important for education: if the core competencies for our education system are numeracy and literacy, it can only go so far. We need to ensure that young people and adults are fully equipped with understanding what their role is in our avoiding temperatures rising above that 1.5° C. By integrating sustainability, it ensures that we will be addressing that in a holistic way, so that we address it in an ethical, fair and just way and it is not just focused on the environmental impacts but is also focused on how, by addressing the impacts that we have on the environment, we do this in a way that is also socially just.

Why our organisation cares about this is because we are called Students Organising for Sustainability. We represent the youth voice in the UK and we know that 91% of tertiary education students in the UK have stated that they are very or fairly concerned about climate change. We need to ensure that education is equipping them with the tools and the competencies to become agents for positive change, so that they do not contribute negatively towards climate change and they know what they can do when they come out of education and, while they are still in education, how they can address that and—just to connect with your question before to Lee—how that can be embedded in the formal education system.

It can also be within subliminal education, like our education spaces. Our schools, university buildings and colleges all need to be climate-proofed.



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We need to ensure that the spaces where students learn are role-modelling what students can go on to contribute when they go out of the education system. By using the subliminal curriculum, students can engage with learning in those physical spaces.

There is a concept called Living Laboratories, where students can have practical engagement with projects, research and learning opportunities in their learning spaces so that they can physically engage. It is the idea of education of the head, heart and hands, so that they gain knowledge and understanding by putting it into practice. Then they learn to really care about it, because they see the impacts.

Q77 Helen Hayes: Thank you very much. My final question is about what needs to be done right now to equip teachers to teach in a way that is fit for a sustainable future.

Meg Baker: A lot of this is outlined in Teach the Future's climate emergency education Bill, which was written by young people. I know it has been sent to Ministers, and they have not had much response from the Ministers they have written to. It would be nice to see some genuine engagement with this, because it highlights how much impact young people can have on changing our education system. It is something that they are part of, they are consumers of and they can contribute to how we change and address it.

To build on how we can support teachers to become equipped to be able to address this fundamental issue, one suggestion has been to use inset days and use those spaces to train students and current teachers to upskill them in how they can embed sustainability, climate literacy and climate education within their different teaching practices.

Having partnerships with universities, Iain mentioned that earlier. I think that is a great suggestion. Within Teach the Future's asks and recommendations is a national climate education information institute, which will connect scientists with educators so they can have the latest and most up-to-date understanding of our current situation regarding climate change and sustainability. It can provide resource and support teachers and educators to look at how they can embed that knowledge and understanding in their teaching and learning.

We need a comprehensive learning programme for existing teachers, lecturers and other key educational institution staff, and this needs investment. This is a cost, but it is a short-term cost because it is a long-term investment. We are investing in the future and in future generations, and it is absolutely integral that we do this. Also, it needs to go into teacher standards so it is something that every teacher has the competencies and confidence to be able to teach. We cannot suddenly ask teachers to embed this into their teaching and learning. We also need to ensure they have the confidence to deliver on it.

Chair: Thank you, Helen. I saw Lee was indicating, but I am afraid we



need to press on. If we could try to have slightly crisper answers, we will manage to get through it.

Q78 Ian Levy: Thank you to the panel for coming along today. It is good to talk to you. To get a quick feel for the constituency that I represent, we have the biggest deep-water port in Northumberland and we have British boats moving through the estuary and a lot of offshore wind based out of the port of Blyth, so greener jobs and bringing people through the education system is quite fundamental for this area.

Charlotte, why do you think both schooling and post-16 education need more flexibility to make changes without regulatory approval?

Charlotte Bonner: I would not say that I completely agree with that statement, but I think there definitely needs to be flexibility in the system. At the moment a lot of the curriculum, particularly in the post-16 education sector, is led by occupational standards that were developed by trailblazer groups and employers. Although I absolutely believe in the centrality of business to curriculum design and matching the supply and demand side of skills, I think it means there is a short-term priority put into the curriculum design, rather than a longer-term priority. It is difficult with that pure occupational business input to align curricula with national strategic needs.

Graham said earlier that development of curricula and the design of partnerships between education and business must be done with input and collaboration from employers, industry bodies, learner representatives and local government agencies to ensure the needs of industry and learners are met, but also that our national strategic goals for society are met.

The other problem is that, in a lot of cases, employers do not know what their long-term needs will be, so there needs to be a mechanism whereby employers can come together alongside experts to establish what those future demands are likely to be so they can be built into the curriculum, too. Currently, teachers are telling us that curriculum restrictions are the biggest limiting factor preventing them from embedding more sustainable development into their curricula.

I think there needs to be enhanced flexibility in qualifications to enable providers and teaching professionals to adapt to their local needs and to new sustainability teaching challenges, and to respond to the regional response, which is diverse across the country, without having to wait for the next re-accreditation cycle, because that can be five years. There needs to be a way for teaching professionals to be more agile in their response to what is included in their curriculum, based on local needs and national priorities, too.

The risk there is how you make sure that, if curricula design is done by occupation, by subject matter or by region, they are sufficiently coordinated and supported so that those national needs are met—that horizontal strategic approach—alongside that local and regional need, and



that both are represented in the curriculum and in how teachers are able to deliver that curriculum sufficiently.

Q79 **Ian Levy:** Iain, would you be able to expand a little on how T-levels and apprenticeships incorporate a greater level of sustainability?

Iain Patton: Currently, that is a real shortfall. You have no overt or direct reference to climate change, biodiversity or circular economy thinking in apprenticeships, and T-levels have been accused of ignoring the transversal or horizontal skills. A theme of this session is: what is it we are talking about here? Yes, as a society, we will need environmental technology specialists as we completely reinvent manufacturing processes and so on, but every job is touched by this. Every life in the UK is touched by a changing climate, with its social and economic disruption, never mind the pandemic.

We celebrate apprenticeships, T-levels and starting to get out of that isolated, insular mindset of vocational versus academic, and trying to find new ways of hands-on, applied learning. Meg mentioned Living Laboratories where you bring groups of students from all disciplines together to solve a real problem. That is such a powerful approach to bringing in new thinking. With T-levels and apprenticeships, it is an issue that you do not have an overt sustainability apprenticeship. There could be better ways of using the levy to say, "Hold on a minute. There is an opportunity here to ensure that every apprenticeship and T-level has a core set of skills."

We are not talking about a new, additional set of specialist sustainability skills. This is a new lens of looking at STEM skills. This is a new way of going, "Hold on a minute. We do not know what the world of work will look like in 20 years' time, and we are training young people today who will be the leaders at that point." It is not that we can prepare them to be a cog in a machine we can predict. Innovation, creativity and enterprise is pushing the boundary further and faster.

