NEW ZEALAND

Law and Practice

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Russell McVeagh

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Russell McVeagh employs approximately 350 staff and partners across its Auckland and Wellington offices. The firm's renewable energy team is a market leader in New Zealand and has represented local and international clients on some of the most high-profile renewable energy transactions. The team has significant experience in advising on all aspects of renewable energy, including on the equity and debt financing, property, consenting and construction aspects of renewable energy projects and advising on the acquisition and sale of projects and project platforms. Russell McVeagh has a deep understanding of the key drivers and issues faced by project sponsors and deploys experts across its full-service practice to manage any issues that arise over the life cycle of a renewable energy project.

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1. Overview

1.1 Energy Transition

Current Energy Mix

The current share of renewable energy in New Zealand's energy mix is higher than in most OECD countries. In 2023, approximately 43% of primary energy supply and 30% of final energy consumption came from renewable sources, according to the Ministry of Business, Innovation and Employment (MBIE).

The share of renewable energy in electricity generation is significantly higher than this. In 2023, renewable energy accounted for approximately 88% of the electricity generated in New Zealand.

This high proportion of renewable energy generation is, in large part, representative of the favourable geography of New Zealand, which includes consistent rainfall and wind and access to geothermal resources.

The Energy Transition Ahead

Against this backdrop, the focus of New Zealand's energy transition in the coming years is likely to involve the following:

- increases in renewable energy generation (and an associated need for investment in transmission and distribution infrastructure) driven primarily by future expected increases in demand for electricity;
- the need to ensure that the electricity system can support increasing levels of intermittent generation;
- mitigating the exposure of New Zealand's electricity system to "dry year risk" (being the risk that overall generation capacity falls as a result of extended periods of low inflows into New Zealand's hydro lakes); and
- the need to transform New Zealand's broader economy to the use of cleaner sources of energy and to a lower emissions economy, particularly in industrial processes, transport and the agricultural sector.

New Zealand's Net Zero Target

New Zealand set a domestic "Net Zero by 2050" target under the Climate Change Response Act 2002 (CCRA) for all greenhouse gases other than biogenic methane. Under the CCRA, the government is required to prepare five-yearly emissions budgets and produce emissions reduction plans that set out the proposed policies for meeting each emissions budget.

Sector-specific emissions reduction targets are decided by the government of the day as a matter of policy. In relation to this, the precise targets to be pursued by the current coalition government are to be confirmed through the publication of the second emissions reduction plan, which is due in December 2024. In relation to renewable energy, the current government has committed to doubling generation from renewable energy sources by 2050.

Oil and Gas

The role of oil and gas in New Zealand's energy future is a matter of debate across the political spectrum. The current government plans to reverse the previous government's ban on new oil and gas exploration. The cited reasons for the reversal include the need to address energy security challenges and regional economic development opportunities.

1.2 Renewable Energy Technologies

The vast majority of electricity in New Zealand is generated from renewable sources (88% in 2023). See **3.1 Electricity** for a breakdown of

generation between different renewable energy sources.

Hydroelectric and geothermal generation are hugely important to New Zealand's current generation capacity. Looking ahead, as electricity is increasingly used in place of fossil fuels and electricity demand increases generally, MBIe, predicts that significant new generation capacity will be required. New wind and solar projects are expected to play a large role in helping to meet this increase in demand.

In addition, activity in battery energy storage systems (BESS) and green hydrogen projects is also expected to increase. See **1.3 Renewable Energy Market and Recent Developments** and **4.1 Electricity** for further information.

1.3 Renewable Energy Market and Recent Developments

Tiwai Point Long-Term Agreements

The May 2024 announcement of new long-term agreements to supply 572 MW of renewable energy to the Tiwai Point Aluminium Smelter ("Tiwai Point"), New Zealand's sole aluminium smelter, was an important milestone for developers in New Zealand's renewable energy market. Tiwai Point, which is owned by New Zealand Aluminium Smelter (NZAS), is the largest user of New Zealand's electricity and accounted for 12.14% of New Zealand's annual demand in 2023.

For some time, there had been material uncertainty as to whether NZAS might ultimately carry through with past threats to close Tiwai Point. The signing of the 20-year agreements with NZAS has brought comfort to renewable energy developers regarding the continued existence of a large proportion of New Zealand's total load. Meridian Energy Limited ("Meridian"), Mercury Energy Limited ("Mercury") and Contact Energy Limited ("Contact") were the providers of the new agreements.

Demand Response

Meridian and Contact also entered into demand response agreements with NZAS, under which NZAS may be called upon to reduce electricity consumption up to an agreed limit.

The risk of electricity shortages in New Zealand increases during long periods of low rainfall, given the resulting impact that this has on lake inflows for New Zealand's hydroelectric dams. Large demand response agreements such as these can help to alleviate the level of stress on the system, and/or reduce the quantity of coal reserves that may need to be burned, during such times.

Development of BESS Projects

There has been a significant recent increase in the development of grid-scale BESS in New Zealand. WEL Networks and Infratec announced in October 2023 that their 35 MW Rotohiko BESS had entered the commissioning phase. Meridian is constructing its 100 MW Ruakākā BESS, with commissioning expected by December 2024.

Corporate PPAs

New Zealand does not have any subsidy, tax deduction or contract for difference regimes for renewable energy projects. Accordingly, the sourcing of a power purchase agreement (PPA) for power offtake is a critical workstream for many developers. Corporate PPAs are becoming more common in New Zealand, as to which see **5.5 Renewable Energy Certificates and (Corporate) Power Purchase Agreements**.

2. Legal and Regulatory Regime

2.1 Governing Law and Upcoming Changes

Legal and Regulatory Framework

The principal laws and regulations governing the energy market in New Zealand are summarised in broad terms below:

- Electricity Industry Act 2010 ("Electricity Industry Act"): This provides a governing framework for electricity sector industry participants, which includes retailers, generators and distributors, among others.
- Electricity Industry Participation Code 2010 ("Code"): This sets out responsibilities for all industry participants and provides detailed rules that govern the physical interaction between transmission, distribution and generation and the operation of the wholesale electricity market (also known as the "spot market").
- Resource Management Act 1991 (RMA): This establishes a regulatory framework that controls the use of land, air and water (within 12 nautical miles from the coast) in New Zealand. This includes the use and development of energy and renewable energy projects. The RMA is the primary legislation for the consenting of new renewable energy projects.
- National Policy Statement for Renewable Electricity Generation 2011: This sets out objectives and policies for renewable electricity generation under the RMA. As of August 2024, the government is reviewing this statement to strengthen the policy framework for renewable energy and provide consistency with New Zealand's emissions reduction targets.
- National Policy Statement on Electricity Transmission 2008: This sets out objectives and policies for New Zealand's electricity transmission network under the RMA. As of August 2024, the government is also reviewing this statement to strengthen the policy framework for electricity transmission.
- Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 ("EEZ Act"): This manages the effects of activities in the exclusive economic zone (EEZ) (12 to 200 nautical miles from the coast of New Zealand) and in/on the continental shelf. This includes the use and development of renewable energy and other energy projects, although renewable energy projects are not expressly enabled.
- Crown Minerals Act 1991: This relates to Crown-owned minerals (including oil and gas) that may (via permit) be prospected, explored and mined for within New Zealand. The legislation also provides decommissioning requirements (see **6.5 Decommissioning Requirements**).
- CCRA: This sets the overarching framework to drive emissions reduction in New Zealand. It establishes New Zealand's emission trading scheme (ETS) and requires the preparation of an Emission Reduction Plan.

