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Two more articles that feature Port Kembla and our developing H2 ecosystem

ABC Illawarra article about H2X's Port Kembla plans. Article features Coregas as well;

https://www.abc.net.au/news/2020-06-29/hydrogen-cars-port-kembla-future-australian-motor-manufacturing/12401494

Hydrogen cars manufactured in Port Kembla could be future for Australia's motor vehicle industry

ABC Illawarra By Nick McLaren



Coregas makes hydrogen from natural gas at Port Kembla, and wants to make emission-free gas from renewable sources. (Supplied: Wesfarmers)

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• Ambitious plans to assemble hydrogen electric hybrid vehicles in the Illawarra, with production to start within two years, have been greeted with cautious optimism.

Key points:

- New company H2X plans to set up a car assembly plant at Port Kembla making hybrid hydrogen electric car
- Port Kembla-based gas company Coregas is already making hydrogen from natural gas but wants to make it from renewable energy to reduce emissions
- Coregas is currently supplying gas to hydrogen cars being trialled around Australia and has built a hydrogen vehicle refuelling plant in northern Sydney

Two weeks ago, little known company H2X, registered in Manly Vale in Sydney, released concept designs for a hybrid electric plug-in, hydrogen-fuelled passenger SUV.

Dubbed the Snowy, it could travel up to 650 kilometres on one tank.

The company also released concept plans for hybrid-battery hydrogen vans and tractors.

Unlike an electric vehicle, hydrogen electric hybrid vehicles do not have to transport a large, heavy battery as they are fitted with a small light-weight hydrogen fuel tank in addition to a small battery.

CSIRO Senior Research Scientist, Christopher Munnings said the design offers the best of both worlds.

"You have the option of either filling it up at a hydrogen refuelling station like you would with a regular hybrid or petrol vehicle, or you can also plug it into a wall socket at home and you can charge it to use it as an electric vehicle," Dr Munnings said.

"So electric vehicles typically take longer to charge and have perhaps a lower range.

"Hydrogen fuel cell vehicles can be refuelled very quickly and have longer rangers, but the fuel is itself is going to be more expensive than the electricity."

Port Kembla link to hydrogen car industry



H2X has developed a prototype car to be assembled in Wollongong. (Supplied: Brendan Norman)

While Wollongong locals looked forward to a visit from the man behind new company H2X, longtime motoring executive Brendan Norman, said it had now been revealed he planned to work closely with Port Kembla hydrogen gas producer Coregas.

Coregas is a Wesfarmers company that has operated the largest merchant hydrogen plant in Australia at Port Kembla since 1986.

It already works with other car companies, including Hyundai and Toyota, who have recently brought hydrogen-powered cars to Australia to trial.

Coregas is also responsible for building the only current hydrogen refuelling station operating in New South Wales, at Macquarie Park in Sydney.

"The attractiveness of hydrogen as a clean fuel source is that you can use renewable energy plus water to produce hydrogen and then hydrogen in a fuel cell such as the Hyundai vehicle produces electricity and water," executive general manager of Coregas, Alan Watkins, said.

"So it's a very neat solution and the way we think of hydrogen is really as a light battery, actually much lighter than current electric battery technology that presents opportunities for cars and most especially for heavy vehicles."

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Hydrogen car plans require deep pockets

Motoring journalist, Toby Hagon, said an enormous investment is required to start a car company.

He said this is demonstrated by electric car company Tesla, which is yet to turn an annual profit despite now manufacturing hundreds of thousands of cars annually, off an investment of tens of billions of dollars.

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"To some extent the easy part of starting up a car company is doing the original cars, doing the designs, doing the 'here's the vision we have got'," Mr Hagon said.

"As Tesla has pointed out, the difficulty is producing a lot of cars in the volume and quality that you need and getting the distribution networks right around the world so there is a huge hill there for this company [H2X] to climb."

Mr Hagon said he foresees a day when suburb Australian homes could have, on average, two cars in the garage, one electric and plugged into the power point each evening, and the other hydrogen for lower cost longer journeys — yet still delivering zero or very low carbon emissions, which is the end goal for the new car market.

Following is link to Friday's announcement about electrolyser sourcing;

https://www.aumanufacturing.com.au/h2x-hydrogen-vehicles-names-first-australian-supplier-elvin-group-renewables

H2X HYDROGEN VEHICLES NAMES FIRST AUSTRALIAN SUPPLIER – ELVIN GROUP RENEWABLES

1. H2X hydrogen vehicles names first...

<u>JUN26</u>



Exclusive by Peter Roberts

Hydrogen vehicle developer H2X has named its first manufacturing partner, Elvin Group Renewables, which will manufacture clean, green hydrogen electrolysers for the Australian market.

The electrolysers will be scalable from small household units, to those capable of being sited at a service station where they could be used to refuel hydrogen vehicles such as those to be manufactured by H2X at Port Kembla.

Elvin Group Renewables managing director Samuel Blackadder told @AuManufacturing that it will produce hydrogen electrolysers as part of its wider renewables businesses that include a founding shareholding in H2X.

Blackadder said: "We believe the time is right for Australia to take hold and drive the hydrogen economy which also means taking control of manufacturing opportunities.

"Instead of importing a hydrogen electrolyser from overseas markets we should be utilising our talented and experienced work force by providing upskilling into a new industry."

Elvin has linked up with US electrolyser manufacturer <u>GinerELX</u> which will supply the largest units, with some assembly and integration being undertaken in Australia.

However for smaller electrolysers Elvin has invested in Australian company Hydrostar which has produced and trialled its own units in Canberra

Blackadder said: "There is a heavy push internationally to set up our HQ offshore however we believe that Australia has the ability to be at the cutting edge and delivery of the hydrogen economy both domestically and internationally.

"This will also supply an instant boost to the economy for skilled trades and high value jobs which will grow all parts within the production and delivery chain of this quickly growing industry."

Elvin Group, a Canberra concrete and construction company, is also discussing with another H2X investor, Ken Mathews' Denzo Pty Ltd, the trustee of The Mathews Family Trust, to supply the initial 40 MW capacity electrolyser facility.

Mathews are in the process of developing three large plants to produce green hydrogen from solar electricity at the Port of Bundaberg QLD, Port Kembla NSW and a third in the Renewable Energy Zone (REZ) of NSW.

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CEO of Denzo Ken Mathews said: "The...cooperation will form a complete supply cycle to the end users of hydrogen thus employing many staff for years to come and this is an all Australian initiative."

Elvin sees an initial sales opportunity for \$60 million worth of electrolysers in Australia and through exports.

A service station refuelling opportunity could involve a 500kw to 1MW container for hydrogen production together with hydrogen refuelling onsite for vehicles.

Units could also be placed in a business such as a vehicle fleet depot, worksite, farm or distribution centre which support large vehicle fleets.

CEO of hydrogen vehicle developer H2X, Brendan Norman said local manufacture of electrolysers would provide ready access for H2X's heavy vehicles as well as its planned Snowy SUV.

Norman said: "This is an exciting development, especially as these electrolysers are being manufactured in Australia, providing jobs and opportunity in our economy."

Picture: Elvin Group

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By Peter RobertsJune 26, 2020

Regards

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