If I can be a little bit controversial, there was a coal mine approved recently. We are locked into needing to keep those skills going in that Cumbrian community, and we are locked into producing steel that way, but the area is fringed by civic universities and industrial technical colleges formed in the industrial revolution that can apply themselves to: how can we produce net-zero carbon steel? How do we use the skills of those people and future-fit them? There is a critical role here, and universities can be a little tetchy sometimes about relating directly to the world of work.

This is an opportunity for research and development, and for universities to apply that thinking, learning and innovation. I think we need to blur these boundaries of technical, vocational and academic, and recognise that the world of work is blurred. Sectors are blurring, and if we produce people who can only fit into a machine today—and I am talking figuratively—we are doing them a disservice. They need to be able to



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think, to cope with complexity, to cope with the bigger picture and systems, be critical and be adaptable.

That is what this pandemic has shown in my sector: the power of being flexible and adaptable in our thinking, and that is what our economy and society needs to do. T-levels and vocational training blurring more with academic input has a critical part to play in this.

Q80 Ian Levy: Charlotte, bearing in mind what Iain has just said, is there a risk that there could be a lack of placements for T-levels and apprenticeships in the future or now?

Charlotte Bonner: Apprenticeships are very different from a T-level work placement. I do not think the issue is that they are competing for placements or that they are particularly similar in terms of the goals of those placements. A route into employment and developing workplace experience is absolutely critical for learners, but the problem is that only a relatively small number of employers are willing to get involved in education. Those that are willing and able to meet all the ESFA funding requirements are already doing apprenticeships, so I think there is not enough capacity of the willing.

To some extent that is the symptom of an illness, and that illness is a big point of difference between our industrial culture and those of nations which—from a technical, vocational and educational perspective at least—we have seen as our competitors internationally. Employers in this country do not expect to invest in the skills of their present or future workforce. They expect their future employees to arrive with skills that are 100% aligned to their business needs.

Obviously there are exceptions to this, but largely they do not contribute to education pipelines in their industry. Therefore, rather than saying there will not be enough placements, we need to think about how we can create an industrial culture where employers do not think, “I might offer an apprenticeship because it will give me something” but where employers are saying, “I need to provide input to the pipeline for my sector and my future workforce,” and they are seen as giving something to education rather than taking from it.

Q81 Ian Levy: Bearing that in mind, do you think the apprenticeship levy should be increased to fund more placements?

Charlotte Bonner: It is interesting that today, in the Budget, one of the headlines is that there are further financial incentives for organisations to provide apprenticeships. I do not know the ins and outs of the levy. I could go away and ask my colleagues and get back to the committee, but in terms of whether the levy is currently sufficient I do not know. I think we need to think about how the relationship between industry and education is shifted from one of give and take to one of real partnership, so that industry is providing work-based placements for the education system and the education system is providing great quality CPD for the



existing workforce to help them become carbon-literate and ready to embrace sustainability challenges. I think that needs to change, rather than necessarily the number of placements that are available but, as I say, it is not my full area of expertise.

Q82 Dr Matthew Offord: Ms Baker, you have called for more emphasis to be placed on a clean growth retraining revolution. Can you outline to us what that revolution would look like?

Meg Baker: Yes, of course. This is outlined in a letter from Teach the Future to the Skills Minister and the Secretary of State, to which they have had no reply, just to let you know where that comes from originally.

In terms of the Government's retraining plans launched this year, we are keen to ensure that how this is done has sustainability embedded throughout its entirety to ensure that any retraining and reskilling that happens is done in a way that we are also addressing the ambitions we have to achieve net zero by 2050. If we do not integrate sustainability, the climate emergency and how we are addressing it in any reskilling process, as an investment we make right now, it seems like a waste of that investment, because that investment needs to be something for the long term, not for a short-term solution. It needs to be a long-term solution and a long-term vision for how we address the climate crisis.

New research released by Friends of the Earth, published yesterday, was saying that 500,000 16 to 24-year-olds are out of work. It has been suggested there could be an investment of £10 billion over five years to create 250,000 green apprenticeships. This connects with that reskilling and clean growth strategy because, by investing in green apprenticeships, we are investing in a clean growth strategy and, instead of just reskilling in a high-carbon economy, we are looking to upskill and reskill young people and current workers into the low-carbon economy so that we can have a just transition that happens in a positive way and is inclusive for all of society.

Q83 Dr Matthew Offord: That is pretty clear. Mr Petersen, like yourself, I am a big advocate of lifelong learning, but the reality has not been achieved. With the announcement of the Lifetime Skills Guarantee, how will that help?

Graham Petersen: It will clearly require focused investment, and the Lifetime Skills Guarantee could make a contribution. There are concerns as to whether it will put people into debt through any loan system. Going back to the point made by Charlotte earlier on investment, the fact is that the UK spends on adult education only two thirds of the EU average and that UK employers spend half the EU average on adult education and training their workforce. That is clearly a major issue. The Government's announcements in the skills White Paper, which has recently been announced, need to be looked at carefully to make sure that we have the integration around supply and demand that Iain referred to at the beginning. Skills cannot just sit on its own in a silo. Policy developments



over the last 10 years have just been a continuation of this problem of, on the one hand, you have skills policy and you have an industrial strategy policy, then you have climate policy, and there is no effective integration across all three.

A quick aside on the skills White Paper. In the executive summary it talks about making sure professionals are trained up in the green economy, but it does not say anything about climate change education or sustainability in the rest of the paper. The lifelong learning policy, if it is fitted into what is essentially a positive development in the White Paper, these local skills improvement plans, there is an opportunity there—if you look at what Lee is doing in Leicester—for local authorities to get to grips with this to try to match up that demand and supply side.

There is no point in an FE college putting on an extended programme of courses that will link into the green economy if there is no demand on the employers' side. Centres have to look at this, and what could be crucial is if there is a requirement for large employers to conduct skills audits. You must anticipate where the potential job losses are and what the upskilling requirements are. That can only be done if that kind of auditing system is put in place, in sectors and large employers.

To take oil and gas, for example. There is real potential for job losses in the oil and gas sector but, equally, through upskilling, there are opportunities for job creation around offshore and onshore wind. There needs to be a system put in place whereby you look at those training requirements and what the processes are to transfer between the two, to ensure that you have learning packages that will be able to support those workers into those new potential growth areas.

I would see that as being crucial if you are going to have something like that. It must also address things like supply chain and procurement. It is no good developing a local economy process if you are going to use supply chains that do not have green skills embedded in the workplace, because you will fall short in terms of being able to provide a skilled labour force that has a lifelong learning programme properly embedded to match the demand that will be needed.

Q84 Dr Matthew Offord: I will ask Mr Jowett the last part of my question. Earlier I heard you talk about further education and the ability to tap into local businesses such as, as you mentioned, the motor industry. How can the FE sector partner with these local businesses to deliver the training for their existing workforce for more sustainable roles? I understand that many companies, like motor garages, are quite small. They are either SMEs or one employer working with several employees. How does the FE sector work with those businesses?

