



Turitea wind farm.

# MERCURY AND CLIMATE CHANGE.

Impacts from climate change, actions to reduce emissions and the transition to a low carbon economy are shaping the world around us. Our strategy anticipates that our business will encounter both climate-related opportunities and risks as we pursue our objective of playing a leading role in New Zealand's successful transition to a low-carbon future.

This climate statement has been prepared in alignment with the incoming Aotearoa New Zealand Climate Standards<sup>1</sup> (NZ CS). These standards were published in December

2022 by the External Reporting Board, a NZ Government agency, and are aligned with the internationally recognised TCFD framework. These standards provide a consistent framework for entities to consider and disclose information on their climate-related risks and opportunities with the objective of enabling the users of this statement to assess and make decisions on how Mercury is responding to the risks and opportunities of climate change.

## CONTENTS.

- 2 INTRODUCTION
- 3 GOVERNANCE
- 6 STRATEGY
- 12 RISK MANAGEMENT
- 14 METRICS & TARGETS

<sup>1</sup> [www.xrb.govt.nz/standards/climate-related-disclosures/aotearoa-new-zealand-climate-standards/aotearoa-new-zealand-climate-standard-1/](http://www.xrb.govt.nz/standards/climate-related-disclosures/aotearoa-new-zealand-climate-standards/aotearoa-new-zealand-climate-standard-1/)

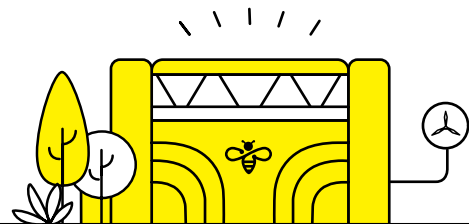
# INTRODUCTION.

Over the past six years we have improved our capability to identify, assess and manage climate-related risks and opportunities. Our governance approach and disclosure of these risks and opportunities has evolved over this period. Our integrated strategy considers climate-related risks and opportunities, and we have made changes to our governance frameworks and remuneration models to ensure that Mercury's Executive Management Team (EMT) have appropriate oversight of, and are actively assessing and managing, these climate-related risks and opportunities. A summary of key points in this climate statement are:

- Material climate-related risks and opportunities are regularly discussed by our Board and EMT
- Scenario analysis was completed in FY23, with three scenarios created based on:
  - (1) a 1.5-degree future
  - (2) a 1.5-2 degree future and
  - (3) a greater than 4-degree future
- Based on these scenarios, we have updated our view of material climate-related opportunities and risks that could affect our business

- Material climate-related opportunities have been identified as those arising from:
  - Increase in electricity demand from decarbonisation
  - Investor desire for renewable generation
- Material climate-related risks have been identified as those arising from:
  - Greater variability in weather patterns leading to changes in generation profile
  - Growing intensity of atmospheric conditions (including storm events) leading to damage to assets or damage to transmission and distribution assets
  - Government Policy settings failing to balance the energy trilemma and leading to a decline in electricity demand growth, a loss of investor confidence in the electricity sector, increased costs for the sector and/or delays in generation development
  - Supply chain constraints driven by rising global demand for renewable electricity generation equipment.

We are currently considering the further actions we can take to reduce our own emissions to ensure we are doing our part to mitigate climate change. Further details of these actions are outlined in our [Climate Transition Action Plan](#).



## DISCLAIMER

Mercury has used best efforts in the preparation of this Climate-Related Disclosure to provide accurate information as at 21 August 2023, but cautions reliance being placed on representations that are necessarily subject to significant risks, uncertainties or assumptions.

This report contains forward-looking statements, including climate-related metrics, climate scenarios, estimated climate projections, targets, assumptions, forecasts and statements of Mercury's future intentions. These statements necessarily involve assumptions, forecasts and projections about Mercury's present and future strategies and the environment in which Mercury will operate in the future, which are inherently uncertain and subject to limitations, particularly as to inputs, available data and information which is likely to change. Mercury has used its best efforts to provide a reasonable basis for forward-looking statements but is constrained by the novel and developing nature of this subject matter. Climate-related forward-looking statements may therefore be less reliable than other statements Mercury may make in its annual reporting.

Descriptions of the qualitative and quantitative current and anticipated impacts and financial impacts of climate change draw on and/or represent estimated figures only. In particular, the risks and opportunities described in this report, and the forecast emissions reductions, may not eventuate or may be more or less significant than anticipated. There are many factors that could cause Mercury's actual results, performance or achievement of climate-related metrics (including targets) to differ materially from that described, including climatic, government, consumer, and market factors outside of Mercury's control.

Nothing in this report should be interpreted as capital growth, earnings or any other legal, financial tax or other advice or guidance.



# GOVERNANCE.

## BOARD

Our Board is responsible for overseeing the management of risks and opportunities for Mercury including those related to climate change. Responsibilities are set out in the [Board Charter](#), and include:

- establishing clear strategic goals with appropriate supporting business plans and resources
- monitoring strategy implementation, financial performance and the integrity of reporting
- ensuring that effective audit, risk management and compliance systems are in place and monitored.

A committee of the Board - the People and Performance Committee – supports the Board to set the approach to remuneration, including incorporating climate-related matters in the Short-Term incentive component of remuneration.

## RISK ASSURANCE AND AUDIT COMMITTEE (RAAC)

A committee of the Board – The Risk Assurance and Audit Committee (RAAC) supports the Board in overseeing climate-related risks. The Board itself has responsibility for climate-related opportunities. Members of the EMT also attend RAAC meetings to ensure appropriate support for the RAAC and facilitate feedback and discussion. The RAAC meets at least quarterly and is responsible for overseeing, reviewing and making recommendations to the Board on our risk management policy and

processes, including climate-related risks and opportunities. The Committee reviews progress against our risk management framework.

In FY23, the relevant RAAC meetings were as follows:

- July and August 2022; review and endorsement of FY22 TCFD report
- February 2023; update on climate-related disclosures pre-assurance review by EY
- May 2023; update on FY23 climate scenario analysis and risk and opportunity identification - including updated climate scenarios for meeting the requirements of NZ CS1

And in FY24:

- July and August 2023; review and endorsement of the FY23 Climate Statement

The RAAC provides feedback to management and back up to the wider Board. At each Board meeting that follows a RAAC meeting the RAAC Chair updates the Board on discussions that took place and decisions reached. Mercury does not currently consider it necessary to establish a separate sustainability sub-committee of the board as sustainability and Kaitiakitanga/ Stewardship are inherent in Mercury's business operating model and strategy and are therefore addressed within existing governance structures.

## RISK MANAGEMENT FRAMEWORK

Our risk management framework meets New Zealand standard AS/NZS ISO 31000 Risk Management – Principles and guidelines.

Our risk management framework helps us to identify different categories of risk – compliance risks, operational risks, reputational risks, financial risks and people risks. Climate-related risks show up across many of these categories and are treated in the same way as other risks across these categories. More information on our risk management framework can be found in the Corporate Governance Statement.

## SKILLS AND COMPETENCIES TO PROVIDE OVERSIGHT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES

The Board skills matrix specifically includes climate change. In FY20 the Board reviewed whether our risk management framework supported our integrated business planning process and whether climate-related risks were adequately captured within this risk management framework. Given the potential impact of climate change across Mercury, the Board amplified climate-related risks within our consolidated risk register.

In FY21, the Board held an externally facilitated deep dive into regulatory, economic and legal aspects of climate-related risks and opportunities. In May 2021, management presented its first climate change scenario analysis report and the outcome of its review of climate-related risks and opportunities to the RAAC.

