



# **Transitioning to a low carbon future**

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# The transition to a low carbon future

There are risks and opportunities for all stakeholders as NZ makes the necessary transition to a low carbon future and reduces reliance on fossil fuels

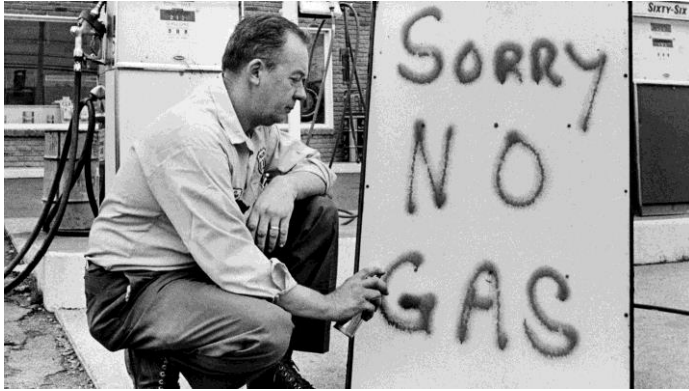
In that context,

- What does the Ukraine war mean for the pace of global transition?
- How does Z Energy move from being in the middle of the problem to being at the heart of the solution?



- WTI crude as traded on NYMEX
- Inflation adjusted, i.e. 2022 US dollars
- Grey bars indicate global recessions
- Sourced from [Macrotrends](#) for the period to June 2022

# One of these things is not like the others



1973



1979



1990

2022



2008



## The usual response

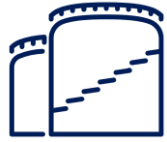
- Tensions abated
- Prices fell
- People forgot
- Governments turned to other priorities
- Global dependence on oil and gas kept rising

## What's different this time

- Aggressive sanctions continue on Russian oil and gas
- Europe getting confident they can replace Russian supplies
- What really matters is whether the West can lower its dependence on fossil fuels altogether

# The EU is the first domino

- Already had plans to slash emissions 55% by 2030
- New plans to accelerate the shift away from Russian gas
- Europe's plans are mostly already written into binding laws
- Europe is now effectively speeding up the exit from oil and gas
- Backed by big spending on infrastructure and R&D
- Globally, there are vast pools of available private capital



## Scale in Infrastructure

Z has terminal infrastructure and retail assets across all regions of New Zealand

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## Customer reach

Market leading position in both B2C and B2B channels, primarily through direct customer relationships rather than through third parties

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## Capabilities

Core capabilities in managing a downstream oil business is now supplemented with growing capability in digital and customer experience (CX)

