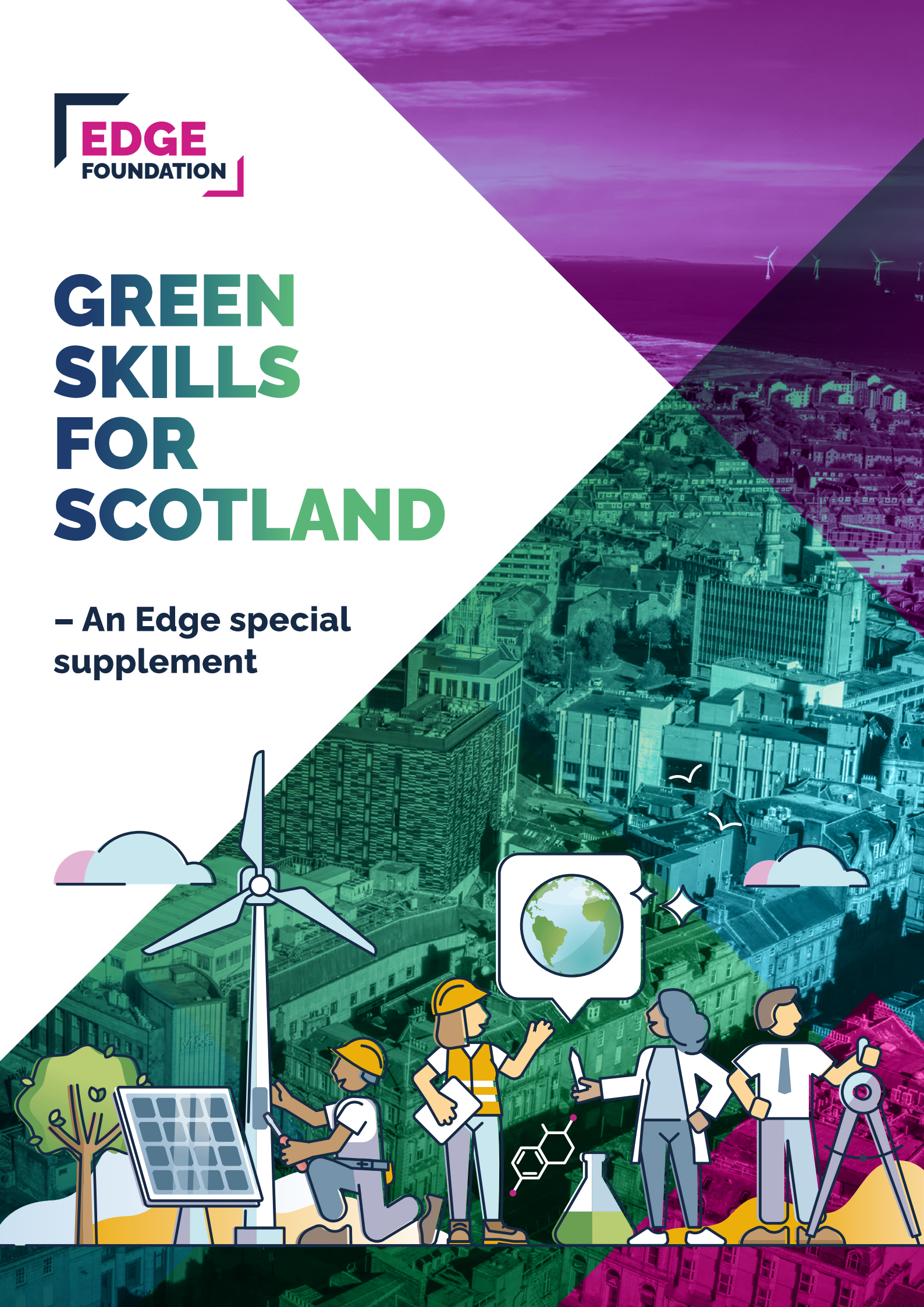
EDGE FOUNDATION

GREEN SKILLS FOR SCOTLAND

– An Edge special supplement



Aberdeen and North East Scotland

Behind its solid granite exteriors, Aberdeen is a city in flux – its oil and gas industry, formerly one of the largest employers in the region, in sustained decline. The pressures to create new jobs in renewable energy, both for local growth and in line with the wider Net Zero ambition, have been growing.

