

# Report on the IET Power Academy 2016

[www.theiet.org/poweracademy](http://www.theiet.org/poweracademy)

## 1. Introduction

The Power Academy is a unique partnership between industry and academia, which seeks to address the looming skills shortage in power engineering through a combination of financial support and work placements for students. Since its inception in 2004, the Power Academy has been managed within the Institution of Engineering

and Technology, which acts as its professional and neutral adviser. The mission of the Power Academy is to increase the recruitment of professional high quality graduate engineers into the power industry and related sectors. The Academy has awarded over 550 scholarships.

## 2. Our Partners

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

Company	University	Institution
Atkins Global	Bath	Energy & Utility Skills
BAE Systems	Cardiff	National Skills Academy for Power
UKAEA CCFE	Imperial	The IET
London Underground	Loughborough	
Mitsubishi Electric	Manchester	
Mott MacDonald	Queen's Belfast	
National Grid	Southampton	
Network Rail	Strathclyde	
NIE Networks		
Northern Powergrid		
Rolls-Royce		
RWE Generation		
SP Energy Networks		
SSE		
Siemens		
Western Power Distribution		

### 3. The IET Power Academy Executive

The top governing body of the Power Academy is the Executive.

**The Terms of Reference of the Executive are:**

- |  |  |
|--|--|
| (a) to agree the overall strategic direction of the Power Academy                      | (c) 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 |
| (b) to approve the criteria and selection process of new partners to the Power Academy | (d) to monitor the overall effectiveness of the management and administration of the Power Academy   |
|  | (e) to agree any changes to the scholarship package.   |

#### Membership of the Executive as of May 2017

<b>Nick Winser (Chair)</b> Deputy President The IET	<b>Kamini Edgeley</b> Network Rail
<b>Keith Bell</b> University of Strathclyde	<b>Manu Haddad</b> Cardiff University
<b>Bill Bennett</b> Scottish Power	<b>Nicki Hussain</b> National Skills Academy for Power
<b>Paul Birt</b> Siemens	<b>Adam McLoughlin</b> Rolls-Royce (Chair of Council)
<b>Dan Canty</b> The IET	<b>Nigel Turvey</b> Western Power Distribution
<b>Richard Earp</b> National Grid	<b>Alun Vaughan</b> University of Southampton

#### Secretariat

**Bill Fenton** The IET

### 4. The IET Power Academy Council

All Power Academy partners have a place on the IET Power Academy Council. It normally meets twice a year in April and September. The Council is responsible for planning and monitoring the day-to-day operation of the Power Academy. As of May 2017, the Council Chair is Adam McLoughlin from Rolls-Royce. The Vice-Chair is Stephen Kelly of SP Energy Networks.

**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 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.

## 5. Scholarship Statistics

Table one below shows the new scholars taken on each year from 2011 to 2016 by company.

Company	Main Power Academy business activity	Number of scholars supported						
		2011	2012	2013	2014	2015	2016	Total
ABB	Power equipment manufacturer	4	2	n/a	n/a	n/a	n/a	6
Atkins	Power industry consultancy	2	2	2	2	3	2	13
BAE Systems	Maritime submarines	n/a	n/a	2	1	3	4	10
UKAEA CCFE	National fusion research laboratory	2	2	1	1	1	2	9
Costain	Power construction consultancy	n/a	n/a	2	2	0	0	4
London Underground	Rail transportation	n/a	n/a	2	2	2	0	6
Mitsubishi Electric	Power equipment manufacturer	n/a	1	0	0	1	1	3
Mott MacDonald	Engineering, management, and development consultancy	n/a	n/a	n/a	n/a	n/a	2	2
National Grid	Transmission system owner and operator	19	7	5	9	9	3	52
Network Rail	Rail transportation	n/a	n/a	2	2	4	4	12
NIE Networks	Transmission and distribution system owner	3	3	2	2	2	0	12
Northern Powergrid	Distribution network operator	0	4	3	0	0	2	9
Rolls-Royce	Power equipment manufacturer	2	3	6	4	4	3	22
RWE Generation	Generator	2	2	0	3	2	2	11
SSE	Transmission and distribution system owner	1	1	1	3	6	0	12
SP Energy Networks	Transmission and distribution system owner	5	4	4	5	5	3	26
Siemens	Power equipment manufacturer	5	0	0	0	5	4	14
Western Power	Distribution network operator	7	9	10	11	9	8	54
<b>Total</b>		<b>52</b>	<b>40</b>	<b>42</b>	<b>47</b>	<b>56</b>	<b>40</b>	<b>277</b>

Table two below sets out the number of new scholarships offered each year from 2011 to 2016 by university.

University	Number of scholars						Total
	2011	2012	2013	2014	2015	2016	
Cardiff University	3	6	4	7	9	1	30
Imperial College, London	7	1	4	1	1	4	18
Loughborough University	n/a	3	0	3	6	3	15
Queen's University, Belfast	6	2	3	2	3	0	16
University of Bath	7	3	2	3	1	5	21
The University of Manchester	6	6	4	1	4	4	25
University of Southampton	5	2	5	9	7	6	34
University of Strathclyde	18	17	20	21	25	17	118
<b>Total</b>	<b>52</b>	<b>40</b>	<b>42</b>	<b>47</b>	<b>56</b>	<b>40</b>	<b>277</b>

### Conversion to employment

By the autumn of 2016, over 280 scholars had taken employment with company sponsors.

## 6. Report on key 2016 Power Academy Activities

### Key highlights:

#### 2016 Power Academy seminar

The 2016 seminar was held at Austin Court, Birmingham on 14 - 15 July 2016.

#### Presentations included:

##### ■ The need for innovation

Nick Winser Deputy President of the IET  
Chair of the Power Academy Executive

##### ■ Railway System Optimisation

Simon Chung Head of Profession Systems  
Performance London Underground

##### ■ Research + Impact = Innovation

Prof Paul Lewin Head of Electronics and Computer  
Science University of Southampton

#### After dinner speaker

This year the after dinner speaker was Dr Peter Bonfield OBE Chief Executive BRE Group and Vice President of the IET.

### The IET 2016 Power Academy Essay Challenge

Every year, the Power Academy invites scholars to write a mini-essay on a chosen topic. The winners were announced at the Power Academy dinner on 14 July 2016 and received an invitation to attend the IET Annual Dinner in 2017 and to have a London hotel booked for them.

The top two essayists will attend a European Power Industry Conference in 2017 or 2018.

#### This year's winners were:

##### 1st Anthony Akuoko

Increasing Solar Energy Systems and challenges to the UK Grid.

##### 2nd Owen Johnson

How have changes in government energy policy over the past 40 years shaped the British energy industry?

##### 3rd Brendan Digney

Since 2008 the quantity of UK energy generated by solar systems has increased by 360 times (17GWh in 2008, 6243GWh (est) in 2015). What challenges has this brought to the UK grid system?

## 7. Advice from Ex-Scholars

We asked ex-Power Academy scholars about their experience of the Academy and what advice they would give to young people thinking of applying for a scholarship.

### **Steven Wray, CCFE**

“Definitely take the opportunity to join the Power Academy - it has opened up many opportunities for me, I met lots of people during my three placements that have underpinned my network and supported me - my original interviewer is still my career mentor to this day!

“Two months out of your summer may seem like a long time, but it is an enjoyable experience, invaluable for your career and you get to go back to university slightly less broke than when you left!”

### **Neil Money Penny, Western Power**

“The Power Academy will unlock many doors for you but it is your responsibility to push these doors wide open and prove your skills.”

### **Susan McDonald, Energy UK's Young Energy Professionals Forum**

“Use the Power Academy to really see the electricity industry from the inside. It really lets you see what you could achieve in a career and highlights opportunities.”

### **Christakis Schinis, Siemens**

“An IET Power Academy sponsorship allows you to develop your technical and business skills and apply your degree to high profile projects early-on in your career.

“It is important that you demonstrate professional conduct at all times because you are starting to build up a network with your peers and colleagues that will be key as your career develops.

“I encourage you to ask the obvious questions because this is an opportunity to develop your understanding of the energy sector and help identify where your interests are.”

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## 8. Importance of Work Experience

In 2016 the IET launched an important Engineering Work Experience for All campaign to promote the need for more work experience, internship and placement opportunities for engineering students in order to give them the practical and technical skills needed by industry.

The IET Power Academy has since 2004 sponsored over 550 undergraduates following an IET accredited electrical power engineering degree at 8 Academy partner

universities. The main features of the sponsorship are the student studying at a university which is recognised as providing a good power engineering education with a minimum of 8 weeks a year well-paid planned vacation placement with an Academy employer partner. The Power Academy is a good example of what can be achieved by providing well planned work experience.



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## IET Venues

### IET London: Savoy Place

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### IET Birmingham: Austin Court

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