

## *Release*

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Stock Exchange Listings NZX (MEL) ASX (MEZ)

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### Meridian to build Ruakākā Battery Energy Storage System

15 December 2022

Meridian Energy will begin construction of the Ruakākā Battery Energy Storage System (BESS) in the first quarter of 2023. The project will construct New Zealand's first large-scale grid battery storage system, providing Meridian with a versatile North Island asset, situated south of Whangārei.

Meridian Energy Chief Executive Neal Barclay says the company's approach to a battery storage system has evolved during its development phase.

"A North Island battery was originally part of our response package to Rio Tinto's termination of its electricity contract for the Tiwai Point Aluminium Smelter. As we developed the opportunity, the BESS business case proved to be an economic investment irrespective of Rio Tinto's future in New Zealand."

Mr Barclay says the BESS offers multiple new revenue streams, providing the ability to load shift between price periods and to participate in the North Island reserve electricity market.

"As intermittent renewable generation increases in this country, the Ruakākā Battery Energy Storage System will help manage supply fluctuations through a low carbon footprint, reducing this country's reliance on fossil fuels," Mr Barclay says.

"We have a bold vision for Ruakākā, with a grid-scale solar farm planned to further speed up our transition to a productive low carbon economy. The shared infrastructure provided by the BESS will significantly improve the economics of the future solar farm," adds Mr Barclay.

Global battery specialist Saft will provide integrated battery supply, installation, commissioning and operational services for the Ruakākā BESS. Meridian Energy will manage a multi contract delivery approach, with project completion expected in the second half of 2024.

#### **ENDS**

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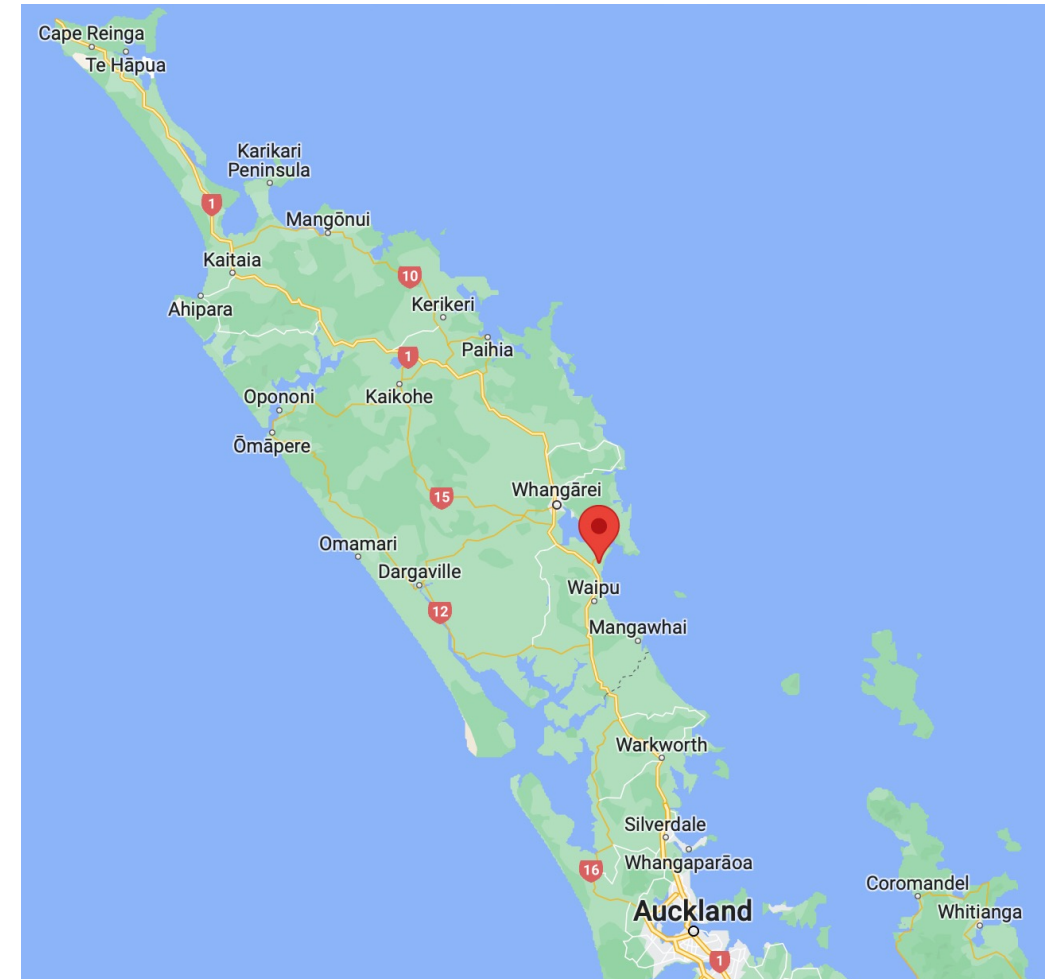
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# RUAKĀKĀ BATTERY ENERGY STORAGE SYSTEM



