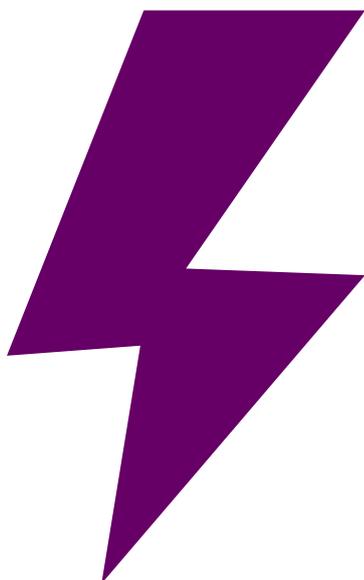


# Getting into... **Energy**



The energy industry is growing and diversifying, with advancements in technology, and a growing awareness of environmental issues, creating new jobs and specialisms. Opportunities exist at each stage of energy production, from extraction and generation to the transmission, distribution, sale and conservation of power.

While many roles will require a science and engineering background, there are a large number of business support roles available (e.g. IT, HR and operations). In all areas, commercial awareness and skills such as communication and teamwork are important.

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# Exploring Your Options

In this section we will be talking about the types of roles that exist within the energy industry, and where you might expect to work. There will be many roles and employers that we don't cover here, but these are some popular examples that you can use as a starting point when exploring your options.

## Typical areas

### Research & Development

Researching and designing equipment or techniques, or evaluating data to harness energy sources in the most efficient, cost effective and environmentally-friendly way. This work could be done in an academic or commercial environment. E.g. Research Analyst/Officer.

### Consultancy

Using scientific or technical expertise to advise companies, governments and NGOs on energy usage/ production/environmental impact. Might also involve the understanding of environmental law and regulations. E.g. Rural Energy Advisor.

### Manufacturing

Planning, creating and installing equipment and components for energy production. Might include maintenance of such equipment. E.g. Solar Product Developer.

### Management

Managing teams and overseeing projects and processes at any stage of energy production, from mining or generation of energy through to its transmission, distribution, and ultimately supplying customers. Managerial responsibilities can be far-reaching, from making sure projects stick to a budget to ensuring the wellbeing of staff. E.g. Project Manager.

### Logistics/operations

Converting, transmitting and supplying energy to meet domestic and global needs. Ensuring day-to-day smooth running of the business. E.g. Operations Manager.

### Marketing/sales/trading

Ensuring sales of energy parts and processes to companies. Selling energy produce (gas/electricity) to the public in the form of utilities. Working with fuel providers, arranging new supplies and negotiating tariffs. Providing customer service to consumers. E.g. Sales Executive.

## **Health & safety/compliance**

Ensuring that projects, processes and equipment meet rigorous legal standards and that regulations are adhered to at each stage. E.g. Health & Safety Officer, Risk Analyst.

## **Sustainability**

These roles are not only found in renewable energy, but also in large oil companies who are looking to improve their public image and diversify their energy sources. Support companies become more socially and environmentally responsible in how they operate, through identifying and implementing solutions with minimal impact on profit. E.g. Sustainability Consultant.

Graduates typically start in technical roles learning about different disciplines within the company, before moving into a more senior role in which leadership, project management and people management skills are gained.

Being flexible is important – not only to meet the changing needs of the industry, but because there can also be an overlap in roles. This is common in smaller companies which specialise (e.g. in manufacturing solar panel components, where a job may involve a number of the functions listed above).

## **Typical areas**

### **Large organisations**

As well as advertising roles as vacancies arise, many large energy and engineering companies will recruit through graduate schemes. These are formal, structured programmes combining work with training. They usually last between one and two years and often involve study for a professional qualification. Be aware that such schemes are highly competitive and the application process can begin up to a year in advance. Recruitment usually involves a number of interviews, as well as assessment centres and psychometric tests. See the 'How Careers and Enterprise can help you' section further down to find out more about our support.

