

ISEE2010 – Educating EirGrid’s Power
System Engineers to facilitate a
sustainable future – a partnership of
Academia and Industry

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Objectives

- To give an industry perspective on the emerging challenges facing engineers in EirGrid
- To open a dialogue with you on how best we can work together to educate engineers

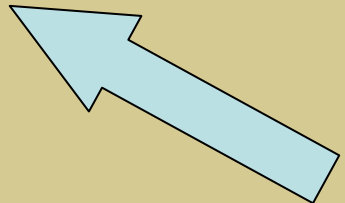
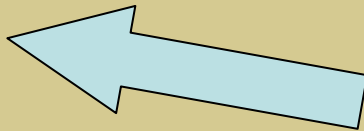
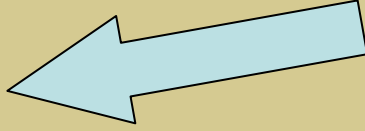
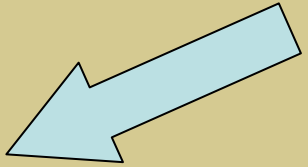
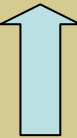
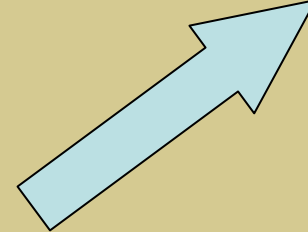
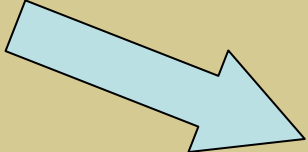
EirGrid plc

- Commercial state-owned company set up under Irish and EU law to carry out the role of TSO and MO
- EirGrid has a key role to play in ensuring competitiveness, sustainability and security of electricity supply across the island of Ireland

The Challenges for EirGrid going forward

- The Customer challenge
- The Infrastructure challenge
- The Renewables challenge
- The Assets challenge
- The Interconnection challenge
- The challenge of delivering shareholder and stakeholder benefits of operating on an all-island basis
- The challenge of influencing evolving European energy policy

External Customers



Roles of Engineers

System and Market Operation

- Maintaining security and reliability of supply
- Providing transparent non-discriminatory transmission access
- Operating the energy market
- Delivering high quality customer service

Roles of Engineers

Delivering on Infrastructure

- Planning and designing technical solutions
- Evaluating impacts
 - societal
 - environmental
 - economic
 - commercial
- Consulting with, communicating with and influencing stakeholders
- Establishing credibility and understanding concerns of all stakeholders
- Handling highly charged, stressful situations

Roles of Engineers

Authoritative voice in the Industry

- Integration of wind energy onto our island system
- Mix of generation
- Smart Grids
- Offshore Grids
- European Interconnection

EirGrid's staff competency framework

- Core competencies
 - Professional Expertise
 - Working with People
 - Customer, Company and Commercial Awareness
- Level specific competencies
 - Written and Verbal Communications
 - Analysing & Problem Solving
 - Organising work and achieving objectives

EirGrid's interactions with Universities

- Employing graduates
- Providing placements for undergraduates of 3 – 6 months
- Sponsoring post-graduate research in areas such as
 - Grid integration of renewables
 - Improving Power System modelling
- Sponsoring prizes in particular programmes e.g U.C.C.'s Masters programme in Sustainable Energy

What we look for in engineering graduates

- High level technical skills
- Strong performer potential
 - Teamwork / self-motivation
 - Communications / interpersonal skills
 - Flexibility of thought
 - Professional and ethical responsibility
 - Appreciation of societal, environmental, economic and global context
- Long term potential
 - Leadership

Feedback

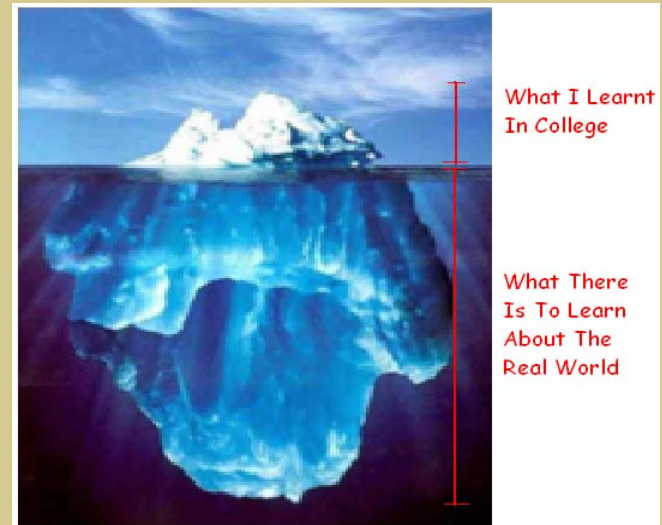
A Graduate of 1 year

- In terms of my academic programme the 1 year placement was a huge advantage.
- It allowed me to leave university with a minimum of 1 years experience already under my belt.
- In terms of the modules available to me, I found Professional Studies (project management, economics, corporate law, accountancy, health & safety) to be a very useful subject in **my current role**. It was compulsory in each year and covered the topics mentioned over the course of the degree.
- Obviously the technical modules and the technical thesis were very beneficial in building up a technical knowledge to enable me to carry out my work.

Feedback

One placement student's words

- Before starting in EirGrid, I prepared myself to dive right into a complex analysis of circuits, transformers and the transmission system, using all the maths and physics I've learned to date. **The reality is completely different.**
- During my short time with EirGrid, I've experienced how much time and effort is devoted to costs, economics, consultation with the public, politics etc. Finding technical solutions is only the tip of the iceberg.
- Arriving in EirGrid and discovering that engineers need to chair meetings, determine construction costs of lines, and take into account the economics and impact of their calculations, on such a constant basis, really did surprise me. *Nowhere in my syllabus is there a whisper about anything like this!*



Any Questions?