

Company profiles

[AtkinsRéalis](#)

AtkinsRéalis is a world-leading design, engineering and project management consultancy. We connect people, data and technology to transform the world's infrastructure and energy systems.

We offer a unique service and corporate experience in integrated planning, design, engineering and project management services with a particular focus on major projects in the Energy, Transport and Infrastructure sectors. We work on exciting and transformative projects, with our industry partners and clients, and our global team of consultants, designers, engineers and project managers with a key focus on digitally enabled engineering to transform our lives, communities and planet for the better.

- [Go to See some examples of their recent projects](#)

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Power Academy students with AtkinsRéalis will have stimulating and rewarding summer placements contributing to exciting engineering projects and getting to know our other scholars through working on a collaborative project. To make the most of being part of such a large organisation, you will be offered varied experience to gain exposure across our energy and transportation businesses. The office locations we would most frequently offer scholar places include (but are not limited to): Birmingham, Epsom / London, Glasgow, Leeds and York.

[BAE Systems Maritime](#)

BAE Systems Maritime Submarines design, build, test, and commission the most advanced submarines ever operated by the Royal Navy, as well as their state of the art combat systems and equipment. With a proud history, they are currently working on the Astute and Dreadnought class submarines for the Royal Navy. They have also signed a tasking statement with the Australian Submarine Agency (ASA) and ASC Pty Ltd, to support the delivery of the SSN AUKUS fleet of conventionally armed, nuclear-powered submarines for the Royal Australian Navy.

Employing more than 11,000 highly skilled people, their main site of Barrow-in-Furness, Cumbria has been designing and building complex submarines for more than a century. Indeed, it is one of only a few places in the world with the capability to deliver nuclear-powered submarines. Sitting at the gateway to the glorious Lake District, their Barrow site offers state-of-the-art facilities and the largest shipyard in the UK. The town has a rich naval history and BAE Systems is a big part of the local community. They're not just building the next generation of nuclear submarines at Barrow, they're developing the next generation of engineering talent! With nature reserves on the doorstep, in 20-minutes you're in the heart of England's largest National Park.

BAE Systems Maritime pride themselves on making a difference and they're always looking for passionate and motivated candidates to help them achieve that. Currently, there are over 750 professional engineers in the company, ranging from graduates to Senior Consultants; within this engineering team there are currently circa 30 electrical power engineers.

All roles within BAE Systems Maritime - Submarines are restricted to British citizens who do not hold dual nationality. Unfortunately, if you do not meet these criteria, it will not be possible for you to take your application any further.

If short-listed you will have to complete an application at a link which will be sent to you by BAE Systems.

GKN Aerospace

GKN Aerospace is a global multi-technology leader in the aerospace industry, with 16,000 employees, 32 manufacturing locations in 12 countries, £3.35bn sales in 2023, and technology that flies on over 100,000 flights per day. With the ambition to be the most trusted and sustainable partner in the sky, GKN Aerospace are invested in the dawn of a new aerospace era focused on zero-emission flight.

Power Academy Scholar placements will primarily take place at the GKN Aerospace Global Technology Centre in Bristol, where we are making zero-emission aircraft a reality through several innovation programmes, such as H2GEAR: a £54M collaborative programme developing hydrogen electric propulsion system technology.

Electrical engineering skills are crucial to delivering programmes such as H2GEAR, where the propulsion system being developed includes a hydrogen fuel cells (producing electrical power), DC-DC converters (conditioning electrical power), energy storage systems (regulating voltage), electrical power and control network (distributing power), and a novel electric motor and drive system (producing thrust).

We have already launched the next phase of this technology development with a flight trial programme (H2FlyGHT), which means the opportunities to work on electric propulsion development for aircraft will be increasing over the next few years bringing even more variety in the placements we can offer in this field.

We have several other manufacturing sites in the UK, such as other Bristol locations, plus Luton and Cowes (Isle of Wight) where there may be opportunity for alternative placements for returning scholars in the future, however the main focus of the placements we offer would be in our Hydrogen Systems organisation at our Bristol technology centre.