### **SMEs**

Small to medium enterprises (SMEs) are organisations which have fewer than 250 employees and represent where most graduate jobs are found. This covers all sectors, and could include anything from a specialist sustainability consultancy firm to a manufacturer of wind turbine components, meaning they offer a diverse range of opportunities. Smaller organisations may provide more variety and flexibility, with the opportunity to take on responsibility earlier, work closely with senior staff and gain exposure to how the business functions as a whole. SMEs are often overlooked as they are less well known.

As well as advertising vacancies on jobs sites, smaller organisations also recruit through networking and speculative applications. This generally means they receive fewer CVs, so targeting your applications to firms in your area of interest can be successful. Vacancies may become available at any time of year and tend to be advertised one–three months before the start date. Price comparison websites are enabling a growth in small to medium sized utility companies. Advances in technology and manufacturing also mean a growth in smaller companies with a focus on manufacturing or technology related to renewable energy.

### **Start-ups**

A start-up is a newly created company with significant growth potential and they are normally founded by two to three people using rented lab or office space to develop new components, techniques or services. Involving fast-paced environments, start-ups can be good opportunities to get involved in a whole range of business activities, from product design and innovation to marketing and finance. Businesses recruit multi-skilled staff who can take on a variety of tasks. These organisations can be found through reading industry news, looking for the winners of industry awards, as well as a good internet search (e.g. ‘energy start-up companies London’ or ‘top green start-ups UK’).

### **Location**

Opportunities in the energy sector exist both nationally and internationally depending on the role you are interested in. For example, the production side of the oil and gas industries are largely centred in specific countries or regions of the globe where these natural resources are found (the north coast of Scotland, southern America and the Middle East).

Business roles may be based in the company’s headquarters or offices at industrial parks and research organisations, which tend to be outside of London. The opportunities that are based in London tend to be in start-ups.

Research and administrative roles are also available at research institutes, universities and spin-outs (where a discovery from academic research is used to create a business).

Governments will hire energy specialists (for instance the UK Department of Energy and Climate Change), as will charity organisations with an interest in the environment and/or international development. With the rising cost of energy and concern about climate change, schools, universities and even large retailers monitor energy wastage and sustainability.

In most roles it is possible to work ‘in-house’ for an organisation or as a consultant, providing technical expertise to clients.

**Take a look at Prospects’ webpage detailing the [Energy sector](#) for more information.**

# Getting Industry Ready

What employers are looking for will vary depending on the role, but below is a general overview of key areas to consider. Always read the job description carefully for the roles you are interested in, to know exactly what the job responsibilities are, and what skills and experiences are required. If there are any areas you don't have experience of, think about how you develop skills in this area.

## What employers want

### Qualifications

Postgraduate qualifications can be an advantage in this industry, particularly for technical engineering roles. For research positions, a relevant PhD may be required. For other jobs, such as in sales, operations and administration, postgraduate study is usually not a formal requirement. See the relevant professional body for information on qualification requirements and accredited courses.

Read job adverts for the roles you are looking to apply for in the future, to identify exactly what level and type of qualification they require. Some employers may cover course fees and offer study leave. Be aware that further study does not replace work experience. You still need to demonstrate your skills such as teamwork and communication, by completing an internship for example.

### Skills

'Soft' skills, such as communication and commercial awareness (see below), are just as important as technical expertise. Other skills employers look for in candidates include problem solving, interpersonal skills, planning and organisation, team working, management and leadership. Again, start-ups or SMEs tend to recruit staff with a variety of skills who can take on a variety of tasks.

#### Commercial awareness

Sometimes known as 'business focus' or industry understanding, commercial knowledge is about knowing a) the role you are applying to b) the organisation you are applying to c) the industry the organisation is in. Consider how advancements in technology, as well as economic, political and environmental factors might affect an organisation or the industry as a whole.

You could be asked about this at interview e.g. ‘Why do you want to work for us (and not our main competitor)?’. Read the company’s website plus the websites listed in this hand-out to develop your commercial awareness.

## How to gain relevant skills and experiences

Knowing what competencies employers look for, not only can you job hunt more effectively but you can start to build up relevant experience to enable you to demonstrate these competencies in job applications and at interviews.

### Take on responsibility

Take on positions of responsibility, whether voluntary or paid. This could be a Team Leader at work, or a committee member for a university society.