Upcoming Legislative Changes

The Fast-track Approvals Bill was introduced on 7 March 2024 to establish a permanent regime to "fast track" consents for nationally and regionally significant projects, including energy projects. This regime is intended to provide shorter consenting timeframes for major projects with appeal rights limited to points of law only. This is in contrast to standard processes under the RMA which allows initial council decisions to be appealed to the Environment Court "de novo", which means a consent applicant has to start the process over again in the court, delaying implementation and increasing costs for projects.

As of August 2024, the government intends to introduce a Resource Management Amendment Bill later in 2024 to further support the consenting of renewable energy projects. This is expected to reduce consent processing timeframes for most renewable energy projects to within a year, extend lapse dates for renewable energy, transmission and distribution projects from five to ten years and increase default consent durations to 35 years for renewable energy consents (where subject to a duration). A new National Policy Statement for Infrastructure (to enable a range of energy and infrastructure projects) is also being produced and is expected to follow a similar timeframe as this proposed Bill.

The government has also indicated its intention to reform the RMA system over the next two years to create a more efficient system that better enables infrastructure (including renewable energy projects).

The government is developing a new regulatory framework for offshore renewable energy (see **6.2 Offshore Project Development**).

2.2 Regulating Authorities

MBIe, is New Zealand's primary government department overseeing and delivering regulation and policies for the energy sector (including renewables). The Ministry for the Environment (MfE) advises the government on environmental matters and related legislation such as the RMA.

Regulatory and quasi-regulatory agencies and authorities in the energy sector include:

- Regional and district councils: These councils make decisions on RMA consents and monitor such consents. Councils may issue infringement and abatement notices, take enforcement action and prosecute offences under the RMA.
- Environmental Protection Authority (EPA): The EPA regulates a range of functions, including those under the RMA, the EEZ Act and the Hazardous Substances and New Organisms Act 1996 ("HSNO Act"), and has powers to investigate, issue infringement notices and pursue court proceedings for non-compliance with the RMA.
- Electricity Authority: An independent Crown entity which oversees and regulates the electricity market. It investigates breaches of the Code and electricity regulations.
- Gas Industry Company Limited ("Gas Industry Co"): An industrial body that works alongside industry and government to co-regulate gas, including "green gasses" such as hydrogen and biofuels.
- Energy Efficiency and Conservation Authority (EECA): The authority seeks to improve energy efficiency and sustainability for New Zealand homes, vehicle fleets and businesses. The authority is focused on accelerating the uptake of renewable energy.
- Commerce Commission: The commission is responsible for regulating New Zealand's competition and consumer laws. It oversees Transpower New Zealand Limited ("Transpower") (the owner of New Zealand's national grid ("Grid")) and distribution companies, including overseeing investments, charges and revenue in each pricing year.

The regulatory enforcement powers of certain of the above authorities (not including the Gas Industry Co or the EECA) are outlined below:

- An authority may have powers to investigate breaches and potential breaches relating to the authority's respective legislation, regulations and rules.

- In some cases, there is a specific dispute resolution scheme, or the authority is able to refer to the court system to obtain, for example, interim injunctions to stop an industry body from breaching the relevant legislation, regulations and rules.
- In some circumstances, an authority may have the discretion to make remedial orders for breaches of the relevant industry code/guidelines, such as a private or public warning, or an order to pay compensation or a pecuniary penalty.

2.3 Regulated Activities

Resource Consenting

The use and development of physical and natural resources in New Zealand is regulated under the RMA. Territorial, regional and district authorities implement regional and district plans which operate as "rulebooks" for land use, including for energy and renewable energy activities (eg, solar farms or wind farms). Generally, resource consent is required for renewable energy projects in New Zealand, although this can differ between regions or districts.

Land use consents for solar and wind farm projects are generally granted for indefinite periods. On the other hand, renewable energy projects using hydro, geothermal or marine resources have limited duration consents of up to 35 years (meaning that consent renewal is required for the continuation of operations beyond consent expiry).

Other Approvals and Registrations

In addition to the RMA, renewable energy projects may require approvals or registration under other legislation, such as:

- the owner of the project and other relevant participants may need to be registered as industry participants with the Electricity Authority;
- building consents under the Building Act 2004 for the construction of structures (such as wind turbines);
- approvals under the Overseas Investment Act 2005 (OIA) to allow overseas companies to purchase or lease sensitive land or to acquire or establish a business over a certain threshold (as more particularly outlined in **2.5 Market Access and Foreign Investment**);
- authorities under the Heritage New Zealand Pouhere Taonga Act 2014 to allow pre-1900 features to be modified or destroyed; and
- marine consent under the EEZ Act if an activity is to occur in the EEZ; marine consents may be granted for up to 35 years.

Hydrogen is an approved hazardous substance with controls enforced by the EPA and regulated under the HSNO Act and the Health and Safety at Work Act 2015. Similarly, most biogases, such as methane, are categorised as approved hazardous substances that are also subject to controls as enforced by the EPA.

2.4 Ownership and Transfer of Control

Onshore Renewable Energy Assets

There are no specific restrictions on the types of persons that may own onshore renewable energy assets in New Zealand, although certain restrictions and/or requirements may be triggered on the transfer of ownership interests in such assets. In particular:

- OIO consent: Where an "overseas person" (as defined under the OIA) develops a new renewable energy project or acquires an ownership interest in an existing renewable energy project, a requirement for consent from the Overseas Investment Office (OIO) may be triggered depending on the nature of

the project and the investment (see **2.5 Market Access and Foreign Investment**).
- Code requirements: An electricity generator (other than an owner of small-scale distributed generation) is required to register as an industry participant with the Electricity Authority.
- RMA: The mechanism for transfer of resource consents varies depending on the type of (and terms of) the resource consent (and purchasers will need to review the scope of applicable resource consents to understand any restrictions on use or transfer).
  (a) Land use and subdivision consents will generally run with the land and remain in place following a transfer of the land (except if the conditions of the consent specifically provide otherwise, such as restricting a consent to the original applicant only – which is sometimes the case for wind farms).
  (b) Other consents (ie, regional resource consents such as discharge permits) may be granted for a term and may only be relied on by a specific person, unless transferred under the RMA.
  (c) Typically, resource consents do not regulate changes of control in respect of the entity which holds the consent.
- Other consents: Certain consents may be required in connection with the transfer of ownership interests, under the terms of relevant project contracts, including under the connection arrangements with Transpower or a relevant lines company.

Offshore Renewable Energy Assets

In terms of offshore renewable energy assets, the details of the proposed permitting regime will become clearer when legislation is introduced to Parliament, likely at the end of 2024. See **6.2 Offshore Project Development** for further details.

2.5 Market Access and Foreign Investment

OIO Consent Requirement

Investment in the renewable energy market in New Zealand by foreign investors may trigger a requirement for consent under the OIA. The OIA sets out New Zealand's regulatory regime for investment by "overseas persons" in "sensitive land" and/or "significant business assets", and which investments must be approved by the OIO.

A foreign investor will be an "overseas person" under the OIA if they are a person or an entity that is domiciled, or owned by a person or an entity domiciled, outside New Zealand. New Zealand-registered entities are also classified as overseas persons where more than 25% of their ownership or control interests are held by overseas persons.

Renewable energy transactions that involve the following factors are likely to trigger the requirement for OIO consent:

- "significant business assets": if the foreign investment exceeds NZD100 million in the manner outlined in the OIA (or the applicable higher threshold that applies to Australian non-government investors, and other non-government investors under certain free trade agreements); and
- "sensitive land": if the renewable energy transaction involves ownership of, or long-term land rights to, sensitive land that are qualifying interests under the OIA; "sensitive land" includes non-urban land (eg, farmland) with an area greater than five hectares, or land that contains or adjoins national parks foreshore, seabed, lakebed or conservation land.

