



Climate Statement

FY25



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About this report

4 July 2025

Manawa Energy Limited (Manawa Energy) presents its Climate-related Disclosure for the year ended 31 March 2025 (FY25).

2025 (FY25).

This document has been prepared in accordance, and complies, with Part 7A of the **Financial Markets Conduct Act 2013 (FMCA)** and the **Aotearoa New Zealand Climate Standards (NZ CS)** published by the External Reporting Board (**XRB**), and forms the climate-related disclosure for Manawa Energy Limited (**Manawa Energy** or the **Group**) for the FY25 reporting period (**Climate Statement**).

This Climate Statement is for the financial period of 1 April 2024 to 31 March 2025.

This Climate Statement has been structured in accordance with **NZ CS 1**.

Manawa Energy has elected to use several of the adoption provisions in **NZ CS 2**, namely Adoption Provision 2 (*Anticipated Financial Impacts*), Adoption Provision 4 (*Scope 3 GHG Emissions*), Adoption Provision 5 (*Comparatives for Scope 3 Emissions*), Adoption Provision 6 (*Comparatives for Metrics*), Adoption Provision 7 (*Analysis of Trends*) and Adoption Provision 8 (*Assurance of Scope 3 GHG Emissions*).

Reporting Entity

Under Part 7A of the FMCA, Manawa Energy is a climate reporting entity (**CRE**) for the FY25 period and is required to publish climate-related disclosures as part of our FY25 reporting.

This Climate Statement is a group Climate Statement for the purposes of Part 7A of the FMCA. References to Manawa Energy include its subsidiaries, as they are identified at page 38 of the **FY25 Annual Report** available on our website (referred to throughout this report as "Manawa", "Manawa Energy", "our" or "we"). The scope of the reporting entity aligns with that used for Manawa Energy's FY25 Group Financial Statements, which are located in its **2025 Annual Report** (pages 46 to 75).

Financial numbers, as presented in this Climate Statement are in New Zealand dollars (NZD) and rounded to millions (\$m), unless otherwise stated. In some instances, quantifications have been provided as a range.

Unless otherwise expressly stated, where external documents are referred to in this Climate Statement (for example, our FY25 Annual Report), these do not form part of the disclosures but are simply general and/or contextual information to direct the reader to further information, should they wish to read more.

A glossary of key terms and acronyms referred to in this Climate Statement is included at **page 69**.

A Limited Assurance Opinion over Scope 1 and Scope 2 greenhouse gas (GHG) emissions is included at **pages 70 to 72**.

Important Notice

This group Climate Statement contains current and forward-looking statements about climate change and the current and anticipated future impacts of climate change on Manawa Energy Limited (**Manawa Energy**). These forward-looking statements include (but are not limited to) climate-related scenarios, climate-related risks and opportunities (**CRROs**), anticipated impacts, and transition plan actions.

The statements in this document (including those which are forward-looking) are based on assumptions, estimates, and judgements that are uncertain and subject to change. They should not be taken as guarantees of future performance and the reader should note there are many factors (climatic, government, technological, and market factors) that could cause Manawa Energy's actual results, performance, risks, or opportunities to differ materially from those described in this Climate Statement. In particular, the CRROs described in this Climate Statement may not eventuate, or may be more or less significant than anticipated, and there could be significant climate-related impacts that eventuate, which have not been identified in this Climate Statement.

Manawa Energy does not represent that the information in this Climate Statement will not

change following publication and gives no undertaking to update the information over time (subject to relevant legal or regulatory requirements). Nothing in this Climate Statement should be interpreted as capital growth, earnings or any other legal, financial, tax or other advice or guidance.

Scheme of Arrangement

On 7 May 2025, after the end of Manawa Energy's financial year (but prior to publication of this Climate Statement), the Commerce Commission gave its clearance for Contact Energy Limited's (**Contact Energy**) proposed acquisition of Manawa Energy under a Scheme of Arrangement (**Scheme**).

At the date of this Climate Statement, the High Court has approved the Scheme. The Scheme is set to take effect on or around 11 July 2025, subject to all remaining conditions of the Scheme being satisfied.

If the Scheme does take effect:

- Contact Energy will become the sole shareholder of Manawa Energy;
- Manawa Energy will be delisted from the NZX (that is, all Manawa Energy equity and debt securities will cease to be quoted on the NZX on, or shortly after, the Scheme's implementation);

- Manawa Energy will cease to be a listed issuer under the Financial Markets Conduct Act 2013 (**FMCA**) and will cease to be a climate reporting entity for the reporting period commencing 1 April 2025; and
- The Board of Directors of Manawa Energy will change.

In this context, and having regard to the uncertainties referenced above, readers should note that the disclosures in this Climate Statement reflect Manawa Energy's circumstances as they were in the FY25 reporting period and do not take into account the impact that the implementation of the Scheme (if completed) and subsequent integration of Manawa Energy's operations into the Contact Energy group, including the approach by a new Board of Directors to governance, strategy and risk management that Contact Energy may bring.

More information about the Scheme (including the conditions) is available at <https://www.manawaenergy.co.nz/soa-information>.



Welcome to our Climate Statement FY25

Message from the Board

Manawa Energy recognises that a changing climate will necessitate changes to the way the New Zealand energy sector operates and that it will be increasingly important for all energy market participants to consider the impacts of climate change on their businesses. Those impacts are already creating, and will continue to create, both risks and opportunities for Manawa Energy and New Zealand's energy sector generally.

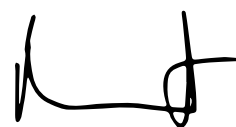
Changing weather patterns, including an increase in the frequency of extreme weather events, are expected to be observed in the near to medium-term future, the physical impacts of these weather events – including flooding, high winds, and extended dry periods or droughts – will increase the risks to our business. New Zealand's hydropower schemes and other renewable generation assets (including solar and wind generation facilities) are all weather reliant and therefore will be affected, to some degree, by the weather-related impacts of climate change. Manawa Energy's assets are geographically diverse, which creates a level of natural resilience to individual extreme weather events.

The broader efforts to mitigate and adapt to the effects of climate change, such as political response or regulatory changes, also present risks and opportunities for Manawa Energy. As a large independent power producer, with a high-quality development pipeline, we are well positioned to support the national ambition for a low-emissions and climate-resilient future. A significant increase in demand for renewable electricity is expected as the economy transitions to meet the "2050 target" under the Climate Change Response Act 2002, for net zero of all

GHG emissions (other than biogenic methane by 2050).¹ However, the transition will bring opportunities and challenges for the sector to resolve necessitating an adaptive, resilient approach.

This Climate Statement has been prepared as Manawa Energy itself is going through a significant transition – in September 2024, Manawa Energy announced it had entered into a Scheme Implementation Agreement with Contact Energy Limited under which Contact Energy agreed to acquire all of Manawa Energy's shares through a Scheme of Arrangement (**Scheme**). At the time of this Climate Statement, the Scheme is set to take effect on or around 11 July 2025 (subject to all remaining conditions of the Scheme being satisfied). If the Scheme does take effect (and once Manawa Energy ceases to be a listed issuer on the NZX), Manawa Energy will cease to be a climate reporting entity (CRE) for the reporting period commencing 1 April 2025. In this context, we note that the disclosures in this Climate Statement reflect Manawa Energy's circumstances as they were in the reporting period and do not take into account the impact that implementation of the Scheme (if completed) and subsequent integration of Manawa Energy's operations into the Contact Energy group may have, including the approach of a new Board of Directors to governance, strategy and risk management that Contact Energy may bring in the future.

This Climate Statement is dated 4 July 2025 and is signed on behalf of Manawa Energy by:



Deion Campbell
Board Chair



Sheridan Broadbent
Chair, Audit and Risk Committee

¹ The "2050 target" as defined in section 5Q of the Climate Change Response Act 2002. In summary, this section defines a net accounting emissions target of zero from 2050 for GHGs other than biogenic methane and specified gross emissions reductions for biogenic methane as against levels in the 2017 calendar year.

Background

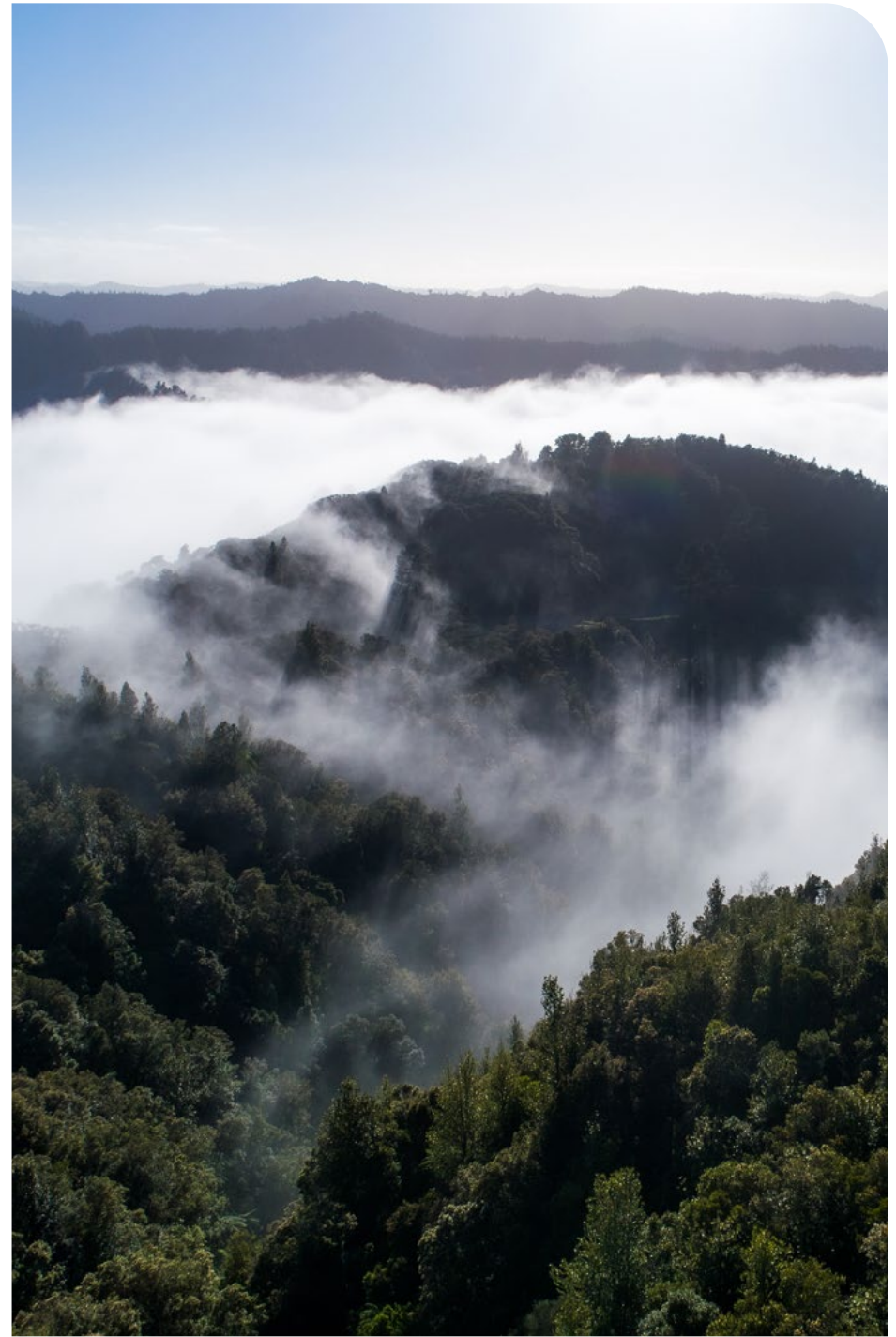
This Climate Statement sets out how climate change is currently impacting Manawa Energy, as well as identifying the possible climate-related risks and opportunities (CRROs) that could impact our business in different climate-related scenarios in the future. It is designed to facilitate assessments about how Manawa Energy is responding to climate change, and how it will do so in the future, in order to assess the resilience of our business model and strategy.

We have had regard to our primary users when preparing this Climate Statement. Primary users include existing and potential investors, customers, lenders and other creditors, and our wider stakeholders who are all predominantly based in New Zealand. Manawa Energy has also considered how our primary users might change in the future.

FY25 is the second period during which Manawa Energy has prepared a climate-related disclosure in accordance with the NZ CS, with our **FY24 Climate Statement** being our first disclosure under NZ CS. We previously considered climate change in our governance, strategy, and risk management approach, which included disclosing against the TCFD Framework in FY21 (as Trustpower) and in FY22 (as Manawa Energy). We also voluntarily disclosed against aspects of the NZ CS in FY23 (see our **FY23 Integrated Report** available on our website for further details).

In FY23 and FY24, we engaged a climate consultancy to help us prepare for reporting against the NZ CS, and in FY25, we engaged external expertise to further progress our focus on this important area. This work has not only helped us to report against the NZ CS, but also to better understand our risks and opportunities in relation to various climate-related scenarios and integrate this knowledge and information into our current and future business planning.

We undertook further foundational work for climate reporting in FY24 – including exploring and understanding stakeholder motivations, finalising our Sustainability Strategy and Plan, and working to better understand the CRROs for our business, and in FY25 we enhanced our GHG reporting by introducing dedicated carbon accounting software, quantified the current climate-related impacts on Manawa Energy for the reporting year, and developed an initial Transition Plan, setting out what we envisage would be our approach to position Manawa Energy to transition to a low-emissions, climate-resilient future.



NZCS Compliance and Adoption Provisions

This Climate Statement complies with the requirements set out in the NZCS issued by the XRB, as they apply in respect of the FY25 reporting period.

Manawa Energy has relied on adoption provisions available under **NZ CS 2** in this second year of reporting, which provide exceptions from NZCS disclosure obligations that Manawa Energy would otherwise be required to comply with.

For this FY25 Climate Statement, we have relied upon the following:

Adoption Provisions 2 Anticipated Financial Impacts

Manawa Energy is relying on Adoption Provision 2 and has not disclosed the anticipated financial impacts of CRROs reasonably expected by Manawa Energy, and related exempt information.



Adoption Provision 4 Scope 3 GHG Emissions

Manawa Energy is relying on Adoption Provision 4 so as not to disclose the following Scope 3 GHG emissions categories – purchased goods and services, capital goods, employee commuting and downstream leased assets. We have continued to refine our Scope 3 emissions data collection in FY25, in order to support reporting on these expanded categories in the future.

Adoption Provisions 5 Comparatives for Scope 3 Emissions

Manawa Energy is relying on Adoption Provision 5 in respect of the Scope 3 emissions categories that it did not report on in FY24. Manawa Energy has provided some comparative data for the categories of Scope 3 emissions that it did report on in FY24 and has subsequently reported on in FY25.

Adoption Provisions 6 Comparatives for Metrics

Manawa Energy is relying on Adoption Provision 6 and has not fully disclosed comparatives for other metrics disclosed in FY24 and subsequently in FY25. Comparative information has been disclosed for Scope 1 and Scope 2 emissions as well as some Scope 3 emissions (as noted above).

Adoption Provision 7 Analysis of Trends

Manawa Energy is relying on Adoption Provision 7 because while we have made initial progress in providing an analysis of trends in this Climate Statement by comparing our GHG emissions (Scope 1 and 2 baseline, and Scope 3 selected categories) for FY24 with our FY25 emission profile, and provided commentary on reasons for increases and decreases (as appropriate). A longer data set would be required to analyse trends in our emissions profile, over time. We have not provided an analysis of trends for other metrics outside of GHG emissions.

Adoption Provision 8 Assurance of Scope 3 GHG Emissions

Manawa Energy is relying on Adoption Provision 8, such that while its Scope 1 and Scope 2 GHG emissions have been the subject of a third-party assurance engagement, although its Scope 3 GHG emissions in FY25 have not been the subject of third-party assurance. The focus in FY25 has been on refining and enhancing data collection processes and integrity, in preparation for a future third party assurance engagement, once expanded categories of Scope 3 emissions are available.

Sections of this Climate Statement

Governance

Pages 8 to 12

This section details the role of Manawa Energy's Board and management team in overseeing, assessing, and managing climate-related risks and opportunities (CRROs).

Strategy

Pages 13 to 50

This section sets out the current climate-related physical and transition impacts Manawa Energy has experienced including quantification, where possible. It also sets out the scenario analysis that Manawa Energy has undertaken in FY25, the CRROs that Manawa Energy has identified, the anticipated impacts of those CRROs on Manawa Energy's business and the progress Manawa Energy has made toward preparing a Transition Plan to address those CRROs in the future.

Risk Management

Pages 51 to 56

This section describes the process by which Manawa Energy identifies, assesses, and manages climate-related risks (and opportunities) and in relation to risk, how that process is integrated into existing risk management processes.

Metrics and Targets

Pages 57 to 68

This section sets out Manawa Energy's Scope 1, Scope 2 and a subset of its Scope 3 GHG emissions for FY25 as well as the processes by which Manawa Energy measures and manages those GHG emissions, compares these to FY24 and provides explanations of the year-on-year changes experienced. This includes reference to the assurance engagement and opinion (pages 70 to 72), issued by KPMG with respect to Scope 1 and Scope 2 GHG emissions. Reference is also made to other climate-related metrics and targets, and how Manawa Energy has deployed capital towards the climate-related impacts and CRROs identified.



Governance

Overview

The governance diagram below sets out a broad overview of the risk and governance relationships and responsibilities of Manawa Energy's board of directors (**Board**), Audit and Risk Committee (**ARC**), People and Remuneration Committee (**PRC**) and management team.

These relationships and responsibilities are set out in more detail in the sections below and further general information is contained within our **FY25 Annual Report**. For other general information, compliance provisions with the NZX Corporate Governance Code, including in relation to Board Composition and Appointment, Committees, Reporting and Disclosure and Risk Management, are set out in the Manawa Energy **Corporate Governance Statement**.

Governance	Manawa Energy Board The governance body responsible for setting Manawa Energy's overall strategy, direction, and approach to risks and opportunities. The Board is responsible for oversight of Climate-related Risks and Opportunities (CRROs), and Environmental, Social and Governance (ESG) and for our Sustainability Strategy and Plan. There is more information about the role of the Board below.	
	Audit and Risk Committee (ARC) The ARC is a standing subcommittee of the Board. The Board has delegated specific functions and responsibilities to the ARC with respect to climate-related disclosures and CRROs, including overseeing CRROs and the preparation, verification, and publication of Manawa Energy's Climate-Related Disclosures (CRD). There is more information about the roles of the ARC below.	People and Remuneration Committee (PRC) The PRC is a standing subcommittee of the Board. The PRC has specific responsibilities related to remuneration, including the incentive arrangements for the Chief Executive and management team, which include determining appropriate ESG and climate reporting Key Performance Indicators (KPIs) relating to ESG and climate reporting. There is more information about the roles of the PRC below.
Executive	Chief Executive and Management Team The Board (via the ARC) delegates responsibility for assessing and managing CRROs to the management team, which includes the Chief Executive. The management team has overall accountability for embedding CRROs into risk management, business strategy and planning, budgeting processes and frameworks, and regular reporting to the ARC and Board on those matters.	
Operations	Business Functions Manawa Energy manages the identification and day-to-day management of CRROs on a devolved basis, with accountability for specific CRROs allocated to particular business functions and responsible members of the management team who then report to general managers, who in turn report to the CEO.	Risk Owners CRROs are identified, and Risk Owners assigned within certain risk categories that they have been allocated. Risk Owners are responsible for monitoring and managing those CRROs using Totum (Manawa Energy's enterprise risk management tool).

Board Oversight of CRROs

Manawa Energy's Board is the governance body responsible for overseeing our approach to climate-related matters. The Board Charter sets out the Board's core roles and responsibilities with respect to the approval and monitoring of Climate-related Disclosures. These are:

- › ensuring appropriate audit and risk management systems are in place to manage risk within the Board's approved risk framework;
- › adopting appropriate procedures to ensure compliance with all laws, including accounting standards (such as the **Aotearoa New Zealand Climate Standards**, NZ CS);
- › overseeing the Company's commitment to our values, sustainable development, the environment and the health and safety of employees, contractors and the communities in which Manawa Energy operates; and
- › ensuring that the Board is and remains appropriately skilled to meet the changing needs of the Company, consistent with NZX requirements.

With respect to climate change specifically, the Board is ultimately responsible for approving and monitoring financial reporting, climate-related disclosures (including the oversight of CRROs), and capital management.

Audit and Risk Committee (ARC)

The Audit and Risk Committee's role is to oversee and assist the Manawa Energy Board to comply with its legal obligations in relation to risk management (including CRROs) and financial reporting.

The **ARC Charter** was amended in November 2024 to reflect the specific responsibilities that the Board has delegated to the ARC with respect to climate-related disclosures and climate-related risks and opportunities. These are:

- › Oversee the identification, quantification and monitoring of Climate Related Risks & Opportunities (CRROs);
- › Oversee the regular reporting and governance framework for CRROs;
- › Oversee the Basis of Preparation used in Greenhouse Gas reporting;
- › Ensure that management has established an appropriate system of controls and management in relation to climate related risks, and record keeping;
- › Review all Climate Related Disclosures (CRDs) and engage with management and the assurance provider in relation to the same; and
- › Recommend the annual CRD for approval to the full Board.

The ARC's general risk management mandate includes climate-related risks. The ARC maintains oversight of climate-related risks within the risk parameters defined by the Board as part of Manawa Energy's Enterprise Risk Management (**ERM**) system, as described further in the **Risk Management** section of this Climate Statement.

Throughout FY25, the ARC assisted the Board in further developing and embedding Manawa Energy's climate reporting processes.

The practice of the ARC has been to meet at least four times per year, and in FY25, the ARC met six times, which included additional out of cycle meetings to consider climate-related risk and opportunity identification, management and reporting, including the quantification of current climate-related impacts and transition planning. All Manawa Energy directors (including those that are not members of the ARC) have access to ARC papers and a standing invitation to attend ARC meetings, where material CRROs are discussed, and attendance by other Board members is a regular occurrence.

The Chair of the ARC reports to the Board, by way of updates at Board meetings that follow the relevant ARC meeting, on the content of ARC meetings. This includes reporting on enterprise risk updates (including CRROs) that have been considered by the ARC.

Board Skills and Competencies

The Board is committed to ensuring that Manawa Energy operates responsibly, ethically and in compliance with our company values – including in relation to current impacts and CRROs. The Board Charter sets out the specific roles and responsibilities of the Board as they relate to climate-related matters, as outlined above.

When the Board is considering appointing a new or replacement director, Manawa Energy undertakes a rigorous evaluation process, as set out in the Board Charter. This process considers the current skillset of the Board and identifies the skills and experience that prospective directors will ideally possess. The climate expertise, skills and competencies of prospective directors are considered and evaluated against the Board Strategic Skills Matrix, which includes ESG and Sustainability as a core Board competency.

All newly appointed directors undertake a comprehensive induction, which includes site visits to see Manawa Energy's generation assets and operating environments first hand.

Time has regularly been set aside in Board meetings to upskill directors on key issues facing Manawa Energy, including CRROs and developments in legal obligations and best practice with respect to climate reporting and climate change generally. Directors have also had access to training funds, which can be

used to support their continuous education on matters relevant to their role at Manawa Energy.

The Board has utilised climate-related expertise – both internally and from external advisors – to discharge its roles and responsibilities. For example, climate-related presentations, legal advice, and reporting on legislative updates in the climate space all contribute to the Board's (and the wider management team's) ongoing education in climate-related matters. Individual Board members are also able to access climate-related materials and knowledge via their other roles and membership of organisations such as the Institute of Directors, the Trans-Tasman Business Circle and Chapter Zero.

The Board Charter includes a requirement to annually review and evaluate Board performance. The FY24 externally facilitated Board governance and performance review, and the resulting report, provided an assessment of current capability against the Board Strategic Skills Matrix and included feedback for individual directors and the whole Board. The report served as the cornerstone for Board performance and assisted in identifying professional development priorities. The FY25 review of Board performance has however been deferred, pending implementation of the Scheme.

Governance of Our Strategy and CRROs

The Board is committed to building a climate-resilient business and considers current impacts and CRROs when reviewing, developing, and overseeing the implementation of Manawa Energy's overall strategy. As Aotearoa New Zealand's largest independent electricity generator and renewables developer, resilience is embedded in Manawa Energy's core business strategy.

