

Water Industry: workforce and skills profile

Purpose – Collate the power sector intelligence on workforce and skills issues (sources include primary and secondary data and/ qualitative evidence).

Characteristics of the industry

- The coming decade will see huge investment in water and waste as well as enormous change, with approximately £20bn to be invested in infrastructure programmes.ⁱ
- The water industry employs approx. 58,500 people in 1,090 businessesⁱⁱ
- The industry is adapting for a new future where new technologies and the impact of climate change and consumer demand will influence the water industries' workforce renewal requirements, in the short and longer-term.ⁱⁱⁱ
- Workforce resilience is now a requirement for PR19 business plan submissions under Ofwat's Final Methodology.

Industry demographics

- The water industry workforce lacks diversity: 81% of the workforce is male and only 4% are from BAME backgrounds. Across the UK, 53% of the workforce is male and 12% of the workforce are from BAME backgrounds.^{iv}
- In the water industry, only 3% of the total workforce is made up of non-UK nationals and, overall, the industry has a comparatively low proportion of workers from outside the UK.^v
- In the wider utilities supply chain, the construction of water projects has a high proportion (16.6%) of the workforce from the EU and this is greater than the UK all-sector average, reflecting a much greater reliance on this source of talent.^{vi}
- The industry is a high performing and well-paying sector, with average salaries above the UK average of £29,010. In the water industry, the average annual salary is £32,754.^{vii}
- Workers are often more highly qualified than in other parts of the energy and utilities sector. This is reflective of the high level engineering skills required.^{viii}
- The industry employs over half of its workforce in professional (24%), associate professional (20%) and skilled trade (17%) occupations.^{ix}

Skills challenges

- The blend of the work in the pipeline is changing and new, more innovative and productive techniques will require a different mix of skills in the future.^x
- The analysis indicates skills shortages at two levels:
 - Professional skills: These include commercial strategy and negotiation specialists, regulatory analysts, legal experts and stakeholder management.
 - Technical skills: These include R&D in chemical and biological engineering, meter installation, water efficiency and leakage prevention.^{xi}

Employment and workforce renewal

- The water industry predicts that 63,000 vacancies will need to be filled during the next decade. This is due to 61,000 existing employees either approaching retirement or leaving through normal staff turnover to find new roles and an estimated 2,000 new jobs will be created.^{xii}
- These issues are compounded by an ongoing ageing workforce, regulatory cycle requirements, the tightening of the labour market and competition for technical skills from other critically important infrastructure sectors.
- Research indicates that the loss of up to 40,000 jobs during the ‘trough’ years in the regulatory cycles will negatively affect National Infrastructure programmes.^{xiii}
- The industry has an ageing workforce: almost a quarter (22%) of the total workforce are over 55 years old and employs proportionately fewer 16-24 year olds (7%) than the UK average (12%).^{xiv}
- Only 1% of university leavers (2,005) joined the energy and utilities sector in 2015/16. 23% of these university leavers joined the water industry.^{xv}

Apprenticeships expenditure and starts

- In the ‘water supply, sewerage and waste management & remediation activities’ industry, the highest level of apprenticeship expenditure is amongst the larger businesses, equating to approximately 67%.^{xvi}
- In 2014/15, of all the apprenticeships started in the sector, 50% (2020) were in ‘water supply, sewerage and waste management & remediation activities’.^{xvii}

ⁱ HM Treasury, (2015) *National Infrastructure Plan for Skills*, HMT

ⁱⁱ ONS (2017) *Business Register and Employment Survey*

ⁱⁱⁱ EUSG (2013) *Foresight: Overview of key findings*

^{iv} ONS (2017) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^v ONS (2016) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^{vi} ONS (2016) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^{vii} ONS (2017) *ASHE*

^{viii} ONS (2017) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^{ix} ONS (2016) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^x HM Treasury, (2015) *National Infrastructure Plan for Skills*, HMT

^{xi} EUSG (2013) *Foresight: Overview of key findings*

^{xii} NSAP (2016) *Workforce Planning Research Results*

^{xiii} HMT (2012) *July 2012 Smoothing investment cycles in the water sector*

^{xiv} BIS (2017) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^{xv} EUSG (2017) *HESA Data Analysis – Higher Education Statistical Summary 2015/2016*

^{xvi} DfE (2016), *Information on apprenticeship levy: data drawn down by size and sector and the total apprenticeship budget*

^{xvii} London Economics (2017) *The incidence of apprenticeships in England*