All-Energy: Developing Skills Opportunities in UK Renewables

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What can the Universities offer?

- Undergraduate education
  - BEng and MEng programmes including renewable energy
- Taught postgraduate education
  - MSc programmes
- Research
  - PhD and postdoctoral specialist research

Review of Existing Literature on Job Creation and Skill Needs

- DTI: *Renewable Supply Chain Gap Analysis, Summary Report DTI, January 2004*
  - Present 5,500 jobs in the UK (1300 in Scotland and 4,200 rest of the UK), this includes employment in manufacturing, development, construction, and operations
  - Methodology: listing current project activity, deriving value added per megawatt and jobs/megawatt for each technology
  - Assuming a flat rate of capacity addition per year, the UK renewable Energy could sustain 17,000 to 35,000 jobs per year to 2020 (including manufacturing jobs abroad)
- EA: *Electricity Training Association: Employment and Skills Survey 2003, EA, 2003*

Numbers Employed in the Renewable Energy Industry today and projections

2003 Composition:

Professional: 31%
Technicians: 20%
Managers: 15%
Craftsmen: 14%
Semi-skilled: 10%
Commercial/admin.: 9%
Trainees: 1%

Electricity Training Association: Employment and Skills Survey 2003, EA, 2003

	2003/2004	2010	2020	Source
Total Numbers employed In the UK	5500	12,000	17,000 to 35,000 (incl. manufacturing jobs abroad)	Renewable Supply Chain Gap Analysis, Summary Report DTI, January 2004
Electrical scope Numbers employed in the UK	3800	9700		Electricity Training Association: Employment and Skills Survey 2003, EA, 2003
Operators:	800	2700		Electricity Training Association: Employment and Skills Survey 2003, EA, 2003
Eng. Services Ops & Maint:	200	500		
Eng services construction:	500	1000		
Consultancy R&D:	200	800		
Manufacturing:	1200	3300		
Other:	300	800		

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Conclusions period 2003/2004 to 2010:

- Main job creation in manufacturing (does the UK have the manufacturing base to benefit ?)
- Engineering Services (Ops and Construction) growth from 700 to 1500 FTEs – are these new positions or what % transfer from other industries?
- Main Engineering disciplines required are Electrical (70%) and Mechanical (30%)

Universities role:

- Urgent need for degree courses in Renewable Energy not obvious
- What is needed are Electrical and Mechanical degree courses with elective modules on: Project Management, HSE and Community Management
- UK-wide problem of attracting young people into the Engineering profession will remain
- Substantial R&D effort still needed outside wind application