

RP2.1-02: A Social Licence and Acceptance of Future Fuels

The Final Report brings together findings from the portfolio of research projects commissioned by the Future Fuels CRC within the **RP 2.1-02 Enhancing acceptance and a social licence to operate of future fuel infrastructure through community engagement and deliberative processes** work package. This research was undertaken by The University of Queensland (UQ) from 2019 until late 2023.

The report synthesises and summarises research findings relating to:

- The state of community sentiment towards future fuels such as hydrogen and biogas, and towards the options for their use to fulfil a variety of energy needs;
- Methods for effective engagement with the community and strategies for building knowledge of, support for and trust in a new energy source;
- Testing the effectiveness of participatory methods in respect of the above; and
- Investigating the information of the differing information and engagement needs of specific community sectors and specialist stakeholder groups.

The pace of change in future fuels development (and energy transition generally) means that the industry needs the support of the broad Australian community, along with strong local support for production facilities and distribution infrastructure. Establishing and maintaining social licence is critical to achieving this. This research found that the Australian community currently has a relatively neutral view of future fuels (specifically hydrogen and biogas) and that education and information sharing was effective in increasing support. This is a good foundation position for the industry and should be capitalised upon.

Overall, this research found there is general support for hydrogen, where hydrogen from renewable sources is preferred, strongly based on messages of zero emissions and environmental benefits. Australians also see a role for future fuels in the future energy mix and would support the introduction of hydrogen as long as it met certain conditions. These include:

- If it was evaluated robustly and determined to be in the public good;
- If it benefitted the environment;
- If they had been provided with enough (“balanced”, “neutral”) information from trusted sources;
- If they had been engaged respectfully in advance and had the opportunity to ask questions and have them answered;
- If they had been made aware and understood that there may be additional costs involved and were either willing to take on those costs or were adequately subsidised or compensated;
- If it was proven to be no less safe than current domestic gases and fuels;
- If it could be made available at a competitive price (compared to electricity); and
- If there were clear economic benefits, especially to local communities but also to the nation.

Policy stakeholders identified challenges in meeting community expectations; representatives of relevant trade organisations and emergency services identified relevant foundation knowledge and skills and had clear suggestions regarding necessary regulatory change and training needs. All of these groups highlighted the extent of work needed in their respective areas, and the lengthy timeframes required to build robust and trusted systems and expertise.

Recommendations from this research aim to build on the neutrality of public attitudes, address community expectations for science-based information, and highlight the extent of work required to establish a robust and effective regulatory framework. In brief, it is recommended that:

- Lessons from pilot projects and trials be shared with the community and key stakeholder groups;

- Balanced science-based information should form the basis of all community information and education;
- Industry and government should share knowledge about changes in technology as it moves up the readiness levels;
- Deliberative processes should be trialled to deepen and expand interactions between industry and Local Government Authorities (LGAs); and
- Action to develop appropriate industry standards, regulatory systems and trainings should commence as soon as possible – these arrangements should be nationally consistent where possible.

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