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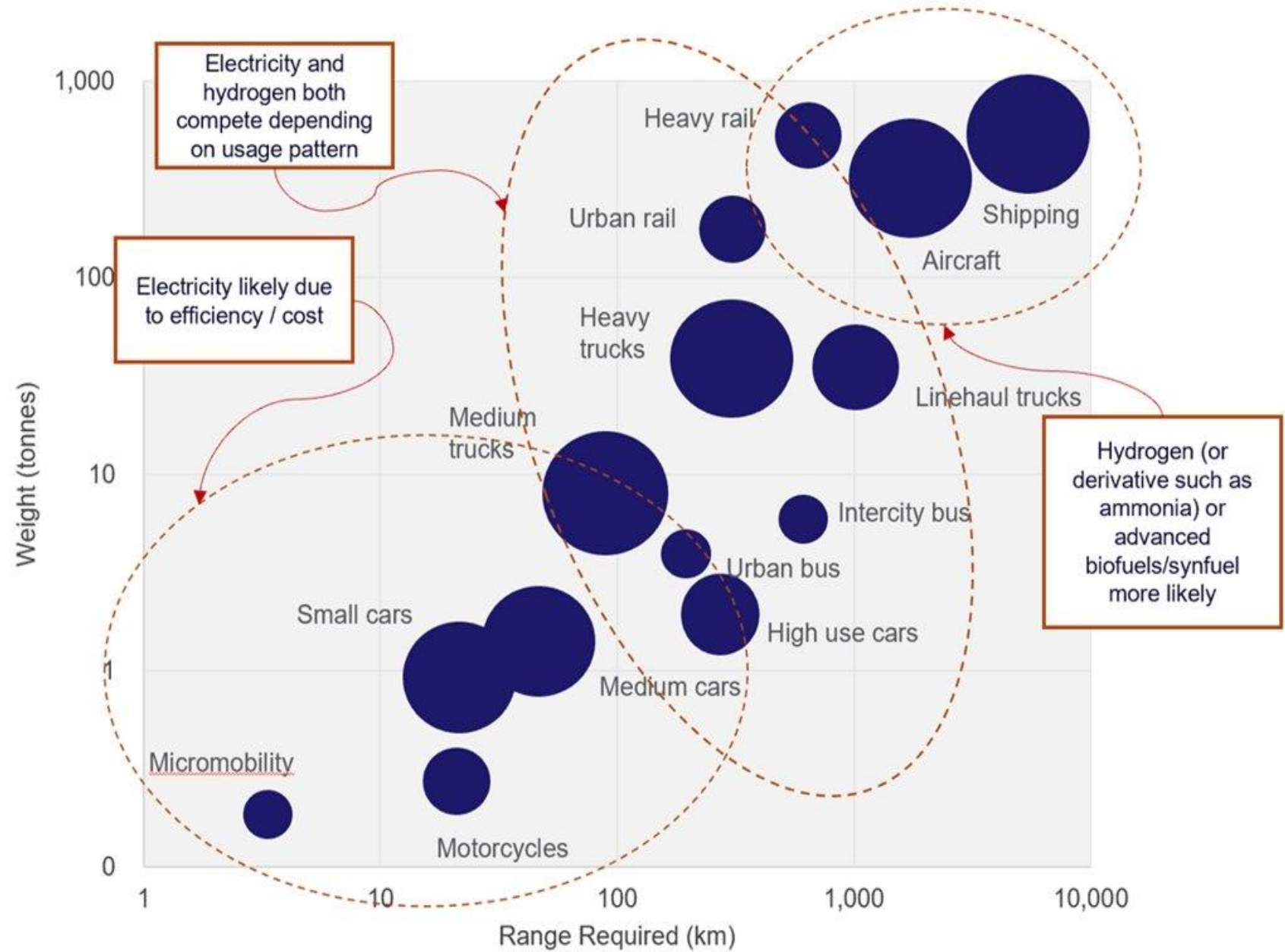


