

Energy in Action: How apprenticeships are driving the energy transition

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The energy sector is going through a huge transformation, not just in the innovation required to modernise and future-proof the system, but also in the size of the workforce needed to deliver this change.

In its Clean Energy Jobs Plan, the government has said the total industry workforce needs to double by 2030, with an additional 400,000 jobs across the UK needed to drive the energy transition.¹

Some of these roles will be filled by people already working, transferring from other sectors, or people looking for work such as veterans, refugees and returners. Some will be filled by graduates. But that won't be enough.

Apprenticeships across a variety of different skills provide an essential route into roles across the entire energy sector by offering paid jobs to people over the age of 16 that combine on-the-job training with classroom-based learning.

Many roles within the energy sector suit apprenticeships as they don't require a high level of qualification, and training can be delivered on the job. Energy UK members like **EDF, E.ON, Hemiko, National Grid, Siemens Energy, Smartest Energy, Utilita, Vaillant, Valda Energy** and **Vital Energi** are playing a crucial role in creating exiting and meaningful opportunities for new entrants to the energy industry.

Read more about the roles available in the industry on [Energy UK's Jobs in energy hub](#).

Straight from school

Research published in 2025 revealed that nearly half (47%) of UK school leavers are already aiming for green careers, with a slightly higher proportion (52%) believing roles that help the planet are more valuable than the alternative.² There are ongoing efforts to nurture this interest by providing apprenticeship opportunities straight from school.

There are already great examples of how an apprenticeship path can lead to senior roles. Darren Davidson started as a 16-year-old apprentice and is now Vice President of **Siemens Energy UK, which took on 140 new apprentices in 2025 and is actively recruiting more.**³ EDF's Managing Director of Hinkley Point C, Stuart

¹ Department for Energy Security and Net Zero (October 2025) [Clean energy jobs plan](#)

² E.ON (August 2025) [One in three school leavers plan to skip university after school as demand for green jobs grows](#)

³ Guardian (February 2025) ['There's never been a more exciting time to work in energy': why apprenticeships are vital for achieving the UK's net zero goals](#)

Crooks, also began his career as an electrical apprentice.⁴ Large infrastructure projects like Hinkley Point C offer huge opportunities for apprentices, with over 1,500 training on the nuclear plant as of 2025, with 70% from the South-West of England.⁵

Businesses across the energy sector are taking on thousands of apprentices in a wide range of roles. **National Grid**, for example, is aiming to recruit over 2,300 graduates and apprentices across the UK business before 2030.⁶

In 2022, **National Grid Electricity Distribution** launched a new training scheme specifically for those who have left school either without or with minimal qualifications but have the skills and ability to be successful in energy. The Power Network Craft Assistant (PNCA) scheme, delivered alongside Catch22 and Young Enterprise, provides a 12- to 18-month salaried training programme for individuals who don't meet the traditional GCSE requirements for apprenticeships to provide a first step towards accredited qualifications and a career in the industry.

National Grid also provides opportunities for students that reflect the need for new recruits across all departments, not just technical or engineering roles. This includes People Function/HR apprentice Molly⁷ and Procurement apprenticeship Oliver.⁸ Both joined the transmission operator after completing their school studies and have progressed to secure roles.

Smartest Energy's apprenticeship scheme also spans multiple business areas. Two apprentices recently completed an Investment Operations Specialist Apprenticeship certification alongside on-the-job learning across trading functions. The company believes investing in apprentices helps to build its own long-term capability while widening access to careers in energy for people from different backgrounds.

Partnering with local educators

Companies across energy are also engaging with other parts of the education sector to attract talent into energy apprenticeships. **E.ON**, for example, teamed up with Dudley College to launch its Net Zero Training Academy in 2023 to deliver specialist training in emerging technologies like AI, renewable energy systems and smart grid management.

These technologies in many ways represent the cutting edge of new roles in the energy industry, requiring jobs that often didn't exist a decade ago. Engineering Degree Apprentice Ben Wood chose to gain practical experience alongside his studies and now works with drones, artificial intelligence and virtual reality

⁴ Energy UK (February 2025) [Stuart Crooks CBE](#)

⁵ EDF (2025) [Driving Growth Hinkley Point C Socio-economic Impact Report 2025](#)

⁶ National Grid (August 2025) [Building the skills for our energy future: Delivering opportunities for all](#)

⁷ National Grid (2025) [Instagram](#)

⁸ National Grid (2025) [Instagram](#)

technologies to help future-proof E.ON's Blackburn Meadows renewable energy plant.⁹

E.ON's Electro-mechanical Engineer Degree Apprenticeship, delivered alongside the University of Nottingham, aims to create direct routes into energy via an alternative to traditional university learning.

The programme blends study under a fully funded degree with real-world experience on live energy projects across the UK. This offers apprentices a salary while equipping them with the skills, experience and opportunities to turn their learning into long-term employment in the green economy. E.ON has supported more than 1,300 apprentices across 100 similar initiatives since 2018.¹⁰

One E.ON apprentice, Alice, takes on a rotation of six-month placements around different parts of the industry. The degree apprenticeship has taken her from an energy storage project on the Isle of Skye to a district heat network in London, all to build relevant experience for a future in engineering.¹¹

Joining forces with higher education facilities has been a successful strategy for several Energy UK members. **Utilita Energy** partnered with Cheshire College South and West to create a new smart metering apprenticeship with the capacity to deliver 1,000 new engineers annually.