Two important elements are necessary for a green transition:

Re-skilling the oil and gas workforce to transition into green energy careers – we explore this in our section looking at **ECITB's** cross-skills pilot. It looks like many of the skills needed in the renewable energy sector have already been developed in the oil and gas industries.

Creating new pathways into green energy – we explore how this can start as early as S3, (roughly equivalent to Year 10 in England) in local school **Bucksburn Academy** and in the work of **Foundation Apprenticeships**. The work of **NESCol** in providing specific training programmes, and **NESA** who provide an Energy Careers Pathways tool which helps deepen awareness and understanding of jobs in the green energy sector is also a vital asset.

To understand the growth of green skills in the Aberdeen area, and across Scotland, we need to understand that it's a story of institutions that are plugged into their communities and willing to be a force for change.

Great British Energy

In 2024 it was announced that **Aberdeen would be the home of Great British Energy,** Britain's new publicly owned energy company.

18,000 jobs in green industries

Extra funding for the North East Investment Zone, announced by the UK government in June 2025, is expected to generate around **£1.7 billion of private investment and support up to 18,000 jobs in green industries and the digital and tech sectors.**

Oil and gas workforce could fall by 58,000

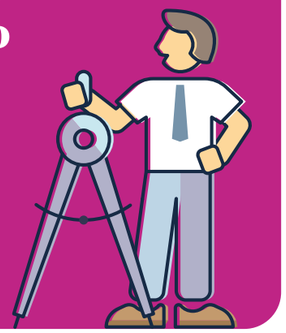
The UK oil and gas workforce could fall by as much as 58,000 by the early 2030s. *(Robert Gordon University (2025), Striking the Balance – Building a sustainable UK offshore energy workforce)*

54,000 offshore energy jobs

There are 45,000 offshore energy jobs in North East Scotland. This is **set to grow to 54,000 in 2030.** *(Robert Gordon University (2022), Making the Switch)*

Over 90%

Over 90% of the UK's oil and gas workforce have medium to high skills transferability and are well positioned to work in adjacent energy sectors *(Robert Gordon University (2021), UK Offshore Energy Workforce Transferability Review)*



£900,000 of UK Government funding

Announced in July 2025, **the Oil and Gas Transition Training Fund, backed by £900,000 of UK Government funding, will support 200 oil and gas workers in Aberdeen and Aberdeenshire** who will benefit from a tailored skills programme to transition into green careers.

11,000+ shortfall

There will be a shortfall of over 11,000 Wind Turbine Technicians over the next 5 years *(RenewablesUK and OWIC (2025), Wind Industry Skills Intelligence Report)*

Acute skills challenges

"Acute skills challenges are anticipated across clean energy sectors include STEM, non-technical skills such as leadership and management, digitisation, and specialist and niche sector-specific skills such as skills for electrification and heat pump installation. These challenges will be exacerbated by existing shortages across the wider economy". *(Department for Energy Security and Net Zero (2025), Assessment of the clean energy skills challenge)*

NESA: Bringing green jobs to life

One of the most impressive examples of local partnership in the Aberdeenshire region is the National Energy Skills Accelerator (NESA). Founded in June 2021, NESA is a not-for-profit partnership between Robert Gordon University, the University of Aberdeen, and North East Scotland College, with support from Skills Development Scotland and Energy Transition Zone Ltd.

NESA works closely with businesses and training providers to build a more adaptable and resilient workforce for the UK's energy sector. By designing and delivering targeted skills programmes, NESA ensures employers have access to a skilled talent pool that can accelerate progress towards achieving net zero.

