

Climate Statement FY2024



Christchurch
City Holdings
Limited

Te Whakapuakanga ā-Āhuarangi



A wholly owned subsidiary
of Christchurch City Council

Introduction

Te Whakatakinga

Christchurch City Holdings Limited (CCHL) is the wholly owned commercial arm of Christchurch City Council. The CCHL Group is made up of six trading companies (the subsidiaries) that own and operate essential infrastructure assets and services across Christchurch and Canterbury.

The CCHL Group includes four 100% owned companies, Lyttelton Port Company Ltd (LPC), Enable Services Ltd (Enable), City Care Ltd (Citycare), and EcoCentral Ltd (EcoCentral) and two that are majority owned, Orion New Zealand Ltd (Orion) (10.725% owned by Selwyn District Council), and Christchurch International Airport Ltd (CIAL) (25% owned by the Crown).

CCHL is a Climate Reporting Entity under the Financial Markets Conduct Act 2013 (FMCA), has \$6 billion in total assets as at 30 June 2024, and is an NZDX issuer with three listed bonds on the NZDX, totalling \$450 million.

About this Climate Statement

CCHL's Climate Statement (the disclosures) report is for the reporting period 1 July 2023 – 30 June 2024 and constitutes CCHL's Climate Statement in respect of that period under the FMCA.

The disclosures in this report have been completed in relation to CCHL and its subsidiaries (the CCHL Group). References to CCHL should be taken to include the Group, as appropriate.

Accordingly, this document has been prepared in compliance with the Aotearoa New Zealand Climate Standards and covers four thematic areas: Governance, Strategy, Risk Management and Metrics and Targets.

CCHL has chosen to use the following adoption provisions outlined in NZ CS 2 for this FY2024 reporting period.

- 1. Adoption provision 1:**
Current financial impacts
- 2. Adoption provision 2:**
Anticipated financial impacts
- 3. Adoption provision 3:**
Transition planning
- 4. Adoption provision 4:**
Scope 3 GHG emissions
- 5. Adoption provision 5:**
Comparatives for Scope 3 GHG emissions
- 6. Adoption provision 6:**
Comparatives for metrics
- 7. Adoption provision 7:**
Analysis of trends.

Approved on and behalf of the Board on 24 October 2024.



Bryan Pearson
Chair

Gill Cox
Director

Disclaimer

This report sets out CCHL's approach to scenario analysis, CCHL's understanding of, and response to, CCHL's climate-related risks and opportunities and our current and anticipated impacts of climate change in relation to the Group. This reflects CCHL's current understanding as at 30 October 2024. We acknowledge that this will evolve over time. Climate-related risk management is an emerging area, and as such may rely on data and methodologies that are developing and uncertain.

This report contains forward looking statements, including climate-related scenarios, targets, assumptions, climate projections, forecasts, statements of CCHL's future intentions, estimates and judgements that may not evolve as predicted. We base those statements and opinions on reasonable information we know at the date of publication. We do not:

- represent those statements and opinions will not change or will remain correct after publishing this report, or
- promise to revise or update those statements and opinions if events or circumstances change or unanticipated events happen after publishing this report.

CCHL cautions reliance on climate-related forward-looking statements that are necessarily less reliable than other statements CCHL may make in its annual reporting. In particular, these statements involve assumptions, forecasts and projections about CCHL's present and future strategies and CCHL's future operating environment. Such statements are inherently uncertain and subject to limitations, particularly as inputs, available data and information are likely to change.

The risks and opportunities described in this report, and our strategies to achieve our targets, may not eventuate or may be more or less significant than anticipated.

There are many factors that could cause CCHL's actual results, performance or achievement of climate-related metrics (including targets) to differ materially from that described, including economic and technological viability, climatic, government, consumer, and market factors outside of CCHL's control. CCHL gives no representation, warranty or assurance that actual outcomes or performance will not materially differ from the forward-looking statements. CCHL does not accept any liability whatsoever for any loss arising directly or indirectly from any use of the information contained in this report.

This disclaimer should be read along with the methodologies, assumptions and uncertainties and limitations on page 26.

This report is not an offer document and does not constitute an offer or invitation or investment recommendation to distribute or purchase securities, shares, or other interests.

Nothing in this report should be interpreted as capital growth, earnings or any other legal, financial, tax or other advice or guidance. For detailed information on our financial performance, please refer to our [Annual Report](#).



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Governance

Te Anga o te Mana Urungi

The CCHL Board of Directors is the governance body ultimately responsible for overseeing the implementation of CCHL's strategy and climate-related risks and opportunities.

The Board is responsible for establishing CCHL's strategic direction and sets its financial and non-financial objectives, including CCHL's sustainability initiatives, as part of agreeing its annual Statement of Intent with its Shareholder, the Christchurch City Council (the Council).

In addition, the Board is responsible for understanding and ensuring its risks, including climate-related risks are managed appropriately, to ensure CCHL meets its objectives and targets.

The Board is supported in its oversight of climate-related risks and opportunities by two Board sub-committees:

- The Audit and Risk Management Committee (ARMC) assists the Board in its oversight of CCHL's risk management framework and the monitoring of compliance within that framework, including in relation to climate-related risk and annual assurance programme.
- The Impact Committee assists the Board in setting the sustainability strategy and providing oversight of climate-related risks and opportunities, including by reviewing and recommending to the Board for approval the CCHL Group Climate Statement. Under the FMCA the committee is also responsible for ensuring the CCHL Group Climate Disclosures are presented in accordance with the Aotearoa New Zealand Climate Standards.

The CCHL Board (including the ARMC and Impact Committee) is informed about climate-related risks and opportunities in the following ways:

- CCHL completed its first scenario analysis process to identify climate-related risks and opportunities in FY24. The climate-related risks and opportunities were reviewed by the Impact Committee and amended to reflect feedback from the Committee, before being recommended for approval by the Board.
- Climate change appears as a key risk in the CCHL corporate risk register. This register is considered and reported to the ARMC quarterly. All Directors can access ARMC papers and have an open invitation to attend ARMC meetings.
- The Impact Committee approves CCHL's annual Impact Programme (finalised in CCHL's annual Statement of Intent), including the activity in relation to the sustainability strategy and reviews performance against the agreed Statement of Intent targets on a quarterly basis. In FY24, that included working with the subsidiary companies to undertake scenario analysis and development of the Group emissions reduction plan and targets. The Impact Committee also receives an annual progress update towards emissions reduction targets and achievement against sustainability objectives/targets for the Group. Further detail is provided in the Metrics and Targets section of this report.

Governance

CCHL Board of Directors

Meets 11 times a year

Governance body ultimately responsible for oversight and implementation of CCHL's strategy.

CCHL's core role includes monitoring of Council's infrastructure investments, understanding and management of the business risks, including climate-related risks and opportunities and approving the sustainability strategy.

Impact Committee

Meets at least 4 times a year

Responsible for overseeing CCHL's strategies, policies and practices in relation to the Impact Programme which encompasses the Group's approach to ESG issues, including external reporting in relation to those areas.

Reviews and recommends to the Board the sustainability strategy, objectives and targets.

Monitors and reports to the Board in relation to CCHL's material ESG matters (including climate-related). Oversees compliance with statutory responsibilities relating to sustainability.

ARMC

Meets at least 4 times a year

Assists the Board with the proper and efficient discharge of its responsibilities to exercise due care, diligence and skill in relation to the oversight of (amongst other things) the risk management framework and the monitoring of compliance within that framework.

Reviews CCHL's portfolio risks, including climate-related risk, on a quarterly basis.

Oversees compliance with CCHL's Sustainable Finance Framework.

Management

Executive Team

The CCHL Executive team, is made up of the Acting Chief Executive Officer, Acting Chief Financial Officer, and Head of Impact & Performance whom participate in the scenario analysis process.

In FY24, this included reviewing CCHL's climate-related risks and opportunities and the impact on CCHL's strategy.

The Head of Impact & Performance is responsible for day-to-day management of CCHL's sustainability strategy and chair of the Sustainability Working Group.

Subsidiary Companies

Sustainability Working Group

In 2021, CCHL and its subsidiaries formed a Sustainability Working Group (SWG) with a representative from each of the subsidiaries and from CCHL. The SWG was established to progress priority areas of sustainability, including mitigating climate change (i.e. reducing GHG emissions), biodiversity, circular economy, integrated reporting, and climate-related disclosures.

Meets fortnightly throughout the year.

Reports progress to the Impact Committee after each meeting.

Subsidiary Boards

Orion, CIAL, LPC, Enable, Citycare and EcoCentral have ultimate responsibility for oversight and implementation of the operational strategies and sustainability plans (including where these relate to climate-related risks) at subsidiary operational level, including providing annual disclosures (with assurance) to CCHL.

Management, Board and Subsidiaries working together to prepare CCHL's Group Climate Disclosures

In 2024, CCHL made a formal request in the FY24 Letter of Expectations to each of the subsidiary companies to prepare disclosures in-line with the Aotearoa New Zealand Climate Standards, noting that CCHL had elected to use the first year NZ CS 2 adoption provisions in FY24. Each subsidiary engaged external experts to carry out a physical risk exposure and qualitative risk assessment as part of its scenario analysis. The climate-related risks and opportunities identified by each subsidiary were consolidated for the Group.

Further explanation on the consolidation method and approach is detailed in the Strategy section on Page 19 in this report.

CCHL's climate-related risks and opportunities were presented to the Impact Committee in May 2024 and agreed.

Board climate skills evaluation and training

The Board aims to ensure that it has the appropriate mix of skills and competencies to provide effective governance for CCHL, including in relation to climate-related risks and opportunities. Management regularly provides papers and updates to the Impact Committee on climate-related topics such as GHG emissions the Group's emission reduction plan, and metrics and targets.

The CCHL Board uses a Board skills matrix to assess the skills and competency of the Board. The skills matrix assessment is completed annually. The matrix includes ESG literacy and assesses the knowledge of and commitment of directors to key strategic ESG matters regarding the long-term sustainability of the organisation and its broader community. This includes the ability to integrate these considerations into the organisation's strategy, understand the implications for reporting, and for stakeholder engagement.

During FY24, there were several changes to the composition of Directors on the CCHL Board. The governance changes were made at the end of the period, and for the last two months of the period CCHL was operating with five directors. The CCHL Board has been strengthened to ensure it has the skills and competencies and appropriate resource to provide oversight of climate-related risks and opportunities in FY25.

In FY25, the CCHL Board and the Boards of Directors of the subsidiary companies, will be completing climate competency training through the Institute of Directors New Zealand.

Integrating climate into CCHL's strategy

In 2024, CCHL evolved its business strategy to reflect the changing operating environment and updated mandate following the outcome of Council's Strategic Review. CCHL's mandate focusses on managing Council's ownership interest in the subsidiaries, ensuring CCHL meets its obligations as a responsible owner, including sustainability. CCHL's strategy and sustainability objectives inform the Impact Programme deliverables that the Impact Committee approve on an annual basis (and published in the CCHL Statement of Intent).

For example, a key objective in CCHL's FY24 strategy was to demonstrate commitment to tangible climate action through greenhouse gas (GHG) emissions measurement and reduction targets in line with Council's expectation that CCHL and the subsidiaries have a good understanding of the drivers of their GHG emissions and the possible ways in which the emissions can be reduced. The associated deliverable for FY24 was to develop an emissions reductions plan for the Group and for each subsidiary company. Management reports on progress against these sustainability deliverables at each Impact Committee meeting. CCHL, supported by input from each of the subsidiary companies, approved a Group emissions reduction plan in May 2024.

Recognising the integral role of sustainability in its business, CCHL's Sustainable Finance Framework (the Framework) was established in 2021 to enable it to increase its leadership and investment in sustainability, while providing the platform for future growth in this area.

The Framework provided a vehicle to facilitate the refinancing of debt relating to CCHL's investment in Enable's fibre-optic network using a Sustainability Bond. CCHL closed its first Sustainability Bond offer in late October 2021. The bond received significant interest – with offers representing more than double the initial bond offer (\$100 million plus an allowance of \$50 million for oversubscriptions). Issuing this bond, only the second Sustainability Bond issued in New Zealand, was a major milestone for CCHL reflecting its approach to providing long-term, economic social and environmental returns to the city and region.

Strategy Te Rautaki

This section sets out the scenario analysis undertaken, the current impacts of climate change on the business, the climate-related risks and opportunities that have been identified across the portfolio, the anticipated impacts of these, and how the Group is positioning itself for a low-emissions, climate resilient future.

CCHL has elected to use Adoption Provisions:

- 1: Current financial impacts;
- 2: Anticipated financial impacts; and
- 3: Transition Planning.

CCHL's strategy and business model

The core role of CCHL is to manage Council's ownership interests in the subsidiaries, which largely service the region's essential infrastructure needs.

The CCHL Group is focussed on delivering strong financial performance which underpins sustainable growth in dividends to Council.

CCHL is also conscious of the large environmental and social footprint of the subsidiaries. CCHL is committed to strong governance frameworks which appropriately consider the impact the operating companies have in these areas. CCHL is committed to demonstrating strategic leadership, providing guidance on and monitoring the performance of the subsidiary companies against their ESG performance objectives (provided in subsidiary Annual Statement of Intent) as well as relevant benchmarks.

CCHL's strategy is supported by its four Integrated Reporting Capitals developed in FY23:



Financial

Focused on long-term value creation through our commitment to prudent financial management and responsible ownership.



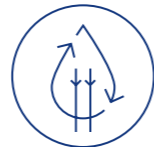
Intellectual

Providing strong diverse governance and leadership with a commitment to nurture talent.



Social

Investing in people, culture, safety and relationships.

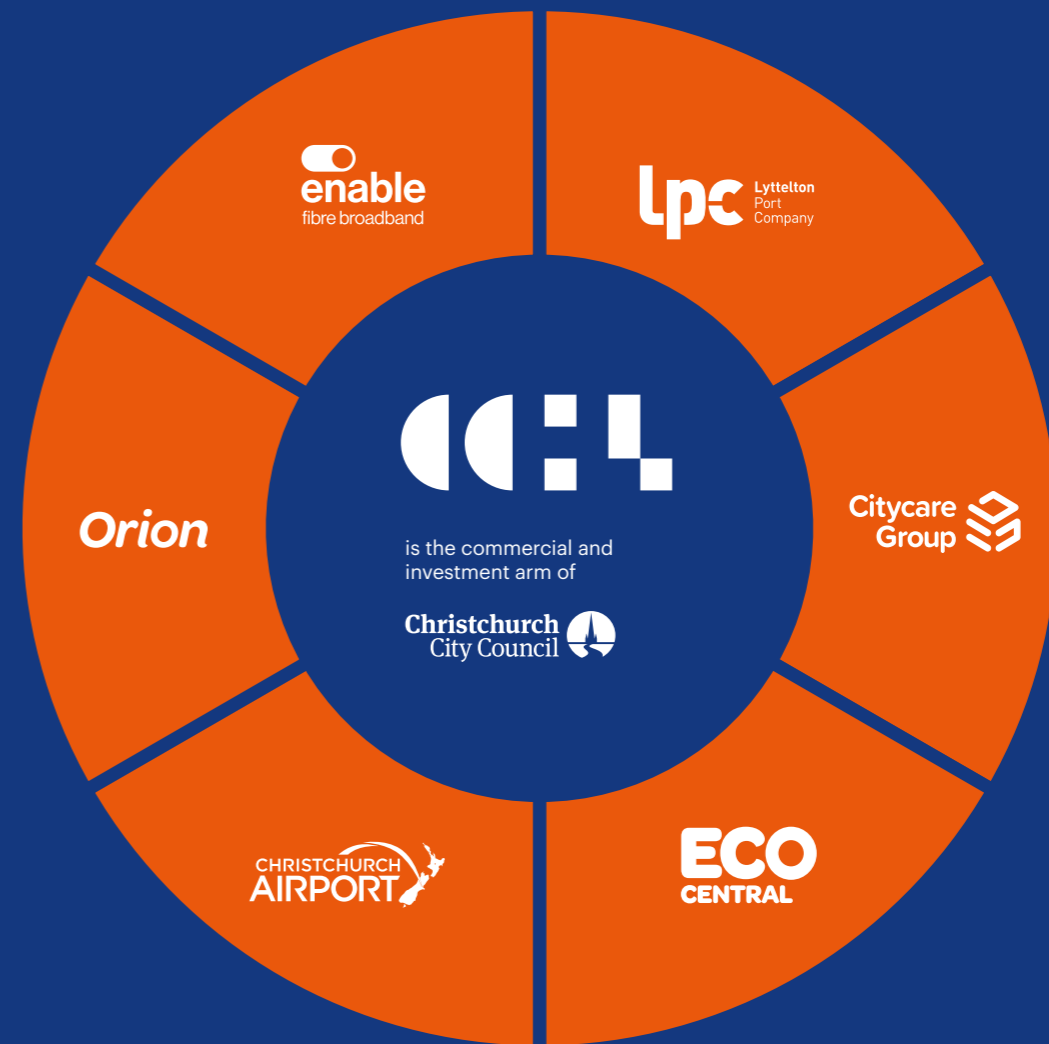


Natural

Leading and investing in environmental sustainability.

Our Mission

Supporting the future growth of Christchurch by investing in key infrastructure assets that are commercially viable and environmentally and socially sustainable



Current climate-related impacts

This table sets out CCHL’s material current climate-related impacts. CCHL defines its current climate-related impacts as those that have been experienced by the Group within the reporting period.