Consideration of CRROs in Strategy Development and Review

As described in the **Strategy** section of this Climate Statement, Manawa Energy has reviewed its strategic framework annually, other than in FY25, where the review has been deferred until the outcome of the Scheme is finalised. Instead, in FY25 the existing strategic framework and sustainability strategy, as set out in FY24, has continued to be developed and implemented and a formal Transition Plan has been developed. CRROs that were identified and assessed by the management team, the ARC and the Board have been considered in terms of our transition planning and the preparation of our Transition Plan but were not specifically considered as part of our broader strategy (given that this review has been deferred for FY25). Had our annual strategy review not been deferred, CRROs would have been considered in conjunction with (and weighed against) other business and enterprise risks identified through our risk management

processes, and appropriate changes made to our strategy in response to the risks that were decided by the Board as being material.

All aspects of Manawa Energy's current and future strategy are impacted by CRROs. For example:

- › Manawa Energy's assets are predominantly renewable hydro generators, and therefore their value is dependent on the weather and is influenced by any changes to climate;
- › As a developer of renewable energy assets (including a pipeline of wind and solar development projects), Manawa Energy's growth strategy is aligned with key components of the country's response to reducing emissions, particularly the electrification of New Zealand's economy and large-scale decarbonisation; and
- › The management of Manawa Energy's assets is informed by how resilient they are to adverse weather and climate change impacts.

The identification and consideration of CRROs is therefore an integral part of Manawa Energy's strategy development and review processes, as described further in the **Strategy** section.

Consideration of other relevant Climate-Related Factors in Strategy Review and Development

In addition to considering CRROs in the strategic planning process, Manawa Energy also uses projections of electricity demand growth such as that from the Climate Change Commission (CCC) and Transpower to inform our strategic planning and decisions.

Linkage to our Sustainability Strategy and Plan

Manawa Energy is committed to working for the good of our people, our environment, our communities and our shareholders. We had previously identified and prioritised 15 material initiatives to ensure our sustainability efforts are geared towards the most important environmental, social and governance (ESG) areas. This includes a specific focus on climate-related business risks (and opportunities).

Our Sustainability Strategy and Plan, as referenced in our **FY24 Climate Statement** and **FY24 Integrated Report** has also informed decision-making on climate-related ESG considerations across Manawa Energy, including by the Board, the ARC and the management team.

An overview of the Sustainability Strategy and Plan is set out on page 25 of our **FY25 Annual Report**. In relation to climate change specifically, key areas of consideration and focus from a governance perspective have included renewable energy development, resilience of existing assets and climate related business risk (and opportunities). Initiatives that have been undertaken to progress our Sustainability Strategy in FY25 generally are described further at pages 25 to 30 of our **FY25 Annual Report**.

Asset Management and its relevance to Strategy

Manawa Energy's existing asset strategy centres on the ongoing reliability, safety and profitability of our 26 generation schemes.

Each year, Manawa Energy reviews our asset management plans (**AMPs**) for each of our generation assets. In addition, as part of Manawa Energy's dam safety program, hydrology models for each hydro catchment are routinely reviewed, to take account of the latest weather modelling and any recent extreme weather events. Any notable changes in rainfall patterns and hydrology are captured during this process. These changes identify risks to assets from extreme weather events and inform how Manawa Energy's maintenance budget is spent, as well as identifying opportunities to capture additional revenue caused by increased rainfall.

These processes help Manawa Energy to not only identify and integrate current impacts and CRROs into strategic planning, but to also understand the overall resilience of our assets to climate change and the counter-measures Manawa Energy might need to undertake – now and in the future – to sustain that resilience. This is reflected in our FY25 Transition Plan, as of 31 March 2025 (page 49), and further definition of capital deployment in FY25 relating to new development, major capital projects and remedial works associated with climate-related events is set out in the **Metrics and Targets** section of this Climate Statement.

Understanding CRROs for future Strategy Consideration

Manawa Energy has over the past two years, engaged external expertise to upskill and build Manawa Energy's capability in relation to identifying and assessing CRROs. These external advisors work with an internal project team, to engage our people, deepen our in-house expertise and further our climate-related work. The scenario analysis process that Manawa Energy undertook to prepare the **Strategy** section of this Climate Statement is intended to serve as a valuable input into future strategy and overall risk identification and management processes, as appropriate, in light of the Scheme with Contact Energy.

Metrics and Targets for Managing CRROs

Manawa Energy currently has the following metrics for managing CRROs:

- › Greenhouse gas emissions inventory;
- › Sustainable Finance Framework;
- › Issuance of energy products such as Renewable Energy Certificates (RECs);
- › Our electricity generation intensity;
- › Major capital project asset upgrade expenditure;
- › Expenditure on specific remedial works in response to extreme weather events; and
- › Planned new renewable energy development expenditure.

Prior to the Scheme, we had intended to consider implementing further metrics and targets for managing CRROs as part of the climate and sustainability-related aspects of Manawa Energy's strategy and business operations.

Manawa Energy's Board oversees the progress and achievement of metrics for managing CRROs through various measures, as follows:

- › Day-to-day responsibility for the definition, operation and monitoring of these metrics is delegated to management. Management monitor progress against the above metrics, and where appropriate, report to the Board on that progress.
- › At Board meetings, the Board considers, as appropriate, any reporting from management in relation to the progress and achievement of metrics. Examples in Board reporting include progress on individual asset enhancement projects, progress on consenting existing hydro assets, and reporting on Manawa Energy's response to specific regulatory changes.
- › The Board makes decisions on changes to the metrics (and the introduction of new metrics) based on reports and recommendations from management.
- › Manawa Energy has also implemented climate-related KPIs in respect of some roles that contribute to the management of CRROs and has been further considering how the achievement of climate-related targets can be linked to the performance-based remuneration of relevant management team members. Further details in relation to these KPIs is set out below.

More information about Manawa Energy's approach to climate-related metrics and targets is set out in the **Metrics and Targets** section of this Climate Statement (pages 57 to 68).

CRRO Management Performance Linked to Remuneration

Manawa Energy's People and Remuneration Committee (PRC) is a standing committee of the Board. The PRC has specific responsibilities in respect of remuneration, including for benefits and incentive arrangements for the Chief Executive and members of the management team.

The PRC and Board review Manawa Energy's remuneration framework (including incentives) annually to determine appropriate linkages to ESG, including climate-related matters.

Chief Executive and management team total remuneration includes a short-term incentive (STI) component. 20% of the STI (FY24: no comparable category) is linked to achievement of shared strategic goals and 40% of the STI (FY24: 70% of STI) is linked to individual goals. These strategic goals and individual goals include the following climate-related KPIs:

- > Maximise the long-term value of existing assets;
- > Deliver and maintain existing renewable generation major asset projects;
- > Continue to progress new value accretive development options – with a core focus on moving these to Final Investment Decision (FID) stage; and
- > Expand Manawa Energy's existing renewable development project pipeline.

Manawa Energy's General Manager Environment, Stakeholders and Development also has a specific ESG goal (as part of the individual component of the Short-Term Incentive, STI) to drive delivery, monitoring, and active engagement of Manawa Energy's Sustainability strategy, of which climate-related matters represent an important area of focus.

General remuneration information is available in the **FY25 Annual Report, Executive Remuneration Policy, People and Remuneration Charter** and **Corporate Governance Statement**.

Management Oversight of CRROs

As described above, CRROs are central to Manawa Energy's strategy. This section describes the management team's role in strategy preparation and risk management at Manawa Energy. The consideration of CRROs is included within these processes and not undertaken as a separate or standalone activity.

The Board (via the ARC) delegates responsibility for assessing and managing risk (including CRROs) to the management team, which includes the Chief Executive. A description of the governance responsibilities and processes that have been adopted by the Board and management team is set out in our **Corporate Governance Statement**.

The management team is committed to ensuring that Manawa Energy's enterprise risk management (ERM) system supports the Company's operations and informs decisions about future opportunities, including those relating to climate change, and this is described further in the **Risk Management** section of this Climate Statement (pages 51 to 56). The management team:

- > receives quarterly reporting from the Head of Finance on Manawa Energy's enterprise risks (including details of any changes to those risks);
- > undertakes risk reviews on a quarterly basis to monitor and identify risks, including climate-related risks;
- > regularly reports its findings to the ARC and the Board;
- > discusses climate-related risk assessments, management and mitigation with the ARC and the Board;
- > regularly considers existing enterprise risk assessments (including the adequacy of controls or the need for additional assurance activity); and
- > considers changes to the risk environment and how these might impact Manawa Energy.

The management team is guided by a series of internal policies, including Manawa Energy's Risk Policy and Risk Guidelines. The management team also have regard to risk appetite for various business functions and to Manawa Energy's insurance programme.



Strategy

Our Business Model

Manawa Energy's core business is as a generator of renewable electricity (primarily hydropower generation), with a focus on increasing renewable generation capacity.

Manawa Energy has a portfolio of 26 power schemes (comprising 45 stations and 90 generating units, and 57 large dams), and a total installed capacity of 512 megawatts (MW). We produce electricity predominantly from hydro generation and operate one thermal diesel peaker plant at Bream Bay, in Northland. Manawa Energy supplies electricity to approximately 550 commercial and industrial business customers.

Manawa Energy primarily derives revenue from selling electricity on the New Zealand wholesale market, entering into electricity supply or power purchase agreements and other financial electricity products (for example, hedge contracts and derivatives).

Further general information about Manawa Energy, including its assets, new developments, performance and governance, can be found in the **FY25 Annual Report**.

Other Revenue

Alongside our generation business, Manawa Energy also derives revenue from irrigation operations, contributing to the conveyance of water to irrigators in mid-Canterbury via our pumping assets at Highbank on the Rangitata Diversion Race and via stored water releases from Lake Coleridge.

Manawa Energy also owns rural land that is leased to farming operations and hosts wind farm assets owned by third parties.

Our Business Strategy

Manawa Energy sets and reviews its strategic plan annually, although in light of the Scheme, an update was deferred for FY25.²

Manawa Energy's current strategic plan developed in 2024, has three key pillars:

1. Maximising the long-term value of our existing assets;
2. Growth through new developments; and
3. Capturing value and facilitating future growth through our revenue contracting strategy.

While these pillars still represent Manawa's current strategy, in light of the Scheme, our focus for FY25 has been pillars 1 and 2.

For general background information about Manawa Energy's business model and strategy, refer to the 'Our strategy' section from page 14 of our **FY24 Integrated Report**. An overview of our FY25 initiatives and focus is covered in the FY25 in review section (page 14) of our **FY25 Annual Report**.

Current and Anticipated Climate-Related Impacts

As a renewable energy generator, Manawa Energy is affected by climate-related impacts each year and anticipates being impacted by further changes in the future – impacts that are related to both physical and transitional changes.

We have integrated the description, and consideration, of all material current and anticipated climate-related impacts into the description of CRROs (Manawa Energy's Climate-related Risks and Opportunities; beginning page 25).³

² This deferral was also applied to other internal strategy documents and process, including, but not limited to Manawa Energy's Sustainability Strategy.

³ Noting that climate-related impacts are also indirectly covered in the Scenario Analysis, Transition Plan and other sections throughout.

FY25 Scenario Analysis

Overview of Scenario Analysis Process for FY25

Manawa Energy understands the importance of scenario analysis in identifying CRROs, to inform our strategy and business model and to assess how resilient our strategy and business model are now and will be in the future.

We have revised how scenario analysis is prepared and used in this Climate Statement compared to FY24. This year we utilised the **Aotearoa Circle Energy Sector Climate Change Scenarios (Energy Sector Scenarios)** as the foundation for our own scenario analysis. This contrasts with the more bespoke, independently developed, approach used in FY24.

We have adapted the Energy Sector Scenarios as we consider they represent a respected, robust and transparent energy industry standard for climate scenarios – they have collated a range of reliable sources of data and produced a set of scenarios using the framework and methodology recommended by **the External Reporting Board (XRB)**. Alignment with these scenarios enables readers to have a degree of assurance that the scenarios we have used are consistent with industry standards and, potentially (subject to their own approach to scenario analysis), our peers in the industry. For these reasons it was decided that this approach would provide additional value compared to the approach used in FY24 (and therefore, more than offsetting any benefits associated with using a consistent scenario analysis from year-to-year).

We have then built upon the foundation provided by the Energy Sector Scenarios by applying more granular detail on specific areas that are most critical to Manawa Energy's business. This process primarily used the judgement of internal subject matter experts with the results validated via several workshops with internal stakeholders and external advisors. The external advisors also helped guide the scenario analysis process to ensure consistency with NZ CS requirements and related XRB and FMA guidance.⁴

At a high-level, our FY25 scenario analysis process was structured as follows:

- The management team engaged a specialist contractor to Manawa Energy (Sustainz Business Solutions), to assume the role of Acting ESG Manager and lead the process of developing this Climate Statement and associated CRD processes, including scenario analysis and CRRO identification and assessment;
- The ARC and the Board received periodic updates on, and contributed periodically to, the scenario analysis process – at both scheduled meetings and through a series of additional out of cycle meetings to discuss matters specific to the CRDs. For example, this included approving an overall project plan, the planned approach for scenario analysis, advising on ad hoc queries as and when necessary, reviewing the outputs from the scenario analysis and transition

planning processes, financial quantification of current impacts and approving this Climate Statement; and

- An internal project team (**Project Team**) was assembled to participate in a series of six workshops run internally. The substantive scenario analysis was undertaken at these workshops, with outcomes documented and validated.

The workshops broadly followed the structure recommended in the XRB's **Staff Guidance for Entity Scenario Development** and involved the following key steps:

- **Step 1:** Set the scene, create a project group, and define objectives, milestones, and deliverables;
- **Step 2:** Define the focal question, map the value chain and organisational boundary, define time horizons;
- **Step 3:** Identify driving forces and critical uncertainties;
- **Step 4:** Select temperature outcomes and emissions pathways;
- **Step 5:** Prepare draft narratives, based on The Aotearoa Circle Energy Sector Climate Change Scenarios but taking into account of Manawa Energy's critical drivers and uncertainties as described in more detail below (Manawa Energy Scenarios – Interpretation of the Energy Sector Climate Change Scenarios); and
- **Step 6:** Conduct scenario analysis (using a '**coordinated effort**' **1.5°C** scenario, a '**trailblazers**' **2.2°C**, a '**slow followers**' **2.5°C** and a '**hot house**' **≥3.3°C** scenario) and identify Manawa Energy's CRROs, taking into account Manawa Energy's climate change scenario narratives, as developed and described in further detail below (Manawa Energy Scenarios – Interpretation of the Energy Sector Climate Change Scenarios). Through engagement with a multi-disciplinary Project Team, these scenarios were systematically considered, assessed and validated, with detailed outcomes from workshops and one-on-one consultations recorded across each of the four scenarios. This provided the basis for both identifying current impacts and framing the transition and physical climate-related risks and opportunities, described below.

Final CRRO disclosures were then developed, reviewed by the ARC, finalised and provided to the Board for approval.

The scenarios used have not been integrated within Manawa Energy's strategy process to date, as the strategic plan and other strategic processes were deferred in FY25 (as described above).

⁴ The external advisors used were Sustainz Business Solutions Limited and Gun Metal Grey Limited.

Focal Question

The focal question for our FY25 scenario analysis was:

"What climate-related risks and opportunities (CRRO's) are affecting the Manawa Energy group (Manawa) now, what CRROs could plausibly affect Manawa over the short-, medium- and long-term, and how material are those CRROs to Manawa's business model and strategy both now and in the future?"

Organisational Boundary and Value Chain

Organisational Boundary

The following entities (the Manawa Energy group) were included within the organisational boundary for the purposes of CRRO identification and analysis:

- Operations wholly owned and operated by Manawa Energy, other than Manawa Energy Generation Limited, Maungatapere 2021 Limited and Manawa Energy Metering Limited, which were deemed immaterial to the identification and analysis of CRROs due to the nature of their business and operations, and Rangitata Diversion Race Management, which was not included due to lack of operational control, but captured in Manawa Energy's downstream value chain;
- King Country Energy Limited's operations, because Manawa Energy holds a majority (75%) ownership interest (King Country Energy is an electricity generation company with five hydro schemes in the King Country and Horowhenua regions);
- Manawa Energy Insurance Limited (Manawa Energy's captive insurance vehicle) (a wholly owned entity of Manawa Energy); and
- Lochindorb Wind GP Limited, where Manawa Energy holds a 50% ownership interest (Lochindorb Wind GP Limited is the general partner of a limited partnership to develop the Kaihiku wind farm project).

Value Chain Exclusions

After mapping Manawa Energy's value chain, the following categories of participant/entity were excluded for the purposes of CRRO identification and analysis on a materiality basis. Categories were assessed and excluded if they were immaterial from a CRRO or sustainable business perspective (such as if it was immaterial to Manawa Energy's ability to generate revenue, maintain assets, obtain insurance, or access capital).

Exclusion	Rationale
Third-party transportation and distribution service providers	No major transportation activity for Manawa Energy.
Lessors of upstream leased assets	Manawa Energy has a small number of lease interests, none of which are material (financially or from a sustainability or CRRO perspective) for the purposes of the value chain.
Travel and accommodation providers	Level of business travel is not material, by reference to GHG emissions.
Landfill and waste disposal service providers	Manawa Energy's waste footprint is not material.
Downstream lessees	Manawa Energy has a small number of downstream lease interests in relation to rural land. Not material to Manawa Energy's primary business.
Forestry interests	Manawa Energy holds modest forestry interests that form part of existing hydropower schemes, or potential development opportunities. The forestry interests are not material to Manawa Energy's primary business and do not result in a significant number of New Zealand Units (under the Emissions Trading Scheme).

Scenario Rationale and Data Sources

The scenarios described below align with scenario architectures and time horizons used in wider energy sector scenario analysis. While they have been specifically aligned to the Aotearoa Circle Energy Sector Scenarios, they have considered other external views on future climate scenarios, including the scenarios chosen by key stakeholder Infratil (as our major shareholder) and our industry peers. In our view, the scenarios we have chosen, provide an appropriate basis to assess the resilience of our business model and strategy against identified CRROs.

In preparing the FY25 scenarios, we used the following data sources:

- The Aotearoa Circle **Energy Sector Climate Change Scenarios**, 2024;
- The Intergovernmental Panel on Climate Change (**IPCC**) sixth assessment synthesis report (**AR6**), which includes detail on CRROs at a global level, including relative concentrations pathways (**RCPs**) which provide an indication of the future concentrations of greenhouse gas emissions driving the changes to the physical climate;
- The Network for Greening the Financial System (**NGFS**) **hypothetical scenarios**. The NGFS "Net Zero 2050", "Nationally Determined Contributions", "Fragmented World" and "Current Policies" scenarios were utilised in producing the 1.5°C, 2.2°C, 2.5°C and ≥3.3°C scenarios respectively;
- The International Energy Agency (**IEA**) **2023 World Energy Outlook**. This provides insights into global energy supply and demand under different scenarios and the implications for energy security, climate targets and economic development, including the scenarios "Net Zero Emissions by 2050", "Announced Pledge Scenario, APS" and "Stated Policies Scenario, STEPS"; and
- Selected advice⁵ to the Government from the Aotearoa New Zealand He Pou a Rangi Climate Change Commission (**CCC**), including the CCC scenarios "Tailwinds", "Headwinds", "General Policy Reference Case" and "Current Policy Reference Case".

Time Horizons

The time horizons that we selected for each of the temperature scenarios are broadly aligned with the Aotearoa Circle Energy Sector Scenarios horizons and are set out in the **Time Horizons for CRROs** section below (page 24). However, for the purpose of CRRO assessment, we have extended the long-term horizon (2080) out to 2100 to reflect the long-lived nature of our assets, and to align with the time horizon used for the high-level physical risk assessment work completed in terms of our assets.

Manawa Energy Climate-Related Scenarios

Key input: Aotearoa Circle Scenarios

The Aotearoa Circle Energy Sector climate scenarios (Energy Sector Scenarios), developed in 2024, were used as the basis for defining Manawa Energy's scenario narratives in FY25. We have used the underlying premise in each of the Aotearoa Circle Energy Sector scenarios, focusing and expanding on those aspects of particular relevance to Manawa Energy. For example, the two central scenarios (Slow Followers and Trailblazers) are particularly useful for Manawa Energy given the relatively low difference in physical outcomes, yet vastly different transitional outcomes.

The scenarios are described at a high-level below. Currently, it is assumed that New Zealand is following a trajectory that sits somewhere between the two central scenarios – Slow Followers and Trailblazers.

⁵ Ināia tonu nei: a low emissions future for Aotearoa (climatecommission.govt.nz); CCC_2024-advice-on-NZ-ETS-unit-limit-and-price-control-settings-2025-2029.pdf (climatecommission.govt.nz).

Overview of Climate-Related Scenarios

(emissions reduction pathways/assumptions underlying pathway)

Category	Hot House	Slow Followers	Trailblazers	Coordinated Effort
Overview of the scenario	A world where minimal and fragmented efforts towards climate change mitigation have resulted in severe physical impacts. Emissions continue to rise unabated and there is continued reliance on fossil fuels. Tipping points are crossed in the Earth's systems. Transition risks are low in the short term and grow over time, due to the costs of adaptation and recovery from climate-related impacts.	A divided world where New Zealand takes a 'bare minimum' approach towards achieving net zero, in comparison to most other countries. The energy sector faces the tension of minimal domestic political support for decarbonisation, against growing international pressure. Technological progress is slower than other scenarios. New Zealand's transition away from fossil fuels is ultimately driven by economics.	A world where varying levels of international cooperation results in a fragmented response to climate change. New Zealand and several others have decarbonised faster, reflecting disparities in resources and capabilities. Technological development is slower due to less conducive international conditions. Fossil fuel consumption has been largely phased out in countries leading the climate movement, with a heavy emphasis on electrification.	A world defined by a rapid global push to decarbonise in the 2020s to achieve net-zero by 2050. Rigorous climate regulations and policies are enacted rapidly across the world. Decarbonisation is achieved through a wide range of renewable energy and energy efficiency measures. Tipping points in the earth system have largely been avoided but the world still faces intensified physical climate impacts, and the pace of change threatens those that fail to keep up.
Average increase in global temperature (2080)	3.3°C	2.5°C	2.2°C	1.5°C
Global emissions	Continue to grow through the century	Peak around 2040, nearly reaching net zero by 2100	Peak in the 2030s, reaching net zero by the 2080s	Peak in the 2020s and then decline, reaching net zero by the 2050s
Severity of physical risk	Extreme	Moderate	Moderate	Lower
Severity of transition risk	Low – Moderate	Low – Moderate	High	Moderate – High
Global policy ambition	Low	Moderate overall, highly differentiated	Moderate overall, highly differentiated	Highly ambitious and coordinated
NZ policy ambition	Limited	Slow and lagging globally	Immediate and bold	Immediate and globally coordinated
Technology change	Slow	Moderate	Moderate	Fast
NZ behaviour change	Slow	Slow – Moderate	Fast	Fast

Category	Hot House	Slow Followers	Trailblazers	Coordinated Effort
Socioeconomic assumptions	The inequitable impacts of climate change worsen socioeconomic divides around the world and within New Zealand. There is unrealistic optimism amongst developed countries in the ability to effectively manage social and ecological systems, including by geo-engineering if necessary. Consumers and industrial users demand resilient energy systems that can withstand extreme weather events and disruptions, and fossil fuels are perceived as essential. Social unrest rises as inequalities are exacerbated and crop failures proliferate. Climate refugees become more common and there are increased levels of geopolitical instability and conflict.	As extreme weather events become more frequent and severe under warming, social inequities are exacerbated due to the resulting increases in power outages, rising costs of energy and difficulty accessing insurance. Consumer preferences in New Zealand prioritise access, affordability and security of energy supply, particularly as climate change risks become evident. There is building activism against countries, including New Zealand, that are seen to be falling behind on sustainable action.	As a result of divided global policy to address climate change, social views are varied regarding sustainability. In countries that are committed to decarbonisation, there are increasing public awareness campaigns to influence stakeholder preferences. The rapid transition places pressure on household energy prices as the operation of low-carbon energy sources is prioritised over cost. This places strain on communities as energy poverty rises and social disparities become more apparent between those that can afford energy and those who cannot. Government support is required to assist households, until long term expansion of renewable generation stabilises and lowers energy prices from the 2040s.	Strong change in consumer and business attitudes increased competitiveness of low emissions technologies, intensifying the 'green race' in the 2020s. There is an increased focus on societal health and wellbeing, including the appreciation for nature underpinning human well-being and people are empowered to transform their lifestyles. However, the rapid transition places pressure on energy prices as use of fossil fuels diminishes. This shortfall in supply worsens prices for households, only stabilising and becoming more affordable in the late 2030s. In the short term, there is an increasing divide between those who can afford energy and those who cannot.
Macroeconomic trends	The cost of dealing with climate change puts a strain on national budgets and hinders global economic growth. The unequal distribution of resources and adaptation capabilities furthers economic disparities between countries. Major parts of some countries most vulnerable to physical impacts, such as Pacific nations, become effectively uninhabitable, leading to a rise in displacement of people.	Sustainable investors shift away from markets that are struggling to demonstrate progress towards decarbonisation and are falling behind the rest of the western world, such as New Zealand. Fuel costs begin to increase at a global level as suppliers begin to reduce exports and international carbon prices soar in major economies.	Access to sustainable finance increases for countries committed to decarbonisation, such as New Zealand, seen as a safe and progressive place to invest. Household energy prices rise initially as low-carbon energy is prioritised, exacerbating social strain until prices stabilise due to buildout of renewable generation.	A gradual re-prioritisation of economic goals has occurred so that focus has shifted to broader human and planetary well-being, including social, environmental and cultural indicators. The physical impacts of climate change have been detrimental to global GDP, but a new wave of green growth boosts the economy in the long term.

