



Institute for Apprenticeships
& Technical Education

Climate change and environmental skills strategy: Action Plan



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Introduction

Our Environmental and Climate Change Strategy summary sets out the role of apprenticeships and technical education in securing a fundamental shift in the skills of the UK workforce, including the steps we have already taken and those we plan to take. This change is needed to meet our environmental and climate change goals.

In this accompanying publication we are providing further detail on our previous work with employers, and on our future plans to maximise the role of apprenticeships and technical education in helping the country achieve sustainable growth and meet its net zero targets.

We have structured the document around the themes: 'Our partners', 'Our Products' and 'Our Organisation'. We have set out the commitments, the background to our work and what we plan to deliver.

Our commitments

2023/24

Our Partners

1. Publishing a future facing innovation strategy, in Spring 2023, which will set out how IfATE plans to accelerate capturing and reflecting emerging skills needs in apprenticeships and technical qualifications
2. Continuing our work to provide expert inputs to Ministers on apprenticeship and technical education, including in support of the Ministerial Green Jobs Delivery Group

Our Products

3. Take forward the panel's recommendations, ensuring the sustainability framework is considered, when we create or update occupational standards, apprenticeships, and technical qualifications. We aim to have reviewed and, where necessary, revised a half of all in scope occupational standards by June 2023.
4. Working with employers to research whether further T Levels are needed to help young people access high-skill and rewarding careers in tackling climate change
5. Updating our occupational maps and apprenticeship search tool, completing the first phase of a review of the design and functionality of our occupational maps by March 2023, to allow users to easily identify

occupations, apprenticeships and technical qualifications that contribute to meeting our environmental and climate change goals

Our Organisation

6. Reviewing our environmental policy to ensure we are meeting the highest standards and having it approved by the IfATE board on an annual basis
7. Sharing and promoting sustainability best practice with other organisations through our Green Action and Innovation Network

2024/25

Our Partners

8. Continuing our work to provide expert inputs to Ministers on apprenticeship and technical education, including in support of the Ministerial Green Jobs Delivery Group

Our Products

9. Continue taking forward the panel's recommendations, ensuring the sustainability framework is considered, when we create or update occupational standards, apprenticeships, and technical qualifications. We aim to have reviewed all in scope occupational standards during 2024

Our Organisation

10. Reviewing our environmental policy to ensure we are meeting the highest standards and having it approved by the IfATE board on an annual basis



Section 1: The importance of climate change and environmental skills

1. To limit further global warming the UK Government was the first major economy to legislate to reduce carbon emissions to net zero by 2050. To achieve this all sectors will need to adapt to work in a more sustainable way, renewable energy will expand rapidly, and new sectors will appear and grow to take advantage of the technological challenge of lowering carbon emissions. Climate change puts increased pressures on our ecosystems and biodiversity, so it is important that conservation, adaptation, and restoration skills are also considered.
2. The Government has set an ambition for two million green jobs in the UK by 2030, and there are already over 420,000 jobsⁱ in low carbon businesses and their supply chains with an estimated turnover of £41.2 billion in 2020ⁱⁱ. Over 80% of the workforce of 2030 is already in work todayⁱⁱⁱ, so reaching net zero by 2050 will require government and industry to work together to ensure workers in high carbon sectors can retrain and upskill as they move into jobs in the green economy.
3. Research shows the East Midlands, West Midlands, and Yorkshire and the Humber are the three regions with the highest proportions of jobs that could be exposed to the transition. Overall, it is predicted that six million jobs will be changed by the transition, and opportunities are likely to be highly regionalised with specific geography being a prerequisite for certain industries or jobs localised around production and manufacturing plants^{iv}.
4. Evidence also suggests a positive correlation between environmental policies and a high-skilled, high-wage economy. A 2021 study^v shows that individuals employed in 'green' industries earn approximately 7% more than those working in non-green industries. Furthermore, analysis by Green Alliance and WPI Economics^{vi} shows that British constituencies with the greatest employment challenges have the greatest potential for the creation of new nature-based jobs. As legally binding Environment Act targets are set, businesses will gain greater certainty over environmental policy direction, and demand for green skills will continue to grow.

"We are keen to understand and support the climate change and environmental skills priorities identified in different regions of England, appropriate to their geography, economy and people, through our national standards."

Beth Chaudhary / Rachel Cooper
IFATE Strategy Directors

Section 2: What are 'green skills' and occupations?