Building the green workforce starts with awareness - polling has shown that only 27% of all young people have heard the term 'green jobs' and are able to explain what it means. In April 2024, NESA launched Energy Career Pathways, an online interactive tool to help people interested in careers in the energy sector understand what jobs are available and how to get them. The tool was created in partnership with local industry stakeholders who engaged in user testing during the refinement process. The project was supported by the Scottish Funding Council's Regional Pathfinder initiative.

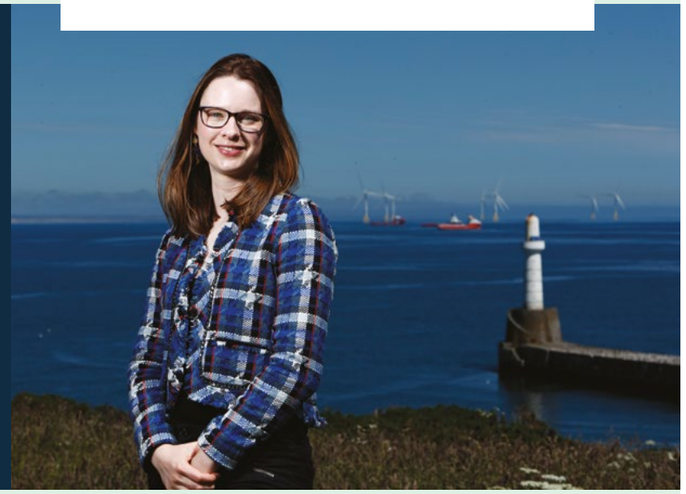
In the pilot stage, the tool highlights six low-carbon energy job profiles, with accompanying videos that showcase real-world examples of people in those professions. Users can also complete the interactive questionnaire to receive a customised plan for the journey into their chosen profession, outlining the qualifications they'll need and how to gain them.

According to NESA's evaluation in 2025, feedback on the tool was positive overall – users found the tool visually appealing and easy to navigate, the videos were relatable, and the contextual information helpful.

While funding has so far only been available in the pilot stage, NESA hopes to secure further funds to develop the tool so that more job roles can be included.

"There are so many different green energy jobs out there and a myriad of education routes into them. It can be a confusing path to navigate, but NESA's pilot tool helps to demystify energy careers and achieve a just energy transition through accessible education routes for everyone and by inspiring the next generation to join the energy workforce."

Lauren Braidwood,
Senior Skills Manager, NESA



Apprenticeships from Aberdeenshire

Aberdeenshire Council's Foundation Apprenticeships are playing a vital role in supporting the energy sector's workforce needs—especially during the green energy transition. In partnership with OEUK (Offshore Energies UK) and SPE (Society of Petroleum Engineers), Aberdeenshire Council has co-created a Level 5 Foundation pathway course in Energy Engineering. This combines knowledge and skills from both the traditional Energy Engineering sector and the renewables sector. Thus, young people are upskilled to work in either or both.

Colin Black, Managing Director, Carjon NRG said, *"In today's landscape, where qualifications alone are insufficient, this initiative delivers the missing link – real-world experience and mindset – making it a vital asset for energy sector workforce development".*

By bridging the gap between school and employment, this programme develops pupils' employability skills and provides employers with clear evidence of aptitude and attitude - essential traits for safety-focused, high-performance teams. In a sector evolving toward sustainability, this initiative ensures young people are ready to contribute meaningfully to the future of energy.

NESCol – the heart of green skills success

With 6,000 full time students, 12,000 part time students and over 1,000 Modern Apprentices across 4 main campuses in Aberdeen, Fraserburgh and Peterhead, North East Scotland College (NESCol) is the beating heart of the region's green skills transition. We sat down with Assistant Principal, Duncan Abernethy to find out more.

