



ES Cornwall Memorial Scholarship – Summary of Experience Abroad

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Program Overview

- **Main Objective:**
 - To gain insight on operational and planning approaches used in international jurisdictions on the integration of renewable energy
- **Scholarship placements:**
 - National Grid, Warwick, UK; 12 months
 - Ontario Power Authority, Toronto, Canada; 12 months



Placement at National Grid

- Power System Analyst; Strategy Development, Electricity Network Investment department
- Strategy Review Team established
 - Developed different generation and demand scenarios consistent to achieving green energy target
- Studying various methods of increasing capability within the network through additional transmission reinforcements to



Placement at the OPA

- Transmission Planner; Transmission Integration department
- Ontario Electricity Structure
 - pre-2002; informal pricing system
 - 2002-2004; dispatching lowest cost generator with side payments - cost of new investments compensated for through their revenue return -> unstructured
 - end 2004-2009; the OPA co-ordinated investment with electricity requirements via competition-on-entry pricing system
 - May 2009; the GEGEA/FIT program; separate investment decisions from electricity requirements



Highlights of Learnings

- Need to investigate all possible avenues of to maintain security of the system in a cost-effective manner while still meeting industry obligations (e.g. green energy targets)
- Greater awareness of changes required for integrating renewable energy – many similarities around the world
- Planning rule of thumb: need -> options -> alternatives -> *recommended* plan
- Some outcomes of the FIT Program



Highlights of Personal Development

- Mentoring basic power system fundamentals to non-engineers and team-lead of a working group (OPA)
- From medium-term operational role at NEMMCO to longer-term planning roles overseas – different thought process
- Awareness and interest in other areas of the energy sector
- International networking



My Scholarship Experience Overall

- Extremely worthwhile experience
- Beneficial to gain placements at companies with different roles in the Electricity industry and in different jurisdictions
- Length of placements