

SW REGION SECTOR SUMMARY

ENERGY & UTILITY SKILLS

SECTOR FOOTPRINT

Energy and Utility Skills is the Sector Skills Council for the creation and delivery of electricity; fuel for heat; water; the removal of waste water and the waste management sector (www.euskills.co.uk).

- The sector footprint is close to those of Asset Skills (recycling/waste), Summit skills (plumbing/electrical), Cogent (power generation) and Construction Skills (contractors).
- Sector Skills Agreement (Stage 5) was officially launched in March 2008.
- Skills Qualification Strategy was published in October 2007 with resultant action plans submitted to SSDA in 2008. Action plans will be reviewed annually.

ENERGY & UTILITY SKILLS LABOUR MARKET

Source: South West England SSA Stage 5 Report, Appendix A Regional Stage 1-3 Summary, SW Sector Key Facts; October 06 LMI of UK Waste Management Sector; SSDA skills matrix 2006, NESS 2007 data derived from LSC SW research team.

Sector size & business unit size

- Approximately 50,700 people employed in this footprint in the SW, making the region the fourth largest in terms of EU Skills footprint employment levels
- There are 8680 business units in the SW
- 94% of firms in the sector in the SW employ less than 50 employees (79% employ 1-10)
- Sector output (GVA) per employed job is high (nationally for sector: 109% compared to that of whole economy at 30.2%)
- Forecasts of employment growth suggest that from 2004 – 2014, there will be an additional 2,000 jobs. In addition, 9,000 jobs will need to be filled due to replacement demand (created by people leaving the sector or retiring).

Profile of Workforce

- Workforce is predominantly white (97%) and male (76%)
- 49% are aged 25-44yrs and a further 46% are aged 45+, with only small numbers by comparison in the 16-24 range. This is an older profile than that of the sector in the UK as a whole. (UK sector figures by comparison 47% and 40% respectively for 22-44 and 45+).

Vacancies & recruitment

- Employing establishments within Energy and Utility Skills in the SW reported 350 vacancies in 2007, accounting for 1% of the total number of vacancies in the region (based on small sample sizes – treat with caution).
- Of those vacancies 34% were hard-to-fill, in line with overall average for the SW (based on small sample sizes – treat with caution).

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- In 2007 there were 75 vacancies that were as a result of skills shortage accounting for 20% of all vacancies. Skills shortage vacancies also account for 60% of all hard-to-fill vacancies in line with the SW average of 62% (based on small sample sizes – treat with caution).
- Skills shortages are likely to occur in the workforce, especially for experienced Waste Managers, Logistics Managers/ Traffic Controllers, Sales Staff, Fitters (both vehicle and plant), Drivers (collection and specialist vehicles), Pickers (recycling), Scientists and Engineers and Craft Level Occupations (Levels 2 and 3).

Qualifications in the Workforce

- Similar to national pattern, with 52% workforce qualified to S/NVQ3 and above. (UK sector figures for NVQ3 and above: 50%, NVQ2: 26% and NVQ1 and below: 24%).
- 75% of establishments in the SW funded or arranged training for employees in preceding 12 months, which is slightly higher than the national average of 71%.
- Just under three quarters (74%) of Energy and Utility Skills establishments in the SW provided on or off the job training in the 12 months prior to the NESS07 survey, higher than the average for all industries as a whole in the SW (68%). Based on small sample sizes – treat with caution.

KEY DRIVERS AND ISSUES

Source: SSA Stage 3 Report England, 2007

The government's Energy Review along with targets for efficiency, capacity and environmental impact is the most significant driver of change for this sector.

Currently most energy needs are met via a centralised system, which is safe and reliable. Innovation and technology to offer generation of energy near to the 'need' is, and will be, increasingly important for the SW due to its geography.