Lee Jowett: From my perspective, as a local authority, we can do that local knowledge and local understanding. Certainly, from the colleges we work with in Leicester, it is understanding that demand and need and putting those links together quite closely. For us, that is a very important



area. From my perspective, we train up young people to have environmental awareness, and then those next steps of how we develop those career opportunities. When we work with the local LEP and with local businesses in those opportunities, it is quite clear that the local knowledge and local supply and demand is important to us. That is key for us.

Iain Patton: In an emerging period like this, as Lee says, supply and demand is critical, and that is where it can all go wrong. You need the skilled people to be available for the emerging technologies. It is chicken and egg, otherwise they fall over at the first hurdle. A local college or an apprentice supplier is critically well placed there to see that emergent need and respond with the appropriate supply-and-demand approaches.

If we give them the funding, the policy and clear, consistent governmental messages that a net-zero future is our future, that skills are a critical element of this—because it is often the first thing to be under-recognised—you have a recipe for some great local innovation. We talked about Humberside. Newcastle College has an energy academy, and it works with local energy employers. It is a real partnership model here.

I would quickly caveat, though, that as someone said, employers do not always know what they will need in 10 or 20 years' time, so we have to make sure that we don't jump into that short-term perspective of today's skills. At the end of the day, people need to know how to think, how to negotiate, how to collaborate and how to work with complexity and not be overwhelmed by it. Those are the core skills we are looking at here, and they will last a young person who is emerging from a college today, who will be leading a business in 20 or 30 years' time. That will serve them well because, if we prepare people just to be widgets or cogs in a machine that we know today, we do them a great disservice. Colleges and partnerships with local employers are critical, but we must not fall into the trap of just preparing them for the skills we know are here today. They have to go beyond that.

Dr Matthew Offord: That is really good. Thank you.

Chair: That concludes the first panel. I would like to thank our panellists, Charlotte Bonner, Iain Patton, Meg Baker, Graham Petersen and Lee Jowett, for your contributions today. It was a very interesting discussion, thank you. You are very welcome to stay and listen to the rest of our session if you like, but I understand if you have other things to do.

Examination of Witnesses

Witnesses: Richard Kendall, Samantha Smith and Kevin Bentley.

Q85 **Chair:** I will introduce our second panel. We will talk about some of the more localised regional challenges that this raises, as well as the transition of skills from one role to another. I would like to welcome Kishor Tailor, the chief executive of the Humber Local Enterprise



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Partnership.

Richard Kendall: Kishor is unfortunately unwell, so I am standing in for him today. I am Richard Kendall, executive director at Humber LEP.

Chair: Thank you, Richard. Samantha Smith, the director of the Just Transition Centre.

Samantha Smith: Thank you very much for inviting me to speak.

Chair: Councillor Kevin Bentley from the Local Government Association and a councillor on Essex County Council.

Kevin Bentley: Thank you for having me here as well.

Q86 **Chair:** Thank you very much indeed for joining. I will start with Councillor Bentley. We have heard from the Chancellor in today's Budget about a number of initiatives and support for growth strategies, with some specific areas singled out for either freeport status, investment in deep ports or, in Holyhead, a hydrogen hub being established. Do you think we have a clear idea of which areas and regions will be most vulnerable to a transitioning economy?

Kevin Bentley: I think first of all—*[Inaudible]*—and we now have a Government that is also putting money into devolution. I would like it to go further still, because devolution means devolving real power, as opposed to just money, to get these things done. I think this is a step in the right direction. What you are seeing is local economies that vary. It is important to understand that not one size fits all, which is why I think devolution helps. You are bringing together those who are locally elected with educationalists and business people to make decisions for their area, and working with young people as well.

I think that skills work is hugely important. It is a great step forward in showing we have a very diverse economy in England, a very diverse population in terms of the work and skills that we need to produce, and now we need to take that a step further and transfer those powers, not decide everything in Whitehall.

Q87 **Chair:** Can I ask a similar question to Richard? We have heard today that the Humber is achieving some significant support from the Government. At our first hearing we heard that the Government need to protect the low-carbon clusters that we have already in the interim period. Do you see the measures announced today in the Budget as doing enough, or do you think there is more needed in terms of Government support to encourage the transition?

Richard Kendall: They are certainly very welcome announcements today on the freeport and on the offshore wind for the Humber. The Humber has the highest carbon emissions in the country. About a quarter of the value of our economy comes from high-carbon industries. About one in 10 jobs tends to be the high-skilled, highest value jobs, so there is a huge risk for us in getting this wrong and it is really important for us



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that decarbonisation does not mean deindustrialisation. We look at this as a growth and renewal opportunity, not just about protecting what we already have.

I think the announcements today are positive. What we still need, though, are commitments on funding for carbon capture and storage clusters that are due. It is important that policy stability is maintained as well. We have seen the benefits that can have. For the offshore wind sector, policy stability has enabled investments in manufacturing facilities and port facilities.

On the flip side, we have seen the negative of instability in the biofuel sector, where we have a plant that was constructed and mothballed for a few years with a loss of jobs because of the delay in introducing E10. That is now going to reopen, thankfully, from the recent announcement. There are a lot of positives there, but still more to do.

Q88 Chair: Could you give us a sense of the relative scale of numbers of people employed in the industries? You just indicated one, which was a low-carbon business that failed, or has not continued to be invested in. Give us a sense of the proportion of jobs in the different sectors in your region.

Richard Kendall: I would say it is about one in 10 jobs overall. That comes from oil refineries, steelworks, chemicals clusters, lime, glass manufacturing, gas-fired power stations and so on, on the high-carbon side. On the renewable energy side, we have probably about 2,000 to 3,000 direct jobs, largely from offshore wind.

Q89 Chair: Does the announcement today have a number of jobs attached to it that you can point to?

Richard Kendall: The freeport itself is subject to the follow-on development. That will certainly have several thousand jobs associated with it. We hope the port facility will enable additional manufacturing investment in the region, and that that will again result in new employment.

Q90 Chair: Councillor Bentley, is there an LGA view about this issue of whether we need to be continuing to protect low-carbon jobs as well as invest in new opportunities?

Kevin Bentley: Yes, absolutely. We have done a huge piece of work around green jobs. Protecting what we have already is critically important. We are investing in new technology and also starting research work, working with our universities, which again we are locally committed to, into what jobs we are going to have, because we do not know yet what we do not know. Therefore, we need people who can research that. Using universities is a great way of doing it, and working with the industries and then helping new start-up businesses invest and get going in these new technologies.



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This is a golden opportunity for the United Kingdom; a golden opportunity for the world, in fact, but certainly for the United Kingdom. The freeports announcement helps with that, and I think you will see a flow of jobs through IT and green technologies, as well as green work. In wind farms and that sort of area you are going to see freeports play a big part. This is a huge opportunity.