Category	Hot House	Slow Followers	Trailblazers	Coordinated Effort
Technology change	Due to a lack of government support and investment in technology, there are no major improvements in energy efficiency or breakthroughs in emerging technologies. Energy security concerns, armed conflict and high fossil fuel prices in the medium to long term drive a combination of behind-the-meter generation, or energy systems located on the customer's side of the utility meter, such as solar panels, and battery installation by a range of critical sectors and industrial users, such as hospitals, water treatment, food production, as well as affluent residential users. Less cross-sector collaboration or R&D support from government on scaling alternative zero, low-carbon, or interim drop-in fuels. Technology adoption focused on efficiency gains, with emissions reduction a by-product.	Low-carbon technologies are expensive in the short term and uptake is slow. Countries who are committed to the transition lead the development of generation and storage technologies, with emerging technologies becoming viable and existing technologies becoming cheaper. Energy efficiency gradually improves as technological developments in energy are pushed forward. Little to no investment in local production of alternative fuels or new infrastructure for low-emissions technologies until the medium-long term, when these become consistently cheaper than fossil fuels.	Emerging technologies take a long time to overcome technical, cost, and supply-chain hurdles. This leads the decarbonisation effort to rely primarily on existing, proven technologies to electrify transport and industry. These technologies are less resilient to the increasingly disruptive physical climate than a more diverse energy portfolio would be. Alternative fuels remain prohibitively expensive in the short-medium term, so the decarbonisation effort is achieved through electrification of transport and industry using existing technologies. High EV uptake.	As many new sustainable technologies came to market, uptake was fast and costs dropped across the board after initial supply-chain constraints were overcome. The energy sector has become more diverse, with a range of energy generation and storage solutions available. Collaboration internationally has played a key role, ensuring technologies, ideas and projects are shared to gain mutual benefits. Early action and long-term planning creates positive R&D environment and leads to domestic production of low and zero carbon alternative fuels and interim drop-in biofuels, and associated technology and infrastructure. Higher energy sovereignty and lower costs by long term.
Carbon sequestration – Afforestation (assumed to follow CCC scenario assumptions)	Exotic afforestation: 0.96 Mha from 2021–2050 Native afforestation: 0.13 Mha from 2021–2050	Exotic afforestation: 0.96 Mha from 2021–2050 Native afforestation: 0.13 Mha from 2021–2050	Exotic afforestation: 0.76Mha from 2021–2050 Native afforestation: 0.44Mha from 2021–2050	Exotic afforestation: 0.57Mha from 2021–2050 Native afforestation: 0.67Mha from 2021–2050
Carbon sequestration – Nature-based solutions (NbS)	This scenario assumes limited efforts to mitigate climate change and reduce greenhouse gas emissions, which results in limited emphasis on nature-based solutions. However, some localised NbS initiatives, such as community-based conservation and restoration projects, are still implemented to address local adaptation challenges such as sea level rise particularly in the long-term, particularly in the long-term.	This scenario has limited emphasis on nature-based solutions in New Zealand due to the high reliance on fossil fuels and slower transition to sustainable development. However, some localised NbS initiatives, such as community-based conservation and restoration projects, are still implemented to address local adaptation challenges such as sea level rise, particularly in the long-term.	NbS, such as sustainable agriculture, forest management, and coastal protection, are assumed to be moderately implemented to enhance carbon sequestration, water management, and biodiversity conservation in the medium to long-term.	NbS, such as reforestation, afforestation, and ecosystem restoration, are assumed to be widely implemented to enhance carbon sequestration and biodiversity conservation. Policies and incentives are in place to promote the protection and restoration of natural ecosystems, including forests, wetlands, and coastal areas.

Category	Hot House	Slow Followers	Trailblazers	Coordinated Effort
Carbon sequestration Technology assumptions (negative emissions technology)	There remains low demand for low-carbon or emissions-saving technologies. The cost of Carbon Capture and Storage (CCS) technologies remain relatively high, making their adoption less economically viable.	Globally, CCS technologies are assumed to be moderately deployed, with varying effectiveness in capturing and storing carbon dioxide emissions.	Assumes negative emissions technology remains cost-prohibitive into the medium term.	Assumes rapid development of both CCS technology for point-source emissions capture and Carbon Dioxide Removal (CDR) technology for distributed negative emissions. Also use of low-carbon liquid fuels. Exact levels are not prescribed.

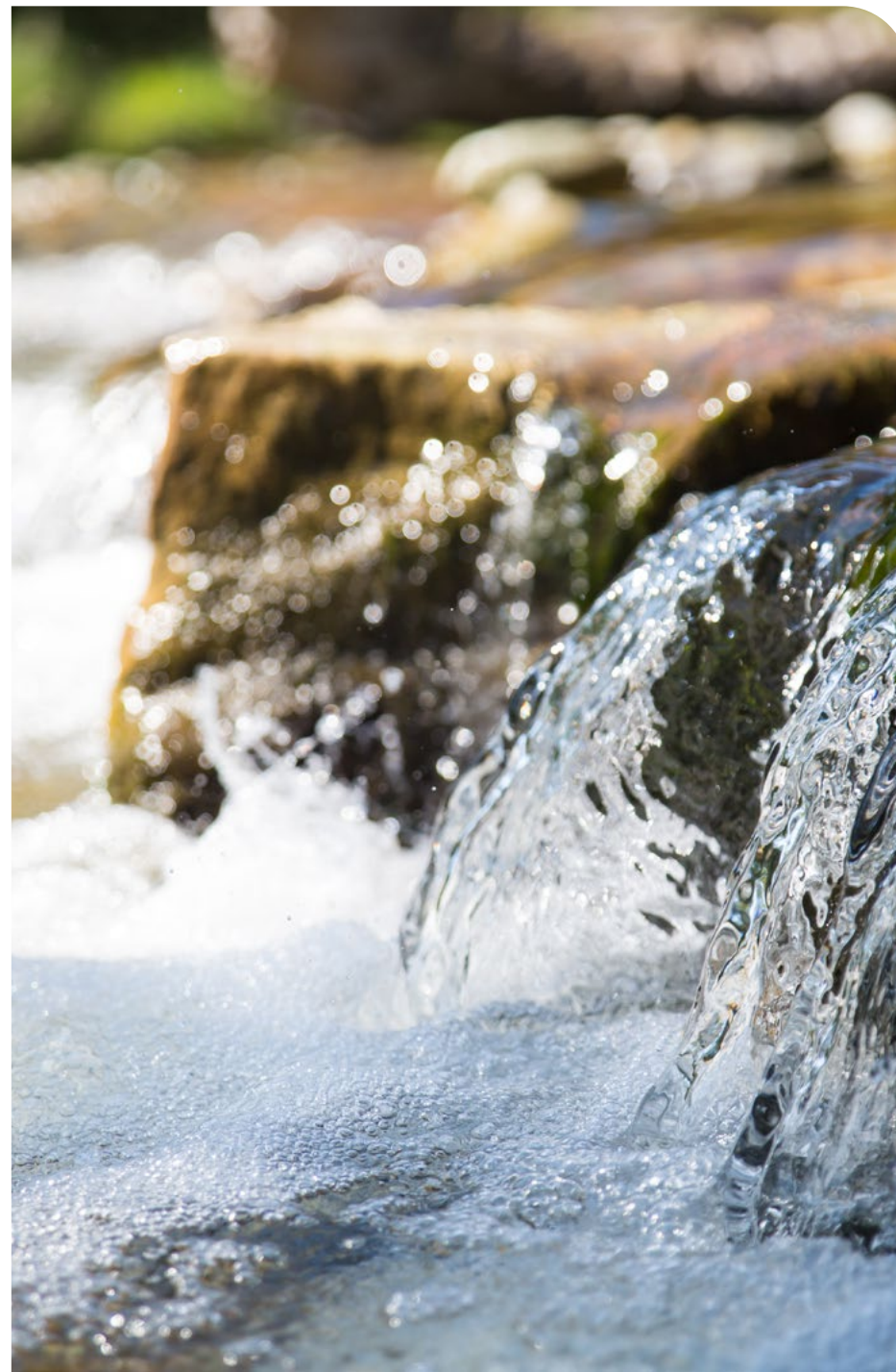
Source: **The Aotearoa Circle Energy Sector Scenarios**, 2024. In addition, particularly significant key assumptions are set out in the Scenario Narratives.

Manawa Energy Scenarios – Interpretation of Energy Sector Scenarios

We have used the same names for the scenarios, and largely the same overall outcomes; however, given the nature of Manawa Energy's business we have specifically focused on several key distinguishing features of each scenario derived from Manawa Energy's critical driving forces and uncertainties:

- The demand for new renewable energy and support for existing renewables – market conditions that support the development of new and existing renewable generation underpins Manawa Energy's value proposition. This is closely related to the second point below (as political and regulatory support is critical to renewable development) but represents how viable renewable development is in each scenario.
- The political and regulatory environment can have a large impact on Manawa Energy. The electricity industry is complex with a range of different participants and regulators. There are several regulatory bodies tasked with overseeing the sector, all of whom play an important role in the industry and impact Manawa Energy in some way.
- The physical impact of climate change on precipitation is the biggest risk and opportunity for Manawa Energy, this is for two reasons:
 - Precipitation is our fuel – we are dependent on rainfall for generating electricity. Any changes to this, positive or negative, will have a substantial impact on Manawa Energy; and
 - The physical risks that our assets are most exposed to are related to extreme weather events that involve high levels of rainfall. Our assets are typically near, or in many cases built upon, rivers; managing variation in river flows (from very high to very low) is a core capability of Manawa Energy.

The following summarises our FY25 scenario narratives, key issues and assumptions.



Scenario Narratives and Key Issues and Assumptions

Warming to $\geq 3.3^{\circ}\text{C}$ by 2080 – Hothouse

Both global and domestic emissions reduction initiatives fail, with emissions continuing to rise throughout the century. The global temperature climbs beyond 3.3°C by 2080, pushing the Earth past critical ecological tipping points. Sea level rise accelerates, storm intensity worsens, and extreme heat becomes more frequent. For New Zealand, the physical consequences are severe with rainfall becoming increasingly intense and unpredictable. These physical changes create compounding stress on natural systems and critical infrastructure.

Against this backdrop, precipitation-related impacts become deeply disruptive for the energy sector. Torrential rain and flooding regularly damage critical infrastructure – both here and abroad. Hydroelectric schemes – traditionally a cornerstone of New Zealand's renewable electricity – struggle with erratic inflows, as droughts interrupt generation capacity in summer and extreme weather events lead to increased spill and operational instability in winter. Chronic impacts of increased temperatures become material issues – aspects such as weed growth in storage lakes and other ecological changes shift from manageable to major ongoing issues. The sector's ability to recover from shocks is diminished by political inaction and fragmented adaptation efforts.

Key Issues and Assumptions:

- Renewable demand: Low, with thermal generation expected to play a role throughout the century.
- Political and regulatory environment: Hands off regulatory approach, very little in the way of intervention, and any interventions likely to be unfavourable for Manawa Energy (i.e. supportive of non-renewable technologies).
- Physical impacts (hydro fuel): Very large changes to inflows in the long-term. Key change being significant increase in volatility and inflows become "spikier" – that is, droughts last longer with shorter, more intense inflow events. Seasonality of inflows shifts to being more winter favoured and drier summer/autumn periods. Any absolute change to inflows is assumed to be too uncertain to predict, but possible inflows may increase in this scenario (conversely, they may also decrease, but this is less likely).
- Physical impacts (extreme weather): Very large increase in storminess in the long-term with regular extreme weather events that have potential to do localised damage.

Warming to 2.5°C by 2080 – Slow Followers

New Zealand drags its feet while the rest of the world makes uneven progress on climate action. While global emissions peak around 2040, New Zealand remains politically cautious, adopting a "bare minimum" approach to climate regulation. Domestic policy is slow to evolve, shaped more by economic pressure than proactive climate response. Regulation of the electricity sector lacks coherence and ambition, creating a reactive and fragmented landscape. Some investors and trade partners begin to penalise New Zealand's inaction, and the country becomes increasingly isolated from global green finance and technology flows.

Physically, the country still faces a rise in global temperature of around 2.5°C by 2080. Significant, but manageable physical changes in the environment emerge, putting increasing pressure on critical infrastructure. These changes are less extreme than in Hot House but still significant (and similar, but slightly worse, than that observed in Trailblazers). For the electricity sector, the precipitation impacts include more frequent and damaging storms, with infrastructure repeatedly hit by heavy rain and wind. Rainfall variability makes water storage planning for hydroelectric schemes more difficult, and summer droughts threaten the stability of peak-season supply. The lack of investment in adaptive infrastructure means the system becomes more brittle over time. Repair costs rise, grid reliability drops and while the continuation of thermal generation makes long-term management of the system easier, short-term interruptions become more common.

Key issues and Assumptions:

- Renewable demand: Moderate to low; much the same as we see now – no direct support and thermal generation expected to play a role in the short-term.
- Political and regulatory environment: Hands off regulatory approach, very little in the way of intervention, and any interventions likely to be unfavourable for Manawa Energy (i.e. supportive of non-renewable technologies). Slightly less hands-off than Hot House.
- Physical impacts (hydro fuel): Large changes to inflows in the long-term. Similar effects to Hot House but lower magnitude changes, similar to that observed in Trailblazers (see below).
- Physical impacts (extreme weather): Large increase in storminess in the long-term with increased (but not continuous or expected every year like Hot House scenario) risk of extreme weather events that have potential to do localised damage (e.g. much in the way Cyclone Gabrielle was). Effectively little difference between this scenario and Trailblazers.

Warming Limited to 2.2°C by 2080 – Trailblazers

New Zealand becomes a proactive climate leader, implementing bold domestic policy even as global efforts remain fragmented. Electricity regulation is focussed on decarbonisation goals, despite reluctance from some parts of the international community. Incentives for electrification create a supportive domestic policy environment for innovation and adaptation. However, transition risks emerge from the pace and scale of change, and from a lack of international coherence that drives up the cost of low-carbon technologies and limits cross-border cooperation.

The physical world in this scenario is less volatile than in the previous two, but still deeply affected. Temperatures rise by around 2.2°C by 2080. Sea level rise and extreme weather events continue, though more slowly, though similar to that observed in the Slow Followers scenario. Rainfall becomes less predictable, especially in the timing and intensity of seasonal flows. For hydro-dependent generation, this presents a nuanced challenge: in the South Island, increased winter rainfall helps reduce pressure during peak heating demand, but drier summers stretch storage capacity and complicate generation planning. Intense rain events and storms still damage assets and disrupt service, making ongoing adaptation essential.

The energy system has invested in resilience, with better forecasting, smart infrastructure, and diversified energy sources that help mitigate the volatility, but this is limited to known technologies, and the industry continues to be relatively risk averse in the context of application of advanced tech, relying on the “tried and true”.

Key issues and Assumptions:

- Renewable demand: Moderate; similar to what we see now but political support for renewables is much more favourable. Noting this favourability may not translate to greater support/increased demand due to unintended consequences and other sub-optimal policy outcomes.
- Political and regulatory environment: Local regulatory environment very supportive of decarbonisation and renewable generation, with direct intervention possible (but not as likely/well designed as Coordinated Effort). Likely some interventions will be reactive rather than planned (i.e. knee-jerk reactions to disruptive events)
- Physical impacts (hydro fuel): Moderate to large changes to inflows in the long-term. Similar effects to Hot House and Slow Followers but lower magnitude changes.
- Physical impacts (extreme weather): Large increase in storminess in the long-term with increased (but not continuous or expected every year like Hot House scenario) risk of extreme weather events that have potential to do localised damage. Effectively little difference between this scenario and Slow Followers.

Warming Limited to 1.5°C by 2080 – Coordinated Effort

The world comes together to aggressively decarbonise, with global and New Zealand policy ambition at its highest. Emissions peak in the 2020s and fall to net zero by the 2050s. The electricity sector in New Zealand is highly regulated and supported by a coherent and stable policy framework. The Emissions Trading Scheme (ETS) is functioning effectively, long-term planning is embedded in infrastructure regulation, and cross-sector coordination ensures that new technologies are deployed efficiently. Energy equity, climate resilience, and emissions reduction are pursued simultaneously, enabling both public and private investment in a low-carbon future.

Physically, this is the least damaging climate pathway, though impacts still materialise. Global temperature rise is limited to around 1.5°C, but even under this scenario, New Zealand faces more hot days, increased rainfall intensity, and rising sea levels. For the electricity sector, this means a more manageable – but still significant – change in hydrological patterns. Enhanced winter rainfall helps with hydro generation during winter, but long, dry, periods still increase in frequency compared to what has been historically observed. Extreme weather events are still observed but are less frequent and therefore more manageable.

The investment community actively responds to the challenges of climate change – renewable investments are prioritised, and the integration challenges renewable growth bring are tackled with advances in technology and universal willingness to step away from fossil fuels, regardless of the costs. The system is not immune to the changes and challenges, but it has the tools and coordination to bounce back quickly, and diversification (both geographic, and in terms of generation type) are likely to be important considerations.

Key Issues and Assumptions:

- Renewable demand: High demand supported by public and private sectors highly motivated to decarbonise. Unlike Trailblazers, it is expected this drive to decarbonise isn't just Government or Regulatory mandated, but organically driven by lower costs, unequivocal public support and advances in technology.
- Political and regulatory environment: Highly supportive environment for renewables, with bipartisan support for relevant policies. Policies are more carefully considered and assumed to have less unintended consequences (as this scenario is “planned” rather than “reactive”).
- Physical impacts (hydro fuel and extreme weather): Little change – no changes beyond what we currently observe (which, notably, aren't zero, just difficult to predict with any certainty).

Manawa Energy's Climate-related Risks and Opportunities

In FY25, we updated the time horizons that we considered for the identification and assessment of our CRROs and aligned with those used within the Aotearoa Circle Energy Sector Climate Change Scenario work, with the exception of extending the long-term time horizon out to 2100. These time horizons make sense to Manawa Energy in terms of consenting new generation development and long-term asset management for our long-lived assets.

Time Horizons for CRROs

Horizon	Period	Description
Short-term	2024–2030	Reflects the timeframe of New Zealand's first two emissions budgets and aligned with Manawa Energy's near-term strategic goals. ➤ This represents the immediate near-term environment where planning artifacts (Business Strategy, Asset Management Plan, etc.) are largely fixed with many details known. ➤ We have a good understanding of what to expect in this time frame, with key sources of uncertainty largely around “when” and “how” rather than “what” – that is, our strategy in this timeframe is well defined and has specific targets, including a robust capital plan to maintain existing assets and execute on growth ambitions. ➤ In this time frame, we do not expect a significant shift in the physical impacts of climate change from what we observe today.
Medium-term	2031–2050	Aligned with key targets and milestones set for 2050, including Paris Agreement emission reduction plans. ➤ This represents the period where the sector is expected to evolve and change rapidly, with many of the driving forces largely settled (e.g. ETS is in place with the framework largely expected to be stable despite the cyclical nature of political and market conditions); yet the specifics and inevitable disruptions are very uncertain and very difficult to predict with any kind of certainty. ➤ This timeframe covers the transition from a strategy that contains specific targets and goals to a lesser defined set of ambitions. ➤ The level of uncertainty in the medium- and long-term necessitates developing a strategy and capital plan that is resilient to a range of possible outcomes rather than a specific “to-do list”. ➤ This time frame is where we expect to see the divergence of physical impacts between different scenarios – with some scenarios assuming the emergence of the more severe physical risks.
Long-term	2051–2100	Aligned with the long-life nature of energy sector assets. ➤ This represents an outer horizon where no specifics are known and the value of having a range of different scenarios comes into play: it is useful to understand the continuum of effects in these scenarios in order to develop least regrets plans (especially important given the long-life nature of energy assets) ➤ In this time frame the scenarios, and hence our strategic planning for each of these scenarios, are vastly different from one another – the higher temperature scenarios realising the full suite of anticipated consequences of climate change, while the lower temperature scenarios are more a continuation of the types of impacts we see today. ➤ Due to the extreme amount of uncertainty in this timeframe, strategic and capital planning is more difficult; however, given the nature of our assets, we need to think about how each scenario will affect our assets.

These time horizons are broadly consistent with strategic planning and capital deployment time frames, with the current strategy focused primarily on short-term and medium-term considerations (i.e. next 5 years, next 25 years), but extends into the long-term when deploying capital as we are investing in long-life assets.

Identified Transition and Physical CRROs and Impact on Manawa Energy

We have identified a range of physical and transition climate-related risks and opportunities (CRROs), through our scenario analysis work in FY25. The tables below connect our CRROs with consideration of current and potential future impacts on the business, materiality and type, linkage to business strategy and our Transition Plan, and financial quantification of current climate-related impacts, where this is relevant to Manawa Energy in FY25. Our intention is to provide an integrated approach, ensuring connectivity across the component parts of our climate-related disclosures.

The following CRRO disclosures reflect Manawa Energy's circumstances as they were in the reporting period (to 31 March 2025), and do not take into account the impact that the implementation of the Scheme (if completed) and subsequent integration of Manawa Energy's operations into the Contact Energy group may have, including the approach by a new Board of Directors to Strategy that Contact Energy may bring in the future.

Summary of key Manawa Energy CRROs

Key Transition Risks and Opportunities	Key Physical Risks and Opportunities
Opportunities (TO)⁶ TO1 – Rapid growth in demand for low emissions energy projects TO2 – Investment capital favouring renewables TO3 – Innovative pressure driving efficiency and growth	Risks (PR) PR1 – Impact of severe acute weather events on third parties PR2 – Impact of climate change on assets and operations PR3 – Changes to renewable fuel supply
Risks (TR) TR1 – Changes to market prices/volatility TR2 – Changes to the political and regulatory environment TR3 – Difficulty accessing necessary resources and infrastructure	

All of these CRROs can be assumed to be risks and opportunities within the New Zealand Energy sector. The only exception to this is where the risks or opportunities are related to global issues – specifically: TO2 (relates to international capital markets), TO3.1 & TO3.2 (relates to global developments in relevant technologies), TR2 (influence of international authorities on local regulations and policies), TR3 & PR1 (relates to global supply chains and labour markets) and PR2.1 (relates to influence of international insurance markets).

⁶ Note that many opportunities have elements of risks embedded with them, and vice versa, many risks have elements of opportunities within them; for more detail see the following section. This is also why there is no opportunities section under the Physical CRROs heading – physical changes tend to primarily be a risk, however, in some scenarios physical changes could benefit Manawa Energy.

Our Key Transition Opportunities

TO1

Rapid growth in demand for low emissions energy

Very High Importance

Transition Opportunity with elements of risk

Consumer lifestyle choices, gas supply constraints, fossil fuel costs and increased electrification across multiple sectors, including transport and process heat, are expected to lead to an increase in demand for electricity. This creates an opportunity for Manawa Energy to expand renewable generation (e.g. solar and wind generation) at locations across New Zealand to meet that increased demand.

However, development of renewables in New Zealand is highly competitive – it is an attractive sector for investors – which acts to limit the size of the opportunity.

TO1.1

Growth in low-emissions energy demand

Growth opportunity for renewable generation: including opportunities for both new development (wind and solar) and expanding capability of existing assets.

Critical Opportunity

Chronic Impacts

Current and anticipated future impacts: Short- and medium-term horizons

Current Impacts:

- > Value creation from development of project pipeline.

Anticipated Future Impacts:

- > Increased revenue from generation growth.

Scenario Considerations:

- > Opportunity is greater the more marked the climate response (e.g. Hot House has lower opportunity than Coordinated Effort)
- > Trailblazers' scenario may increase opportunity (over Coordinated Effort) as New Zealand may become attractive to international businesses looking to decarbonise.

Financial Quantification – Current Impacts:

- > In FY25 Manawa Energy spent \$9.7 m (operating expenditure and capital expenditure) on the development of new renewable generation.