Water sub-sector

SSC has identified this industry as a priority in the SW. Pressure to recruit & retain highly skilled people to satisfy needs due to an ageing workforce; establishment of the regulatory system; transfer of duties and activities from the water companies, particularly to consultants and contractors; movement of labour across different supply chain sub sectors as companies diversify. Nationally 15,000 recruits are required between 2006 and 2014

Electricity sub-sector

Fewer staff expected to take on wide range of duties with greater responsibility, and also need to focus on commercial environment related skills, due to privatisation related changes; increasing competition in generation and supply markets; strong regulatory framework with tough pricing regime

Upstream Gas sub-sector (from beach to main control valve, usually adjacent to meter)

Large numbers of older workers leaving and the demands of new programmes of capital investment required to meet regulator targets

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Downstream Gas sub-sector (activities on customer side of main control valve, including the meter)

SSC has identified this industry as a priority in the SW due to its ageing workforce, the industry being fragmented due to privatisation and a dominance of small to medium sized employers

Waste sub-sector

SSC has identified this industry as a priority in the SW. Growth in legislation will provide basis for new and commercial technology opportunities. Estimated that total employment in the sector will need to increase by between 10% and 30% over the next 10 years. Of paramount importance is the need to address Health & Safety issues for its existing and increasing migrant workforce and the general public.

The SSC has identified 5 Major Skills Priorities, which expand into 16 Sector Programmes:

- Government Policy – influencing government policy
- Economic Regulation
- Competence – Certificate of Technical Competence, Health & Safety, Gas(upstream), Gas(downstream), Water, Electricity sector skill sets; realignment against national qualifications, Management & Leadership, Network construction(multi-utility)
- Skills Provision – Review adequacy of capacity, Awarding Bodies, Basic/Essential Skills, Higher Education
- Sector Recruitment & Attractiveness – Diversity, Sustainable schools strategy.

NSAS/COVES /14-19 DIPLOMA/HE (NATIONAL SKILLS ACADEMIES AND CENTRES OF VOCATIONAL EXCELLENCE)

- Full status CoVE 2004: British Gas Academy, Leeds
- The Power Academy established in June 2004 exists to provide scholarships to students studying Electrical Engineering (BEng or MSc) at the Universities of Manchester, Southampton, Strathclyde and Queens University, Belfast.
- Consideration to expand this facility to form an NSA for the sector noted in the SSA Stage 3 report
- Energy & Utility Skills is part of the cluster of sectors working on the Engineering Diploma led by SEMTA, the Construction & Built Environment Diploma led by Summit Skills and the Land based & Environment Diploma led by Lantra. Engineering and Construction & Built Environment to be available from 2008 and Land based & Environment from 2009
- Higher Education and vocational routes into Higher Education are important to the Energy & Utilities industries, which are all technology and science based. Projects currently underway with Exeter University and the Water sub sector.

KEY EMPLOYERS

Source: SSSA skills matrix2006/South West England SSA Stage 5 Report

Bournemouth & Hampshire Water

All information and data contained in this sector summary is accurate up to 31May 2008

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Wessex Water
South West Water
Western Power Distribution (SW) plc
RWE nPower
EDF
E.ON
Viridor Waste Management Ltd
Veolia Group
Corey Environmental
May Guerney
Siemens
Wales & the West Utilities
Morrisons
Avent Engineering

LOCAL & REGIONAL PROJECTS/NETWORKS

South West employers e.g. South West Water, Viridor, Western Power Distribution, are represented on various national Energy & Utility Skills employer forums. There are no known regional based employer networks for this sector at this time.

SUMMARY OF SUPPLY

Source: LSC IPOL data (ILR extract)

Analysis of further education and work based data by Sector Skills Council footprint is not yet available for 2006/07. The data presented below relates to Train to Gain activity which can, in most cases, be attributed to a specific sector.

