SIMPSON GRIERSON

Energy outlook

October 2023

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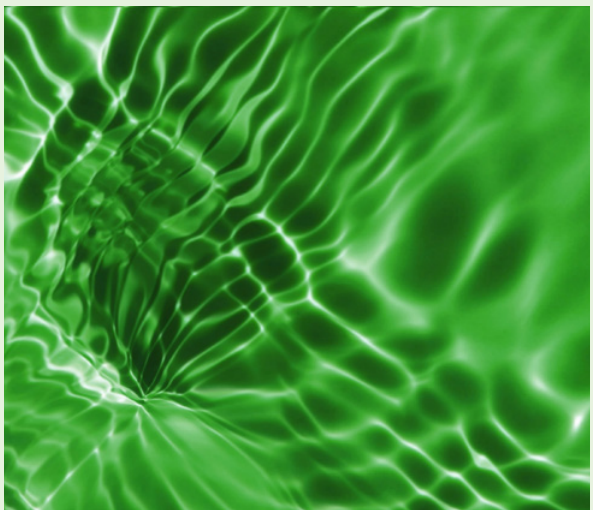


Welcome to Energy Outlook

Welcome to the first edition of Simpson Grierson's Energy Outlook, which coincides with an exciting time in New Zealand's energy transition. As we continue to push towards achieving our international and domestic emissions targets, there is an opportunity for a newly formed Government to grasp the opportunities ahead. We expect the heightened levels of Government engagement will continue as the nation looks forward to a number of key upcoming developments.

The purpose of this publication is to provide New Zealand and international readers with an overview of key developments, so that they can better navigate the renewable energy landscape and horizon. Our Energy Team's specialist lawyers provide expert commentary and analysis on the main trends developing in New Zealand and their impacts across the sector.

In this edition, we highlight:

- MBIE's consultation process on the future of New Zealand's energy system, and how this might affect the energy sector;
- the impact that a new Government might have; and
- our predictions for the energy sector in 2024.

We hope you find this Energy Outlook to be a timely and informative snapshot of key energy developments in New Zealand. Please feel free to contact us if you would like to discuss any particular developments, or the New Zealand energy sector generally.

Michael Sage
Partner

Market pulse: 2024 predictions

The last quarter of 2023 is likely to hold some exciting developments and opportunities for New Zealand's renewable energy sector, and there are some clear market trends for the year ahead. We asked some of our Energy Team specialists to give their predictions for 2024:

Continued growth in investment

Simon Vannini | *Project development & transactions*

We have seen a steady flow of announced projects during 2023 so far, in particular from gentailers as well as privately funded projects. Of particular interest is direct government support for some projects, ranging from part-funding NZ Steel's decarbonisation project to direct investments such as Lodestone Energy through the NZ Green Investment Fund.

We think a key challenge into 2024 is likely to be around limited/reduced government financial support for large projects, given the budget projections and pressure on the Government to deliver cost of living impacts in short order, including tax cuts. However, we think regulatory settings for investment in renewable energy projects are likely to be generally more favourable to investors, including overseas investors. This should support the continuing attractiveness of these projects.

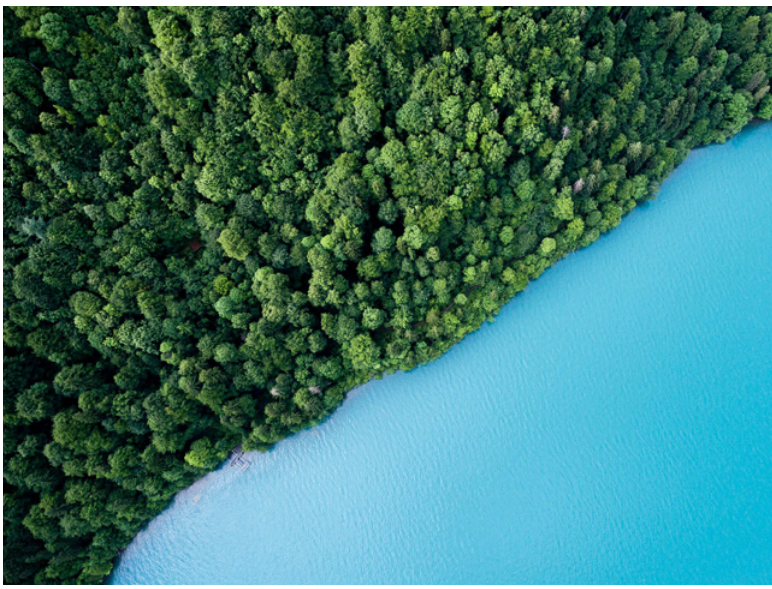
Electricity prices to increase in the short-to-medium term

Chris Browne | *Regulatory*

It is unclear how wholesale electricity prices will respond to an increasing saturation of renewable generation in the power system over the coming years and decades. Now, and in the past, prices have been influenced, directly and indirectly, by the marginal cost of thermal generation and by grid constraints.

