





All about the IET Power Academy 2021

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1. Aims of this report

This report is designed to give the reader a feel of the IET Power Academy. Who is involved and why? What do partner companies think of the Power Academy and why have they joined? What makes students apply for scholarships and what do they hope to get out of them? Is it just the money or is it a stepping stone to a career?

As always we have asked some partner companies for their opinions and some current and ex scholars for their views.

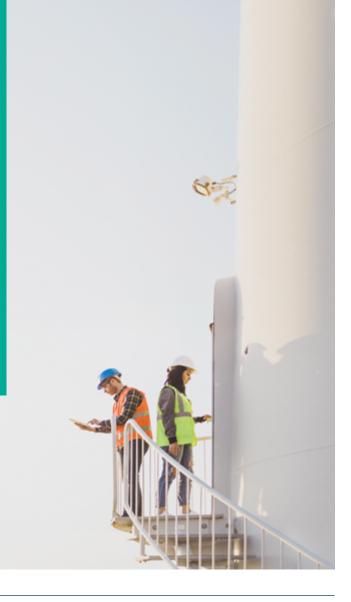


Rachael Eynon

"I studied Electronic and Electrical Engineering with International Study at the University of Strathclyde and was awarded a Power Academy Scholarship in my second year of university. I was sponsored by National Grid and completed three summer placements before joining the Graduate Scheme in 2019.

The experience I received from these three placements has been invaluable. The scheme gave me the opportunity to put my degree knowledge into practice, gain exposure to working life in an office environment, and allowed me to get a head start in building a professional network in the power sector.

I recently began my first role since completing the Graduate Scheme as an Outage Planner for National Grid ESO. My role is to facilitate access to the transmission network so that assets can be maintained and upgraded."



2. What is the IET Power Academy?

It's a scholarship scheme for engineering students, providing them with financial support for their studies and work experience placements to prepare them for a career in the power and electrification industry sectors.

The Academy is made up of top companies and universities with expertise in power engineering. These companies are dedicated to addressing the skills shortage and helping graduates enter the industry. Managed by the Institution of Engineering and Technology (IET), the Academy has awarded over 600 scholarships to date.

Preparing students for the power and electrification industries

A Power Academy scholarship is a brilliant opportunity for students to discover what they are interested in, develop work-based skills and even secure a position in the power industry, all while receiving financial support that allows them to focus on their studies.

Giving graduates the edge

Our university partners offer Power Academy scholarships as a way of supporting students with their studies, developing their professional skills and getting them into meaningful employment.

Accessing the talent pool

Corporate partners get access to high calibre graduates through the Power Academy. Scholars have the drive, and develop the expertise, to build careers in the power industry.

3. Strategic Review of the IET Power Academy



Over the last two years to coincide with the 15th anniversary of the IET Power Academy, an external review was undertaken by Lynne Alsopp of LD Associates and included talking to a sample of current partners and scholars as well as some alumni scholars. This is a summary of what the Strategic Steering Group agreed should be changed:

1. Mission and objectives

The current mission and objectives from 2014 focused very much on traditional power activities. Feedback indicated that they needed to include the broader aspects of power engineering, the wider impact it has on society and the role that engineers play. The Executive and Council have agreed these changes and the new ones will be on the website and in other literature.

The steering group agreed that the current organic growth strategy should continue.

3. Operating Principles

The Bursary will be reviewed every April by the Council with any changes recommended to the Executive.

4. Communication

Formal communication appeared hit and miss with some confusion over roles and responsibilities between governance groups as well as communication with scholars. To improve this, the terms of reference for the groups have been updated, the scholar representatives administer a closed Facebook group and all scholars are encouraged to join. Brief updates from Council meetings are provided on here as well as requests for agenda items.

To respond to the restrictions Covid-19 is placing on normal activities, a newsletter was set up from summer 2020.

5. Annual Summer Seminar

Scholars and alumni scholars think that the seminars are brilliant at providing industry leading information, practical examples of application of their skills and networking opportunities. They really appreciate the time and effort that goes into making them successful.

6. Already Implemented

There have been a number of actions already taken.