Business Response:

- > A core part of Manawa Energy's strategy is responding to this opportunity through the growth and development of renewables in New Zealand, with this reflected also in the Transition Plan
- > 1 of 3 core strategic pillars are explicitly linked (growth through new developments, with others implicitly linked)
- > Risk associated with renewable growth embedded with risk management framework (sometimes known as a risk register) as specific risk.

TO1.2

Increased value of existing assets

Increased value associated with existing assets: as demand grows, prices may rise, increasing value associated with existing assets.

Scenario Considerations:

- › Impact of scenarios as per TO1.1
- › May have larger differences between scenarios than TO1.1.

Important Opportunity (and Risk)

Anticipated future impacts: Short- and medium-term horizons

Current Impacts:

- › No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- › Increase in asset value
- › Subject to market cycles – and opportunity may switch to a risk (see TO1.3).

Financial Quantification – Current Impacts:

- › No current impacts.

Business Response:

- › Largely beyond Manawa Energy's control
- › Seek to maximise opportunity and minimize risk through execution of strategy and Transition Plan
- › 1 of 3 core strategic pillars is explicitly linked (maximise value of existing assets)
- › Market price risk embedded with risk management framework as specific risk.

TO1.3

Market over-build and competition

Overbuild of Wind and Solar may lead to lower returns on investments; however, may mean increase in value of Manawa Energy's limited quantity of flexible generation.

Scenario Considerations:

- › Impact of scenarios as per TO1.1.

Moderate to Important Opportunity and Risk

Anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- › No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- › Increased competition for development sites
- › Reduced revenue for similar fuel sources
- › Increased demand for flexible sources of generation.

Financial Quantification – Current Impacts:

- › No current impacts.

Business Response:

- › Risk is acknowledged, while growth remains core aspect of strategy, as reflected in the Transition Plan
- › Risk associated with renewable growth embedded with risk management framework as specific risk.

TO2

Investment capital favouring renewables

High Importance

Transition Opportunity with elements of risk

Manawa Energy's profile as a predominantly renewable electricity generator could lead to increased access and reduced capital costs as capital markets reflect societal desire to invest in the transition to a low carbon economy, with an opportunity to leverage strong sustainability, climate and resilience credentials.

However, on the flipside, there may be greater competition for this capital as more firms enter renewable electricity generation market.

TO2.1

Investment capital favouring renewables

Easier access to, and cheaper rates for, capital given Manawa Energy is a renewable electricity generator (i.e. already attractive to a demographic of investors) and are intending to invest in more renewables (wind and solar).

Important Opportunity

Chronic Impacts

Anticipated future impacts: Short- and medium-term horizons

Current Impacts:

- > No current impacts.

Anticipated Future Impacts:

- > Easier to access finance
- > Lower cost of finance.

Scenario Considerations:

- > Opportunity is greater the more marked the response (e.g. Hot House has lower opportunity than Coordinated Effort)
- > Trailblazers' scenario may increase opportunity (over Coordinated Effort) as New Zealand may become attractive to international businesses looking to decarbonise (however, this may be offset by reduced availability of domestic sources of financing).

Financial Quantification – Current Impacts:

- > No current impacts.

Business Response:

- > This opportunity supports Manawa Energy's core strategy of renewable growth
- > No direct action taken in direct response to this opportunity, but strategy is well aligned 1 of 3 core strategic pillars is explicitly linked (growth through new development)
- > Rest of pillars implicitly linked
- > Risk associated with renewable growth embedded with risk management framework as specific risk.

TO2.2

Increased competition for capital

More developers targeting same capital pools may counteract T02.1. This risk is similar to TO1.3 in that it is a consequential risk associated with the broader growth opportunity.

Scenario Considerations:

- > Impact of scenarios as per TO1.1 and TO2.1.

Minor Risk

Anticipated future impacts: Short- and medium-term horizons

Current Impacts:

- > No current impacts.

Financial Quantification – Current Impacts:

- > No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- > Increased competition for capital
- > May reduce size of growth opportunity (TO1.1, TO2.1).

Business Response:

- > Risk is acknowledged, while growth remains core aspect of strategy, as reflected in the Transition Plan
- > Risk associated with renewable growth embedded with risk management framework as specific risk.

TO3

Innovative pressure driving efficiency and growth

Low to Moderate Importance

Transition Opportunity with elements of risk

Mounting pressure on the energy sector to decarbonise is expected to drive innovation and cost reductions across both existing and emerging technologies. This presents a dual outcome: an opportunity to increase value through efficiencies and new sources of revenue, but also a risk if competitors or substitutes (such as new technologies or platforms Manawa Energy does not adopt) erode market share or diminish the value of current assets.

TO3.1

Reduction in development costs

Reduction in development costs due to technology maturity, innovation, or improved supply chains may create a more attractive environment for renewable project investment.

However, lower development costs do not directly translate into higher value, as market pricing dynamics often adjust in parallel, potentially reducing margins.

Minor Opportunity and Risk

Chronic Impacts

Anticipated future impacts: Medium- and long-term horizons

Current Impacts:

- > No current impacts.

Anticipated Future Impacts:

- > Potential for faster and more cost-effective new generation development
- > Risk of reduced long-term value if lower costs lead to lower prices.

Scenario Considerations:

- > Cost reductions are most prominent under the Coordinated Effort scenario
- > Hot House scenario assumes slower technology maturity
- > Central scenarios (Trailblazers and Slow Followers) assumed to reflect current observed trends.

Financial Quantification – Current Impacts:

- > No current impacts.

Business Response:

- > No immediate changes to strategy; cost monitoring and scenario planning continue
- > Pricing risk is core part of risk management framework
- > Implicit linkage through future development strategy and ongoing market analysis.

TO3.2

New technologies or markets

Emerging technologies such as grid-scale batteries and ancillary services could offer new revenue streams. While Manawa Energy is not currently investing directly in these, their deployment by other players may indirectly support greater investment in renewables, such as solar and wind.

Scenario Considerations:

- › Coordinated Effort scenario sees rapid technological advancement
- › Other scenarios unlikely to drive meaningful change in near term.

Minor Opportunity

Anticipated future impacts: Medium- and long-term horizons

Current Impacts:

- › No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- › Potential enabling role for growth in solar/wind
- › May present growth opportunity in future.

Financial Quantification – Current Impacts:

- › No current impacts.

Business Response:

- › Manawa Energy is observing trends but not currently targeting these technologies and taking a reactive approach
- › Not part of current Manawa Energy strategy.

TO3.3

Substitutes (re-)enter the market

Technological substitutes such as carbon capture, offshore wind, or re-emergence of thermal generation pose a threat to the value of both new and existing Manawa Energy assets. These substitutes may offer flexibility, cost advantages, or regulatory support that disadvantages current asset types.

Scenario Considerations:

- › Hot House scenario: increased role for thermal generation
- › Coordinated Effort: substitutes like batteries and CCUS gain traction
- › In Trailblazers and Slow Followers risk is lower compared to other scenario, but still may be material in the long-term.

Low to Moderate Risk

Anticipated future impacts: Medium- and long-term horizons

Current Impacts:

- › No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- › Risk of erosion in asset revenue or market share
- › Possibility of being outpaced by disruptive innovation.

Financial Quantification – Current Impacts:

- › No current impacts.

Business Response:

- › Risk is acknowledged, but regarded as low in the short-term
- › Ongoing active market monitoring
- › Part of evolving strategic threat environment; not embedded in current strategy
- › One of the underlying risks related to pricing risk which is key part of risk management framework.

Our Key Transition Risks

TR1 Changes to market prices/volatility	Moderate to High Importance	
	Transition Risk (with some upside potential)	
	Changes in market dynamics – driven by decarbonisation, fossil fuel scarcity, carbon pricing, intermittent renewables, and evolving consumer behaviour – are expected to increase price volatility in the electricity market. This could negatively affect revenue stability and portfolio performance. However, volatility may also increase the value of flexible and peaking assets, presenting a potential opportunity for Manawa Energy.	
TR1.1 Increase in intra-day/week market volatility	Low to Moderate Risk (and Opportunity)	Acute and Chronic Impacts
	Anticipated future impacts: Short- and medium-term horizons	
Short-term volatility – including intra-day and intra-week price swings – can create significant risk to wholesale revenue, particularly if generation and hedge profiles misalign with spot market outcomes – i.e. Manawa Energy may find itself more exposure to peak prices as the system evolves (e.g. more intermittent generation). However, these conditions may also benefit peaking generation assets that can respond rapidly.	Current Impacts: > No current impacts.	Anticipated Future Impacts: > Earnings reductions/gains from intra-day/week extreme pricing events (acute risk/opportunity) > Increased revenue uncertainty (chronic risk) > Higher value of flexible generation (chronic opportunity).
Scenario Considerations: > Highest risk in Trailblazers (high intermittent, low-tech support) > Moderate in Coordinated Effort > Lower in Slow Followers and Hot House (more thermal generation stabilises prices).	Financial Quantification – Current Impacts: > No current impacts.	Business Response: > Managed through current wholesale portfolio strategy and risk management systems > Current business processes are adequate, but have increased monitoring of seasonal variations to build understanding > Revenue uncertainty is core risk within risk management framework.

TR1.2**Increase in seasonal market volatility**

Seasonal volatility is increasing due to higher carbon prices, reduced thermal flexibility, and possible long-term shifts in hydrology. These changes may be beneficial in some scenarios, but are more likely to result in earnings pressure due to Manawa Energy's negative price-generation volume correlation.

Scenario Considerations:

- Risk highest in high-temperature physical scenarios – Trailblazers, Slow Followers and Hot House
- Coordinated Effort assumes sufficient supporting technology to mitigate risk.

Moderate to High Risk (and Opportunity)**Current and anticipated future impacts: Short-, medium-, and long-term horizons****Current Impacts:**

- Earnings reduction from extreme pricing events (multiple months rather than intra-day/week as covered in TR1.1)
- Greater challenge for storage planning due to volatile market conditions.

Chronic Impacts**Anticipated Future Impacts:**

- Earnings reductions/gains from extreme pricing events (multiple months rather than intra-day/week as covered in TR1.1) (acute risk/opportunity)
- Increased revenue uncertainty (chronic risk)
- Greater challenge for storage planning.

Financial Quantification – Current Impacts:

- Not able to be quantified as attribution to climate change cannot be established with sufficient certainty (including the weighting of this attribution – i.e. what proportion of outcomes was due to climate change) compared to normal variations in weather patterns and other relevant market factors.

Business Response:

- Managed through current wholesale portfolio strategy and risk management systems
- Current business processes are adequate, but have increased monitoring of seasonal variations to build understanding
- Revenue uncertainty is core risk within risk management framework.

TR1.3**Increased market prices from transition**

Higher thermal generation costs – due to fuel constraints and rising carbon prices – could increase average wholesale prices. In the long term, high prices may suppress demand.

Scenario Considerations:

- Risk/opportunity is highest in Trailblazers and Slow Followers scenarios (imperfect transition)
- Coordinated Effort may cap prices with supporting tech
- Hot House may lower thermal and carbon costs.

Moderate Risk (and Opportunity)**Anticipated future impacts: Short-, medium-, and long-term horizons****Current Impacts:**

- No current impacts.

Chronic Impacts**Anticipated Future Impacts:**

- Increased earnings from higher market prices
- Reduced growth opportunity from reduced demand in long-run.

Financial Quantification – Current Impacts:

- No current impacts.

Business Response:

- Current business processes are adequate, but have increased monitoring of underlying price changes
- Managing future price risk is already a core aspect of strategy and planning processes
- Pricing risks and revenue uncertainty is core risk within risk management framework.

TR2

Changes to the political and regulatory environment

High Importance

Transition risk with potential opportunities

Regulatory changes, whether incremental or structural, could significantly affect Manawa Energy's ability to operate effectively and achieve a fair return on its investments.

Outcomes may include increased compliance burdens, constrained access to natural resources, or sudden changes to market settings. While some regulatory developments (e.g. fast-track consenting) may enhance opportunities, the prevailing risk is unpredictability and adverse impacts on long-term planning.

TR2.1

Highly uncertain regulatory environment

Rapid or frequent shifts in Government policy – driven by political turnover or reactive responses – can reduce certainty for long-term capital planning and execution. This increases enterprise-level risk and may reduce investor confidence.

Moderate risk

Chronic Impacts

Anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- > No current impacts.

Anticipated Future Impacts:

- > Increased uncertainty for capital planning
- > Potential deterrent to long-term investment.

Scenario Considerations:

- > Slow Followers and Trailblazers scenarios most likely to feature regulatory instability
- > Hot House and Coordinated Effort assume more consistent approaches.

Financial Quantification – Current Impacts:

- > No current impacts.

Business Response:

- > Regulatory and stakeholder management across a range of different regulatory bodies is a well-established function within Manawa Energy
- > No additional activity required
- > Regulatory (including environmental considerations) is a key risk within the risk management framework.

TR2.2

Negative policy outcomes impact Manawa Energy

Policies that are either poorly designed or unintentionally harmful to Manawa Energy's business model could limit growth or increase costs, even if they are framed as climate aligned. Risks may arise across all scenarios and are difficult to predict.

Changes to consents, and specifically Manawa Energy's ability to access water for hydro generation, are of particular importance. Access to water is fundamental to Manawa Energy's business model and if there are any policy changes or directives that restrict or constrain access to water this will directly impact Manawa Energy's revenue from generation.

Scenario Considerations:

- More likely in Hot house and Slow Followers due to lack of renewable support in these scenarios
- However, can occur in any scenario depending on implementation details (e.g. unintended consequences), but highly uncertain.

Low to Moderate Risk

Anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- No current impacts.

Financial Quantification – Current Impacts:

- No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- Reduced ability to deliver strategic objectives (including reduced revenue)
- Increased cost or resource diversion
- Policy misalignment with operational needs.

Business Response:

- Regulatory and stakeholder management across a range of different regulatory bodies is a well-established function within Manawa Energy
- Continued prioritisation of consenting work, focusing on maintaining, or improving where possible, access to water resources
- No additional activity required
- Regulatory (including environmental considerations) is a key risk within the risk management framework.

TR2.3

Positive policy outcomes impact Manawa Energy

Supportive Government policies such as fast-track legislation may enhance Manawa Energy's ability to execute strategy. These benefits are less likely to materialise in high-temperature scenarios but possible in all pathways.

As per TR2.2 above, access to water for hydro generation is critical to Manawa Energy's business model. There is an opportunity for Manawa Energy to obtain greater access (either more generation, or greater flexibility of usage) that comes from increased support for renewable generation.

Scenario Considerations:

- More likely in Coordinated Effort and Trailblazers scenarios
- Coordinated Effort could include more aggressive changes, such as direct subsidies or new revenue streams (e.g. RECs)
- Unlikely but possible in all scenarios, including Hot House and Slow Followers scenarios.

Low to Moderate Opportunity

Anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- No current impacts.

Financial Quantification – Current Impacts:

- No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- Improved ability to execute on strategic objectives
- Easier or quicker development execution
- Lower consenting overheads
- Greater alignment between public policy and business needs.

Business Response:

- Regulatory and stakeholder management across a range of different regulatory bodies is a well-established function within Manawa Energy
- Continued prioritisation of consenting work, focusing on maintaining, or improving where possible, access to water resources
- No additional activity required
- Regulatory (including environmental considerations) is a key risk within the risk management framework (which applies here, despite opportunity rather than risk).

TR2.4**Increase in compliance costs (e.g. CRD)**

Compliance with climate-related disclosure regulations and related initiatives (e.g. CRD) require additional internal resourcing and external advisor input. These costs are clear and attributable but don't present a large risk to the business.

Scenario Considerations:

- > Greatest risk and impact in high regulation scenarios: Coordinated Effort and Trailblazers
- > Minimal in Hot House and Slow Followers scenarios (and unlikely to grow in the future).

Low Risk**Current and anticipated future impacts: Short- and medium-term horizons****Current Impacts:**

- > Increase in overhead and reporting cost
- > Additional burden on internal capacity.

Chronic Impacts**Anticipated Future Impacts:**

- > Increase in overhead and reporting cost
- > Additional burden on internal capacity
- > May not increase materially in the future (i.e. not grow in the future), but equally, reporting requirements may become more onerous in some scenarios.

Financial Quantification – Current Impacts:

- > In FY25, Manawa Energy spent approximately \$449,000 on third party resources (specialist consultants, assurance, legal) to prepare its CRD.

Business Response:

- > Due to the pending implementation of the Scheme with Contact Energy, a dedicated ESG Manager role was not able to be filled, with additional specialist contracting resource being engaged
- > Without the uncertainty of the Scheme with Contact Energy more permanent resourcing arrangements would have been established
- > Established resourcing requirements known and budgeted for.

TR2.5**More conservative technical standards**

As physical climate impacts become more apparent, regulatory or engineering standards may become more conservative. This could raise costs for new development or necessitate retrofits to existing infrastructure.

Scenario Considerations:

- > Most likely to emerge after physical impacts materialise, therefore more likely in Hot House and to a lesser degree Slow Followers and Trailblazers
- > Higher impact in Trailblazers may be likely as due to proactive regulatory approach.

Low to Moderate Risk**Anticipated future impacts: Short-, medium- and long-term horizons****Current Impacts:**

- > No current impacts.

Chronic Impacts**Anticipated Future Impacts:**

- > Higher design or construction costs (including ongoing maintenance)
- > Potential delays to development due to new requirements.

Financial Quantification – Current Impacts:

- > No current impacts.

Business Response:

- > Monitoring of design standard changes; adaptation planning under review
- > Established input into asset management planning.

TR3

Difficulty accessing necessary resources and infrastructure

Moderate Importance

Transition risk

The global shift towards low-emissions technologies is driving significant demand for renewable infrastructure and skilled labour. As a smaller market, New Zealand – and Manawa Energy specifically – faces the risk of being deprioritised by global suppliers.

This may delay projects, increase costs, or limit access to critical components or expertise. Furthermore, transmission infrastructure is increasingly constrained, creating a material bottleneck for renewable energy deployment.

TR3.1

Limited access to suppliers and global markets

Due to global competition and the location and size of the New Zealand market opportunity, Manawa Energy may face difficulty accessing, or increased costs of, solar panels, turbines, and other core components, especially during periods of heightened international demand.

These cost increases may negate any reductions observed as a result of TO3.1, in practice increasing costs overall.

Moderate risk

Chronic Impacts

Anticipated future impacts: Short- and medium-term horizons

Current Impacts:

- > No current impacts.

Anticipated Future Impacts:

- > Increased project delays or cancellations
- > Rising costs (plant, equipment, etc.) due to competition and availability
- > Reduced capacity to execute strategy.

Scenario Considerations:

- > Greatest impact under Coordinated Effort (global surge in renewable demand)
- > Some impact in central scenarios
- > Minimal impact in Hot House due to weaker global demand for renewables.

Financial Quantification – Current Impacts:

- > No current impacts.

Business Response:

- > Procurement is a key component of new development and asset management functions and risks are actively managed
- > Embedded in development risk assessments and procurement processes
- > No additional activity required.

TR3.2

Labour shortages

Persistent shortages of skilled labour in the energy sector may worsen as renewable projects accelerate. This could limit Manawa Energy's ability to deliver projects or maintain existing infrastructure efficiently.

Moderate Risk

Anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- > No current impacts.

Chronic Impacts

> Anticipated Future Impacts:

- > Inability to recruit necessary talent to deliver on strategy
- > Delivery delays for key projects
- > Rising wage and contractor costs.

Scenario Considerations:

- > Expected to persist or worsen across most scenarios
- > Particularly acute under Coordinated Effort and Trailblazers due to increased demand.

Financial Quantification – Current Impacts:

- > No current impacts.

Business Response:

- > Talent management is already a priority for internal resource management, and will continue to be so
- > Monitoring labour trends and assessing workforce development needs, acknowledging talent management may become more difficult in the future
- > Working with industry bodies, as appropriate, to support initiatives to increase talent pool
- > Reflected in People and Capability related risks
- > Core part of People and Capability strategies.

TR3.3

Transmission and infrastructure limitations

Constraints within the national transmission grid and distribution networks limit Manawa Energy's ability to connect new projects. Increasing queue times and limited grid capacity are already impacting project prioritisation decisions.

As the market grows (both in size and complexity), there will also be additional pressure on the transmission network and other critical infrastructure/services (e.g. system operations) that could impose constraints or restrictions on Manawa Energy's operations.

Scenario Considerations:

- > Most pronounced in all scenarios involving rapid deployment (e.g. Coordinated Effort and to a lesser degree Trailblazers)
- > Transmission constraints may occur in all climate scenarios.

Moderate Risk

Current and anticipated future impacts: Short-, medium-, and long-term horizons

Current Impacts:

- > We have had to reprioritise a small number of development projects due to limitations around Transpower's ability to process new connection enquiries.

Financial Quantification – Current Impacts:

- > Reprioritisation of development projects has not led to any tangible financial impacts in FY25 – new development strategy is still progressing as planned (via alternative development options).

Chronic Impacts

Anticipated Future Impacts:

- > Slower growth due to delayed or constrained connections
- > Possible loss of development opportunities
- > Reduced economic value of otherwise viable projects
- > Increased risk of transmission or system constraints that could lead to lost revenue and/or reduction in asset value.

Business Response:

- > Have been actively prioritizing what projects are progressed
- > Engagement with Transpower to see where their constraints lie (to assist with project prioritisation)
- > Key development risk.

Our Key Physical Risks and Opportunities

PR1

Impact of severe acute weather events on third parties

Low to Moderate Importance

Physical Risk

Acute climate-related events such as storms, floods, and fires may affect third-party services upon which Manawa Energy depends – especially contractors, logistics providers, and external infrastructure. These impacts can manifest as delays, cost increases, or compromised reliability in project delivery and operations.

While not expected to be materially disruptive in the short term, this risk is likely to increase in frequency and severity over time, particularly in higher-temperature scenarios.

PR1.1

Upstream and downstream cost increases

Contractors and third-party service providers may raise prices or take on less risk requiring Manawa Energy to include greater contingency in response to physical risks.

Low to Moderate Risk

Chronic Impacts

Anticipated future impacts: Medium- and long-term horizons

Current Impacts:

- > No current impacts.

Anticipated Future Impacts:

- > Increased project and operational costs
- > Potential delays in maintenance and delivery
- > More conservative third-party contractual terms.

Scenario Considerations:

- > Higher-temperature scenarios (Hot House and to a lesser degree Slow Followers and Trailblazers) expected to exacerbate this risk
- > Possible manifestation in lower-temperature scenarios via transition-linked compliance impacts.

Financial Quantification – Current Impacts:

- > No current impacts.

Business Response:

- > Ongoing monitoring of contractor and supplier pricing trends; contingency planning
- > No additional activity required
- > Embedded in existing procurement and supplier management processes.

PR1.2

Weather-induced supply chain disruption

Extreme weather events could disrupt global or domestic supply chains, delaying access to equipment or materials. While not considered a near-term risk for Manawa Energy, it could become more important if acute climate impacts increase.

Scenario Considerations:

- Primarily relevant in high-temperature scenarios (Hot House and to a lesser degree Slow Followers and Trailblazers)
- Some risk also present under Coordinated Effort due to global pressures on logistics.

Low Risk

Anticipated future impacts: Medium- and long-term horizons

Current Impacts:

- No current impacts.

Financial Quantification – Current Impacts:

- No current impacts.

Acute Impacts

Anticipated Future Impacts:

- Delayed procurement timelines
- Cost increases due to re-routing, delays or sourcing alternatives.

Business Response:

- No specific action taken; monitored through TR3.1 (supplier access risk)
- Aligned to TR3 and broader supply chain risk monitoring
- No additional activity required.

PR2

Impact of climate change on assets and operations

Low to Moderate Importance

Physical Risk

Increased frequency and severity of acute weather events – such as storms, floods, and extreme winds – alongside more chronic environmental shifts (e.g. changing rainfall patterns, rising temperatures), pose a growing threat to Manawa Energy's generation assets and operational continuity. These risks can lead to direct physical damage, increased maintenance costs, and more frequent unplanned outages.

PR2.1

Increased insurance costs

As physical changes begin to occur, climate-related risks will lead to increased global insurance premium rates, and may cause potential issues with obtaining adequate cover in the future. This may lead to direct cost increases for Manawa Energy.

Low Risk

Chronic Impacts

Current and anticipated future impacts: Short- and medium-term horizons

Current Impacts:

- Higher insurance rates (cost per dollar insured) leading to increased costs.

Anticipated Future Impacts:

- Higher insurance rates (cost per dollar insured) leading to increased costs
- Increased difficulty securing comprehensive coverage.

Scenario Considerations:

- Most likely under high-temperature scenarios (Hot House and to a lesser degree Slow Followers and Trailblazers)
- Could still occur under Coordinated Effort if physical events remain frequent.

