

DEMYSIFYING ELECTRIC CAPITALEQUIPMENT FROM A CUSTOMERS PERSPECTIVE

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V O L V O



SAFETY MOMENT



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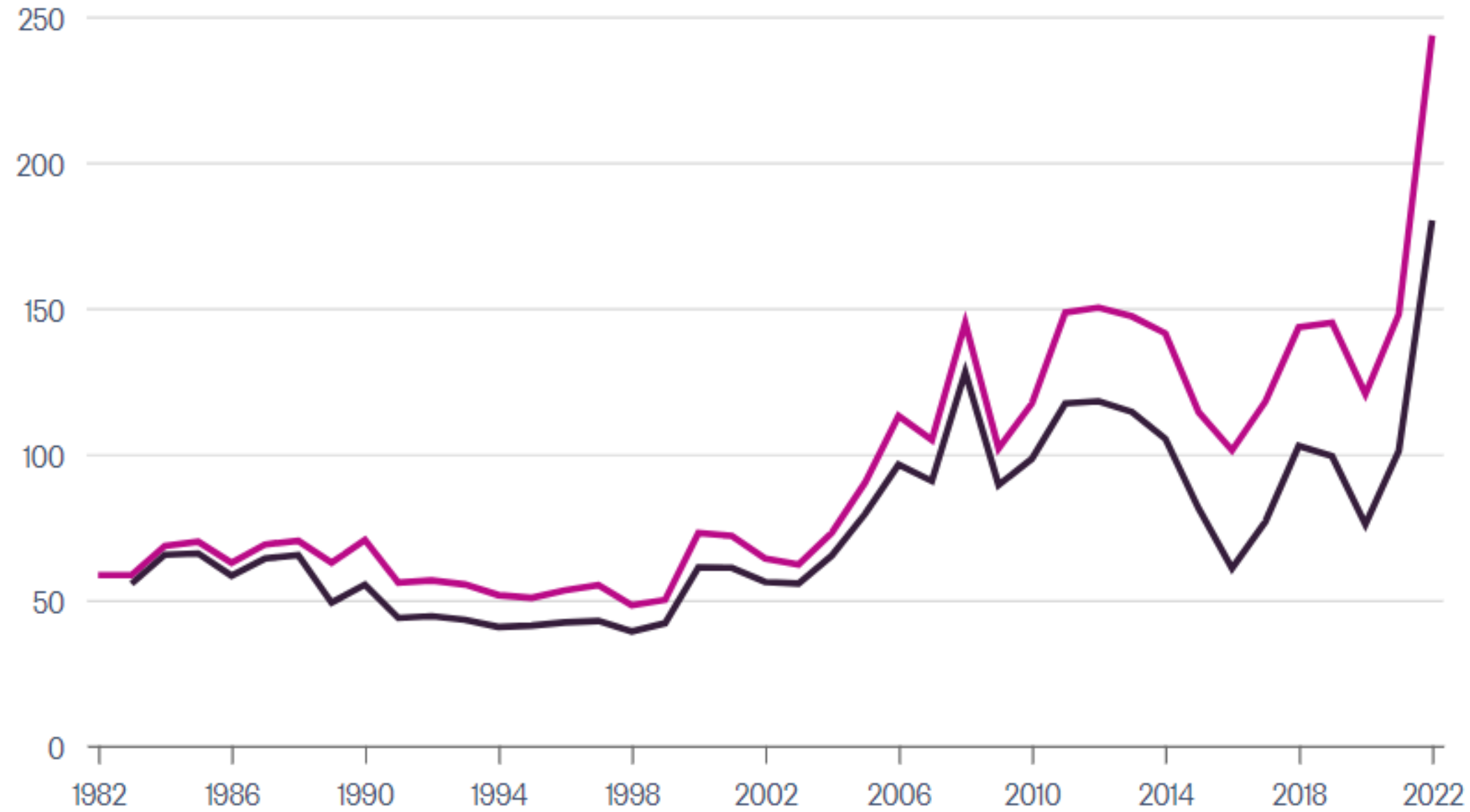