CCHL’s current climate-related impacts have been identified by extracting the current impacts identified in each of the subsidiary company’s disclosures to consolidate a complete list of current impacts across the Group. The current impacts were then aligned with the consolidated headline drivers for consistency.

Physical impacts

| Driver | Current impacts | Detail |
|--|---|--|
| Increasing temperatures and droughts | Damage to water mains from high temperatures resulting in ground movement and cracking, causing increased maintenance requirements. | <p>Citycare Annually, in summer months, there is an increase in maintenance to water mains due to the dryer ground conditions, which impacts Citycare workloads.</p> <p>There have been instances of regional water shortages which has restricted the ability to flush the water network in some cases. This required sourcing water from different supplies, which has negatively impacted Citycare’s operational expenses.</p> |
| Increased intensity of weather events | Increased frequency and intensity of extreme weather and winds leading to damage to assets, service disruption, damage to stock/equipment and increased maintenance and repair costs. | <p>Orion Orion’s distribution network suffered a severe windstorm causing physical damage and associated expenses.</p> <p>LPC Regular high winds have required LPC to halt operations due to consented wind limits in some cases. More extreme events have caused LPC supply chain delays, e.g. a halt in coal deliveries to LPC due to a slip on the Buller Gorge rail line.</p> |
| | Additionally, severe weather events can impact transmission, distribution or generation assets, disrupting electricity supply. | <p>Citycare Citycare has observed a general reduction in budgets for operational and maintenance contracts from its customers due to the significant amount of money being invested in managed retreat, with reduced maintenance contract availability.</p> |
| Increased fire risk | Reduced budgets and reprioritisation focusing on reactive management. | <p>Orion The Port Hills Fire in February 2024 caused significant outages on Orion’s network during the event and required a Co-ordinated Incident Management System response.</p> |
| Combination of both acute and slow-onset hazards | Impacts on staff wellbeing due to increased workload and stress from climate-related hazards. | <p>EcoCentral Staff experience heat stress annually when working in EcoCentral’s recycling plant due to the corrugated iron roof.</p> |
| | Increased number of operational health and safety incidents resulting in impacts to staff/crew, decreasing workforce retention and wellbeing. | <p>Citycare Rurally located Citycare workers could not access worksites as their roading access was unsafe. Staff have also been exposed to flooding, which has resulted in both physical injuries in addition to exposure to contaminated flood water.</p> |

Transition impacts

| Driver | Current impacts | Detail |
|---|---|---|
| Development of low-emissions technologies | Delayed climate policy direction that supports the transition to a low-emissions economy. | Current levels of policy response and consequent investment in supporting infrastructure varies internationally, which is slowing the development and shift to zero-emission technology. |
| | Availability of key technologies (e.g. Sustainable Aviation Fuel). | <p>Orion Regulation in Europe directed toward phasing out the use of SF6 gas in electrical equipment has increased demand for non-SF6 equivalents, with an associated reduction in supply and increase in cost of non-SF6 equipment. This has not cost The Orion Group directly, but does mean the pace of transition of their SF6 circuit break fleet has slowed.</p> <p>Orion Theft of copper from Orion’s network has increased significantly in the past 12 months and has significantly increased public safety risk. Theft rates are influenced by a number of factors, but we anticipate that as the cost of rare earth minerals rises and intersects with cost-of-living issues that can be exacerbated by the impacts of climate change, that this type of event will be more frequent.</p> <p>Citycare Citycare has experienced delays with securing new electric and hybrid vehicles (due to COVID supply chain disruption) which impacts operations.</p> |
| Energy transition (domestic) | Impacts on procurement/purchasing decisions and operational performance. | <p>Orion A general election and uncertainty around ongoing support for EVs in New Zealand impacted purchase decisions for replacement vehicles in Orion. Purchase of electric vehicles was brought forward to take advantage of the clean car discount before it was removed by the new government. Capital expenditure associated with this issue was associated with timing of purchase rather than the expenditure itself, so is not considered a significant financial impact.</p> |
| Carbon pricing | | <p>Citycare Risk of substantial one-off capital investment to decarbonise all operational equipment, increased ongoing operational costs, and potential operational challenges. Battery powered, electric plant and equipment is demonstrably more expensive and has some other limitations, such as weight, range etc.</p> |
| Regulation/compliance | | |
| Energy transition (international) | | |

Scenario analysis

CCHL has undertaken climate-related scenario analysis to support the identification and assessment of its climate-related risks and opportunities.

Overview of scenario analysis process

CCHL's scenario analysis process was conducted as a standalone exercise in FY24 with input from management, rather than integrated into our existing strategy processes. This process was supported by external consultants Tonkin + Taylor who have subject matter expertise in the area of climate change and scenario analysis.

No part of CCHL's value chain was excluded from the process. This includes activities relating to CCHL and the six subsidiary companies.



The outputs of the scenario analysis have been discussed at several CCHL Board and Board committee meetings. They have been used to further develop and inform CCHL's strategy and operating model, including aspects relating to transition planning.

A summary of the scenario analysis process undertaken is provided in the following table.

| | |
|---|--|
| Step 1 Identify scenario archetypes and driving forces | <ul style="list-style-type: none"> Reviewed the scenarios of the subsidiaries to identify and agree scenario archetypes relevant to CCHL at the Group level Identified relevant driving forces for CCHL at the Group level based on the operations of the subsidiaries and their scenarios Presented the scenario archetypes to the CCHL Board Reviewed the proposed scenario archetypes and driving forces with the CCHL management team and consolidated the driving forces Reviewed sector-level scenarios developed by New Zealand industries to inform each of driver narratives relevant to each scenario |
| Step 2 Develop scenarios | <ul style="list-style-type: none"> Developed three scenarios based on scenario archetypes and different combinations of the driving forces |
| Step 3 Assessment of climate-related risks and opportunities | <ul style="list-style-type: none"> Reviewed and consolidated the climate-related risks and opportunities identified by each of the subsidiaries under CCHL's scenarios Reviewed and consolidated the current climate-related impacts identified by each of the subsidiaries Completed an evaluation of the potential impacts or effects on the CCHL Group and material impacts on the subsidiaries under each of the scenarios Identified and assessed climate-related risks and opportunities that are material for CCHL at the corporate level under each of the scenarios |

Development of scenarios

Climate-related scenarios are a plausible, challenging description of how the future may develop (based on assumptions about both physical and transition risks).

Climate-related scenarios are not intended to be probabilistic or predictive, or to identify the 'most likely' outcomes of climate change. They are intended to provide an opportunity for entities to develop internal capacity to inform the identification of risks and opportunities, and test resilience strategies.

In FY24, CCHL developed three climate-related scenarios to help assess its climate-related risks and opportunities, and to help it understand the resilience of its business model and strategy under different levels of uncertainty.

Each scenario incorporates key driving forces and critical uncertainties relevant to CCHL and the subsidiaries, allowing the Group to identify and assess its climate-related risks and opportunities over the short, medium, and long term under different conditions.

CCHL's climate-related scenarios were developed by first identifying relevant archetypes and driving forces. Driving forces were selected based on a desktop review of relevant drivers included within the scenarios the subsidiaries utilised. The purpose of this was to understand the broad scale factors that will influence the direction of future change and CCHL's potential climate-related risks and opportunities over the short, medium, and long term.

Subsidiary-level and sector-level scenarios were reviewed to further inform the development of the narratives relevant to each scenario. The Driving Forces table summarises the relevant driving forces identified by CCHL, and the sources of information that influenced and informed each scenario narrative.

CCHL elected to primarily draw from sector-level scenarios as these have been developed to support climate reporting entities to prepare climate-related disclosures in-line with the Aotearoa New Zealand Climate Standards. Drawing from these sector-level scenarios enables more meaningful disclosure comparison for primary users of climate statements.

CCHL's scenarios include a set of statements and drivers that are plausibly consistent with a reference emissions reduction pathway from the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6). The assumptions underlying the reference pathways have been developed by the IPCC.

Each IPCC scenario pathway includes its own policy and socioeconomic assumptions, macroeconomic trends, energy pathways, carbon sequestration from afforestation and nature-based solutions and technology assumptions including negative emissions technology. CCHL did not include afforestation and nature-based solutions as a relevant driver at the entity-level as it was not deemed relevant to our operations or value chain.

Driving Forces

| Driver | Reference |
|---|--|
| Carbon price | Property and Construction Sector Scenarios Current market carbon price via CommTrade* |
| Population | Property and Construction Sector Scenarios |
| GDP | Health Sector Scenarios |
| Economic costs and government funding | Health Sector Scenarios |
| Climate migration | Health Sector Scenarios |
| Behaviour change/consumer preferences | Retail Sector Scenarios |
| Development of low carbon technologies | All sector-level scenarios |
| Power infrastructure reliability | Energy Sector Scenarios |
| Changes to urban form | Property and Construction Sector Scenarios |
| Regulation/compliance | CCHL |
| Change in severity and frequency of extreme weather events (acute hazards) | Intergovernmental Panel on Climate Change AR6 and downscaled New Zealand projections |
| Change in severity and frequency of hazards, e.g. sea-level rise and average temperature change (chronic hazards) | Intergovernmental Panel on Climate Change AR6 |

*Disorderly scenario only.

Description of scenarios

| | < 1.5°C | ~2°C | > 3°C |
|--|---|---|---|
| Scenario | Scenario One: System Transition Orderly New Zealand and the world reach net zero by 2050, driven through strong policies and rapid technology change. | Scenario Two: Slow Progress Disorderly Progress towards decarbonisation is slow to 2030. New Zealand and the developed world commence their transition, but the developing world does not follow suit, and as such emissions still increase considerably. | Scenario Three: Hothouse World New Zealand and the world abandon net zero targets. There is continued reliance on fossil fuels into the future. |
| RCP | 1.9 (Lowest Emissions) | 4.5 (Intermediate Emissions) | 8.5 (Highest Emissions) |
| SSP | SSP1 Sustainability | SSP2 Middle of the Road | SSP5 Fossil-Fueled Development |
| Global Temperature Increase by 2050 | 1.6°C | 2.0°C | 2.4°C |
| Global Temperature Increase by 2100 | 1.4°C | 2.7°C | 4.4°C |
| Transition Risk by 2050 | Medium | High | N/A no transition |
| Physical Risk by 2100 | Lower | Medium | High |

<1.5°C
Orderly scenario

The Orderly scenario describes a future where the world succeeds in limiting warming to within 1.5° Celsius. Ambitious decarbonisation goals and policies are introduced immediately, and emissions decline rapidly and steadily to achieve net zero by 2050. The scenario assumes moderate transition risk in order to meet net zero 2050 goals and limited exposure to physical risks.

Orderly scenario describes a future where the world succeeds in limiting warming to within 1.5° Celsius. Ambitious decarbonisation goals and policies are introduced immediately, and emissions decline rapidly and steadily to achieve net zero by 2050. The scenario assumes moderate transition risk in order to meet net zero 2050 goals and limited exposure to physical risks.

In this scenario, the transition to a low-emissions economy occurs both locally and globally in an immediate, aggressive, and coordinated manner across all sectors of society. The global shift emphasises more inclusive and sustainable development that respects environmental and planetary boundaries. It is driven by clearly signalled policy changes focused on decarbonisation, substantial emissions reductions and widespread adoption of renewable energy sources and technology are achieved.

Climate mitigation and adaptation actions are funded through a combination of public and private debt, targeted tax increases, and innovative financial instruments. The immediate transition away from emissions-intensive activities leads to an increase in the cost of living for households in the short to medium term as a result of tax increases and the rising cost of carbon.

In an effort to reduce global GHG emissions and other impacts on the environment, a large proportion of people from developed countries, including New Zealand, begin to adjust their lifestyle and consumption behaviours. This results in a significant reduction in spending on high-emissions products and services, including domestic and international transport and travel.

New Zealand's electricity infrastructure is upgraded and grows to keep up with increasing demand in the transition away from non-renewable energy, supported largely by highly skilled migrant workers.

Consequently, there is an increase in capability for the government to deliver large scale capital projects to increase supply of renewable energy.

Central and local government work together to limit urban sprawl and the associated infrastructure requirements, and instead support urban development that enable and encourage the transition to a low-emissions economy. This includes increasing the usage of active and public modes of transport, primarily in major cities.

Adaptation to the impacts of climate change remains a public and private sector focus over the short, medium, and long term. A minor change in severity and frequency of extreme weather events is observed over time, which have been appropriately anticipated and planned for by central and local government, the private sector, and local communities. Historical GHG emissions and 'locked in' global warming result in changes in chronic hazards such as sea-level rise and average surface temperatures, which eventually stabilise in the long-term as a result of the net zero transition. By mid-century, average surface temperatures reach 1.6 °C above pre-industrial levels by 2050 and mean sea-level rise reaches around 0.4m by 2050.

New Zealand's population increases from 5.22 million in 2025 to 5.44 million in 2030, 5.82 million in 2040, and 6.13 million in 2050.

By 2030, the carbon price rises to \$138/tonne, increasing gradually to \$250/tonne by 2050.

~2°C**Disorderly scenario**

The Disorderly scenario describes a future where we succeed in limiting warming to approximately 2° Celsius, and significant decarbonisation is delayed until the 2030s. This scenario assumes the highest transition risk as New Zealand rushes to meet net zero 2050 goals and moderate exposure to physical risk due to delayed action.

In this scenario, New Zealand and the developed world are delayed in their transition to a low-emissions economy in the short term, and continue to follow a path in which social, economic, and technological trends do not shift markedly from historical precedent. Realisation occurs in 2030 that climate action is urgently needed to reduce GHG emissions, resulting in disjointed, abrupt, and poorly coordinated policy and market changes.

Given the delayed and poorly planned nature of the transition to a low-emissions economy and increasing impacts from extreme weather events, the economy suffers. From 2030, the government needs to make major trade-offs in spending across the public sector (including on decarbonisation and adaptation spending), and reduce spending overall. While the cost of living remains unchanged in the short-term, this rapidly increases in the medium-term when the transition ramps up and taxes are increased to finance the transition.

There is limited change to current consumer behaviours in the short-term as governments fail to prioritise the transition to a low emissions economy. From 2030, the growing impacts of climate change and a sharp increase in decarbonisation policy propel behaviour change and alter household consumption. To reduce GHG emissions, consumers shift away from goods and services from high-emitting sectors, including domestic and international air travel, resulting in a significant increase in demand for low-emissions products and services.

The development of low-emissions technologies continues at the projected pace in the short-term and is insufficient to enable a transition to a low-emissions economy. In the late 2020's, several technological breakthroughs are achieved, particularly in hydrogen, sustainable aviation fuel, solar, and battery energy technologies, which enables the transition and the achievement of GHG emissions reductions.

New Zealand's electricity infrastructure is maintained, but limited investment in capacity is observed in the short-term due to limited additional market demand. Demand begins to rapidly increase in the medium-term as the economy shifts away from fossil fuels however, there is insufficient skills/labour and fundings to expand and upgrade the system to increase supply, resulting in a drop in reliability and an increase in prices.

As global GHG emissions to date continue to change the climate, acute extreme weather events occur more frequently and are more severe than observed in the past. 'Locked in' warming from historical GHG emissions continue to increase average surface temperatures to 2.0°C above pre-industrial levels and mean sea-level rise reaches around 0.5m by 2050.

New Zealand's population increases from 5.22 million in 2025 to 5.44 million in 2030, 5.82 million in 2040, and 6.13 million in 2050.

The carbon price remains at \$60/tonne and rapidly increases to \$250/tonne where it roughly remains until 2050.

>3°C**Hothouse World scenario**

The Hothouse world scenario describes a future where no additional policies are introduced to curb emissions, and emissions continue to rise with warming reaching >3° Celsius. This scenario assumes limited transition risks but extreme physical climate risks.

The transition to a low-emissions economy fails as New Zealand and the world fail to implement key GHG emissions reduction policies and abandon net zero targets. Dependence upon fossil fuels continues into the short, medium, and long term, resulting in rising global GHG emissions.

This world places increasing faith in competitive markets, globalisation, innovation, and participatory societies to produce rapid technological progress and development of human capital as the path to sustainable development. At the same time, the push for economic and social development remains coupled with the exploitation of fossil fuel resources. This ultimately leads to significant negative impacts on economic development and poverty increasing in climate vulnerable countries in the long term.

Significant and ongoing damages from extreme weather events lead to massive compounding costs for the New Zealand government and large sectors of the economy. This has significant implications on spending and investment across the entire public and private sectors, and results in broader increases in the cost of living of households.

There is limited change to current consumer behaviours as governments fail to prioritise the transition to a low emissions economy. Consumption continues to be resource and energy intensive, and little interest in the adoption of sustainable lifestyles is observed outside of successive generations.

New Zealand's electricity infrastructure is maintained, but there is limited investment in expansion. As extreme weather events become more severe and frequent over time, reliability of electricity is negatively impacted, and regular outages become the norm for New Zealand households and businesses. Where resource is deployed, this is primarily directed towards maintaining current levels of service and 'keeping the lights on', rather than making improvements.

As global GHG emissions to date continue to change the climate, acute extreme weather events occur more frequently and are more severe than in the past. 'Locked in' warming from historical GHG emissions continue to increase average surface temperatures to 2.4 °C above pre-industrial levels and mean sea-level rise reaches around 0.8m by 2050. In combination with more frequent and severe weather events, rising sea-level contributes to increasing damages to coastal infrastructure and housing.

