

Response to Jobs and Skills Australia's Discussion Paper

Australia's Clean Energy Workforce

April 2023

About the Energy Skills Australia

Established by industry for industry in 1995, Energy Skills Australia (ESA) has been representing the energy sector for 28 years as an independent, not for profit, bipartite company.

We support high quality training and workforce development activities by providing advice and expertise to industry and government.

Additionally, we oversee a suite of learning and assessment resources and accredited courses designed to provide quality and consistent outcomes for apprenticeship and post trade training.

Our membership and board are made up of various key industry bodies such as the National Electrical and Communications Association (NECA), Master Electricians Australia (MEA), the Electrical Trades Union of Australia (ETU), the Communications, Electrical and Plumbing Union (CEPU) and the Australian Services Union (ASU). Our highly experienced board members provide ESA with the necessary direction, governance and oversight needed to ensure we are well placed to represent the views of industry.

ESA has established strong working relationships with key industry stakeholders, governments, the vocational education and training (VET) sector and regulatory authorities within Australia and internationally.

Critically, it is these relationships and deep connection to industry that allows us to support employers and workers as they grapple with the current workforce challenges across the growing clean economy.

ESA welcomes the opportunity to participate in the consultation process on the Jobs and Skills Australia (JSA) Discussion Paper into Australia's clean energy workforce.

Definitions and Terminology

Question 1 - Is the conceptual definition of the clean energy workforce ambiguous? If so, how could it be more clearly defined?

No. ESA does not believe the definition is ambiguous. We believe that the word 'designing' should be included within the definition. Renewable energy systems can be designed by both engineers and electricians. ESA believes there is a difference between design and develop, the latter of which refers to the building or construction of infrastructure used in the supply of clean energy.

Question 2 - How could clean energy supply workers be identified in existing data? What are the gaps?

The difficulty with identifying workers that participate as a part of the clean energy workforce is that they are often trade qualified workers that utilise skills across a range of industries. For example, an electrician (ANZSCO 34111), may work in the clean energy industry, in domestic, commercial or large-scale situations for generation, transmission and distribution of electricity. However, they could also work in industries such as construction, generation (for now) and manufacturing that

have no linkage to the clean energy economy. The same can be said for numerous occupations such as mechanical fitters, boilermakers, civil construction workers, riggers and painters.

Many industry bodies prefer maintaining broad based qualifications and subsequent development of skills, so that trades workers are not held captive to a particular industry or enterprise. Given the fact that trade qualified workers can transition across various industries, it is difficult to capture data of the clean energy workforce using either the ANZSIC or ANZSCO classification systems.

Question 3 - How could workers involved with energy use be identified in existing data? What are the gaps?

As per question 2.

Question 4 - Which jobs require skills that are unique to the clean energy workforce?

The clean energy workforce is largely technical in nature. It requires engineers, electricians, mechanical fitters and the like. These trades are not unique to the clean energy workforce; however some positions will require certifications or specific technical expertise such as those trades working on wind turbines.

Question 5 - How do workers obtain skills that are unique to the clean energy workforce (VET/Higher Education/on-the-job skilling/other)?

All the above, however they may not all be unique to the clean energy sector as many of the skills developed are portable in nature.

Trade qualifications will be obtained through vocational education and training, as will some post trade qualifications and skill sets such as those relating to the design and installation of grid connect photovoltaic and battery storage systems.

There is accredited training also used broadly across the clean energy sector, such as the Clean Energy Council (CEC) accreditation and Global Wind Organisation training used for the wind sector.

University education is also required for many engineering and scientific roles across the clean economy.

Question 6 - Are there any emerging occupations and industries in clean energy that aren't well captured by current definitions?

There are currently reviews and reports being undertaken across various aspects of the energy industry which JSA is aware of and has included in the library or resources such as the work in hydrogen being undertaken by the South Australian Government. As previously stated, it is hard to specifically define and measure occupational roles such as electricians or boiler makers due to the portable nature and participation of these workers across numerous sectors.

What we already know

Australia

Question 7 - What are the main barriers to employers recruiting and retaining workers with the skills required to support the clean energy transition?

One of the main barriers to employers attracting workers to the clean energy sector is that they are competing against other sectors or projects that are more attractive. For example, working on one of the infrastructure projects in Victoria, workers can be paid higher and remain closer to home. Emerging renewable energy projects are often located in regional areas, meaning some workers will need to travel large distances and often for less pay. This doesn't make it an attractive proposition.