The term 'green skills' and occupations will mean different things to different people. To some it will suggest those occupations delivering carbon reduction technologies, such as installation of electric vehicle (EV) charge points or offshore wind farms, or occupations that work with and in the natural environment such as forestry and agriculture. Others will see the need for climate change and environment expertise in all businesses, whatever sector of the economy, to mitigate financial risk and improve competitiveness of businesses through more sustainable practices.

Our work on green skills and occupations encompasses not only those occupations that instantly spring to mind but also the huge range of occupations, such as those in digital, construction and finance, which will need new knowledge, skills, and behaviours to deliver sustainable growth and help the country meet its net zero targets. It is also applicable to all sectors of the economy: public, private, and community. At IfATE we want to make sure that every person trained using an apprenticeship or technical qualification can play their part in contributing to these goals.



Our Partners

As the organisation with responsibility for apprenticeships and technical education in England, we cannot deliver our work without working closely with employers, awarding organisations, partners in government and wider stakeholders. In the following section we set out how we will work with our partners to deliver our strategy.

Commitment 1: Publishing a future facing innovation strategy, in Spring 2023, which will set out how IfATE plans to ensure our products meet the future skills needs of the economy. Through the development of a forward-facing skills and technical education system we can support employers to meet their future skills needs, reducing the risk of skills gaps and shortages

We are in constant dialogue with employers across the economy about the skills they need the apprenticeship and technical education system to provide. We also recognise that the business environment is challenging at present and for many employers the focus is rightly on immediate business need, rather than projecting ahead to future skills needs, both at a national and regional level.

For this reason, we are growing our capacity within the organisation to horizon scan, identifying new and emerging skills and technologies which will impact the nature of occupations within the economy. We are already engaging with R&D organisations, innovation centres as well as local authorities and mayoral combined authorities to understand future skills needs and strategies. By doing this we can work to validate and share these findings with employers as well as finding new and innovative ways to accelerate how these skills and technologies can be reflected in apprenticeships and technical qualifications. More about the vision for this work and how we will undertake it will be set out in our upcoming future facing innovation strategy, which will be published in the Spring 2023.

Commitment 2 & 8: Continuing our work to provide expert inputs to Ministers on apprenticeship and technical education, including in support of the Ministerial Green Jobs Delivery Group.

Through working with employers to make sure we have the apprenticeships and technical education they need, we know that there are sometimes barriers that need to be overcome to secure great outcomes. We are working with employers and partners in government through the ministerial [Green Jobs Delivery Group](#). The Green Jobs Delivery Group brings together government, employers, and wider stakeholders, to tackle the biggest barriers to delivery, looking at priority areas of the economy on a thematic basis.

As set out in the October 2021 Net Zero Strategy: Build Back Greener, the government wants to see continuous improvement in the quality of jobs in the UK, both in the creation of new high-quality jobs which support Government priorities such as net zero, and through in-work progression. Part of the role of the Green Jobs Delivery Group is considering how government and industry can work together to ensure green jobs are good jobs.

For IfATE, a key part of this is making sure that apprenticeships and technical education are part of the solution, including those needed to help the country meet its environmental and climate change goals, and support equity, diversity and inclusion. Evidence shows that organisations work more effectively and creatively when they have people from different backgrounds working together. It also shows increased economic output. By offering varied and new perspectives, diverse workforces break down barriers to the benefit of individuals, employers and the overall economy.

We want equity, diversity and inclusion to be built into our organisational DNA and to be able to demonstrate that as an employer, a decision maker, and a government institute, we can influence positive change. Our upcoming equity, diversity, and inclusion (EDI) strategy will set out the work IfATE will do to make technical education accessible to everyone, including those who want to pursue careers that support the country meeting its environmental and climate change goals.



Our Products

We want to ensure that apprenticeships and technical qualifications for key occupations meet environmental and climate change needs, and that people understand what is available. In this section we provide further information about how we are taking forward work with employers and awarding organisations to achieve this.

Commitments 3 & 9: Take forward the panel's recommendations, ensuring the sustainability framework is considered, when we create or update occupational standards, apprenticeships and technical qualifications. We aim to have reviewed and, where necessary, revised half of all in scope occupational standards by June 2023 and all in scope occupational standards during 2024.

For the country to secure sustainable growth and meet its net zero goals, individuals and employers will need access to new knowledge and skills or be able to apply existing knowledge and skills in new ways and contexts. For some occupations such as those in engineering, manufacturing, transport, construction, and agriculture this will be about adopting new technologies and ways of working. For other occupations, such as those in legal and finance, sales, marketing and procurement, digital, and business and administration, individuals will need to understand sustainability and climate change within their occupational context.