OIO Consent Pathways

The following OIO consent pathways apply where consent is required under the two bullet points above:

- Pathway for "significant business assets": The "investor test" requires that relevant entities and individuals with control meet specified character and capability criteria to determine whether the investor is suitable to own or control sensitive New Zealand assets.
- Pathway for "sensitive land":
  (a) The "investor test" referred to above applies.
  (b) "Benefit to New Zealand test": In addition, the investment must provide benefit to New Zealand, based on the following seven benefit factors: economic, environmental, access, heritage, government policy, participation and oversight and flow on benefits. To meet the benefit to New Zealand test, the investor must submit an investment plan with their OIO consent application which establishes that the benefits of their investment are proportionate to the size and nature of the land, nature of the investment, and sensitivity of the land.
  (c) Additional requirements for farmland: To ensure New Zealanders have sufficient opportunity to purchase farmland, it must be advertised on the open market before the overseas persons enter into the transaction. The benefit to New Zealand test is also analysed differently, such that greater economic benefits are required and that benefits to New Zealand will be, or are likely to be, substantial.

Strategically Important Businesses

Notification to the Minister of Finance, via the OIO, can also be mandatory or voluntary for certain transactions that are less than the NZD100 million threshold but involve "strategically important businesses". The Minister of Finance can also call-in such transactions relating to strategically important businesses (which include a business involved in electricity generation with a total capacity exceeding 250 MW) for review, and to block, impose conditions on, or unwind, if the Minister of Finance considers the transaction poses a significant risk to New Zealand's national security or public order.

3. Production/Generation

3.1 Electricity

Renewable Energy Generation

Generation from renewable energy in New Zealand is concentrated in the following sources:

- Hydroelectric schemes generate the highest proportion of electricity in New Zealand, accounting for approximately 61% of total generation in 2023.
  (a) Manapōuri hydro power station, owned and operated by Meridian, is New Zealand's largest hydro power station with a total installed capacity of 850 MW (although generation is limited to 800 MW by resource consents).
  (b) Other hydro power stations include Benmore dam hydro station (also owned and operated by Meridian) with an installed capacity of 552 MW, the Clyde Dam (owned and operated by Contact) with an installed capacity of 432 MW and Roxburgh power station (owned and operated by Contact) with an installed capacity of 320 MW.
- Geothermal energy is New Zealand's second largest source of electricity, accounting

for approximately 18% of total generation in 2023.
- Onshore wind accounted for approximately 7% of total generation in 2023.
- Solar accounted for approximately 0.8% of total generation in 2023.

The proportions of generation represented by onshore wind and solar respectively are expected to increase in the coming years, as new wind and solar projects are constructed in response to the anticipated growth in demand for electricity.

Renewable Energy Generators

The generation of electricity from renewable sources in New Zealand involves the following generators:

- three "mixed ownership model" companies (each 51% owned by the government), being Meridian, Genesis Energy Limited and Mercury;
- two large privately owned and widely held companies, being Contact and Manawa Energy Limited; and
- various other smaller generators.

Regulation

Electricity generation in New Zealand is regulated primarily by the Electricity Industry Act and the Code. See **5.1 Electricity** and **5.5 Renewable Energy Certificates and (Corporate) Power Purchase Agreements** for information in relation to New Zealand's electricity wholesale market, electricity futures market and private PPA market.

3.2 Gas

Renewable Gas

New Zealand's current production of gas from renewable sources is at an early stage and is concentrated into four main sources:

- Landfill gas capture systems are required to be used by large landfills under the RMA. Production is then typically used to generate electricity that is either utilised on-site or injected into a relevant local distribution network ("Local Network").
- Anaerobic wastewater treatment of industrial wastewater is used by some industrial facilities, such as meat and milk processing plants. Fonterra Co-Operative Group Limited operates one of the largest anaerobic digesters in the southern hemisphere at its Tīrau plant, generating biogas to offset natural gas consumption in the processing of milk.
- There are at least 15 municipal wastewater treatment plants in New Zealand. Typically, the gas produced is used to generate electricity which is then utilised to offset the plant's electricity demand. As of August 2024, New Zealand does not have any wastewater treatment plants that inject renewable natural gas into local gas grids.
- In 2022, Ecogas began operating New Zealand's first biogas plant for large-scale organic waste. A project to build a gas upgrading plant to inject biogas directly into the gas pipe network is expected to be completed in late 2024.

Regulatory Regime

Gas Industry Co jointly develops, with the government, the regulations and rules governing the gas market in New Zealand. In the Gas Transition Plan Issues Paper from August 2023, the Gas Industry Co reported it was considering work to

develop a regulatory framework and monitoring regime for renewable gas certification providers.

3.3 Heat

Geothermal

There are significant geothermal resources in New Zealand; however, geothermal is predominantly utilised for electricity generation.

Hot water and steam from geothermal sources (including as a by-product of electricity generation) is to some extent used as process heat directly for industrial processes. The Kawerau Industrial Complex in the Bay of Plenty has industrial users located nearby to geothermal resources to make use of geoheat.

Geothermal resources are managed by the environmental consenting regime under the RMA. The RMA requires that no person can take, use, dam or divert water (including geothermal water) or, heat or energy from geothermal water (or from the material surrounding geothermal water) unless expressly allowed by a national, regional or district planning document or permitted by a resource consent. There are no current express allowances under any national planning documents, although some limited exceptions may apply under regional or district planning documents for small offtakes.

Heat From Other Renewable Sources

New Zealand does not have large-scale district heating schemes within its urban areas. Some small-scale district heating schemes are operated, including in Christchurch. The Washdyke Energy Centre, which supplies steam to local industry in Timaru, transitioned to 100% sustainable biomass in April 2023. The Dunedin Energy Centre was also converted to run on biomass in 2023.

3.4 Hydrogen and Other Biofuels and Renewables

Green Hydrogen

New Zealand does not have a well-established industry for the production of green hydrogen. Nevertheless, considering the availability of renewable energy in New Zealand (and the highly renewable generation system), New Zealand is well-placed for such an industry should markets for green hydrogen and ammonia offtake develop.

The government is actively working to improve the regulatory framework for green hydrogen. MBIe, prepared the Interim Hydrogen Roadmap (released in August 2023) and has undertaken market consultations in relation to the roadmap and other considerations related to the role hydrogen should play within New Zealand. See **4.5 Hydrogen and Other Biofuels and Renewables** for further information.

Hiringa Energy Ltd ("Hiringa") is a key player in green hydrogen in New Zealand. Hiringa is in the process of constructing green hydrogen production and refuelling infrastructure across New Zealand for hydrogen-powered trucks.

In August 2024, Meridian announced that its Southern Green Hydrogen Project, a proposed large-scale green hydrogen and ammonia facility, had been put on hold. Meridian concluded its partnership with Woodside to develop the project and noted that markets have been slow to resolve the gap between the cost of producing green hydrogen and potential customers' willingness to pay for it.

Biofuels

New Zealand's biofuels industry is small. There are, however, a number of key players across different industries that are looking to use biofuels

to decarbonise their operations, with a particular focus on biofuel production using residue from existing forestry and wood processing. Air New Zealand is exploring the use of sustainable aviation fuel in its operations.