### Follow organisations online

Use social media to see what organisations are doing and build commercial awareness and your network. You can also take a look at industry magazines and join professional associations.

### Attend events

Attend university or external events to hear from recruiters, develop your understanding of the industry and make new contacts. You can ask these contacts for advice, or even for an opportunity to shadow them in their role.

### Get application ready

Update your CV and have a speculative letter ready to adapt should you need to apply for an opportunity at short notice. Book an appointment to get it checked by Careers and Enterprise.

### Practice Tests

Many employers are now using online psychometric tests as part of their selection process. These can include numerical reasoning, verbal reasoning, situational and critical judgement tests. If the role you are applying for is highly technical, you may also be asked to complete tests involving other programmes, like Excel, so make sure you brush up on your skills.

If you’re asked to complete online psychometric tests, it’s a good idea to practise first. Sometimes the employer will provide you with practise test links, otherwise check out our practice test platforms on the Careers & Enterprise site.

## How can Careers and Enterprise help you?

### Careers and Enterprise Support for you

There are a number of ways Careers and Enterprise can help you build skills and prepare for applying to opportunities.

### Appointments

We run one-to-one appointments with expert career consultants who can talk to you about a variety of topics including your CV and applications, as well as give you career guidance and advice surrounding making career decisions. You can also book [Practice Interview appointments](#) to test your skills, for when you have an upcoming interview

### Events

We hold a range of [careers events](#) throughout the year where you can learn more about an industry, network with employers and find out what people look for in a graduate.

### Programmes

If you are looking to develop your skills, Careers & Enterprise is home to the [Aspire Programme](#): Queen Mary's Student Career Development Programme. These programmes take place alongside your degree, allowing you to gain vital employability skills to add to your CV, as well as raise your commercial awareness. Please note: Eligibility requirements apply

### Online Resources

Our bank of [online resources](#) is a great place to go for careers support. We have guides (such as this one), templates for things like CVs and applications, as well as tools that you can use to build or improve a CV ([QM CareerSet](#)), practice for a psychometric test ([Graduates First](#)) or practice for a video interview ([ShortlistMe](#)).

## Make the most of work experience opportunities

Once you have found a work experience opportunity, it is important to make the most of it! Here are some things to keep in mind before, during and after the opportunity.

1. Discuss your expectations with the employer at the start, so that you have the same understanding of what the experience will involve.
2. Always be polite, motivated and interested. Work experience can involve boring tasks, but being flexible, helpful and willing to get involved will make a good impression and could lead to more opportunities.

3. Be inquisitive and learn everything you can about the way the organisation works. How do they hire? What key skills are they looking for? What are the main issues affecting the organisation at the moment?
4. Talk to people who work at the organisation and find out what they do and how they got there. You might uncover job roles and employers that are new to you, as well as pick up some helpful tips. Keeping in touch with people you meet can be a great way of finding out about future opportunities and expanding your network.
5. Ask for feedback at the end of the placement to identify your strengths and the skills you need to develop further.

**For more information on where you can develop your skills and experiences, see the Resources section.**

# Finding Opportunities

## Industrial Placements

The School of Engineering and Materials Science offers optional industrial experience – typically 10-12 months working for a company in a paid role. Not only is it excellent experience for your CV, but it can count towards the requirements to become a chartered engineer. Employers may hire students who perform well on their placements.

## Plan from your first year

Many placements can be advertised up to a year in advance. It is important to plan ahead to find the area(s) and companies that interest you, so you don't miss deadlines. Placements are competitive and recruiters will look for a combination of good academic results with evidence of career commitment and work experience. Many employers take applications from students at the start of their 2nd year, so you need to have relevant experiences in your 1st year to include e.g. industrial visits, work shadowing and non-engineering experience like being a Student Ambassador. It's also a great idea to get involved in extracurricular programmes such as the Aspire programme, as well as joining clubs and societies. They are all valuable opportunities that can give you valuable transferable skills.

