

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** M192302 FW: What to do about transport - a view  
**Date:** Thursday, 25 July 2019 2:13:36 PM  
**Attachments:** [image001.jpg](#)

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Tena koe e BJ

Thank you for your email of 15 July 2019 regarding New Zealand's ability to support ourselves.

You may be aware that the Minister recently announced two initiatives for public consultation (a Clean Car standard and a Clean car discount). Information about these can be found on the Ministry of Transport's website at:

<https://www.transport.govt.nz/multi-modal/climatechange/electric-vehicles/clean-cars/>.

As part of the development of this strategy, your email will be forwarded to the Ministry of Transport as a submission, I think they may find value in the information you have shared.

Your email will also be provided to the Minister for her information.

Nga mihi



**[REDACTED] Hekeretari Matua | Office of Hon Julie Anne Genter | Associate Minister of Transport**

Level 6.C Bowen House | Parliament Buildings | Wellington | New Zealand

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**From:** [REDACTED]  
**Sent:** Monday, 22 July 2019 12:03 PM  
**To:** [REDACTED]  
**Subject:** FW: What to do about transport - a view  
**From:** Bj Chippindale [REDACTED]  
**Sent:** Monday, 15 July 2019 12:15 PM  
**To:** [REDACTED]  
[REDACTED]

**Subject:** What to do about transport - a view

Hi Ms Genter

Long time green with some things to suggest and describe.

Every vehicle we have in NZ is built and maintained with parts from overseas. We are a very long way from our suppliers (just as we are a long way from our export markets).

When the climate destabilizes, as it is starting to go, the prices of everything we import will go up *if we can find a supplier at all*.

For the good and security of the country we have to consider our ability to support ourselves in a vastly disordered and disorganized world.

The electrification of rail is an excellent start.

Electrified **freight** follows and we have the ability to automate and route freight units of 3 or 4 railcar units.

Build those units here.

They can be used to carry freight, or piggyback electric vehicles of more limited range, with the ability to more fully utilize rail infrastructure that spends way too much time without any rail cars on it.

This will however, require reductions in the number of our level crossings and other infrastructure. It can take a lot of long haul trucking off the road.

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Passing that, we have a the question of where our electrical motors and generators are built. Where our bearings come from.

Where our glass comes from.

Where our rubber and tires come from.

So we can build the *entire* rail car.

We need to have at least a small capacity for everything, not necessarily to compete with a factory in China, but to bootstrap our industry should that factory no longer be able to supply us.

This makes those things "research" facilities, or educational facilities.

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Our resources are different from most places. We should play to our strengths. We have a great deal of wood. Why not build a plant to make this ?

<https://www.nature.com/articles/nature25476>

Then use it to make a simple electric vehicle, entirely here?

Perhaps using this, using Aluminium (which we have access to) rather than the batteries.

<https://phys.org/news/2018-06-army-nanogalvanic-aluminum-powder-discovery.html>

This is of value to future generations in all instances but one.

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This isn't a complete answer for New Zealand of course. We have farmers who need tractors that work, have the ability to exert massive torque and operate independently of the grid. Can we do it? In my opinion we can. The solutions could be unique to NZ. In our isolation, this does not matter.

There is one possibility that gets us away from the need for all this, and it has to do with the Chinese developments of Pebble Bed and Molten-Salt nuclear reactors. The Pebble Bed reactors can (and may already be planned to) replace the boilers of any supercritical coal powered generators. The Molten Salt reactors can replace the engines of cargo ships and other electrical plants.

This makes it possible that China can and will reduce its CO2 footprint far more quickly once it has perfected its pebble-beds and that the carbon cost of shipping on their bottoms will disappear - greatly reducing the difficulty of distance.

Understanding the possibilities is worthwhile. I doubt that much of this can be done, but having ideas that I never communicate guarantees that none of them will be.

regards

BJ Chippindale

( Jan Logie is my local rep )

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