



The Institution of  
Engineering and Technology

**Power Academy**

# Report on the IET Power Academy 2010

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## 1. Introduction

The IET Power Academy was set up to address, alongside quality power companies and universities, the shortfall in engineering expertise in the electricity power industry. This was achieved by attracting new talent into the industry, primarily at undergraduate level and ultimately leading to graduate employment. Since 2004 the number of power employers has grown from nine to sixteen and the number of universities from

three to seven. The Academy is a unique partnership between industry and academia, which seeks to address the looming skills shortage in the power-engineering sector, through a combination of financial support and workplace mentoring for students. Since its inception, the Power Academy has awarded over 330 scholarships.

The Academy is hosted and managed within the Institution of Engineering

and Technology (the IET) which acts as its professional and neutral adviser. The Academy is also supported by Energy & Utility Skills and the National Skills Academy for Power.

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## 2. Our Partners

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

Company	University	Institution
AREVA T & D	Cardiff	Energy & Utility Skills
Atkins Global	Imperial London	National Skills Academy for Power
CCFE	Manchester	The IET
CE Electric	Queens Belfast	
EA Technology	Southampton	
E.ON UK	Strathclyde	
National Grid		
NIE		
Rolls-Royce		
RWEpower		
Scottish Power		
SSE		
Siemens T & D		
United Utilities		
UK Power Networks		
Western Power Distribution		

### 3. The 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
- (b) To approve the criteria and selection process of new partners to 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
- (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

Nick Winser (Chair)	National Grid
Alan Bryce	Scottish Power
Richard Earp	National Grid
Sue Guest	Energy & Utility Skills
Barry Hatton	UK Power Networks
Tim Littler	Queens University, Belfast
Paul Maher	Siemens
Jim McDonald	University of Strathclyde
Jim O'Sullivan	E.ON UK
Agnes Segal	The IET
Alun Vaughan	University of Southampton

#### Secretariat

Bill Fenton	The IET
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### 4. The Power Academy Council

All partners are represented on the Power Academy Council, which manages the day to day quality effectiveness and delivery functions of the Academy.

#### Membership of the Council

Lynne Allsopp (Chair)	Central Networks
Raj Aggarwal	University of Bath
Geoff Baines	The University of Manchester
Keith Bell	University of Strathclyde
Elizabeth Birchenough	Atkins Power
Kim Bowman	ABB
Paul Blezard	EA Technology
Bill Bennett	Scottish Power
Dawn Collier	UK Power Networks
Jackie Costello	CCFE
Bob Fox	WPD
Chris Freeman	University of Southampton
Sharon Goymer	National Grid
Huw Griffiths	Cardiff University
Jane Lees	National Grid
Karen Hardwick	AREVA
Tim Littler	Queens University Belfast
Bikash Pal	Imperial College London
Gemma Bell	SSE
Soo Poole	CCFE
Liz Burnside	NIE
Robert Skae	Siemens
Tom Stewart	ABB
Brian Simmers	Rolls-Royce
David Van Kesteren	CE-Electric
Polly Whyte	UK Power Networks
Lie Xu	Queens University Belfast
Julie Young	RWEpower

#### Secretariat

Bill Fenton	The IET
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## 5. The Power Academy University Peer Group

The University Peer Group provides the self regulation that drives the performance of the Power Academy university partners.

### Membership of the University Peer Group

Jim McDonald Chair  
Raj Aggarwal  
Peter Crossley  
Manu Haddad  
Bikash Pal  
Alun Vaughan  
Tim Littler

University of Strathclyde  
University of Bath  
University of Manchester  
Cardiff University  
Imperial College London  
University of Southampton  
Queens University, Belfast

Secretariat  
Bill Fenton

The IET

## 6. Scholarship Statistics

Table 1 below shows the new scholars taken on each year from 2004 to 2010 by company.

