

# New Zealand flywheel energy storage project investment







#### **Overview**

#### What is the NZ battery project?

The NZ Battery Project was set up in 2020 to explore possible renewable energy storage solutions for when our hydro lakes run low for long periods. A pumped hydro scheme at Lake Onslow was one of the options being explored. The Government stopped the Lake Onslow investigations in late 2023.

Will Infratec build a new energy storage system in New Zealand?

Infratec general manager Nick Bibby said that the storage system is "the first of its scale to be built in New Zealand". As reported by Energy-Storage.news, the two companies completed their assessment of the project in late 2021, selecting a site in Huntly, a town in the Waikato District.

What can New Zealand do to improve energy resilience?

WEL Networks and Infratec said they are actively pursuing other opportunities to enhance resilience and increase access to renewable energy in the region. New Zealand currently has a couple of 1MW battery storage systems in operation, but certainly nothing on the scale of the BESS in Huntly.

Which large-scale battery energy storage systems are coming to New Zealand?

As a result, worldwide as well as in New Zealand, more and more large-scale Battery Energy Storage Systems (BESS) are announcing their arrivals. Let's take a look at a few examples: 1. WEL Networks + Infratec: 35 MW BESS.

Does New Zealand need flexible thermal generation?

e 1: Modelled 2035 thermal generation for the Renewable push scenarioTo deliver the flexible generation required, New Zealand needs a solution that can bala ce the trilemma of security, affordability, and environmental impact. An optimal solution would: Have suff ient storage capacity to be able to cover.



#### Why does New Zealand need 'flexible' energy?

has largely displaced thermal generation assets from baseload duty. As with other electricity markets around the world, the use of renewables means the market faces great exposure to climatic conditions – the amount of rain, wind, and sunshine in particular locations – and therefore New Zealand requires significant amounts of 'flexible'



#### New Zealand flywheel energy storage project investment



#### **Energy Storage Flywheel Market**

A single 20-ton flywheel rotor assembly for utilityscale storage requires specialized transportation infrastructure, with only 12 certified heavy-haul carriers operating in North America. During ...

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### <u>Eku steps in New Zealand with BESS</u> <u>project purchase</u>

Eku Energy, the battery storage platform of Macquarie's Green Investment Group (GIG), has acquired an energy storage project in New Zealand, a move that marks its entry ...

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### New Zealand progressing at pace towards a highly renewable ...

The Authority is working to improve the visibility of generation investment, as well as connections of large-scale load, battery energy storage systems, and projects in distribution ...

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#### Flywheel Energy Storage Study

This emerging technology evaluation project studied a particular Flywheel Energy Storage system. The FES System is a 25 kWh-capacity flywheel utilizing a steel rotor, low-loss ...

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Summary: New Zealand is embracing flywheel energy storage to optimize thermal power systems, reduce carbon footprints, and enhance grid stability. This article explores how this ...

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### Flywheel-lithium battery hybrid energy storage system joining ...

A hybrid energy storage system combining lithium-ion batteries with mechanical energy storage in the form of flywheels has gone into operation in the Netherlands, from ...



#### The Status and Future of Flywheel Energy Storage

Outline Flywheels, one of the earliest forms of energy storage, could play a significant role in the transformation of the electri-cal power system into one that is fully sustainable yet low cost. ...

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## Strategic Player in the Future of New Zealand Energy

6-10 month pathway to new gas production Restoration projects planned for low investment, quick pay-back opportunities - including new gas storage solutions

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#### **NZ Battery Project**

The NZ Battery Project was set up in 2020 to explore possible renewable energy storage solutions for when our hydro lakes run low for long periods. A pumped hydro scheme ...

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#### The need for energy storage: Firming New Zealand's ...

Zealand's energy security over the short, medium, and long term. This white paper presents the key findings of that analysis, including considering a long list of solutions for flex.





# Renewable energy investment opportunities in New Zealand, Invest New

Government-backed initiatives support wind development, energy storage innovations and smart grid modernisation, ensuring a future-proof investment landscape.

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### New Zealand's 'first grid-scale battery storage project' ...

Infratec general manager Nick Bibby said that the storage system is "the first of its scale to be built in New Zealand". As reported by Energy ...

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#### Top five energy storage projects in the UK

Listed below are the five largest energy storage projects by capacity in the UK, according to GlobalData's power database. GlobalData uses proprietary data and analytics to ...







### 100% renewable electricity grid explored with pumped storage ...

This analysis will mostly focus on a pumped hydro storage project at Lake Onslow in Central Otago, but will also include the assessment of smaller potential pumped storage ...

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### flywheel energy storage project capital investment

The Beacon Power Stephentown - Flywheel Energy Storage System is a 20,000kW energy storage project located in Stephentown, New York, US. The electro-mechanical energy ...

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### Renewable energy investment opportunities in New ...

Government-backed initiatives support wind development, energy storage innovations and smart grid modernisation, ensuring a future-proof investment ...

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#### Enel will put Amber Kinetics' long duration

Amber Kinetics flywheel. Image: Amber Kinetics Facebook page. Multinational utility Enel will assess the effectiveness of flywheels, having ...







New Zealand's 'first grid-scale battery storage project' in

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#### **NZ Battery Project**

The Authority is working to improve the visibility of generation investment, as well as connections of large-scale load, battery energy storage ...

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### The Rise of Grid-Scale Battery Projects in New Zealand

Through this plant, the companies aim to support NZ's journey towards the goal of 100% renewable by 2030. The unit will be able to store energy from a range of renewable ...



### Renewable energy investment opportunities in New ...

New Zealand is well-placed in the Asia-Pacific region, making it a key location for clean energy exports and green hydrogen production. Robust infrastructure ...

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#### New Zealand Flywheel Energy Storage Market (2025-2031)

New Zealand Flywheel Energy Storage Industry Life Cycle Historical Data and Forecast of New Zealand Flywheel Energy Storage Market Revenues & Volume By Application for the Period

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#### Construction Begins on China's First Grid-Level ...

The station consists of 12 flywheel energy storage arrays composed of 120 flywheel energy storage units, which will be connected to the Shanxi ...

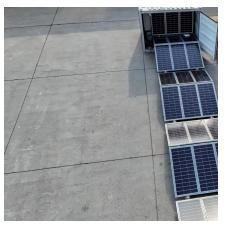
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### Applications of flywheel energy storage system on load frequency

Flywheel energy storage systems (FESS) are considered environmentally friendly short-term energy storage solutions due to their capacity for rapid and efficient energy storage ...

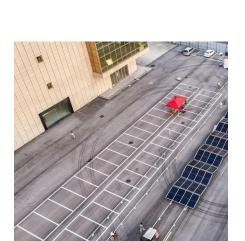




### The Rise of Grid-Scale Battery Projects in New Zealand

Through this plant, the companies aim to support NZ's journey towards the goal of 100% renewable by 2030. The unit will be able to store

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### The Rise of Grid-Scale Battery Projects in New Zealand

Grid-scale battery storage solves this problem of solar and wind intermittency, enabling the use of renewable plants for large sets of ...

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### RMP and Torus partner for 70MW of BESS, Flywheel in Utah

RMP and Torus have signed an MOU outlining a partnership and exploration of 70MW of demand response capacity using Torus' energy storage.







### Why NASA's Mechanical Battery Could Be the Future ...

NASA's Glenn Research Center developed a new flywheel-based mechanical battery system that redefined energy storage and spacecraft ...

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