Financial Quantification – Current Impacts:

- Premium rates have increased slightly in FY25; however, the impact of this increase cannot be quantified as insurers do not provide information on the proportion of the cost increase that is attributable to climate change risk.

Business Response:

- Insurance coverage reviewed regularly; climate impacts factored into long-term planning
- Aligned with asset management policies and capital risk framework.

PR2.2

Damage to assets and infrastructure from extreme weather events

More frequent and severe storms increase the risk of direct damage to assets or supporting infrastructure, including substations, spillways, and riverbanks. Events such as Cyclone Gabrielle, in February 2023, have highlighted the potential for significant operational disruption.

Scenario Considerations:

- Strongest in high-temperature scenarios (Hot House and to a lesser degree Slow Followers and Trailblazers)
- Acute events possible in all scenarios, with variable frequency.

Moderate Risk

Current and anticipated future impacts: Short-, medium-, and long-term horizons

Current Impacts:

- Repair and maintenance costs following damage to Esk scheme during Cyclone Gabrielle
- Loss of generation during outage at Esk scheme (the outage continued into FY25).

Financial Quantification – Current Impacts:

- Damage from Cyclone Gabrielle has been quantified as this event is representative of the impact extreme weather events can have (noting: full FY25 costs are described below, but what proportion of this can be attributed to climate change is inherently difficult; for the purposes of this Climate Statement we have assumed Cyclone Gabrielle was a climate related event)
- Impacts of Cyclone Gabrielle (which damaged Esk hydro scheme in the Hawkes Bay in February 2023) included remediation costs in FY25 of approximately \$2.1m (of which \$1.6m was covered by insurance revenue) and lost revenue in FY25 of \$0.5m (all of which was covered by insurance revenue).

Acute Impacts

Anticipated Future Impacts:

- Increased repair and maintenance costs
- Loss of generation during outages
- Accelerated asset degradation.

Business Response:

- Managing extreme weather events is a core part of Manawa Energy's asset management and operations which, given the nature of Manawa Energy's assets, is already performed to a very high standard
- Impact of climate change is being assessed and, where necessary, asset management plans will be continuously updated
- Asset damage and related risks are existing key risks within Manawa Energy's risk management framework.

PR2.3

Operational disruption from physical risks

Physical impacts such as increased spill due to more intense rainfall, transmission interruptions, or H&S risks during extreme events can lead to reduced generation, increased operational cost, or plant outages. These issues may also affect third-party infrastructure Manawa Energy relies upon.

Scenario Considerations:

- Risks higher in high temperature scenarios (Hot House and to a lesser degree Slow Followers and Trailblazers).

Moderate Risk

Anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- No current impacts.

Acute Impacts

Anticipated Future Impacts:

- Reduced output or increased downtime
- Increased H&S risk and staff disruption
- More spill events and complex operational conditions.

Financial Quantification – Current Impacts:

- No current impacts.

Business Response:

- As above, managing extreme weather events is a core part of Manawa Energy's asset management and operations
- Impact of climate change is being assessed and, where necessary, operational plans will be continuously updated
- Operational disruption and related risks are existing key risks within Manawa Energy's risk management framework.

PR2.4

Impact of physical changes on water access

Physical changes to the climate may result in consenting authorities to impose limits or operational constraints on Manawa Energy's ability to access water. For example, a consenting authority may require more stringent requirements for river flows in an attempt to mitigate the impact of more volatile weather patterns on river ecology. This also may create an opportunity – consenting authorities may be encouraged to give greater access to water in an effort to increase renewable generation (or peaking capability).

Scenario Considerations:

- Risks are related to physical outcomes, therefore higher risk and impact in high temperature scenarios (Hot House and to a lesser degree Slow Followers and Trailblazers).

Moderate Risk (and Opportunity)

Anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- No current impacts.

Chronic Impacts

Anticipated Future Impacts:

- Reduced (or increased) generation volume (changes to water allowances)
- Changes to generation flexibility (including peaking capability)
- More spill events and complex operational conditions.

Financial Quantification – Current Impacts:

- No current impacts.

Business Response:

- Continued prioritisation of consenting work, focusing on maintaining, or improving where possible, access to water resources
- Consenting risk and the management of consents is a core part of both Manawa Energy's strategy and risk management framework.

PR3

Changes to renewable fuel supply

High Importance

Physical Risk and Opportunity

Climate change is expected to influence the availability and seasonality of renewable fuel sources, especially hydro inflows and wind patterns. While some regions may benefit from increased fuel availability, others may experience a reduction.

Shifts in timing and intensity could reduce alignment with demand, increase volatility, or cause higher spill rates. Limited storage capacity exacerbates the risk.

The long-term effect could be either positive or negative depending on how changes unfold geographically and seasonally.

PR3.1

Changes in seasonal patterns and inflow timing

Changes in the seasonal timing of hydro inflows and wind generation – such as more persistent high-pressure systems or shifts in storm frequency – may result in poorer alignment with demand, increased volatility and greater risk of material downside events.

This change also undermines the usefulness of historical data for forecasting and scheduling, making these tasks more difficult.

Moderate to High Risk and Opportunity

Both Chronic and Acute Impacts⁷

Current and anticipated future impacts: Short-, medium- and long-term horizons

Current Impacts:

- Inflows into Manawa Energy hydro schemes in FY25 were uncharacteristically poor – very dry overall, with inflows arriving in short, intense, windows, leading to very challenging market conditions.

Anticipated Future Impacts:

- Increased frequency, and longer duration, low inflow events
- Increased spill or suboptimal dispatch
- Reduced peaking factors and revenue variability
- Harder scheduling and reduced planning certainty.

Scenario Considerations:

- Strongest in high-temperature scenarios (Hot House and to a lesser degree Slow Followers and Trailblazers).

Financial Quantification – Current Impacts:

- Not able to be quantified as attribution to climate change cannot be established with sufficient certainty (including the weighting of this attribution – i.e. what proportion of outcomes was due to climate change) compared to normal variations in weather patterns.

Business Response:

- Dealing with intermittent generation is core business for Manawa Energy
- Ongoing assessment and monitoring of inflow changes to support operational decision-making
- Renewable fuel variability is also a key risk in Manawa Energy's risk management framework.

⁷ Impacts are likely to persist over several years and therefore present ongoing, chronic, implications; however, persistent high-pressure systems or less frequent, but higher intensity, inflow events result in short-lived, acute events.

PR3.2**Changes in total renewable fuel availability**

Climate change may increase or reduce the absolute volume of hydro and wind resources in specific catchments or regions. While some models suggest an increase, others highlight variability and long-term decline. These changes will directly impact revenue and asset utilisation.

Scenario Considerations:

- > Physical models suggest long-term impact most likely by 2050
- > High-temperature scenarios carry greater risk of change (Hot House and to a lesser degree Slow Followers and Trailblazers), noting change could be positive or negative (a risk and an opportunity).

High Risk and Opportunity**Anticipated future impacts: Short-, medium- and long-term horizons****Current Impacts:**

- > No current impacts.

Financial Quantification – Current Impacts:

- > No current impacts.

Chronic Impacts**Anticipated Future Impacts:**

- > More or less generation, depending on location and scenario
- > Indirect effects on market prices
- > Complicated fuel management decisions.

Business Response:

- > Dealing with intermittent generation is core business for Manawa Energy
- > Ongoing assessment and monitoring of inflow changes to support operational decision-making
- > Renewable fuel variability is also a key risk in Manawa Energy's risk management framework.

Transition Plan Aspects of Strategy

Our changing climate will undoubtedly shape the way Manawa Energy operates in the medium- to long-term, and we know more extreme weather patterns could increase the risk of damage to our assets and impact our generation revenue both positively and negatively.

Our existing asset management planning and our future renewable development strategy, together with the work we have undertaken to prepare our first Transition Plan within this Climate Statement, positions us to manage climate-related risk, leverage climate-related opportunities, and build a more climate-resilient business going forward.

For our first reporting period under the climate-related disclosures regime in FY24, Manawa Energy relied on Adoption Provision 3, while indicating that Manawa Energy was in the process of developing the transition plan aspects of our strategy. In FY25, we have developed an initial Transition Plan. This sets out key areas of focus and priorities for leveraging opportunities, managing risks, and delivering climate ambition and capability across the time horizons of Manawa Energy today, near term actions (to 2030), and future state (from 2031 and beyond), to ultimately position Manawa Energy to transition to a low-emissions, climate-resilient future, as assessed for the Company as structured and operating at the end of FY25.

As with any plan, Manawa Energy's Transition Plan is subject to change, but readers should note that the Scheme could have a particularly significant impact depending on the priorities of Manawa Energy's Board following implementation of the Scheme. Nevertheless, in developing this Transition Plan, we have focussed on aligning plans to commercial drivers, to seek to focus on initiatives that may have the broad support of future stakeholders.

A key consideration in developing the Transition Plan has been how Manawa Energy would continue to operate, generate sustainable revenue, protect our assets and finance our business in a low-emissions, climate-resilient future, while acknowledging that as a renewable energy generator, resilience to physical risks is already inherently embedded in our business strategy. By its nature, this has included balancing short-term and long-term tensions, setting out tangible actions, where we can. It is recognised that this is a dynamic and iterative process, where uncertainty is embraced and planned for, and assumptions are tested.

In developing this Transition Plan, we have considered the mandatory requirements of the **NZ CS**, the expectations of key stakeholders (including intended primary users of Manawa Energy's Climate Statement) and integration with Manawa Energy's core business and ESG strategies and plans. This work was also informed by the scenario analysis work (described above), and we make specific reference to relevant CRROs, where appropriate, in our Transition Plan. Scoping and definition were further informed by a transition plan maturity assessment (**maturity assessment**).

This maturity assessment identified existing measures by Manawa Energy that could be considered as transition planning efforts, identified gaps in those measures, and highlighted key areas for development in terms of the transition to a climate-resilient future state. This included consideration of the scope of recent Manawa Energy disclosures, the extent to which, and how these could link with and inform the Transition Plan, and those areas where integration with existing Manawa Energy strategies, frameworks and plans could be further developed or reinforced.

Transition planning and capital deployment

The aspects of the Transition Plan relating to "Manawa Today" have been integrated into internal capital deployment and funding decision-making processes.



Our Plan^{*}

For a transition to a low-emissions climate-resilient future

	Leveraging Opportunities	Addressing Risks	Climate Ambition & Capability
Manawa today	- Strategy pillars (renewable growth, maximising value existing assets, capturing value revenue contracting) and ESG Strategy - Critical enablers within strategy (high performing organisation, technical excellence etc) - New development function and project pipeline in place that reflects diverse geography, and introduces future mix of generation types - Existing environmental monitoring and assessments, over time, informs understanding of climate-related opportunities - Engaging with material parts of supply chain on emissions data collection and reporting (Scope 3) - Participation in local and global benchmarking insights to inform ESG focus (e.g. GRESB Infrastructure Asset Assessment, Forsyth Barr CESG and sector insights)⁴	- Specific climate-related physical and transition risks and opportunities identified and disclosed, including current financial impact - High-level physical climate risk modelling obtained to further inform risk identification, assets & new development pipeline alongside rigorous engineering assessments⁴ - Dam safety, established flood hydrological analytics and asset knowledge inform asset management planning and operations - Risk Management Policy and Framework explicitly includes climate-related risks (and opportunities) - Diverse geographical distribution of renewable assets supports generation flexibility, continuity - High standard of asset management, health & safety, environmental compliance and operational excellence	- Climate resilience embedded in core Business Strategy and ESG Strategy - Emergent internal capability managing climate-related disclosures, supported by external advisors - Leadership engagement and cross-functional collaboration in climate related planning and execution - Board oversight, sign-off on climate disclosures and Transition Plan, Board education and upskilling delivered - Engagement with peak industry bodies, to advocate for positive outcomes on key regulatory matters and share knowledge on current and emerging ESG issues - Emissions Inventory Scope 1, Scope 2 and selected Scope 3 in place and disclosed - External assurance Scope 1 and Scope 2 emissions, readiness for assurance on material Scope 3 emissions
Near-term actions ¹	- Commitment of capital to climate-related opportunities across existing assets and operations, including asset enhancement and dam safety projects that support resilience, adaptation and emissions reduction outcomes - Building new mix of generation types (wind, solar), with further geographic distribution of assets supports resilience - Plan in place to engage value chain in Scope 3 emission reduction initiatives - Leverage understanding of anticipated climate-related physical changes to inform climate strategy and execution (short-term: monitor, understand, prepare; medium-term: respond, evolve, actively mitigate and long-term: stabilise, following knowledge of expected end state) - Review and update Sustainable Finance Framework project financing focus, to include reference to climate-related KPIs, as appropriate	- Ongoing review and strategic integration of climate-related physical and transition risks (and opportunities) (CRROs) into core business strategy, frameworks and execution - Embed monitoring functions for emergent physical risks, including lead indicators to detect variability, change (monitor, understand and prepare) - Embed monitoring functions for emergent transition risks (e.g. regulatory, policy changes) (monitor, understand and prepare) - Grow analytical suite capabilities (and data-driven decision making) to mitigate risks and optimise generation that will increase our resilience (monitor, understand and prepare) - Long-term Asset Management Plan (AMP) integrates internal and external climate variability and change insights, informing resilience and adaptation focus	- Develop science-aligned emission reduction targets, interim Scopes 1, 2 and 3 targets, including progress reporting³ - Build on existing internal leadership and staff climate capability, including awareness and training - Review executive and management remuneration incentives to ensure these reflect appropriate climate-related metric(s), in line with Business Strategy and objectives - Whole board oversight of climate-related matters, and embedded in decision-making and operating environment - Expand Scope 3 emission inventory data capture, engagement and disclosure - External assurance Scope 1, Scope 2, and material Scope 3 emissions
Description of future state ²	- Growth in renewable generation (TO1, TO2, TR2+) - High performing existing (renewable) assets (TO1, TO2, TR1+, TR2+) - Turn shifts in market and environment into positive outcomes for Manawa Energy (TO3, TR1+, TR2+, PR3) - Commitment of capital to short, medium and long-term emissions reduction, climate-related mitigation and adaptation opportunities - Formal plan in place for engaging with material parts of value chain on Scope 3 emission reduction initiatives, with targets and milestones achieved and disclosed - Sustainable Finance Framework project focus embeds climate-related risk and opportunity KPIs (such as resilience, adaptation and mitigation)	- Specific climate-related risks identified and appropriately disclosed (both physical and transition), and includes addition of both actual and anticipated financial impacts - Continuously evolving strategy (TO3-, TR2), monitoring and proactively responding to shifts in market and operating environment (TR1, TR2) - Readiness for emergence of physical risks (PR1, PR2, PR3) - Advanced, forward-looking portfolio and asset management that integrates climate related insights and monitoring and responds to risks well ahead of them materialising (TR1, PR2, PR3) - Advocate for and proactively respond to a regulatory environment that supports existing and future MNW assets (TR2) - Competitive new development options, execution capability (TO1-, TO2-, TO3-, TR3)	- Emissions Reduction Plan and initiatives to support Aotearoa New Zealand's net zero emissions goals - Leadership capability plan and execution covers climate response frameworks (internal and external) - Climate response activities closely aligned with strategy, and other elements of core business - Climate-related remuneration metric(s) are embedded into performance management framework in line with Business Strategy and objectives, and disclosed - External assurance Scope 1, Scope 2, and material Scope 3 emissions and targets, in line with Manawa Energy Emissions Reduction Plan - Leverage strong ESG, climate and resilience credentials to attract investment, stakeholder support, development partners (TO2-)

Key

- 1 Near Term actions: up to 2030.
- 2 Future State: from 2031 and beyond.
- 3 Future Emission Reduction Plan (ERP) will decouple emissions reduction from growth strategy (building efficiency, intensity metrics and consideration of development projects (Scope 3) into future target definition).
- 4 Infratil commissioned (GRESB, Jupiter Risk Assessment).

^{*} This Plan was prepared by Manawa Energy, as structured and operating on 31 March 2025. It does not take account of any change in priority that may be applied if the Scheme proceeds.

- Indicates where a risk (or risks) also exists in relation to the specified transition or physical opportunity (for example TO1-).

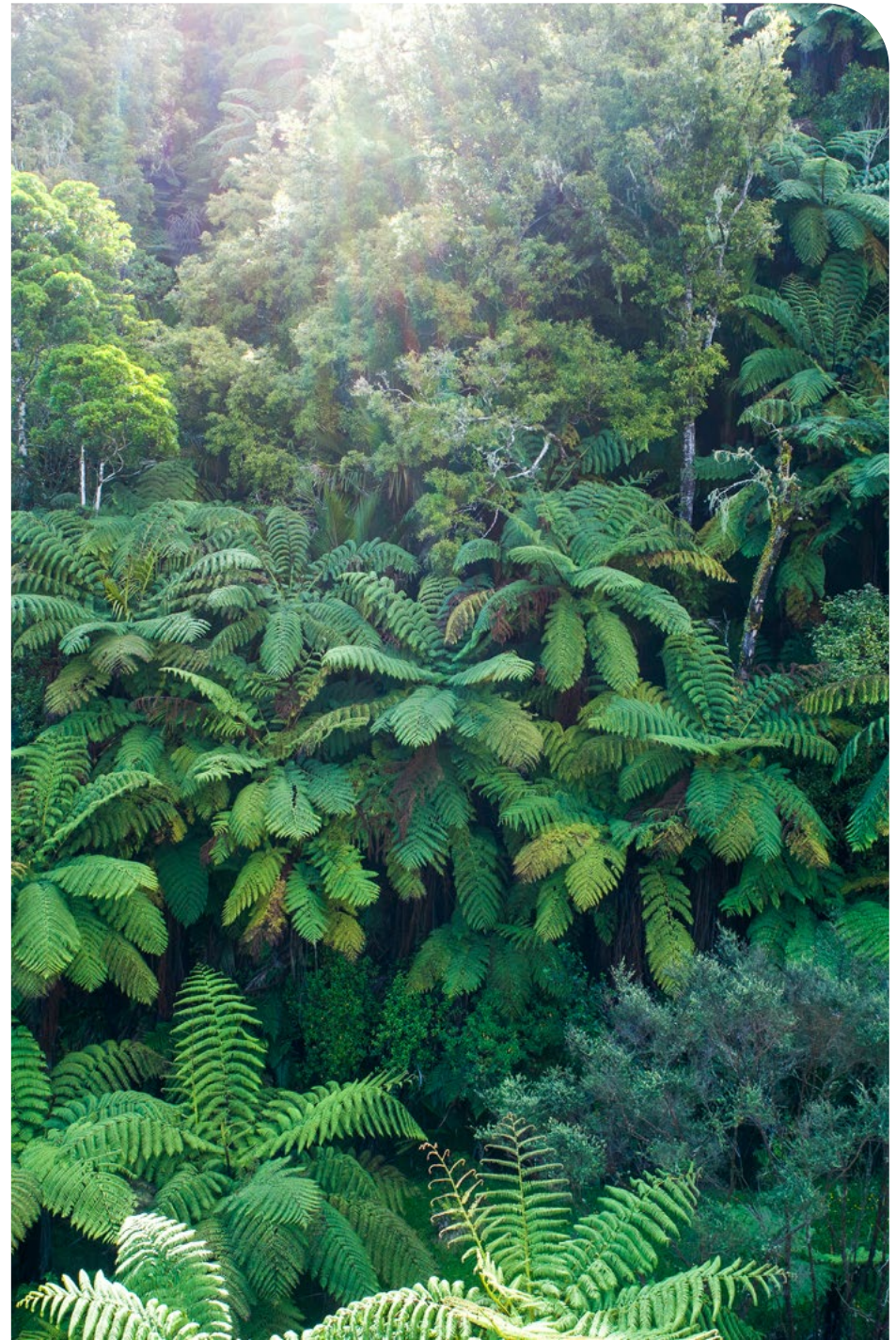
+ Indicates where an opportunity (or opportunities) also exists in relation to the specified transition or physical risk (for example TR1+).

How Manawa Energy uses CRROs for Strategic Planning and Capital Decision-Making and Deployment

We incorporate identified CRROs into our internal capital deployment and funding decision-making processes in the following ways:

- › Climate-related risks are factored into dam safety reviews and investment planning;
- › Climate-related risks are carefully considered when upgrading and maintaining our plant, for example, to better operate our assets to manage extreme flows or extended dry periods;
- › Where climate-related opportunities are identified, we consider whether there are opportunities to invest in new projects, for example:
 - new wind and solar opportunities from increased demand for renewable electricity as a result of the decarbonisation of the New Zealand economy in response to climate-related risks;
 - increased generation capacity opportunities where higher rainfall, wind and solar resource is expected;
 - increased droughts and lower rainfall in some areas providing higher demand for stored water; and
 - new opportunities through storage technology to support the use of renewable electricity sources (for example, batteries).
- › We consider risks through our enterprise risk management (ERM) system and incorporate climate assessment and hydrology measures to help predict and understand the effects of climate change at our schemes;
- › We are involved in industry studies and groups that contribute to hydrological data and science, and the development of policy and legislative initiatives, to inform our decision-making processes; and
- › We consider how climate-related impacts may affect the health and safety of our employees and contractors and incorporate this in our business continuity planning and training.

For further information in relation to Manawa Energy's capital deployment for the FY25 period, refer to the **Metrics and Targets** section (pages 57 to 68) of this Climate Statement. General information about our asset upgrade programme overall is set out on pages 15 to 21 of the **FY25 Annual Report**.



Risk Management

Introduction to Risk Management at Manawa Energy

Manawa Energy maintains an ERM system that supports our existing operations and informs the decisions taken to achieve future growth aspirations and business development goals. Climate-related risks, as described in the [Strategy](#) section of this Climate Statement, are considered as an integral part of this system and are embedded in the associated processes and outcomes. Put simply, the ERM provides the framework for effectively managing the climate-related risks that we have identified through our scenario analysis and related processes.

An overview of Manawa Energy's ERM system is summarised in the diagram below, and described (for general information purposes) further within our [FY25 Annual Report](#), page 33.



Our Risk Policy (and other related policies and guidelines) informs our risk management processes and assists in ensuring the appropriate management of risks. Our enterprise-level risks are assessed, using the Risk Matrix described below, based on measures of consequences and likelihood and the potential for a range of impacts including financial, business disruption, stakeholders, environment and community and safety. In relation to the climate-related risks and opportunities that we describe in the [Strategy](#) section of this Climate Statement, this includes identifying and distinguishing those that are physical and transition-related, with our physical risks also considered, at a high-level on an asset basis, in terms of both frequency and vulnerability.

As noted in the [Governance](#) section of this Climate Statement, throughout FY25, the management team has continued to provide the Board and Audit and Risk Committee (ARC) with quarterly risk and risk treatment reporting, and this has included consideration of climate-related risks.

Our authorities, responsibilities and accountabilities, as related to risk management, are set out below.

