

Nuclear

The Nuclear industry provides employment for approximately 58,000 people. Of these 14,000 are in Defence and 44,000 are in the civil sector.

The civil nuclear operators employ 24,000 people directly in the areas of Electricity Generation, Decommissioning, and Fuel Processing. The remainder is employed in the direct supply chain to the industry. Regions of concentrated operational employment include the North West (53%), the South West (15%), Scotland (12%) and the South East (9%).

New build Nuclear offers significant potential for workforce renewal. It will also induce job creation in the supply chain for construction and manufacturing. Without new build, the workforce is set to decline by 58% by 2025.

Peer reviewed scenarios for new build suggest that the impact on employment could be equivalent of three London Olympics projects by 2025.

Critical Skills (New Build Supply Chain)⁶

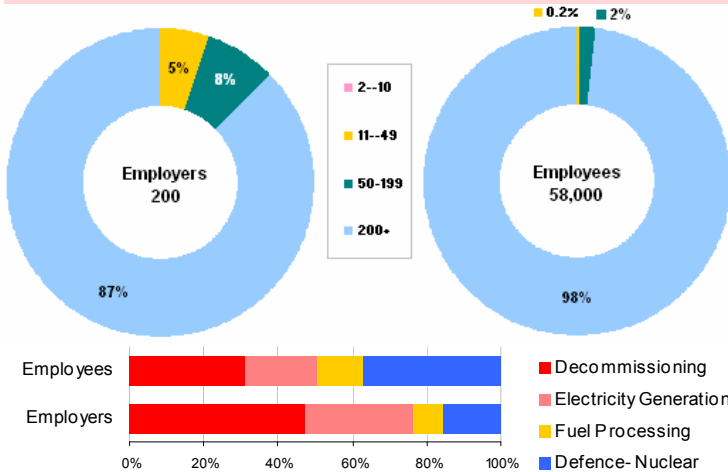
Design & Planning	Project and Programme Managers
	Safety Case Authors
	Design Engineers (various)
	Geotechnical Engineers
	Regulators
Equipment Manufacture	Manufacturing Engineers
	Control & Instrumentation
	Welders (high integrity, materials)
Engineering Construction	Non-destructive Engineers
General Nuclear Culture and Experience (new entrants)	The Project Management skills required to deliver effective projects
	Adequate and relevant Capability/ Experience of the sector

Headlines^{5,6}

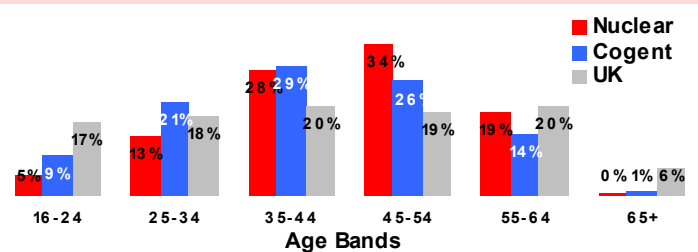
- Currently there are 8 sites identified as potentially suitable for new build nuclear. Assuming approval, first new builds are likely to be at Hinkley Point, Sizewell and Wylfa sites.
- Nuclear power at its peak provided round 20% of the UK's electricity although many of the nuclear power stations are coming to the end of life and the contribution today is around 15%.
- The UK is the **10th** highest nuclear generating country globally
- The UK Nuclear industry generated **62.9bn kWh in 2009**.
- There are currently **19 reactors in operation** producing approximately **11 GWe**, however by 2023, Sizewell B may be in sole operation (producing 1.88GWe) unless new build nuclear is commissioned in the meantime.
- The Royal Navy has **12 nuclear powered submarines** in service

The Workforce

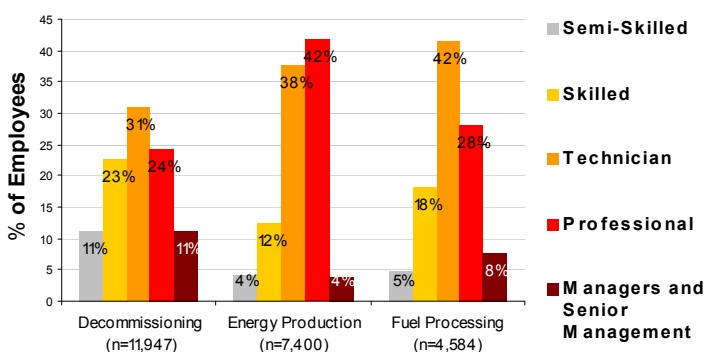
Employers and Employees by Size^{4,5} (direct and indirect)



