

Hydrogen Awareness Project

Hydrogen In Tasmania

Tasmania is rapidly moving to a renewable energy future. This is a pivot point for the state economy, and one that builds upon the legacy of the hydroelectric scheme. Green hydrogen, pumped hydro and wind power will form the future mix of energy output to create market opportunity. Projected job gains and skill requirements will necessitate strong engagement with the education sectors and community to generate enthusiasm for, and awareness of, the many opportunities being revealed.

Within this context, Artibus Innovation is being funded by the Tasmanian Government to develop a hydrogen ready training course that will build a pipeline of new industry entrants.

Tasmanian Workforce Planning

As the hydrogen industry in Australia is embryonic, there is significant uncertainty on its impact on industry and society. To properly consider future skill needs, the Tasmanian Hydrogen Awareness project has been developed from the perspective of occupational clusters and job families rather than speculating on the impact to individual jobs.

A labour market model has been developed to project net worker requirements, based on future infrastructure projects and the distinctive and shared needs evident across the renewable energy sector. In viewing infrastructure for the state as a whole, and renewables as a distinctive subsection, we have been able to reconfigure our assumptions about workforce flows and skills forecasting and gain deeper insight into the groups of occupations required, and thus their common skill requirements.

The project has benefited significantly from cross-sectoral expertise, and advisors have been drawn from coalitions of interest rather than any particular geographic or sectoral fidelity. The resulting new qualification is a Certificate II in Renewable Energy Pathways, and addresses entry level needs across the range of applicable renewables in Tasmania - Hydro, Wind, Solar, and Hydrogen.

Renewable Energy occupational cluster

The project has proved a clear instance of how reconceptualising workers and skills needs around occupational clusters and job families can significantly improve training outcomes and adapt them for future needs. With hydrogen, the issue of industry convergence is unmistakable: hydrogen is both an energy source, and an application. It is used across processing, energy generation, manufacturing, engineering, transport & logistics. While these sectors have long been approached as discrete silos, in real terms there is significant cross over between both the skills needed, the workforce who utilise them, and the companies that deploy them.

When hydrogen is viewed across its value chain, it becomes apparent that it's best located as part of the suite of renewable energies. This is clear both pragmatically across its applications, and also conceptually as a point of appeal to potential new entrants to the workforce. There are a number of hybrid jobs that will emerge at both a trade and post trade level. At an entry level, these are STEM rich, vocationally trained occupations such as process workers skilled in engineering, instrumentation, and installation coupled with trade skills such electrical or plumbing. Post trade, there is a clear need for roles like vocationally trained chemical and energy engineers.

When seen in this way, hydrogen becomes apparent as an enabler of an entirely new industry, and an exemplar of alternative approaches to building skill responses.