EU Skills Starts 06/07		
Starts	NVQ in Waste Management Operations	141
Total Starts		141

SUMMARY OF DEMAND

Source: E&U Skills SQS V11, 25.09.07 and SSA Action Plan South West v14.11.07

The following key messages from the Stage 2 SSA research were derived from employers:

- Flexible, unitised, credit rated qualifications with embedded functional skills would better suit both employers and employees alike, enabling the apprentice/modern apprentice to tailor the qualifications to their job roles
- Employers regard private training providers as more flexible and responsive to their needs than FE institutions
- More vocational content within FE programmes is required, aligned to National Occupational Standards
- Need for management and leadership training and in particular, at first line management and supervisory levels.

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- National Occupational Standards and Qualifications should reflect the skill sets required
- Regulatory qualifications in some sectors need to be more flexible and responsive with opportunities for demonstrating CPD.

Priority needs summarised as:

- Skills for Life for the Waste Management industries
- Adult Apprenticeships for the Electric, Gas and Water industries
- Improve provision for Downstream Gas and Utility Contractors
- New Technical Qualifications
- New Apprenticeship for Waste Management industry.

Current Qualifications available to Energy & Utility employers - to be reviewed

This list will be regularly updated as new qualifications are developed and old ones reviewed/removed. *Source: E&U Skills Draft SQS, Version11, dated 25.09.07.*

Electricity

Title	Level
Engineering Technology Operations Foundation	1
Engineering Technology Operations Support	2
Engineering Technology Operations	3
Engineering Technology Maintenance Support	2
Engineering Technology Maintenance	3
Engineering Technology Management	4
Electricity System Technology Engineering Support	2
Electricity System Technology Engineering	3
Revenue Protection	3

Utilities

Title	Level
Utilities Metering Operations (NVQ only)	2
Utilities Control Centre Operations (NVQ only)	2
Public Utilities Distribution	2
Utilities Network Planning and Management (NVQ only)	4

Gas

Title	Level
Domestic Natural Gas Maintenance	2
Domestic Natural Gas Maintenance	3
Domestic Natural Gas Installation	2
Domestic Natural Gas Installation	3
Domestic Natural Gas Installation & Maintenance (ACS)	2
Domestic Natural Gas Installation & Maintenance (ACS)	3
Industrial and Commercial Gas Installation and Maintenance	2
Domestic Natural Gas Emergency Service Operations (ACS) (SVQ only)	2
Emergency Service Operation (SVQ only)	2
Gas Network Operations (NVQ only)	1
Gas Network Operations (service laying) (NVQ only)	2
Gas Network Operations (main laying) (NVQ only)	2
Gas Network Operations (craft) (NVQ only)	3
Gas Network Engineering Management (Design) (NVQ only)	4

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Gas Network Engineering Management (Installation & Construction) (NVQ only)	4
Gas Network Engineering Management (Project Management) (NVQ only)	4
Gas Network Engineering Management (Maintenance) (NVQ only)	4
Engineering Surveying, systems or services (NVQ only)	4
Pipelines (Oil & Gas) Engineering Management - installation & construction (NVQ only)	4
Pipelines (Oil & Gas) Engineering Management - maintenance (NVQ only)	4
Pipelines (Oil & Gas) Engineering Management – design (NVQ only)	4
Pipelines (Oil & Gas) Engineering Management - project management (NVQ only)	4
Pipelines (Oil & Gas) Engineering Management - gas transmission & distribution network control (NVQ only)	4
Gas Services Management (emergency services) Not accredited	4
Gas Services Management (Design) Not accredited	4
Gas Services Management (Project Management) Not accredited	4
Gas Services Management (SME) Not accredited	4
Gas Services Management (Installation, commissioning, de-commissioning & maintenance) Not accredited	4