Q91 Chair: Samantha, can you give us an international context for this? What are other countries doing to stimulate jobs in low-carbon sectors?

Samantha Smith: Quite a lot. Just to situate myself, I work for the International Trade Union Confederation and we represent more than 200 million organised workers in 162 countries. I run a global support centre for unions and others to help them get good plans for a just transition.

To give a couple of examples, as you know, Germany is phasing out thermal coal by 2038 and first negotiated, in a process with employers, unions, regional and federal Government, a big package of climate measures and regional and just transition measures and has now turned those into budgets. It is the biggest, but it has a lot of things that you see in other countries.

The first part is that the national Government have a role. People need expanded unemployment insurance, they need paid access to education, they need other kinds of social protection in this period where jobs are changing and disappearing. You also need investments in a lot of these regions. In Germany the package concerns deindustrialised regions in the former East Germany. You need different kinds of modernisation investments for infrastructure, everything from high-speed rail to broadband, and so on.

Then, of course, you need the part that we have just heard quite a lot about, which is technical institutions, R&D, skills and so on. You need those kinds of soft infrastructure, along with schools and hospitals, in these regions. Finally, you need commitments from employers to stay and to create new jobs. If we look at different countries, for example the US. If you are looking at President Biden's recent executive order on climate change, it has a just transition provision where quite a big chunk of the upcoming federal budget is going to go into supporting coal, oil and gas and power-plant communities and creating jobs, in the first instance, through funding infrastructure in clean energy.

Canada, Australia, South Africa and a number of European countries are taking this regional approach, where the national authorities come in with some of the backbone of funding for job creation. Then regional groups of unions and employers, local government, take it from there.

The main thing that I am missing a little bit in the discussion I have heard so far is we are in a giant economic crisis. We have hundreds of millions of people out of work around the world. When we are talking about green jobs, we are just talking about jobs—good jobs, creating



jobs, keeping the jobs that people have right now—because that is what our members care about at the moment.

Q92 **Chair:** Richard, your region has received a huge boost from the new offshore wind technologies in recent years. That was stimulated in part by the sector deal that was developed in the last few years. Do you think there should be similar sector deals for other parts of the country that have particular advantages, and should they have conditions attached in relation to low carbon-content requirements or local requirements of a particular region and sector?

Richard Kendall: The sector deal is only a couple of years old and, given the lead time on investments, we have yet to see a big impact from that. What it did that was positive for us was it put the focus on clusters. We know all the evidence points to the importance of clusters in terms of competitiveness and productivity. That was encouraging. I think often in the past Government have taken a place-blind approach in sectors, so to see the Humber and other relevant places called out in that was encouraging.

The other important thing that the sector deal did was to have that regular drumbeat of future leasing around some contracts for difference, so there was a pipeline of opportunities there that can help to make the case for new manufacturing investment. Unless you know you are going to have customers in a few years' time, it is very difficult to make the size of investment that we are talking about here.

The drive on cost reduction and the advancement of technology, we have also seen the effects of that already in Hull. The blade factory, the old Siemens factory in Hull was built for 75-metre blades. It was remodelled a couple of years ago for the next generation of 81-metre blades. They are vast turbines. The planning application has just gone in last month for a doubling of the size of the factory to facilitate the next generation. That is an example of how the industry is evolving and reinvesting in local areas to build up.

In terms of replicating that in other sectors, the base value of UK content is interesting. I have some sympathy with the industry perspective on this that in the past they have not necessarily had the long-term visibility to warrant those investments in manufacturing to make a return on those investments. In the initial stages, remembering that this is a very new sector—most of the capacity existed in continental Europe rather than here—the UK supply chain was not advanced enough and projects needed to be delivered, so I can understand why there was a need to import. Certainly, given the size of the market, as long as we have that policy stability and long-term certainty, there is no reason why we cannot see further rounds of investment. The announcements in today's Budget will certainly help facilitate those.

One learning I would suggest from the sector deals is that one slight frustration we have as the LEP, and as local authority partners, is we



were not involved in that conversation. It was a conversation between industry and Government. While we have good relationships with the local industry and they try to keep us informed, it was bound up in confidentiality, for understandable reasons, but that misses the role that places have in helping to deliver some of this growth, the importance of business support and skills provision in enabling the growth of clusters. I think if this was to be done for other sectors in the future, all local leaders are part of the process as well.

Chair: That is very interesting and will be picked up by Jerome Mayhew in his questions.

Q93 **Jerome Mayhew:** Thank you, Chair, I was thinking just the same. What I want to explore with you, Mr Kendall, is the relationship between local approaches and the ability to generate green jobs, and what we can learn about the decentralisation of power and whether or not that has a beneficial effect on this.

As the Humber LEP, what has led to the successful growth in low-carbon jobs in the Humber region? What would you put it down to?

Richard Kendall: It started by having the conditions for this in the first place. A lot of the growth has come from the offshore wind sector, and we were very fortunate that we happened to be in the right place for this, the closest and largest market in the world. We happen to have already the port infrastructure that could be adapted within the timeframes, an existing harbour revision order, in the case of Hull, deep water. We have ample space for the very large components we were talking about. The key thing for the industry was they knew we already had the skills base, with transferable skills, so that recruitment would not be an issue.

All those ingredients were there and we were fortunate with that, but the way that we responded as a region is one of the reasons why we maximised the impact. I put that down to a couple of things, first the mindset that the leaders took, public and private sector. There was a kind of openness to the opportunity, and real proactivity of local authorities, LEP and education in responding to this and trying to facilitate this investment.

Also the business response. Some of these jobs have come from existing businesses, engineering businesses, ex-trawler-fleet owners, who have diversified and gone into the sector and into the supply chain. It captured the public imagination. Everybody was talking about it at the time. It was a new gold rush, really, for the region. It was a great opportunity, so I think the way people rallied behind it was important. Secondly is the support that was available for businesses and for training, because that is ultimately what has enabled some to access these opportunities.

Q94 **Jerome Mayhew:** In previous inquiries we heard quite a lot about the Humber region and some of the natural advantages that you have. One of them is the concentration of heavy energy users; the position of Drax power station and the potential to have negative carbon-emission energy



and plenty of it locally; the ability to create the structures around which a hydrogen hub could be built. All these things are great for the Humber but it does beg the question: how replicable is the success that you have created with your deep-water port right in the centre of the first expansion of offshore renewable energy? Are there more lessons we can learn, other than “lucky old Humber”?

Richard Kendall: Yes. Obviously, I will not give you the sales pitch for why we should be involved in carbon capture and that sort of thing. That competition still has to take place, unfortunately.