As baseload thermal generation gives way to renewables, the thermal generation cost signal will fade and eventually disappear. We think it will be replaced by the cost signal of distributed energy resources (various forms of demand response) but it will take time for that signal to become clear. At the same time, Transpower's Net Zero Grid Pathways programme of grid upgrades will relieve grid constraints and open up the wholesale market to more, and more reliable, competition.

We think prices are likely to increase in the short-to-medium term as market participants adapt to the new realities of the power system, possibly spurred along by supply-side market concentration as thermal generation is decommissioned. To some extent this prediction is supported by the upward trend in electricity futures prices over recent years.



Increased focus on offtake / PPA arrangements

Rob Macredie | *Project development & transactions*

We anticipate a slow but steady increase in the number of energy buyers and sellers looking to enter into long-term power purchase agreements. The offtake market will continue to be characterised by strong participation from gentailers, with increasing involvement from independent power producers (on the generation side) and large corporates (on the demand side).

Gentailers will be willing to contract with independent generators under sleeved power purchase agreements, where retail route-to-market is leveraged for attractive pricing. Corporates with significant energy procurement needs will continue to look for PPA solutions, especially those organisations with ETS obligations and those whose business models would particularly benefit from additional green credentials.

A continuing trend will be for bankable PPAs to remain essential for new development projects, as leading banks and institutional investors will only offer reasonably priced project finance facilities for projects that are supported by the long-term, stable cashflows that PPAs provide.

Equity/debt availability for renewable energy projects

Josh Cairns | *Project finance & transactions*

For viable projects, the availability of capital is unlikely to be a great cause for concern for project sponsors.

The Government has clearly signalled a commitment to promote capital investment in clean energy projects through various initiatives such as its partnering with BlackRock on the establishment of a climate infrastructure fund and further contributions to the investment capital of the NZ Green Investment Fund in Budget 2023.

But this is merely the tip of the iceberg – with banks, private fund managers and institutional investors continuing to actively seek long-term clean energy assets as a home for capital.

Offshore wind and hydrogen

Edward Norman | *Project finance & transactions*

Both offshore wind and hydrogen were key focus sectors in the previous Labour Government's energy consultation, and we await the development of the key regulatory and policy documents that will set the future direction of each sector.

Projects in both sectors are capital intensive, and for investors in offshore wind generation and hydrogen production, the key requirements for a viable project are the same: a settled regulatory and policy environment that provides them with confidence to invest for the long-term; a long-term stable offtake that underwrites the project; and projects that make economic sense (with appropriate government support, where necessary).

The development of both sectors is potentially interlinked, as the production of green hydrogen has the potential to be an important source of demand for offshore wind generation.

In the offshore wind sector, we will be keenly focused on the development of New Zealand's offshore permitting regime, which MBIE previously signalled will be developed in 2024. Alongside certainty as to how permits will be allocated, investors will be focused on the extent to which the Government is willing to offer some form of revenue support mechanism to incentivise development.

In the hydrogen sector, absent a change of policy from the incoming Government, we await the publication of the hydrogen roadmap. This document is expected to set the future direction of the hydrogen sector in New Zealand from both a supply/production side and determining viable demand/use cases.

We expect the year ahead to be critical in shaping the regulatory and policy settings for both the offshore wind and hydrogen sectors and determining the future viability (or not) of these sectors in New Zealand.

Fight for sites

Michael Sage | *Project development & transactions*

Suitable land with viable renewable resource and close enough to transmission and distribution infrastructure is becoming rarer.

We are seeing some early stage M&A activity in the market, reflecting that sites have become a saleable asset particularly where experienced developers see value in the project.

This is happening from pre-feasibility through to fully consented sites, although the local market has seen very little other M&A activity in terms of acquisition of project portfolios (as there are only a small number of new projects in the construction phase).

The rise of demand-side flexibility and batteries

Rob Macredie | *Project development & transactions*

Battery storage will be an increasingly important consideration in the market as generation asset owners look for opportunities to solve capacity and firming issues.

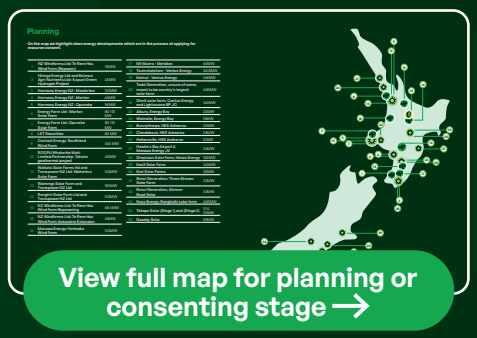
As more intermittent generation is developed, we expect to see further interest in the frequency control and demand response ancillary services that large batteries can provide.

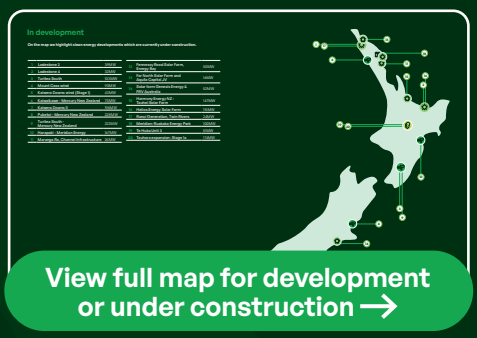
The market will eagerly await construction of the announced battery projects, and financial modelling will be a key focus, as will the revenue streams that will be available to developers to support these investments and to make them financially viable.

We expect to see further interest from international battery developers in New Zealand opportunities. The Government's battery project – the Lake Onslow pumped hydro scheme – will be shelved permanently by the new Government.

Status report: renewable energy projects

New Zealand's renewable energy sector is growing fast. On the map we highlight current and future clean energy projects. More detail is available in the maps below.






KEY
Announced
Planning or consenting stage
Consented
Development or under construction
Operational

What does a new Government mean for New Zealand's energy transition?

The election results are in and New Zealand's Government is changing. Until official results are published on Friday 3 November, it's not clear whether National and ACT will retain their majority or whether NZ First will hold the balance of power.

In the lead-up to the election, National indicated an intention to move quickly on certain renewable energy policy changes. In Electrify NZ, National stated that it will issue a new Policy Statement for Renewable Electricity generation within a year of taking office and will produce a draft for consultation within six months. The Policy Statement will:

- Be strongly directive of enabling renewable energy;
- Create nationally consistent rules so that requirements are clear for each type of renewable generation and address adverse effects rather than avoid them;
- Make solar, wind, geothermal and biomass a controlled activity under the Resource Management Act, requiring councils to update their plans to make consents for these generation types near-automatic; and
- Outline the conditions that may be attached to new consents. Provided the conditions are met, consents cannot be declined.

Both National and ACT opposed the previous Government's replacement of the Resource Management Act 1991, so we expect the new Government to repeal the Natural and Built Environments Act 2023 and the Spatial Planning Act 2023 within its first 100 days in office. National also announced that it will introduce a new fast-track consenting programme within its first 100 days in order to speed up the electrification of New Zealand's economy by reducing barriers for new and existing developments.

The biggest change planned is that local authorities will be required to issue resource consent decisions on new renewable wind, energy, and geothermal projects within one year of application. If the local authority does not issue a decision within one year, the consent will be automatically granted without conditions.

National's proposed changes to resource consent timeframes are set out in the table below:

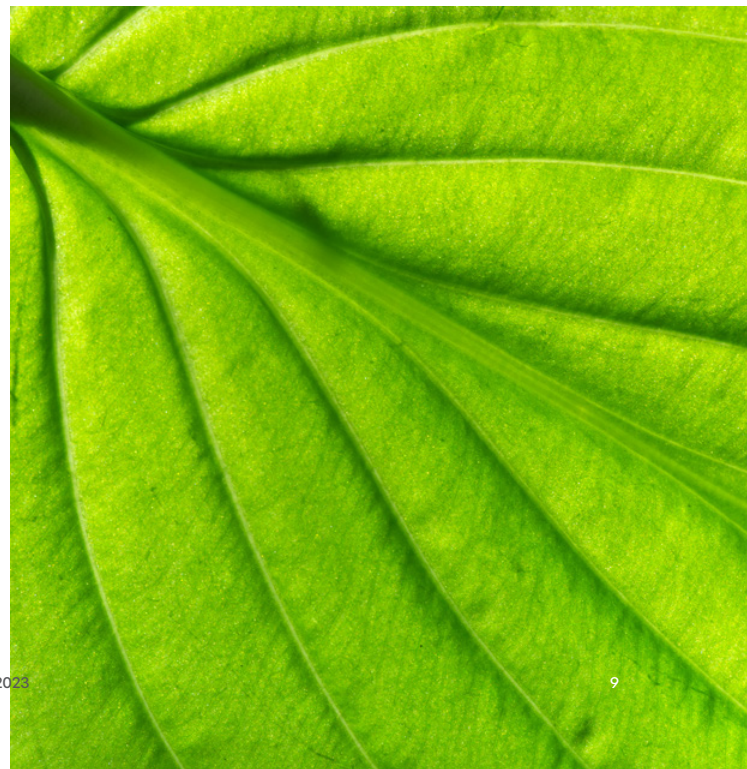
	Controlled activity	1 year consent	35 year duration	10 year lapse	1 year re-consent
Hydro	🔴	🔴	🟢	🟢	🟢
Other renewables (solar, wind, geothermal, biomass)	🟢	🟢	🟢	🟢	🟢
Transmission and local lines	🟢	🟢	🟢	🟢	🟢

Both the National and ACT parties released additional renewable energy policies prior to the election, agreeing on some points and diverging on others. Below, we provide a concise summary of their renewable energy policies, to see where the points of disagreement might be during coalition negotiations in this sector and what is likely to change.

Policy	National	ACT
100% renewable electricity target	●	●
Net Zero by 2050	●	● Repeal Zero Carbon Act Eliminate the Climate Change Commission Tie New Zealand's emissions cap to trading partners' emissions
Disestablish the Government Investment in Decarbonising Industry Fund (GIDI)	●	●
Introduce a national policy statement on hydrogen	●	No policy announced
Halt the pumped hydro project at Lake Onslow	●	● Supports private development if no cost to taxpayers
Introduce a permitting regime for offshore wind projects	● Complete offshore wind regulations including commercial permits within one year	● Adopt "suitable and well-understood standards" from equivalent OECD countries
Reverse ban on new oil and gas exploration	●	●
Introduce a national policy statement on electricity distribution to make it easier to build infrastructure	●	No policy announced

As the dust settles from the election, there are big changes ahead for New Zealand, but in the renewable energy sector, the big picture has not changed. The push to electrify New Zealand's economy and meet its international climate commitments will continue.

For renewable energy developers, investors, and stakeholders, these are dynamic times. The National and ACT parties' commitment to speeding up resource consenting and removing red tape for renewable energy developments means that stakeholders in the sector will need to be ready to swiftly advance new projects.



Key market developments

MBIE Energy Consultation

New Zealand is in the process of developing policies that will shape its future energy sector, with ongoing Government consultations throughout 2023 and 2024. Most recently in September 2023, MBIE launched a package of discussion documents consulting on the future of New Zealand's energy system and net zero transition. A summary of the key consultation documents is set out below.

The key question underlying the consultation is when and how New Zealand will achieve its commitments to reaching net zero emissions by 2050, 50 per cent of total energy consumption from renewable sources by 2035, and an aspirational target of 100 per cent renewable electricity by 2030.

The consultation is stated to support the Government's work towards an overarching Aotearoa Energy Strategy, which is expected to be released in late 2024. The Energy Strategy is keenly awaited by renewable sector participants both domestically and internationally, whose investment decisions are driven partly by clear policy direction from Government, so the MBIE consultation provides some important initial signalling on New Zealand's future strategy direction.

Consultation closes on Thursday 2 November 2023 at 5pm. The consultation documents are:

Measures for transition to an expanded and highly renewable electricity system

A high level issues paper discussing a range of challenges and opportunities facing New Zealand as it seeks to transition to a more highly renewable electricity system. Read our analysis on this paper here.

Developing a regulatory framework for offshore renewable energy

This paper addresses the full development of New Zealand's offshore renewable energy regime, including whether the Government should revenue-extract or financially support offshore renewables, and how these measures might be implemented. Read our analysis on this paper here.

Interim hydrogen road map

This paper sets out how the Government envisages the future role of hydrogen in New Zealand, in the form of a roadmap. Read our analysis on this paper here.

Implementing a ban on new fossil-fuel baseload electricity generation

This paper focusses on how to implement the Government's ban on new fossil-fuelled baseload generation in its Emissions Reduction Plan. Read our analysis on this paper here.

Gas transition plan

This paper primarily focuses on the role of natural gas in the renewable energy market. Read our analysis on this paper here.

Energy Strategy 2024

MBIE is developing the Energy Strategy through a consultative and collaborative process, and is expecting to finalise it by the end of 2024. MBIE will use the findings from its current consultations to develop the Energy Strategy. Many industry participants and commentators (including the International Energy Agency (**IEA**) in its 2023 update) have suggested that New Zealand needs to fast-track its Energy Strategy in order to send clear investment signals, enabling faster deployment of renewable energy projects to meet its domestic and international climate targets.

High global interest in offshore wind

There is global interest in New Zealand's offshore wind potential and the New Zealand Government has accelerated the development of the regulatory regime to meet the "significant inquiries" from international investors. These investors are exploring potential projects around the lower South Island, South Taranaki and "right up the coast of the North Island" and are generally large, established developers with experience in Europe and the UK. We anticipate a strong push from the new Government, which is demonstrating a keen interest in expediting offshore wind development.

IEA releases Electricity Market Report 2023

The IEA's Electricity Market Report 2023 found that renewables are set to dominate the growth of the world's electricity supply over the next three years. During this time, more than 70% of the expected increase in global electricity demand is likely to come from China, India and Southeast Asia. The report also showed the share of the global power generation mix from renewable energy is forecast to rise from 29% in 2022 to 35% in 2025, with the shares of coal and gas-fired generation falling.

Additionally, the report notes that electricity demand and supply worldwide are becoming increasingly weather dependent, which has highlighted the need for faster decarbonisation and accelerated deployment of clean energy technologies.

Irrespective of changes in government, New Zealand's transition to renewables has gained significant momentum, driven by both international and domestic pressures. We anticipate an accelerating shift towards renewables, although there may be variations in the approach to achieving climate goals.

Hydrogen Aviation Consortium reports on hydrogen-fuelled aircraft

The NZ Hydrogen Aviation Consortium has released a report showing how its members (Airbus, Air New Zealand, Christchurch Airport, Fortescue, Hiringa Energy and Fabrum) could use hydrogen-fuelled aircraft on domestic routes to remove up to 900,000 tonnes of carbon emissions every year by 2050. The Report, 'Launching green hydrogen powered aviation in Aotearoa New Zealand', suggests that New Zealand's geography and scale of domestic aviation, both in terms of size of aircraft and the length of journeys, has resulted in it being an ideal location to use hydrogen powered aircraft. To achieve these significant emission reductions, the Report says New Zealand would need to create affordable new renewable electricity generation (indicatively up to 6.7 terawatt hours p.a. of renewable energy will be needed), develop electricity transmission and distribution capacity, and most importantly, make it more cost-effective to produce and supply green hydrogen.

Simpson Grierson digest

We regularly publish insights on key legal and governmental developments in the ever-evolving renewable energy and climate legal landscape. You can subscribe to receive our latest publications on our website. Excerpts and links of our recent legal updates are below.

Mapping out the future of New Zealand's electricity system

What should New Zealand's electricity system look like if we are to meet our decarbonisation goals?

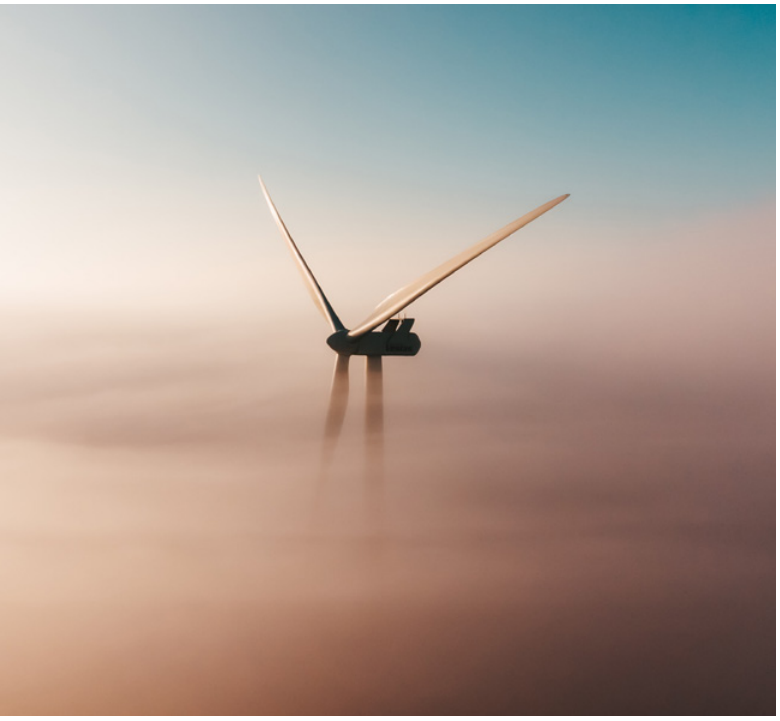
A recent report prepared for the Commissioner for the Environment sets out different future pathways for New Zealand's electricity system and their economic and electricity price implications. The report aims to "kickstart an open debate to ensure key investment decisions are for the long-term benefit of consumers", rather than to draw any definitive conclusions about the best pathway forward.