3.5 Local and Domestic Production

Small-scale generation of renewable energy for own or domestic use in New Zealand is regulated on a district-by-district basis through district plans. Any restrictions will often depend on the size of the structure and the zoning of the land where it is located. As a rule of thumb, small-scale, behind-the-meter solar or wind generation can be undertaken without resource consents. However, the need for a resource consent can depend on factors such as size and mounting specifications for solar and type of turbine (with reference to speed and noise produced) for wind. Often, building consent will still be required, for example, if solar panels or wind turbines are mounted on an existing building.

Additional compliance requirements need to be met should a small-scale energy producer connect to the Grid or a Local Network to sell power.

4. Infrastructure: Transportation and Storage

4.1 Electricity

Transportation

In New Zealand, electricity is transmitted via the Grid and distributed to end users via Local Networks.

The Grid is managed by system operator and state-owned enterprise, Transpower. Transpower is required to operate and maintain the Grid and oversee the transmission of electricity across New Zealand, including to ensure that electricity transmission is safe, reliable and cost-effective.

The Local Networks in New Zealand are owned and managed by 29 electricity distribution businesses (EDBs).

Transpower charges the EDBs (and other users of the Grid) a fee to use the Grid. This fee is typically passed on from the EDBs to the retailers, together with distribution pricing that the EDBs themselves charge in respect of their own networks. Retailers pass these costs onto the end users via the electricity price they charge.

The Commerce Commission regulates the maximum revenue that Transpower and the EDBs (other EDBs that are consumer-owned) may earn over a set period (typically five years).

The Electricity Authority regulates the way in which Transpower charges its customers and the reliability and service levels required to be maintained by Transpower. The Electricity Authority is also responsible for ensuring that EDBs comply with the Code, and publishes the distribution pricing principles that EDBs are required to follow.

Storage

It is expected that BESS will become increasingly relevant as New Zealand moves closer to 100% renewable electricity generation. The Electricity Authority has determined to improve current market settings to better facilitate the development of BESS. In particular, the Electricity Authority had identified that:

- the way in which BESS participates in the wholesale and instantaneous reserve markets is cumbersome, with the market system not being able to model a resource (such as

BESS) that can transition from load to generation; and
- the revenue stream available to a BESS for ancillary services in New Zealand (alongside arbitrage opportunities) may be impacted by current market settings, which limit the ability of BESS to provide frequency keeping ancillary services to periods where the BESS is discharging (ie, acting as a generator), despite the fact that a BESS may also be capable of providing such services whilst charging (ie, acting as load).

Following a consultation on these topics (among others), the Electricity Authority issued its decision paper in July 2024, in which the Electricity Authority outlined its decision to (i) enhance BESS participation in the wholesale and instantaneous reserves markets, and (ii) build additional value streams through BESS participation in ancillary services.

4.2 Intermittency, Grid Congestion and Flexibility

Security of Supply and Winter Peak Demand

Security of supply in New Zealand's power system is an increasingly relevant topic, in light of the continued transition to higher proportions of intermittent generation.

During winter months, it can at times become challenging to co-ordinate generation resources to meet peak demand in New Zealand. Managing this issue is a focus area for the Electricity Authority, which in July 2024 released its decision paper on potential solutions for peak capacity issues. The Electricity Authority decided to develop a range of solutions, including to reduce barriers to the development of BESS (as more particularly outlined in **4.1 Electricity**).

In the event that Transpower (as system operator) considers that the electricity market is (or will soon be) unlikely to match supply and demand, and that unplanned outages are likely if planned outages are not implemented, Part 9 of the Code allows Transpower to make a "supply shortage declaration". When this declaration is in force, Transpower may require mandatory curtailment by directing specified participants (eg, EDBs) to contribute to achieving reductions in the consumption of electricity by implementing outages or taking any other action specified, and those specified participants must comply.

Transpower can also issue different notices to encourage voluntary curtailment where it foresees a potential supply emergency (eg, for potential shortfalls, low residuals, forecast deficits, or real-time deficits).

Grid Congestion

The Grid is operated on open access principles, which allows developers to request to build and connect at any location on a "first ready first served" basis and means that Transpower may connect subsequent generation in the same area (provided that Transpower's ability to operate the power system is not compromised). Developers of new projects are, therefore, required to consider the risk of other nearby projects coming online in a manner that might contribute to congestion on relevant transmission infrastructure, and assess how Transpower would likely seek to address such issues.

Managing Intermittent Supply

The Electricity Authority released a consultation paper in February 2024 on the future operation of New Zealand's power system, which considered potential solutions for managing intermittent supply and electricity capacity issues. Proposed solutions included:

- short-term solution (less than two years): improve the co-ordination of existing generation resources and ensure that New Zealand is prepared for emerging technologies;
- medium-term solution (two to four years): wider adoption of BESS and participation in ancillary markets by generators and the industry; and
- long-term solution (more than five years): significant new generation and storage options.

4.3 Gas

New Zealand's bulk natural gas transmission network is privately owned by First Gas Limited ("First Gas") and includes over 2,500 km of gas pipelines. First Gas, Powerco Limited and others also own gas distribution networks for the distribution of gas to end users in the North Island. These networks are not currently used to transport renewable gases (as of August 2024), but work is underway by industry leaders to enable the transport of both natural gas and biogas. First Gas is also working with Ecogas to inject biomethane from Ecogas' organics processing facility into First Gas' gas network by late 2024.

4.4 Heat

As noted in **3.3 Heat**, there are no large-scale district heating or heat grids operated in New Zealand. Small-scale district heating regimes are typically privately owned, with customers being supplied steam and other services under individual supply contracts.

4.5 Hydrogen and Other Biofuels and Renewables

Green Hydrogen

New Zealand does not have a meaningful transportation network for green hydrogen.

MBIE's Interim Hydrogen Roadmap outlined several options for the future transportation and storage of hydrogen. In relation to transportation:

- MBIe, noted that hydrogen may be able to be transported through the existing gas pipelines, although this would require the network to be repurposed and modified. On the whole, this option was expected to be the lowest cost method of transmission. However, given biomethane (as an alternative to hydrogen) is expected to be more cost-effective in the medium term, MBIe, did not consider that there would be a role for hydrogen in the reticulated network until at least the mid-2030s.
- Another option would be to blend hydrogen with fossil gas. However, to use this method within the existing network, a maximum concentration of approximately 20% hydrogen could be used.

Key players in the hydrogen-fuelled vehicle sector include Hiringa (see **3.4 Hydrogen and Other Biofuels and Renewables**) and H.W Richardson (HWR). HWR is New Zealand's largest privately owned transport business and is invested in dual-fuel hydrogen technology with a particular focus on dual-fuel truck fleets and a hydrogen refuelling network. Fabrum Solutions Limited is also well respected as a leader in liquid hydrogen liquefaction storage and fuel tanks in small to medium volumes.

As mentioned in **3.4 Hydrogen and Other Biofuels and Renewables**, the regulatory framework for green hydrogen is being developed, however, in the meantime, the current regime for renewable energy generation will be relevant (see **2.1 Governing Law and Upcoming Changes**) and the HSNO will apply (see **2.3 Regulated Activities**).

Biofuels

Generally, the transportation or storage of any biofuel classed as a hazardous substance, such as bioethanol or bio/mineral diesel blends, is subject to controls and requirements that are regulated under the HSNO Act and the Health and Safety at Work (Hazardous Substances) Regulations 2017.

5. Trade and Supply

5.1 Electricity

Wholesale and Retail Markets

The trade of electricity (including renewable electricity) between generators and retailers in New Zealand occurs via the wholesale market. In order to participate in the wholesale market, generators must make offers to the system operator (being Transpower) to supply a certain amount of electricity, at a particular pricing node, at a proposed price in auctions run at 30-minute intervals in the future. Transpower will select the lowest cost offers that can satisfy demand whilst ensuring reliability of supply, taking into account a range of factors (including distance between the location of the generator and the electricity demand). All generators that are dispatched receive the same clearing price.