Urban sprawl continues as spatial policy direction remains inconsistent and infrastructure decision-making further entrenches car-dependency in the short term. Demand for housing increases as a response to general population growth over time, as well as migration and refugees from climate-impacted nations. Over the medium to long term, urban intensification increases in response to voluntary and involuntary retreat from climate hazard prone areas, putting pressure on centralised infrastructure.

New Zealand's population increases from 5.22 million in 2025 to 5.44 million in 2030, 6.29 million in 2040, and 6.93 million in 2050.

The carbon price is consistently low at \$35/tonne into the future.

Time horizons

An overview of the time horizons considered as part of the scenario analysis process are set out in the table below. These time horizons were chosen as they align with CCHL's strategic planning horizons and capital deployment plans.

| Time horizon | Year | Rationale |
|--------------|--------------------|---|
| Short term | Present day – 2030 | Aligns with CCHL's near term capital allocation and funding cycle (three-year Statement of Intent period and 10 year forecasting for Council's Long Term Plan). |
| Medium | 2030 – 2050 | Aligns with capital allocation for CCHL's capital planning to support future Long Term Plans of the Council. |
| Long | 2050 – 2100 | Aligns with ownership and operation of critical infrastructure assets subject to the long-term impacts of climate change. |

In FY24 CCHL has focussed on identifying climate-related risks and opportunities and these will be incorporated into future capital deployment decision making processes and included in future transition planning.

Climate-related risks

CCHL's climate-related risks serve as an output of our scenario analysis process. Climate-related risks refer to the potential negative impacts that climate change may have on CCHL over the short, medium, and long term.

Risks have been identified as physical and transition risks.

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 increase variability in weather patterns, such as sea level rise.

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.

Further explanation on how CCHL's climate-related risks have been identified and assessed are provided in the Risk Management section of this report.

| Risk | Type | Anticipated business impacts | Scenario | Short term present day – 2030 | Medium term 2030 – 2050 | Long term 2050 – 2100 |
|---|------------|--|------------|-------------------------------|-------------------------|-----------------------|
| Risk of skilled workforce shortage for the transition. | Transition | Orion and Enable identified a risk that the net zero transition will require changing workforce and skills, there will be increased competition for skilled staff, and increased pressure on skilled staff to plug the skill shortage gap. This could result in increased labour costs and turnover as the industry competes for resource. Wellbeing of staff remaining could be at risk as they balance an increased workload. | Orderly | High | High | N/A |
| | | | Disorderly | Low | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of reduced travel and freight demand due to changing consumer preferences. | Transition | CIAL identified a risk that public attitude towards climate change and aviation means heightened scrutiny and shifting consumer preferences for travel and freight. | Orderly | Moderate | Low | N/A |
| | | | Disorderly | Moderate | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of a delayed national response to the transition. | Transition | CIAL identified a risk that national policy response and/or investment in supporting infrastructure are insufficient to respond to demand from the aviation sector's shift to low-emissions technology. | Orderly | High | High | N/A |
| | | | Disorderly | High | Extreme | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk that key technology (e.g. SAF) is unavailable. | Transition | CIAL identified a risk that scarcity of Sustainable Aviation Fuel (SAF) or deployment of other new technologies presents a procurement and investment challenge for the sector and presents risks to the make-up of CIAL's future long-haul network partners. | Orderly | Moderate | Low | N/A |
| | | | Disorderly | Moderate | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of increased costs and reduced volumes of air travel. | Transition | CIAL identified a risk that the cost of air travel increases (due to regulations e.g. carbon tax, SAF mandates and/or market forces e.g. fuel price). | Orderly | Low | High | N/A |
| | | | Disorderly | Low | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of reduced income from coal exports. | Transition | LPC identified a risk that the transition away from coal could lead to a decrease of coking coal as an export item - resulting in decreased revenue. | Orderly | Low | High | N/A |
| | | | Disorderly | Low | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of constraints on low voltage electrical network due to EV charging. | Transition | Orion identified a risk that widespread electrification (e.g. for EVs) places significant demand on the electricity network, leading to infrastructure constraints, potential for outage, revenue loss and major investment requirements. | Orderly | Moderate | High | N/A |
| | | | Disorderly | High | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| | Transition | CIAL identified a risk that energy generation and transmission capacity is insufficient to support the decarbonising economy, and supply constraints cause higher prices and/or interrupted supply (black/brown outs). CIAL and EcoCentral identified a risk that higher energy prices and supply interruptions may result in operational disruption and, ultimately, revenue/market share loss. LPC identified a risk of inadequate electricity transmission capacity to LPC. Electrical network upgrades required for increased capacity and demand. | Orderly | High | High | N/A |
| | | | Disorderly | High | Extreme | N/A |
| | | | Hot House | N/A | N/A | N/A |

| Risk | Type | Anticipated business impacts | Scenario | Short term present day – 2030 | Medium term 2030 – 2050 | Long term 2050 – 2100 |
|--|--|---|------------|-------------------------------|-------------------------|-----------------------|
| Risk of increased costs related to decarbonisation requirements or increased carbon costs. | Transition | Citycare identified a risk of increased CAPEX costs of replacing ICE vehicles with EVs. | Orderly | High | High | N/A |
| | | | Disorderly | Moderate | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| | Transition | Enable identified a risk of a mandated zero carbon fleet affecting Civtec, increasing operational costs of Enable. | Orderly | High | High | N/A |
| | | | Disorderly | Low | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| | Transition | LPC identified a risk in barriers to accessing external funding for replacement of high carbon emissions equipment (primarily container/coal handling equipment and the marine fleet) with zero or low emissions equipment, within the time frames required for LPC to meet its GHG reduction targets and commitments. | Orderly | High | High | N/A |
| | | | Disorderly | Low | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| | Transition | LPC identified a risk of increased design standards that accommodate improved embodied emissions footprint or changes to energy and emissions performance requirements, leading to increased costs. | Orderly | Moderate | Moderate | N/A |
| | | | Disorderly | Low | Moderate | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Transition | CCHL identified a risk of failing to reduce GHG emissions and achieve reduction targets due to capital allocation restraints. This may harm CCHL's reputation, result in potential litigation and other legal-related impacts, over-exposure to the rising cost of carbon, and a failure to attract and retain talent. | Orderly | High | High | N/A | |
| | | Disorderly | High | Extreme | N/A | |
| | | Hot House | N/A | N/A | N/A | |
| Risk of supply chain constraints due to international and national decarbonisation. | Transition | Enable and Citycare identified a risk of supply chain constraints due to rapid decarbonisation nationally and globally, leading to shortages of a wide range of products/technology. | Orderly | Extreme | Moderate | N/A |
| | | | Disorderly | N/A | Moderate | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of changes in regulation / policy. | Transition | Citycare identified a risk that changes in regulation and policies have potential impacts on building services and construction subcontractors which, in turn, could impact service delivery. | Orderly | High | High | N/A |
| | | | Disorderly | Low | High | N/A |
| | | | Hot House | N/A | N/A | N/A |
| | Transition | CCHL identified a risk of exposure to significant changes in the regulatory environment in which CCHL operates as the economy transitions to a low-emissions economy. This may increase operating costs associated with ensuring compliance with changing regulation/legislation and significant changes in the financial performance and valuation of subsidiaries. | Orderly | Extreme | N/A | N/A |
| | | | Disorderly | N/A | Extreme | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of changing stakeholder expectations. | Transition | CCHL identified a risk of misalignment between the needs and expectations of CCHL and its shareholder in regard to climate change and the management of climate-related risks and opportunities. This may result in failing to reduce GHG emissions, harm to CCHL's reputation, and over-exposure to other climate-related risks. | Orderly | High | High | N/A |
| | | | Disorderly | High | Extreme | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Risk of increasing climate change reporting and governance requirements. | Transition | CCHL identified risk associated with failing to appropriately identify, assess, and report its climate-related risks and opportunities due to CCHL's unique complexity. This may result in harm to CCHL's reputation, potential litigation and other legal-related impacts, over-exposure to climate-related risks, and failing to harness climate-related opportunities. | Orderly | High | N/A | N/A |
| | | | Disorderly | High | N/A | N/A |
| | | | Hot House | N/A | N/A | N/A |