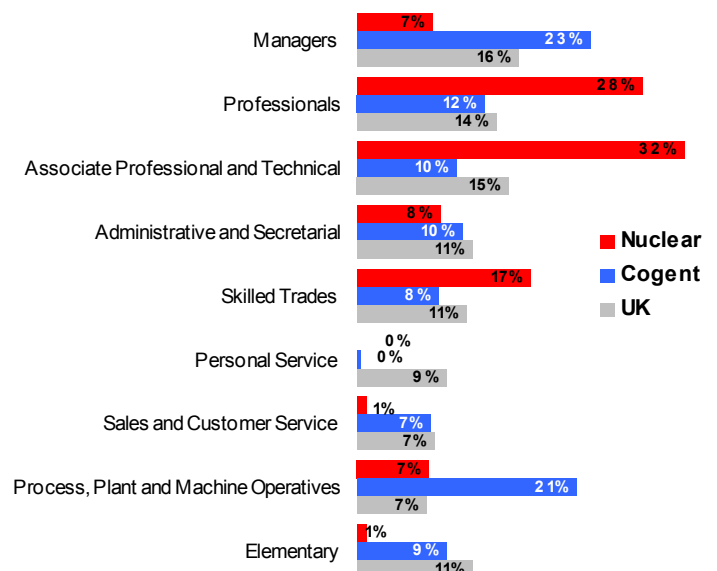
Age Profile^{3,5}



Skill Level of Civil Nuclear Workforce⁵ (excl. Supply chain)



Occupational Distribution^{3,5}

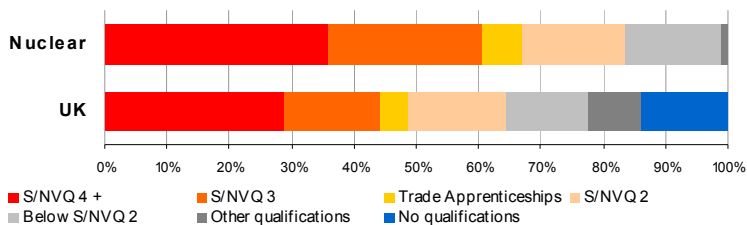


1. Annual Business Enquiry (ABI) 2008, Office of National Statistics (ONS) 2010
2. National Employers Skills Survey (NESS) 2009,

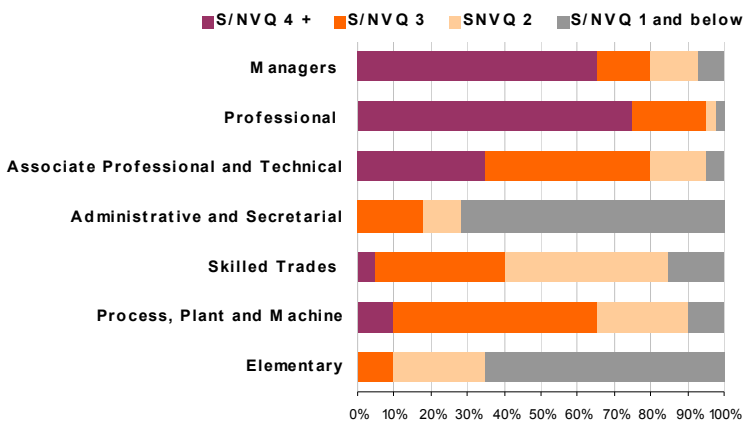
3. Labour Force Survey (LFS) 2009, ESDS 2010
4. Cogent Industry Estimate