Through our network of over 5,000 employers and wider stakeholders we are working to identify where new occupations need to be added to the apprenticeships and technical education system, so that employers and individuals have access to high quality training and learning. Our [Green Apprenticeships and Technical Education Advisory Panel](#), supported by a broad-based Green Advisory Community, has identified where existing occupations and their associated apprenticeships can become greener and new ones are needed. The panel, supported by the wider community, have reviewed our existing stock of occupations, and have identified several that could be added to meet employers' needs. These include:

- Domestic insulation operative/technician
- Energy Efficiency Assessor and Advisor
- Forest Manager/Supervisor

If you are an employer with an interest in these occupations, we would welcome your engagement in developing them. You can register your interest via our dedicated mailbox (institute.sustainability-team@education.gov.uk). Although we have carried out this work, we recognise and understand that the skills that the economy needs to secure sustainable growth and meet the country's net zero targets are constantly evolving, and that this is a dynamic process, rather than a one-time activity.

To support employers in making this change, with the support of our construction route panel, we created the [IfATE Sustainability Framework](#). The framework sets out the key themes that are important for securing sustainable growth and helping the country meet its net zero targets, and is designed to be relevant for all employers, no matter what sector they are in.

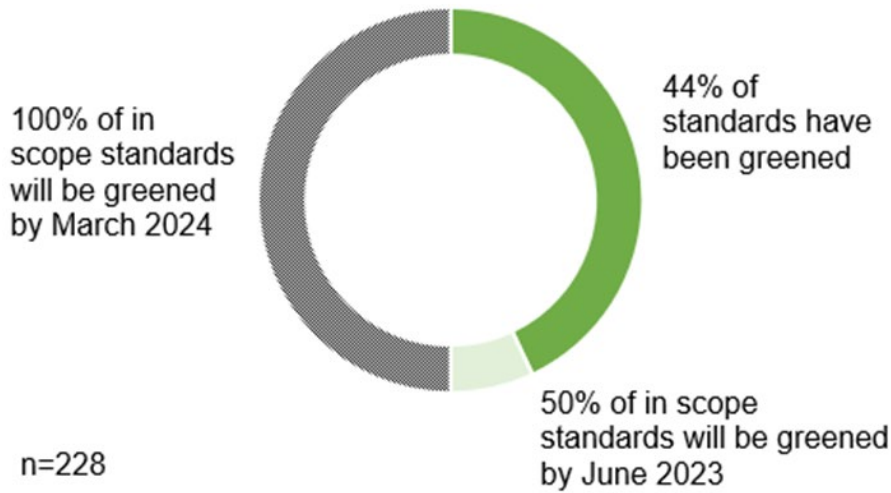
We are asking all the employer groups we work with, known as trailblazer groups, to consider and apply the framework when developing or revising their occupational standards and the associated apprenticeships. This ensures that sustainability themes are always considered in a way that is meaningful and appropriate for each occupation that is developed, and that in due course every existing occupation will have appropriate content on sustainability themes. We need to help employers drive this change. Working with our Green Apprenticeship and Technical Education Advisory Panel, we have mapped our occupations to the priority themes and requirements set out in the [‘Green Jobs Taskforce Report’](#). The initial themes we identified as a priority were:

- Energy: including electricity networks, offshore wind, solar and heat pumps
- Agriculture, Forestry and nature
- Construction: including retrofit and energy efficiency
- Shift to Electric Vehicles including Battery Manufacture
- Engineering
- Manufacturing
- Quality Assurance
- Logistics
- Materials Planning
- Green Finance and Innovation
- Occupations supportive of a Green Economy: including Digital, STEM, Procurement, Logistics and Management.

As part of this work we published an initial list of [endorsed ‘green apprenticeships’](#) that were already available. We have subsequently written to over 180 employer trailblazer groups to highlight how the occupation they are responsible for aligns to these priorities, and where we recommend that the occupational standard should be revised to address these priorities.

Trailblazer groups have responded positively to the challenge, and we are working with them to make the changes. We aim to have reviewed, and where necessary revised half of the 228 in scope occupational standards by June 2023. By the end of 2024, we aim to have reviewed, and where necessary revised, all 228 in scope occupational standards. Many of the occupations and associated apprenticeships in our Construction and the Built Environment and Engineering and Manufacturing routes are preparing for revision, having been through our [Route Review process](#). We expect that any necessary changes for the occupations and associated apprenticeships will be made as part of that work.

Greening Occupational Standards Progress



We have made great progress, with our review work with employers confirming that 100 (44%) of the in-scope occupational standards already have the environmental and climate change knowledge, skills, and behaviours they need. Where our discussions with employers have confirmed that changes are needed, 22 of the in-scope occupational standards are now being revised, and a further 101 are preparing for revision. For the remaining 5 we are working to convene or reconvene employer trailblazer groups to consider the panel's recommendations.

In the following section, we have highlighted just a few of the hundreds of occupations that are currently available or in development, that can be accessed through apprenticeships and technical education and will contribute to the country achieving its environmental and climate change goals. There are many others available across the 15 apprenticeship and technical education routes which will be highlighted as part of our ongoing improvements to our occupational maps.

Energy Security

As set out in the British Energy Security Strategy we need a flow of energy that is affordable, clean and secure^{vii}. Offshore wind is a critical part of this, and it is expected that the sector will grow to support around 90,000 jobs by 2030^{viii}. Our current [Maintenance and Operations Engineering Technician](#) occupational standard has a Wind Turbine Technician occupation option within it and is available as an apprenticeship. However, we want to expand the options available to allow people to specialise in a wider range of renewable energy sources, which is why as a recommendation of our Engineering and Manufacturing Route Review, we are working with employers to redevelop this to create a Power Asset Maintenance Technician occupational standard.

The new Power Asset Maintenance Technician occupational standard will include the current wind turbine technician occupation option and will add further power generation occupation options, including: tidal, solar and hydroelectric. This will strengthen the standard, by including specific knowledge, skills, and behaviours in the different power generation occupational options, and by covering the necessary regulations specific to power generation.

Apprenticeships and technical education also support the manufacture of wind turbine technology, and we already have 25 occupations, such as [Engineering Manufacturing Technician](#) and [Electro-mechanical Engineer](#), approved and in delivery to support this endeavour. We are working with employers to update occupational standards that are critical to the sector, and have recently revised the [Composites Technician](#) occupational standard, which will be available for new starts in March 2023.

Alongside offshore wind, nuclear power generation will be a key part of our enhancing our energy security, with the aim that up to a quarter of the power consumed in Great Britain is from nuclear by 2050^{ix}. Our employer trailblazer group responsible for nuclear occupations has accepted the findings of our Engineering and Manufacturing route review and are beginning to revise their occupational standards and associated apprenticeships, starting with Nuclear Operative and Nuclear Health Physics Monitor. As part of this process, they will be including environmental and sustainability knowledge, skills and behaviours.

Energy security also is dependent on resilient energy distribution networks, and we have a well-established suite of occupational standards and associated apprenticeships in place to support this. However, we recognise that we need to ensure that the content of these remains current and continues to meet employer's needs. We are therefore working with employers to revise and update the occupational standards for Electrical Power Networks Engineer and Electrical Power Protection and Plant Commissioning Engineer. We plan for the new versions of these occupational standards and their associated apprenticeships to be available by Q4 2023.

We are also working with employers to carry through the recommendations of our Engineering and Manufacturing Route Review, revisiting the way the occupation currently defined as Power Network Craftsperson is defined, ensuring that it continues to meet employer's needs. This work will result in new occupational standards and associated apprenticeships for the occupations of Power Industry Overhead Linesperson, Power Industry Sub-Station Fitter, and Power Industry Cable Jointer, which will be available from Q1 2023.

To support our work with the sector we have established an [Energy & Utilities Advisory Panel](#), who are supplying independent employer expertise to further support our work in the development and maintenance of apprenticeships and technical qualifications. The panel is reviewing the content and coverage of our occupational standards, identifying where occupations do not currently

have the necessary knowledge and skills, including those needed to deliver the country's environmental and climate change goals.

Construction and Built Environment

Our homes and buildings are one of the UK's biggest emitters of carbon dioxide. We have a well-established suite of occupations and apprenticeships in our Construction and Built Environment route that are well placed to increase energy efficiency and incorporate new energy sources, through both new build and retrofitting existing homes and buildings.

We are continuing to add to these all the time. In June 2022 we approved the occupational standard and associated apprenticeship for [Domestic Electrician](#) which offers a new route for individuals and employers to get the knowledge and skills needed to install and maintain domestic heat pumps, solar panels, and EV charging points.

We are also working with employers to develop occupational standards and associated apprenticeships for the occupations of Low Carbon Heating Technician and District Heating Technician. Both occupations will play an important role in meeting the ambition set out in the British Energy Security Strategy; that by 2050 all heating systems are compatible with Net Zero, with the installation of gas boilers ending by 2035 at the latest^x. We expect the apprenticeship for Low Carbon Heating Technician to be available from Q1 2023 and the apprenticeship for District Heat Network Maintenance Technician to be available from Q3 2023.