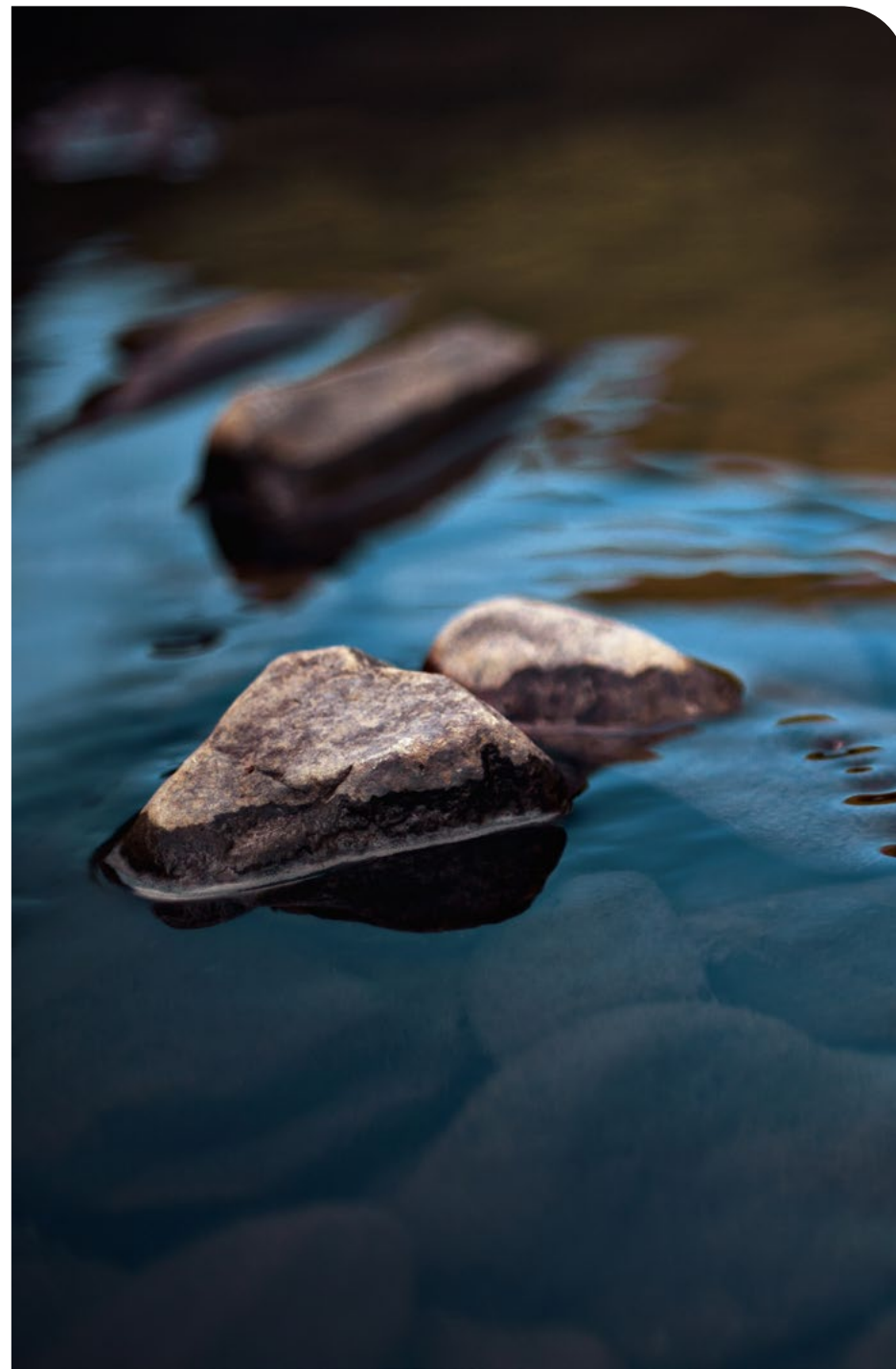


Throughout FY25, we continued to embed and operationalise the Risk Project Plan described in our [FY24 Climate Statement](#), with this work including further integrating our enterprise risk management tool, "Totum" (**Totum**), into standard risk management processes and reviewing and integrating climate-related risks, (with full 'bowtie' assessment on the top risks) into organisational risk management.

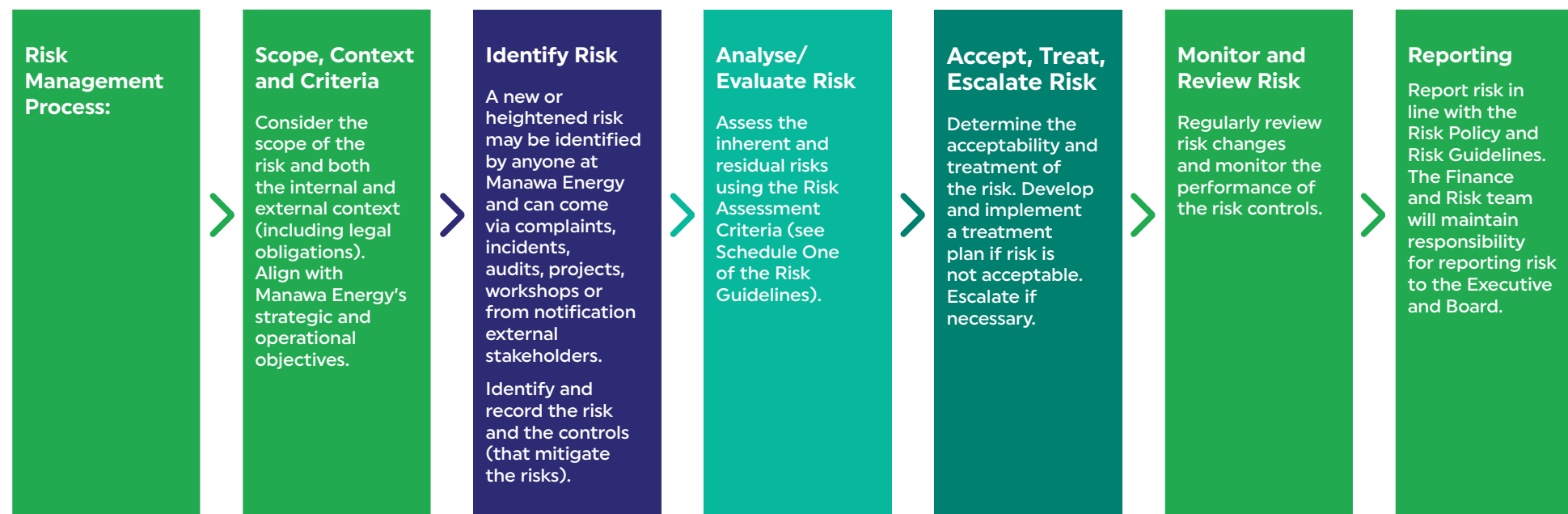
Our Risk Matrix (set out below), allows for comprehensive risk analysis, including in relation to our identified climate-related risks. The Risk Matrix continued to be used across the business throughout FY25, guiding assessment of the likelihood of risks, and considering the potential for a range of consequences.

Following identification, risks are quantified, across a spectrum of minor/low/moderate/high and critical.

	MINOR	LOW	MODERATE	HIGH	CRITICAL
HIGHLY LIKELY					
LIKELY					
UNLIKELY					
HIGHLY UNLIKELY					
RARE					



The following overview sets out processes by which climate-related risks are identified, managed and reported by Manawa Energy.



In relation to these processes:

- Risks have been recorded in Totum, and assigned to relevant business functions and Risk Owners
- Business functions have ongoing responsibility for monitoring and managing risks assigned to them and the associated controls;
- Risks have been monitored on an ongoing basis to identify and consider any material changes to risk profiles and relevant external factors that might impact how specific risks are managed;
- Business functions report to the relevant General Manager (GM) and the wider management team on an ongoing basis; and
- In parallel, the management team, the ARC and the Board have monitored and assessed enterprise risks (including climate-related risks) on a quarterly basis, which has informed the steps set out above.

Identifying, Assessing and Managing Climate-related Risks

The identification, assessment and management of climate-related risks and opportunities is not an isolated process for Manawa Energy – it is an integrated aspect of our existing risk management processes.

We identify and assess climate-related risks in the same way we identify and assess other types of enterprise risk, using our ERM system and the other risk identification and management processes (such as scenario analysis) described in the **Strategy** section of this Climate Statement, and generally in our **FY25 Annual Report**.

Under the ERM system, climate-related risks are identified across the business and assigned to Risk Owners to whom certain risk categories have been allocated. They are then classified and assessed using the above-mentioned Risk Matrix and process, and at an asset level, based on frequency and vulnerability, reported on and reassessed periodically.

FY25 Scenario Analysis Process for Identifying and Assessing Climate-related Risks and Opportunities

For our second reporting period under the climate-related disclosures regime, the **Strategy** section of this Climate Statement includes further details about the scenario analysis process that we used to identify and consider CRROs in FY25. This includes definition of:

- > the specific climate-related scenarios considered;
- > the short-term, medium-term and long-term time horizons considered; and
- > the relevant exclusions to Manawa Energy's value chain and organisational boundary.

Drawing on **The Aotearoa Circle Energy Sector Scenarios 2024**, we used scenario analysis as our primary tool to assess the scope, size and impact of CRROs, with our scenario narratives tailored specifically to Manawa Energy. We also had regard to:

- > heat mapping;
- > stakeholder engagement;
- > relevant forecasting;
- > hazard maps; and
- > modelling (as part of the scenario analysis process for both FY24 and FY25, we had regard to high level modelling, but have not to date, conducted detailed asset specific modelling).

The climate-related risks identified in this year's climate risk review have been incorporated within internal risk management and capital deployment and assisted with developing informed climate-related risk strategy and adaptation

management. This is described further in the **Metrics and Targets** section of this Climate Statement, with reference to specific assets and projects. Climate-related risks that have been identified as material through our scenario analysis work have been recorded in our ERM system, and considered alongside our other enterprise risks, with these risks expected to be monitored and updated on an ongoing basis.

The above reference to the FY25 scenario analysis process in the context of risk management reflects Manawa Energy's circumstances as they were in the reporting period (to 31 March 2025), and does not take into account the impact that the implementation of the Scheme (if completed) and subsequent integration of Manawa Energy's operations into the Contact Energy group may have, including the approach by a new Board of Directors to Risk Management that Contact Energy may bring in the future.

Sustainability Materiality Matrix

As described in the **FY24 Climate Statement**, Manawa Energy's Sustainability Materiality Matrix identified a number of material issues to the business related to sustainability. Manawa Energy's ESG Risk Register was developed by reference to these material issues. In November 2023, the ARC considered the Materiality Matrix and ESG risks and opportunities. Some of the climate-related risks from the ESG register are also reflected in Manawa Energy's top enterprise risks (for example, risks related to climate change, health and safety, and regulatory compliance).

Specific climate change adaptation risks, and a risk related to failure to adequately consider material ESG issues are also included in our wider enterprise risks.

Enterprise Risks

Enterprise risks, including climate-related risks, are analysed using the Risk Assessment Criteria (contained in the Risk Guidelines that sit alongside our Risk Policy).

Several of the top enterprise risks identified by Manawa Energy are associated with, or are exacerbated by, climate change risk, including:

- > risk of regulatory change;
- > failure of material generation assets (caused by natural disaster);
- > risks related to execution of significant generation capital projects;
- > delivery of pipeline of new generation projects; and
- > electricity market price path risk.

Manawa Energy typically assesses enterprise risk:

- > based on a three-to-five-year horizon; and
- > against the risk categories of most relevance to the specific risk (namely, safety, financial, business disruption, environment, and stakeholders).

In relation to climate-related risks, in accordance with our scenario analysis (described in the Scenario section of this Climate Statement), the timeframes we considered included short-term (2024–2030), medium-term (2031–2050) and long-term (2051–2100).

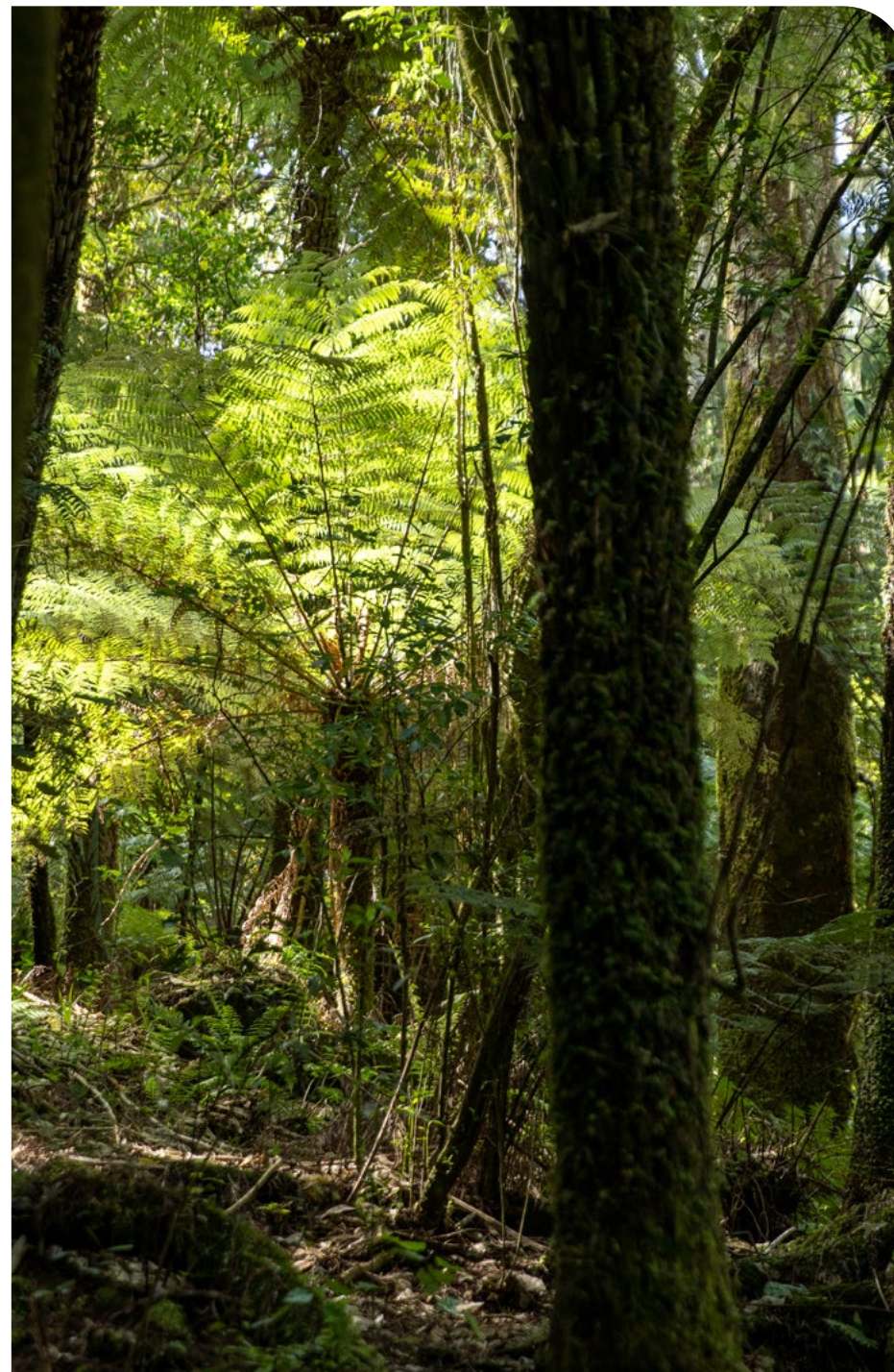
Prioritising Climate-Related Risks against other Risks

Part of managing risks is considering which risks are the most significant to our business. We prioritise climate-related risks relative to other types of risk by applying our ERM system. We also use critical risk analysis (using 'bowtie' analysis) and risk reporting, including heat maps, to show relative risk severity, the impacts of risk controls and changes in risk trends, as described above.

Frequency of Risk Assessments

Our standard enterprise risk reviews have taken place on a quarterly basis, as noted above.

In addition, specific climate-risk assessments have taken place annually in line with Manawa Energy's reporting obligations under the NZ CS climate-related disclosures regime, and at a high-level asset and portfolio scale, also on an annual basis.



Integration of Climate-Related Risks into Overall Risk Management Processes

Manawa Energy's existing risk management framework, as described in this Climate Statement, is used to ensure management, and the Board is regularly informed about, monitors, and makes decisions on climate-related risks that ultimately inform and support Manawa Energy's strategy and focus.

This approach to risk management means that climate-related risks (and in some cases opportunities also) are managed in various parts of the business, as illustrated by the examples below.

Asset Management Team	Incorporate climate assessment and hydrology measures to help predict, understand and manage the effects of climate change on our hydropower schemes. The Generation Team invests in innovative approaches to maximise production and minimise risk. This particularly applies when making decisions about maintaining and upgrading our assets to better manage extreme flows or extended dry periods. Members of our Generation Team participate in climate change hydrology working groups with others across the industry to collaborate and to support research into potential flood impacts.
Generation Development Team	Having regard to New Zealand's need for additional renewable energy, Manawa Energy's Generation Development Team are actively pursuing opportunities in wind and solar generation. There are also potential opportunities for alternative uses of Manawa Energy's hydro storage capacity that may add value to our schemes, particularly those with operating flexibility.
Environment and Stakeholder Relations	Focussed on protecting and expanding our portfolio of consents including through the ongoing work with consenting authorities, iwi and other stakeholders, the Consenting Team factor in the risks posed by extreme weather events and other climate-related risks into this work programme.
Dam Safety	Manawa Energy's dam safety risks are managed through ongoing monitoring and inspection, including annual asset inspections and five-yearly reviews of our high and medium Potential Impact Category (PIC) hydropower schemes, and ten-yearly reviews of our low PIC schemes. These reviews identify potential hydrological changes and allow us to plan any remediations and upgrades, including in preparation for more extreme weather events. Manawa Energy regularly collaborates on, and contributes hydrological data towards, science and studies on climate resilience in New Zealand.

Trading	A predicted increase in intermittent generation (wind and solar) may increase the volatility of prices in the wholesale electricity market, consequently increasing the value of storage and controllable generation. Manawa Energy maintains a balance between uncontrolled generation (run-of-the-river hydropower schemes), and controlled hydro (those with the ability to store water), and we manage our overall market exposure with a range of risk management products.
Technology	Significant research and development into renewable electricity sources and associated technologies has led to a rapid decline in the cost of decentralised electricity generation, like solar and batteries. Manawa Energy continues to monitor new technologies that may provide Manawa Energy with opportunities in the future, noting that equipment manufacturers will likely adapt specifications in response to climate change.
Regulatory	Policy and legislative changes have the potential to significantly impact Manawa Energy's business. Manawa Energy sees potential opportunities from the climate and other Government policies that provide a positive framework to grow renewables and to support a low-emissions economy. Manawa Energy continues to work alongside industry and sector groups to help advocate for energy security, affordability, and sustainability.

Metrics and Targets

Greenhouse gas emissions

For the year ended 31 March 2025, Manawa Energy has produced our GHG emissions inventory, as also set out in our **FY25 Annual Report** (pages 43 to 44), and described in further detail below. We have prepared a **GHG Emissions Reporting Basis of Preparation Guide** (an internal document) to ensure consistency throughout Manawa Energy's GHG inventory process through to final climate-related disclosure (CRD).

Measurement Protocol

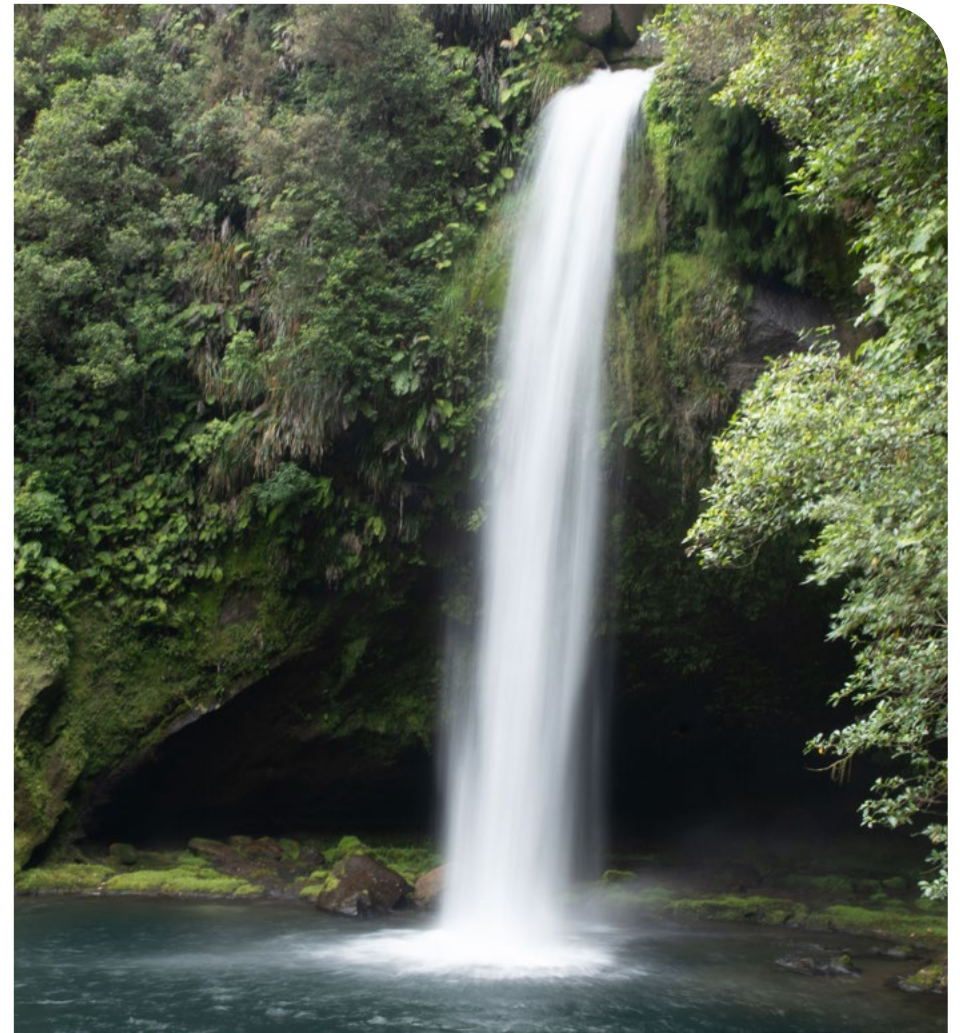
Manawa Energy has produced an annual GHG emissions report for FY25 in accordance with the following standards and guidance.

Standards	➤ Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard (WBCSD/WRI, 2015) ➤ Greenhouse Gas Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard (WBCSD/WRI, 2011).
Guidance	➤ Greenhouse Gas Protocol – Scope 2 Guidance (WRI, 2015) ➤ Greenhouse Gas Protocol – Scope 3 Calculation Guidance (WBCSD, WRI and Carbon Trust, 2013).

Consolidation Approach

When measuring emissions, Manawa Energy used the operational control approach, as defined by the **GHG Protocol**. This means that 100% of the carbon emissions from operations over which Manawa Energy has operational control in the reporting period are accounted for in the FY25 GHG inventory. This approach was chosen as it aligns with our financial accounting.

The table below outlines Manawa Energy's New Zealand operations, including subsidiaries, joint ventures, and investments – both included and excluded for the purposes of measuring Manawa Energy's GHG emissions in FY25.



Legal entity	Type	Ownership %	Operational control?	What the entity does	Does the entity produce GHG emissions?	Included in FY25 GHG inventory?
Manawa Energy Limited	Parent entity	100%	Yes	Primary hydro-electric business and owner of assets (e.g. dams and generators) and Group investments	Yes	Yes
King Country Energy Limited	Subsidiary	75%	Yes	Asset holding business - electricity generator, owns five hydro-electric generation schemes (of which Manawa ultimately owns 75% (via 100% interest in KCE-Holdings), operated by Manawa Energy Limited on its behalf)	Yes	Yes
Lochindorb Wind GP Limited	Joint Venture	50%	No	Holds new renewable generation development options	Yes	No – immaterial volume of emissions
Manawa Energy Insurance Limited	Subsidiary	100%	Yes	Captive insurance entity	Yes	No – immaterial volume of emissions
Rangitata Diversion Race Management Limited	Equity investment	15%	No	Irrigation water conveyance	Yes	No – immaterial volume of emissions
Maungatapere 2021 Limited	Subsidiary	100%	Yes	Non-trading subsidiary, established to acquire and develop the Maungatapere solar project, and ceased trading March 2024	No	No – as entity does not have any associated emissions (ceased trading March 2024)
Manawa Energy Generation Limited	Subsidiary	100%	Yes	Non-trading subsidiary of Manawa Energy Limited	No	No – as entity does not have any associated emissions
King Country Energy Holdings Limited	Subsidiary	100%	Yes	Holding company	No	No – as entity does not have any associated emissions
Manawa Energy Renewables Holdco 1 Limited	Subsidiary	100%	Yes	Holding company	No	No – as entity does not have any associated emissions
ANZ Renewables Limited	Subsidiary	100%	Yes	Holds new renewable generation development options	No	No – as entity does not have any associated emissions
Manawa Energy Metering Limited	Subsidiary	100%	Yes	Non-trading subsidiary	No	No – as entity does not have any associated emissions

Emission Factors

Manawa Energy used the latest published emission factors available at the balance date (31 March 2025). These include the following sources which informed preparation of our FY25 GHG emissions inventory and reporting:

New Zealand Ministry for the Environment (MfE)	Measuring Emissions: A Guide for Organisations (2024 MfE Workbook). Manawa Energy has used the most recently published emission workbook available at the time of reporting. For the FY25 reporting period, the 2024 MfE Workbook was used. ⁸
UK Department for Business, Energy and Industrial Strategy (BEIS) and Department for Energy Security and Net Zero	Government Conversion Factors for Company Reporting of Greenhouse Gas Emissions (2024 BEIS Workbook). Manawa Energy has used the most recently published emission workbook. For the FY25 reporting period, the 2024 BEIS Workbook was used.
EORA database	A Global Multi-Regional Input-Output Database. For the FY25 reporting period, Manawa Energy has used the EORA emission factors for New Zealand from 2017. The selected EORA emission factors were converted from USD dollars (USD: 2017 rate) to New Zealand dollars (NZ: 2017 rate) and inflated to the final period prior to current financial year (Q1 2023). The calculation method and public source for inflation was included in the BraveGen (new carbon accounting software) process for FY25.
New Zealand Energy Certificate System (NZEC)/Brave Trace	NZECs Residual Supply Mix for Electricity Certification (2024 BraveTrace). Manawa Energy has used the most recently published NZEC/Brave Trace published emission factors for 2022/23 for emissions relating to purchased electricity in Scope 2.