Electricity retailers purchase electricity at wholesale prices and supply their customers with the electricity they need. The cost that retailers charge their customers for electricity typically includes the costs of transmission and distribution.

Electricity Futures Market

Market participants are able to hedge their financial risk of electricity price movements (over up to the next three calendar years) via the electricity futures market, operated by the Australian Securities Exchange. This market allows participants to enter into electricity futures contracts against the Ōtāhuhu Grid reference node and the Benmore Grid reference node on a cash-settled basis.

PPAs

Subsidies or contracts for difference are not available to generators in New Zealand to support the development of new renewable energy projects. Accordingly, if developers require long-term pricing certainty for all or any part of the electricity to be produced by a proposed project, they must independently procure and negotiate a satisfactory offtake contract themselves (see **5.5 Renewable Energy Certificates and (Corporate) Power Purchase Agreements**).

5.2 Gas

New Zealand does not have a significant market for the trade of renewable gas.

While some landfills use the renewable natural gas produced to generate electricity that is injected into the Local Network, the large majority of renewable gas is used by the producers themselves, generally to fuel their industrial plants.

5.3 Heat

The domestic market for the supply of heat from renewable sources is largely limited to individual supply contracts between generators and consumers.

5.4 Hydrogen and Other Biofuels and Renewables

Hydrogen

As mentioned in **3.4 Hydrogen and Other Biofuels and Renewables**, Hiringa is in the process of developing a green hydrogen refuelling network across New Zealand, which will allow heavy-

duty transport vehicles to use green hydrogen instead of fossil fuels.

HWR introduced the first hydrogen-diesel dual-fuel truck in the Southern Hemisphere and is trialling dual-fuel trucks in its fleet. In respect of its refuelling network, HWR is utilising Allied Petroleum's fuel stop network to distribute hydrogen as an alternative fuel by adding this capability to existing and new sites.

Biofuels

There is not a significant domestic market for the trade of biofuels in New Zealand.

5.5 Renewable Energy Certificates and (Corporate) Power Purchase Agreements

RECS

New Zealand does not have a mandatory or regulated market for renewable energy certificates (RECs). BraveTrace and Energy Market Services (owned by Transpower) are providers of RECs in New Zealand. BraveTrace administers the New Zealand Energy Certificate System upon which a form of RECs (referred to as "NZ-ECs") can be acquired. Energy Market Services issues International Renewable Energy Certificates (referred to as "I-RECs") in New Zealand, which are governed by the International Renewable Energy Certificate Foundation.

Corporate PPAs

Developers of renewable energy projects are increasingly seeking to source corporate PPAs as a means of reducing merchant power price risk and with a view to raising project debt. This is particularly the case for independent developers who, unlike New Zealand's gentailer-developers, do not have their own retail books to service. A number of corporate PPAs were signed in New Zealand in 2023, including by Amazon, Microsoft, the Warehouse Group, New Zealand Steel and Ryman Healthcare.

Corporate PPAs are typically structured either as:

- a physical ("sleeved") PPA, which involves a retailer (in substance) purchasing the electricity produced from the seller and passing on the benefits of that trade to the corporate buyer (typically with a firming solution attached); or
- a virtual PPA (structured as a contract for difference), under which the buyer and seller make payments to one another depending on whether the agreed price is above or below the referenced market price.

The key benefit of a PPA for a renewable energy generator is the revenue certainty it provides and the resulting de-risking of the investment case and ability to raise (or maximise the level of) project financing debt.

The key benefits of a PPA for a corporate buyer are as follows:

- Price benefit and certainty: The corporate buyer can fix its electricity costs for the volume it purchases under the PPA, typically at a discount to expected market pricing.
- Access to RECs: The corporate buyer typically receives the RECs associated with the purchased volume, which can then be used to validate claimed reductions in energy-related emissions.

6. Renewable Energy Projects

6.1 Onshore Project Development

In recent years, the development of onshore renewable energy projects in New Zealand has predominantly been in wind, solar and geothermal. Development activity in BESS is also increasing and a number of solar developers are pursuing projects in a manner that allows for the option of a co-located BESS to be installed at a later date.

A significant change in the onshore renewable energy market in recent years has been the large increase in the number of independent developers that are pursuing new solar projects in New Zealand. New Zealand now has a substantial pipeline of solar projects at various stages of development.

The following parties play a key role in the development of onshore renewable energy generation projects in New Zealand (in addition to the providers of equity and debt capital to the project):

- Landowners: A key initial step for a developer is to secure appropriate rights to the land on which the project is proposed to be constructed and operated. Such rights are, for the most part, negotiated privately. Developers typically seek initial rights to enter the land for the purpose of conducting feasibility studies, under a licence arrangement, together with an option to acquire long-term land rights for the project (eg, by way of a lease, easement or freehold ownership), with the intention that the option would be exercised following the taking of a final investment decision in respect of the project.
- EDB/Transpower: Depending on whether the project will be connected to a Local Network or the Grid, connection rights with the relevant lines company and/or Transpower will need to be secured. A key consideration impacting the timeline is the work required to connect the project and, for a Grid-scale project, where the project stands in Transpower's generation connection pipeline.
- Regional and district councils: Where consent under the RMA is required, this must be sought from the relevant council. Detailed environmental effects assessments are required to be undertaken to support the application for consent.
- Local communities: During the planning stages of the renewable energy projects, local communities and iwi (Māori tribes) are often consulted to ensure all potential effects of these projects are identified and responded to.
- Offtaker: In order to mitigate the project's exposure to merchant power price risk and, accordingly, to attract infrastructure-style equity investors and support a project debt financing, many developers will seek to secure a long-term PPA providing fixed pricing for the project's output.
- Construction and operations contractors: The arrangements for the construction and operation of renewable energy projects in New Zealand are varied. For solar, an approach which involves a full scope engineering, procurement and construction (EPC) contract is common, particularly where project financing is involved. For onshore wind, turbine supply and installation are typically contracted separately from balance of plant. The approach to contracting balance of plant varies depending on a number of factors, including the experience of the particular sponsor that is involved.
- OIO: If the project will involve equity investment from an overseas investor, consent

under the OIA may be required (see **2.5 Market Access and Foreign Investment**).

6.2 Offshore Project Development

Proposed Regulatory Regime

The offshore renewable energy market is still in its infancy in New Zealand. In Taranaki, there is opportunity for offshore wind to supplement the transition away from oil and gas exploration.

MBIe, has been leading the policy development for the regulatory framework to support offshore renewable energy technology, including wind, solar, wave, tidal and offshore transmission infrastructure. As of August 2024, the following indicative timeframes apply for the offshore energy regulatory regime being developed by the government:

- December 2024: legislation introduced to Parliament;
- mid-2025: legislation passed;
- late 2025: first feasibility permits round; and
- 2026: first feasibility permits granted.

In August 2024, the government announced its decisions on the design of the proposed regulatory regime. The framework will follow a developer-led approach (where developers will select the sites for their applications), with feasibility permits to be granted for up to seven years to undertake studies on the specified seabed area (on a "use it or lose it" basis). Feasibility permit holders will have the right to apply for a commercial permit to construct and operate the project. For further information, see the New Zealand Trends & Developments chapter for Renewable Energy.