Recognising the importance of improving the energy efficiency of our homes and the skills gap in this area, we are looking at ways to use the knowledge, skills and behaviours of being a retrofit coordinator to create apprenticeships and technical qualifications which deliver the skills required to do this key green job.

Complementing all these occupations are the occupational standards and



associated apprenticeships for the occupations of [Junior Energy Manager](#) and [BEMS \(Building Energy Management Systems\) Controls Engineer](#) that play a key part in helping organisations meet sustainability commitments by reducing energy consumption and costs.

Vehicle electrification

Through our work with employers, we are supporting the switch to Electric Vehicles (EVs) across the whole life cycle, from design, to manufacture and consumer use. In tandem with the work to revise and update the relevant occupational standards across our Engineering and Manufacturing Route, we are working with employers to scope and define the occupation of Battery Manufacturing Technician which we anticipate will be in place for apprenticeship starts from Summer 2023.

Our occupational standards and associated apprenticeships also support the arising demand for Electrical Vehicle Charging points. As set out in the section above, our new domestic electrician occupational standard and associated apprenticeship will help to address the demand for domestic EV charge point installations. Through our work with employers to revise and update the [Installation Electrician and Maintenance Electrician](#) occupational standard and associated apprenticeship, we are contributing to the ambition to have 300,000 publicly accessible EV charging points by 2030^{xi}. It's anticipated that the revised and updated standard and associated apprenticeship will be available from Q1 2023.

Biodiversity, nature-based solutions, and the environment.

Achieving the country's environmental and climate change goals is not just about equipping individuals and employers with the knowledge and skills to make a technological change. Equally important is equipping the country to re-establish, conserve, and protect our natural environment. Occupations and



associated apprenticeships such as [Environmental Practitioner](#) and [Ecologist](#) will play a key role in this.

We have worked with employers to develop and update the occupational standard and associated apprenticeship for [Professional Forester](#), published in August 2022. This is complemented by our [Forest Craftsperson](#) occupation and associated apprenticeship, approved for delivery in August 2022, designed to provide the knowledge and skills needed to create, maintain, and harvest forests and woodlands. This will contribute to increasing tree canopy and woodland cover. Forest Manager is already identified as an occupation on our Agriculture, Environmental, and Animal Care route occupational map, and we will encourage employers to come forward with a proposal for this occupation; the same employer trailblazer group that developed Forest Craftsperson are likely to be well placed to develop this.

Similarly, through our work to revise and update our [Landscape or Horticulture Supervisor](#) occupational standard, which we expect to have completed by Q4 2023, we are making sure that employers and individuals can access the knowledge and skills needed to plan and maintain large gardens, parks and other green spaces. Our [Countryside Ranger](#) occupation and associated apprenticeship provides employers and individuals with the knowledge and skills to provide daily management, maintenance, conservation and protection of the natural environment and to inspire people about the natural environment.

A proposal for the occupation of Soil Scientist was submitted by employers in November 2022. This occupation will have application in a range of areas including construction and the built environment, agriculture, and science. We will be consulting our Agriculture, Environmental and Animal Care Route Panel on how to better reflect the environmental occupations on their occupational map. This includes updating the cluster titles that group occupations with similar knowledge and skills, and their descriptions to emphasise environmental opportunities across multiple sectors.

Oil and Gas Transition, Hydrogen, and Carbon Capture.

As the country moves away from fossil fuel consumption, we are likely to see a continued decline in oil and gas production. Workers in these industries will need support to transition to new industries, such as hydrogen production and carbon capture and storage, to which many of their skills will be transferable. We will continue to engage with employers in these rapidly developing industries, particularly through our work on emerging skills, to understand how the existing range of apprenticeships and technical education can meet their needs and support transition, and where new occupations may need to be added to give them access to the knowledge and skills they need.

Aerospace sector

Aerospace engineering is undergoing a rapid technological revolution to meet the UK government's target to reduce UK aviation emissions to Net Zero by 2050. The digitisation of design and manufacturing is allowing businesses to do much more, more quickly, sustainably and cost effectively.

Innovative technologies such as integrating automation using autonomous robotics, digital systems and manufacturing engineering systems, including digital twinning, will reduce waste and increase product manufacturing efficiencies. Further developments in advanced manufacturing techniques are creating lighter, more fuel-efficient aircraft and, combined with emerging power sources, reducing emissions.

These advances in digitisation, materials, and fuel sources require new skills and all new occupations and revisions are being future-proofed to keep up with technological change. This includes revising Space Systems Engineer (new integrated degree model) and Aerospace software engineer (new integrated degree model) and Aerospace Engineer (integrated degree).

