TUC: Skills for a low carbon future

Andrew Raingold, Executive Director
Aldersgate Group members

Other members include peers and MPs from all major parties.
Big Green Targets

- 80% CO2 reductions by 2050
- 50% CO2 reductions by 2025
- 15% energy from renewables by 2020
- Smart meters in every home by 2020
- Zero carbon homes by 2016
- A zero-waste economy
CBI: Green a vital driver for growth

UK £122 billion share £3.3 trillion global market.

Employs almost 1 million people.

In 2014/15:
- Expected to roughly halve the UK’s trade deficit.
- A coherent strategy would improve trade balance by £800 million.
- Uncertainty puts at risk £400 million exports in 2014/15.
Export Growth

Source: Green Alliance
Jobs in the green economy

- Low carbon and environmental: 939,600
- Financial services: 1,061,900
- Motor trade manufacture and retail: 518,400
- Telecoms: 212,900
Mind the gap

- One in three firms in environmental sector hampered by a shortage of skilled staff
- Latent demand for green skills – needs are not being clearly articulated by employers
- High proportion of workforce in 2020 already in work & ageing workforce (retire 10 – 15 years)
- Staff recruitment and retention: e.g. Philips, Interface and National Grid
Major challenges

- **Core skills** – green sectors
  
  (70,000 engineers in offshore wind by 2020? 9,000 graduates + 4,500 skilled trades in nuclear?)

- **Enhanced skills** – majority of jobs not entirely new in content (e.g. electricians fitting solar panels)

- **Generic skills** - communication, leadership and management skills to drive culture change

- EU systemic weaknesses in its skills base (management and technology) greater concern than ‘new’ skills
### Building new skills

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Upskilling</th>
<th>New occupation</th>
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</thead>
<tbody>
<tr>
<td>Construction worker</td>
<td>Knowledge of energy systems and data analysis</td>
<td>Energy auditor</td>
</tr>
<tr>
<td>Product design and services</td>
<td>Integrating environmental criteria and lifecycle analysis</td>
<td>Ecodesigner</td>
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<tr>
<td>Engineer in energy sector</td>
<td>Installation and maintenance of low-carbon technologies</td>
<td>Smart-energy expert</td>
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<tr>
<td>Commodity trader/Broker</td>
<td>Practical skills on functioning of carbon market</td>
<td>Carbon trader/Broker</td>
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In most sectors, businesses are not certain about their future skill needs. This is being addressed by:

- “Skills for a green economy” initiative
- Guidance for National Careers Service
- Improving skills provision in the FE sector
- Raising awareness through Unionlearn
- Make STEM a priority
- 1000 apprenticeships for Green Deal
Compliment the demand-led skills framework

Strategic intervention – Government support for skills and training matches the focus and ambition of its strategies for promoting investment in green innovation and infrastructure.

Investment – apprenticeships, training centres, STEM skills.

Cross sector approach (e.g. Green Economy Council).

Drive demand – policy certainty and coherence.
Skills for a New Economy

- The education system must evolve to enable learners to grasp ‘whole systems’ design.
- Ability to think in a more connective and integrated way.
- Skills should not be addressed separately in different subjects but should seek to link disciplines together.
- Leadership skills - pro-active, independent enquirers and highly adaptive.
- Learning in real contexts that is problem-based, project-centred, peer-to-peer and trans-disciplinary.
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