



# Grid-scale battery investment at Glenbrook

Contact Energy | July 2024



# Grid-scale battery investment to enhance Contact's renewable energy flexibility

## Contact has confirmed it will build its first 100MW grid-scale battery at Glenbrook

- The battery will provide Contact, and the New Zealand electricity market, with an important addition to renewable energy flexibility.
- The site, three hectares leased from NZSteel, is adjacent to Transpower's GXP at Glenbrook.
- It will be located closer to Auckland load than any other grid-scale battery project.
- Following a competitive tender process, Tesla's Megapack technology has been selected – a first for New Zealand at grid-scale.
- Consent has been granted by Auckland Council to operate for 35 years.



Image depicts battery megapacks, transformers, switchrooms, auxiliary facilities and access road at Glenbrook the site.



Auckland  
Glenbrook

Stratford

**Second consented site  
at Stratford provides  
future battery  
investment option**

# Increase in intermittent generation and market volatility sees a value shift to flexibility



## Electricity supply composition is changing

The New Zealand electricity market will increasingly be dominated by weather-dependent generation that is variable on a short-term, daily basis i.e. solar and wind generation.



## Future price volatility to be driven by increased reliance on intermittent generation

While recent price volatility has been the result of gas market constraints, future volatility will also be driven by increased reliance on solar and wind generation. This trend is emerging now.

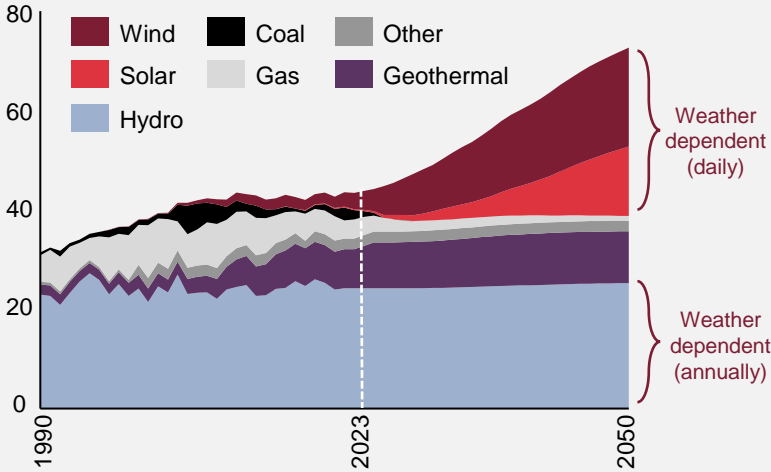


## Value shift to flexibility

Value will shift from intermittent renewable generation to the owners of flexible, renewable storage.

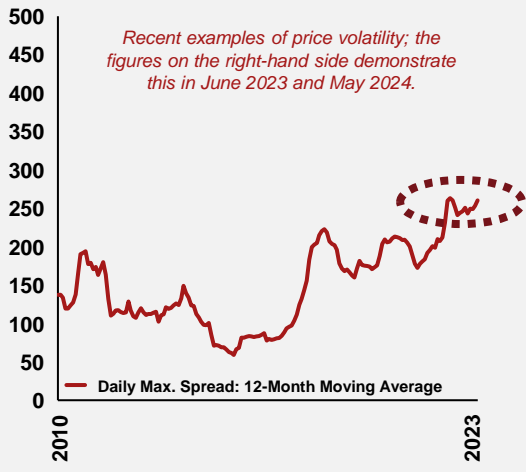
### Forecast generation mix (TWh)

Climate Change Commission<sup>1</sup>



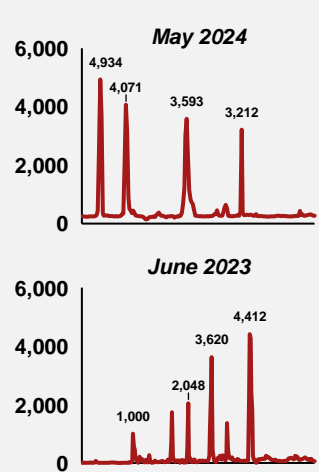
### Spread at Otahuhu (\$/MWh)

Trends in the volatility of wholesale prices



### Price at Otahuhu (\$/MWh)

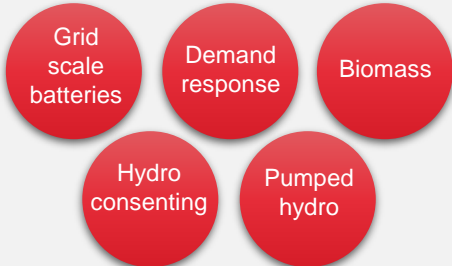
Wholesale prices per trading period



*“Flexibility in supply and demand becomes the ‘secret sauce’ .....as the system shifts towards renewable supply.”*

EA’s Market Development Advisory Group

### Sources of new renewable flexibility



<sup>1</sup> Climate Change Commission Demonstration Path (April 2023). Aligns with New Zealand’s emissions targets.