Aerospace Engineering Technician and Aircraft Maintenance Technician are new apprenticeships in development and will replace 3 options in the current engineering technician standard. We expect these to be available for delivery in Q2 2023.



Environmental and climate change skills in the wider economy

We need to equip individuals working in all occupations, such as those in digital, finance, management, and procurement, with the climate change and environmental knowledge, skills, and behaviours needed to be change makers.

Organisations will need help to understand the choices in front of them, and how the way in which they conduct their business can have a positive or

negative environmental impact. A key change maker is our [Sustainability Business Specialist](#) occupational standard and associated apprenticeship, approved in May 2020, which provides the skills to help find new and innovative approaches to working and building resilience based on economically sound, socially friendly and environmentally driven principles. This is further supported by our [Corporate Responsibility and Sustainability Practitioner](#) occupational standard and apprenticeship, which was approved for delivery in May 2021.

For those working in the digital industries, it can be occupations such as [Data Analysts](#) who organisations will need to understand the impact of their actions or [Software Developers](#) writing the code needed for new technologies to function. In finance, [Compliance and Risk Officers](#), will need to understand environmental and climate change risks to provide proactive support and guidance to the organisations they work for, while [Actuaries](#) will need to predict the likelihood and potential financial risk of future environmental and climate change events. In procurement, [Procurement and Supply Assistants](#) will need to understand the environmental and climate change impacts of the decisions they make. These are just a few examples of how the many hundreds of wider occupations that underpin the apprenticeship and technical education system can contribute to the country meeting its environmental and climate change goals.

Some of our achievements so far:

- ST0923 Professional Forester - level 6 (Revision)
- ST1321 Forest Craftsperson – level 3 (New)
- ST0629 BEMS (Building Energy Management Systems) Controls Engineer – level 4 (Revision)
- ST0161 Junior Energy Manager - level 3 (Revision)
- ST1017 Domestic Electrician – level 3 (New)
- ST0748 Sustainability business specialist (integrated degree) - level 7 (Revision)
- ST0094 Composite Technician - level 3 (Revision)

Future developments in Occupational Standards:

Q1 2023

- ST0152 Installation electrician and maintenance electrician – level 3 (Revision)
- ST01020 Low Carbon Heating Technician - level 3 (New)
- ST0303 Plumbing and domestic heating technician (with environmental technologies option) – level 3 (Revision)
- Space systems engineer (new integrated degree model)
- Aerospace software engineer (new integrated degree model)

Q2 2023

- ST0156 Power networks craftsman level 3 is becoming
 - Power Industry Overhead Linesperson – level 3 (New)
 - Power Industry Sub-Station Fitter – level 3 (New)
 - Power Industry Cable Joints (New)
- ST1313 level 3 Aerospace engineering technician (new)
- ST1315 level 3 Aircraft maintenance technician are new apprenticeships in development and will replace 3 options in the current engineering technician standard, we expect that these will be available for delivery in Q2 2023.

Q3 2023

- ST1338 Battery Manufacturing Technician – level 3 (New)
- District Heat Network Maintenance Technician (New)

Q4 2023

- ST0475 Electrical power networks engineer – level 4 (Revision)
- ST0157 Electrical power protection and plan commissioning engineer level 4 (Revision)
- ST0226 Landscape or Horticulture Supervisor – level 3 (Revision)

Many of our occupations, their associated apprenticeships and end point assessment plans will already have environmental and climate change content. Through our process of revisions, we will be working with employers to add occupationally appropriate environmental and climate change content to more occupational standards and their associated apprenticeships and we will be adding new occupations and apprenticeships. In both cases we will, with our employer led trailblazer groups, explore how environmental and climate change content can be assessed, using the most valid assessments in relation to the nature of each occupational role.

We will ensure that each revised or new end point assessment plan has clear grading descriptors for any environmental and climate change content, supporting End Point Assessment Organisations to deliver consistent assessment. Our work with trailblazer groups and End Point Assessment Organisations will ensure that environmental and climate change content is, where possible and appropriate, assessed holistically and thematically, reflecting the fact that it is embedded in the occupation.

Ensuring changes are reflected in all our technical education products

For every apprenticeship and technical education product that IfATE approves the journey starts with the [occupational standard](#) created by employers, which defines the knowledge, skills, and behaviours that an individual needs to acquire to be considered occupationally competent. As we have set out, we are working with employers to update our existing suite of occupational standards, ensuring that each one has climate change and environmental content appropriate to the occupation. The vital next step is making sure that these changes flow into the content of T Levels and technical qualifications.