In FY22 and FY23, a cross-functional team from across the business conducted more in-depth scenario analysis to highlight emerging risks and opportunities.

Ngā Awa Pūrua geothermal station.

The Board seeks internal and external expertise and advice relating to climate change as required to ensure that it has up to date information and can provide appropriate oversight of climate-related risks and opportunities.

**MANAGEMENT'S ROLE IN ASSESSING AND MANAGING CLIMATE-RELATED RISKS AND OPPORTUNITIES**

The Board delegates to the Chief Executive and the EMT, responsibility for developing, and recommending to the Board, strategies to identify, assess and manage climate-related risks and opportunities (refer to the Leadership and Governance section of the FY23 Integrated Report for further detail). The EMT is also charged with fostering improved reporting and disclosure of these risks and opportunities

including the identification of metrics and targets. Mercury's management is responsible for ensuring the business is identifying, assessing and managing climate-related risks and opportunities. Mercury's annual climate-related risk disclosure process is prepared by Management with a primary governance pathway via the RAAC to the Board.

**RISK MANAGEMENT COMMITTEE**

Our management operates a Risk Management Committee (RMC) whose mandate is (1) to promote risk awareness and appropriate risk management to all Mercury people; and (2) to monitor and review risk activities as required. Membership of the RMC is the EMT and is chaired by the Chief Executive.

The RMC meets prior to every RAAC meeting and reviews Mercury's risks. This includes reviewing its approach to climate-related risks and opportunities which is carried out at least annually. In FY23 the RMC met six times with climate-related risks being considered at the following meetings:

- Twice in July 22 to review FY22 climate risk disclosures
- Jan 23 to discuss outcomes of a third-party pre-assurance review of Mercury's FY22 climate-related disclosures, and
- April and June 23 to review FY23 climate-related risks, opportunities and disclosures

In FY23, the RMC endorsed updates to the company's climate change scenarios, and subsequent updates to the climate-related risks and opportunities.

(Please refer to table on the following page for more information on specific responsibilities.)

**CLIMATE-RELATED RISKS AND OPPORTUNITIES ARE INCORPORATED INTO COMPANY STRATEGY DEVELOPMENT**

Climate-related risks and opportunities are also actively considered in the context of management's periodic reviews of Mercury's strategic framework. The reviews form a key element of regular stock takes of any significant market context changes that could result in either identification of new risks and opportunities or re-assessment of existing risks and opportunities, that is, a change in the likelihood and/or consequence of their impact.

A cross functional business team co-ordinates contributions from across the business led by the Sustainability Team reporting through the GM Sustainability. This work feeds into our updates to our future scenarios which provide context when setting our 3-year objectives and long-term aspirations. These scenarios are reviewed each quarter by the EMT and the Board. The EMT undertook these reviews in Aug and Oct 2022 and in Jan, April and May 2023.

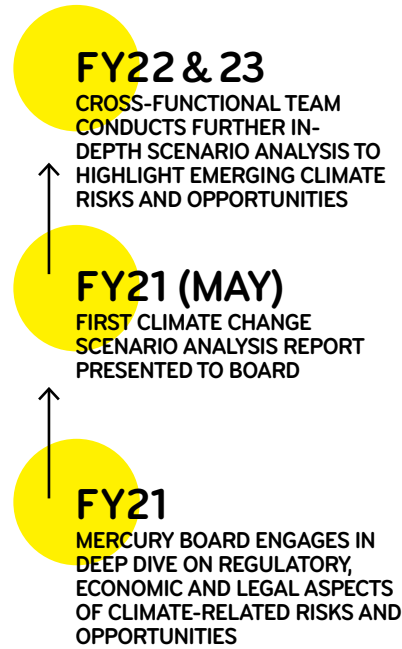
**MANAGEMENT REMUNERATION IS LINKED TO MANAGEMENT OF CLIMATE-RELATED RISKS AND OPPORTUNITIES**

The remuneration of the Chief Executive and the EMT is linked to Mercury's strategic objectives, purpose and goals. The Short-Term Incentive (STI) component of remuneration is set as a percentage of the executive's base salary and for FY23 was set at 60% for the Chief Executive and up to 35% for other EMT members.

A proportion (70% for the Chief Executive and 50% for other EMT members) of the STI is related to a shared set of Group Key Performance Indicators (KPIs) which are aligned to our three year objectives. The climate-related objectives and their related KPIs are shown below.

More information on the responsibilities and remuneration of the Chief Executive and the Executive Management Team can be found in our Corporate Governance Statement and Remuneration Report.

Three-Year Objective	FY23 KPI	FY24 KPI
Play a leading role in New Zealand's successful transition to a low carbon economy	Progress on future development pipeline	Role in electricity sector transition progress
Create executable options for new growth	Clear path to carbon reduction	Progress non-condensable gas reinjection



Nga Tamariki geothermal station.

## OVERVIEW AND RELATIONSHIP BETWEEN RESPONSIBILITIES OF MERCURY BOARD, SUB-COMMITTEES AND MANAGEMENT.

<b>BOARD</b>	<b>MERCURY BOARD</b> Establishes the purpose and strategic direction, oversees and approves risk management strategy and risk appetite and monitors progress against climate-related risks, metrics and targets. Climate-related risks and opportunities form an integral part of Mercury's overall risk management framework. All key climate-related risks and opportunities are approved by the Board. In addition to reporting from the Risk Assurance and Audit Committee (RAAC), the Board receives quarterly updates on key sustainability trends and issues.			
	<b>RISK ASSURANCE AND AUDIT COMMITTEE</b> A sub-committee of the Board, the RAAC supports the Board in overseeing risks and opportunities including climate-related risks and opportunities and on the assurance of the CRDs in relation to compliance with the NZ Climate Standards.			
	Periodically reviews Mercury's Risk Management Policy and Framework, to ensure these remain fit for purpose, with appropriate and effective risk management strategies in place.	Quarterly review of risk reports from management. Each year, the May quarter review includes climate-related risk assessments and endorsing updated scenarios used in Mercury's identification of key climate-related risks and opportunities.	Reports to the Board on the outcomes of RAAC meetings, including discussion concerning risks and making recommendations to the Board.	
<b>EXECUTIVE</b>	<b>CHIEF EXECUTIVE AND EXECUTIVE MANAGEMENT TEAM</b> Overall accountability for actions and commitments to embed climate change into risk management, business strategy and planning, budgeting processes and frameworks. Includes identifying, considering and monitoring climate-related risks and opportunities and reporting to the RAAC and the Board.			
	<b>RISK MANAGEMENT COMMITTEE</b> The Risk Management Committee (RMC) is a committee of the Executive Management Team (EMT) chaired by the Chief Executive. It meets quarterly.			
	Promotes risk awareness and appropriate risk management to staff. Monitors and reviews risk activities at its quarterly meetings.	Reporting is primarily developed by Mercury's internal experts through the Risk Assurance Team which includes a Risk Assurance Officer to co-ordinate management of all company risks. Climate-related risks and opportunities are reported to the RMC through facilitation by the Sustainability Team.	When appropriate, management engages third-party experts for services such as auditing, specific climate research or strategic management consultants.	
	<b>EXECUTIVE</b> Ensures the risks in each business area are identified, understood and managed and monitored and escalated appropriately.			
	Implements risk mitigation strategies approved by the RMC and RAAC, and where applicable the Board.	Reviews quarterly sustainability updates.	Monitors emerging and developing risks. For climate-related risks and opportunities this is facilitated by Mercury's Sustainability Team which reports to the General Manager Sustainability. Oversight of risk reporting is performed by the risk assurance team which reports to the Chief Financial Officer.	Preparation and presentation of climate-related risk reports to the RAAC. These reports include action taken to mitigate risks previously disclosed.
	Management remuneration includes incentives tied to climate-related risks and opportunities.			
<b>OPERATIONS</b>	At an operational level the identification and day-to-day management of climate-related risks is dispersed throughout Mercury.			