National Grid Electricity Transmission and National Grid Ventures

National Grid lies at the heart of a transforming energy system. Our business areas play a vital role in connecting millions of people to the energy they use, while continually seeking ways to make the energy system cleaner.

National Grid Electricity Transmission (NGET) own and maintain the high-voltage electricity transmission network in England and Wales. We transport the electricity from where it's generated, to where it's needed. We're investing in the network to help connect more renewable and low carbon electricity, transporting it through our infrastructure of power lines and substations so it can reach the local networks. From there, your district network operator can then provide power to homes and businesses. We play a crucial role in turning the UK's net zero ambitions into reality and are working hard to ensure our future transmission system is flexible, adaptable and sustainable.

National Grid Ventures (NGV) enable innovations to help revolutionise and decarbonise the future of energy. We are at the forefront of the energy transition. We operate across the UK, Europe and US, developing, operating, and investing in large-scale clean energy infrastructure. We're helping to accelerate society's drive towards net zero while maintaining security of supply today. NGV runs separately from National Grid plc's core regulated operations. We've built a broad portfolio of businesses that work together to keep the lights on, decarbonise the economy and power a clean, fair and affordable energy future for consumers. Our diverse businesses include subsea electricity interconnectors, wind and solar power generation, competitive electricity transmission, battery storage, conventional generation and LNG regasification and storage. We're also developing emerging technologies such as multi-purpose interconnectors and hydrogen, which could play a key role in decarbonisation.

Power Academy scholars at National Grid will get the opportunity to either work across the UK Electricity Transmission business or National Grid Ventures. This will give you the chance to work with teams that are designing, building and making the energy system better for everyone. Power Academy Scholars will be considered for either NGET or NGV.

[National Energy System Operator \(NESO\)](#)

NESO is an independent public corporation at the heart of the energy system, responsible for energy planning and operations. For the first time in Great Britain, one organisation oversees the entire energy system, including natural gas, electricity, and other energy forms, as mandated by the UK's 2023 Energy Act.

Building on our expertise as the Electricity System Operator (ESO), which balances electricity supply and demand 24/7, NESO significantly expands these capabilities. Our impartiality and whole-system perspective allow us to make balanced recommendations for cleaner, cheaper, and more secure energy for all of Great Britain.

We bring together eight key activities to deliver the plans, markets, and operations of today's and tomorrow's energy system:

- Energy Insights: Independent, evidence-backed insights for government, Ofgem, and industry.
- Strategic Planning: Identifying and planning long-term whole energy system needs.
- Security of Supply: Ensuring stable and reliable energy supply.
- Resilience & Emergency Management: Coordinating system resilience and emergency preparedness.
- Energy Markets: Developing competitive, efficient energy markets.
- Systems Operations: Advancing clean power through a whole-system approach.
- Connections: Facilitating access for clean power projects.
- Data & AI: Advancing the energy system with data exchange and AI.

Are you passionate about impacting the future of energy and combating climate change? Join NESO, and you could create future energy scenarios, plan cutting-edge networks, conduct economic analyses, or lead innovative projects. Our placements in Warwick or Wokingham, UK, offer a unique chance to build a greener, net-zero future for Great Britain. Join us and be part of the solution!

National Grid Electricity Distribution (formerly Western Power Distribution)

National Grid Electricity Distribution is the electricity distribution network operator for the Midlands, South Wales and the South West.

We operate and maintain the network to deliver electricity to nearly 8 million customers over an area of 55,300sq km. Our network consists of 220,000km of overhead lines and underground cables, and 185,000 substations.

The area we cover includes large cities, such as Birmingham, Nottingham, Coventry, Milton Keynes, Bristol, Cardiff, Swansea and Plymouth, as well as remote and exposed rural areas, including the Brecon Beacons, Dartmoor and the Peak District, and the rugged coastlines of Devon, Cornwall, Pembrokeshire and the North Sea.