For existing T Levels, we will increase the climate change and environmental content in line with the changes to the occupational standards on which they are based, expanding the content to cover some aspects of energy and sustainability. For those T Levels in the Engineering and Manufacturing, and Construction and Built Environment Routes there may be a need to create additional knowledge content or add further occupational specialisms to accomplish this.

We expect these changes would happen as part of the annual review process for T Levels, where employer panels consider the currency and relevance of the T Level's content and propose changes where required. Making these changes will future proof existing T Levels, increasing the potential progression and employment opportunities for students, and support the pipeline for employers requiring these skills.

[Higher Technical Qualifications](#) (HTQs) are level 4 or 5 qualifications that have been quality marked by IfATE to show their alignment to employer-led occupational standards. New or existing level 4 or 5 qualifications submitted to our approvals process will receive a quality-mark if the qualification satisfies our approvals criteria. HTQs align to existing occupational standards, and allow learners to enter their chosen profession or progress onto higher education.



From the 2021 Cycle 2 HTQ approval window, organisations have been introduced to our Sustainability Framework. They have been asked to set out how their qualification considers and designs-in sustainability themes and practices, such as procurement, energy sources and usage, management of resources and opportunities, and consequences.

With each HTQ we approve, changes may be needed during the lifecycle of a qualification to ensure it remains fit for purpose and continues to align to the most up to date employer requirements. We expect that organisations whose HTQs we have approved will be proactive in making these changes in line with their own internal change processes.

Through our [change management process](#), we will review and approve proposed changes, with the expectation that awarding organisations will complete and submit their changes, along with any accompanying employer evidence, within six months of our agreeing the change request. In some instances, we may also request changes are made, primarily as the result of adjustments or revisions to the associated occupational standard or standard(s) to which the qualification aligns.

The Skills and Post-16 Education Act 2022 gives IfATE the power to approve level 2 and 3 technical qualifications. These reforms mean that employer-set occupational standards will now play a similarly important role for technical qualifications that run alongside T Levels at level 3, as well as those supporting entry to lower-level roles at level 2. This will bring consistency between the products, as the basis for the content of both technical qualifications and apprenticeships will be the same occupational standard.

As occupational standards are revised to include climate change and environmental skills, these, alongside the application of our Sustainability Framework, will underpin the approval of technical qualifications at levels 2 and 3.

Commitment 4: Work with employers to research whether further T Levels are needed to help young people access high-skill and rewarding careers in tackling climate change

Apprenticeships and technical qualifications provide great options for employers who want to increase the level of skills in their organisation, and for individuals who want to enter or upskill in a particular occupation. But equally important is making sure that we secure the pipeline of future talent that employers need.

There is evidence from multiple surveys^{xii} that young people want jobs and careers that align with their passion for tackling climate change and environmental issues. However, they are often not sure how to achieve that, or the range of sectors they could work in to support the UK's transition to net zero.

Alongside apprenticeships for those who wish to train for a specific occupation, and A levels for students who wish to continue academic

education, we are creating high-quality options for students at level 3 through the creation of T Levels.

Designed with businesses and employers, T Levels are two-year technical qualifications designed to give students the skills that industry needs. They bring classroom learning and an extended industry placement together, providing a mixture of:

- technical knowledge and skills specific to their chosen industry or occupation
- an industry placement of at least 45 days in their chosen industry or occupation
- relevant maths, English, and digital skills

Many of the T Levels already available are creating a route for young people into occupations and sectors that support the UK's achievement of its environmental and climate change goals. These include T Levels already available in engineering, construction, digital, and science, and the development of a T Level for Agriculture, Land Management and Production, which will support the increased focus of the UK agriculture sector on environmental and sustainable practices.

But we want to go further. While the T Levels described above will go a long way to creating the talent pipeline that employers and the economy needs, there is space to create additional T Levels to further support the country reaching its environmental and climate change goals, and help young people access high-skill and rewarding careers. For this reason, we are currently researching potential new T Levels with employers, to understand their needs and support pathways into energy and sustainability careers.

Commitment 5: Update our occupational maps and apprenticeship search tool completing the first phase of a review of the design and functionality of our occupational maps by March 2023 to allow users to easily identify occupations, apprenticeships and technical qualifications that contribute to meeting our environmental and climate change goals.

Our work with employers is producing the high-quality apprenticeships and technical education the country needs to secure sustainable growth and meet its net zero goals. However, these only have value if employers and individuals know that they are available and can make informed choices about which apprenticeship or technical qualification is right for them.