# STRATEGY.

## WHAT WE ARE SEEING

Mercury recognises that climate change is currently impacting the way we operate in the following ways:

### CURRENT PHYSICAL CLIMATE IMPACTS

#### PHYSICAL IMPACTS

Extreme weather events in FY23, such as the Auckland Anniversary weekend floods and Cyclone Gabrielle, caused widespread flooding and property damage. Over 225,000 homes lost power including ~25,000 Mercury customers. The financial impact on Mercury was immaterial from this event but the impact on some of our customers lives was significant. Recognising these circumstances we elected to delay the implementation of customer price changes and also issued customer credits of ~\$200,000.

Extremely wet weather events throughout the year have resulted in the Taupō catchment receiving inflows of 6,243GWh, the highest aggregated inflows for any 12 month period ending 30 June since records began in 1927. Hydro generation across the Waikato Hydro Scheme over the same period was 5,209 GWh, the third highest since records began in 1980. It has not been possible to quantify the impact the changing climate has played in this outcome.

### CURRENT TRANSITION CLIMATE IMPACTS

#### TRANSITION IMPACTS

Stakeholder desire for greater clarity and understanding of climate impacts on business has led to increasing climate-related disclosure standards

Mercury engages with regulators and other stakeholders on climate-related initiatives, such as the NZ Battery Project<sup>1</sup> (sometimes referred to as discussions on Onslow or pumped hydro), seeking to enable the best pathway for New Zealand to transition to a low-carbon economy

As a participant in the New Zealand Emissions Trading Scheme (ETS), Mercury surrenders emissions credits for its geothermal fugitive emissions and natural gas sales

Mercury is currently sequestering ~8,000tCO<sub>2</sub>e p.a. of fugitive geothermal greenhouse gas emissions by reinjecting non condensable gases from one unit at our Ngā Tamariki geothermal station (about 25% of the total).<sup>2</sup> We are investigating further opportunities at Ngā Tamariki and other geothermal sites.

As part of its asset management programme, Mercury reviews the capabilities of its hydro structures against future changes in flood levels due to climate-induced changes in weather patterns

In FY23 Mercury has chosen not to financially quantify the current financial impacts of climate change due to the significant uncertainty in apportioning impacts to climate but will look to do so in future years where practical.

<sup>1</sup> The NZ Battery Project is a climate change initiative being led by the NZ Government to investigate the ability of pumped hydro, and alternative technologies, to address New Zealand's dry year electricity problem.

<sup>2</sup> Please refer to our [GHG Emissions Inventory Report](#) for details on calculation of our emissions.

<sup>3</sup> NIWA is the National Institute of Water and Atmospheric Research, a Crown Research Institute of New Zealand.

## LOOKING FORWARD

### SCENARIO ANALYSIS

To help improve our understanding of climate-related risks and opportunities over the current, short, medium and long-term and to test the resilience of our strategy, we undertake scenario analysis on a regular basis and will continue to refine and adapt our processes as things continue to change.

Mercury has previously used external third-party consultants for guidance, however in FY23 no external partners or stakeholders were involved in the scenario analysis process. This was internally-led as a standalone process developed by management to comply with NZ CS1 where a cross-functional workgroup consisting of representatives from across each of Mercury's business units was formed to update and refresh our climate scenarios. Once complete, the climate scenarios we developed were closely aligned to three of our company strategic scenarios so we amended those strategic scenarios to incorporate climate-related drivers. In following this process, Mercury developed a single set of company scenarios that are used to identify both strategic and climate-related risks and opportunities and inform our strategic decision-making.

The RAAC and the RMC provided governance oversight of the scenario analysis process through receiving updates from management at meetings in February and May 23. These included reviews of the selected scenarios and material climate-related risks and opportunities where feedback was sought by management and provided.

The Board was also updated on scenario analysis development and the identification of material climate-related risks and opportunities as, after each RAAC meeting, the Chair of the RAAC provided updates at subsequent Board meetings.

In accordance with NZ CS1, three scenarios were analysed – one where global temperature increase is limited to 1.5°C (with an emissions reductions pathway aligned to RCP1.5), another where the temperature rise is greater than 4°C (aligned to RCP8.5) and a third scenario where global temperature increase was limited to 1.5–2°C (aligned to RCP2.0). These scenarios and their associated pathways were chosen to fulfil the NZ CS1 requirement for a 1.5 degrees Celsius climate-related scenario, a 3 degrees Celsius or greater climate-related scenario, and a third climate-related scenario. In Mercury's case, the third scenario was chosen for its alignment with Mercury's strategic scenarios. It provides an alternative view of how New Zealand could successfully transition to a low-carbon economy in order to assess the resilience of Mercury's business model and strategy to climate-related risks and opportunities.

Data sources including Transpower demand forecasts, NIWA<sup>3</sup> temperature and rainfall forecasts and global predictions of carbon price rises were used in the creation of these scenarios. We also considered advice from the Climate Change Commission and the government's Emissions Reduction Plan in shaping our view of how the economy and the energy sector could transition towards Net-Zero carbon. Mercury did not undertake its own modelling in the construction of its scenarios.

The boundary for Mercury's scenario analysis was the whole of the organisation, including our subsidiaries. We also considered the impacts on the upstream and downstream phases of our value chain, e.g. key suppliers, partners and customers.

Our scenario analysis was framed using the focal question: "What climate-related risks and opportunities are affecting Mercury now and could plausibly affect Mercury over the short, medium and long terms?". Our time frames were defined, in alignment with Mercury's business planning, as current: <1 year, short-term: 1 to 3 years, medium-term: 3 to 10 years, and long-term: 10–30 years. The endpoint of these time frames are aligned with:

- Current and short-term: Mercury's 3-year objectives
- Medium-term: Mercury's long-term strategy and strategic scenarios
- Long-term: The expected useful life of new generation development

Following the establishment of the focal question and timeframes, the STEEP (Social / Technological / Economic / Environmental / Political) framework was used to build out our climate scenarios and draft our scenario narratives described on the following page.

As noted above, the climate scenario narratives were closely aligned to three of our company strategic scenarios so we incorporated these together into a single set of company scenarios that are used to identify both strategic and climate-related risks and opportunities and inform our strategic decision-making.

