

“Keeping the Lights On” - Case Study of an Industrial Trust Educational Experience at RWE npower Fawley

This case study describes an educational visit by a group of 40 gifted and talented young people and their parents to Fawley Power Station in Hampshire. The visit was designed to provide first hand experience of Electrical Engineering and the sorts of challenges that a career in the Electricity Industry can provide.



[The National Academy for Gifted and Talented Youth \(NAGTY\)](#) supports the education of gifted and talented young people to ensure that they reach their full potential. The Industrial Trust approached NAGTY to explore how its programmes and employer links could help with this aim.

[The Electricity Industry](#) is a very important sector in the UK economy, employing tens of thousands of people in a wide range of jobs. Although it offers well paid and interesting careers, the industry is not well understood by young people. A key issue is the supply of high quality electrical engineers.

[Fawley](#) oil fired power station is owned by RWE npower (one of the UK’s largest energy suppliers). It is on the shores of Southampton Water and has the capacity to meet the power needs of 1 million people.

Objectives

Good quality information, advice and guidance is critical to effective decision making by young people about careers. The Industrial Trust believes that young people are more likely to make the best choices if they have first hand experience on which to base their decisions. There is much independent evidence for this:

“...Young people need less didactic “information” approaches to post-school information, advice and guidance.They would prefer to have direct experience of their post-16 options, they need to get closer to what it means to work in an industry or study a given programme, specialist subject or attend a given institution. They need to meet people, visit the places and have the opportunity to share and reflect on these experiences in the company of others....”

Dyke, Foskett and Maringe, Southampton University 2005: The Impact of Information and Experience on the decision to participate in learning in post-compulsory education.

“Keeping the Lights On” was designed to provide:

- gifted and talented students with an opportunity to explore a sector offering excellent career prospects
- parents with a better understanding of the opportunities that the sector offers
- information on routes to careers in the sector including through Higher Education
- major employers an opportunity to showcase the sector to a group of potential recruits.

The Event

The opportunity for young people in Key Stage 4 (14-16) to visit Fawley Power Station was advertised on NAGTY’s website and marketed locally to schools. The programme was run during a half term holiday so that other studies were not disrupted. Parents were encouraged to attend.

The event started with presentations introducing the young people to the sector. Issues covered included:

- the processes of electricity generation, transmission, distribution and supply (from starting up the power station to the consumer switching the light on)
- the impact of privatisation and systems for the regulation of the sector
- future issues for the sector (including global warming and security of energy supply.)

The technical challenges facing the sector were illustrated with descriptions of the use of “moles” to lay cables underground, through to illustrations of different types of pylons. An example of a power failure emergency was given to show how team work and communications skills play an essential role in ensuring that the electricity supply to customers is sustained. There was a presentation on the power station which covered the history of the site and illustrated its development from conception through to the present day.



Afterwards the group was given an extended guided tour of the Station, the enormity of which amazed everyone. This included a visit to the control tower where the site is managed using advanced computer technologies.

After the tour visitors were given a chance to reflect on what they had seen as part of a session led by graduates recently recruited by RWE npower and Scottish and Southern Energy. They described the routes they had taken into the electrical engineering sector, how their careers were developing, and some of the exciting projects that they were involved in managing.

The visit closed with an opportunity to ask questions about the event and career opportunities within the sector.

Conclusion

Feedback provided by young people and their parents after the event demonstrated that the passion and enthusiasm for the industry of the presenters and the opportunity to see a Power Station first hand had had a big impact on those attending. Over 75% of the students present confirmed that they would like a career in design and/or manufacturing and every young person present asserted their intention to continue with their studies into higher education.

“I hadn’t really thought about electrical engineering until today. But having listened to the presentations and seen for myself what a fascinating and worthwhile career it is I am definitely going to consider it as way forward.” Year 10 student.

“There are many more careers involved in the electrical industry than I first thought, more opportunities to visit other countries and to be involved in bigger projects, especially with current worries over global warming. I have learnt that there are many more processes involved in generating electricity than I expected.” Year 11 student.

“My colleagues and I have really enjoyed today. But more importantly we can tell, from the responses of the young people and their parents and the high level of interest shown, that we have made an impact on them: that a group of potentially very valuable recruits is looking much more favourably on Engineering as a career.” Nick Stockdale, RWE npower.

The Industrial Trust is very grateful to everyone who helped to complete this event, in particular to RWE npower, Scottish and Southern Energy and the National Academy of Gifted and Talented Youth.