| Risk | Type | Anticipated business impacts | Scenario | Short term present day – 2030 | Medium term 2030 – 2050 | Long term 2050 – 2100 |
|--|---|---|------------|-------------------------------|-------------------------|-----------------------|
| Risk of stranded assets or decrease in asset valuation. | Transition | CCHL identified a risk of potential stranded assets and/or loss of value of assets in the transition to a low-emissions economy. | Orderly | Moderate | N/A | N/A |
| | | | Disorderly | N/A | Moderate | N/A |
| | | | Hot House | N/A | N/A | N/A |
| Increasing temperatures and droughts resulting in energy insecurity, increased energy demands, direct damage, increased operations and maintenance costs and asset upgrade investments. | Physical | CIAL identified a risk of drought impacts on hydro generation, presenting an energy security risk (rolling brownouts). | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | High |
| | | | Hot House | Moderate | High | Extreme |
| | Physical | CIAL identified a risk of increased energy demand, requiring electrical equipment and HVAC upgrade. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | High |
| | | | Hot House | Moderate | High | Extreme |
| Physical | CIAL identified a risk of increased temperatures leading to melting/flushing of asphalt and pavements - increasing maintenance and remediation costs. | Orderly | High | High | High | |
| | | Disorderly | High | Extreme | Extreme | |
| | | Hot House | High | Extreme | Extreme | |
| Extreme weather events such as storms and tropical cyclones resulting in direct damage to assets and facilities, energy insecurity, increased operations and maintenance costs, and disruptions to operations and supply chains. | Physical | Orion, LPC, Citycare and EcoCentral identified an increase in frequency and intensity of extreme weather and winds leading to damage to assets, service disruption, damage to stock/equipment and increased maintenance and repair costs. Orion additionally identified that severe weather events can impact transmission, distribution or generation assets, disrupting electricity supply and causing reputational issues. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | High | High | Extreme |
| | | | Hot House | High | Extreme | Extreme |
| | Physical | CIAL identified a risk of extreme weather causing supply chain disruptions e.g. shipping delays, critical infrastructure outages and fuel security. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | Extreme |
| | | | Hot House | Moderate | High | Extreme |
| Sea level rise, storm surge and coastal inundation, resulting in either permanent or temporary damage to assets, disruption to access to and from facilities, and increased operations and maintenance costs. | Physical | Orion, Enable and LPC identified a risk of slow-onset sea level rise causing exposed assets to be permanently unusable (stranded). | Orderly | High | High | High |
| | | | Disorderly | High | High | High |
| | | | Hot House | High | High | Extreme |
| | Physical | Enable and LPC identified a risk of periodic coastal inundation/storm surges causing damage and disruption, rendering exposed assets temporarily unusable. Also causing increased frequency and duration of repair and maintenance activities. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | Moderate | High |
| | | | Hot House | Moderate | High | High |
| Physical | Enable and LPC identified a risk of sea level rise/coastal inundation resulting in damage to transport networks, supply chain interruptions and delays to operations. Also can cause landslips/washouts on key access routes. | Orderly | Moderate | Moderate | Moderate | |
| | | Disorderly | Moderate | High | High | |
| | | Hot House | Moderate | High | High | |

| Risk | Type | Anticipated business impacts | Scenario | Short term present day – 2030 | Medium term 2030 – 2050 | Long term 2050 – 2100 |
|---|----------|--|------------|-------------------------------|-------------------------|-----------------------|
| Increased rainfall and flooding resulting in damage to assets, disruption to access to and from facilities, and increased operations and maintenance costs. | Physical | CIAL and LPC identified a risk of increased rainfall impacting on stormwater systems (causing flooding) and wastewater infrastructure (causing overflows) - requiring capacity upgrades. Can also lead to erosion of roads and railway foundations, pollution, flooding and damage of assets/land/yards and disruption to road access - impacting operations and increasing maintenance costs. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | High |
| | | | Hot House | Moderate | High | Extreme |
| | | LPC identified a risk of extreme rainfall and flooding leading to supply chain interruptions. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | High |
| | | | Hot House | Moderate | High | Extreme |
| | | LPC identified a risk of extreme rainfall leading to an increase of silt in harbour resulting in more frequent dredging operations. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | High |
| | | | Hot House | Moderate | High | High |
| | | CIAL identified a risk of increased extreme rainfall resulting in weathertightness issues, increased instances of nuisance rainfall and flooding - impacting operations. This would lead to increased disruption and need for remediation - for example covered walkways, anti-slip surfacing, covered carparks etc. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | High |
| | | | Hot House | Moderate | High | Extreme |
| Increased fire weather resulting in damage to facilities and product/stock, impacting operations and staff health and safety. | Physical | EcoCentral identified a risk to staff wellbeing due to increased workload and stress from climate-related hazards. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | Moderate | Moderate |
| | | | Hot House | Moderate | Moderate | Moderate |
| | | Orion identified a risk of increased fire weather leading to a greater risk of ignition from incidents where trees and other vegetation contact overhead lines and equipment. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | Moderate | Moderate |
| | | | Hot House | Moderate | Moderate | Moderate |
| Both acute and slow-onset hazards resulting in physical and mental health risks to staff and key stakeholders. | Physical | Citycare identified a risk to staff wellbeing due to increased workload and stress from climate-related hazards. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | Moderate | High |
| | | | Hot House | Moderate | Moderate | High |
| | | CIAL , Enable , LPC and EcoCentral identified extreme weather events leading to increased number of operational health and safety incidents. Resulting in impacts to staff/crew, decreasing workforce retention and wellbeing. | Orderly | Moderate | Moderate | Moderate |
| | | | Disorderly | Moderate | High | Extreme |
| | | | Hot House | Moderate | High | Extreme |

Climate-related opportunities

CCHL's climate-related opportunities serve as an output of our scenario analysis process.

Climate-related opportunities refer to the potentially positive climate-related opportunities for CCHL as a result of mitigating and adapting to climate change.

Further explanation on how CCHL's climate-related opportunities have been identified and assessed are provided in the Risk Management section of this report.

Key

| | |
|-----|----------------------------|
| ✓ | Opportunity exists |
| – | Limited opportunity exists |
| N/A | Not applicable |

Transition Planning

CCHL acknowledges that climate-related risks are just one part of the bigger picture of environmental risks New Zealand is facing, including resource constraints relating to biodiversity loss, water and air pollution.

The first step in CCHL's transition towards a low carbon economy has been to establish a baseline measure of our greenhouse gas emissions.

Scope 1 and 2 emissions (the baseline measure for the Group) is set out in the Risk Management section on page 28 of this report, and we have commenced the process of measuring our Scope 3 emissions, which are expected to be disclosed in 2025.

| Driver | Opportunity | Scenario | Short term present day – 2030 | Medium term 2030 – 2050 | Long term 2050 – 2100 |
|---|--|------------|-------------------------------|-------------------------|-----------------------|
| Regulation/compliance, behaviour change/consumer preferences. | Opportunity to grow customer and asset base due to a significant projected increase in energy demand across the electricity network. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | – | ✓ | N/A |
| | | Hot House | – | – | N/A |
| | Opportunity to create a more highly utilised network through technology to increase efficiency and investment. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | ✓ | ✓ | N/A |
| | | Hot House | ✓ | ✓ | N/A |
| | Opportunity to increase or leverage renewable energy generation on existing landholdings. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | – | ✓ | N/A |
| | | Hot House | – | – | N/A |
| | Opportunity to decarbonise operations and reduce energy use, emissions and overall cost. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | – | ✓ | N/A |
| | | Hot House | – | – | N/A |

Risk Management

Te Whakamauru Tūraru

| Driver | Opportunity | Scenario | Short term present day – 2030 | Medium term 2030 – 2050 | Long term 2050 – 2100 |
|---|---|------------|-------------------------------|-------------------------|-----------------------|
| Development of low carbon technologies. | Opportunity for CIAL to partner with airlines that are aligned with our climate goals. This has the potential to open up potential new aviation markets. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | — | ✓ | N/A |
| | | Hot House | — | — | N/A |
| | Opportunity to leverage market demand to support new cargo types and identify opportunities new technologies leading to green and new infrastructure development. i.e., encouraging collaboration with other sectors such as construction. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | — | ✓ | N/A |
| | | Hot House | — | — | N/A |
| Behaviour change/ consumer preferences. | Opportunity for Enable to expand services due to an increase in data centres and international organisations moving to New Zealand. These international organisations are attracted to New Zealand due to its low carbon electricity grid. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | ✓ | ✓ | N/A |
| | | Hot House | ✓ | ✓ | N/A |
| | Opportunity for increased revenue from increased recycled materials usage and associated payments. For example, through stewardship schemes. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | — | ✓ | N/A |
| | | Hot House | — | — | N/A |
| Changes in market expectations. | Opportunity for CCHL to integrate climate change and ESR into all investment decision-making an increase its resilience. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | ✓ | ✓ | N/A |
| | | Hot House | — | — | N/A |
| | Opportunity for CCHL to use climate change reporting to demonstrate CCHL's performance to its shareholder and other investors. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | ✓ | ✓ | N/A |
| | | Hot House | — | — | N/A |
| Change in severity and frequency of extreme weather events (acute hazards). | Opportunity for enhancement of emergency response capabilities and services, leading to increased areas for business expansion. For Citycare Property this was notably the uptake of rural firefighting services due to increases in wildfires. | Orderly | ✓ | ✓ | ✓ |
| | | Disorderly | ✓ | ✓ | ✓ |
| | | Hot House | ✓ | ✓ | ✓ |
| | Opportunity to diversify service offering to provide climate resilience services to customers for example retrofitting services to properties, nature-based solutions, flood mitigation etc. | Orderly | ✓ | ✓ | ✓ |
| | | Disorderly | ✓ | ✓ | ✓ |
| | | Hot House | ✓ | ✓ | ✓ |
| | Opportunity for EcoCentral to provide waste services post extreme weather events (disaster waste), to support community recovery. | Orderly | ✓ | ✓ | ✓ |
| | | Disorderly | ✓ | ✓ | ✓ |
| | | Hot House | ✓ | ✓ | ✓ |
| Changes to urban form. | Opportunity to generate additional business through increased densification of urban areas. For example, construction, design, operations and maintenance. | Orderly | ✓ | ✓ | N/A |
| | | Disorderly | — | ✓ | N/A |
| | | Hot House | — | — | N/A |

Identification of climate-related risks and opportunities

CCHL identified and assessed its climate-related risks and opportunities as part of its scenario analysis process. Knowing CCHL's material climate-related risks and opportunities are those associated with its subsidiaries, this process was informed in part by each subsidiary company undertaking its own scenario analysis process before CCHL conducted its own.

