

## **Expelling nothing but clean water**

We've just changed the car. The new one is almost identical, even the same colour as the "old", which wasn't really old but was about to drop out of its three-year warranty.

At our stage of life, you either go with the three-year cycle or run the "old" one into the grave (its and yours). Deciding what to buy was easy. The Suzuki Swift will always be our car of the year.

The process was easy, but along the way threw up a curve ball. For a few grand more we could buy something called a "hybrid", a petrol car that charged a battery big enough to drive the engine and reduce something called our carbon footprint.

Had we reached a personal ethical crossroads offering a chance to make life bearable for our grandchildren? Obviously, yes. But we calculated the budget wouldn't stretch far enough for us to take such responsibility so fossil fuel it remained.

This week, I parked the same new car among a bunch of others, some of which were probably hybrids or electric or what have you. The only thing I knew for sure was they didn't run on hydrogen.

If that was possible, though, the owner of every single one would indeed be putting such a fuel in their car, knowing the only thing coming out their exhaust pipes would be water vapour.

Every single one of the owners is confident, however, that because of the work they are doing, the day will come when that same environmentally benign emission will emerge from the exhaust stacks of many if not most of New Zealand's big trucks...and eventually, probably, their own vehicles.

The workplace I'm talking about is a converted suburban home in New Plymouth, so packed with high-flying scientists, engineers and experts in hydrogen that they've spilled into the back shed.

There's little outward sign of \$40 million in government funding being poured into the efforts of Hiringa Energy to develop a way to replace fossil fuels like diesel and coal as the main drivers of heavy transport and industrial processing.

The money is being spent on research and the development of the means of making hydrogen commercially in New Zealand – the core technologies long

ago invented overseas - and applying it to the government's decision to phase out fossil fuels as quickly as possible.

The trucking behemoths that bring many of our consumer goods to Taranaki (and most everywhere) are one of the first targets of this controversial strategy, and Hiringa is well advanced towards setting up the crucial parts to make it work – refuelling stations, electrolysis plants to make the hydrogen, and cost-effective ways to obtain “clean” electricity to power up those plants.

The latter is one of the biggest challengers. Naysayers – and there are a few in trucking and academia – were quoted recently as saying it can't be done economically and we're better to reform society to use less transport fuel or wait until bigger countries resolve such issues.

Or switch our focus to bikes and trams. Good luck with that in what continues to be a car-mad country.

There's maybe only one hydrogen production car in the country (it visited New Plymouth's Shaun Biesiek at his Energy Motors recently) but as Hiringa says, while its focus is not particularly on cars at this stage, once/if hydrogen production hits real scale, watch how quickly that sphere could expand.

The government agrees with Hiringa that waiting for all this to happen offshore would be a poor choice, especially since about 6500 replacement diesel trucks are added annually to the country's 150,000 fleet.

Replacing soon with hydrogen-fuelled trucks will lead to a tipping point when the economies of scale cut in and the process becomes economically irresistible.

Having already written extensively about Hiringa in the past and updating with them again recently, I'm backing them to prove their case. If they do, Taranaki will be proud of them.

**Footnote 1:** Public response to my new *Wolfie* book has been encouraging, with Raewyn Wolfe packaging up many dozens to early buyers. Neil has had much pleasure applying his fine hand to write messages on the inside covers.

**Footnote 2:** Centre City has asked brother Rob Tucker to show nearly 50 of his best Taranaki photos taken over the last couple of decades. He's encouraging other photographers to step up should the space remain available.