

Hydrogen

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Sector Green Economy

Looking for:

Players in the hydrogen landscape to be part of the fast-evolving industry in New Zealand being supported by government to push its green and clean agenda

Web-links

- <https://www.mbie.govt.nz/>
- <https://www.nzhydrogen.org/>

There are various projects underway in New Zealand like:

Hyundai New Zealand NEXO FCEV Demonstration Project

- <https://www.drivelife.co.nz/2019/06/hyundai-introduces-the-nexo-new-zealands-first-hydrogen-powered-suv/>

Hiringa Green Hydrogen Project

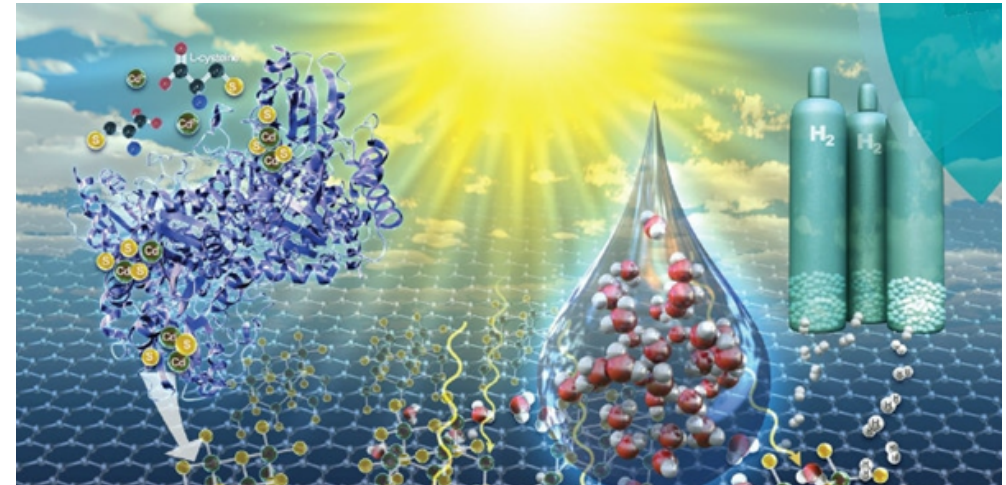
- <https://www.hiringa.co.nz/post/hiringa-energy-and-balance-agri-nutrients-green-hydrogen-project-teaser>

Ports of Auckland Hydrogen Demonstration Project

- <http://www.poal.co.nz/media/ports-of-auckland-to-build-auckland%E2%80%99s-first-hydrogen-production-and-refuelling-facility>

Tuaropaki Trust Geothermal Powered Hydrogen Pilot Project

- <http://www.tuaropaki.com/our-business/hydrogen-energy/>



Opportunity to be associated with the fast-emerging Hydrogen based industry

Summary

New Zealand is one of several countries investigating the most appropriate applications and transition pathway for hydrogen within their energy system and economy, making best use of their existing natural, social, cultural, human and financial resources.

There are many potential areas of application including seasonal electricity storage for winter peak demands in electricity generation, decentralised energy generation for remote and isolated users, decarbonised gas, intermediate and high temperature industrial process heat, green industrial chemical feedstocks, and transport and mobility applications such as for freight, materials handling, return to base fleet transport, shared mobility and public transport.

Summary of Current Hydrogen Projects in Northland and Auckland

Refining NZ Green Hydrogen Project

Marsden Point, the country's sole oil refinery, has spent more than a year looking at the potential of new technologies – including solar and hydrogen – to lower its costs or to form the basis of new, low-carbon business lines in the future. The Refinery has approved the construction of a \$37 million solar farm on 31 hectares, which will be one of New Zealand's largest, and will supply 26.7 MW or around 10% of their total electricity need. The company is already one of New Zealand's largest producers of steam reformed hydrogen and investigative work is underway to establish the preferred hydrogen production technology and end use applications.

Hyundai New Zealand NEXO FCEV Demonstration Project

Hyundai's all new NEXO fuel cell electric powertrain offers the latest in fuel cell electric vehicle technology. An on-board electric motor produces 120kW and a torque of 395 Nm, drawing power from an under-bonnet fuel cell stack, which combines oxygen from the surrounding air with hydrogen from NEXO's high-pressure storage tanks. The result is electricity to power the motor and charge the battery, and water vapour, which harmlessly exits through the exhaust. With full tanks of hydrogen on board, NEXO is capable of travelling 605km (WLTP), before being able to refuel in under six minutes. Hyundai New Zealand has established its hydrogen demonstration project to show case the NEXO and to share the globally leading technology with New Zealanders.

Ports of Auckland Hydrogen Demonstration Project

Ports of Auckland has committed to build a hydrogen production and refuelling facility at its Waitematā port. The company, and project partners Auckland Council, Auckland Transport and KiwiRail, will invest in hydrogen fuel cell vehicles including port equipment, buses and cars as part of the project. The Port has adopted the target to be a zero-emission port by 2040. As part of its commitment to achieve this target it is transitioning to a renewable and resilient power source for heavy equipment like tugs and straddle carriers, which are difficult to power with batteries. Hydrogen is seen as a potential solution as it can be produced and stored on site, allows rapid refuelling and provides greater range than batteries. Resource consent has been lodged and plant procurement is progressing with evaluations of RFP submissions currently underway.



REFINING NZ
Your Energy Hive



HYUNDAI



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