Can you give us a sense of where NESCol fits into the green skills agenda?

We are right at the heart of it. Increasingly, much of our focus is on supporting the energy transition and making sure the local population have access to upskilling and reskilling to take advantage of new job opportunities. NESCol sits in the North East Scotland Investment Zone, and the demand for skills in areas like offshore wind, hydrogen, and carbon capture is only growing. Our role is to make sure the workforce is ready for that.

Can you give some specific examples of green skills training you're delivering?

We deliver wind technician training for companies like Vestas, who are operating offshore and onshore wind farms in the region. New skills development is important for this, but in many areas, existing skills are already highly transferrable. For example – there are skills shortages in welding. The processes and techniques are very similar whether working on turbine structures or oil and gas plant. Increasingly, employers are telling us it's those fundamental skills like electrical and mechanical engineering, that are in short supply, whether for developing new hydrogen plants or maintaining offshore wind infrastructure.

"Key areas of focus for us are going to be offshore wind, carbon capture and hydrogen, but the skills that we want to make sure that the future workforce have would include those around general energy transition knowledge, electrical and mechanical engineering, construction, manufacturing, project management, health and safety and quality. These are often things that we are already doing, but they might well be add-ons to the offer that we have."

Neil Cowie, Principal of NESCol, to the Scottish Affairs Committee, 14 May 2025

You mentioned hydrogen and carbon capture. How is the college preparing for those areas?

Hydrogen and carbon capture are both real opportunities for our region. For example, with Statera Energy developing its Kintore Hydrogen project, electrical technicians are going to be in very short supply. Similarly, the ACORN carbon capture project is repurposing the Goldeneye gas infrastructure for carbon capture - many of the technicians already trained for oil and gas will be able to transition to these roles with relatively small changes in training. Our approach is to work with employers and keep courses agile so we can adapt provision quickly as projects come to life.

What about work with schools – how are you encouraging young people into green jobs?

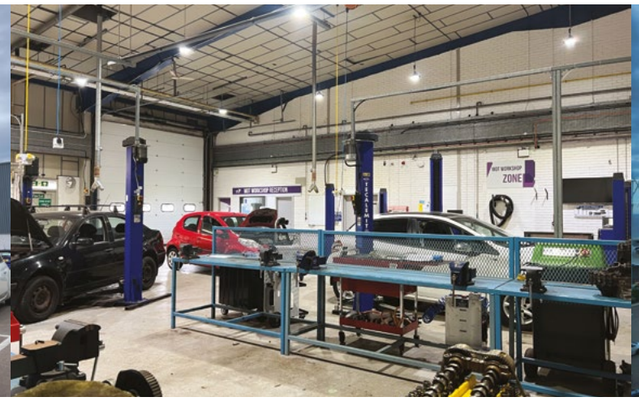
That's a really important part of what we do. Our strong links with all of the region's secondary schools, see around forty percent of school leavers in the region come to us. Programmes like Shell's Girls in Energy are a great example: each year, about 300 young women take part, visiting energy related sites, meeting inspiring female role models, and even taking part in challenges which consider how to meet global energy, food and water problems at an annual conference each year. There are also competitions for younger pupils to spark interest in STEM and energy transition at an early age - building solar panels and wind turbines, for instance. Our Energy On The Move vehicle is able to take learning out to schools so that pupils can gain a better understanding of the future challenges the world faces with regard to energy - and how to help.

It sounds like there are some great local partnerships working to support the green transition – where does NESCol fit?

Partnerships are absolutely vital. We're working closely with public, private and third sector partners locally and further afield. For example, our new Energy Transition Skills Hub, which has just opened, supported by funding from the Scottish Government's Just Transition Fund, in partnership with Shell, ETZ, ECITB, SSEN and others will be a centre for delivering the specialist training industry needs. We're also supported by the Energy Skills Partnership, which connects colleges across Scotland to share expertise and capacity. Without those collaborations, it would be much harder for us to scale up green skills provision.