Other considerations should be creating clear workforce pathway information, which highlights workers being a part of the solution to the climate crisis. Younger generations are worried about the future and giving them an opportunity to work in a sector that impacts directly on the solution will enhance workforce participation.

Question 8 - What barriers do priority social cohorts, including women, First Nations Australians, people with disability, and culturally and linguistically diverse people face in entering the clean energy workforce?

Women are facing many barriers to working in traditional trades within and outside of the clean energy sector. These are not new. Structural workplace reform and education is required to ensure that women are encouraged to enter the sector. There are several programs that have been introduced to create better pathways for women. There are still cultural impediments that exist with a largely male dominated industry which need to change. This is slowly changing, but to ensure the clean energy economy workforce is grown and maintained, more needs to be done. Access to safe workplace amenities and uniforms that fit are also important.

Genuine consultation with workers in regional areas, those from culturally diverse backgrounds and Aboriginal and Torres Strait Islander Peoples will help address barriers to participation. Cultural awareness training for all social cohorts should be prioritised, along with setting procurement targets.

Question 9 - What accredited clean energy education and training pathways (qualifications and course components) are currently available in Australia?

Please refer to the Electrotechnology Training Package, Clean Energy Council and Global Wind Organisation.

Question 10 - What barriers do students and prospective workers face in accessing education and training specific to clean energy?

Clearer pathway resources that promote careers in clean energy will be useful. Many potential applicants may not realise that a career in clean energy can start with an electrical apprenticeship or for that matter an engineering degree or a certificate in civil construction.

Question 11 - What barriers do education and training providers face in delivering courses specific to clean energy at the scale and pace required?

Underfunding for TAFE and broader vocational education and training (VET) sector has meant that it is difficult for providers to be able to buy and maintain the necessary equipment required to be utilised in training the next generation of clean energy workers. Because of this, elective units within the electrotechnology training package that focus on renewable energy are not always offered by registered training organisations (RTOs) due to the lack of supporting resources. It is cheaper to deliver common electives than it is to offer a wider scope of training.

Consideration should be given to resourcing Renewable Energy Centres of Excellence, to ensure that there are RTOs that can specialise in meeting the demands of the clean energy sector.

There are chronic shortages of electrical teachers across the country. ESA is hearing stories of delays in electrical apprentice training of up to 18 months. This means that an electrical apprentice who starts their apprenticeship on 1 January 2023, may not commence their 1st year electrical training until June 2024, resulting in an extension to their training contract and exacerbating a sector that is already grappling with shortages.

Regional experiences

Question 12 - Which regional and First Nations communities should JSA engage with to better understand and address the impacts of the clean energy workforce transition?

Any regional area or community that has been identified in a renewable energy zone or where projects are considered.

Question 13 - What information and assistance do communities need to prepare and harness the opportunities of future clean energy industries?

Genuine consultation needs to take place wherever there is a project being considered. This also includes traditional areas of coal fired power generation. A transition authority should be established to ensure that no existing worker will be excluded from the transition to the clean economy.

Informative information that shows how communities and workers can be a part of the solution.

Question 14 - What programs and initiatives have worked well to support workers transition out of in emissions-intensive industries?

ESA believes that there needs to be tripartite cooperation and engagement between employers, unions and governments in addition to community engagement and local participation. There are

reports and lessons to be learned from Germany's just transition which should be taken into included in the conversation in Australia. Of course, there are many differences between Australia and European countries, none more so that in the industrial relations setting.

International experiences

Question 15 - What international experiences should JSA look at to establish an understanding of international best practice in relation to:

- *supporting workforce transitions*
- *developing education training opportunities and incentives*

Look at European countries like Germany and Spain.

Analytical Approach

Question 16 - What do you consider to be the most significant information gaps in this sector?

Promotion of clear concise training pathway information.

Question 17 - How can government better work with industry to measure the workforce?

Actively engaging with industry bodies and the soon to be formed Jobs and Skills Council. Drawing on their data and that of Jobs and Skills Australia, through industry surveys. Industry can provide confirmation to statistical data that is collected through the ABS and JSA.

Question 18 - Are there existing data sources that could be better leveraged or improved?

The Clean Energy Council will hold a data around how many accredited people/businesses there are within the sector.

For further information or inquiries, please contact:

