## **Essen renewables New Zealand**



#### Do we still rely on non-renewable fossil fuels in New Zealand?

If we look at all energy consumed by users in New Zealand, we still rely on non-renewable fossil fuels for around 70% of our energy needs. These fossil fuels produce large quantities of greenhouse gas emissions when burned, with energy use responsible for over 40% of New Zealand's total greenhouse gas emissions.

Can New Zealand achieve 100% renewable electricity by 2030?

New Zealand should weigh its aspiration to achieve 100% renewable electricity by 2030against the potentially considerable costs associated with achieving the last 2-5% of the target. New Zealand does not yet have a long-term energy strategy in place. While work is underway on a strategy, it is not due for release until the end of 2024.

#### Why is demand flexibility important in New Zealand?

Enabling demand flexibility means that, in the future, New Zealand households and businesses can help to balance the electricity grid by reducing or increasing their energy use when there is more or less renewable energy available. This prioritises renewable energy use, and ultimately lead to a more sustainable and reliable electricity system.

Why are New Zealand's hydro lakes a major contributor to renewable generation?

"High rainfalltopped up New Zealand's hydro lakes over the winter months, making hydro a major contributor to renewable generation. Hydro generation was 60% of all electricity for 2022, up 4.4 percentage points on 2021," says Mike Hayward, Manager Markets, Digital, Data & Insights, at MBIE.

How much energy did renewables consume in 2022?

"Energy consumed from renewable sources accounted for 30% of the total final consumption in 2022, the highest value ever recorded." Mike Hayward said. Energy supply from renewables reached 44% in 2022, building off last year's record high of 40.8%. This is the highest since reporting started in 1990.

What are New Zealand's emissions budgets and emissions reduction plans?

In addition, the Act requires emissions budgets and emissions reduction plans (along with national adaptation plans). New Zealand's emissions budgets cover 5-year periods and are set 10-15 years in advance, after considering the recommendations of the Climate Change Commission.

Renewables can meet future demand. Still, by 2030 we can expect around 11.5 terrawatt hours (TWh) a year from the new solar projects, and around 10.1TWh from the onshore wind projects. In total, this is about half the ...

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Survey released ...

A report commissioned by the Electricity Authority Te Mana Hiko shows the amount of new renewable electricity generation that has been committed has almost doubled in 18 months. The Generation Investment Survey released today shows that there is now, based on annual output once built, 5,000 Gigawatt hours (GWh) of new generation committed.

New Zealand is fortunate to already have a high proportion of renewable electricity, which is currently over 80% of electricity production. However, due to the electricity system's heavy reliance on hydropower, its key challenge is coping with a "dry year", when hydro inflows are low.

The future of energy in New Zealand. With diverse renewable energy options, our country is well-positioned to transition to a sustainable, low-emissions energy system. New Zealand's energy-related emissions. Learn where our greenhouse gas emissions come from, and how we can reduce emissions from energy use. Demand flexibility - smart grid ...

It already delivers hundreds of jobs to regional New Zealand and can use fuels procured from within New Zealand." Renewables Johns said the company had a target of 95 percent renewable generation by 2035, which would be needed to electrify the economy and achieve zero-carbon goals by 2050.

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New Zealand"s electricity system is transforming to electrify New Zealand and reach net zero carbon emissions for 2050. The electricity market is shifting to more renewable intermittent generation (eg, wind and solar), with new and many technological advancements, distributed energy resources (eg, rooftop solar panels and battery storage), mass ...

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New Zealand"s wider renewable capacity continued to grow in 2022, with new records for renewable energy consumption. "Energy consumed from renewable sources accounted for 30% of the total final consumption in 2022, ...

New Zealand is transitioning to a highly renewable electricity system. This change will require increased and

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accelerated investment in new electricity generation to match demand growth and the retirement of thermal power plants.

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