<b>CLIMATE SCENARIOS</b>	<b>ORDERLY TRANSITION SCENARIO (TEAL SCENARIO)</b> Global temperature increases are limited to 1.5 degrees.	<b>DISORDERLY TRANSITION SCENARIO (AMBER SCENARIO)</b> Global temperature increases are limited to 1.5-2 degrees.	<b>4+ DEGREE WARMING SCENARIO (MAROON SCENARIO)</b> Global temperature increases by 4+ degrees.
<b>CLIMATE IMPACTS</b>	Lowest to medium physical climate risk. We are able to navigate to a 1.5 future and new technologies have emerged to help adapt and largely mitigate any disruption caused. Extreme weather events are only moderately higher than historical norms.	We are able to navigate to a 1.5 to 2 future, however when climate events do occur, they are expensive and disruptive as technological solutions are not adequate to help adapt and mitigate the disruption caused.	Highest physical climate risk. We have been unable to navigate to a 1.5 future, with warming on track to realise a 4+ degree future. Incidents of disruptive and expensive damage to infrastructure are growing in frequency. The retreat from the ocean has begun.
<b>ENERGY PATHWAYS:</b> Grid Demand	High demand driven from industry and decarbonisation. Peak shaving and smart demand response are used efficiently to help manage the grid.	High demand driven from industry and decarbonisation. Demand side flexibility is minimal and only used in emergencies (much like today). Most fossil gas has been displaced by electricity.	Electricity demand has been stagnant to declining. Gas is still used quite extensively.
<b>ENERGY PATHWAYS:</b> Grid Supply	Fossil fuels have been retired. Demand growth has been met by grid-scale renewable generation. Wholesale prices decrease.	100% renewable has been achieved through deployment of grid scale wind and other renewable solutions.	Fossil Fuels remain with limited growth in renewables.
<b>MACROECONOMIC TRENDS:</b> Resource and technology constraints	Goods and knowledge are affordable, and flow freely. Technology allows a high degree of sustainable use of natural resources. New Zealand is attractive for investment.	Physical resources were challenging to access due to global demand, however, are now readily available from global sources.	Access to knowledge and technology is difficult and expensive.
<b>POLICY AND SOCIOECONOMIC ASSUMPTIONS:</b> Consumer needs	AI powered digital assistants enrich consumers lives. Consumers have a high work/life balance and discretionary spend on entertainment and other luxuries.	Many are struggling and looking for deals on the basics. This is mixed with an expanding older wealthy segment looking for entertainment and life's comforts.	Financial hardship has created a large price sensitive segment focussed on the basics. There is a culture of conserving, repairing, and reusing limited resources. In contrast to the majority, there is a small segment seeking luxury, who have created off-grid sanctuaries.
<b>POLICY &amp; SOCIOECONOMIC ASSUMPTIONS:</b> Competition / new entrants / disrupters	Benign wholesale conditions drive retail competition in the energy sector. Retail is sophisticated providing innovative products and services. Incumbents are delivering efficiently to meet growth. Successful new entrants exist in niches.	Competition in retail and wholesale is strong with competitive prices. New entrants and novel business models emerge.	Competition in energy is very limited. The market is easy to enter and new entrants with a novel bundle appear from time to time but typically struggle to compete with the scale of the incumbents.
<b>POLICY AND SOCIOECONOMIC ASSUMPTIONS:</b> Future of work	Industry is adapting to shorter working weeks, and an ageing workforce. Employers value employees with attitude and aptitude to keep up with the pace of change. Young employees want to work for businesses that have embraced these changes and are leading further advancements.	New Zealand has suffered from a "brain drain" making talent hard to secure. Young employees have for the most part gone overseas where wages are higher and the cost of living lower. Those that remain have secured senior high-paying jobs.	The highly skilled enjoy flexible working conditions. The majority work hard for low wages. Young employees are looking for the opportunity that will give them a leg up to better job prospects.
<b>CARBON SEQUESTRATION FROM AFFORESTATION</b>	Carbon sequestration from afforestation has been utilised for emissions reduction to a limited extent, being displaced by technological and nature-based solutions as they become available.	Carbon sequestration from afforestation has been widely deployed, being gradually superseded by technological and nature-based solutions.	Carbon sequestration from afforestation is utilised at a local level, without effective global coordination and certification.
<b>NATURE-BASED SOLUTIONS</b>	Nature-based solutions have been developed and form part of a broad portfolio of emissions reductions solutions.	Nature-based solutions have been developed and form part of a broad portfolio of emissions reductions solutions.	Nature-based solutions have been developed but have had limited impact on reducing emissions.
<b>NEGATIVE EMISSIONS TECHNOLOGY</b>	Effective negative emissions technology has been developed and widely deployed.	The development of negative emissions technology was slower than expected, leading to its delayed deployment.	Negative emissions reductions technology has been developed but has had a limited impact on removing emissions.

# CLIMATE-RELATED RISKS AND OPPORTUNITIES.

Climate-related risks and opportunities were then identified from the scenario narratives and assessed. To assess which of these were material, the climate scenario workgroup used Mercury's risk matrix, which required consideration of both quantitative impacts, e.g. loss of revenue or increases in costs, and qualitative impacts, e.g. loss of social license to operate or reputational impacts.

Inclusion of non-financial impacts in assessing materiality aligns with the materiality principles described in the NZ CS. These principles recognise

that quantitative assessment of climate-related risks and opportunities is not always possible and thus broader judgement is required in assessing whether risks and opportunities are material.

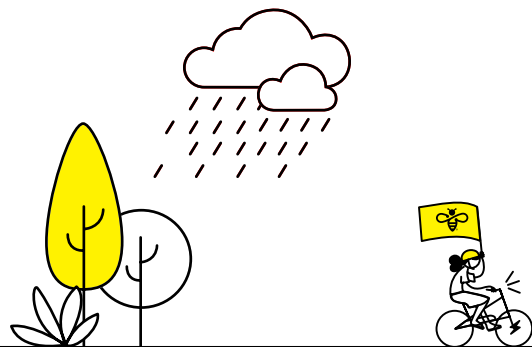
A description of the identified material climate risks and opportunities and their current and anticipated impacts (both financial and non-financial) are shown in the tables below.

RISK	RISK TYPE: Time Horizons	TIME HORIZON OVER WHICH RISK BECOMES MATERIAL, LIKELIHOOD AND CONSEQUENCE	IMPLICATIONS	ASSESSMENT METHODOLOGY	MANAGEMENT RESPONSE
<b>GREATER VARIABILITY IN WEATHER PATTERNS (INCLUDING MORE FREQUENT HIGH INFLOW EVENTS AND DROUGHTS) REDUCES HYDRO GENERATION FLEXIBILITY AND PROFITABILITY</b>	Chronic Physical: Current, Short, Medium, Long-term	In the long-term, i.e. in 10-30 years' time, this risk is assessed as being highly likely (10-30% probability in any given year) to materialise and may have a significant financial impact, i.e. between \$7.5m and \$75m.	Changing weather profile could lead to reduced energy margin during droughts, (as Mercury may have to buy from competitors to supplement its own hydro generation output), and also during high inflow events because abundant supply results in low market prices.	Assess changes in average rainfall and min/max inflow profiles to determine decrease in long-run hydro generation earnings and profile factor.	<ul style="list-style-type: none"> <li>Mercury manages its peak customer sales commitments by taking a portfolio approach to generation development, existing and operations and financial hedging. We look to balance sales with our physical generation and financial contract purchases.</li> <li>Mercury's environmental and planning teams engage with governing and consenting bodies to manage the operational impacts of lake storage levels and preserve operational flexibility on the Waikato Hydro System.</li> <li>Lake Taupō may be held at lower average storage levels to provide buffer for large inflow events.</li> </ul>
<b>GROWING INTENSITY OF ATMOSPHERIC CONDITIONS (INCLUDING STORM EVENTS) THAT CAUSE ASSET DAMAGE</b>	Acute Physical: Current, Short, Medium, Long-term	In the long-term, i.e. in 10-30 years' time, this risk is assessed as being likely (1-10% probability in any given year) to materialise and may have a major financial impact, i.e. between \$75m and \$750m.	<p>Increasing intensity of storm events, floods and high wind events may lead to physical damage to generation assets resulting in costs to repair and lost generation revenue.</p> <p>Increasing storm intensities and/or higher likelihood of heating and fires and/or other extreme atmospheric conditions may lead to severe damage to electricity transmission and distribution systems resulting in Mercury being unable to export from stations.</p>	Greater of estimate of cost to repair generation assets or lost generation revenue from transmission outages.	<ul style="list-style-type: none"> <li>Mercury regularly assesses physical risks to generating plant and assets as a reasonable and prudent asset owner/operator and will mitigate risks of damage as they arise.</li> <li>Mercury has a dam safety programme, including annual and 5-yearly reviews, and is working to gain insight into the impacts of climate change on flood risks.</li> <li>Mercury maintains a geographically dispersed and fuel diverse generation fleet which reduces impacts arising from locational-specific storm events that could cause asset damage.</li> <li>Mercury carries insurance cover that mitigates the financial impact of replacing damaged assets and for business interruption.</li> </ul>