They include:

- Formally introducing a year in industry for those students who are required to do this as part of their degree programme and their sponsoring employer can accommodate this
- Process for employer partners to identify extended and linked degree requirements
- Terms and conditions clarification i.e. the minimum requirement and the flexibility the employer partners may have
- Revised terms of reference for the Executive and Council structures including a business plan
- Formal confirmation that final year students are not eligible for Power Academy scholarships

In summary, the outcome of the review was to update, refresh and tighten the operating parameters of the Power Academy to ensure its continuing applicability for the future.

4. Our Partners

The companies, universities and institutional bodies that make up the IET Power Academy are as follows:

| Companies | Universities | Associated Universtities |
|--------------------|-----------------|-----------------------------------|
| Atkins Global | Bath | Birmingham |
| BAE Systems | Cardiff | Heriot-Watt |
| National Grid | Imperial | Liverpool |
| Network Rail | Loughborough | Liverpool John Moores |
| NIE Networks | Manchester | Institutions |
| Northern Powergrid | Newcastle | Energy & Utility Skills |
| Omexom | Queen's Belfast | National Skills Academy for Power |
| Rolls-Royce | Southampton | The IET |
| RWE Generation | Strathclyde | |
| SP Energy Networks | | |
| UKAEA | | |

Western Power Distribution

























































5. Scholarship Statistics

New scholars taken on each year from 2012 to 2020 by company.

| 6 | • | | | | | | | | | | |
|----------------------------|--|------|------|------|------|------|------|------|------|------|-------|
| Company | Туре | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
| ABB | Power equipment manufacturer | 2 | n/a | 2 |
| Atkins | Power industry consultancy | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 19 |
| BAE Systems | Maritime submarines | n/a | 2 | 1 | 3 | 4 | 0 | 4 | 3 | 3 | 20 |
| UKAEA | National fusion research laboratory | 2 | 1 | 1 | 1 | 2 | 3 | 2 | 4 | 2 | 18 |
| Costain | Power construction consultancy | n/a | 2 | 2 | 0 | 0 | n/a | n/a | n/a | n/a | 4 |
| London Underground | Rail transportation | n/a | 2 | 2 | 2 | 0 | 0 | 0 | n/a | n/a | 6 |
| Mitsubishi Electric | Power equipment manufacturer | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| Mott MacDonald | Power consultancy | n/a | n/a | n/a | n/a | 2 | 1 | 0 | n/a | n/a | 3 |
| National Grid | Transmission system owner and operator | 7 | 5 | 9 | 9 | 3 | 5 | 6 | 4 | 6 | 54 |
| Network Rail | Rail transportation | n/a | 2 | 2 | 4 | 4 | 2 | 3 | 1 | 3 | 21 |
| NIE Networks | Transmission and distribution system owner | 3 | 2 | 2 | 2 | 0 | n/a | n/a | 1 | 1 | 11 |
| Northern Powergrid | Distribution network operator | 4 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 12 |
| Omexom | Generation, transmission and distribution | n/a | 5 | 5 | 10 |
| Rolls-Royce | Power equipment manufacturer | 3 | 6 | 4 | 4 | 3 | 4 | 3 | 0 | 0 | 27 |
| RWE Generation | Generator | 2 | 0 | 3 | 2 | 2 | 3 | 2 | 2 | 0 | 16 |
| SSE | Transmission and distribution system owner | 1 | 1 | 3 | 6 | 0 | 0 | 0 | n/a | n/a | 11 |
| SP Energy Networks | Transmission and distribution system owner | 4 | 4 | 5 | 5 | 3 | 13 | 12 | 12 | 11 | 69 |
| Siemens | Power equipment manufacturer | 0 | 0 | 0 | 5 | 4 | 5 | 0 | 0 | n/a | 14 |
| Western Power Distribution | Distribution network operator | 9 | 10 | 11 | 9 | 8 | 9 | 9 | 8 | 8 | 81 |
| Total | | 40 | 42 | 47 | 56 | 40 | 47 | 43 | 42 | 44 | 401 |



Mark Goudie "I was an Atkins Power Academy Scholar during my studies at the University of Strathclyde. For me, applying to the Power Academy was a no brainer. It offered experience, financial support and the opportunity for eventual graduate employment. The bursaries helped during term time, allowing me to focus on my studies rather than more part time work while the industrial experience complemented my academic learning.

