

The Energy Sector

Contribution to the UK economy:

£25 billion Direct

£71 billion Indirect

The energy sector **employs 169,000 people** (2013)

Productivity is high

The number of people working in the sector is increasing

Energy Sector

- Oil & Gas**
 - Exploration, extraction, refinement, transportation and sale of petroleum
 - Natural gas extraction and coal gas manufacture, distribution and sale
- Electricity**
 - Generation, distribution and sale
- Coal**
 - Underground and ground level mining, combustion and sale
- Nuclear**
 - Generation, building, decommissioning and restoring power plants, distribution and sale
- Renewables**
 - Generation, distribution and sale of sustainable sources of energy such as hydro, wind and solar

The report focuses on five key occupations:

- Engineer
- Technician
- Project/change manager
- Sales and marketing manager
- Overhead lines worker

Current Challenges

- **Skills shortages:** Demand for skilled engineers and technicians outweighs supply
- **Ageing workforce:** New recruits needed every year to meet projected demand
- **New entrants:** Limited numbers of young people entering the sector
- Employers need to **collaborate** to plan for the future

Future Skills Issues

Energy Sector

- New technologies
- Government investment
- Sophisticated energy storage and management solutions
- Energy efficiency targets

Technical skills such as data analytics

Knowledge of the latest technologies

Practical skills

People management skills

Key Occupations

Engineer:

- Design, develop and maintain power grids
- Analyse complex problems
- Use technical expertise
- Explain design ideas and work in a team
- Prioritise, plan and make decisions

Technician:

- Plan, install, test and maintain equipment
- Use design tools and techniques
- Understand detailed information and visualise changes
- Convey complex concepts to non-technical staff
- Understand latest technological developments
- Problem solve

Overhead lines worker:

- Install, maintain and repair overhead electricity lines network
- Competent working at height
- Physically fit
- Good practical skills
- Safety-conscious
- Problem-solving ability

Project/change manager:

- Establish relationships with and motivate teams
- Excellent facilitation and negotiation skills
- Exceptional communication
- Critical thinking and problem solving
- Technical background and industry knowledge

Sales and marketing manager:

- Research and develop marketing / sales plans
- Communication skills
- Excellent organisational and planning skills
- Strong sales and negotiation skills
- Detailed knowledge of the energy market

Conclusions

The sector offers good opportunities, pay and progression.

Employers can collaborate with schools and colleges to promote the sector to young people.

Skills

Up-skill current work-force

Retiring staff: Need to capture skills and knowledge

Develop training

New staff: Bring new knowledge

Up-skill current workforce and develop new staff

The sub-sectors have different drivers of change. There can be peaks and troughs in demand for workers across energy sub-sectors.

Training and collaboration could facilitate working across sub-sectors.

Collaboration:

- Within companies
- Between companies
- Between energy subsectors