# CLIMATE-RELATED RISKS AND OPPORTUNITIES.

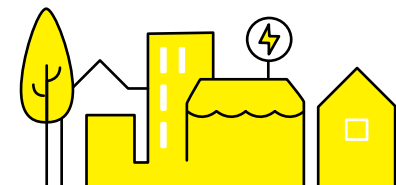
RISK	RISK TYPE: Time Horizons	TIME HORIZON OVER WHICH RISK BECOMES MATERIAL, LIKELIHOOD AND CONSEQUENCE	IMPLICATIONS	ASSESSMENT METHODOLOGY	MANAGEMENT RESPONSE
<b>SUPPLY CHAIN CONSTRAINTS</b>	Acute Transition: Short, Medium, Long-term	In the medium-term, i.e. in 3-10 years' time, this risk is assessed as being almost certain (>30% probability in any given year) to materialise and may have a major financial impact, i.e. between \$75m and \$750m.	Constrained global supply of renewable generation technology (i.e. wind turbines and solar panels) may cause construction delays and capital cost overruns.	Estimated cost increases between 20-50% in generation development.  Longer lead times result in commissioning delays.	<ul style="list-style-type: none"> <li>Mercury manages its supplier relationships to support its generation development pipeline including executing procurement processes with sufficient lead time to minimise construction delays.</li> </ul>
<b>GOVERNMENT POLICY SETTINGS FAIL TO BALANCE THE ENERGY TRILEMMA AND LEAD TO A DECLINE IN ELECTRICITY DEMAND GROWTH AND/OR A LOSS OF INVESTOR CONFIDENCE IN THE ELECTRICITY SECTOR, INCREASED COSTS FOR THE SECTOR, AND/OR DELAYED DEVELOPMENT OF RENEWABLE ELECTRICITY GENERATION CAPACITY</b>	Chronic Transition: Medium, Long-term	In the medium-term, i.e. in 3-10 years' time, this risk is assessed as being likely (1-10% probability in any given year) to materialise and may have a major financial impact, i.e. between \$75m and \$750m.	<p>Without clear and considered government policy setting, the rate of electrification of industrial process heat and transport could fall behind projections, resulting in a reduced need for new investment in renewable generation developments.</p> <p>Government response to climate change leads to market intervention which negatively impacts asset valuations.</p> <p>Resource Management Act reforms may favour environmental protection over mitigating climate impacts and renewable electricity generation consents could be declined or delayed, constraining and adversely impacting Mercury's generation development pipeline.</p>	<p>Reduction in average wholesale price for Mercury's generation;</p> <p>Reduced revenue from delays in supplying renewable electricity generation to the NZ market.</p> <p>Reduced enterprise value of the company.</p>	<ul style="list-style-type: none"> <li>Engage on policy settings that will support a successful transition for Aotearoa.</li> <li>Maintain a pipeline of potential large commercial and industrial customers including new forms of demand (e.g. hydrogen, data centres).</li> <li>Maintain a broad range of renewable electricity generation development options that can be brought to market in different demand scenarios.</li> <li>Mercury actively engages with regulators and other external stakeholders to increase the understanding that renewable electricity is a key enabler of the transition to a low-carbon economy and promote regulatory settings that support the development of renewable electricity.</li> </ul>



# CLIMATE-RELATED RISKS AND OPPORTUNITIES.

OPPORTUNITY	OPPORTUNITY TYPE: Opportunity Time Horizons	TIME HORIZON OVER WHICH OPPORTUNITY BECOMES MATERIAL, LIKELIHOOD AND CONSEQUENCE	IMPLICATIONS	ASSESSMENT METHODOLOGY	MANAGEMENT RESPONSE
<b>LOW-CARBON TRANSITION LIFTS ELECTRICITY DEMAND</b>	Chronic Transition: Medium, Long-term	In the medium and long-terms, i.e. in 3-30 years' time, this opportunity is assessed as being almost certain (>30% probability in any given year) to materialise and may have a significant financial impact, i.e. between \$7.5m and \$75m.	Increased demand for renewable electricity due to decarbonisation of transport and process heat may provide greater opportunities to build renewable generation capacity and increase sales volumes.	Increased generation revenue from new generation development.	<ul style="list-style-type: none"> <li>Mercury looks to secure resource consents for generation development projects ahead of expected increases in demand.</li> <li>Ensure a broad pipeline of development opportunities and maintain strong relationships with generation equipment suppliers.</li> </ul>
<b>CAPITAL MARKETS TILT TOWARDS INVESTING IN LOW-CARBON GENERATION</b>	Chronic Transition: Short, Medium, Long-term	In the long-term, i.e. in 10-30 years' time, this opportunity is assessed as being likely (1-10% probability in any given year) to materialise and may have a major reputational impact.	Mercury's profile as a renewable electricity generator may lead to reduced capital costs through increased share price support and cheaper borrowing costs as equity investors and debt issuers seek exposure to climate-resilient investments, reflecting societal desire to invest in the transition to a low carbon economy.	Impact of reduced cost of borrowing.	<ul style="list-style-type: none"> <li>Mercury has looked to leverage its renewable profile in issuing Green Bonds and promotes its low-carbon generation profile to research analysts and sustainability rating agencies.</li> </ul>

In FY23 Mercury has chosen not to undertake financial quantification of the material risks and opportunities from climate change due to the uncertainty associated with estimating modelling parameters across the medium and long-terms but will look to do so in future years where practical.



# RESILIENCE OF STRATEGY.

Actions described above for each of these climate-related risks and opportunities are reflected in our planning processes through:

- the setting of strategic objectives and performance incentives in the Executive Scorecard each financial year;
- the application of our Risk Management Framework to assess physical risks to generating plant and assets and prioritising any required mitigation work in business plans;
- the deployment of capital and funding for the development of new renewable generation; and
- the consideration of portfolio risks when progressing new generation development.

When making capital allocation decisions we consider climate-related transition impacts, such as decarbonisation initiatives and emissions reductions pathways, given the significance these have on future electricity demand growth. We also consider the impacts of climate-related risks and opportunities over different time horizons in developing our capital investment plans. In FY23, over 90% of Mercury's growth capital expenditure was allocated to renewable generation development.

## TRANSITION PLAN ASPECTS OF STRATEGY

Our business model and strategy are described in our FY23 Integrated Report. We test the resilience of our strategy through the lens of our material climate-related risks and opportunities.

