

**Future Energy Exports (FEnEx) CRC
MILESTONE SUMMARY TABLE**

Research Program 2: Hydrogen Exports and Value Chains

2	Generally aligned with the goal of developing Hydrogen Exports & Value Chains (including Utilisation) but not specifically aligned with any of the other RP2 Milestones	1 Jul 2020	30 Jun 2030
2.1.1	Detailed design of a liquid hydrogen production and storage plant at the scale required for export	1 Jul 2021	30 Jun 2023
2.1.2	Identify optimum integration and recovery of hydrogen from a selected liquid organic carriers	1 Jul 2025	30 Jun 2027
2.2.1	Develop and test a liquid hydrogen boil-off gas model as a user-friendly software tool	1 Jul 2021	30 Jun 2022
2.2.2	Report detailing technical requirements for scale up of electrolysis methods relevant to production at export-scale	1 Jul 2023	30 Jun 2024
2.2.3	Optimal containment material identified for large-scale hydrogen storage accompanied by required operation data for its inclusion in system design	1 Jul 2028	30 Jun 2030
2.3.1	Final design of integrated renewable energy co-electrolysis (power-to-gas, gas-to-power) with energy storage and heat integration to produce and transport hydrogen	1 Jul 2026	30 Jun 2028
2.4.1	Report detailed options for (i) closed loop carbon economies and (ii) coupled methane reforming and carbon capture and storage for the delivery of hydrogen	1 Jul 2020	30 Jun 2021
2.4.2	Identification, development and demonstration of hydrogen utilisation technologies that will drive export markets	1 Jul 2022	30 Jun 2025
2.5.1	Experimental design and construction of test rig for technical evaluation of solid-state hydrogen storage and thermal batteries	1 Jul 2023	30 Jun 2026
2.5.2	Integrate optimum hydrogen export method (solid state hydrogen, liquid organic hydrogen carriers or liquid hydrogen) into co-electrolysis pilot plant	1 Jul 2027	30 Jun 2029
2.6.1	15 PhDs completed in RP2	1 Jul 2020	30 Jun 2030