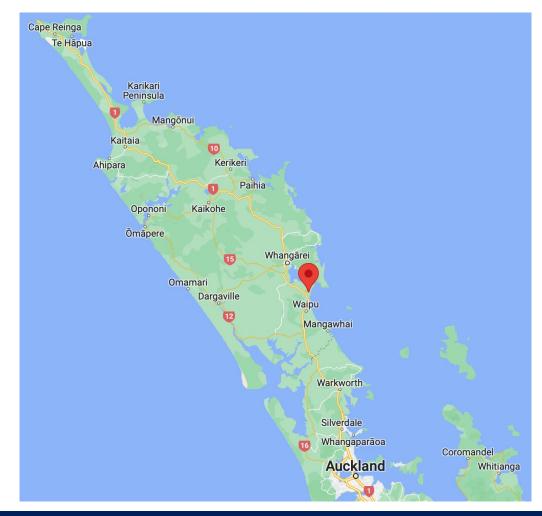
# **RUAKĀKĀ BATTERY ENERGY STORAGE SYSTEM**



**Dow Jones** 

## 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**

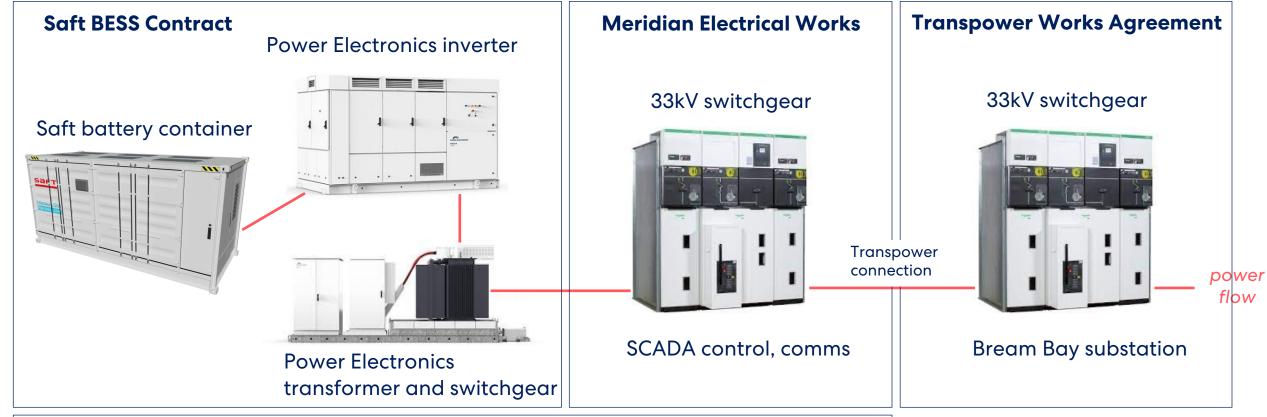
- BESS site is a 30 minute drive from Whangārei, located adjacent to Transpower's 220kV Bream Bay substation, Channel Infrastructure's fuel import terminal and Northport
- The balance of the land, along with additional nearby land, will be used for development of a 130MW solar farm
- A 'multi contract' 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** 

**Services** 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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