Waste and Recycling

Title	Level
Cleaning and support services	1
Cleaning and support services (highways and land)	2
Waste management operations	1
Waste management operations	2
Waste management supervision	3
Waste management operations: closed landfill	3
Waste management operations: inert waste	3
Waste management operations: civic amenity site	3
Waste management operations: managing landfill hazardous waste	4
Waste management operations: managing incineration	4
Waste management operations: managing landfill non-hazardous waste	4
Waste management operations: managing transfer hazardous waste	4
Waste management operations: managing transfer non-hazardous waste	4
Waste management operations: managing treatment hazardous waste	4
Waste management operations: managing treatment non-hazardous waste	4
Managing waste collections operations	4
Recycling operations	1
Recycling operations	2
Management of Recycling Operations	3
Management of Recycling Operations	4
Management of Recycling Operations: Small Scale Operations	4

Water

Title	Level
Network Construction Operations	1
Distribution Control	2
Leakage Control	2
Leakage Control	3
Maintain Water Supply (Network)	3
Operating Process Plant (Water)	2
Operating Process Plant (Waste Water)	2
Operating Process Plant (Sludge)	2
Monitoring the water environment	2
Controlling water operations (process)	3
Water industry operations (sewerage maintenance)	2
Water fittings regulations enforcement (NVQ) (old) No SVQ	3

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Water Byelaws enforcement (SVQ) (old) No NVQ	3
Water Industry Operations (SVQ) No NVQ	3
Leakage Detection (new) Not yet accredited	2
Leakage Control (new) Not yet accredited	3
Network Construction Operations NVQ only – SVQ not yet accredited	1
Network Construction Operations: servicelaying (water) NVQ only – SVQ not yet accredited	2
Network Construction Operations: mainlaying (water) NVQ only – SVQ not yet accredited	2
Network Construction Operations NVQ only – SVQ not yet accredited	3
Operating Process Plant (water) NVQ only – SVQ not yet accredited	2
Operating Process Plant (waste water) NVQ only – SVQ not yet accredited	2
Operating Process Plant (sludge) NVQ only – SVQ not yet accredited	2
Monitoring the Water Environment Not yet accredited	2
Controlling Process Operations Not yet accredited	3
Managing and Controlling Process Operations Not yet accredited	3
Sewerage maintenance Not yet accredited	1
Sewerage maintenance Not yet accredited	2
Underground pipeline operations: trenchless technology Not yet accredited	2
Water fittings regulations/byelaws enforcement Not yet accredited	3

EU Skills Other Qualifications relating to the sector

Electricity

Title	Level
BTEC Nat Cert/Dip. Eng tech Ops/Maint	3 VRQ
BTEC Nat Cert/Dip. Elec & Electronic Eng.	3 VRQ
Certificate in Engineering (Entry level)	Entry
Certificate in Engineering	5 HL
Graduate Diploma in Engineering	6 HL
Post-Graduate Diploma in Engineering	7 HL
Higher Professional Diploma in Engineering	4 HL
Advanced GCE in Engineering	3 GCE
Advanced Subsidiary GCE in Engineering	3 GCE AS
Certificate in Electrical Technology Engineering	3 VRQ
Level 1/Level 2 GCSE in Engineering (Double Award)	1, 2 GCSE

Gas

Title	Level
Domestic Nat. Gas Inst & Maint. (C & G 6132-22 100/4785/2)	2 VRQ
Domestic Nat. Gas Inst & Maint. (C & G 6132-22 100/4785/2)	3 VRQ
Complex Domestic Nat. Gas Inst & Maint. (C & G 6132-33 100/4786/4)	3 VRQ
Gas Emergency Services Operations	3 VRQ
Certificate in Energy Efficiency for Domestic Heating	3 VRQ
Diploma in Domestic Energy Assessment	3 VRQ

Waste Management and Recycling

Title	Level
Principles and Practices of Sustainable Waste Management Award	3 VRQ
Award in Waste Treatment Technologies	4 (original NQF) HL
BTEC National Diploma in Applied Science	3 VRQ
Higher Professional Diploma in Land based Management	4 (original NQF) HL
HNC Waste Management – University College, Northampton.	