We pride ourselves on providing excellent customer service and achieving outstanding levels of reliability on our system, whilst at all times maintaining an exceptional safety record.

We are looking for graduates who are keen to work imaginatively and flexibly in helping us to meet the challenges of achieving net zero, while minimising the impact on our customers.

You will be joining a successful team who are committed to maintaining our position as a sector leader among electricity distribution companies.

BRUSH Group

BRUSH Group is a company with a rich heritage (nearly 150 years!) and while we are proud of where we've been, we're really excited about where we are going.

Power systems are in our DNA. Utilising our hard-earned expertise, technical know-how, and industry knowledge, we manufacture power transformers and switchgear as well as provide consultancy, design, and project management solutions that help to shape the UK's energy network.

Working across every part of the electrical network, from generation to grid connection, our innovative, integrated, and sustainable engineered solutions support the energy transition and play a critical role in powering the UK.

We're a business that rewards hard work, we recognise skill, value ambition, and champion innovative thinking. We're committed to developing the next generation of engineering talent and through our training and development schemes, we're creating opportunities for individuals to build meaningful careers at the forefront of the challenge of net zero.

IET students will be based at our purpose-designed South Wales switchgear manufacturing facility, where they will be supported by our dedicated team of switchgear experts, gaining insights into advanced manufacturing processes while working on real-world projects using cutting-edge electrical technologies.

Network Rail

Network Rail is an organisation that prides itself on providing an integral service to Britain by running, operating, maintaining and investing in the entire railway infrastructure, which dates back to 1825.

Steeped in history, laced with professional development and an organisation that strives to find and develop future leaders? Network Rail are that company. We own and operate the infrastructure for Britain's railway. We own over 2,500 stations, managing the 17 largest ones. We run, maintain and develop Britain's rail tracks, signalling, bridges, tunnels, level crossings and viaducts. We also constantly seek to improve the service we offer – making the 1.3 billion journeys taken each year quicker, safer and more cost effective.

From the smallest power readjustment to the rollout of our £multi-million electrification programmes, you'll face many and varied challenges as part of our Electrical, power or Electronic Engineering team. As the power behind the growth of the railway, you'll work with cutting-edge technology, delivering innovation that is fundamental to our future success.

So, what does electrification power cover?

The E&P discipline is extremely diverse, undertaking work in Electrical, Mechanical and Control Engineering. The areas we cover in both Design and Project Engineering include:

- Distribution - 25kV AC (including AT) and 750V DC traction power supply systems, incorporating grid supply points, transformers, high voltage AC and low voltage DC switchgear, cabling and protection equipment
- Contact Systems - overhead line equipment (OLE) for 25kV AC and 1500V DC traction systems, and conductor rail for third rail areas
- Plant - signalling power supply systems, LV power supplies to BS7671 for domestic installations, points heating, non-traction HV distribution systems, pumping installations and depot/siding and level crossing lighting
- SCADA - electromechanical and electronic supervisory control equipment for Electrical Control Rooms (ECRs) and substations

Northern Ireland Electricity Networks (NIE Networks)

NIE Networks is the owner of the electricity transmission and distribution networks in Northern Ireland and is the electricity distribution network operator, serving all 860,000 customers connected to the network. Acquired by ESB in 2010, NIE Networks remains an autonomous organisation with its own Board and management teams.

Our role is:

- to operate our network of 2,200 km of transmission network, 47,000 km of distribution network and 300 major substations to effectively 'keep the lights on' for our customers
- to maintain our network so that it is in a condition to remain safe and reliable
- to upgrade or extend the existing network to provide additional electricity supplies or capacity to our customers including the development of innovative solutions to manage the increasing level of renewables connections and the uptake of low carbon technologies
- to provide electricity meters and provide metering data to suppliers and market operators

- to connect customers to the network, both for new electricity supplies and for new electricity generators.

NIE Networks' vision is to be a high performing electricity networks company that makes a positive contribution to the Northern Ireland community. Our mission is to distribute electricity in a safe, reliable, efficient and environmentally aware manner.