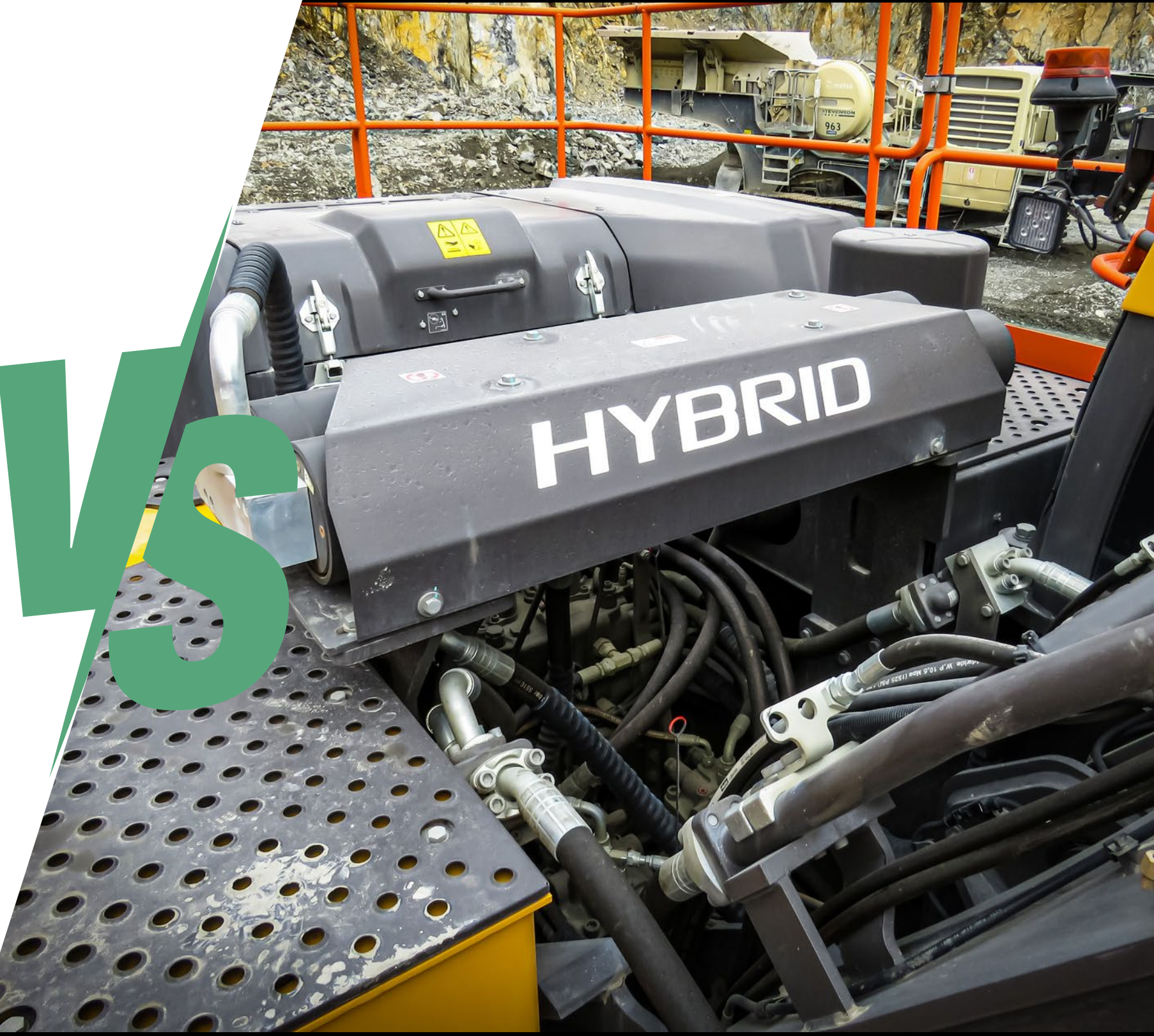


Nominal average prices of diesel in New Zealand

By type, 1982-2022, NZ cents per litre

Provider: Ministry of Business, Innovation, and Employment





VS



15 fuel burn reduction (per hour)



10% productivity increase



17% improv. fuel burn per tonne



TDX

TOITŪ



ISO 14064-1
ORGANISATION

INTRODUCING
THE VOLVO
ELECTRIC JL120
LOADER
PILOT...





WAYNE RICHARDSON

FULTON HOGAN
RELIABLEWAY

BACKGROUND ON THE TRIAL

- Since December, Reliable Way has been working with Volvo distributor TDX to test the Southern Hemisphere's first medium-sized (20 tonne) fully electric Volvo loader.
- Reliable Way is building quite a track record in electrification – in late 2022 they introduced the Southern Hemisphere's first Keestrack electric crusher and a 30 tonne Hybrid Volvo EC300 excavator.

KEY FINDINGS SO FAR

- Quieter, more comfortable and more responsive.
- Gear changing is smoother and faster, particularly under full load.
- With little or no need to change standard work schedules depending on the demand due to better than anticipated battery life and energy efficiency.
 - Full charge 5-9 hr working hours
 - 240 Kw Fast charger can put 85 % SOC back into the machine an hour.

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KEY FINDINGS SO FAR

- Same power as the diesel equivalent
- Now using a larger (3.8m³) bucket from the 3.5m³ bucket they started with.

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ENERGY COST SAVINGS

JL120 hours worked between December 2023 and 31 April 2024	548 hours	
Cost of electricity used by the electric JL120	\$ 3,247.88	FIELD ST CHINA
Equivalent diesel cost for a L120H diesel loader @\$ 1.50 per litre @\$ 2.00 per litre	Effective / equivalent diesel cost for the period \$ 9,158.40 \$ 12,211.20	Effective saving (electricity over diesel) 64.5% 73.5%

NB. Electricity and diesel prices fluctuate and reflect individual companies' commercial arrangements. The energy cost is also only one financial consideration in moving to electrification. The trial was held during the summer – colder winter conditions tend to reduce the performance of battery-driven equipment. The savings will depend on the particular application – quarry work, for example can be more power intensive than a RAP plant.

OTHER CONSIDERATIONS

- Cost of machine
- Costs of installing a charging station
- Site's existing electrical capacity
- Distance from existing mains electricity
- Number of machines using it for recharging (utility)

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NEXT STEPS

- Reviewing the workload of the machine. The aim is to push the pilot machine as hard as we can to expose any weaknesses or faults.
- At the end of the Demo this JL120 Loader will return to Volvo JTC for tear down and inspection to verify long-term wear and life span trends.
- The electric JL120 pricing will be in the market at the end of next month
- Unique offering to deal with the capital costs and residual value.
- It is not for everybody, but the technology does work.

THANK YOU