Read the full legal update here

New BlackRock Climate Infrastructure Fund targets 100% renewable electricity in New Zealand

The New Zealand Government and U.S. investment firm BlackRock have announced the largest single-country, low-carbon transition investment fund that BlackRock has created to date.

Read the full legal update here



Overseas investment considerations for acquisition of land for renewable energy projects

Overseas interest in New Zealand renewable energy projects has increased significantly over the past few years, with current market sentiment appearing to support this trend as developers and investors look for further opportunities.

Read the full legal update here

Electricity Authority eyeing distribution pricing reforms

Electricity distributors (local lines companies) charge their customers for the line function services the distributors provide. These charges are mostly paid by retailers trading on the relevant distribution network, who pass them through to consumers.

The Electricity Authority has traditionally taken a light-handed approach to regulating the prices distributors charge their demand-side customers. That looks set to change if the Authority's recent Targeted Reform of Distribution Pricing issues paper is anything to go by.

Read the full legal update here

Reading list

We set out below some of the most important reports, papers and other information published on developments in the renewable energy sector during 2023:

February 2023

New Zealand's Electricity Authority published a snapshot outlining the Authority's predictions regarding the generation and pricing of renewable electricity for winter 2024, 2025 and 2026. The snapshot was released in conjunction with the Authority's longer form Review of Wholesale Market Competition.

March 2023

Ara Ake published a report comparing the technical and commercial qualities of various battery energy storage system (**BESS**) chemistries which are currently available in New Zealand. BESS can be used (in conjunction with a renewable energy system) to divert excess energy produced at times of low demand into storage, and also can be used to supply electricity at times of high demand.

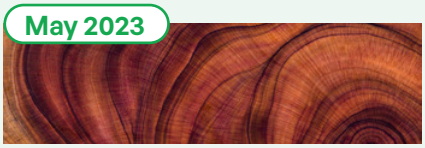
April 2023

The Ministry for the Environment published a Greenhouse Gas Inventory Snapshot showing New Zealand's carbon emissions profile between 1990 and 2021, showing that gross emissions have been stable since 2006 and are dominated by the agriculture and energy (particularly road transport) sectors.

April 2023

The Climate Change Commission issued a report after completing studies investigating the barriers for process heat sites when seeking to reduce carbon emissions (aside from cost). The paper cites lack of equipment availability, poor data availability (and subsequent system design), labour constraints and site characteristics as common barriers in reducing carbon emissions.

May 2023



The Electricity Authority published a decision paper in light of a review into competition in the wholesale electricity market in March 2021. The paper reviews whether the electricity market is working for the long-term benefit of its customers, and sets out the actions which will be taken by the Electricity Authority to further promote wholesale market competition in the transition to renewable electricity.

May 2023

Transpower published its Transmission Planning Report 2023. Each year Transpower undertakes system planning studies and compiles an annual report which provides an outline of current grid capability and work and investment required, working closely with distributors on options and solutions.

May 2023

MBIE published its 2023 Electricity Demand and Generation Scenarios (EDGS) consultation document for the Commerce Commission to utilise in its assessment of major investment proposals by Transpower. The document involves preparing a range of scenarios that explore potential futures of electricity demand and generation in New Zealand.

August 2023

MBIE published its 2023 annual report into the energy sector, including statistics on supply, transformation and demand for the 2022 calendar year. MBIE released this report highlighting the key takeaway that 87% of electricity generated over 2022 came from renewable sources.

October 2023

Transpower published an insight paper into Corporate Power Purchase Agreements outlining the role that Corporate PPAs can play in driving new renewable electricity generation development in New Zealand. The paper is part of Transpower's wider Whakamana i Te Mauri Hiko (Empowering our Energy Future) work programme, which is designed to support industry discussions.

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