
From: Jörn Scherzer
Sent: Monday, 13 March 2023 12:32 pm
To: [REDACTED]
Cc: Information Management Team
Subject: RE: [EXTERNAL] Why is there 640 x less electric charging capacity than fuel in Lower Hutt?

Dear Richard

Thank you for your email.

A comparison of the number of fuel bowsers vs charging stations is not straight forward, as EVs can (and should where possible) be charged at home and overnight. This maximises the use of off-peak power, which is cheaper, depending on the contract you have, but also tends to be lower carbon (eg it can use baseload or must run power production).

For a typical resident with off-street parking/charging at home, it can be expected that the majority of trips (90% plus) would be powered by charging up at home. This means that charging stations are only used when the trip is longer than the range of the vehicle (eg for long distance travel). For those that do not have off-street charging/parking at home, or travel for work purposes, they will need to rely more on public charging stations or other opportunities, such as charging at work sites. However, as the range of vehicles improves, and also their charging speed, those vehicles will likely end up using charging stations in the same way that petrol vehicles currently rely on petrol stations. For the latter approach, some providers are now rolling out hyper chargers (150-300kW plus, such as in Bulls), ie they can fill a vehicle in a few minutes, which would have similar dwell time to someone filling up with petrol.

Looking at Lower Hutt, there are currently 15 DC charging stations, with a further 8 DC stations about to come online at the end of March. Most of these have been brought in by Hutt City Council in anticipation of increasing demand, which is quite a different approach to other cities, where they rely on private operators to meet the demand.

- Eastbourne Days Bay 1x 25kW
- Seaview Marina 2x 25kW
- Petone PaknSave 2x 25kW
- Petone Z 1x 75kW (but can charge two vehicles)
- Dowse Museum 1x 50kW, 1x 25kW
- Moera Library 2x 25kW
- Walter Nash Stadium 3x 25kW
- Stokes Valley 2x 25kW
- Avalon Park 1x75kW (but can charge two vehicles), 3x 25kW; going live end of March
- Wainuiomata town centre: 1x75kW (but can charge two vehicles), 3x 25kW; going live end of March

Most of these are intended to enable for drivers to add some useful range while also visiting those sites. So in most cases, drivers will still need charging at home, to avoid them having to dwell at those charging sites for a long time. In addition to the above DC charging units, there are various AC charging stations, such as those at the Ricoh Sports Centre and others co-located with the DC units. www.plugshare.com has a useful overview of all stations available in Lower Hutt, and the wider Wellington region.

So overall, I consider that Lower Hutt is currently well placed to cater for EV drivers (particularly in relation to the current number of EVs), albeit there will be need for more hyper chargers sooner rather than later. I am aware that a couple of providers (eg ChargeNet) are looking at potential sites to meet that demand.

Kind regards

Jörn Scherzer

(pronounce as "Yearn Shar-tza")
Head of Climate and Waste

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From: ^{s7(2)(a)} [REDACTED]

Sent: Thursday, 9 March 2023 6:10 pm

To: ContactHCC <contact@huttcity.govt.nz>

Subject: [EXTERNAL] Why is there 640 x less electric charging capacity than fuel in Lower Hutt?

There are 16 fuel stations in the Hutt Valley (see google), with 8 or more bowsers for fuel. 128 bowsers. There are 2 x 50kw charging points. (Less than 50kW doesnt count for reasons which will become obvious).

Filling a petrol car takes about 4 minutes.

An Electric car (64kw) takes about 40min. Visitors must use these...

Therefore The relative capacity , petrol to electric charging, is 128/4 compared to 2/40.

Or petrol has 640 x electric refueling capacity.

25kw charging means a queue twice as long, wait twice as long. Not 8 minutes, rather 2-3 hours. Nope.

I find it very difficult to use an electric car here for this reason. Shannon has the same capacity, with 100x few people. Bulls, Taihape, Mangaweka have about the same capacity as Lower Hutt. How can this be?

Is there a plan to do anything in this regard, or should I go back to petrol?

Kind regards,

Richard Brathwaite.