Company	Main Power Academy business activity	No. of scholars supported							
		2004	2005	2006	2007	2008	2009	2010	Total
ABB	Power equipment manufacturer	n/a	1	2	2	3	1	3	12
AREVA T&D	Power equipment manufacturer	n/a	0	2	2	2	2	0	8
Atkins	Consultancy	n/a	0	2	2	2	2	2	10
CE Electric	Distribution network operator	2	1	3	1	1	0	2	10
CCFE					1	2	1	2	6
Central Networks	Distribution network operator and Generator	8	9	5	8	11	5	11	57
EA Technology	Power networks research institute	1	2	1	1	0	0		5
UK Power Networks	Distribution network operator	6	7	9	8	7	7	4	48
National Grid	Transmission system owner and operator	15	3	7	5	14	15	20	79
NIE	Transmission and distribution system owner	n/a	2	3	2	0	2	4	13
Rolls Royce	Power equipment manufacturer	n/a	n/a	n/a	3	3	2	4	12
RWEpower	Generator	n/a	n/a	n/a	n/a	5	6		11
SSE	Transmission and distribution system owner	1	1	1	1	1	1	1	7
Scottish Power	Transmission and distribution system owner	3	3	4	2	2	2	5	21
Siemens	Power equipment manufacturer	2	8	5	2	2	2	4	25
United Utilities	Distribution network operator	2	2	2	1	0	0	0	7
Western Power	Distribution network operator	1	2	1	2	2	1	2	11
<b>Total</b>		<b>41</b>	<b>41</b>	<b>47</b>	<b>43</b>	<b>57</b>	<b>49</b>	<b>64</b>	<b>342</b>

Table 2 sets out the number of new scholarships offered each year from 2004 to 2010 by university.

University	Year joined scheme	Number of scholars							
		2004	2005	2006	2007	2008	2009	2010	Total
Cardiff University	2006	n/a	n/a	7	7	5	4	3	26
Imperial College London	2006	n/a	n/a	11	3	9	11	11	45
Queen's University, Belfast	2004	2	11	4	2	1	4	7	31
University of Bath	2008	n/a	n/a	n/a	n/a	5	6	3	14
University of Manchester	2004	17	9	8	7	5	4	6	56
University of Southampton	2004	5	6	3	8	8	3	9	42
University of Strathclyde	2004	17	15	14	16	24	17	25	128
<b>Total</b>		<b>41</b>	<b>41</b>	<b>47</b>	<b>43</b>	<b>57</b>	<b>49</b>	<b>64</b>	<b>342</b>

### Conversion to Employment

By the autumn of 2010 82 scholars had taken employment with company sponsors. The target set by the Executive for convergence to employment of all scholars is 66%. This figure has been improving each year. For 2010 71% of final year scholars joined their sponsoring companies as employees.

## 7. Report on 2010 Power Academy Activities

### Key highlights:

#### a) The 6<sup>th</sup> Power Academy Annual Summer Seminar and Dinner

The 2010 Summer Seminar was hosted by EDF Energy and Atkins Power on 15/16 July 2010 near Colchester in Essex. Over 130 scholars from all universities attended the event. The theme was "Sustaining the future". The opening address on Sustaining Energy for the Future was made by Barry Hatton Director of Capital Programmes EDF Energy. On the first day there were two main sessions on Smartgrids and the sustainable challenge of the 2012 Olympic Park. John Pritchard, Director of Energy from Atkins Energy welcomed delegates to the dinner and John Scott, Director - Network Innovation Kema Consulting was the after dinner speaker. The second day saw some scholars visiting Sizewell Nuclear Power station whilst others took part in team building activities.

#### b) Essay Competition

An annual essay competition has been a feature at all Power Academy Summer Seminars. This year the winners were

**First Place:** Nicola Pellow, Atkins Power Scholar, University of Strathclyde  
**Joint Second Place:** Stuart Carey, Atkins Power Scholar, University of Strathclyde  
 Stuart Glen, Western Power Distribution Scholar, University of Strathclyde

The winning essays can be seen on [www.theiet.org/poweracademy](http://www.theiet.org/poweracademy)

All three winners attended the 2011 IET Annual Dinner in London and attended the Anglo German Energy Policy seminar in Germany in June 2011.

