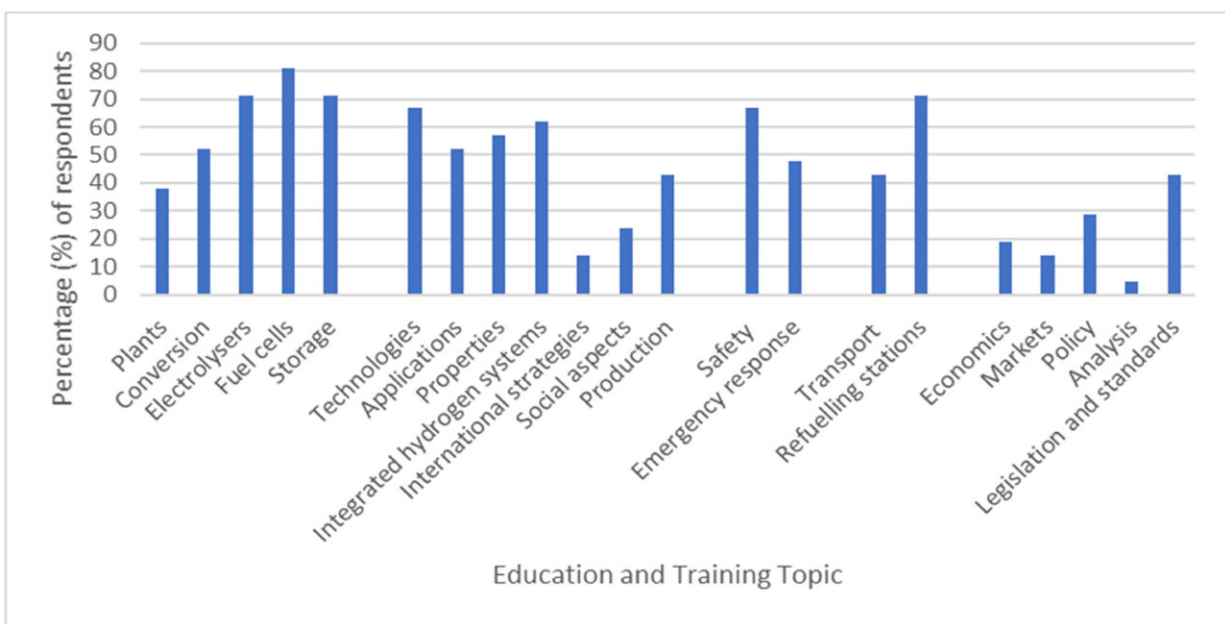


Highlighting the critical importance of hydrogen skills: A case study from Australia

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Specific education and training needs for the Hydrogen industry. Credit: *International Journal of Hydrogen Energy* (2023). DOI: 10.1016/j.ijhydene.2023.02.061

From secondary schools to universities, trades to big business, Australia lacks the hydrogen skills and training capabilities it needs to achieve its newly-legislated carbon reduction targets, according to new research by Swinburne University of Technology's Victorian Hydrogen Hub (VH2).

Over the long term, delivering [education](#) and training through registered organizations can protect workers transitioning into the hydrogen economy from being locked out of the industry.

However, the Australian skills and education landscape is not keeping pace with the fast-moving green hydrogen industry, causing a rush by industry to fill the gaps. Short courses and the emergence of micro-credentialing are being offered by a variety of organizations. While benefits of this include flexibility and a degree of resilience, there are also risks of such a fragmented landscape.

"Skilling the green hydrogen economy: A [case study](#) from Australia," published in the *International Journal of Hydrogen Energy*, highlights the urgent need for cross-sector collaboration to support education and training on hydrogen energy. Training on electrolyzers, fuel cells, hydrogen storage and refueling stations is most needed.

The implementation of hydrogen into the Australian economy is a key strategy in the federal government's Long Term Emissions Reduction Plan to achieve net zero emissions by 2050. Education and training planning is essential to achieve these goals, with "train the trainer" courses, trades courses, school curriculum changes, micro-credentials, [higher education](#) and industry engagement programs all forming part of the solution.

With the current high demand for engineers and high-level workers in the hydrogen sector and the predicted impact on trades, the first priority must be basic awareness and safety to prepare a large workforce for the changes. Swinburne's Victorian Hydrogen Hub was given \$10 million in funds through the Victorian Higher Education State Investment Fund to help make hydrogen accessible to all.

Social License Adjunct Research Fellow, Dr. Kim Beasy, from

Victorian Hydrogen Hub at Swinburne University of Technology, says, "We know that the [hydrogen economy](#), to be successful, needs responsive education and training solutions. Ideally, registered training organizations and higher education institutions will be one step ahead to ensure a ready workforce is available.

"Because approval processes for centralized training and education courses can take such a long time, we are seeing a range of micro-credentialling and short course options come on to the market. This is a great, interim solution, but it risks creating a fragmented training landscape."

Deputy Vice-Chancellor (Research), Professor Karen Hapgood, from Swinburne University of Technology, says, "As we move towards a more innovative and sustainable planet through [hydrogen](#) technology, we must be focused on teaching the skills required to make this technology a reality.

"At Swinburne, we are committed to ensuring we develop the skills that industry needs and that students require for the jobs of the future, across [vocational education](#), higher education and research."

More information: Kim Beasy et al, Skilling the green hydrogen economy: A case study from Australia, *International Journal of Hydrogen Energy* (2023). [DOI: 10.1016/j.ijhydene.2023.02.061](https://doi.org/10.1016/j.ijhydene.2023.02.061)

Provided by Swinburne University of Technology

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