The programme, which is set to welcome two new cohorts of apprentices in 2026, combines dynamic classroom instruction with hands-on fieldwork. It offers apprentices the opportunity to gain real-world experience using Utilita's advanced commissioning rigs at its Warrington Training Academy.¹²

With the government considering targets to ensure the vast majority of consumers benefit from a smart meter by the end of 2030, increasing the number of qualified installers will be an essential part of rolling out the technologies to those that want it.

Turning up the heat

The same is true of the heat networks sector, which has ambitions to invest £80 billion by 2050 in the development of new heat network infrastructure.¹³ The Government's Warm Homes Plan aims to create 180,000 additional high-quality, well-paid, future-proofed jobs in energy efficiency and clean heating by 2030.¹⁴

⁹ E.ON (January 2026) [Degree Apprenticeship applications are open: See how apprentice Ben is engineering a green future | E.ON News](#)

¹⁰ E.ON (January 2026) [UK youth embrace green skills pathways with 500% more youth applying for apprenticeships at E.ON](#)

¹¹ E.ON (November 2025) [Alices 'Lightbulb Moment': Alice's journey into green engineering](#)

¹² Elemental London (July 2024) [Utilita Energy launches smart metering apprenticeship](#)

¹³ Energy UK (August 2025) [Clean Heat Financing the transition](#)

¹⁴ Department for Energy Security and Net Zero (January 2026) [Warm Homes Plan](#)

Many clean heat companies are already ramping up their apprenticeship programmes to meet the demand of these targets. In 2025 **Vital Energi** recruited 30 apprentices based around the country, to train while working on its projects. These early career opportunities span technical, low carbon, and business services as well as additional opportunities in newly launched specialisms.¹⁵

As of January 2026, the company had reached 62 apprentices with applications for the 2026 cohort open for more to join.

Many of the company's existing apprentices have trained on the Leeds PIPES project since work began in 2028. The city-wide scheme delivered alongside Leeds Council provides over 4,000 residential properties and 29 non-residential buildings with heat and hot water generated by burning non-recyclable waste.

The project created opportunities for 30 new apprentices, including Quantity Surveying Degree Apprentice Ciaran, who had the opportunity to work alongside experienced engineers, learning firsthand about system design, installation, and operation.¹⁶

Many of these opportunities in the clean heat sector have only emerged in recent years, offering access to an exciting sector. Harry, for example, was one of the first cohort of **Vaillant's** Low Carbon Heating Technician Apprenticeship. Now in his third year, he splits his time between Derby College, three days on site, and a final day at Vaillant's UK Head office in Belper where he's able to dedicate the day to low-carbon training.

Hemiko, meanwhile, launched the UK's first Heat Network Maintenance Technician Apprenticeship in January 2025 with South & City College Birmingham to attract new talent into the rapidly growing sector.¹⁷ The apprenticeship is open to people over the age of 16 with no prior industry experience, or those wanting to retrain and join the heat network industry. It aims to enhance the knowledge and skills base of those maintaining heat networks across the UK while expanding opportunities for people from diverse backgrounds to enter the sector.

This includes retaining workers from other disciplines. Amal joined **National Grid** in September 2023 having previously used her degree in nuclear science and materials to become a physics teacher.¹⁸ Following an Electrical Power Network Engineers Apprenticeship, Amal is now an Optimisation Planner working with teams across the

¹⁵ Vital Energi (December 2025) [Vital Energi Celebrates Record Recruitment for Early Careers Programme](#)

¹⁶ Department for Energy Security and Net Zero (January 2026) [Warm Homes Plan](#)

¹⁷ Hemiko (January 2025) [New UK District Heating Apprenticeship Set to Launch in Birmingham, Fuelling Green Job Growth in the West Midlands](#)

¹⁸ Energy UK (February 2025) [Amal Kottapalli - Energy UK](#)

business to safely plan and deliver the largest overhaul of the electricity grid in generations.¹⁹

Building life skills

Boosting opportunities for a broad range of talent is a key benefit of apprenticeships in the energy sector. **Valda Energy** provides a permanent contract from day one of its apprenticeship programme, with a starting salary of £22,000 to ensure apprentices are rewarded for their hard work.

It also includes life skills sessions covering personal finances, health and nutrition, emergency medical training, cyber security and car maintenance, delivered by partners like Nationwide Building Society and St John Ambulance.

Energy in Action

As the UK moves through one of the most ambitious energy transitions in its history, the companies driving this change are already demonstrating what meaningful investment in people looks like.

From large infrastructure projects that train thousands of apprentices on site to sector-wide commitments that span technical, commercial and emerging digital roles, the industry is proving that apprenticeships are a cornerstone of a resilient, future-ready workforce.

Attracting new talent from all levels – schools, higher education, alternative disciplines or other roles – will continue to be vital if we are to deliver on government and industry-wide ambitions for a clean, safe and secure future energy system.

Energy UK will continue to shine a light on apprenticeships as one of the most powerful tools for building a skilled, diverse and motivated energy workforce. [Our Jobs In Energy resource](#) demonstrates the benefits of working in the sector with lists of apprenticeships offered by Energy UK members, personal stories from apprentices in the sector, and links to other useful sites where you can find open apprenticeship schemes.

We also [follow apprentices from across the country to chart their success](#) and publish case study collections demonstrating how [Energy UK members are building the workforce for our future energy system](#). If you have a case study showcasing innovative work within the sector, please get in touch via press@energy-uk.org.uk.

¹⁹ National Grid (August 2025) [Meet Amal : Physics Teacher to network Planner](#)

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