#### c) Vacation Placements

The vacation placements take place over eight or nine weeks in the summer. The 2010 survey of all scholars indicates very real appreciation of the efforts of companies and satisfaction with the placements and communication. These are the scholars most likely to enter careers with the sector. The survey also again revealed areas of improvement still needed including the requirement to communicate regularly with scholars and provide challenging and interesting summer placements.

## 8. Improving Performance

The Power Academy Executive and Council have identified the drivers for success in all aspect of the delivery of the Academy. In particular efforts have been made in improving the relationship between scholar and company. Performance Process Models have been drawn up for companies, universities, the IET and scholars themselves. In addition questionnaires have sought to capture best practice and to improve delivery by all partners. In 2010 the partners carried out a self assessment their delivery of the Academy. The results were discussed by both the Power Academy Council and Executive. There were many examples of good practice, which were shared amongst partners.

## 9. The Assessment and Selection Process

In 2010 companies made improvements and changes to the assessment and selection of scholars. These included:

- a) A change in the timetable which allowed for planned interviews to take place in February 2011 rather than December 2010
- b) A more thorough systematic process of all aspect of the assessment and selection process
- c) Improvements to the university awareness days in October
- d) More assessors at the November university events
- e) An assessor training course carried out for partners by National Grid
- f) A new effective team exercise for the assessment centres provided by Rolls Royce.

The Power Academy Council continually reviews its assessment and selection process year by year to improve the effectiveness of the process.

## 10. Public Relations

The IET, when and where appropriate, seeks to promote the Power Academy on the UK and international stage.

In February Bill Fenton made a presentation to a British Wind Energy Association Event in Northumberland.

In August 2010 a presentation on the Power Academy was produced by Keith Bell, University of Strathclyde, Bill Fenton, Power Academy and Colin Ray, Consultant for the CIGRE Conference in Paris. Keith Bell attended the event and made the presentation.

In September Natalia Ashikalis, an E.ON UK scholar, presented on the Power Academy at the International Dempsee Conference in Crete.

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## 11. Survey of Power Academy Scholars

Every year all scholars are sent a questionnaire with the purpose to finding out how effective the summer placements have been and other aspects of the scholarship such as payment of bursaries, the seminar, communication with sponsoring companies and marketing by the universities.

In 2010 scholars reported that they had an excellent vacation placement and virtually all find the summer seminar useful and stimulating - particular the team building activities, topics and networking. Some placements are seen as not so well planned or challenging and some companies clearly work much harder on communications than others. Most scholars received their bursaries on time but not all. All these areas should be improved.

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## 12. Conclusions

The Power Academy aims to attract school and college leavers into electrical engineering degrees, and electrical engineering graduates into the power industry. It offers financial support to students who have succeeded in being admitted to the scheme. More importantly, it enables a relationship to be built between sponsoring power companies and scholars. This relationship is critical to the scheme's success, which, for the companies, means conversion of the best scholars to employment and, for scholars, means finding an attractive and rewarding career route. The key factor in building the relationship is the nature and challenge of summer placements with the sponsoring company. Almost as important is regular communication between company and scholar throughout the year and the support given by a company mentor. This is done by visits, phone calls and emails.

It has been argued that, since its foundation in 2004, the IET Power Academy has been a success with increasing numbers of scholars coming onto the scheme and a significant majority of positive responses being found in annual surveys of their

experiences. However, the level of influence it has had on the degree choices by school and college leavers is still small. This remains a challenging area, not only for the Power Academy partners but also for the UK government in respect of its

overall skills agenda. With the rise in university fees taking place in 2012 the Power Academy is likely to continue to be attractive by quality engineering undergraduates seeking sponsorship and challenging work experience.