After graduation, I spent five years with Atkins, starting as a graduate engineer and finishing as their first Head of Future Networks. I now work for SP Energy Networks as their Distribution System Operation (DSO) Manager, preparing the electrical system for our Net Zero future.

Since graduation, I've also stayed involved with the IET. This ranged from continuing to support the Power Academy through the Council and Executive but also other committees, such as my position as Chair of the IET Horizons Bursary scheme. All this work supported my election in 2020 as one of the youngest engineering Fellows in UK history."

6. University Statistics

New scholarships offered each year from 2012 – 2020 by university.

| University | Number of scholars | | | | | | | | | |
|------------------------------|--------------------|------|------|------|------|------|------|------|------|-------|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
| Cardiff University | 6 | 4 | 7 | 9 | 1 | 5 | 6 | 6 | 5 | 49 |
| Heriot-Watt | n/a | n/a | n/a | n/a | n/a | 4 | 2 | 2 | 1 | 9 |
| Imperial College, London | 1 | 4 | 1 | 1 | 4 | 4 | 2 | 0 | 4 | 21 |
| Loughborough University | 3 | 0 | 3 | 6 | 3 | 1 | 3 | 1 | 0 | 20 |
| Queen's University, Belfast | 2 | 3 | 2 | 3 | 0 | 1 | 0 | 1 | 1 | 13 |
| University of Bath | 3 | 2 | 3 | 1 | 5 | 5 | 1 | 1 | 1 | 22 |
| University of Liverpool | n/a | n/a | n/a | n/a | n/a | 3 | 0 | 2 | 3 | 8 |
| Liverpool John Moores | n/a | n/a | n/a | n/a | n/a | 2 | 1 | 1 | 0 | 4 |
| The University of Manchester | 6 | 4 | 1 | 4 | 4 | 2 | 4 | 1 | 1 | 27 |
| Newcastle University | n/a | n/a | n/a | n/a | n/a | 2 | 0 | 0 | 2 | 4 |
| University of Southampton | 2 | 5 | 9 | 7 | 6 | 5 | 5 | 6 | 3 | 48 |
| University of Strathclyde | 17 | 20 | 21 | 25 | 17 | 13 | 19 | 21 | 23 | 176 |
| | 40 | 42 | 47 | 56 | 40 | 47 | 43 | 42 | 44 | 401 |





Robin Preece

"I was sponsored through my BEng in Electrical and Electronic Engineering at The University of Manchester from 2005-09. I was sponsored by EDF Energy Networks who were the distribution network operator for London, East Anglia and the South East of England. Now I'm a Senior Lecturer in Future Power Systems (still at The University of Manchester) and I encourage the new students to become part of the Power Academy. I work with different companies, like National Grid Electricity Transmission and Northern Powergrid, to help identify solutions to problems that the power system is going to face in the future – trying to find the fix before the problem has even happened. The Power Academy gave me a much better understanding of the real power system – putting everything into context compared to the lectures I had at university. It's definitely the reason I'm still working on power systems now."

7. IET Power Academy Summer Seminars

Every year we invite scholars to a summer seminar where they can meet the partners behind the Power Academy, network and hear about key issues affecting the industry. Sadly the 2020 seminar planned to take place in July in Liverpool was cancelled due to Covid-19.

The plans for 2021 are a virtual two day seminar on 29-30 July. Company workshops on how zero carbon ready they are will help to make it as interactive as possible along with an escape room activity. Rob Watson, Director, Electrical at Rolls-Royce will give the opening address and Dawn Ohlson, Vice President of the IET will close the event with a look at the IET's 150th Anniversary. Four ex scholars will also discuss where they are with their careers.



2019 Seminar group at the Angel of the North.

8. The IET Power Academy Executive

Our Power Academy is governed by an Executive committee.