In the absence of a CCHL Group level climate-related risk framework, Tonkin + Taylor assisted CCHL in developing a risk and opportunity assessment method that allowed CCHL to assess the subsidiaries own climate-related risks under the three scenarios. This method allowed for the nuances between the different risk and opportunity assessment approaches undertaken by each subsidiary, which each utilised different risk frameworks, scenarios, and time horizons.

Risk assessment methodology

- Physical risks identified as moderate, high or extreme (or equivalent language used by the subsidiary as part of their own risk scales) across any time horizon (short, medium, and/or long term) were identified as relevant risks for CCHL.
- Risks were then grouped by headline statements based on key hazards/drivers and impacts. Where there were similar risks that existed across multiple subsidiaries, these were consolidated into one risk. Where risks were distinct, they were retained and not consolidated.
- Risks were assessed under each scenario and time horizon using a 5-point rating scale of Insignificant to Extreme. The risk ratings provided by the subsidiaries were retained where possible, however these were overridden where they conflicted with the following logic (see below) for physical risks and transition risks based on CCHL's own scenarios. Where no risk ratings were provided by subsidiaries, ratings were provided using the same logic, and were reviewed and endorsed by the subsidiaries.
- Additional risks that were relevant at the CCHL Group level (the portfolio of companies) were then identified and assessed under each scenario and time horizon using the same 5-point rating scale.

Risk rating logic

Physical risks were rated across the short, medium, and long term across all three scenarios, applying the following logic when doing so:

- All ratings in the short term were given the same score under all scenarios.
- All ratings remained constant (i.e. did not change across the short, medium, and long term) under the Orderly scenario. Unless otherwise rated by the subsidiaries, ratings for the medium term under the Orderly and Disorderly scenario were the same, given low divergence in RCP4.5 and RCP8.5 projections at mid century.

Transition risks were rated under the Orderly and Disorderly scenarios and over the short and medium time horizons only, applying the following logic when doing so:

- All transition risks are expected to be most relevant and material over the short and medium term and under the Orderly and Disorderly scenarios only. This logic was applied as the transition to a low-emissions economy is expected to occur by mid-century, therefore making transition risks irrelevant in the long term.
- All transition risks are not expected to be material under the Hot House scenario given that there is little transition occurring under this scenario. Therefore, no ratings were provided for any transition risks under this scenario.
- Unless otherwise rated by the subsidiaries, ratings remained constant over the short and medium terms under the Orderly scenario and were elevated in the medium term under the Disorderly scenario.

CCHL notes that there are inherent limitations to the approach used to identify and assess our climate-related risks as the subsidiaries utilised different risk management frameworks as part of their scenario analysis process, and therefore their risk definitions and outcomes may be different.

In line with CCHL's annual financial reporting, CCHL will undertake annual reassessments of the Group's climate-related risks and opportunities and evaluate these in conjunction with other enterprise risks.

Metrics and Targets

Ngā Waeine me ngā Ūnga

Opportunity assessment methodology

1. Developed a long list of transition and physical climate-related opportunities identified by each of the subsidiaries over the short, medium and long term.
2. Refined the long list of climate-related opportunities using the External Reporting Board's definition of 'climate-related opportunities', and where these opportunities added value (in the form of reduced costs or increased revenue) to the entity. In doing so, some opportunities that the subsidiaries have identified have been removed as part of the consolidation approach.
3. The refined list of climate-related opportunities was then consolidated under similar drivers and impacts.

Management of climate-related risks

While CCHL identified and assessed its climate-related risks as part of a stand-alone scenario process, CCHL prioritises and manages climate-related risks with equal weighting relative to other risks.

CCHL's climate-related risks have been added to CCHL's existing investment and corporate risk registers and are managed as part of existing risk management processes.

Metrics

Greenhouse gas (GHG) emissions

CCHL has prepared its FY24 GHG emissions inventory in accordance with the Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard ("GHG Protocol").

CCHL applies a financial control consolidation approach in the preparation of its GHG emissions inventory, as defined by the GHG Protocol. Under the financial control approach, CCHL accounts for 100% of the GHG emissions over which it has financial control.

The organisational boundary includes CCHL and all its subsidiaries. The scope of the GHG emissions inventory includes all business units and activities within the operational boundaries of CCHL. No facilities, operations, or assets have been excluded from the operational boundary.

GHG emissions are reported across the following Scopes. CCHL has elected to use Adoption provisions 4: Scope 3 GHG emissions, 5: Comparatives for Scope 3 GHG emissions, 6: Comparatives for metrics, and 7: Analysis of trends.

Scope 1 – Direct GHG emissions:

emissions from sources that are owned or controlled by the entity.

Scope 2 – Indirect GHG emissions:

emissions from consumption of purchased electricity, heat, or steam.

FY24 forms CCHL's base year Scope 1 and 2 GHG emissions. No base year restatements have been made.

FY24 emissions

All emissions are presented as tonnes of carbon dioxide equivalents (tCO₂e). Scope 2 emissions are reported as location-based, as defined by the GHG Protocol.

| | FY24 |
|--------------------------------------|---------------|
| Scope 1 - total | 20,035 |
| Stationary combustion | 217 |
| Mobile combustion | 19,641 |
| Fugitive emissions | 177 |
| Scope 2 - total | 13,361 |
| Purchased electricity | 2,429 |
| Transmission and distribution losses | 10,932 |
| Scope 1 and 2 - total | 33,396 |

| Scope | Category | Emission sources | Calculation methodology | Data Limitations | Data quality | Uncertainty |
|--|--------------------------------------|---|--|---|--------------|-------------|
| 1 | Stationary combustion | LPG for heating and cooking. | Direct activity-based method. | None | Robust | Low |
| | Mobile combustion | Fuel used for transport, including petrol (regular and premium) and diesel. | Direct activity-based method. | Where fuel type was unknown, this was assumed to be regular petrol. | Robust | Low |
| | Fugitive emissions | Refrigerants in HVAC, welding gases, and de-icing. | Indirect activity-based method, based on top ups and capacity. | Poor data quality. Not all refrigerants have been measured. | Questionable | Medium |
| SF6 used in high voltage circuit breakers. | | Direct activity-based method. | None | Satisfactory | Low | |
| 2 | Purchased electricity | Purchased electricity. | Direct activity-based method. | Excludes EV charging off-site. | Robust | Low |
| | Transmission and distribution losses | Distribution losses associated with Orion's electricity network. | Direct activity-based method. | None | Robust | Low |

A materiality assessment was undertaken by an external consultant to determine the emission sources to be included within the inventory.

This assessment was based on the size of the GHG emission, level of control, ability to measure, and industry reporting practice. Based on this assessment, lubricants combustion has been excluded from Scope 1 due the small size, lack of available data, and lack of common reporting practice associated with this emission source.

The size of this emission source is expected to be less than 1% of the total Scope 1 and 2 inventory.

GHG emissions were calculated using emissions factors from the following sources:

- New Zealand Ministry for the Environment’s Measuring emissions: A guide for organisations: 2024 detailed guide (Intergovernmental Panel on Climate Change Fifth Assessment Report (AR5) (GWP100).
- New Zealand Ministry for the Environment’s Measuring emissions: A guide for organisations: 2023 detailed guide (Intergovernmental Panel on Climate Change Fifth Assessment Report (AR5) (GWP100).

GHG emissions intensity

The CCHL Group calculates its emissions intensity using its asset value. With an asset value of \$6 billion for financial year ending 30 June 2024, CCHL Group’s emissions intensity is 143.1 tCO₂e/\$M.