Carbon capture, given the huge scale of the investment we are talking about, has to start in certain places, and with it can come hydrogen production and distribution. We are already talking to our neighbours, particularly in the Sheffield and Leeds city regions, about how we can build out from the Humber. The Humber gives you the first critical mass of hydrogen demand from industry, as you mentioned, with Drax and some of the other carbon emitters, for carbon capture. That will just be the starting point for a much larger network in the future.

Q95 **Jerome Mayhew:** You briefly mentioned collaboration between the LEP and other agencies and, importantly, businesses. Could you expand a little on that answer and talk about how that collaboration has spread across education, business, local authorities and how productive that has been?

Richard Kendall: We have a joint strategy and a joint approach in the region, so everybody has a core understanding of the opportunity and backs its priority.

To give you some specific examples of things that have been done and worked and could be repeated either here or elsewhere: Green Port Hull was initially a marketing construct that came together between two local authorities and the port operator, landowner, ABP, and the University of Hull to try to attract offshore wind to the city and the surrounding area. This was about 10 years ago. The key players were engaged from the start and were there to have joint conversations with potential investors, which gave quite a powerful message.

What enabled that partnership to move on was that it secured investment through the Regional Growth Fund, a £25.7 million investment for the Green Port Growth Programme. That was not about providing money for new investors to come to the region. It was about preparing the area to respond to the opportunity. That enabled a joined-up response of business support across training provision, innovation and land assembly. It was investing ahead of need. It invested ahead of Siemens coming to Hull.

One thing that the group realised very early on is there was going to be a big demand for engineering apprenticeships for people with semi-skilled backgrounds. With the best will in the world, unfortunately, when a new



factory opens not everybody who is employed there is going to come straight off the unemployment register. We are talking about replacement demand as well. They spent as much time focusing on our existing manufacturing industries as they did on the new ones, to sort out that backfill problem.

Some of the things they did was to provide wage subsidies for apprenticeships, upskilling support, covering half of the cost of training, skills and work experience for long-term unemployed, bearing in mind the local area has pockets of generational unemployment. There was a one-stop shop called Green Port Hub for people interested in a career in manufacturing or engineering, which supported 2,000 people in the first year. There was a specific programme called WIME that was targeting women into the manufacturing and engineering workforce. There were a range of interventions through that programme. I can talk about all sorts of measures and I am happy to—

Q96 Jerome Mayhew: If we can keep it relatively concise, because there are a lot of questions to get through. If I could pause there, you mentioned the importance of subsidies for apprenticeships. No doubt you welcome the announcement in the Budget a couple of hours ago of the doubling of those subsidies nationwide. Interestingly, you also talked about anticipatory investment by the Government and the £25.7 million of the Regional Growth Programme. Do you think there is an increased role for central Government in funding or in other manipulations of the market to assist in these local rollouts? If so, what do you think that might be?

Richard Kendall: The Green Port programme is a model that can be repeated. It just happened that the money came from Government. Of course, if we had devolution in the area and we already had the resources, skills and business support under our control, perhaps that investment would not be needed. The council is already repeating that model around another investment, in rail manufacturing, in the region at the moment.

Q97 Jerome Mayhew: That is very interesting. Thank you very much for those answers.

Mr Bentley, you represent the Local Government Association. I understand that the LGA believes that more devolution of powers and funding is needed to create green jobs. Well, you would, wouldn't you? To answer the criticism that you have skin in the game and want more power for yourselves, can you justify that position and explain why it is so important that funding is devolved?

Kevin Bentley: Yes, it is not just because I would say that; it is because I firmly believe in it as well. I also have to say it is not about power; it is what you do for local people. All of us, or virtually all of us on this board, are here for one reason—to serve the public. Of course, councils are very close to their public.



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Let me give you a real example that has been happening in Essex and happens in other areas as well. We put together an employment skills board where we brought together educationalists and businesses, probably for the first time in such a forum, where they could talk about the kind of skills required. One of the battles you often hear about is employers saying, "You are not training young people in the right skills," and those in the education sector saying, "We have to go with what we are given in terms of the money and what the demands are." Put that more locally and make it more accountable to local people through their local councillors, those elected to those positions to make those decisions, and suddenly it becomes very real. In that you put young people as well, the kinds of jobs that they want.

A lot of young people want to travel away and go to university and stay away. A lot of people do want to stay at home, so let's free up our further education colleges and make them much more involved in the skills they are providing with the employers that need those skills locally. That is where I think the skin in the game is. It is not about power; it is about doing things that benefit people's lives and, in turn, benefit UK plc.

Q98 Jerome Mayhew: We have heard some caveats already in the evidence this afternoon, that sometimes businesses do not know what they are going to need in 10 years' time. As a businessman and employer myself, that was absolutely the case. I could always complain about what I did not have now. It was much harder to anticipate the direction of my business in a few years' time. If you are dealing with these things locally, how do you address that conundrum?

Kevin Bentley: I am a businessperson as well, and I own what used to be called a PR agency but I call it a digital marketing agency.

Jerome Mayhew: Exactly. That is a very good example.

Kevin Bentley: The point is that 20 years ago we did not even know the skills we have to provide now. The answer is very much working with people like our universities, working with further education organisations and working with the industry. Those three have the key to unlock what we need for the future. Put those together, as we did in this particular skills board we had, because it involved higher education as well as further education, and you suddenly have a rich mix. That is when you can start looking at those industries that you need.

In the green jobs world, for instance, we tend to think of the typical kinds of jobs it might entail. Wind farms and all that sort of thing are hugely important. What about construction? Every area of the United Kingdom needs housing. How we construct that housing is hugely important, using green technology to do that. Connectivity. If we build roads, we do not need to build roads just for cars and lorries any more. The way we get people around is hugely important. That will come through technology.



Then, one of those very old-fashioned ways of doing things, town planning. Town planning could very much fit into the green economy in the way we build and connect our towns and cities in the UK. Those are traditional jobs that are suddenly brought into the limelight with reskilling. That is where that could be done at a much more local level.

Q99 Jerome Mayhew: Thank you very much. That is a fascinating answer. I am going to pivot now to ask a little more about what we can learn from regions globally about managing the just transition. Ms Smith, you are the expert on this. Using the language of just transition, in the United Kingdom the word “just” has some party-political overtones that might not be that helpful. Could you start with what you mean by a just transition and say what role that would play in COP26?

Samantha Smith: First of all, to take it out of the realm of UK party politics, we have UN architecture and definitions for what is a just transition. It has been negotiated between employers and their organisations, workers and unions and 162 Governments. The UN Secretary General, in opening the Powering Past Coal Alliance meeting today spent a little time talking about that definition of just transition and how it should be the basis Governments use. We can feel pretty secure with it because it is not tied to one party, one ideology or even one specific Government.

