

Solar Power Design Engineer

Role Specific Education Training Needs

A traditional educational route into being a Solar Power Design Engineer is to study one an engineering discipline such as Civil, Electrical or Mechanical engineering, and then to work for a company specialising in solar installations. Many people will still take this route since it offers a broad range of opportunities. Others may choose a degree in Construction Engineering if they know the wish to work on site.

However at UCAS you can find specific degree courses tailored to people who want to work in the renewable energy sector such as this one from City University in London:

<https://digital.ucas.com/coursedisplay/courses/05cadf92-2bd0-af6e-30ec-166ebc8c5b0e?academicYearId=2022&backUrl=https:%2F%2Fwww.ucas.com%2Fexplore%2Fcourses%3Fsubject%3DMaterials%2520science%2520and%2520engineering%26filterBy%3Dall%26studyYear%3Dcurrent%26latLng%3Dfalse%26filters%255B0%255D%3DLondon-locations&courseOptionId=3f2863f4-08e1-49e3-aeba-e132653aff47>.

Whatever degree option you choose you should ensure the degree is accredited by the relevant engineering institute or institution. So for example, if you were to choose a degree in Civil Engineering, you must ensure your particular degree course is accredited by the Institution of Civil Engineers: <https://www.ice.org.uk/careers-and-training/graduate-civil-engineers/course-search-tool>.

The Engineering Council will point you in the right direction for the accreditation body for your chosen engineering discipline:

<https://www.engc.org.uk/>.

Alternative entry routes

Higher Technical Qualifications

Engineering is a profession that is in demand in the solar sector in London and the UK, and there are many routes into the field. You don't always need to start with a degree. From the age of 18 you could choose a Higher Technical Qualification in an engineering discipline like an HNC or an HND, you could choose a foundation degree or a higher education diploma. There are a huge choice of options available to you.

T Levels

If you're 16 and deciding between the traditional A level route or alternative routes and you want a blend of academic and practical learning, you might be interested in the new Technical Qualifications (T Level) choices. T levels are a new 2-year long qualification They bring classroom learning and an extended industry placement together. You'll spend 80% of your time in the classroom and 20% on a 45-day placement with an employer which will give you a great experience of the world of work in your chosen field. One T level takes 2 years of full-time study and is equivalent to 3 A levels. T Levels are rolling out across the country with many more coming online by September 2024.

The Design, Surveying and Planning for Construction T – Level is currently offered in London by Newham College: <https://www.newvic.ac.uk/>.

The Building Services Engineering for Construction is offered in London by Barking and Dagenham College:

<https://www.barkingdagenhamcollege.ac.uk/>.

Other colleges across London will begin to offer these courses from September 2022.

You can search for a relevant T Level delivered in your location here:

<https://www.tlevels.gov.uk/students/find?Postcode=&ShouldSearch=True&SearchedQualificationId=48&TotalRecordCount=22&SelectedQualificationId=0>.

Apprenticeships

Apprenticeships are a common and popular route to take at age 16, 18 or older. This is because during your apprenticeship you are employed and

earn a wage while you study to learn your profession. There are many apprenticeships relevant to a Solar Power Design Engineer. Many of these apprenticeships will provide you with a degree or higher technical qualification at the end, but you will also have to undergo an 'end point assessment' which will assess your knowledge, skills and behaviour in your chosen occupation. Many apprenticeships offer the chance to become an Engineering Technician or Incorporated Engineer. The level 6 or 7 apprenticeships relevant for a Design Engineer will provide you with a degree.

Career Prospects and Progression

The Engineering Council states that "once you have the necessary qualifications and workplace experience you should apply to your institution to become professionally registered. Your institution will guide you through the registration process and help you to decide when you're ready to apply. This might be as an Engineering Technician (EngTech), Incorporated Engineer (IEng), or Chartered Engineer (CEng)".

A qualified engineer may progress to a management route or continue to progress along the technical route being given ever larger and more important projects to lead. Continuous Professional Development (CPD) is vital to an Engineer to keep abreast of new technology development in their field. So your relevant institution will have CPD requirements you must complete in order to maintain your registration.

Skills Needed

According to Prospects UK Design Engineers will need the following skills:

- Subject specific technical knowledge and expertise.
- Commercial awareness of your specialist area of engineering.
- An eye for detail and a methodical work process.
- It and CAD knowledge.
- Analytical and numeracy skills.
- Creative problem-solving ability.
- The ability to work in a team.

- Effective communication to liaise with team members, clients, contractors and others involved in the design process.
- Leadership and negotiation skills.
- Written communication and the ability to write reports.
- Time management, organisation, and the ability to work to deadlines.
- A flexible approach to work and the ability to adapt to change.
- A driven, self-motivated attitude and the ability to use initiative.

Number Employed (UK)

As of 2018 there were 491,000 Professional Engineers employed across the UK. (SOC 212)

Typical Salary Range

A UK wide salary range for qualified Engineers ranges from £24,000 – £50,000, but a qualified graduate in London can expect a starting salary of around £27,000. Incorporated Engineers will earn between £30,000–£40,000 when they attain Incorporated Engineer status. Engineers in London should expect a salary of £50,000+ when Chartered status is attained.

ENDS

Please note that the information contained on this page is accurate to the best of Solar Energy UK's knowledge. Solar Energy UK welcomes additional information and will aim to update any errors or omissions.