## Brand

Z is an iconic Kiwi brand that has potential to extend beyond fossil fuels

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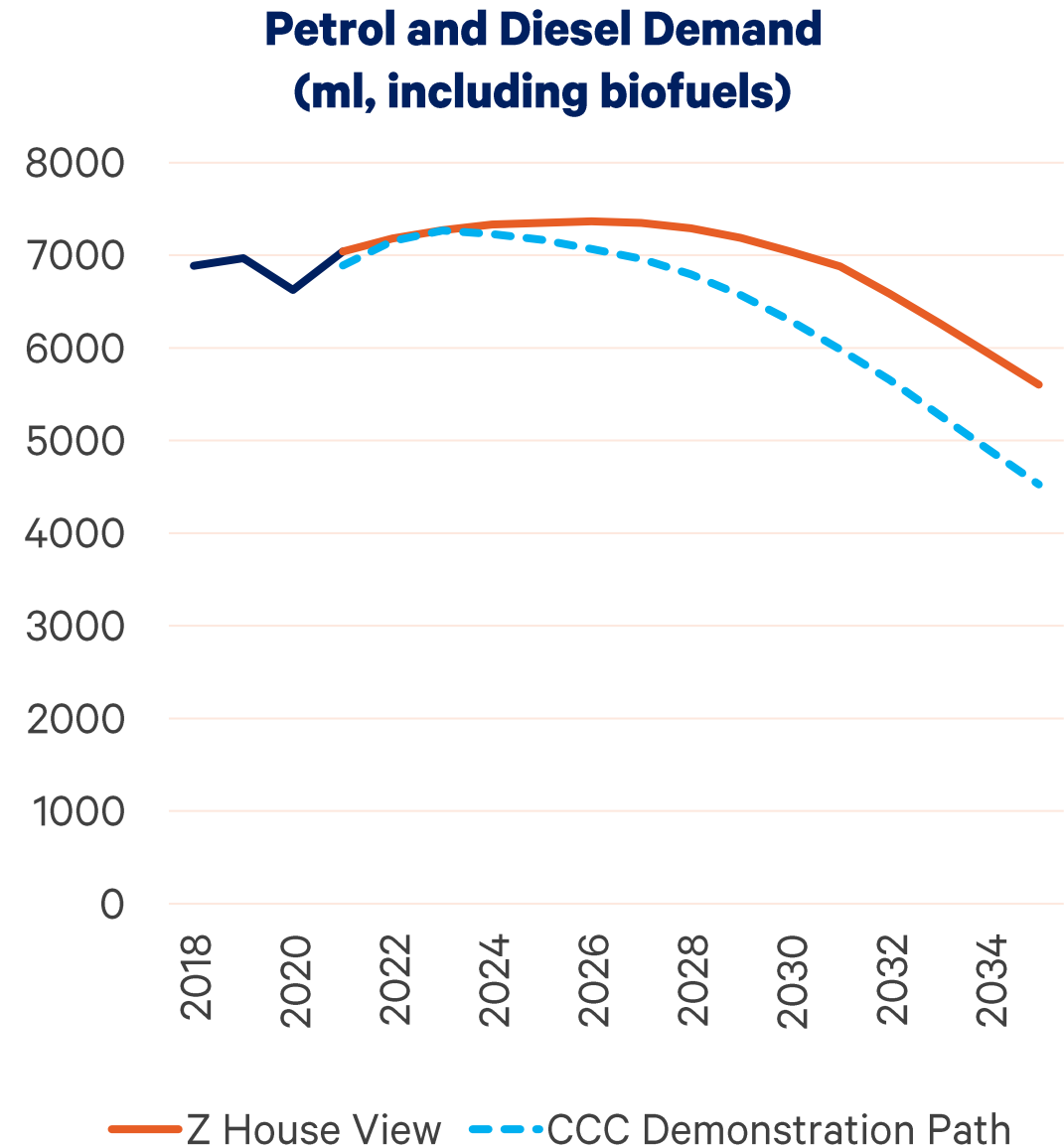