Reporting Units

Manawa Energy's carbon footprint is reported in tonnes of CO₂ equivalents (tCO₂e), as required by the GHG Protocol.

Global Warming Potential (GWP)

The Global Warming Potential (GWP) of GHG is applied to calculate the total CO₂e emissions. Manawa Energy used the GWP values as set out in the 2024 Ministry for the Environment (MfE) **Emissions Factors Workbook**.

Defining Scope 1, Scope 2 and Scope 3 Emissions

Scope 1 emissions refer to direct sources owned or controlled by Manawa Energy (such as fuels and refrigerants). Scope 2 emissions refer to indirect emissions from purchased electricity, and Scope 3 emissions refer to indirect value chain emissions.

Exclusions from GHG Emissions Sources and Scope

As set out in the table above, the following entities were excluded from Manawa Energy's FY25 GHG inventory.

Entities with an immaterial volume of emissions:	➤ Rangitata Diversion Race Management Limited ➤ Manawa Energy Insurance Limited ➤ Lochindorb Wind GP Limited
Entities with no associated emissions:	➤ Manawa Energy Renewables Holdco 1 Limited ➤ ANZ Renewables Limited ➤ Manawa Energy Metering limited ➤ Maungatapere 2021 Limited (ceased trading March 2024) ➤ King Country Energy Holdings Limited ➤ Manawa Energy Generation Limited

In FY25, Manawa Energy has reported on all Scope 1 and Scope 2 emissions, and three Scope 3 emission categories (C3: fuel and energy-related activities, C5: Waste generated in operations and C6: business travel). Further definition of the rationale for current scope selection is provided below (see **Scope 3**). Of the 15 Scope 3 categories available, seven have been assessed as being applicable to Manawa Energy, and of these, three have been included within the FY25 inventory. The Manawa Energy Scope 3 emissions sources that were not covered in the emissions reporting for FY25, and for which we have therefore relied on adoption provision relief (*Adoption Provision 4 – Scope 3 GHG emissions*) due to limitations in data availability and completeness, were C1: Purchased goods and services, C2: Capital goods, C7: Employee commuting, and C13: Downstream leased assets. We have continued work on scoping and building these data sets in FY25. The Scope 3 emissions categories in which Manawa Energy has not disclosed (based on an assessment of applicability and materiality) are: C4: Upstream transportation and distribution; C8: Upstream leased assets; C9: Downstream transportation and distribution; C10: Processing of sold products; C11: Use of sold products; C12: End-of-life treatment of sold products; C14: Franchises; and C15: Investments.

GHG Emissions Reporting Software

The implementation of dedicated carbon accounting software in FY25 has enabled more automated GHG data collection processes, emissions calculations and data aggregation, supporting our GHG inventory tracking and reporting this year. This work has enhanced both our data management and reporting processes for FY25 and our visibility in relation to GHG emissions tracking and reporting, over time.

⁸ MfE released the 2025 MfE Workbook on 11 June 2025, after the balance date (31 March 2025), and subsequent to our first disclosure of Manawa Energy's GHG Inventory within its FY25 Annual Report (released on 16 May 2025). Due to the timing of release, Manawa Energy has not updated the emission factors used to reflect the 2025 MfE Workbook.

Total Emissions for FY25

The emissions reporting for FY25 covers Scope 1, Scope 2, and a subset of the 15 distinct Scope 3 GHG emission categories that apply under the **GHG Protocol**. The Scope 3 emissions sources that were not covered in the emissions reporting for FY25 were purchased goods and services, capital goods, employee commuting, and downstream leased assets. We have started work on expanding Scope 3 emissions data collected during FY25 (including purchased goods and services, capital goods, and downstream leased assets) and subject to the Scheme, may expand the categories of emissions that we report on in subsequent years.

A summary of our FY25 GHG emissions is set out in the table below.

	Emissions Source	% Change FY24 to FY25	FY25 tCO ₂ e	FY24 tCO ₂ e
Scope 1 – Direct Emissions	Stationary combustion (Bream Bay)	709% ↑	1,724	213
	Mobile combustion (vehicle fleet)	3.5% ↑	667	644
	Refrigerant (fugitive) emissions ²	100% ↓	0	12
Total Scope 1		175% ↑	2,391	869
Scope 2 – Indirect Emissions	Purchased electricity (Market Based)	19.5% ↓	545	677
	Purchased electricity (Location Based)	20% ↓	522	656
Total Scope 1 + 2 (Market Based)¹		90% ↑	2,936	1,546
Total Scope 1 + 2 (Location Based)¹		91% ↑	2,913	1,525
Scope 3 – Indirect Emissions	Transmission and distribution losses (electricity and gas) ³	64% ↑	723	441
	Waste and wastewater (per capita)	17% ↓	15	18
	Travel (domestic & international air travel, taxis/rental cars, private car use for business, hotel accommodation)	14% ↓	428	498
Total Scope 3		22% ↑	1,166	957
Total Market Based Emissions¹	Scopes 1, 2 and 3	63% ↑	4,102	2,503
Internal Emissions Price	Manawa Energy does not use a fixed internal emissions price.			

¹ As per the GHG Protocol the location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using grid-average emission factor data). The market-based method reflects emissions from no or low emissions electricity that companies have contracted (or if no renewable electricity supply is contracted (nor available for contracting) using the residual mix emission factor). The reporting of both location-based and market-based emissions is required under the GHG Protocol as Manawa Energy operate in a market where product or supplier specific electricity and data is available.

² Includes total refrigerant replacement/top-up amounts across the full inventory of equipment that uses refrigerants. The leakage of refrigerant gas (such as HFC, PFC, SF₆ and NF₃, described below), is a small but significant source of GHG emissions because of a high GWP associated with these GHGs.

³ Transmission and distribution losses includes all greenhouse gas emissions from the production, transportation, transformation and distribution of the fuel used (both stationary and transport). In relation to Bream Bay, this includes Well-To-Tank (WTT) emissions associated with operation of the thermal peaker plant.

FY24 was set as the base year (**Base Year**) for Manawa Energy's GHG emissions reporting for Scope 1 and Scope 2 emissions. No base year has been set for Scope 3 emissions given that Manawa Energy is not reporting on all 15 potential classes of Scope 3 emissions yet, in reliance on adoption provisions, as noted above. Given the availability of relevant information, we have elected to provide information for the subset of Scope 3 emissions that we are reporting on as against our FY24 results (noting, however, that FY24 is not a formal Base Year for Scope 3 emissions).

As shown in the table above, FY25 overall gross GHG emissions (market based) have increased by 63% from the base year, FY24.

To inform interpretation of these results, an overview and comparison of GHG emission results for FY25 relative to the base year (FY24 in relation to Scope 1 and 2 emissions) is provided below:

Scope 1 – An increase of 175% between FY24 and FY25 emissions is attributable to the following:

- A 709% increase in **stationary combustion** is due to the dry-calm winter in 2024 resulting in an energy shortage across the country and Manawa Energy's portfolio, leading to higher utilisation of the Bream Bay thermal peaker plant. This was also reflected in a significantly higher proportion of thermal generation utilisation across New Zealand over this period. In addition, Bream Bay was used as cover during an extended, unplanned outage in Northland in June 2024, following the collapse of a Transpower pylon, providing essential back-up power supply while transmission lines were reinstated;
- A marginal increase of 3.5% in relation to the **mobile fleet** indicates the fleet remained relatively unchanged, and while some swings in certain drivers was experienced, on the whole, no behavioural or organisational changes occurred between FY24 and FY25; and
- A 100% decrease in **refrigerants** relates to a change from the average leakage rate calculation to the top-up method, as a more accurate measure, based on actual refrigerant usage.

Scope 2 – A decrease of between 19.5% (market based) and 20% (location based) is attributable to:

- **Purchased electricity** decreasing due to a lower level of pumping at the Highbank scheme during the irrigation season. The extremely wet December 2024 and January 2025 conditions in Canterbury meant that demand from irrigators was reduced, with water availability in races being sufficient to meet demand, reducing the need for pumping in January and March 2025.

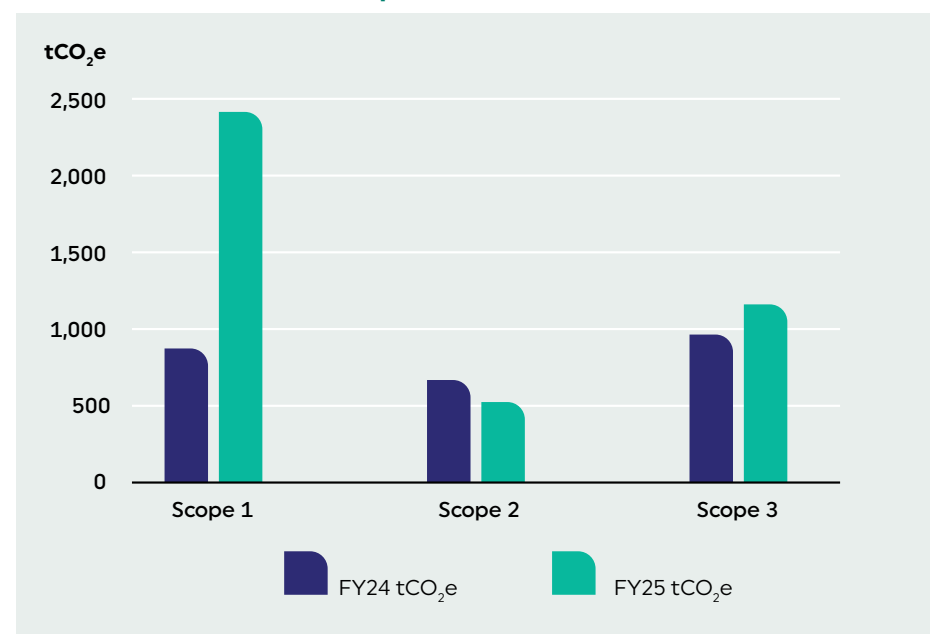
Scope 3 – An increase of 22% in those Scope 3 categories reported on is attributable to:

- A 64% increase in **transmission and distribution losses**. This category includes the transportation of fuel to the Bream Bay thermal Peaker plant and the majority of the increase is due to the higher generation at the Bream Bay plant, as described above;
- A 17% decrease in **waste and wastewater consumption** and associated emissions, due to lower staff numbers and less waste produced at Manawa Energy sites; and
- A 14% decrease in **business** travel primarily due to a change (reduction) in the MfE emissions factors relating to air travel in FY25 compared to FY24, and a 4% decrease in total kilometres travelled for business purposes.

Overall GHG Emissions in FY25 compared with FY24

As highlighted above, FY25 overall gross GHG emissions (market-based) have increased by 63% from the base year, FY24, and as the graph below indicates, the most significant increases were realised in relation to Scope 1 (175% increase) and Scope 3 (22% increase) (noting the contribution of the Bream Bay peaker plant in response to national energy shortages), and a decrease of 19.5% in Scope 2 emissions in FY25.

GHG Emissions in FY25 compared with FY24



Emissions Per Greenhouse Gas

Most of Manawa Energy's emissions come from carbon dioxide (CO₂), with a relatively small portion from other greenhouse gases, used predominantly for, or as a byproduct of, electricity generation systems, fuel combustion, waste disposal and refrigeration. For FY25, our breakdown of emissions by greenhouse gas, compared to FY24 is as follows.

	Greenhouse Gas	Primary Application	% Change FY24 to FY25	FY25 tonnes	FY25 tCO ₂ e	FY24 tonnes	FY24 tCO ₂ e
CO ₂	Carbon dioxide	Electricity generation systems, fuel	65% ↑	4,049.90	4.050	2,459.0000	2,459
CH ₄	Methane	Electricity generation systems, fuel, waste	84% ↑	1.25	35	0.6500	19
N ₂ O	Nitrous oxide	Electricity generation systems, fuel	42% ↑	0.06	17	0.0400	12
HFC	Hydrofluorocarbons	Refrigerants	100% ↓	0	0	0.0020	3
PFC	Perfluorocarbons	Refrigerants, electricity generation systems	0% –	0	0	0	0
SF ₆	Sulphur hexafluoride	Refrigerants, electricity generation systems	100% ↓	0	0	0.0003	9
NF ₃	Nitrogen trifluoride	Refrigerants, electricity generation systems	0% –	0	0	0	0

The following highlights key changes between FY24 and FY25 emission sources and contributions:

- > An increase of 65% in carbon dioxide (CO₂) emissions is largely due to Scope 1 emissions (fuel combustion associated with operation of the Bream Bay peaker plant and vehicle fuel, collectively contributing 2,374 tCO₂e), with the balance being purchased electricity (503 tCO₂e) (i.e. Scope 2) and Scope 3 emission sources;
- > An increase of 84% in methane (CH₄) emissions is comprised of Scope 2 (purchased electricity) (18.6 tCO₂e), Scope 3 (waste) (13 tCO₂e which increased in FY25), and Scope 1 (fuel) (3.5 tCO₂e); and
- > An increase of 42% in nitrous oxide (N₂O) emissions is attributable to an increase in Scope 1 (fuel), comprising 13.8 tCO₂e, with the balance spread across other emission source categories Scope 2 (purchased electricity), and Scope 3 (business travel and waste).

Assurance Scope 1 and Scope 2 Emissions

Manawa Energy engaged KPMG to provide limited assurance over Scope 1 and Scope 2 GHG emissions for FY25. We obtained an unqualified **Limited Assurance Report and Opinion** (pages 70 to 72) in respect of this engagement.

Methodologies and Sources of Uncertainty

We have set out below the methodologies (and relevant assumptions) and uncertainties used to calculate our Scope 1, Scope 2 and Scope 3 emissions. Uncertainties in data quality can impact the accuracy of GHG emissions disclosures and therefore are important considerations. In FY25, Manawa Energy has further enhanced its GHG data management processes, which as described above, has included the implementation of dedicated carbon accounting software. Other refinements have included changing the approach to measuring refrigerant emissions, transitioning from using the MfE default annual leakage rate (Methodology B), to measuring actual refrigerant top-up volumes (Methodology A). An overview of key emissions activities, calculation methods, data sources, data quality and levels of uncertainty is provided below, in relation to key emissions applicable to Manawa Energy in FY25.

Reporting Category	Emissions Activity	Calculation Method	Data Source	Limitations, Data Quality and Uncertainty ¹
Scope 1				
Stationary combustion	Emissions generated by thermal peaker plant at Bream Bay	Manawa Energy used the total litres of purchased diesel multiplied by the relevant MfE emission factor. For heavy oil, used total expenditure and unit price purchased to estimate total litres. Following guidance from IPCC, also calculated estimated tonnes of CO ₂ released by heavy oil used as lubricant	Purchased diesel and heavy oil from Manawa Energy's financial accounting system	Supplier invoices Low uncertainty
Mobile combustion (vehicle fleet)	Emissions generated by Manawa Energy's vehicle fleet	Total litres purchased in FY25, per fuel type, multiplied by the relevant MfE emission factor. Premium petrol emission factors were used for both Unleaded 95 and Unleaded 98 fuel types	Purchased fuel from Manawa Energy's financial accounting system	Supplier invoices Low uncertainty
Refrigerant gases	Emissions from fugitive gases – losses from refrigerants	Total refrigerant replacement/top-up amounts across the full inventory of equipment that uses refrigerants, using MfE mission factors and Methodology A (top-up method), except in relation to sealed for life units, where SF ₆ emissions are assumed to be zero	Refrigerant top up maintenance records, annual site returns, records from refrigerant providers	Maintenance and refrigerant provider records Low uncertainty
Scope 2				
Purchased electricity	Emissions from electricity Manawa Energy purchases for our own operations	Total operational electricity consumption multiplied by the NZECS emission factor for residual supply to calculate market-based emissions	Invoices from Manawa Energy's financial accounting system	Supplier invoices Low uncertainty

¹ **Low uncertainty** = data sourced from Manawa Energy's financial accounting system and/or supplier reporting Scope 3.

Scope 3

Scope 3 emissions are those that occur as a consequence of activities arising from sources not owned or controlled by Manawa Energy. The GHG Protocol divides Scope 3 emissions into 15 distinct categories. Manawa Energy assessed these categories for applicability and materiality (as described in the GHG Protocol Scope 3 Standard (WBCSD/WRI, 2011)). We identified seven categories as applicable; and focused on three of these categories for FY25 reporting as being material (primarily on the basis of proportional quantum of Manawa Energy's GHG emissions and also taking into account data availability). We also considered other relevant criteria as set out in the GHG Protocol when identifying material emissions sources (for example, influence on potential emission reductions, stakeholder perspective, contribution to the Company's risk exposure).

Manawa Energy has reviewed the relevance and materiality of Scope 3 emission sources over time, and recognises the importance of such reviews, particularly following any significant structural changes. It is noted that ownership changes, such as the Contact Energy Scheme, could in the future trigger recalculation and restatement of the Base Year.

In FY25, Manawa Energy has relied on a number of adoption provisions from **NZ CS 2** in relation to Scope 3 emissions, including Adoption Provision 4 (*GHG Emissions Classified as Scope 3*), Adoption Provision 5 (*Comparatives for Scope 3 GHG Emissions*) and Adoption Provision 8 (*Assurance of Scope 3 GHG Emissions*).

The following are the subset of the Scope 3 categories included in our reporting for FY25, including the methodologies (and relevant assumptions) used, noting that uncertainties and limitations in data quality can impact the accuracy of GHG emissions disclosures, and Manawa Energy's Scope 3 emissions have not been subject to third-party assurance, to date.

Category Number	Reporting Category	Emissions Activity	Calculation Method	Data Source	Limitations, Data Quality and Uncertainty
Scope 3					
C3	Fuel and energy-related activities not included in Scope 1 or Scope 2	Emissions generated by the extraction, refining and transportation of purchased fuels (fuel and heavy oil well-to-tank (WTT) emissions)	The emissions from all purchased fuels to be used as lubricants have been included in Category 3, rather than Category 1, since some is burnt even as a lubricant. The total litres purchased was multiplied by a UK Government Department for Business, Energy and Industrial Strategy (BEIS) emission factor, with the EF, in relation to heavy oils, converted to litres	Supplier invoices from Manawa Energy's financial accounting system	Supplier invoices Moderate uncertainty, given requirement for some estimation
C3	Fuel and energy-related activities not included in Scope 1 or Scope 2	Emissions generated by the extraction, production and transportation of fuels consumed in the generation of purchased electricity (electricity WTT emissions)	New Zealand electricity emissions have been calculated utilising BEIS's methodology, using an estimated proportion of the energy mix emission factor (22%). To calculate, used electricity WTT emissions, the total electricity purchased was multiplied by the NZECS factor	From Manawa Energy's financial accounting system	Supplier invoices Low uncertainty
C3	Fuel and energy-related activities not included in Scope 1 or Scope 2	Transmission and distribution losses of purchased energy (electricity or natural gas) that was lost in transmission and distribution systems	Includes all greenhouse gas emissions from the production, transportation, transformation and distribution of the fuel used (both stationary and transport). In relation to Bream Bay, this includes Well-To-Tank (WTT) emissions associated with operation of the diesel-fired Peaker boiler. Calculated using appropriate MfE emission factor	From Manawa Energy's financial accounting system	Supplier invoices Low uncertainty
C5	Waste	Emissions from waste generation in operations, including office waste and wastewater	Solid Waste Total quantity of waste destined for landfill during the reporting period multiplied by the MfE emission factor for general waste to landfill, without gas recovery Wastewater Emissions from wastewater were calculated using an MfE per capita emission factor, and the total number of employees, given that wastewater is not metered	Supplier reporting	Supplier invoices and reporting Data not broken down by waste type, wastewater calculations based on estimation Moderate uncertainty
C6	Business travel	Emissions from transportation and accommodation of employees and directors for business related travel	Flights Fuel combustion from air travel. The total kilometres travelled by passengers per flight multiplied by the relevant domestic and international air travel emission factors (including radiative forcing) from MfE was applied Rental Cars Fuel combustion from rental cars. Total distance multiplied by MfE emission factors. Most rental vehicle distances travelled were measured, but where not available, an assumption of 50km travel for each day of use was applied Personal Vehicles for Business Travel Staff mileage reimbursements (Scope 3–Category 6), based on kilometres travelled, from reimbursements (Scope 3 as not owned or operated by Manawa Energy) Hotel Stays The total room nights of hotel stay, per country. For each country, total room nights were multiplied by the relevant MfE emission factor	Supplier invoices from Manawa Energy's financial accounting system, corporate travel reporting and staff reimbursement returns	Supplier invoices Corporate travel reporting Staff reimbursements Low uncertainty

1 **Low uncertainty** = data sourced from Manawa Energy's financial accounting system and/or supplier reporting; **Moderate uncertainty** = includes estimation methods.

GHG Emissions Calculations Limitations and Uncertainty

For FY25 we have a low level of uncertainty for the methods used to calculate GHG emissions for Scope 1 and Scope 2. As noted above, KPMG undertook a limited assurance over our Scope 1 and Scope 2 emissions, and in FY25 Manawa Energy further enhanced its data management and third-party auditing processes by introducing new emissions reporting software.

In relation to Scope 3, moderate uncertainty remains in terms of purchased fuels, based on the requirement for some estimation of fuel and heavy oil well-to-tank emissions, and in relation to waste generated in operations, given that current data is not broken down by waste type, and wastewater calculations involve estimation.

GHG Emissions Base Year Recalculation Policy

From the FY25 reporting period onwards, emissions data has been provided with comparison to the FY24 Base Year, except in relation to Scope 3 emissions, where a Base Year has yet to be established.

Base Year emissions can be recalculated in future if there are material impacts on our emissions inventory from improvements in accuracy, changes in calculation methodology or errors are discovered.

We use our internal GHG Emissions Basis of Preparation Guide for base year recalculation and determining materiality, with a significance threshold of 5% of the cumulative total of emissions set to trigger recalculation of the FY24 Base Year.

Industry-Based Metrics

Sustainable Finance Framework

During FY24 Manawa Energy implemented a sustainable finance framework, and our existing NZX-listed bonds were approved by NZX as Green Bonds in October 2023. As of 31 March 2025, Green Bonds represent 75% (FY24: 83%) of Manawa Energy's total net debt.

New Zealand Energy Certificate System and Renewable Energy Certificates

Manawa Energy issued our first renewable energy certificates (RECs) during FY24, with the Kaimai electricity generation asset registered under the New Zealand Energy Certificate System (NZECS). This allows for the renewable attributes of this generation volume from Kaimai to be made claimed by those of our customers who have signed up for RECs. Throughout FY25, we supplied approximately 9.03 GWh (FY24: 4.27 GWh) of electricity from our Kaimai generation volume under RECs, representing approximately 0.47% (FY24: 0.22%) of Manawa Energy's total generation volume.

Having RECs allows our customers to report their Scope 2 electricity emissions as zero (to the extent covered by RECs) using the market-based reporting methodology under the GHG Protocol.

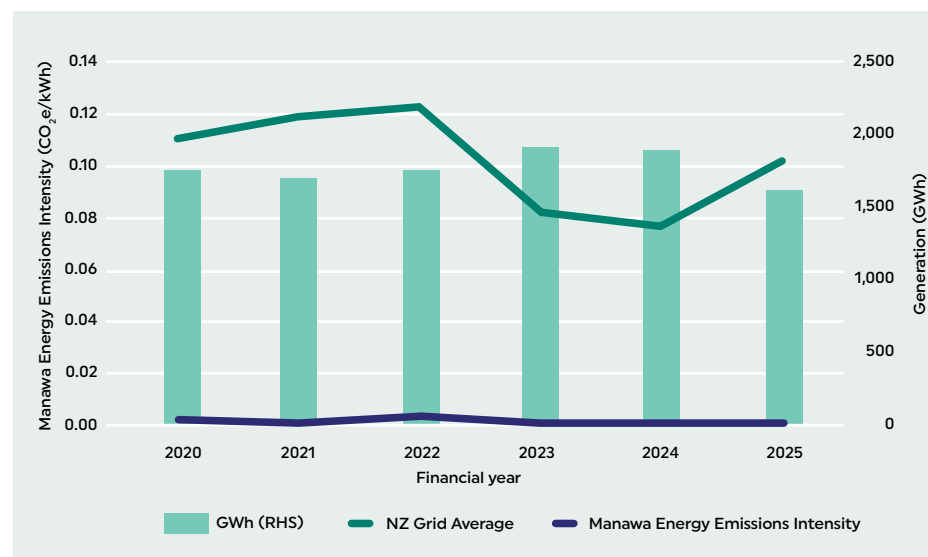
For future years, our intention was to continue to evaluate whether to have our other assets (including our new developments) registered as renewable energy products including with the NZECS, noting the overlay of the Scheme.