Potential Locations For Offshore Wind

Researchers and developers have identified Taranaki, Waikato and Southland as prime locations for offshore wind, due to the quality offshore wind and the relatively shallow seabed. Several developers have begun engaging with local communities and undertaking early feasibility work to understand New Zealand's operating landscape and environment.

Development Considerations

There are a number of considerations that developers are focused on in relation to the development of offshore energy projects in New Zealand:

- The supply chain will need to be developed, including for specialised equipment required to be supplied from outside New Zealand. New Zealand may seek to find opportunities to draw on capabilities developed for Australia's supply chain.
- Expertise in the local workforce for construction and operations activities will be required. There will be some overlap here with the existing expertise in Taranaki's oil and gas sector.
- Port facilities will need to provide sufficient capacity and capability for the storage and onshore construction of offshore wind components, as well as to service the vessels required for construction and to facilitate ongoing asset maintenance. It is expected that Port Taranaki will serve as a "hub" for offshore wind development in New Zealand and that upgrades may be needed to port infrastructure.
- A further consideration is the availability of offtake arrangements providing long-term fixed pricing for electricity generated by the project, whether under a government-provided contract for difference or similar support mechanism or through privately-negotiated PPAs. The government signalled in August 2024 that it is not considering any price stabilisation or support mechanisms.

6.3 Project Finance

Key Features of Project Finance Structures for Renewable Energy

The project finance structure for renewable energy projects in New Zealand is usually very similar to the project finance structure for other asset types. In particular:

- The project financing is non-recourse and the project obligors (typically limited partnerships in New Zealand) are special purpose vehicles.
- The financiers receive all asset security from the project obligors (including security over the equity interests in the project vehicle).
- The financiers have direct agreements with key counterparties, including the landlord, any PPA offtaker and any material construction contractor.

Key Legal Considerations

Key legal considerations for financiers that apply to renewable energy projects specifically include:

- The project site is often leased farmland, so the robustness of the lease terms, access to the site (including the interaction with any creditors of the landlord in an enforcement scenario), the landlord's rights to use the site and obtaining consents for the financiers to have a mortgage of the lease are important.
- For projects where there are multiple construction and supply contracts, the interface risk (including between construction works and supply of turbines or solar panels) needs to be managed appropriately.
- The project vehicle must operate within the regulated wholesale market, including compliance with the Code.
- The project vehicle needs dependable access to a Grid or Local Network connection (which might require the construction of a new connection).
- Virtual PPAs are financial instruments and are therefore regulated as derivatives under the Financial Markets Conduct Act 2013.

There are no specific rules or regulations that apply to the project financing of renewable energy projects in New Zealand (as opposed to the project financing of other asset types).

6.4 Subsidies and Incentive Schemes

Subsidies and Incentive Schemes for Renewable Energy

New Zealand does not have any direct government incentive schemes aimed specifically at renewable energy, such tax deductions, subsidies or contracts for difference. The government signalled in its August 2024 policy decisions for the proposed new offshore wind (and other offshore renewable energy) regulatory regime that it does not intend to offer price support or stabilisation mechanisms.

The Emissions Trading Scheme (ETS)

The ETS, introduced in 2008, is the primary legislative tool intended to incentivise emissions reductions in New Zealand. The ETS is a "cap and trade" system, that imposes a price on each tonne of carbon dioxide equivalent emitted by participants. The ETS applies to all sectors and all gases (although agricultural emissions are presently only reported and are not priced). The ETS operates as a domestic-only system.

Under the ETS, mandatory participants are required to "surrender" one New Zealand Unit (NZU) for each tonne of carbon dioxide equivalent emitted. The ETS operates as a "net" scheme, in that certain removal activities (most notably, forestry) can earn NZUs, with one NZU available for each tonne of carbon dioxide equiv-

alent sequestered. Participants in the ETS can acquire NZUs to meet surrender obligations in a number of ways:

- by purchasing units at quarterly government auctions (provided that relevant reserve prices are met);
- by earning them through eligible removal activities;
- by purchasing them on the secondary market; or
- being awarded free units in certain circumstances.

The particular activities that trigger a person to be a mandatory participant in the ETS and to incur surrender obligations are defined in legislation and are subject to minimum thresholds. They include a wide range of activities across the forestry, liquid fossil fuels, stationary energy, industrial processes, synthetic gases and waste sectors.

Impact of the ETS

Because the ETS is a net scheme with emissions and removals treated on a "like for like" basis, the ETS has incentivised high rates of afforestation, especially in exotic species such as pinus radiata. The credits awarded for these projects can then be sold to mandatory participants for use in meeting emissions liabilities.

A surplus of NZUs in the system has kept prices low, which plays into decisions on whether it is cheaper to meet the emissions liability under the ETS or invest in decarbonisation initiatives. Despite the ETS undergoing numerous reforms since it was introduced in 2008, there remain questions about its effectiveness in incentivising the energy transition.

6.5 Decommissioning Requirements

The cessation of renewable energy activities is regulated under the conditions of resource consents granted under the RMA for those activities. Conditions generally include requirements for decommissioning and site rehabilitation within specified timeframes. Bonds may also be required to be provided to ensure decommissioning is undertaken.

For offshore wind (and other offshore renewable energy technologies), in its August 2024 policy decisions on the proposed regulatory regime, the government outlined that commercial permit holders will be subject to decommissioning obligations that must be backed by one or more financial securities. Feasibility permit holders will, when applying for a commercial permit, be required to provide a decommissioning plan, a decommissioning cost estimate and a proposal on financial securities. The quantum of the financial securities will be determined by the Minister for Energy, based on the risk profile of the developer, and the Minister may adjust these requirements over time if required.

7. Outlook

7.1 Renewable Energy Policy Developments

In summary, the significant future developments of renewable energy policy in New Zealand include the following:

- The Fast-track Approvals Bill is with the Environment Select Committee, as of August 2024. The Select Committee is set to review these submissions and report to Parliament on any recommended changes to the Bill in September 2024 (see **2.1 Governing Law and Upcoming Changes**).

- A Resource Management Amendment Bill to further support the consenting of renewable energy projects is expected in 2024 (see **2.1 Governing Law and Upcoming Changes**).
- Another significant future development is the reform of the RMA system to better enable infrastructure and renewable energy (see **2.1 Governing Law and Upcoming Changes**).
- The strengthening of national policy statements for renewable energy and transmission infrastructure will be relevant when consenting those projects under the RMA (see **2.1 Governing Law and Upcoming Changes**).
- The second emissions reduction plan (ERP2), outlining the actions the government intends to take during the second emissions reduction period (2026 – 2030) in connection with the "Net Zero by 2050" target under the CCRA, is due in December 2024.
- A consultation document was released by MBIe, in July 2024 in relation to proposals for a regulation regime for carbon capture, utilisation and storage (CCUS). Following a consultation period ending in August 2024, the government will decide whether to include CCUS policies in ERP2, including how the ETS should be modified to account for emissions reductions achieved using carbon capture and storage.
- The Hydrogen Roadmap is being developed by MBIE, and a summary report of key themes from the consultations on the Interim Hydrogen Roadmap paper, which closed November 2023, is expected in 2024 (see **3.4 Hydrogen and Other Biofuels and Renewables**).
- The legislation for the proposed regulatory regime for offshore renewable energy technologies is proposed to be introduced to Parliament at the end of 2024 (see **6.2 Offshore Project Development**).

Trends and Developments

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Russell McVeagh employs approximately 350 staff and partners across its Auckland and Wellington offices. The firm's renewable energy team is a market leader in New Zealand and has represented local and international clients on some of the most high-profile renewable energy transactions. The team has significant experience in advising on all aspects of renewable energy, including on the equity and debt financing, property, consenting and construction aspects of renewable energy projects and advising on the acquisition and sale of projects and project platforms. Russell McVeagh has a deep understanding of the key drivers and issues faced by project sponsors and deploys experts across its full-service practice to manage any issues that arise over the life cycle of a renewable energy project.