## TRANSITION TO A LOW-CARBON ECONOMY

As the Climate Change Commission recognised in its draft advice to inform the strategic direction of the Government's second emission reduction plan, the largest share of emissions reductions in the second emissions reduction period is expected to come from energy and industry. Therefore, getting the settings right to support electrification is crucial. The Commission recommendations include prioritising and accelerating renewable electricity generation build. Aotearoa has one of the lowest emissions electricity sectors in the world. This electricity can be used to reduce emissions economy-wide through electrifying transport, industrial process heat and space heating. The Commission recommended setting a target so that 50% of all energy consumed comes from renewable sources by 2035, and this has now been adopted by the government in its Emissions Reduction Plan. For context, in CY2022, Aotearoa's renewable share of final energy consumption was 30%.

As a fundamental element of our strategy, we consider the role that we can play in supporting this decarbonisation of New Zealand. In addition to significant investments made in renewable generation development (to help reduce emissions from the electricity sector itself and other sectors), we also consider the role we can play in supporting the decarbonisation of other sectors.

We are also working on how we can reduce our own emissions. We are currently sequestering ~8,000 tonnes per annum of CO<sub>2</sub>e at Ngā Tamariki and are looking to expand CO<sub>2</sub> capture and reinjection across this and other geothermal sites.

## DEMAND

Electricity demand is a fundamental value driver for our business. Ensuring ongoing resilience of our business model requires an approach to strategy that takes into account an increasingly uncertain future. We improve the resilience of our strategy by ensuring that we are positioned for a range of different outcomes related to demand and taking action to attract new sources of demand to New Zealand such as offering Power Purchase Agreements (PPAs) for new infrastructure such as Data Centres.

## PORTFOLIO APPROACH

The rapid growth of new renewable electricity generation development is key to Mercury's contribution to New Zealand's transition to a low-carbon economy. We recognise the risks involved in bringing large-scale, complex projects to market while balancing the energy trilemma needs of security, affordability and renewability. In addition to ensuring new generation is delivered on time to meet demand for electricity, the intermittency of new renewable generation sources such as wind and solar, also provides a challenge in balancing day-to-day peak loads.

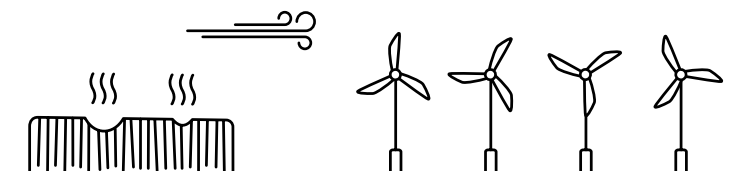
Mercury approaches these risks using a portfolio approach to its generation fleet, utilising the flexibility provided by its existing assets to enable the integration of intermittent new generation and looking towards market-based solutions through offtake agreements. A portfolio approach to new generation development, looking at both fuel types and locational risks (considering the vulnerabilities caused by the co-location of generation assets) is also employed when prioritising new development.

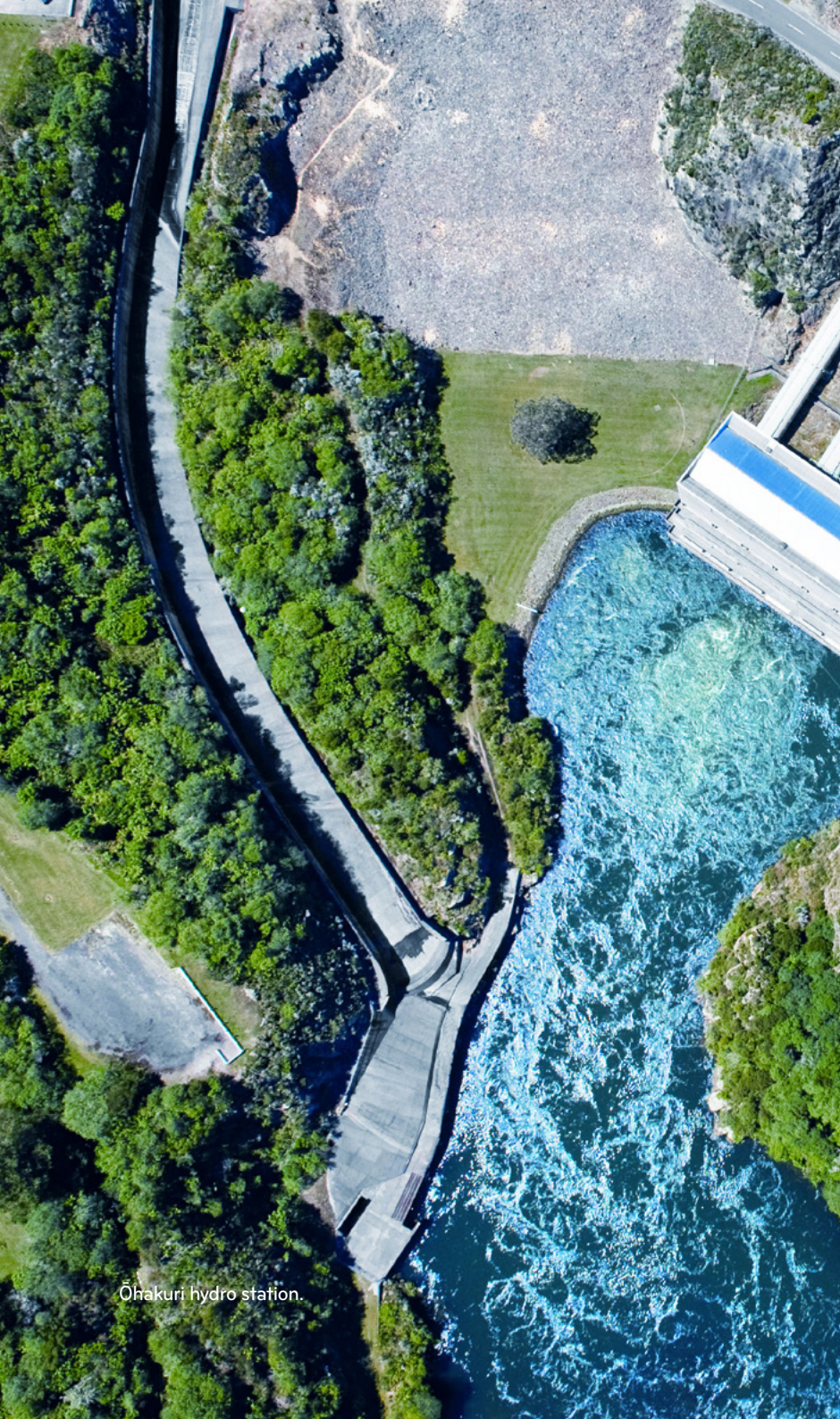
## PHYSICAL ASSETS

Underpinning our strategy is a long-term approach to the management of our physical assets. One element of this is that our management of dam safety risks assumes a value for Probable Maximum Flood (PMF). This is a measure of the possible volume and flow rate of the Waikato River in the event of an extreme flood. Our PMF values are prudently conservative. We are mindful that it is possible

that in a changing climate PMF values may need to be increased over time. Based on currently available data and analysis, our risk management practices and mitigants are appropriate. Through our ongoing dam safety work programme and hydrological studies, we continue to seek out additional information to ensure resilience of our strategy. We are currently working alongside other dam infrastructure owners in New Zealand to review the PMF assumptions including considering if these need to be updated to reflect the changing climate.