And finally, what's your personal outlook on the opportunities and challenges ahead for green skills in the region?

It's been a challenging time for the region with reducing opportunities in the energy industry, and the workforce here has had to cope with boom and bust cycles and promises of jobs that don't always materialise. The Energy Transition opportunity feels different though, with real projects coming to life, like Moray East and West offshore wind farms and new hydrogen plants. A key challenge is timing. It can take up to two years to train a new engineering technician and longer to complete a full Modern Apprenticeship. Our task is to work closely with industry, keeping our eyes on what's genuinely coming, and ensure we have the people and programmes in place so the North East - and Scotland more broadly - remains at the forefront of the green energy future and is able to take advantage of the opportunities that emerge.



Bridging the Energy Divide: A different direction for offshore wind

It is estimated that the UK will face an annual shortfall of over 11,000 wind turbine technicians over the next five years, especially concentrated in coastal and Scottish regions. Given the immediate needs of the renewable energy sector, and maturing oil and gas reserves in the North Sea, a lot of thought has gone into how to prepare the current oil and gas workforce to transition from high carbon to low carbon careers. The conditions are ideal – research shows that over 90% of those working in oil and gas have medium to high transferability to ensure an easy transition in adjacent energy sectors.

Preparation for this is already underway through initiatives like the Energy Skills Passport, which has been developed with £3.7 million in investment from the Scottish Government, and has since been piloted to other areas of the UK. In its current version, the Passport consists of a digital platform which helps workers in the oil and gas sectors identify viable career and training routes into clean energy, based on their skills and experience. However, the Passport has been criticised for not going far enough to reduce the time needed to retrain.

Another initiative to cut down on training time is the Engineering Construction Industry Training Board (ECITB)'s Cross-Skills Pilot. Launched in February 2025, in collaboration with the Global Wind Organisation (GWO) and the Offshore Renewable Energy (ORE) Catapult, the pilot was designed to upskill oil and gas technicians for deployment in the offshore wind sector. The pilot featured two cohorts: one based at Forth Valley College in Grangemouth and another at North East Scotland College in Aberdeen. Each technician participated in a fully funded, intensive six-week cross-skilling curriculum that built on their electrical, mechanical, or instrumentation expertise. A prerequisite for participation was possession of a Level 3 NVQ (or equivalent) and validated technical competence through ECITB's Connected Competence scheme.

Training spanned core wind turbine safety protocols, GWO Basic Technical Training (BTT), and GWO Basic Safety Training (BST) modules such as enhanced first aid, working at height, manual handling, fire awareness, and optional sea survival. The programme also included GWO Slinger Signaller training and e-learning modules on wind awareness, SCADA systems, high-voltage switchgear, and condition monitoring. Learners completed practical exercises inside ORE Catapult's Levenmouth demonstration turbine to gain hands-on familiarisation.

A total of 15 technicians completed the programme, with some participants securing immediate roles on wind installations at companies including Wood and GE Vernova - demonstrating a clear, career-transforming outcome.

Based on early feedback, ECITB is reviewing insights from learners, training providers, and employers to refine the model. The ambition is to roll out a widely available programme through ECITB's technical training providers by autumn 2025.

Transitioning from one industry from another is about more than just skills, of course – workplace culture, particularly around behavioural safety, varies greatly between the oil and gas and offshore wind sectors – but the ECITB pilot is an important step in bridging a crucial gap for workers.

Andrew Hockey, ECITB Chief Executive, said: "Oil and gas will need to continue, certainly in the short and medium term, and we need to ensure the industry has the skilled workforce it needs to deploy to both existing oil and gas fields as well as onshore and offshore wind.

"It is vital we maintain the appropriate standards of technical skills and behavioural safety across the engineering construction sectors and the two-way transition of skilled workers between sectors will help improve safety, workforce mobility and the resilience of the industry."