## Networking

Attend employer and careers events to find out about companies and get advice from their employees. Build your contacts by attending talks, insight days, joining a relevant student society and by networking online. Make the most of opportunities at careers events run by QMUL and other organisations to meet employers and people working in the industry. They could give you advice on finding work experience, or perhaps tell you about unadvertised graduate vacancies.

Also join relevant professional associations to access their events. Keep in touch with anyone you meet through work experience or at events – you never know when they might be able to help you. Consider how you can use social media to build your digital presence and strengthen your job search. X (formerly Twitter) and LinkedIn are valuable tools for following industry trends and developments, as well as for hearing about events, news, jobs and companies. Create/update your LinkedIn profile and find interesting LinkedIn groups to join, and follow relevant people and organisations on X.

## Speculative Applications

As well as searching for jobs online, improve your chances by making speculative applications. This is where you contact companies you are interested in directly to ask whether they have any placements or work shadowing opportunities. This is a common method of finding opportunities, as often roles (particularly for work experience) are not advertised formally. Speculative approaches can be very effective, especially if you have already made contact with someone from the organisation through networking.

Look for companies that fit your skills and interests, e.g. work in the area you studied for your final project. You are more likely to be successful if you make your application specific to the organisation and demonstrate your suitability and interest in that particular employer. Although you may see yourself working in a large company, the greatest number of jobs are actually in small and medium sized companies. Smaller organisations are often more flexible with their recruitment and are more likely to consider work experience positions.

Most professional bodies and trade associations have online directories of companies you could send speculative applications to (see websites listed later in this handout). Keep in mind 'spin-out' companies (normally a company that has developed out of a university or a research project) are likely to have opportunities that are not advertised but found through networking and speculative applications.

### **Job boards, professional bodies & directories**

In addition to searching job sites, you will find details of opportunities from professional bodies and trade associations. Many have an online directory of members or suppliers, which you can use to identify companies to apply to speculatively. Their websites will also feature industry news, developments and trends, which will develop your commercial awareness. Some will provide careers information, such as routes into the industry with lists of accredited courses and training.

Check for details of events and conferences, where you can find out more about the industry and make new contacts. Being a member of a relevant professional body looks good on a CV and demonstrates your motivation and dedication to the industry. Many offer discounted rates for students.

### **Recruitment agencies**

Temping (a series of temporary jobs in various organisations through an agency) is an excellent way of building your skills and experience. It is also a way to try different roles and organisations to help you decide which area you want to follow. Know the type of work or organisation you are interested in, so you can be specific about what it is you are looking for. Some agencies may require previous work experience.

# Resources

## [QM Careers Hub](#)

A range of roles across all industries, plus details of our work experience programmes.

## [Geological Society](#)

Energy sector information and job profiles.

## [My Energy Future](#)

Features case studies and career planners giving a flavour of what jobs consist of on a day-to-day basis.

## [Nuclear Skills Delivery Group](#)

Find out more about career pathways.

## [Renewable UK](#)

Careers information and vacancies.

## [Prospects.ac.uk](#)

Graduate careers site with vacancies, case studies and industry overviews:

[Guide to Renewable Energy Careers](#) and [Energy and Utilities](#).

## **Job Sites**

### [Energy Job Line](#)

International jobs board for all roles in energy.

### [Green Jobs](#)

Includes roles in renewable energy and the environment.

### [Gradcracker](#)

A range of jobs, placements and internships advertised. Includes careers and application advice plus case studies.

### [Jobs.ac.uk](#)

Academic, research and support positions in all fields. Renewable Energy Jobs Job site, with positions available across all areas of the renewable energy sector.

### [Rigzone](#)

Rigzone Oil and gas vacancies board with vacancies in the UK and worldwide.

### [SolarJobs](#)

Job site specialising in solar energy roles.

### **Further information**

#### [Energy Institute](#)

Professional association with careers section and good overview of different areas of energy to gain commercial awareness. body. Includes careers information with lots of detail on things. Has details of qualifications and routes into industry like professional qualifications and internships, plus a searchable members directory.

#### [Energy UK](#)

Trade association for the energy industry. Includes industry information and downloadable reports useful for developing commercial awareness.

#### [Renewable Energy Association](#)

Features industry news and members directory.