What it is about is what the social partners—employers and unions, plus usually Governments—can negotiate to get this very rapid, ideally pretty smooth, process of bringing down emissions without putting a lot of people out of work or creating social unrest. That is the rough definition of just transition.

The things that we can learn from other jurisdictions—here I am speaking from personal experience, as I spend almost all of my professional life talking to workers from high-emitting sectors like auto, steel, cement, coal, oil and gas and so on. If you start by telling people that this transition is going to put them out of work, you will meet a deaf ear. The first task of just transition is to get people around the table to talk about how we are going to create good jobs.

You have heard a bit about that from other witnesses, especially from the Humber region. I would say that that timing, the sequencing of activities, is critically important. Once people see that there are going to be good jobs, that it is not just closing down the mine or the plant but that they or someone else in their household will have a good job to go to, it is a very different discussion.

The second thing that we are learning is that there are roles for Government at different levels. I am not going to try to get into the question of devolution, but I will say that there is definitely a role for national Governments because you have the ability to tax. You have one source of public funding that a regional government is not going to be able to match. There is also a role for employers, both public sector and



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private sector. In the United States there is a labour management collaboration in the construction sector between private sector contractors and unions, which puts over US\$1 billion every year into apprenticeship and training programmes.

There are things that regional governments are best placed to do because they are closest to constituents and may be closer to local employers. What we generally would recommend is that you will have some kind of regional government employer body that is going to make decisions, ideally, or at least recommendations, about what kind of infrastructure needs there are and what that region is going to need in order to transition.

The last thing is that job quality really, really matters. We are seeing this all over the west. If the job-creation plan is about replacing what people see as high-quality, family-supporting industrial jobs with zero-hours contracts, or with low-wage jobs without health and safety or without rights at work, you are eventually going to get a real political backlash. So it is important to try to replace the good jobs that are disappearing with other good jobs.

Maybe one little thing is about the social protection system, which I already mentioned. In some of these regions the demography of high-emitting sectors is such that you have a lot of people who are close to retirement. One way to manage that transition is to create a bridge for people to a secure pension. That opens up space for younger workers. To repeat our main message, it is about the jobs. It is about investing to create jobs, and the skills are almost a secondary issue.

Q100 Jerome Mayhew: That is very interesting about how we can manage a just transition. What role will this area have in international agreements, and in particular what role will it play in COP26 in November?

Samantha Smith: Pretty big. I mentioned the Powering Past Coal Alliance, and your Government are one of the co-founders or co-leaders of this alliance. I personally sit on a just transition task force as part of PPCA. We are also seeing it come up in the negotiations, where a couple of countries have explicitly put just transition into their national emissions plans, the nationally determined contributions. Others have also put estimates about job creation and economic growth, and so on, into those plans.

The location of the COP is also pretty important. A few people have mentioned the offshore wind industry, and we know that there is a huge focus on good job creation and just transition from oil and gas jobs to offshore wind. That is going to come up from civil society but also from unions and even employers.

The last point is, to speak about my country of birth, the United States, we have a new Administration. It is very pro-labour; it is very interested in these issues of just transition. We are going to see a big emphasis on this, not only in the executive order that has already come out but also in



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the upcoming federal budget, which will have a very big infrastructure spend, probably with decent job standards attached to it and focused on clean energy. I expect that both from European countries, from the Canadians, from the US Government, probably from the South Africans and maybe from a couple of other countries we will see this issue of just transition coming up again and again in the negotiations themselves.

Jerome Mayhew: Thank you very much. I know the Chair is very interested in the international comparisons, so I will hand back to him at this stage.

Chair: I am, but so is Caroline Lucas and she has managed to join us from the Chamber, so I am going to ask Caroline to ask the next question.

Q101 **Caroline Lucas:** I want to ask about the approach taken in Spain in particular. It is often highlighted as a good example of how to do a good just transition, where they closed their coal industry. What can we learn about managing transitions from what happened in places like Spain?

Samantha Smith: The first thing I can say is that we are hosting a side event for the Powering Past Coal Alliance tomorrow, and you can hear from a Spanish trade unionist, the confederal secretary, explain what was good and bad about the Spanish transition if you have time.

A lot of things were done right in Spain, but one thing was not done right and has made life tough for people in the regions. The thing that was not done right, to start with that, is that there was a long period where everybody knew that the mines were going to close, where capital expenditure drained out of the region and out of the mining sector without any comprehensive effort to rebuild the regional economy. The Spanish Government then did many things right. They negotiated a just transition agreement with the mining unions, which provided this bridge to pension for older workers. Also, keep in mind that anyone who has worked in mining, if you started working in a mine when you were 16, is ready to retire when they are in their 40s, physically, because they probably have a high load of occupational disease and decreased life expectancy.

They negotiated this agreement with the bridge to pension, they negotiated a top-up for younger workers who would then be trying to seek other work, maybe not with the same kind of salary, and a bunch of other provisions. That was really good and then the planning parts that the Government put in place were also really good. They negotiated with local government and employers and unions these plans to revitalise the mining regions and put people back to work. One big part of the plan was remediating or cleaning up coal mines, because that is a great skills match for former mine workers. Another was construction, also a great skills match for people working in mining generally. With green construction there is not a lot of reskilling that is needed. It took a while to get the budget for that allocated, so what you will hear tomorrow,



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probably, is the gap between these great plans and agreements and the budget for regional efforts that would create new jobs if there is a gap, and people were pretty unhappy about that.

As we come out of this crisis—I hope we are coming out of this crisis—what we are going to see is a big burst of job creation in Asturias and the other former coal-producing regions of Spain. There is a lot of excitement about other things the Government have done. They have created a just transition observatory to look at, for example, the transition of the auto industry in Spain, to look at new job creation, good new job creation in renewables, and it has put in other social supports.

Q102 **Caroline Lucas:** From what you know, do you think enough is being done here in the UK to start managing a transition to a changing, greener economy?

Samantha Smith: That is a difficult question, but I am going to be frank. The UK has a history of not managing these industrial transitions very well, like a lot of countries; like the US, my country of birth. What has happened now is that you have regions of the country where people are very suspicious of any kind of transition that is coming their way, and that also includes a climate transition. We see this in a lot of countries. There is generational poverty, there is a lack of good industrial jobs, there is high unemployment. People remember that when you start talking to them about closing something else.

What we think is needed, as trade unions, is a much greater focus on the issue of new, good job creation and of job quality, because what happens when you do not do that is you get regions where people are either semi-employed or unemployed and are often depending on benefits of one kind or another, which are also not adequate to rebuild an economy. Therefore, it requires investment, but it also requires willingness of Government to attach job standards to that investment.

Q103 **Cherilyn Mackrory:** What I want to explore with this set of questions is how training and skills can be provided to the existing workforce as the economy changes. It builds on very nicely from the answers you were just giving. How important do you think retraining and reskilling is to changing local economies and just transition issues?