Skill level, Skills Needs and Demand

Skill Level ^{2,4}

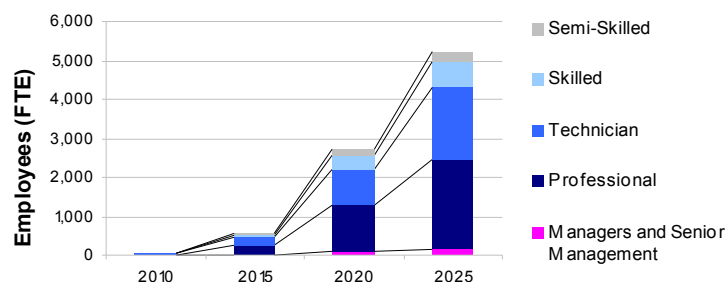


Skill Level by Occupation ⁴



Skills Needs ⁴

New-Build Operational workforce skills demand forecast 2010-2025

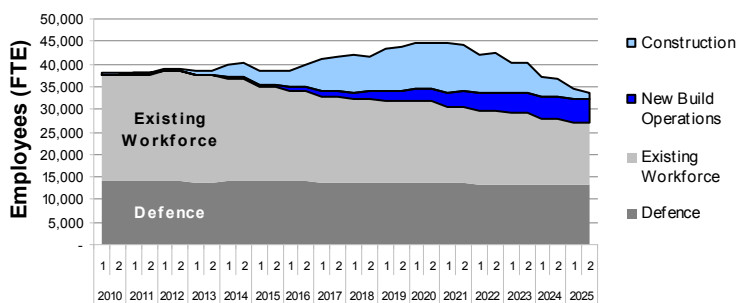


Demand for Apprentices and Graduates ^{4,6}

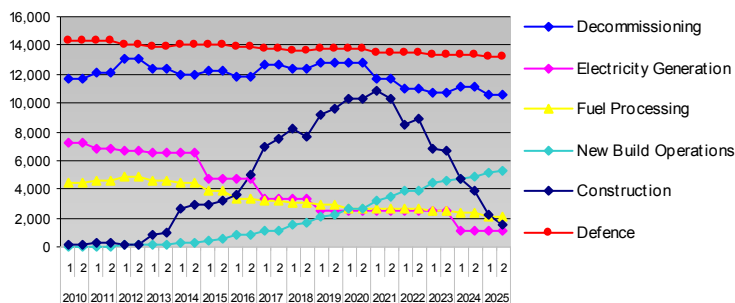
16 GWe Approximation Scenario	Peak year	Peak Demand	Average per year
New Build Operation	2025	5,200	301
New Build Construction	2021	10,600	663
Manufacturing	2015	2,721	170
Existing Operations	2017	5,610	283
Integrated Demand	2022	23,752	1,484

Workforce Demand Forecast ^{4,5,6} (16 GWe Approximation Scenario)

Integrated Demand Forecast 2010-2025 ^{4,6}

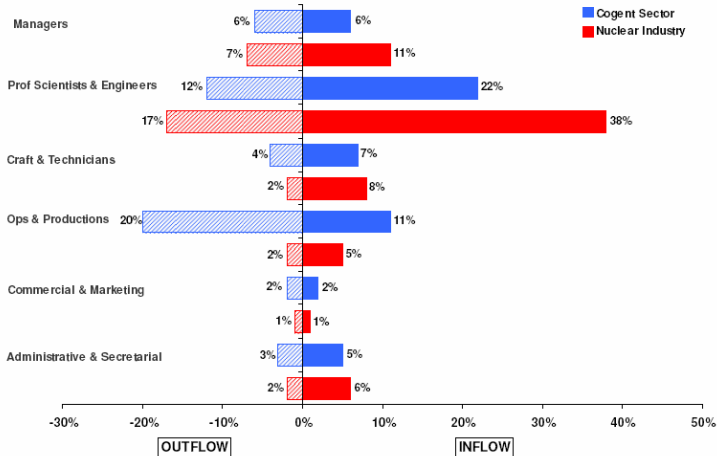


Individual Sector Demand Forecast 2010-2025 ^{4,6}



Employment Turnover and Workforce Distribution

Employment Turnover by Skill Level ⁷



According to Nuclear Skills Oracle survey, the annual employment turnover in the Nuclear industry was 13% in 2010.

- The main recruitment routes into the sector were: 'Agency Supply Workers' (41%) and 'Mature Entrants' (34%).
- The main departure routes of the sector were: 'other' (71%), retirements (23%) and redundancies (6%).

Employment by Region and Nation ^{4,5,6} (direct and indirect)

	Employees		Employers	
	n	%	n	%
East	1,373	2%	10	5%
East Midlands	4,034	7%	10	5%
London	976	2%	5	2%
North East	1,529	3%	10	5%
North West	23,103	40%	48	24%
South East	12,844	22%	24	12%
South West	6,641	11%	38	19%
West Midlands	576	1%	5	2%
Yorkshire and The Humber	264	0%	5	2%
England	51,339	89%	152	76%
Scotland	5,137	9%	33	17%
Wales	1,468	3%	10	5%
Northern Ireland	36	0%	5	2%
Total	57,979	100%	200	100%

5. Power People - The Civil Nuclear Workforce 2009, Cogent
 6. Next Generation: Skills for New Build Nuclear 2010, Cogent
 7. Skills Oracle 2010, Cogent SSC