How the RWE npower Energy Challenge helped one graduate—and how it could help you

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By Andrew Baines, School of Chemical Engineering alumnus

Engineering has always been my passion. I spent my childhood taking things apart and rebuilding them, with an undying interest in how they work and how I can improve them. Now I am graduate engineer for RWE Generation SE (an electricity generation company with the same group owner as the electricity retail company npower), graduating from the School of Chemical Engineering in the summer of 2012 as a Master of Engineering.

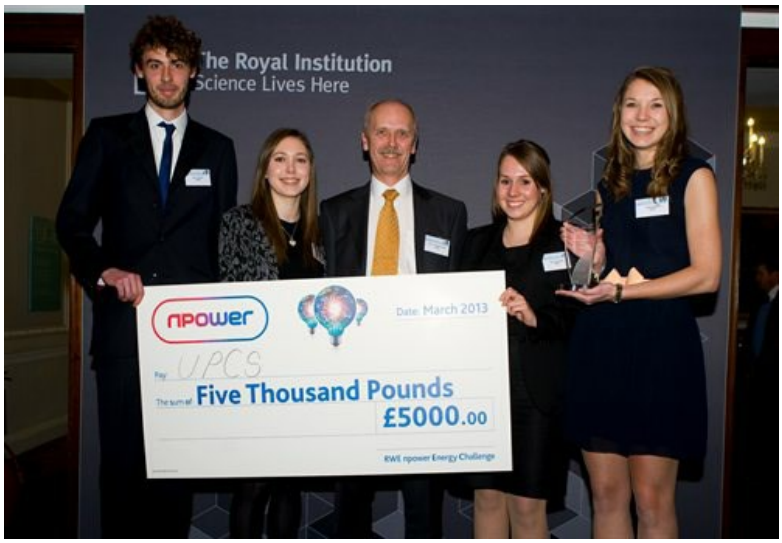
Throughout my time at University I became very interested in the energy industry; its challenges (technical, commercial, environmental and political), and the way it has become fundamental to the way we now live. We have built a society that relies on electricity to function. Could you do your job without electricity? Could supermarkets supply food (especially fresh food) without electricity? Could your house be supplied with water without electricity? Could you call 999 without electricity? Very few parts of the UK could answer "yes" to any of these. It is crucial, therefore, that the UK maintains a stable and reliable electricity supply. At the same time, the way we conventionally generate electricity has been found to impact very negatively on the world around us. The culmination of these two challenges leaves engineers in the power industry an enormous challenge. Can we change the entire structure and market of electricity generation in the UK without disruption? Yes, but the necessary cost to consumers is already being seen, and heavily debated.

Birmingham foundations

My time in Birmingham built excellent foundations for a job in engineering. For instance, I developed my organisation and people skills through being involved in organising events, from the Frank Morton (a UK Chemical Engineering sports day hosted in Birmingham in 2010), to being a committee member in the Chemical Engineering society, and finally to chairing the Student-Staff Liaison Committee during my final year. And that's not forgetting the quality of the staff in the School of Chemical Engineering and their genuine interest in student and course development, which meant I left competent and confident to enter a role in industry.

A highlight of my time at Birmingham was winning the RWE npower Energy Challenge. Each year the competition offers students a question, challenging them to prepare a solution to some of the major challenges faced by energy companies in the UK. Competing teams must submit a short summary and if successful will be invited to present at a round of heats to senior managers within npower. If selected to proceed to the final, the teams will be allocated an npower mentor who is able to steer the final preparation of their presentation to meet the expectations of the judges and provide supporting information from within npower. The final is held at the Royal Institution of Great Britain in London. Presenting in the Faraday Lecture Theatre (where the Christmas lectures are delivered) to members of the executive board of npower, the competitors must pitch their idea convincingly and cover all aspects of selling energy and energy services including the social, environmental, financial and technical attributes to their proposal.

More than a prize



The reward for winning is far greater than the £5,000 prize. By networking at the events I began to build my contacts and learn an enormous amount about the industry. It was through this that I was offered and completed an internship at the Energy Retail Association (now Energy UK), the association representing the views of UK energy companies to work collaboratively with Ofgem and the Department of Energy and Climate Change (DECC) which, as an engineer, was invaluable to gaining an appreciation of the commercial and political aspect of the energy industry and how policy and regulation is constructed. Also offered by RWE npower is a summer placement for the winning team.

Now working for RWE I enjoy my continued involvement in the competition, encouraging the competitors and this year comparing the final. As a performance engineer my time is spent optimising the power station – both commercially and technically – investigating where the biggest losses in the generation process are and improving them. From the properties of the coal being delivered to the efficiency of the turbine, to meeting emissions limits; my team covers the whole station meaning my work is unpredictable and exciting every day.

Get involved

I recommend to any student to get involved in the competitions and opportunities presented to them. The experience of delivering a real business presentation, meeting senior managers and executives, feeding off their enthusiasm to make a difference in the industry, and starting to build contacts within the job market is absolutely essential to maximising your opportunities post-university. RWE npower also offers the Future Leaders competition, now open for applications, which involves implementing a sustainable project on their university campus. Previous prizes have included trips to the Antarctic or Arctic to personally witness the effects of climate change there. Next year the prize will be a journey trekking in the Amazon rainforest. For more information and updates click **here (http://www.npowerjobs.com/graduates/future-leaders)**.

If, like Andrew, you would like to tell us your story then please fill in our online form (http://www.birmingham.ac.uk/university/colleges/eps/eps-community/Get-involved/Career-profiles.aspx) or email us (mailto:eps-community@contacts.bham.ac.uk).

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