Water

Title	Level
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Certificate in Water Engineering	2 VRQ
Diploma in Water Engineering	3 VRQ
BTEC National Diploma in Applied Science	3 VRQ
Certificate in the Protection of Water, Environment and Recommendations	3 VRQ
HNC Water Operations with Management	HNC

Foundation Degrees

Title	University
Utilities Management	University of Central Lancashire and Bolton Community College
Electrical Power Engineering	Aston University and Walsall College
Waste Management	University of Salford
Waste Management	University of Northampton
Sustainable Waste & Environmental Management	University of Northumbria
Water and Utilities Management	University of Leicester & Brooksby College

EU Skills Related Qualifications

Degrees

Biology, Micro Biology, Chemistry, Materials, Physics, Chemical Processing and Energy, Undergraduate diploma in pollution control, Water/Environmental Management, MSc Environmental Management.

BTEC Qualifications in Engineering sector:

<p>BTEC Nationals in:</p> <p>BTEC National Certificate in Mechanical Engineering BTEC National Diploma in Mechanical Engineering BTEC National Certificate in Manufacturing Engineering BTEC National Diploma in Manufacturing Engineering BTEC National Certificate in Operations and Maintenance Engineering BTEC National Diploma in Operations and Maintenance Engineering BTEC Nationals Certificate in Electrical/Electronic Engineering BTEC Nationals Diploma in Electrical/Electronic Engineering BTEC National Award in Engineering BTEC National Certificate in Engineering BTEC National Diploma in Engineering</p>	<p>BTEC First in :</p> <p>BTEC First Certificate in Engineering BTEC First Diploma in Engineering BTEC First Diploma in Engineering (Maintenance) BTEC First Diploma in Engineering (Manufacturing) BTEC First Diploma in Engineering (Electronics)</p>
<p>BTEC Introductory Certificate & Diploma in Engineering</p> <p>BTEC Introductory Certificate in Engineering BTEC Introductory Diploma in Engineering Edexcel GCSE in Engineering</p> <p>Edexcel GCSE in Manufacturing Technologies</p> <p>Edexcel GCE AS in Engineering (180 GLH)</p> <p>Edexcel GCE AS in Manufacturing Technologies</p>	<p>Engineering Diploma Development</p> <p>Level 1 Principal Learning in Engineering</p> <p>Level 2 Principal Learning in Engineering</p> <p>Level 3 Principal Learning in Engineering</p>

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Edexcel GCE in Engineering (360 GLH)	
Edexcel GCE in Manufacturing Technologies	
BTEC Higher Nationals NQF Level 5	NVC approved BTEC Foundation Degrees
<p>BTEC HNC in Manufacturing Engineering BTEC HND in Manufacturing Engineering BTEC HNC in Mechanical Engineering BTEC HND in Mechanical Engineering</p> <p>BTEC HNC in Operations Engineering BTEC HNC in Operations Engineering (Instrumentation and Control) BTEC HND in Operations Engineering BTEC HNH in Operations Engineering (Instrumentation and Control)</p> <p>BTEC HNC in Electrical/Electronic Engineering BTEC HNC in Electrical/Electronic Engineering (Electrical) BTEC HNC in Electrical/Electronic Engineering (Electronic)</p> <p>BTEC HND in Electrical/Electronic Engineering BTEC HND in Electrical/Electronic Engineering (Electrical) BTEC HND in Electrical/Electronic Engineering (Electronic)</p>	<p>BTEC Fd in Electrical Engineering BTEC Fd in Electronic Engineering BTEC Fd in Electrical and Electronic Engineering BTEC Fd in Mechanical Engineering BTEC Fd in General Engineering BTEC Fd in Manufacturing Engineering BTEC Fd in Operations Engineering</p>

SQS

The implementation of the Energy & Utilities SQS Action Plan will result in changes/removal or additions to the qualifications listed above.