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Introduction: Increasing Levels of Renewable Energy

The need, and opportunity, for significant further investment in renewable energy generation in New Zealand has become increasingly clear in recent years. Large increases in wholesale electricity prices over New Zealand's 2024 winter have confirmed the need for new generation capacity, as well as storage and firming solutions.

The winter price increases highlighted that New Zealand's transition to higher proportions of renewable energy generation must be carefully managed at a system level, to ensure that sufficient generation will be available during peak periods when hydro storage is low. In 2024, during New Zealand's winter months, there was both a gas supply shortage and low inflows into hydro storage lakes, resulting in pressures on the levels of residual generation reserves and on wholesale prices.

Renewable energy generation already represents a very high proportion of New Zealand's overall generation mix, with approximately 88% of total electricity generation coming from renewable sources in 2023 (with 61% coming from hydro, 18% from geothermal and 7% from onshore wind, in approximate percentages). Forecasted increases in electricity demand are nevertheless driving significant development activity in new renewable energy generation, and the proportion of generation sourced from renewables is expected to continue to increase.

As is the case in many other countries, the need for investment in transmission and distribution infrastructure to support increasing electrification, increasing generation capacity and a more distributed generation system has become hugely important in the context of the overall solutions required for the electricity system. In New Zealand, there is an increasing focus on the capital expenditure required across the distribution networks and on the settings required to support that investment. New Zealand's distribution networks are currently organised across 29 separate electricity distribution businesses (EDBs), many of which are owned by local councils or consumers.

In a fast-changing sector, investors and developers are required to keep abreast of the many regulatory changes that will impact development activities in renewable energy generation and shape the sector for years to come. Recent developments include proposed reforms to the resource consenting regime to support investment in renewable energy and other significant infrastructure projects, a proposed regulatory framework for offshore wind and other offshore renewable energy and anticipated changes to the Electricity Code to better facilitate battery energy storage systems (BESS) in New Zealand.

Winter 2024 Wholesale Pricing Pressures

Pricing impacts

Winter 2024 saw significant pressures on wholesale electricity prices in New Zealand, with average weekly prices in early August 2024 reaching approximately NZD800 per megawatt hour, at levels that were about six times higher than they were in winter 2023. The high wholesale electricity prices had a material impact on some businesses. For example:

- A large sawmill operator, Winstone Pulp International, paused work at its two sites and announced a proposal to shut its entire operation indefinitely, citing electricity price increases of more than 600% since September 2021 and power costs which comprise over 40% of total production costs.

- Electricity retailer Electric Kiwi announced in mid-July 2024 that they would be ceasing to accept new retail electricity customers to avoid making a loss from new unhedged customers.
- Major methanol exporter Methanex entered into arrangements to sell its natural gas to power companies for electricity generation, diverting gas away from its usual activity of producing methanol.

A dry year and a gas shortage, in winter

There were several factors that contributed to high wholesale electricity prices:

- A key factor was low levels of hydro storage due to months of dry weather. Lower rain and snow melt impacted lake levels, to the extent that hydro storage in early August 2024 was sitting at about 55% of the historic average for winter (being one of the lowest levels seen on record).
- A gas supply shortage also played a significant role. Natural gas in New Zealand is sourced from gas fields in the Taranaki region. Production from these fields has been in decline, due to depleting resources within the existing fields and reduced investment over a number of years, as government policy settings have sought to transition New Zealand towards a low-emissions economy. A ban on oil and gas exploration was introduced in 2018. The current government has announced that it will introduce legislation in late 2024 to reverse this ban.
- There is, naturally, higher demand for electricity usage during the winter months in New Zealand. It is during these peak winter months where "dry year risk", being the risk that overall generation capacity falls during extended periods of low inflows into hydro lakes, can become particularly hard to manage.

In 2023, 9% of electricity was generated from gas and 2% from coal. These thermal resources play a key role in the pricing of electricity in New Zealand. New Zealand's wholesale spot market applies a uniform price to all generation that is dispatched at a particular pricing node (or location), meaning that the dispatch of thermal generation (typically at higher marginal costs than renewable energy generation) is a key driver of pricing for all generation. In winter 2024, gas supply issues arose at a time when hydro storage was low, impacting electricity prices materially.

Political and regulatory reaction

Wholesale prices in 2024 have received significant focus from politicians and relevant regulatory bodies, with some questions also being raised as to the design and operation of the New Zealand energy system. By way of example:

- The Electricity Authority (EA) and the Commerce Commission (the "Commission") established an Energy Competition Task Force in August 2024, to develop a series of short-term and medium-term actions to improve the performance of electricity markets. In connection with announcing the task force, the EA's Board chair noted (among other things) that "bringing more generation online sooner puts more electricity into the system, which is the best way to protect New Zealanders from fuel shortages in the future".
- The Energy Minister announced in August 2024 that the government intends to remove regulatory barriers to the construction of liquid natural gas (LNG) import facilities.
- The Energy Minister also announced in August 2024 that the government intended

to ease restrictions on lines companies from owning generation. Under the Electricity Industry Act 2010 (as in place at the time of the announcement), a person involved in a distributor cannot also be involved in grid-connected generation with a total capacity of more than 250 MW. Corporate separation and arm's length rules also apply to distributors investing in more than 50 MW of generation that is connected to the distributor's network.

The winter 2024 "energy security crisis", as referred to by the government, has highlighted the need for significant investment in the electricity sector, including in new renewable energy generation and storage solutions (such as BESS), alongside long-term planning to ensure that New Zealand maintains sufficient generation capacity in future dry years.

Investment in Transmission and Distribution Infrastructure

Electricity demand in New Zealand is predicted to increase 57% by 2050, from 2023 consumption, according to the reference scenario of the Ministry of Business, Innovation and Employment published in July 2024. The expected increase reflects both anticipated population growth and the electrification of the economy.

Transmission and distribution networks will play a critical role in the electrification of New Zealand's economy. There is a substantial need for investment to maintain and replace ageing networks and to support new generation capacity and meet domestic energy demand.

New Zealand's transmission network is owned and operated by Transpower, a state-owned enterprise. The distribution networks are owned by 29 EDBs, many of which are owned by consumer trusts or local councils. Transpower and the EDBs are forecasted to spend significantly more on capital expenditure than they have previously.

The Commission regulates the maximum revenue that Transpower and certain of the EDBs (being those that are not consumer-owned) may earn. In February 2024, the Commission approved Transpower's nearly NZD400 million "Net Zero Grid Pathways" programme to invest in strengthening the national grid.

For the regulated EDBs, a new default price-quality path, which regulates the maximum revenues that can be recovered from consumers and the applicable minimum quality standards, will be set by 30 November 2024 and apply from 1 April 2025. The new revenue limits set by the Commission are expected to be set at increased levels to account for expected investment in reliability and capacity.

Despite the anticipated increases in revenue limits, the Commission has indicated that the need for new investment cannot be met solely through price increases paid for by customers. Ultimately, EDBs will need to raise the necessary capital themselves to fund significant network investment plans. A key question for a number of the EDBs in raising that capital in coming years will focus on the extent to which their current ownership and financing structures will facilitate the level of capital investment required.