Indicative only: Bubble size indicates relative energy use  
Source: Z Energy



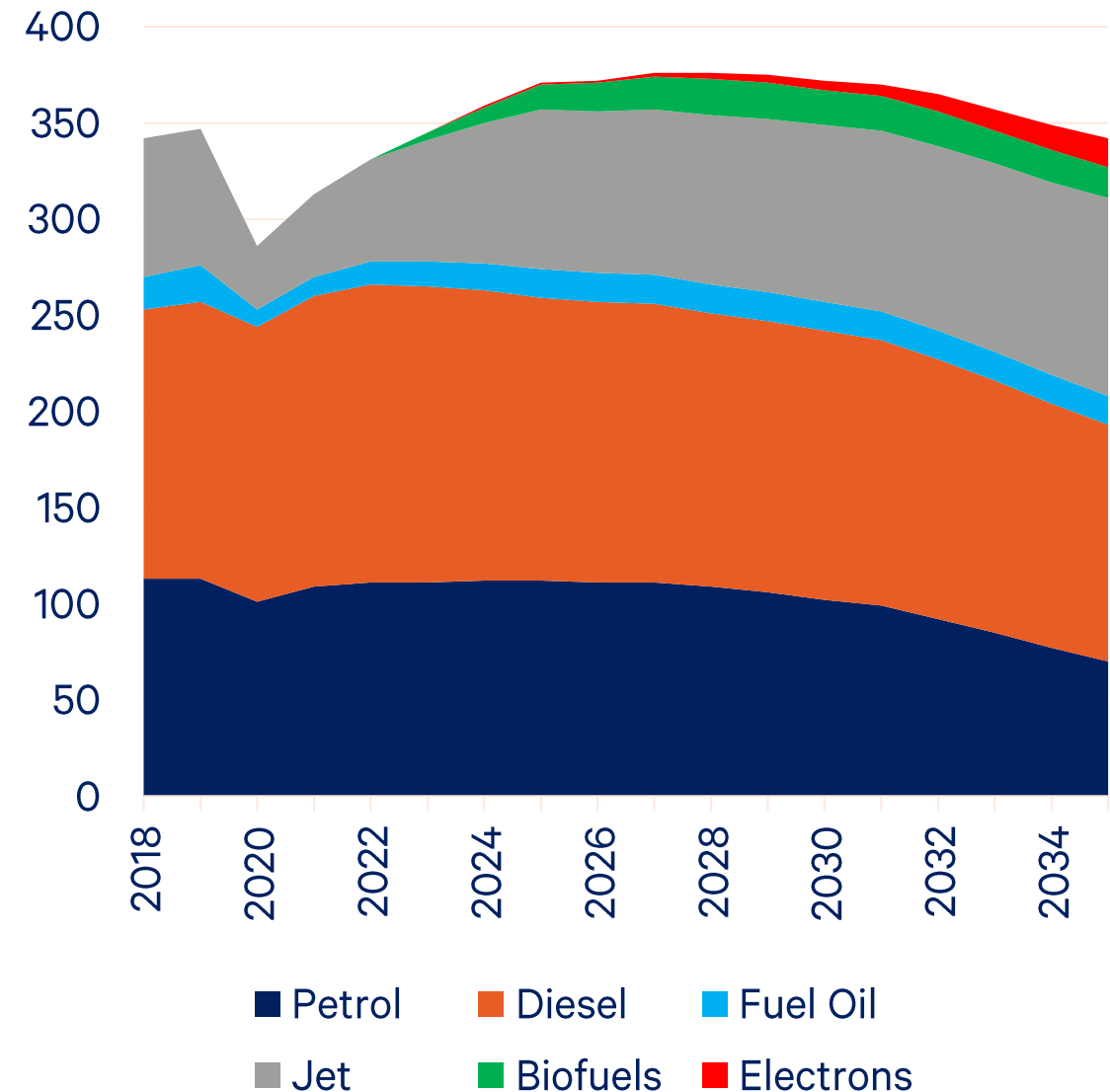
- Fuel demand model enables detailed in-house volume modelling, sensitivity analysis and test scenarios
- Three key questions have been asked:
  - What is the total land transport task for NZ?
  - How will the task be delivered?
  - What is the resulting fuel requirement?
- Identified nine key drivers of demand for transport fuel and formed a view relative to the Climate Change Commission’s “Demonstration Path” scenario
- Published as [The Future of Fuel Demand](#)



Key Driver	Z's Change to CCC model assumptions
Climate change policy for transport	<ul style="list-style-type: none"> <li>No hard ICE ban</li> <li>Feebate modelled to be fiscally neutral during 2022-2028</li> </ul>
Customer adoption of EV's	<ul style="list-style-type: none"> <li>Bass Diffusion (technology adoption methodology)</li> <li>2035 light passenger vehicle (LPV) fleet EV 36% to CCC's 38%</li> <li>2035 heavy passenger vehicle (HPV) fleet EV 2.4% to CCC's 14.6%</li> </ul>
Vehicle utilisation of EV's relative to ICE	<ul style="list-style-type: none"> <li>EV LPVs travel up to 30% further than ICE to CCC's up to +46%</li> <li>EV HGVs travel up to 9% further than ICE to CCC's up to +300%</li> </ul>
Freight task (tonne kms)	<ul style="list-style-type: none"> <li>3.5bn medium and heavy truck VKTs vs CCC 2.9bn (by 2035)</li> </ul>
Transport patterns – VKT/person, mode shift	<ul style="list-style-type: none"> <li>Reduced rate of mode shift by 30% following Auckland Transport's assessment of what is achievable</li> </ul>
Fuel efficiency standards/vehicle improvement	<ul style="list-style-type: none"> <li>None</li> </ul>
EV battery price path	<ul style="list-style-type: none"> <li>LPV capital cost parity (excluding feebate) one year earlier than CCC</li> </ul>
NZ market EV pricing and availability	<ul style="list-style-type: none"> <li>Parity one year earlier in 2029 to CCC's 2030</li> </ul>
Fuel/electricity pricing and taxes	<ul style="list-style-type: none"> <li>+5cpl in 2026 and +10cpl in 2030, whereas CCC assumed flat fuel prices</li> </ul>