We have also reinvested hundreds of millions of dollars into a hydro refurbishment programme over the past 10+ years to ensure the assets can continue to generate renewable energy for many years to come. For example, we are currently working on a ~\$90 million refurbishment of the Karāpiro Hydro Power Station that will extend the asset's life by a further 50 years and make it more efficient.





Ohakuri hydro station.

# RISK MANAGEMENT.

## PROCESSES FOR IDENTIFYING AND ASSESSING CLIMATE-RELATED RISKS

Risk management is an integral part of Mercury's business. We have an overarching Risk Management Policy supported by a suite of risk management policies appropriate for our business.

The purpose of the Risk Management Policy is to embed a comprehensive capability in risk management which provides a consistent method for identification, assessment, control, monitoring and reporting of existing and potential risks to our business and to the achievement of its plans.

Our risk management framework meets New Zealand standard AS/NZS ISO 31000 Risk Management – Principles and guidelines and applies to all risks at Mercury and is used across the organisation. This framework provides for the integration of risk across our material value drivers– including financial, non-financial, social, environmental and climate-related risks.

A cross-functional group consisting of representatives from the relevant business functions supports the identification of climate-related risks through scenario analysis (see Scenario Analysis section in this Climate Statement). This group utilises information and

data to understand whether potential risks are real, and to inform our view of the likelihood and impact of these risks.

Climate-related risks and opportunities are then classified and assessed relative to other types of risks using a common methodology (the risk matrix – shown below). Mercury's risk matrix requires consideration of both estimated quantitative impacts, e.g. loss of revenue or increases in costs, and qualitative impacts, e.g. loss of license to operate or reputational impacts to classify and assess the materiality of climate-related risks and opportunities. Material climate-related risks and opportunities are assessed as falling within the red and black portions of the risk matrix. From FY23, following assessment under our risk management framework, the RMC and RAAC review climate-related risks which will be incorporated into our existing risk framework through being recorded in our risk register system and assigned to relevant business units.

The climate-related risks and opportunities included in this year's climate statement have been identified by considering our three climate change scenarios over a 30-year time horizon. In doing so, we considered all phases of our value chain (without any exclusions).

## MANAGING CLIMATE-RELATED RISKS

The day-to-day management of climate-related risks, opportunities occurs across Sustainability, Finance, Generation, Portfolio, Customer Operations and Commercial Operations with cascading responsibilities up to the RMC and the RAAC. The RAAC provides an assessment of whether the business is managing our climate risks and responsibilities appropriately and ensures there are effective policies and procedures in place.

As an example, when the dam safety team considers the risks faced by their business function, potential impacts from climate change are one of the factors that they take into account. The dam safety team work with the GM Generation to build an approach to manage these risks and develop their forward plans. Where material, issues are escalated to the RMC, the RAAC and the Board. The responsibilities of business functions, the RMC, and the RAAC are described in more detail in the Governance section in this Climate Statement.

In relation to markets, our Portfolio and Finance teams manage risks and opportunities presented by:

- the electricity market – we continually model scenarios of resource availability, electricity market supply and demand and adjust our approach accordingly
- the carbon market – we are involved in forest carbon investments and have long-term contracts in place

		IMPACT					
		Insignificant	Minor	Moderate	Significant	Major	Fundamental
PROBABILITY	Almost Certain						
	Highly Likely						
	Likely						
	Possibly						
	Unlikely						
	Rare						

# RISK MANAGEMENT.

Regulatory risks and opportunities are managed by our Government and Industry Relations team in conjunction with External Communications. Submissions have been made recently on the Climate Change Commission's 2023 draft advice to inform the strategic direction of the government's second Emissions Reduction Plan.

Physical risks and opportunities from climate change fall into acute (already impacting the business, e.g. extended periods of drought and likely to increase in the medium term) and chronic (not currently impacting the business but likely to impact over the medium to long-term). We have continued to monitor proposed methodologies for climate change risk assessment and adaptation planning, both nationally and internationally.

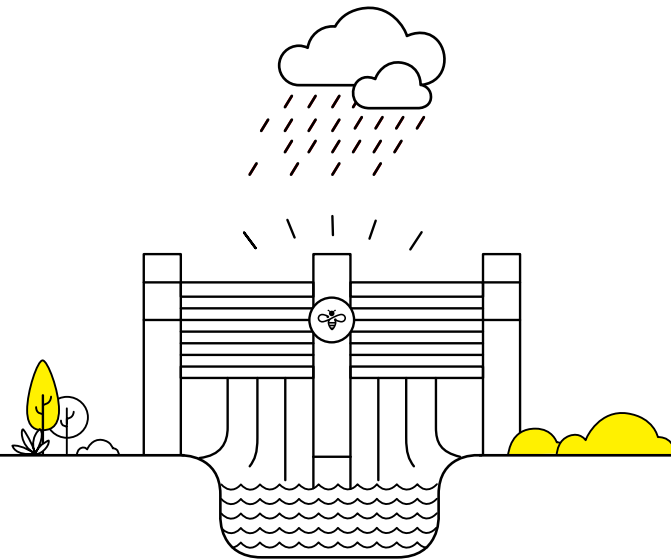
We have models of storm events experienced within the Waikato hydro catchment and we work in partnership with the Waikato Regional Council to engage in training exercises and flood simulations to educate and familiarise Mercury and council staff on the management of storms and flood risks.

We continue to refine and mature our climate-related scenario analysis to assess the impacts of our changing climate on our assets and business and are working with a research organisation, Bodeker Scientific, to improve the quality of our climate data including potential future inflows to the Waikato Hydro Scheme. Currently available regional level datasets are too high level to provide the robust and detailed outputs required for long-term investment decisions for hydro assets.

## DATASETS & MODELS USED

Modelling has been undertaken by the National Institute of Water and Atmospheric Research (NIWA) for many of the physical risks associated with a changing climate. The outputs from this NIWA modelling, and other specific studies related to impacts on the electricity sector, have informed this Statement.

We have drawn on the Climate Change Commission's advice to the government and the government's Emissions Reduction Plan to better understand how the economy, the broader energy system and the electricity sector will likely evolve towards Net-Zero carbon. In particular, the Commission's modelling of its "demonstration path" has influenced our expectations of future electricity demand.

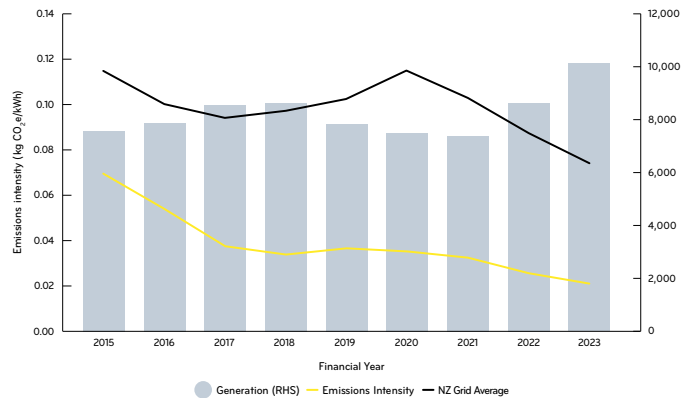
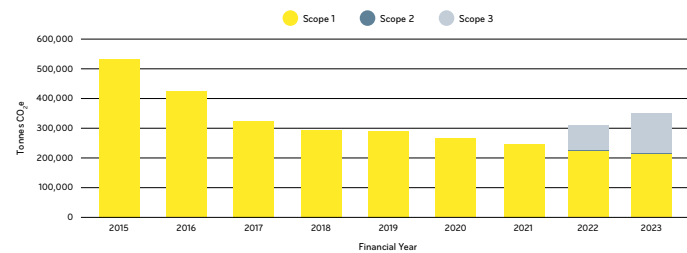