Samantha Smith: Again to be frank, the big issue generally is not that people lack skills; it is that the jobs are not there or the jobs are not good. Having said that, there are very good, accepted tools, skills audit, skills-matching tools, that help us to see whether, let's say, someone who today is working on an offshore oil rig has skills that are a good match for building offshore wind or doing something onshore, manufacturing work.

Our perspective is that it is, most of all, important to be sure that there are new jobs and there are good jobs and that that happens first. Thereafter it is important to look to see for individual workers or groups



of workers what skills they have and what kinds of skills they might need to transition to new jobs.

The one exception might be, in some sectors, digitalisation. I just came off a two and a half hour call with 100-plus agitated auto union leaders. One of the big issues in the auto sector is that you have increasing robotisation and increasing use of electronics in vehicles, so you are talking about different groups of workers, or a real skills upgrade for someone who might have started out in the industry 20 or 30 years ago. Generally, skills and training are important but not as important as the jobs.

Q104 **Cherilyn Mackrory:** Councillor Bentley, you have spoken a bit about young people's education. Please can you expand a little more on why there should be more devolution or more funding for adult education skills?

Kevin Bentley: Picking up the last point, it is alright to have those jobs. We need to invest in that work, such work as is needed, to find out whether these jobs and skills are going to be required. Of course it is at all ages. I have talked about younger people but it applies to all ages as well. People are coming out of professions that may no longer have a long future in a greener world, but certainly their skills are required and need to be adapted and used in other sectors. It is very important to establish what those jobs are going to be, certainly through education. There is no reason we should not be using further education to retrain older people as well, people of my age. There is no reason that should not happen, going into new jobs that are required.

They are coming quite rapidly. I will give you an example in a place called Braintree, which happens to be in Essex. It has, from what we understand, the first UK electric forecourt for charging. There is no petrol pump at all; it is all for electric charging. Just the act of building it, designing it and all the work that goes into the component parts are new skills that were not around probably five years ago. That is going to increase.

Imagine if eventually every petrol and diesel forecourt was replaced with electric forecourts. That is going to mean a huge amount of work, but people already in those sectors that build them, there is no question but that they have transferable skills to do that. The green economy, green jobs is for all ages, not just young people, not just older people, but for everyone. We can all learn and we can all adapt, and that will make a better Britain.

Cherilyn Mackrory: Perhaps we need to remember that there will be lots of on-the-job training. Somebody may be hired and—absolutely.

Kevin Bentley: Yes.

Q105 **Cherilyn Mackrory:** Turning to you, Richard Kendall, specifically what is the Humber region doing to ensure such training and new skills for



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workers to move to these more sustainable sectors? What examples can you give?

Richard Kendall: In the Humber so far, building on the earlier point, it has all been upside because the new jobs have come but we have not lost the old jobs yet. The new jobs have come from renewable energy, and we have yet to transition our high-carbon industries, and that is the challenge over the coming years. We cannot directly fund provision because we do not have devolution in our area. All we can do is articulate the need and try to influence delivery and manage the response.

We developed the local evidence base through the skills advisory panel process, working with businesses and doing labour market analysis of that. We have an excellent relationship with local providers, both publicly funded and the private providers. There are a number of employment and training associations in our area specialised to respond, as well as the public sector.

We have marshalled some skills capital investment to make sure that the facilities were there when we had access to that funding from Government. We invested in engineering centres, for example. We have managed to influence a lot of European Social Fund delivery in our area, particularly at targeted things; for example for older workers, workers with disabilities and for SME reskilling. Of course, we do not know yet what the future of that is going to be in the UK Shared Prosperity Fund.

The bit that often gets missed is being active in identifying what the opportunities are. This is careers advice. It is all very well jobs being there and the training being there but, if people do not know about the opportunity, they are not going to enter it. We do a lot in organising largescale events, web information and linking up schools and employers, to make sure there is direct visibility right from primary and secondary education through to university and beyond of what the opportunities are and how to get into them.

Q106 **Mr Robert Goodwill:** We have already talked quite a lot about skills, so I would not want you to go over ground that we have already covered. Councillor Bentley, we have heard—particularly today from the Budget—that the Chancellor is putting more money into apprenticeships and other ways that people can upgrade their skills. As a Committee, we are also very aware that, for example, we do not yet have the skills to deliver the green homes grants and all those projects that need to be done. What are your asks from central Government to help overcome local or regional skills gaps, things that have not already been done?

Kevin Bentley: First of all, of course, the money is welcome in apprenticeships. All forms of skills are great. I do not think—given my previous answer—we ever stop learning, do we? I now run a business that doesn't remotely look anything like it did 20 years ago. There is one very minor example, and it is true right through the economy.



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For me, it is around the freedom of those colleges and those educators and businesses to be able to come together and determine the future, working with those who wish to be employed as well as employers. While I understand you have to have some national framework—I do understand it has to happen—none the less, giving the ability and the freedoms for that local decision making, it takes the shackles off the economies in those areas, which builds a better UK economy.

While there are skills that you can transfer around the UK no problem at all, there are some that are very local to areas that people will only be required to have in that particular area, especially around ports. There are certain skills there that require that you have to go to another port with those skills, so why not stay in your local port? That is important for me. If you have the ability to do that, and the freedoms and the money to do that, it is hugely important. More importantly, it is accountable to the public as well. If you have elected people such as councillors on those boards, if people do not like it, they can express their opinion very loudly.

I will give you one last example. With the offshore wind sector, as a county council, some years ago we established in Harwich, which has just become part of the Felixstowe and Harwich Freeport East bid, so that is great news. In Harwich, along with the Colchester Institute, a further education college we developed a huge section where young people went to learn specific skills in wind energy out at sea, and trained with those in that sector and with people from those companies. That was a huge advantage and it was done some years ago. We need to do more of that and have the ability to do that, not just do them as pilots but make them become mainstays of education. With that freedom, with the ability to do that, we can make headway, again working with our partners such as universities and further education colleges and businesses. That to me is a rich mix.

Q107 Mr Robert Goodwill: I certainly would agree with you that directly elected councillors are people who are accountable to the people and, therefore, those decisions should respond to what people are saying.

What role do you think our new metro Mayors should have? Should they be in the driving seat on this, or is this something that should be done at lower levels, at county or district sort of level?

Kevin Bentley: Where there are elected metro Mayors, they have a set of responsibilities. You cannot have everyone doing everything. That would just be crazy. There should be a chain of command. It may well be that Mayors have the responsibility, but they do not necessarily deliver. They have councillors at the unitary councils to do that, or they set up their own boards to be able to do that. Perhaps that is where the freedoms come in. The most important thing is that people in the area should have a right to say how their money is being spent, and skills is a huge, huge area. A lot of that spend is not seen by the public, nor is it accountable, and that must change.