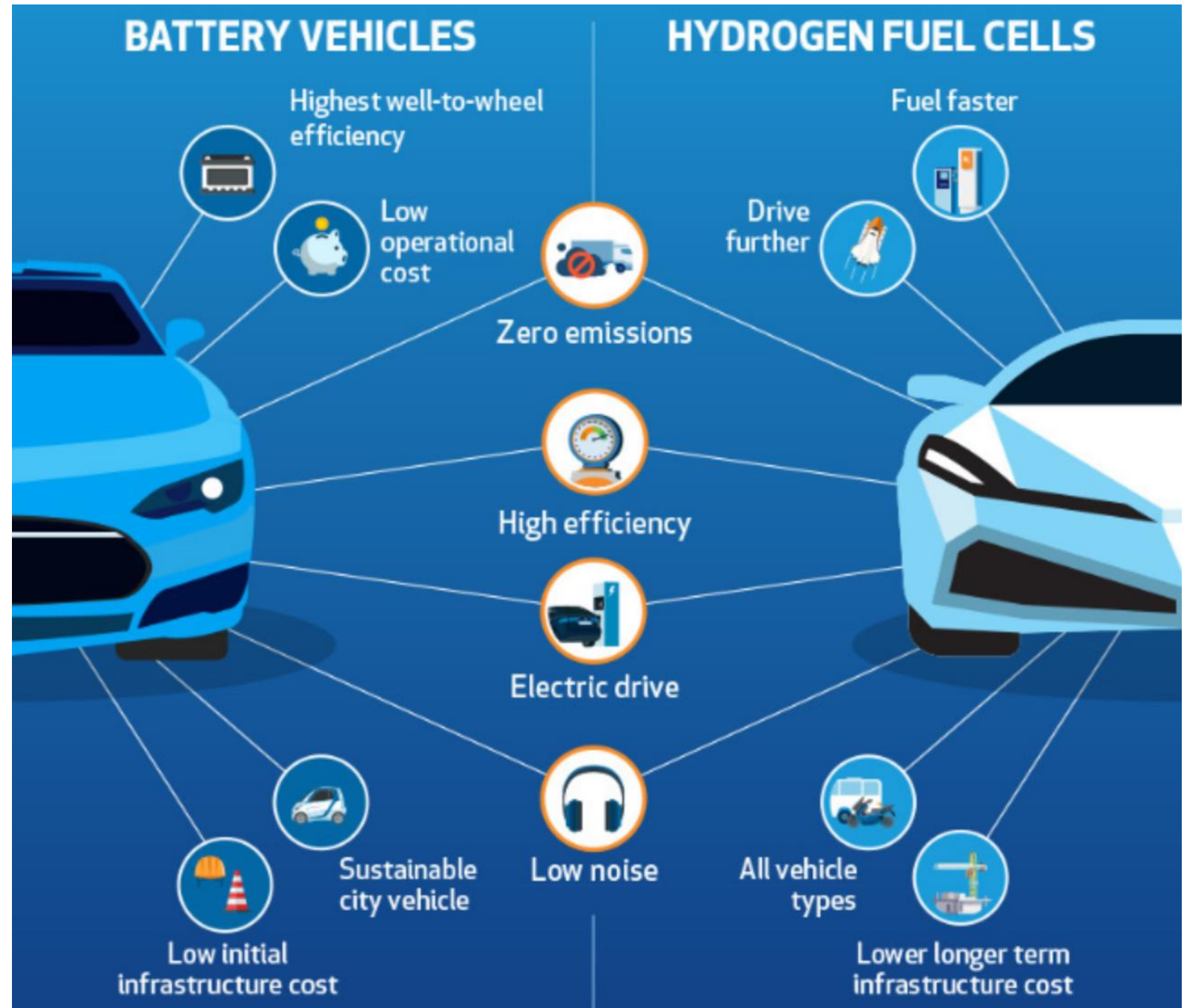
- House View on transport fuel forecasts (from 2021 to 2035) vehicle kilometres travelled (VKT) to be +15% for light passenger and commercial vehicles and +23% for medium and heavy trucks
- Petrol volumes are -36% and diesel volumes are -8% (including biofuels) over the same period
- Electrons used in electric motors for transport are ~3x more efficient than fossil fuels used in ICE (as PJs)
- Jet fuel likely to may be substituted by Sustainable Aviation Fuels (SAF)
- Hydrogen has been excluded from current forecasts