# METRICS & TARGETS.

## MEASURING OUR IMPACT - EMISSIONS

Mercury produces an annual [GHG Emissions Inventory Report](#) in accordance with the Greenhouse Gas Protocol which is available on [our website](#). A summary of our FY23 and prior years GHG emissions and emissions intensity is shown below:

	FY23 (tCO2e)	FY2022 (tCO2e)
<b>Scope 1</b>	213,645	222,736
<b>Scope 2 (location-based)</b>	632	1,108
<b>Scope 3</b>	134,778	84,909



As can be seen from the table and graphics above, our gross emissions are dominated by Scope 1 emissions, which account for 61% of the entire emissions profile currently and have reduced by 60% over the past eight years. This is due to the elimination of our emissions from thermal electricity power generation by decommissioning the Southdown gas-fired power station in FY16, the natural decline in fugitive geothermal emissions over time and our investment in geothermal greenhouse gas reinjection.

Our Scope 3 emissions from the sale of gas to our domestic dual fuel customers now represent 38% of our total gross emissions and increased by 58% (on an annual basis) over the past year due to the acquisition of Trustpower's gas customer base.

The emissions intensity calculation uses gross Scope 1 emissions and total generation output figures from all our power stations. No adjustments have been made to reflect Mercury's part-ownership of two of our geothermal power stations nor have any adjustments been made in relation to carbon credit surrenders or trading conducted under the NZ ETS.

*Note: Under the NZ ETS, Mercury surrenders certified forestry-backed carbon units, purchased under long-term agreements with forest owners, to the NZ Government which cover all of our geothermal emissions and, to the NZ Government or to our gas supplier, for gas sales related emissions.*

Consistent with a reduction in our gross emissions over time, our emission intensity has also reduced including over the past two years where the impact of our increase in wind generation from both new builds and acquisitions is having measurable impacts.

[Our Climate Transition Action Plan](#) outlines in detail the actions that we are taking to ensure we are acting consistently with a 1.5 degree future and are playing our part in reducing greenhouse gas emissions.

“ WE ARE RELEASING OUR CLIMATE TRANSITION ACTION PLAN WHICH SETS OUT HOW WE ARE PLAYING OUR PART IN REDUCING OUR GHG EMISSIONS.

## MEASURING OUR IMPACT – WATER USE AND OTHER ACTIVITY METRICS

In addition to emissions metrics, Mercury has looked to the International Sustainability Standards Board (ISSB) sector metrics for Electric Utilities & Power Generators for general and industry-based metrics for the management of climate-related risks and opportunities. These metrics have been assessed for their materiality to Mercury and the relevant metrics are disclosed below.

WATER USE	FY23	FY2022
<b>Geothermal</b>		
Water extracted (Mm3)	24	25
Water reinjected at source (Mm3)	13	13
<b>Hydro</b>		
Non-consumptive water use (Mm3)	11,529	6,465

Mercury extracts and reinjects geothermal water for geothermal generation and is a non-consumptive user of water through its hydro power stations. Mercury does not extract any water from regions with High or Extremely High Baseline Water Stress and in FY23 did not have any incidents of non-compliance with water quantity and/or quality permits, standards, and regulations.

Other material Activity Metrics are described in the Our Business Model section of our FY23 Integrated Report and disclosed in our [Operating Statistics](#).

# METRICS & TARGETS.

## IMPACTS OF THE CHANGING CLIMATE ON OUR ASSETS AND BUSINESS ACTIVITIES

Mercury's assets and business activities are vulnerable to transition risks as described below:

- Our geothermal generation assets, comprising ~27% of Mercury's equity-weighted generation in FY23, produce fugitive emissions which are vulnerable to transition risks in the form of rising NZU prices in the event that geothermal emissions are unable to be captured and/or reinjected.
- Our entire generation portfolio is vulnerable to climate transition risk from regulatory settings impacting the energy trilemma, e.g. through influencing carbon pricing in the NZ ETS which directly impacts the spot price of electricity.
- Our generation development portfolio is vulnerable to risks arising from regulatory settings constraining renewable electricity development.
- Our gas sales activities, comprising 1% of FY23 revenue, are vulnerable to changes in regulatory settings and/or changes in consumer preferences away from fossil fuels.

Mercury considers all, i.e. 100%, of its generation assets are vulnerable to the physical risks of climate change such as extreme wind, floods and fires, with detail on identified material risks disclosed earlier in this Climate Statement.

All, i.e. 100%, of Mercury's existing electricity generation assets are considered aligned with climate-related opportunities as enablers in New Zealand's low carbon transition. Increasing demand for renewable electricity due to

decarbonisation of transport and process heat has been identified as a material climate-related opportunity from which 100% of Mercury's renewable generation assets stand to benefit. The majority of Mercury's capital deployment is also aligned with climate-related opportunities as in FY23 \$155m of growth capital expenditure was allocated to new renewable generation development. Mercury is also pursuing climate-related opportunities to reduce emissions through developing reinjection of geothermal non-condensable gases. In assessing and valuing these opportunities, Mercury does not use a fixed internal emissions price but assesses a range of outcomes under various emissions pricing scenarios.

The alignment of management remuneration to these climate-related risks and opportunities is discussed in the Governance section of this Climate Statement.

## CLIMATE TARGETS

Mercury has committed to set the following near and long-term company-wide emission reduction targets in line with science-based Net-Zero with the Science Based Targets Initiative (SBTi). These targets have been developed using tools provided by the SBTi. The SBTi framework uses a sectoral decarbonisation approach to align emissions reductions in each industry to a global emissions reductions pathway consistent with limiting global warming to 1.5 degrees Celsius compared to pre-industrial revolution times. The base year for these targets is FY2022 and they are described to the right.

	Near-Term / Interim Target	Long-Term Target
<b>Scope 1</b>	Target Year: FY2030 70% reduction in emissions intensity (in kgCO2e/kWh) from base year	Target Year: FY2040 70% reduction in emissions intensity (in kgCO2e/kWh) from base year
<b>Scope 2</b>	Target Year: FY2030 42% absolute reduction from base year	Target Year: FY2040 90% absolute reduction from base year
<b>Scope 3 – Use of Sold Products (Natural Gas Sales)</b>	Target Year: FY2030 42% absolute reduction from base year	Target Year: FY2040 90% absolute reduction from base year

Note: These targets are subject to change through the validation process with SBTi.

Mercury does not currently use emissions offsets and, in alignment with the SBTi framework, does not intend to use offsets to achieve interim targets. Offsets may be used for persistent emissions that are unable to be abated for final targets, or for broader purposes outside of achieving interim targets.

In FY23, Mercury's progress against these targets was:

	FY23
Scope 1	18% decrease in emissions intensity
Scope 2	476 tCO2e decrease
Scope 3 – Use of Sold Products	48,932 tCO2e increase

The reduction in the Scope 1 emissions intensity between the FY22 base year and FY23 was due to a significant increase in the amount of renewable electricity we generated over the base year. This was achieved through the commissioning of the Turitea Wind Farm and a significant increase in the amount of hydro electricity generated on the Waikato Hydro Scheme.

As noted earlier, the increase in Scope 3 gross emissions was primarily due to the acquisition of the Trustpower retail business which included ~44,000 new natural gas connections.

Mercury 