Power Academy and Scholarship undergraduate students with NIE Networks will have engaging, interesting and rewarding 'summer placements', allied with mandatory 'year out' placements with us from their degree programme.

Northern Powergrid

Northern Powergrid is the electricity distribution network owner and operator for Yorkshire and the Northeast of England. We deliver electricity to 3.9 million homes and businesses from North Northumberland to the Humber and North Lincolnshire and from the East Coast to the Pennines - an area covering 25,000 square kilometres.

Our electricity network consists of more than 63,000 substations and 96,000 km of overhead and underground cables operating at voltages from 132,000 volts where it connects into the national transmission network, down to 230 volts where it connects into homes and small businesses.

The way we use the distribution network is rapidly changing as the UK moves towards a low carbon economy. We are looking for talented and enthusiastic graduates to help us develop the network so that it remains fit to meet the challenges ahead.

We are a subsidiary of Berkshire Hathaway Energy, which owns other energy companies, mainly in North America. Our vision is to be the best energy company in serving our customers while delivering sustainable energy solutions. We measure our performance against our six key business priorities:

- Customer service
- Employee commitment
- Financial strength
- Environmental respect
- Regulatory integrity
- Operational excellence

We set a very high store on safety, where our performance ranks us as one of the safest businesses in our industry in the UK.

OCU Group

Leading the Way in Energy Transition, Utilities and Infrastructure

OCU provides end-to-end infrastructure engineering in the utilities, digital, and energy markets, specialising in safely and efficiently delivering complex client requirements. Our breadth of capabilities and depth of operational capacity, paired with our cutting-edge technology, ensure that we are not just part of the market; we are leading it.

Our expertise spans generation, transmission, distribution, and renewables, offering full solutions including design, installation, consultation, and surveying. Accredited by the National Electricity Registration Scheme (NERS), we ensure independent, reliable, and cost-effective delivery for both long-term frameworks and major projects.

Committed to the UK's 2050 Net Zero target, we lead in energy transition by partnering with companies such as Pacific Green, SSE, Scottish Power, and EG Group. From feasibility and design to construction and handover, we deliver high-quality projects while prioritising sustainability, safety, and stakeholder value.

OCU also excels in transport infrastructure, working with the UK's largest transport providers for over 25 years. Our services cover the design, installation, and commissioning of light rail, mass transit, and rail systems. Holding a Principal Contractors Licence from Network Rail, we provide trusted, turnkey solutions across both trackside and non-trackside projects.

OCU is part of the Institute of Engineering and Technology (IET) Power Academy scholarship program. This includes a valuable summer placement. Scholars can expect to be involved in a broad spectrum of tasks relating to impactful design work and invaluable hands-on experience out on-site. Whilst also developing impactful connections with experienced members of industry.

[Omexom](#)

Omexom specialises in the design, supply, installation, maintenance and commissioning of electrical infrastructure for a varied range of electricity utility companies and renewable energy developers throughout the UK and Ireland.

As part of a global network of experts, our business units provide our customers with a competitive edge by leveraging and sharing experience and best practice.

With a proven track record in engineering design, project management, construction and commissioning of all electrical infrastructure up to 400kV, we place Safe Communities at the heart of all our activities.

At Omexom, we pride ourselves on our diverse and empowered workforce and recognise fully the importance of our people as our greatest asset and key to our future success. We have a strong commitment to graduate recruitment, with training programmes in place to provide engaging, challenging and rewarding project assignments.

Our placements are across the UK. Within the UK & Ireland, we have main offices in Belfast, Glasgow, Perth, Birmingham, Coventry, Leicester and Sutton., as well as depots and construction sites in most regions. This means we can offer placements to suit business needs and the preferred location for students.

[Rolls-Royce](#)

Rolls-Royce pioneers the power that matters to connect, power and protect society. We have pledged to achieve net zero greenhouse gas emissions in our operations by 2030. We joined the UN Race to Zero campaign in 2020, and have committed to ensuring our new products will be compatible with net zero operation by 2030, and all products will be compatible with net zero by 2050.