Q108 Mr Robert Goodwill: Thank you very much. Mr Kendall, in answer to the last question from Cherilyn, you talked about the role of colleges. I often get the impression that, on one end of the production line, you have an employer wanting a skilled member of staff, at the other end you have the raw material, students, and in the middle are the colleges. Would you say that in the past we made a mistake in colleges in basically filling the courses that people wanted to do as students, rather than the courses that employers want? Are we falling into this trap of having loads of media studies graduates, or people doing courses that they want to do rather than courses that lead to a job? What can you do as a LEP to engage with the colleges to try to make them a little more demand-led than supply-led?

Richard Kendall: It is probably fair to say that that has happened in the past, but our experience in recent years is that the sector and wider education sector have been really responsive to new opportunities and to how we can articulate what the demand is going to be. As you rightly say and others have said, it is very difficult to predict what the demand is going to be in five or 10 years' time and exactly what courses should be done, but the foundations are still going to be very similar—STEM subjects primarily. We can certainly influence that side of things.

Colleges are also very good examples of how we have partnered with particular businesses. For example, when Siemens came to Hull, it partnered with Hull College. Hull College set up a dedicated training centre for them, a composite centre. Everybody working in that factory, around 800 roles at the time, went through a 14-month training programme with the college, trained by people who had been trained by Siemens in Denmark in existing factories. The result was that the factory employed around 98% local workforce. If the provision is there and the relationship is there between the employer and training provider, there is no reason why you cannot have that kind of impact.

Q109 Mr Robert Goodwill: Do you have examples of where employers have gone into schools to try to influence students to look at where they want to be in five years' time and look at the course they want to do?

Richard Kendall: We do, not just going into schools but actively sponsoring them as well. We have two university technical colleges in Humber, in Hull and Scunthorpe, with companies sponsoring them from the kind of sectors that we are talking about here, and others.

Q110 Mr Robert Goodwill: Turning to Samantha Smith, do you have any examples from other countries that may have been more successful than us in closing those green skills gaps and where this Committee could look into in more detail?

Samantha Smith: Sure. I am not going to rank countries in order of success.

Mr Robert Goodwill: Oh, go on.



Samantha Smith: First of all, I would take Denmark as a great example because there you had a collaboration between employers, research institutions, the Government and the trade unions that spanned 30 years, where they set targets, first, to become less dependent on imported oil and then to become a world power in renewable energy, especially wind, and energy efficiency.

The result is that you have a pretty tight link with vocational training. You have a large number of skilled and semi-skilled blue-collar jobs related to the green economy, where that training is developed in collaboration between the training institutions, the unions and the employers, and often paid for by the Government. You have a pipeline of people coming from secondary school into a skilled or semi-skilled job and getting further training on the job from the company. Similarly, in Germany there is a huge amount of technical training that is provided within companies. People come out of school as apprentices within companies. You have a labour-management collaboration to develop training through and provided by the employer.

In the US we are not that good at this, but we are trying. I mentioned the collaborations between the construction unions, the building trades and contractors, but we played a small role in helping to get a collaboration with a specific company, Ørsted, the world's biggest offshore wind developer. It has reached a framework agreement with the North American building trade unions, which is in part about labour standards for every project that Ørsted will build in the United States, but also about joint training programmes up and down the east coast of the US where most of these jobs are going to be.

There are lots of good examples where trade unions, employers and sometimes Governments come together and create these programmes. We also do some of this ourselves as trade unions. In Canada the insulators use membership dues to create apprenticeships and train young workers themselves and bring them into new jobs. They have their own training regime, more or less, which is very sought after.

There are many models. From our perspective, making sure that this is not only employer-driven or only driven from Government but also bringing in unions can be pretty important, because in addition to representing workers we also have a lot of technical knowledge about these jobs and what it takes, aspects of health and safety but also how you can improve the technology. These training collaborations are a way to bring that to the table.

Q111 **Mr Robert Goodwill:** That is interesting. Could I take you back to something you said earlier? You talked about coal mining in Spain, but I noticed you specifically referred to it as thermal coal. We are having a big debate here in the UK about whether we should be mining metallurgical coal. It is very easy to clean up our economy by importing all our steel to make our clean nuclear power stations and our wind turbines. Are any



countries looking at how they might wish to internalise those high-energy industries that we need as a necessity to deliver those green industries? Are we just kidding ourselves if we tell the workers in the coal mine in Cumbria, "Sorry, you cannot have a job but, don't worry, there is a guy in China or Australia who is going to mine the coal"? Is that a debate that is happening around the world?

Samantha Smith: It is huge. We are running a process now on green steel, hydrogen and CCS, which is going into exactly these issues. You probably know that the company SSAB in Sweden, together with the iron-mining company LKB and Vattenfall, the Swedish power company, have formed an industrial cluster that is probably going to produce the first commercial green steel. That is specialty steel that is produced using hydrogen made from renewable energy.

There is enormous interest in it, because many of these manufacturers, for example in the auto sector, have said that they are going to have zero-emissions targets. They are very excited to get steel that is itself going to be made with low emissions. We now see similar investments in the Netherlands and Germany looking at green hydrogen. We are involved now in a project that is just starting in the US looking at a hydrogen strategy, not for everything but for some parts of the energy and transport sectors. That is going to be important.

The short version is that there is now going to be a huge burst of public and private investment into the so-called hard-to-abate sectors, including steel and cement. We are probably a decade away from having at least parts of the steel sector produced with very low emissions, whether that is with hydrogen made with natural gas and CCS, which we are working on here in Norway, or hydrogen made from renewable energy. Whether that can outpace the low-cost production of steel, and even potential dumping by other countries, is a good question. That is also going to depend on things like standards and trade measures.

Q112 **Mr Robert Goodwill:** In the meantime, we will need new skills to deliver those new types of steel-making technologies, I guess.

Samantha Smith: Yes, but they are also amazing job creators. This region in Sweden, where you have an industrial cluster, is one of the regions in Sweden with the highest unemployment. It is up in the north. As a result of this development of a low-carbon steel process—which was produced through a labour-employer-Government collaboration—they have some of the lowest unemployment in Sweden and lots of prospects for young people in that region to stay and have a good job.

Chair: Thank you. That concludes our second panel. I would like to thank our panellists, Councillor Bentley, Samantha Smith and Richard Kendall, standing in today.

Apologies there is a lot of noise going on in the background, and I hope you can hear me. It has been an interesting session. Thank you all very much for joining. Thank you to the members of the Committee who have



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been able to join us, some dipping in and out. I noticed Caroline Lucas was speaking in the Chamber within a few minutes of her contribution to this panel. It shows how flexible Members of Parliament can be when pressed on a busy day like today with the Budget. Thank you all very much indeed for joining us.