We want to make it easier for people to see which apprenticeships and technical qualifications can help them choose a green career path, whether they are a young person with a passion and interest in climate change and sustainability looking for career options that support the transition to net zero or the restoration of biodiversity or someone working in a transitioning industry who is looking to retrain and reskill in line with the needs of the green economy. We also want to make it easier for employers to find and understand which apprenticeships and technical qualifications will provide the skills they need to secure sustainable growth.

As part of a wider redevelopment of our [occupational maps](#), we plan to publish information which will allow people to find which occupations in the apprenticeship and technical education system contribute to the country meeting its environmental and climate change goals. We will add functionality that will allow users to find occupations and associated apprenticeships and technical qualifications which are available in key areas such as energy and networks, and sustainable land use and forestry.

As well as the occupational maps service, an Application Programming Interface (API) will be made available to the public containing information and data from the maps. Users of the API will be able to use the data to inform their own products and services. We plan to release both the public beta of the occupational maps online service and API in the Spring of 2023.

In addition to the improvements to our occupational maps, we will be further developing our popular apprenticeship search tool to allow for easy identification of which apprenticeships have green job roles. As occupations develop to meet the needs of a green economy, not every job role within the wider occupation will necessarily support sustainable outcomes. We are developing a filter on our apprenticeship search tool to allow easy identification of those apprenticeships that include green job roles, with green job roles in each occupation being shown by a green leaf symbol.

The aim of that functionality is to enable stakeholders to find where an occupation supports both green economy and legacy economy job roles. In these instances, you will find some job roles with a green leaf and some without a green leaf. We would not consider these to be purely “green apprenticeships” as their use is context dependent within the wider economy. We have started to publish this information on a trial basis, based on the input from our employer trailblazer groups to test the functionality. We will continue to refine our approach and expand the information available during 2023.

“We are making sure that occupationally appropriate environmental and climate change content is added to hundreds of occupations and their apprenticeships across all our routes. These changes are led by employers and stakeholders that understand the occupations needs, supported by the green apprenticeships and technical education advisory panel and communities to ensure that changes are future proofed and realistic. We are absolutely committed to this and it sits with our very top priorities.”

Rob Nitsch - Delivery Director

Our Organisation

Through our work with employers and wider stakeholders, we are developing high quality apprenticeships and technical education products to deliver the skills needed for sustainable growth and to meet the country's net zero targets. However, this is not the only way that IfATE can have a positive effect. We can also play an important role as an employer in the way that we go about our work and in the culture we have as an organisation.

Commitments 6 & 10: Review our environmental policy to ensure we are meeting the highest standards and having it approved by the IfATE board on an annual basis

Commitment 7: Sharing and promoting sustainability best practice with other organisations through Green Action and Innovation Network

One of our biggest levers for positive change is how we carry out our functions, including our procurement activity, ensuring we go about it in a way that is sustainable. To enable this, we have refreshed and republished our own [environmental policy](#). We are committed to complying with all relevant legislation and government policy, particularly the [Greening Government Commitments 2021 to 2025](#), and improving our environmental performance.

As our office space is shared with DfE (Department for Education), we will follow policies and procedures on sustainability which apply to our use of shared spaces. We will act as an advocate for more sustainable practices within this construct and we will promote sustainable practices in all our other activities and behaviours, notably travel.

We will review our environmental policy and have it approved by the IfATE board on an annual basis, or more often in the event of significant changes to our business. In addition to these provisions that we can directly influence, we will be monitored and reported on by the Department for Education.

We have also aligned our procurement policy and processes with the Government Commercial Standards and Chartered Institute of Procurement and Supply ethical procurement standards. This is already influencing our policy and procurement decisions, allowing us to agree social value and sustainability targets for generation 2 T Levels. We will report annually on our procurement social value and sustainability objectives.

While we have made great progress in embedding sustainability in how we carry out our business, this isn't sufficient to deliver change on its own. We also need to continue to build an organisational culture that drives improvements and change at the level of every individual in our organisation. To support this, we have created a staff-led Green Action and Innovation Network (GAIN), which is creating and delivering a plan to drive organisational and individual action. This includes arranging volunteering days to work with

environmental organisations; creating staff guides to encourage behaviour changes; and advising on how to minimise the environmental impact of staff away days.

"It is important that we consider the impact on the environment of the decisions we make as an organisation. If we're asking our stakeholders to work in a sustainable way, then we need to be able to show that we're also adopting sustainable methods of working too."

Liz Vincent
IFATE Growth and Innovation Network lead



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