**NZ Transport Fuel Demand plus transport electrons (PJ)**



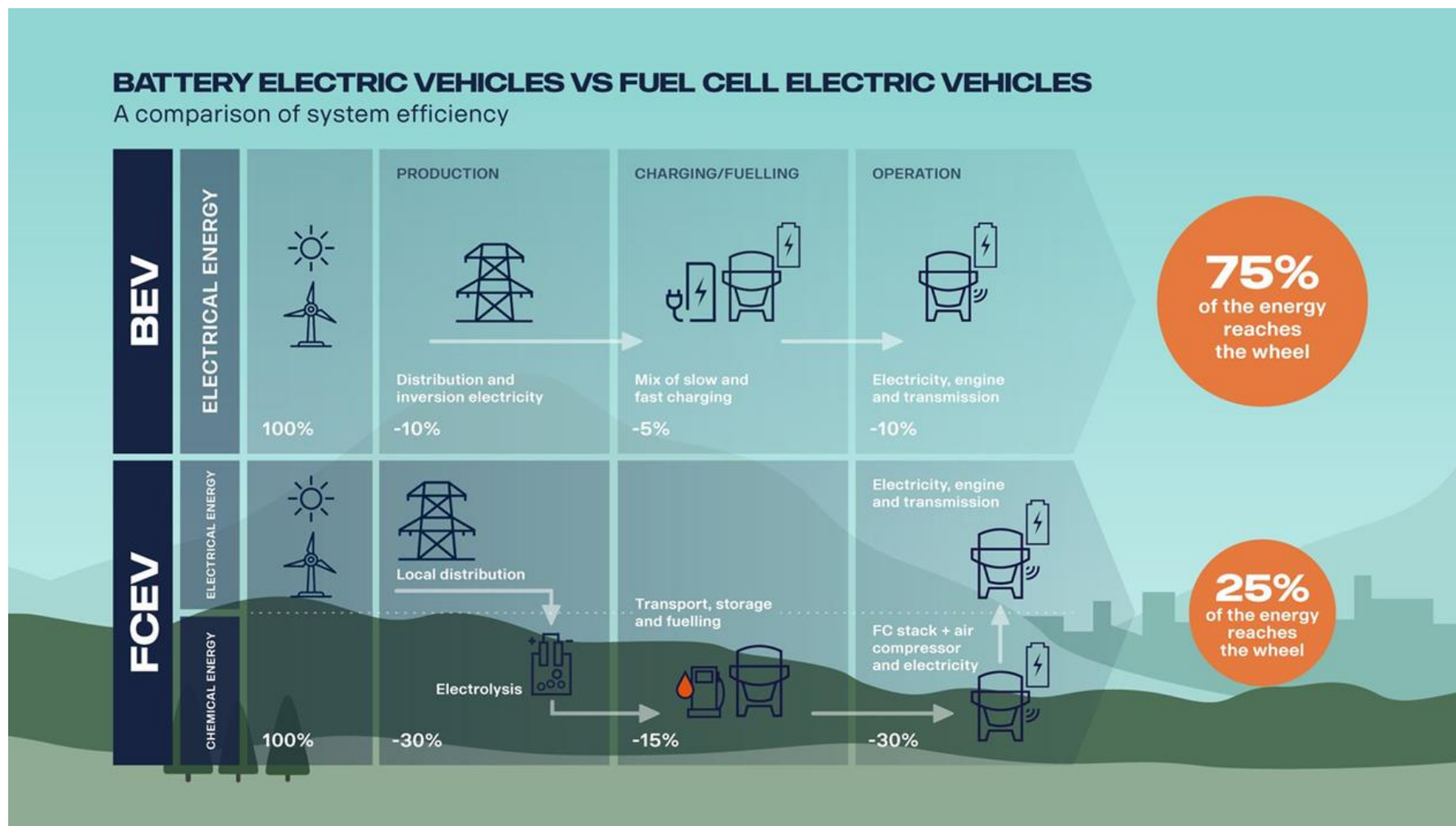
# FCEV v BEV

The same, but different



# FCEV v BEV

The same but different, mostly in system efficiency as 75% of the energy reaches the wheel in BEV compared to 25% for FCEV







# Moving Waiata

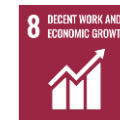
The story behind the story.

ZEN0014-BTS\_Conf\_DISPATCH

## Goals

### Empower Communities

We will actively support local communities in the locations where we operate, enabling more New Zealanders to live the lives they value and empower the young people of Aotearoa to reach their full potential.



### Restore Nature and Wellbeing

We leverage our scale and unique capabilities to foster restorative and regenerative actions that have a positive impact on communities, nature, and inter-generational well-being.



### Lead Transition

We will take bold action in response to climate change to reduce our own impact, work with our customers, suppliers, and partners to reduce theirs and provide solutions that will enable New Zealanders to join us on the path to a low carbon future.





## Outcomes

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Our operational emissions are reduced in line with the Paris Agreement to limit warming to 1.5 degrees Celsius – science aligned target of 42% reduction by 2030

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More of our customers are using low carbon products and services

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Publicly disclose decision-relevant information about our climate-related risks and opportunities

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## Focus Areas to 2025

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- Implement ongoing emission reduction initiatives
  - Finance voluntary climate mitigation for unavoidable emissions
  - Support our employees to reduce their emissions
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- Electric Vehicle Charging Infrastructure