Rolls-Royce is the leading supplier of all-electric and hybrid electric propulsion and power systems across multiple aviation markets. As we grow our electrical capability we continue our strong commitment to apprentice and graduate recruitment and to further developing employee skills.

Rolls-Royce has customers in more than 150 countries, comprising more than 400 airlines and leasing customers, 160 armed forces and navies, and more than 5,000 power and nuclear customers.

Annual underlying revenue was £11.76 billion in 2020 and we invested £1.25 billion on research and development. We also support a global network of 28 University Technology Centres, which position Rolls-Royce engineers at the forefront of scientific research.

SP Energy Networks

ScottishPower is part of the Iberdrola Group, one of the world's largest integrated utility companies and a world leader in wind energy. We are the first integrated energy company in the UK to generate 100% green electricity. Our focus is on wind energy, smart grids and driving the change to a cleaner, electric future and we're investing over £7m every working day to make this happen. We're committed to speeding up the transition to cleaner electric transport, improving air quality and over time, driving down bills - to deliver a better future, quicker for everyone.

Our **SP Energy Networks** business here at ScottishPower provides power on behalf of supply companies through a network of cables and power lines that we own and maintain. Through our transmission and distribution network we provide power to:

- 1.5 million customers in Merseyside, Cheshire, North Wales and North Shropshire
- 2 million customers in Central and Southern Scotland

We're dedicated to delivering a safe and reliable electricity supply to all of our customers 24 hours a day, every day of the year.

Here at ScottishPower, we are focused on playing our part - creating a cleaner, more affordable and more secure energy supply for the UK. So, knowing that our people are our strongest asset, we're always looking for individuals to join our careers programmes whose energy, intelligence and passion can help us reach our goals. Our scholarship programmes aim to help train a new generation of professionals capable of driving the transformation towards a sustainable energy model and who have a desire to develop their career in the power industry.

ScottishPower Renewables

ScottishPower is part of the Iberdrola group, one of the world's largest utilities and a global leader in renewable energy. We operate in a growing number of countries across the globe as we seek to decarbonise the energy industry and support the global objective of Net Zero.

ScottishPower's focus is on wind energy, smart grids and driving the change to a cleaner, electric future and we're investing over £8m every working day to make this happen. We're committed to speeding up the transition to cleaner electric transport, improving air quality and over time, driving down bills - to deliver a better future, quicker for everyone.

Our ScottishPower Renewables Business, with over 20 years experience in renewable technologies, has built up a significant Onshore and Offshore portfolio of assets including wind, solar and battery technologies. We now have over 3GW of operational assets, a pipeline of around 20GW, and a desire to do so much more.

At ScottishPower, we work to attract diverse talent while developing a workplace that is supportive and open to everyone and we are very proud to support people across the UK as they take their first steps into the energy industry. This is an exciting time to join our growing Renewables business. If you have a passion for renewables/sustainability and are looking to

contribute to Net Zero goals in your future career our scholarship programme could be right for you!

SSE Renewables

SSE Renewables is a leading developer and operator of renewable energy across the UK and Ireland.

With a portfolio of around 4GW of onshore wind, offshore wind and hydro, our strategy is to drive the transition to a net zero world through the world class development, construction and operation of renewable energy assets.

We're aiming to treble our renewable energy output from 2019 levels to 30TWh by 2030, making a significant contribution to decarbonising the power sector and achieving net zero emissions by 2050.

We own nearly 2GW of operational onshore wind capacity with over 1GW under development. Our 1,459MW hydro portfolio includes 300MW of pumped storage and 750MW of flexible hydro. Our operational offshore wind portfolio consists of 579MW across three offshore sites in UK waters, two of which we operate on behalf of our joint venture partners.

With the largest offshore wind development pipeline in the UK and Ireland at over 6GW and an onshore wind pipeline across both markets in excess of 1GW, SSE Renewables has strong opportunities for the future.

SSE Thermal

In SSE Thermal, we create value for shareholders and society by developing, operating and owning low-carbon energy infrastructure in a sustainable way.