GHG Emissions Intensity

Manawa Energy has calculated the intensity of its emissions relative to generation as follows:

- > **Total Generation: 1,620,248,262 kWh** (FY24: 1,901,000.000 kWh)
- > **Total Scope 1 Emissions: 2,391,605 kg CO₂e** (FY24: 869,000 kg CO₂e)
- > **GHG Emissions Intensity FY25: 0.0015 kg CO₂e/kWh** (FY24: 0.00046 kg CO₂e/kWh).

Manawa Energy Emissions Intensity vs. NZ Grid Average



Other Key Performance Indicators used to Measure and Manage CRROs

For complete information relating to KPIs used to measure and manage CRROs, please see the section entitled **CRRO Management Performance Linked to Remuneration** found in the **Governance** section of this Climate Statement, and for information on management performance measures overall, the **FY25 Annual Report** (pages 35 to 36).

Remuneration

Refer to the **Governance** section of this Climate Statement (CRRO Management Performance Linked to Remuneration), for the remuneration of Manawa Energy's Chief Executive and Executive Team that is linked to Manawa Energy's shared Company goals, including those that are climate-related. This is subject to review on an annual basis.

The initial Transition Plan, as of 31 March 2025, included a near-term goal of reviewing executive and management remuneration incentives by 2030, to ensure these reflect appropriate climate-related metric(s) in line with Manawa Energy's business strategy and objectives, at that time.

Exposure to Risks and Opportunities and the Impact of the Changing Climate on Manawa Energy's Assets and Business

Manawa Energy's current business operations and our future strategy, as described in the **Strategy** section of this Climate Statement, are impacted by CRROs in the following ways:

- The profitability of all Manawa Energy's existing assets is heavily impacted by the weather and, transition responses to climate change, as such, vulnerable to the transition and physical risks associated with climate change; and
- As a renewable energy developer Manawa Energy's growth strategy is aligned with New Zealand's electrification and decarbonisation goals. All of Manawa Energy's existing assets, new development and future strategy present an opportunity to contribute to large-scale decarbonisation of New Zealand's economy.

Due to the nature of Manawa Energy's business, its operations, assets, and business activities are affected by changes to the climate and the specific CRROs that arise out of those changes. Manawa Energy has therefore determined that:

- **Transition risks:** All (100%) of our existing and development assets are vulnerable to the transition risks of climate change, including in particular, regulatory and policy change, a key transition risk facing all energy sector participants. If regulatory change negatively impacts electricity generation, then this also impacts the revenue we can generate from our existing generation assets and may also negatively impact the value of our development options. Equally, if we cannot access the necessary resources and infrastructure from both global and domestic markets to progress our pipeline projects, our business activities will be significantly impacted;
- **Physical risks:** All (100%) of Manawa Energy's existing hydro generation assets are (to a greater or lesser extent) vulnerable to the physical risks of climate change; and
- **Climate-related opportunities:** Conversely, all (100%) of Manawa Energy's generation assets have (to a greater or lesser extent) the ability to provide options and opportunities in response to climate change and are therefore aligned with climate-related opportunities.

These assessments are the same as they were in FY24.

Climate-Related Targets

Manawa Energy does not currently have any GHG emissions reduction targets, although our Transition Plan describes when these might be developed.

Manawa Energy has set FY24 as the Base Year for GHG emissions measurement, in relation to our Scope 1 and Scope 2 emissions, and in FY25, continued to further evaluate our emissions profile, with a view to finalising our emissions reduction plan and positioning the Company for setting future targets. Manawa Energy engaged external expertise to assist with this process. We have been considering the Science Based Target Initiative (**SBTi**) framework to inform possible options for emissions targets including emissions intensity approach, along with a science-aligned approach, although this work was deferred for FY25 in light of the Scheme.

We consider that emissions intensity targets would best align with Manawa Energy's strategy for enhancing our existing assets and developing our new renewable generation, and while in FY25 specific targets had yet to be defined, our initial Transition Plan (as of 31 March 2025), included reference to the future definition of climate-related targets, as a near-term action, intended to be in place by 2030.

Manawa Energy has not used emissions offsets for FY25 and does not currently have any plans to use offsets for FY26 or subsequent financial years.

Capital Deployment

The drive towards a low carbon future and the decrease in thermal generation is expected to increase New Zealand's reliance on intermittent power generation (primarily wind and solar in the short to medium term). This has been identified as providing future investment opportunities for Manawa Energy, as of 31 March 2025.

Manawa Energy's capital deployment towards the climate-related risks and opportunities that we have identified in this Climate Statement for FY25 is set out below. Further general information is contained in the **FY25 Annual Report** (pages 15 to 24).

Category of expenditure	FY25 spend (\$NZD)	Summary
New development investment (opex + capex)	\$9.7m (FY24: \$19.7m)	Across FY25 our development pipeline saw good progress on site specific technical and environmental assessments, connection activities, as well as securing accretive additional options at existing sites and new options adding to our renewable development pipeline. FY25 capital investment in our new development pipeline was also significant and included securing resource consents for the Argle solar farm, and two of Manawa Energy's key new development wind projects, of significant scale, were listed in the Fast Track Approvals Act. As at the end of FY25, Manawa Energy holds secured wind and solar development options totalling ~4,600GWh p.a. of potential generation, with a further ~3,000GWh p.a. of wind and solar opportunities in advanced negotiations. The higher FY24 investment includes land purchases and investment in the Lochindorb JV. New development would assist Manawa Energy in continuing to respond to CRROs – particularly in relation to the growing need for more renewable generation, including renewable generation of diverse types and across dispersed geographic areas, to enhance natural resilience.
Major refurbishment and enhancement capital expenditure projects (capex)	\$26.4 m (FY24: \$28.5m)	Significant progress has been made during FY25 on Manawa Energy's major asset investment programme, with a focus on robust project delivery and a continued response to CRROs. Projects completed so far are already providing significant benefits to Manawa Energy – with greater capacity, efficiency, improved risk profile and reliability all reflected in improved operational performance and resilience.
Remedial works in response to extreme weather or climate-related events (Esk scheme remediation) (opex + capex)	\$2.1m (FY24: \$3.4m)	FY25 represented another year of record investment in our hydro assets. In addition to our major asset investment programme, we completed a number of significant projects, including several carried out in response to climate and/or weather-related events. These include restoring both Esk scheme stations (Hawkes Bay) to full capacity (with improved operational performance), following damage suffered during Cyclone Gabrielle in February 2023, and repairs to the spillway to Lake Wahapo (West Coast), after multiple heavy rain events caused damage. The latter was not caused by a single, extreme weather event, and has accordingly not been quantified in this context.

Indicative Timeline of Currently Announced Development Projects

Manawa Energy's pipeline of future renewable energy development projects and the indicative timeframes for each, as of 31 March 2025, are set out below. There is also further general information in our **FY25 Annual Report** (pages 22 to 24).

Indicative timeline of currently announced development projects:

● Resource monitoring ● Consenting/Connection/Procurement ◻ Potential 'shovel ready' window²

Project	Technology	Capacity (~MW) ¹	Output (~GWh/pa)													Status (as of 31 March 2025)
				2025		2026		2027		2028		2029		2030		
				H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	
Huriwaka	Wind	300	1,020													Previous Central Wind project. Consenting workstreams under way.
Hapuakohe	Wind	230	790													Wind monitoring, site design, and consenting assessments under way.
Kaihiku ³	Wind	150	530													Historic wind monitoring data available, consenting workstreams under way.
Ototoka	Wind	150	530													Wind monitoring and site development assessments under way.
Vernon	Wind	100	350													Land secured. Wind monitoring and site development assessments under way.
Kaipara Dairies	Solar	100	190													Resource monitoring, site design, and consenting assessments under way.
Hawke's Bay	Solar	40	80													Resource monitoring, site design, and consenting assessments under way.
Argyle 1 and 2	Solar	65	130													Southern area consented. Land secured for northern area; consent secured.
Mackenzie Basin	Solar	250	540													Land secured. Consenting assessments under way.
Total		~1,385	~4,160													

¹ Solar project capacity is MWac.

² Potential Investment Window (indicative)

³ Manawa Energy is a 50% partner – the capacity and output figures are 50% of the total project expectations.

Strategic Project Asset Enhancements

Manawa Energy's major asset investment programme aims to maximise the long-term value of its assets, including resilience to climate-related risks, as well as leveraging climate-related opportunities. In addition to various refurbishments, replacements, dam safety upgrades, and enhancements that are currently underway, major project upgrades that have been completed include the Matahina turbine replacement, Arnold dam strengthening and the Waipori generator replacement project, with upgrades to Coleridge and Highbank currently underway. Further general information about key projects is described in the **FY25 Annual Report** (pages 16 to 21).

Other Asset Repairs and Upgrades

In addition to the major asset investment programme described above, in FY25 we also completed a number of other significant projects, including several that were directly, or indirectly in response to climate-related or weather-related events, or have been undertaken to enhance resilience. These projects are described further in the **FY25 Annual Report** (page 15), and include both Esk scheme stations in Hawkes Bay being restored to full capacity, with improved operational performance, following damage suffered during Cyclone Gabrielle in February 2023, and the spillway to Lake Wahapo on the West Coast was repaired after multiple heavy rain events caused damage.

Glossary and Acronyms¹

Adaptation

Changes in processes, practices and structures to moderate potential damage or to benefit from opportunities associated with climate change.

Aotearoa New Zealand Climate Standards (NZCS)

Standards issued by the XRB that comprise the New Zealand climate-related disclosure framework. These include **NZ CS 1**, **NZ CS 2** and **NZ CS 3**. CREs are required to report against these standards. It includes requirements to disclose information about exposure to climate-related risks and opportunities (applies to around 200 economically significant entities in New Zealand).

Carbon Capture Utilisation and Storage (CCUS)

Involves the capture of carbon dioxide (O₂) generally from large point sources like power generation or industrial facilities that use either fossil fuels or biomass as fuel. If not being used on-site, the captured CO₂ is compressed and transported by pipeline, ship, rail or truck to be used in a range of applications or injected into deep geological formations such as depleted oil and gas reservoirs or saline aquifers.²

Climate-Related Disclosure Framework

Climate-related disclosure (CRD) framework refers to climate statements, group climate statements, or other information that complies with the climate-related disclosure frameworks, such as the Aotearoa New Zealand Climate Standards. This has the same meaning set out in **section 9AA of the Financial Reporting Act 2013**.

Climate-Related Impacts

The effects (also referred to as consequences or outcomes) of climate change occurring for an entity. These effects will, in turn, depend on the impacts of climate change on the broader socioeconomic and ecological systems an entity operates within (including an entity's value chain).

Climate-Related Opportunity

The potentially positive climate-related outcomes for Manawa and can include both physical and transition opportunities. Efforts to mitigate and adapt to climate change can produce opportunities for entities, such as through resource efficiency and cost savings, the adoption and utilisation of low-emissions energy sources, the development of new products and services, and building resilience along the value chain.

Climate-Related Risks

The potential negative impacts of climate change on an entity. See also definitions of physical risks and transition risks.

Climate Reporting Entity (CRE)

Has the meaning given to that term in Section 461O of the Financial Markets Conduct Act 2013 (**FMC Act**). It covers large NZ entities with higher levels of public accountability than other FMC reporting entities and includes large banks, insurers, managers of investment schemes, and large publicly listed entities, including Manawa Energy.

CO₂e

The universal unit of measurement to indicate the global warming potential of each of the seven GHGs, expressed in terms of the global warming potential of one unit of carbon dioxide for 100 years. It is used to evaluate releasing (or avoiding releasing) any GHGs against a common basis.

CRRO

Climate-Related Risks and Opportunities (see detailed definitions – Climate-Related Opportunity, Climate-Related Risk, Physical Risks, Transition Risks).

ESG

The environmental, social and governance factors to assess sustainability practices and performance.

Financial Impacts

The translation of impacts into current or anticipated impacts on financial performance, financial position and cash flows.

FY

The financial year ended 31 March of the stated year.

GHG

Greenhouse Gases are the seven gases listed in the Kyoto Protocol.³ These GHGs are currently carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).

GHG Protocol

The **Greenhouse Gas Protocol**, is a partnership between World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The **GHG Protocol** develops standards and guidance, such as the **Corporate Standard** and the **Corporate Value Chain Scope 3 Standard**, both used, as referenced, for Manawa Energy's reporting.

Global Warming Potential (GWP)

A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given GHG relative to one unit of carbon dioxide CO₂.

Mitigation

Could include mitigation of disaster, or of climate change. Mitigation of disaster relates to the lessening of the potential adverse impacts of physical hazards (including those that are human induced) through actions that reduce hazard, exposure, and vulnerability. Mitigation of climate change refers to human intervention to reduce greenhouse gas (GHG) emissions or enhance GHG removals.

Net Zero

In general terms (but subject to the definition used in a particular context), a condition in which the amount of human-caused residual greenhouse gas (GHGs) released are balanced by the amount of human-led removal from the atmosphere over a specified period and within specified boundaries. Achieving this balance may involve a combination of emission reductions, offsetting (but only offsetting that constitutes removal) and innovative technologies. **ISO Net Zero Guidelines** (IWA 42.2022). In this explanation, "balanced" refers to an accounting assessment and is not a representation that the environment or other relevant domains are in balance at Net Zero.

NZX

New Zealand Stock Exchange.

Organisational Boundary

Organisational boundary defines the scope within which a company or entity operates, establishing the limits for responsibilities, control, and operations.

Physical Risks

Risks related to the physical impacts of climate change. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events. They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather events, such as sea level rise.

Primary Users

Existing and potential investors, lenders and other creditors.

Scenario

A plausible, challenging description of how the future may develop based on a coherent and internally consistent set of assumptions about key driving forces and relationships, covering both physical and transition risks in an integrated manner. Climate-related scenarios are not intended to be probabilistic or predictive, or to identify the 'most likely' outcome(s) of climate change. They are intended to provide an opportunity for entities to develop their internal capacity to better understand and prepare for the uncertain future impacts of climate change.

Scenario Analysis

A process for systematically exploring the effects of a range of plausible future events under conditions of uncertainty. Engaging in this process helps an entity to identify its climate-related risks and opportunities and develop a better understanding of the resilience of its business model and strategy.

Scheme of Arrangement/Scheme

The agreement/mechanism by which Contact Energy Limited may acquire all the shares in Manawa Energy Limited as described at www.manawaenergy.co.nz/soa-information.

The Aotearoa Circle Energy Sector Climate Change Scenarios

The **Energy Sector Scenarios**, published by the Aotearoa Circle in 2024. Represents a comprehensive package of strategic analysis that is designed to support climate disclosures across the energy sector.

Transition Plan

An aspect of the entity's overall strategy that describes targets, including any interim targets, and actions for its transition towards a low-emissions, climate-resilient future.

Transition Risks

Risks related to the transition to a low-emissions, climate-resilient global and domestic economy, such as policy, legal, technology, market and reputation changes associated with the mitigation and adaptation requirements relating to climate change.

Value Chain

The full range of activities, resources and relationships related to Manawa Energy's business model and the external environment in which it operates. It encompasses the activities, resources and relationships Manawa Energy uses and relies on to create its products or services, from conception to delivery, consumption and end of life (e.g. those in Manawa Energy's operations such as human resource, those along its supply chain, marketing and distribution channels, and the financing, geographical, geopolitical and regulatory environments in which it operates).

XRB

The External Reporting Board (XRB) is an independent Crown Entity that is responsible for developing a financial reporting strategy for New Zealand, preparing and issuing accounting, assurance and climate standards and non-binding guidance on non-financial reporting.

¹ Terms that are defined in the NZ CS, and used in this Climate Statement, have the meaning given to them in the NZ CS.

² Carbon Capture Utilisation and Storage – Energy System – IEA: www.iea.org/energy-system/carbon-capture-utilisation-and-storage

³ The Kyoto Protocol is an international treaty adopted in 1997 and aimed at reducing greenhouse gas emissions. It operationalises the **United Nations Framework Convention on Climate Change** (UNFCCC) by committing industrialised countries and economies to transition to limit and reduce greenhouse gas emissions in accordance with agreed individual targets.



Independent Limited Assurance Report to Manawa Energy Limited

Conclusion

Our limited assurance conclusion has been formed on the basis of the matters outlined in this report.

Based on our limited assurance engagement, which is not a reasonable assurance engagement or an audit, nothing has come to our attention that would lead us to believe that, in all material respects, the Scope 1 and 2 gross greenhouse gas emissions, additional required disclosures of Scope 1 and 2 gross greenhouse gas emissions and Scope 1 and 2 gross greenhouse gas emissions methods, assumptions and estimation uncertainty disclosures included in the climate statement on pages 57 to 65 (Scope 1 and 2 Emissions Reporting) are not fairly presented and prepared in accordance with the Aotearoa New Zealand Climate Standards (NZ CSs) issued by the External Reporting Board (the criteria) for the period 1 April 2024 to 31 March 2025.

Information subject to assurance

We have performed an engagement to provide limited assurance in relation to Manawa Energy Limited's Scope 1 and 2 Emissions Reporting for the period 1 April 2024 to 31 March 2025.

Our conclusion on the Scope 1 and 2 Emissions Reporting does not extend to any other information included, or referred to, in the climate statements on pages 57 to 65 or other information that accompanies or contains the climate statement and our assurance report (**other information**). Additionally, our assurance engagement does not extend to Scope 3 emissions, of which details may be referenced within pages 57 to 65. We have not performed any procedures with respect to the other information.

Criteria

The criteria used as the basis of reporting include the NZ CSs issued by the External Reporting Board. As disclosed on pages 57 to 65 of the climate statement, the greenhouse gas emissions have been prepared in accordance with the World Resources Institute and World Business Council for Sustainable Development's Greenhouse Gas Protocol standards and guidance (collectively, the GHG Protocol):

- › **Scope 1** emissions have been prepared in accordance with The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (revised edition); and
- › **Scope 2** emissions have been prepared in accordance with The Greenhouse Gas Protocol: GHG Protocol Scope 2 Guidance: An amendment to the GHG Protocol Corporate Standard.

As a result, this report may not be suitable for another purpose.

Standards we followed

We conducted our limited assurance engagement in accordance with New Zealand Standard on Assurance Engagements 1 (**NZ SAE 1**) Assurance Engagements over Greenhouse Gas Emissions Disclosures and International Standard on Assurance Engagements (New Zealand) 3410 Assurance Engagements on Greenhouse Gas Statements (**ISAE (NZ) 3410**) issued by the New Zealand Auditing and Assurance Standards Board (**Standard**). We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Our responsibilities under the Standard are further described in the 'Our responsibility' section of our report.

Key Matters

We have determined that there are no key matters to communicate in our report.

How to interpret limited assurance and material misstatement

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Misstatements, including omissions, within the Scope 1 and 2 Emissions Reporting are considered material if, individually or in the aggregate, they could reasonably be expected to influence the relevant decisions of the intended users taken on the basis of the Scope 1 and 2 Emissions Reporting.

Inherent limitations

As noted in the Scope 1 and 2 Emissions Reporting page 57 to 65, Scope 1 and 2 Emissions quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emission factors and the values needed to combine emissions of different gases.

Use of this assurance report

Our report is made solely for Manawa Energy Limited. Our assurance work has been undertaken so that we might state to Manawa Energy Limited those matters we are required to state to them in the assurance report and for no other purpose.



Our report is released to Manawa Energy Limited on the basis that it shall not be copied, referred to or disclosed, in whole or in part, without our prior written consent. No other third party is intended to receive our report.

Our report should not be regarded as suitable to be used or relied on by anyone other than Manawa Energy Limited for any purpose or in any context. Any other person who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk.

To the fullest extent permitted by law, none of KPMG, any entities directly or indirectly controlled by KPMG, or any of their respective members or employees accept or assume any responsibility and deny all liability to anyone other than Manawa Energy Limited for our work, for this independent assurance report, and/or for the opinions or conclusions we have reached.

Our conclusion is not modified in respect of this matter.

Manawa Energy Limited's responsibility for the Scope 1 and 2 Emissions Reporting

The Management of Manawa Energy Limited are responsible for the preparation and fair presentation of the Scope 1 and 2 Emissions Reporting in accordance with the criteria. This responsibility includes the design, implementation and maintenance of such internal control as Management determine is relevant to enable the preparation of the Scope 1 and 2 Emissions Reporting that are free from material misstatement whether due to fraud or error.

The Management of Manawa Energy Limited are also responsible for selecting or developing suitable criteria for preparing the Scope 1 and 2 Emissions Reporting and appropriately referring to or describing the criteria used.

Our responsibility

We have responsibility for:

- › planning and performing the engagement to obtain limited assurance about whether the Scope 1 and 2 Emissions Reporting are free from material misstatement, whether due to fraud or error;
- › forming an independent conclusion based on the procedures we have performed and the evidence we have obtained; and
- › reporting our conclusion to Manawa Energy Limited.

Summary of the work we performed as the basis for our conclusion

A limited assurance engagement performed in accordance with the Standard involves assessing the suitability in the circumstances of Manawa Energy Limited's use of the criteria as the basis for the preparation of the Scope 1 and 2 Emissions Reporting, assessing the risks of material misstatement of the Scope 1 and 2 Emissions Reporting whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Scope 1 and 2 Emissions Reporting.

We exercised professional judgment and maintained professional scepticism throughout the engagement. We designed and performed our procedures to obtain evidence about the Scope 1 and 2 Emissions Reporting that is sufficient and appropriate to provide a basis for our conclusion.

Our procedures selected depended on the understanding of the Scope 1 and 2 Emissions Reporting that is sufficient and appropriate to provide a basis for our conclusion. The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

In undertaking limited assurance on the Scope 1 and 2 Emissions Reporting the procedures we primarily performed were:

- › obtained, through inquiries, an understanding of the Manawa Energy Limited's control environment, processes and information systems relevant to the preparation of the Scope 1 and 2 Emissions Reporting. We did not evaluate the design of particular control activities, or obtain evidence about their implementation;
- › inquiring with relevant staff regarding any matters that arose in the application of the selected boundary in establishing the emissions inventory;
- › performing analytical procedures on particular emission categories by comparing the expected Scope 1 and 2 emissions emitted to actual Scope 1 and 2 emissions emitted and made inquiries of management to obtain explanations for any significant differences we identified;
- › agreeing a selection of Scope 1 and 2 emissions data to relevant underlying source documents and re-performing emission factor calculations for a limited number of items; and
- › considered the presentation and disclosure of the Scope 1 and 2 Emissions Reporting.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Our independence and quality management

This assurance engagement was undertaken in accordance with NZ SAE 1. NZ SAE 1 is founded on the fundamental principles of independence, integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.



We have complied with the independence and other ethical requirements of Professional and Ethical Standard 1 *International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand) (PES 1)* issued by the New Zealand Auditing and Assurance Standards Board, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Professional and Ethical Standard 3 *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements (PES 3)*, which requires the firm to design, implement and operate a system of quality control including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have also complied with Professional and Ethical Standard 4 *Engagement Quality Reviews (PES 4)* which deals with the appointment and eligibility of the engagement quality reviewer and the engagement quality reviewer's responsibilities relating to the performance and documentation of an engagement quality review.

Our firm has also provided financial audit services to Manawa Energy Limited. Subject to certain restrictions, partners and employees of our firm may also deal with Manawa Energy Limited on normal terms within the ordinary course of trading activities of the business of Manawa Energy Limited. These matters have not impaired our independence as assurance providers of Manawa Energy Limited for this engagement. The firm has no other relationship with, or interest in, Manawa Energy Limited.

As we are engaged to form an independent conclusion on the Scope 1 and 2 Emissions Reporting prepared by Manawa Energy Limited, we are not permitted to be involved in the preparation of the Scope 1 and 2 Emissions Reporting as doing so may compromise our independence.

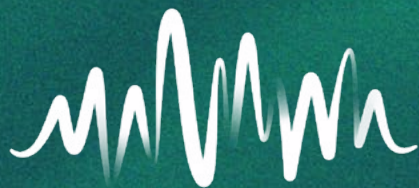
The engagement partner on the assurance engagement resulting in this independent assurance report is David Gates.

A large, stylized, handwritten-style signature of 'KPMG' in blue ink.

KPMG

Level 2, 247 Cameron Road
Tauranga 3110
New Zealand

04 July 2025



MANAWA ENERGY

manawaenergy.co.nz