# Today's announcement

- Meridian has committed to construction of the Ruakākā Battery Energy Storage System (BESS)
- NPV positive project that significantly improves the investment economics of the stage two solar project
- Strategic location immediately adjacent to Transpower's 220kV Bream Bay substation
- Direct revenue from electricity price arbitrage and reserve market participation
- Reduced price separation benefit to Meridian's portfolio



The BESS project is stage one of a two-stage project that anticipates the future construction of a 130MW solar farm

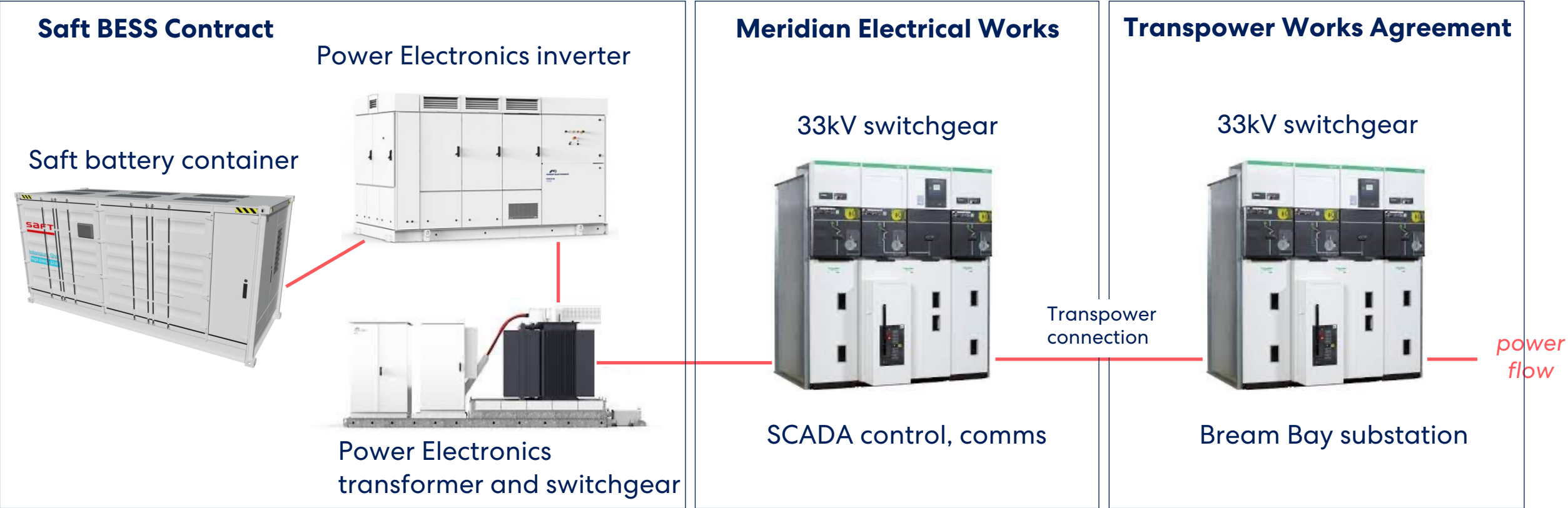
# Project overview

- BESS site is a 30 minute drive from Whangārei, located adjacent to Transpower's 220kV Bream Bay substation, Channel Infrastructure's fuel import terminal and Northport
- The balance of the land, along with additional nearby land, will be used for development of a 130MW solar farm
- A 'multi contract' approach will be used to deliver the project
- Bulk of the project capital cost is the battery contract with Saft
- Balance of plant delivers the civil and electrical infrastructure for the battery and provides the export path via a connection to Transpower
- Balance of plant also includes operations, maintenance and switch room buildings



# Project overview

- Four major contracts will be running in parallel: Meridian's civil and electrical works, Saft BESS contract and Transpower's grid connection works



**Meridian Civil Works**  
Including: site access, drainage, pad, BESS foundations, fencing, firewater



# Project specifications

100 MW peak and 200 MWh (2 hours) energy storage

3 hectare project site (land purchased in 2021)

Project completion in second half of 2024

**SaFT** Battery Energy Storage Solution (integrated supply, install, commission, operational services)

Shared infrastructure (switchgear, buildings) will reduce stage two solar project unit cost by ~\$20\MWh

\$186m capital investment, including contingency

\$20m - \$30m EBITDAF p.a. (average, low - high scenarios)

\$6m operating costs p.a. mainly transmission costs (connection, benefit-based investment and residual charges)

Up to \$35m revenue p.a. from price arbitrage, reserve market participation, indirect revenue

- Arbitrage means buying power at low price periods and selling at high price periods. This form of 'load shifting' will secure revenue, as well as providing support to the grid at peak times
- As the volume of intermittent generation grows, arbitrage will increasingly include operating in response to fluctuating output from wind and solar

- 6 second fast reserve (FIR) and 60 second sustained reserve (SIR) are procured by island and are co-optimised nationwide
- A BESS will operate and secure revenue from both the FIR and SIR markets in the North Island simultaneously alongside any arbitrage activity

- Increasing supply in the North Island reserve markets will increase HVDC transfers, with a corresponding reduction in North Island thermal generation
- Reduced separation between North Island and South Island prices will deliver energy margin benefits

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All currency amounts are in New Zealand dollars unless stated otherwise.