  - Mobility services
  - Retail electricity, distributed energy and storage
  - Sustainable biofuels
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- Measure and publish our carbon footprint
  - Assess our climate related risks and opportunities, incorporating them into strategy, risk management and financial planning
  - Disclose information in accordance with NZ's climate standards
  - Update and improve our analysis and disclosures
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## Our four-year TCFD roadmap

	FY20	FY21	FY22	FY23
<b>Governance</b>	<ul style="list-style-type: none"> <li>• Gap analysis completed</li> <li>• Internal alignment achieved</li> <li>• Board approval</li> </ul>			
<b>Strategy</b>	<ul style="list-style-type: none"> <li>• BEC Scenarios used to inform strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Scenarios expanded to include a 2 degrees Celsius and one other comparison scenario</li> </ul>	<ul style="list-style-type: none"> <li>• Climate scenario analyses integrated into financial modelling and informs strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Climate-related risks and opportunities quantified, and financial impacts identified</li> </ul>
<b>Risk Management</b>	<ul style="list-style-type: none"> <li>• Approach to climate risk management documented</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative risk assessments identified physical and transitional climate-related risks</li> <li>• Climate risks integrated into risk management processes</li> </ul>	<ul style="list-style-type: none"> <li>• Climate-related risks and management process reviewed for effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Quality assurance of climate risk management and financial disclosures</li> </ul>
<b>Metrics and Targets</b>	<ul style="list-style-type: none"> <li>• Carbon targets integrated into business planning</li> </ul>	<ul style="list-style-type: none"> <li>• Climate metrics and targets under review and agreed</li> </ul>		