However, the ECITB recognises that re-skilling the existing workforce won't be enough to meet the incoming challenge and is working hard to provide new entry routes into the energy sector for those not currently employed or in training, through its Work Ready and scholarship programmes.

Pathways to clean energy careers at Bucksburn Academy

The green workforce of Aberdeen's future is being developed in the here and now. One institution that understands that particularly well is Bucksburn Academy. Located on the outskirts of the city, not far from the airport, it describes itself as 'an ambitious school with an ambitious curriculum'.

With the support of the Wood Foundation's Excelerate Programme, Bucksburn recently introduced the Pathways Programme for its S3 students. Pupils can choose from nine pathways, aligned to key growth sectors in the region, including construction, life sciences, and finance and legal. Designed in partnership with local businesses and providers like Robert Gordon University and NESCol, the courses provide opportunities to visit real-world workplaces and take part in hands-on learning - crucial for employability skills. At Bucksburn, those skills are referred to as SCRIPT – Self-Management, Communication, Resilience, ICT + Digital Literacy, Problem Solving, and Teamwork.

The Energy in the North East Pathway is focused primarily on jobs related to energy transition in the region. At its core, the pathway is about linking classroom learning with future opportunities. Pupils engage with projects themed around Scotland's transition to net zero, including wind, hydrogen, and carbon capture. These projects are developed in partnership Techfest, with input from leading industry organisations including ETZ (Energy Transition Zone), Storegga's Acorn Project, and Res.

Pupils work on challenges like designing energy plans for an imaginary town, calculating renewable energy outputs, and presenting solutions to peers and industry experts. Visits to local wind farms and talks from professionals bring the subject matter to life, while also building SCRIPT skills. For some, these experiences have been transformative – inspiring one student to pursue a career in wind energy after learning about apprenticeship routes with Res.

Employer engagement has been a cornerstone of the pathway's success. With the support of a dedicated Business Community Support Officer, Bucksburn has built strong and lasting relationships with partners across energy and construction. Companies are drawn not only by the chance to support the skills pipeline but also by the school's commitment to reciprocity – promoting partners' work, hosting stakeholder events, and ensuring employers' needs are heard. Companies now actively approach the school to get involved.

The programme is also aligned with progression opportunities through NESCol. Pupils can access Skills for Work engineering courses and foundation apprenticeships in energy-related fields, combining school qualifications with college study and work placements. These apprenticeships allow students to test their interests in real workplaces before committing to further training or employment.

Importantly, the pathway also addresses wider challenges in the sector. For young people, the programme tackles perceptions of instability by showcasing the breadth of careers available – from renewables and decommissioning to opportunities in engineering and beyond. Employers emphasise that skills developed in energy are highly transferable across industries and geographies.

With women making up only 22% of the offshore wind workforce, diversity is a key consideration. The first year of the pathway enrolled only boys, but recent cohorts are beginning to show greater gender balance, with efforts underway to showcase role models from varied backgrounds, routes, and experiences. This focus reflects the school's belief that anyone can find a place in the energy sector, whether through apprenticeships, university, or on-the-job training.

Bucksburn Academy aims to expand the employability dimension of the pathway in future. Plans include year-long internships with local businesses, SQA-accredited employability qualifications, and targeted support for pupils uncertain about their next steps. By embedding industry exposure earlier, the school hopes to reduce mismatched choices in qualifications and career paths, ensuring students make informed decisions about their futures.

Jon Scally, the school's lead for the Energy in the North East Pathway, said:

"Developing pathways through school and beyond has been part of our journey as a school for some time now. Our pathways programme is the latest part of all this work and our learning through Excelerate with the Wood Foundation. Working with industry and further/higher education is crucial to the success of this, whether developing their knowledge of different pathways, opportunities to develop their SCRIPT skills or being exposed to industry so that they can see it to be it."

EDGE FOUNDATION

Making Education Relevant

www.edge.co.uk