# Battery investment metrics are compelling, supported by a range of strategic benefits

## Battery investment key metrics



## Sources of value

- ✓

Participation across physical, reserve and frequency-keeping markets
- ✓

Supports retail shape and can support price cap and virtual battery products for tier 2 retailers
- ✓

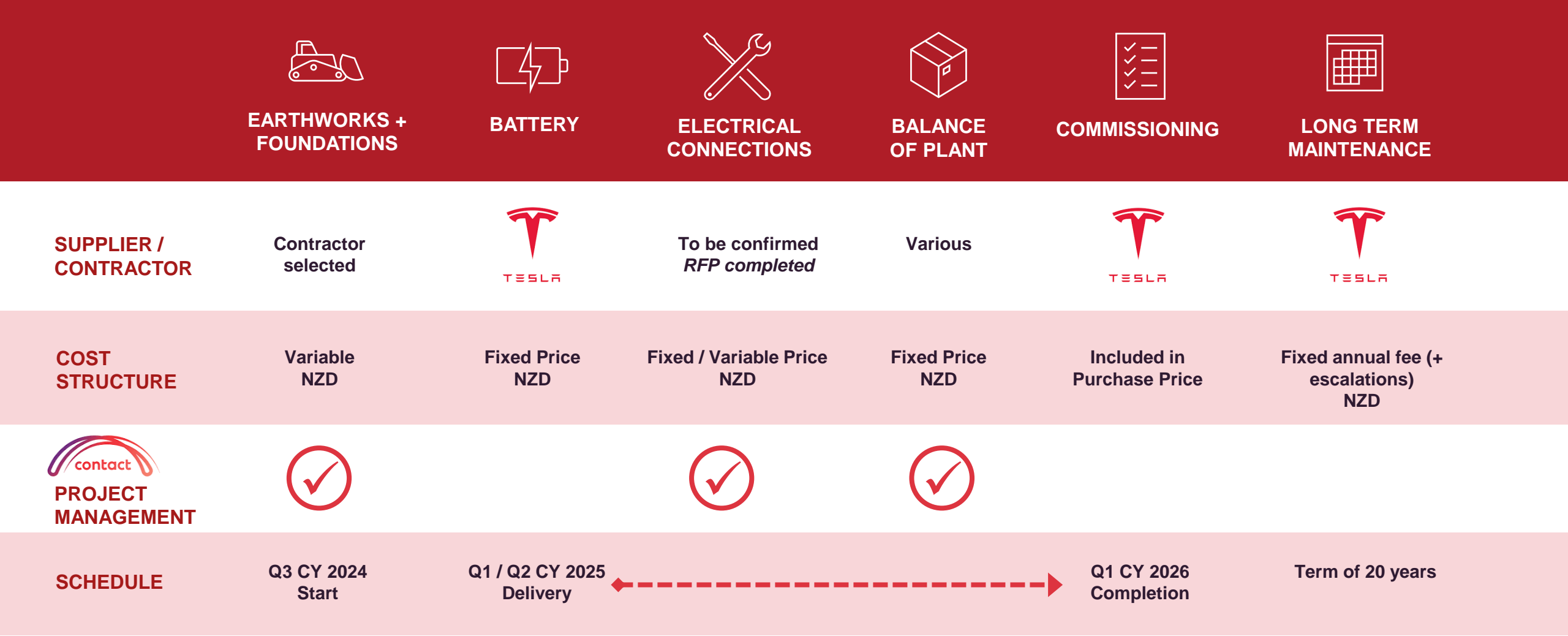
Expansion option with Tesla to increase capacity to 130 MW / 260 MWh
- ✓

North Island location, close to retail load, reducing North/South Island price separation
- ✓

Reduces reliance on gas peakers by offering intra-day peaking
- ✓

Supports new wind and solar on an intra-day and intra-week basis

# Project delivery approach



← End-to-end, overall project management to be provided by Contact →