The Executive's Terms of Reference are:

- to agree the overall strategic direction of the Power Academy
- to approve the criteria and selection process of new partners to the Power Academy
- to provide strategic guidance to the IET in respect of all policy issues referred to it either by the Power Academy Council or the IET. The current Chair is Rob Watson from Rolls-Royce. The Vice Chair is Colin Taylor from Scottish Power Energy Networks.
- to monitor the overall effectiveness of the management and administration of the Power Academy
- to agree any changes to the scholarship package



Rob Watson, Chair of IET Power Academy Executive



9. The IET Power Academy Council

All partners have a place on the IET Power Academy Council which plans and monitors the day-to-day operation of the Academy. It normally meets twice a year in April and September.

The current Chair is Carl Ketley-Lowe from Western Power Distribution.

Key activities of the Council are:

- to agree the selection process
- to recommend London and regional vacation rates to the Executive
- to recommend the IET Power Academy management fee to the Executive
- to oversee the organisation of the summer seminar
- to provide advice to the Executive on progress of the scheme



Carl Ketley-Lowe

Engineering Policy Manager, WPD

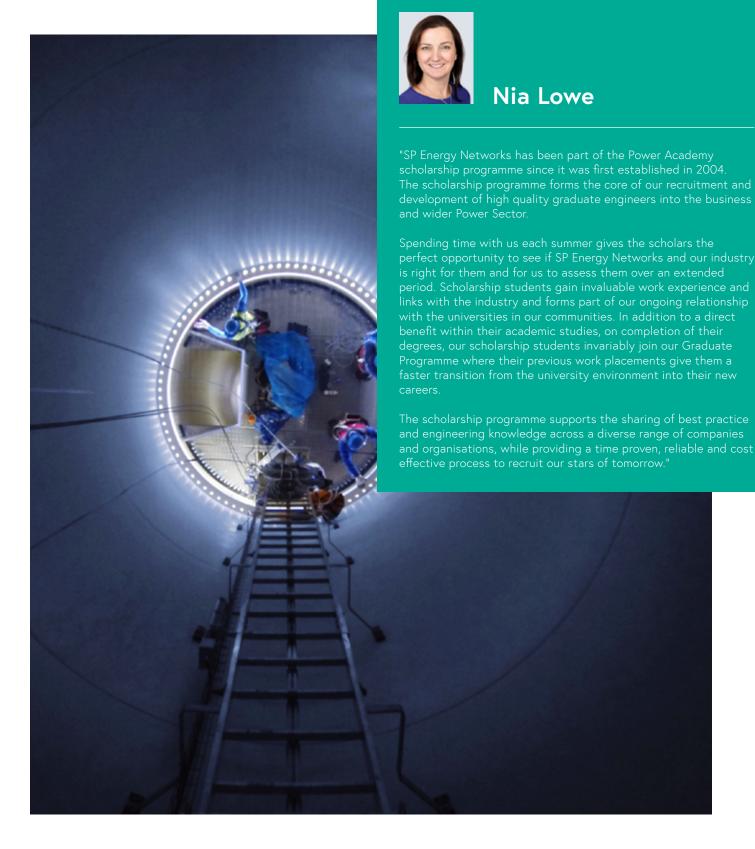
"Western Power Distribution (WPD) has been a partner of the Power Academy for over 10 years. During that time, we've supported between 8 and 10 new scholars each year, many of whom have gone on to the company's Graduate Programme and then taken permanent roles in various engineering teams in the business.

The Power Academy provides access to high calibre undergraduates that are excited by Electrical Engineering and aspire to work in our sector. The Power Academy provides us with a talent pool in some of the top UK universities with an electrical engineering pedigree. With our business moving to an increased system operator focus, we're dependent on being able to grow a strong capability in electrical engineering – through the Power Academy we're able to identify potential undergraduate candidates that we can work to develop.

Giving the scholars a Summer Internship each year is a fantastic opportunity both for us to assess the scholars that we take on, but also for them to see whether our company fits their needs. It's like an extended two-way interview, meaning that once the scholars graduate, they're very quickly aligned to the needs of the business and to develop their career potential.

From my perspective the programme offers good value for money in our pursuit of world class electrical engineering talent, both for the future needs of our business and the customers that we support."









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