We're already making significant progress by displacing older, less-efficient assets with cutting-edge infrastructure like our Keadby 2 Power Station in North Lincolnshire, which in March 2022 became the most-efficient CCGT in Europe when it entered commercial operations.

This is in line with the SSE's commitment to reducing the carbon intensity of the electricity we generate by 80% by 2030, from our 2018 baseline.

However, we want to go further. We're actively developing opportunities in carbon capture and hydrogen technology, which, if given government approval, can decarbonise thermal generation at our sites including Keadby in the Humber region and Peterhead in the north-east of Scotland.

That's how we'll continue to provide the energy needed today, while building a better world of energy for tomorrow.

SSEN Transmission

SSEN Transmission's first priority is to provide a safe and reliable supply of electricity to the communities it serves. It does this by making sure its employees and contractors work safely while ensuring the network is able to function properly and meet electricity demand now and in the future.

SSEN Transmission also plays a critical role in the transition to a low carbon future, developing, building, maintaining and operating a network for net zero.

Vital to net zero ambitions, it transports huge quantities of clean, green renewable power to over a quarter of the UK land mass across some of its most challenging terrain.

With the region home to some of the UK's greatest resources of renewable power, the business has a critical role to play in the transition to a low carbon future, connecting up more renewable energy and transporting it across the country.

From the deep waters of the North Sea to high mountains of the Highlands, the power from onshore and offshore wind-farms, hydro power stations and other generation assets is moved across a vast network of underground and sub-sea cables, overhead-lines, wooden poles and steel towers to millions across the UK.

This system supports both the UK and Scottish Governments' net zero emissions target whilst meeting the needs and expectations of stakeholders.

As the way we live our lives changes, billions of pounds in investment will be required to meet energy demands now and in the future. Through a fair, balanced and considered investment programme, SSEN Transmission is committed to improving network reliability and enabling the transition to net zero at an affordable cost to consumers, whilst also providing a fair return to investors.

[United Kingdom Atomic Energy Authority \(UKAEA\)](#)

Do you want to go to work to change the world? UKAEA could be the employer you've been looking for.

Nuclear fusion, the process that powers the Sun, is seen as the Holy Grail of clean energy. Safer than nuclear fission, with virtually limitless fuel and no greenhouse gas emissions, it could transform the way electricity is generated in the future. UKAEA's mission is to lead the commercial development of fusion power and related technology and position the UK as a leader in sustainable nuclear energy.

UKAEA manages the UK's fusion programme at Culham Centre for Fusion Energy near Oxford, which has been at the forefront of research since the 1960s. Our scientists and engineers are working with partners around the globe to develop fusion as a new source of carbon-free energy for tomorrow's power stations.

UKAEA hosts the world's largest and most powerful fusion experiment, JET, for scientists from around Europe. The UK's own MAST Upgrade facility, also based at Culham, is pioneering designs for smaller and more efficient reactors.

UKAEA has recently opened a series of new research centres to take on the challenges of bringing fusion to the energy market. These include a Materials Research Facility and a robotics testbed, RACE (Remote Applications in Challenging Environments), which also works with companies in spin-off areas as diverse as nuclear decommissioning and driverless car testing.

We have a growing team of over 1,000 employees working in a friendly, international atmosphere; industry-accredited graduate and apprentice programmes; and a strong commitment to staff training and development.

Opportunities for power and electrical engineers include working on:

- Pulsed Power Supplies for Fusion Machines
- HV Power Distribution Systems

- Control & Instrumentation
- Electronics

Getting fusion power onto the grid is one of the biggest and most exciting challenges in engineering. The first industrial-scale experiment – the international ITER project – is under construction in France, and UKAEA is already developing technology for the first fusion power plants. Now is the perfect time to play your part in bringing cleaner electricity to the world.

Related links

- [UKAEA website](#)
- [Power Academy at UKAEA and Culham Centre for Fusion Energy](#)
- [UKAEA YouTube channel](#)