Institute for Apprenticeships (IfA) Consultation on Draft Occupational Maps

The consultation is an online survey and asks stakeholders for feedback on four core questions. We have drafted a sector response, for members to review and comment on.

a. Which of the 15 occupational maps are you commenting on?

Primarily, the Engineering and Manufacturing Route and also the Construction Route as some of the relevant energy and utilities industries' occupations are mapped to it.

b. Are there any skilled occupations you would expect to see on the map which are not currently included?

Please provide rationale for your suggestion considering the following points:

- Is it a skilled occupation that requires a significant training component?
- Is it a recognised stand-alone occupation with clear demand in the labour market? Is there evidence of this?
- Is it unique – does it overlap with other occupations?
- What level is the occupation thought to be at?
- Can it be performed at a range of employers and workplaces (e.g. it is not employer-specific)?
- Is it linked to any other occupations shown on the maps (e.g. other occupations at a higher or lower level?)

We welcome the opportunity to respond to this consultation. The recently published Industrial Strategy White Paper highlighted the vital role of skilled people in realising the Government's vision for improved productivity and growth. A clear, coherent occupational mapping system will enable the UK to identify the skills it needs and deliver this vision in a changed economic environment following Brexit.

Our key points to consider and over-arching sector observations are:

Gaps in the occupational mapping

- We welcome the overall structure and organising framework of the occupational maps. They **theoretically and conceptually capture a wide range of occupations** that will **provide the backbone for technical education and apprenticeship development.**
- The Engineering and Manufacturing route however, is, by nature, **complex and challenging because of the diverse range of occupations**. It may not be obvious to employers in differing industrial segments that they are based on similar knowledge, skills and behaviours and thus may be challenging for users unfamiliar with the approach to the organising framework. **An accompanying explanatory note** may benefit the document as navigation and understanding of the maps is difficult; in comparison to, for example, legal or health and social care route maps.
- The Engineering and Manufacturing route **map could be judged as less systematic or illogical to the lay reader.** For example, Gas engineering (downstream gas), is situated in the Construction Route but many look to seek technical progression or employment within the upstream sector situated in Engineering and Manufacturing Route. **Therefore, additional guidance is needed to provide a support structure for such an eclectic engineering industry**. **Also, additional explanations of the relationships between the different pathways and clusters that inter-link or represent progression routes would ensure coherence and buy-in.**

Logical mapping and terminology

- We would recommend that the IfA technical panels **reflect on some of the clusters in the Manufacturing and Engineering and Construction routes** to review the placement of some of the occupations within these clusters. The aim would be to **streamline and introduce a simpler more intuitive logic**, similar to that of other routes, such as the Creative and Design Route.
- We understand that there is a plan to look at the role descriptors across the columns of information to ensure coherence (e.g. operative, craftsperson, technician, engineer etc.). However **it is also important to consider industry terminology/ history/ tradition and any unintended consequences** related to trade unions and pay grade. For instance, if you describe a ‘craftsperson’ for one occupation in gas and power, it relates to a level of responsibility. However, in another engineering area the same level of responsibility may be described as a technician role.

c. Should an existing occupation be assigned to a different route, or a different pathway or cluster within the route?

Please provide rationale for your suggestion considering the following points:

- What are the key Knowledge Skills and Behaviours (KSBs)? Which other occupations share similar KSBs?
- Are there any mandatory professional qualifications or other mandatory requirements which might link the occupation to a specific route?

- Are there any other linked occupations already on the maps? In which route/pathway do they feature?
  Other than similar KSBs, are there other reasons to group this with certain other occupations?

Suggestions for the Engineering & Manufacturing Route

The following occupations would benefit from being located with other energy and utilities standards in the Engineering and Manufacturing route.

- **Gas engineering**
- **Dual fuel meter installer**

Currently this route is causing confusion - for example, construction and plumbing and heating will be largely around 'wet work', yet Gas engineering focuses more upon 'dry work'/fault diagnostics and resolution).

Within the **Engineering and Manufacturing Route**, we suggest that these occupations should be assigned to the **Maintenance, Installation and Repair pathway and the Manufacturing/ Process, Maintenance Operative/ Technician cluster.** Other core energy and utilities occupations with similar Knowledge, Skills and Behaviour are already mapped to this route, such as Maintenance and Operations Engineering Technician. In addition, it is also worth considering logical progression opportunities, for example, an individual may begin a gas career in 'downstream gas', but advance within occupations allied to gas networks (upstream).

Electrical Power Engineer (Level 4) standard cluster review

The current cluster mapping of **the standards pathways for Electrical Power Network Engineer (Level 4)**, which is mapped to the Engineering, Design, Development and Control pathway, is incorrectly positioned i**n terms of the knowledge, skills and behaviour for the occupation**. We recommend that the standards pathways are split as follows:

- Move Asset Management Engineer occupation to Design & Development Technical Manager cluster
- Move the Planning Engineer and Control Engineer occupations to Quality Improvement & Project Control Manager cluster
- Move Electrical Project Engineer and Operational Delivery Engineer occupation to Installation, Service, Repair and/ or Overhaul Advanced Technician.