Resource Consenting Reform

The government is in the process of reforming New Zealand's environmental and planning laws to support investment in renewable energy and other significant infrastructure projects. This reform process includes:

- a new, "one-stop shop", fast-track consenting regime to accelerate consenting processes in New Zealand;
- two bills to make targeted amendments to the Resource Management Act 1991 (RMA) to reduce the regulatory burden facing key sectors;
- the creation of a new national direction to support the consenting of large infrastructure projects, including a new national direction for renewable energy generation and electricity transmission infrastructure; and
- the replacement of the RMA with new legislation.

These reform processes are at various stages, but are all intended to be passed this parliamentary term:

- A new fast-track consenting regime was introduced on 7 March 2024. Following the success of earlier fast-track processes, the Fast-track Approvals Bill is expected to continue to support investment in renewable energy in New Zealand. This is reflected by the approximately 70 renewable energy projects that have applied to be listed for fast-track consenting in the Bill. This Bill is expected to become law by the end of 2024.
- The first amendment Bill, the Resource Management (Freshwater and Other Matters) Amendment Bill, was introduced on 23 May 2024. This Bill includes targeted changes to the process for developing and amending new national direction, which is expected to speed up the development of new national direction, including for renewable energy. This Bill is intended to become law by the end of 2024.
- The second amendment Bill is expected to be introduced by the end of 2024 with key changes to support renewable energy projects. This Bill is intended to become law in mid-2025. The package of new or amended national direction, including national direction for renewable energy generation and electricity transmission infrastructure, is intended to follow this same timeline. While substantive details on the further RMA amendments and national direction are not yet available, it has been indicated that amendments will include reductions of consenting timeframes, extension of lapse periods and 35-year default consent durations for renewable energy projects.

The government has previously stated its intention to replace the RMA this parliamentary term. This will be an important reform process to further support renewable energy projects in New Zealand.

Offshore Wind

In August 2024, the government published its policy decisions on the design of the proposed regulatory regime for offshore wind and other offshore renewable energy technologies. The government confirmed its intention to introduce legislation for the regime in December 2024, with a view to the first feasibility permits round being initiated in late 2025 and the first feasibility permits being granted in 2026. The key aspects of the proposed regime include the following:

- seven-year feasibility permits granting an exclusive right to apply for a commercial permit and for relevant environmental consents (for offshore renewable energy) in the specified area, subject to "use it or lose it" provisions;
- 40-year commercial permits covering the construction and operations periods, with the potential to extend for another 40 years with approval;

- allocation rounds for feasibility permits based on a developer-led approach (whereby developers must identify the proposed site), the Minister for Energy having the ability to limit rounds by generation capacity, spatial area or technology type (if appropriate), applications being assessed on a comparative basis and priority being given to projects that are most likely to be delivered successfully;
- no royalty mechanism, although the government will recover the costs of administering the regime through fees;
- iwi and hapū engagement forming part of the assessment considerations for feasibility permit applications;
- commercial permit holders generally being responsible for building new offshore transmission infrastructure, on the basis that Transpower will become the owner and operator of the same following construction (with the details to be developed); and
- decommissioning obligations backed by financial securities (the quantum of which will be determined by the Minister for Energy, reflecting the risk profile of the developer), with developers being required to submit a decommissioning plan and estimated decommissioning costs at the stage of applying for a commercial permit.

The government also signalled (in its August 2024 policy decisions) that it does not intend to offer price support or stabilisation mechanisms (such as contracts for difference), which have been a key feature of many successful offshore wind regimes internationally. The government's view was that such mechanisms would depart materially from New Zealand's market-based electricity model.

Battery Energy Storage Systems: An Evolving Regulatory Landscape

Development activity in BESS is increasing in New Zealand, both in stand-alone grid-scale BESS and BESS co-located with renewable energy generation. As more intermittent generation comes online, it is expected that BESS will play an important role in balancing supply and demand and enhancing the stability and resilience of the electricity grid.

In a decision paper released in July 2024, the EA outlined its proposals to actively facilitate investment in BESS by reducing barriers to entry and enhancing flexibility and competition in the wholesale and ancillary services markets. This includes simplifying the process for participation in the wholesale market and exploring the expansion of ancillary services available to BESS, such as frequency keeping and five-minute variability management, which would create new revenue opportunities for operators while bolstering the overall flexibility of the grid. For more details on this decision paper, see **4.1 Electricity** of the New Zealand Law & Practice chapter for Renewable Energy.

Transmission pricing methodology (TPM) review

The EA has also been reviewing transmission pricing methodology (TPM), to better support investment in BESS and emerging technologies by rectifying issues identified in the TPM. In a consultation paper issued on 5 August 2024, the EA outlined two proposals, as follows:

TPM: Connection charges

- Connection charges are charged by Transpower to recover the costs of a connection investment directly from its customers. The charges are shared if there are multiple connected customers. The charges do not

include capital costs recovered by Transpower under an investment agreement with a developer, under which Transpower agrees with the developer to make a particular investment in a connection asset (save to the extent a subsequent developer connects to the connection asset, in which case a capital charge is then applied to the subsequent developer to address the first-mover disadvantage that would otherwise arise).
- Under the TPM in force at the time of the consultation paper, the EA identified that BESS customers (who both inject into and offtake from the grid) will face higher connection charge allocations as compared to other load consumers or generators, ultimately creating "an artificial commercial disadvantage" and potentially discouraging investment in BESS.
- To address this issue, the EA proposed to amend how connection charges for shared assets are calculated, with a focus on ensuring that charges are capacity-based.

TPM: Residual charge allocations

- Residual charges are charged by Transpower to load customers to recover the remainder of Transpower's maximum allowable revenue (as set by the Commission) not captured by other transmission charges. Under the TPM in force at the time of the consultation paper, the EA identified that residual charges disproportionately affect customers with low load factors (ie, those customers whose energy consumption fluctuates or "peaks") when their energy consumption increases, as compared to customers with high load factors (who maintain steadier, "flatter" demand profiles).
- The EA noted that this disparity risks creating a material distortion in incentives for those investing in BESS, including, potentially, an incentive for a generator to avoid co-locating the BESS with generation (as opposed to in another location) in order to achieve lower residual charges.
- The EA proposed to adjust how residual charges are allocated in order to address this issue, with the intention of ensuring that all customers, regardless of load profile, experience the same proportional increase in residual charges when their consumption increases.

The proposed TPM amendments summarised above are intended to come into force in April 2026 (with the EA noting that the connection charges issue does not apply in the first two years from connection and that load customers do not pay a residual charge for the first four years from connection).

Instantaneous Reserves Market: Cost Allocation to Wind and Solar

Transpower, as the system operator in New Zealand, procures instantaneous reserves contracts to insure against the risk of a sudden loss of generation, known as "contingent events". Such events might be caused by a sudden failure of a large generation unit or by the failure of the HVDC link that connects the North Island and the South Island. Instantaneous reserves can comprise both generation capacity that can be called upon to increase output or interruptible load that can be called upon to be reduced, when required.

The EA issued a consultation paper in July 2024 outlining its proposal to amend the cost allocation methodology for instantaneous reserves. The costs of procuring instantaneous reserves contracts are allocated to generators with units exceeding 60 MW and to the HVDC owner (Transpower). Under the methodology for such allocations, the 60 MW threshold is calculated by reference to the size of individual generating

units (being, in the case of a wind farm, the individual turbines). The result has been that individual wind and solar components have not been considered large enough (under the existing methodology) to attract instantaneous reserves charges, notwithstanding the size of the overall wind or solar project.

The EA proposed to amend the cost allocation methodology for instantaneous reserves, by including groups of generating units that share a single grid connection and collectively represent a risk of giving rise to a contingent event.