### Key



Complete



In progress



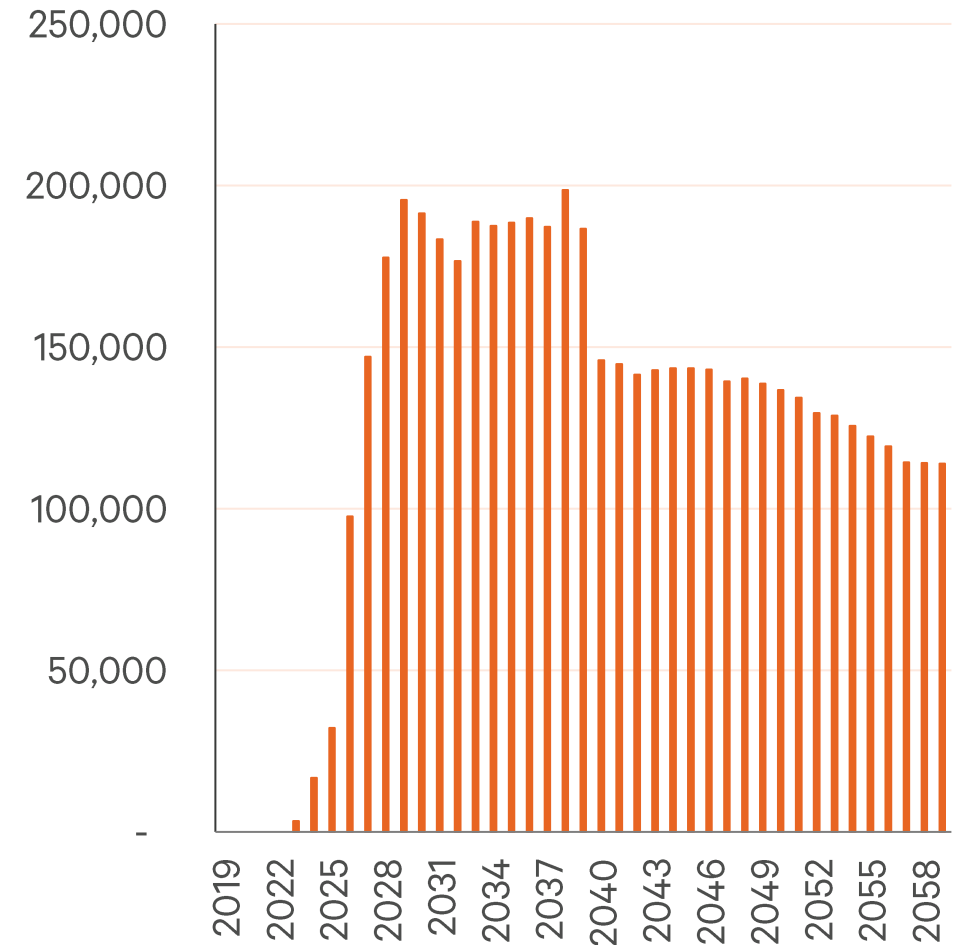
Planned

Note: TCFD Index can be found on pages 84–85.

# Dryland Carbon

- A carbon forestry operation designed to help NZ meet its climate change commitments through forestry on land where trees are the best use of land
- A preference for rotation forestry and for partnerships with landowners
- Z has committed \$45m to date
- Investment economics assumed an effective ETS price (NPV) of \$20/tonne to deliver an acceptable level of return
- From 2026 onwards, 1.3% of Z's forecasted obligation, growing to 3% in 2030
- Just committed a further >\$50m to another investment round

## Z's Distributable NZUs



# A final word