Installation, service and maintenance occupation

We have reviewed the maps and in both Construction and the Engineering & Manufacturing routes there are installation, service and maintenance clusters which include standards for our sector. **Our recommendation is to consider a revised cluster** which is located under the 'Engineering & Manufacturing' route, 'Maintenance, Installation & Repair' pathway. This could be termed 'Services, Supply and Maintenance'. **Alternatively, it could move into the Manufacturing/ Process, Maintenance Operative/ Technician cluster. This would be**

more relevant to our employers as much of the technical and apprenticeship training in the sector is within supply and maintenance.

d. Are there any clusters, pathways or routes that have been deemed appropriate for 'apprenticeship only' that could be taught in the classroom, and should potentially form part of the T level programme?

Please provide rationale for your suggestion considering the following points:

- Are all the occupations within the suggested route, pathway or cluster suitable for classroom based learning or would anything prevent this (e.g. the need to practice with large machinery)?
- Could 16-17 year olds learn about the occupation and complete a significant work placement, or are there any age restrictions linked to the occupation that would prevent this (e.g. a requirement to hold a driving licence)?

Apprenticeship only rationale

The Manufacturing/ Process Maintenance Operative/ Technician (Level 2/ 3) cluster is designated 'apprenticeship only;' for the energy and utilities industry to make an informed judgement on whether this is appropriate, we request that the rationale for the 'apprenticeship only' decision and how this was arrived at, is made available.

T Level workability

We appreciate innovation by nature is an iterative process, therefore as a sector are keen to offer support to the IfA to ensure that the curriculum is confirmed as fit for purpose within a broad engineering sector as the T levels evolve.

There are **significant safety considerations** for a highly regulated sector which may limit the work placement, for example, some employers are required to meet HSE agreement, therefore, have no real on site work placements whether at level 2/3 or even degree level.

The sector is prepared to embrace change but has responsibilities to not just shareholders, but also to the Energy and Utilities Regulators. Some employers have an **age restriction** of over 18 years, not to create bureaucratic barriers but for safety and regulatory reasons. S**afeguardin**g must consider the nature and location of the placement - it would be both a challenge and significant cost to ensure that the range of people the young person would come into contact with has the required DBS check. **A solution might be to allow employers to offset some of these high pastoral costs against their levy**.

It is also vital to consider what is both **practicable and achievable in the three month work placement, as much of the placement in some industries** may be confined to induction activities - for example, working at heights, safety, confined spaces, company policies and

procedures etc. Furthermore, the candidate **may not have ample opportunity or time to assimilate knowledge and practical skills experience to achieve a meaningful set of competencies to work in the selected occupation area.**

In summary, it is also important to consider the broader picture and implications for post T level employment within a highly regulated and safety critical sector. **Occupational maps provide a roadmap; an organising framework, but it is important not to confuse the academic level with an occupational competence level when using these to design T level curriculum**. For example, a T level in mechanical or electrical, control and instrumentation at level 3 would not mean (even with a 90 day placement) that an individual could progress directly into a skilled occupation without further skills training – indeed it would be more likely that initially skills training might need to be at a lower level e.g. basic hand tool skills. Equally, they could not expect to progress to a level 4 professional role without time served and experience gained. **If employers faced with recruitment decisions between an apprentice and a T level graduate are expected to pay for post T level upskilling, this could potentially impact upon recruitment decisions. Therefore in the initial post T level period, which could be time-bound, we propose employers should be able to utilise their levy to offset this cost to create that level playing field for all young people whichever technical route they choose.**

e. Do you have any further comments?

It is **essential to look at how both the occupational maps and T levels will be aligned and portable across four nation borders especially for transnational employers**.

The recently updated National Infrastructure and Construction Pipeline shows that the energy and utility sectors combined are responsible for the largest share of planned infrastructure investment of all the sectors, making a vital economic contribution. Business and economic success for UK plc is underpinned by a strong, highly skilled energy and utilities sector **and therefore energy and utilities should have parity of voice alongside other engineering industries rather than being subsumed**.

About Energy & Utility Skills

Energy & Utility Skills is the sector's skills body, with a UK-wide membership comprising of the major infrastructure companies within water, power, gas and waste management and their top tiers of delivery partners. Our membership brings companies together to collectively identify and address the unique workforce renewal and skills challenges the sector faces, whilst engaging with governments, regulators and other senior stakeholders to help them develop an informed and supportive policy and regulatory environment. We have a keen interest in the ongoing technical education reforms and are working closely with our members to keep them informed and develop robust policy recommendations.