Assurance

No assurance has been provided over this GHG emissions inventory. McHugh & Shaw have undertaken a pre-assurance engagement to provide feedback and identify any issues that may lead to the GHG disclosure containing a material misstatement.

Additional metrics

| Metric | FY24 |
|--|---|
| Transitional risks: Amount or percentage of assets or business activities vulnerable to transition risks | CCHL has not yet valued the amount or percentage of assets or business activities vulnerable to transition risks. CCHL will begin to understand its exposure in FY25 as it quantifies the anticipated financial impact of its transition risks. |
| Physical risks: Amount or percentage of assets or business activities vulnerable to transition risks | CCHL has not yet valued the amount or percentage of assets or business activities vulnerable to physical risks. CCHL will begin to understand this in FY25 as it quantifies the anticipated financial impact of its physical risks. |
| Opportunities: Amount or percentage of assets or business activities vulnerable to transition risks | CCHL considers all business activities are potentially aligned to climate-related opportunities. CCHL will begin to understand this further in FY25 as it quantifies the anticipated financial impact of its opportunities. |
| Internal carbon price | CCHL does not currently utilise an internal carbon price. |
| Remuneration | Management remuneration is not currently linked to climate-related risks and opportunities. |

CCHL has no additional key performance indicators or metrics used to measure and manage climate-related risks and opportunities.

Capital deployment

CCHL has elected to disclose the amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities at the subsidiary level.

| Subsidiary | FY24 |
|---|---|
| Lyttelton Port Company | <p>\$642,000 (Capital/Operational expenditure) Spend on upgrades to network cabling, LED lighting at the coal yard and CityDepot, and additional EV charging.</p> <p>\$555,000 (Capital) Spend related to hydrological studies and upgrades to infrastructure within the coal yard to improve stormwater capture and treatment capacity. Includes upgrades to stormwater drainage at CityDepot.</p> <p>\$250,000 (Operational expenditure) Spend required to repair and improve the resilience of a portion of seawall that has been damaged during Cyclone Gabrielle.</p> <p>\$252,427 (Capital/Operational expenditure) Spend on increasing the durability of timber and concrete wharves and jetties.</p> <p>\$100,000 (Capital) Spend related to the replacement of a 32-year-old diesel truck with a LDV et60 electric utility vehicle and charger. Includes costs to retrofit the truck for vessel lines operations.</p> |
| Enable | <p>\$204,408 (Operational expenditure) Spend across consultant fees, service providers, software, and sustainability certifications.</p> |
| EcoCentral | Nil. |
| Citycare Group | <p>\$162,590 (Operational expenditure) Annual spend on technical support to advance our progress in managing our climate-related risks and opportunities.</p> <p>\$62,000 (Operational expenditure) Annual spend on emissions measurement and management software</p> <p>\$1,185,400 (Capital or operational expenditure) Annual investment in low-emissions vehicles</p> |
| Orion | Refer to Orion's Asset Management Plan: oriongroup.co.nz/assets/Our-story/Publications/Orion-AMP-2024.pdf |
| Christchurch International Airport Ltd | <p>\$1,900,000 (Capital/operational expenditure) Investment in energy solution initiatives Kōwhai Park Solar Farm, EV energy hub, upgrading LED lighting, and electrifying fleet vehicles.</p> <p>\$267,000 (Capital/operational expenditure) Investment in water and drainage initiatives to both increase current understanding of water usage across the campus and build climate resilience to new drainage infrastructure.</p> |

Targets

CCHL does not currently have any targets to manage climate-related risks and opportunities, including for GHG emissions reductions. In this reporting year, CCHL has focused on establishing its GHG emissions inventory baseline, and will investigate establishing relevant targets in the future.

CCHL has elected to outline the subsidiaries' own GHG emissions reduction targets in the interest of users of this Climate Statement. CCHL has not set targets over and above these.

| Subsidiary | Targets | Interim targets | Alignment with limiting warming to 1.5°C | Reliance on offsets | Performance against targets |
|------------------------|---|--------------------------|--|---------------------------------|---|
| Lyttelton Port Company | 50% absolute reduction in Scope 1 and 2 ¹ GHG emissions by FY30, against a FY18 base year. | No interim targets. | Targets were modelled using the Science Based Targets initiative's tools, which outline the reductions in emissions required to contribute to limiting global warming to 1.5°C. ³ | Targets do not rely on offsets. | 4% absolute reduction achieved against FY18 baseline. |
| | 90% absolute reduction in Scope 1, 2, and 3 GHG emissions by 2050, against a FY18 base year. | | | | |
| Enable | 35% absolute reduction in Scope 1 and 2 ¹ GHG emissions by FY25, against a FY20 base year. | No interim targets. | FY35, FY40, and FY50 targets were modelled using the Science Based Targets initiative's guidance for ICT companies, which outline the reductions in emissions required to contribute to limiting global warming to 1.5°C. ³ | Targets do not rely on offsets. | 26% absolute reduction achieved against FY20 base year. |
| | 62% absolute reduction in Scope 1 and 2 ¹ GHG emissions by FY30, against a FY20 base year. | | | | |
| | 76% absolute reduction in Scope 1 and 2 ¹ GHG emissions by FY35, against a FY20 base year. | | | | |
| | 90% absolute reduction in Scope 1 and 2 ¹ GHG emissions by FY40, against a FY20 base year. | | | | |
| | 95% absolute reduction in Scope 1 and 2 ¹ GHG emissions by FY50, against a FY20 base year. | | | | |
| EcoCentral | No information provided. | No information provided. | No information provided. | No information provided. | 3% absolute reduction achieved against FY19 base year. |

| Subsidiary | Targets | Interim targets | Alignment with limiting warming to 1.5°C | Reliance on offsets | Performance against targets |
|------------------------------------|---|--|---|----------------------------------|---|
| Citycare Group | 42% absolute reduction in Scope 1 and 2 ¹ GHG emissions by 2030, against a FY22 base year. | No interim targets. | Targets were modelled using the Science Based Targets initiative's tools, which outline the reductions in emissions required to contribute to limiting global warming to 1.5°C. ³ | Targets do not rely on offsets. | 3% absolute reduction achieved against FY22 base year. ⁵ |
| | 66% absolute reduction in Scope 1 and 2 ¹ GHG emissions by 2040, against a FY22 base year. | | | | |
| | 90% absolute reduction in Scope 1 and 2 ¹ GHG emissions by 2050, against a FY22 base year. | | | | |
| Orion | 50% absolute reduction in X GHG emission sources by 2030, against a 2020 base year. | Interim targets in place for FY25, FY26, and FY27. | No information provided. | Target does not rely on offsets. | 3% absolute reduction achieved against FY22 base year. |
| Christchurch International Airport | Maintain net zero ⁴ in Scope 1 and 2 ¹ GHG emissions from 2021 onwards, against a 2015 base year. | N/A | Targets were modelled using the Science Based Targets initiative's net-zero tool, which outlines the reductions in emissions required to contribute to limiting global warming to 1.5°C. ³ | Refer to footnote 6. | Target achieved. |
| | Absolute zero Scope 1 and 2 ¹ GHG emissions by 2035, against a 2015 base year. ⁶ | No interim targets. | | Target does not rely on offsets. | No information provided. |

¹ Scope 2 GHG emissions are in reference to the location-based/market-based method, as defined by the GHG Protocol.

² Scope of the Scope 3 target excludes ship emissions, employee commuting, purchased goods and services, and one-time construction emissions.

³ While this target was set using publicly available resources from the Science Based Targets initiative, this target has not been submitted to or approved by the Science Based Targets initiative.

⁴ CIAL defines net zero as maintaining an over 90% absolute reduction in Scope 1 and 2 GHG emissions against a 2015 base year, and offsetting the remaining GHG emissions.

⁵ Citycare Group has adopted the absolute Scope 1 and 2 reduction targets from a FY22 base year, subject to cost benefit analysis and adequacy of funding.

⁶ CIAL's principal focus is on gross emissions reductions. In addition to this, in FY24 we worked with New Zealand-based carbon management firm Ekos to purchase and progress the permanent cancellation of a volume of New Zealand Units (NZUs) under the New Zealand Emissions Trading Scheme (ETS) that is equivalent to our FY23 residual Scope 1 and 2[1], and Voluntary Carbon Units (VCUs) equivalent to a portion of CIAL's FY23 scope 3[2]GHG emissions [3]. This purchase and cancellation of NZUs and VCUs has been undertaken by CIAL as a voluntary additional action.

The NZUs cancelled by Ekos on CIAL's behalf in FY24 were sourced from a post-1989 forestry project in Jacks Valley that is registered under the ETS and will also be accounted for by New Zealand's reporting against its Nationally Determined Contribution under the Paris Agreement. The forest consists of indigenous forest and exotic forest that is transitioning to indigenous forest. Further information about the Jacks Valley forest project is available on Ekos's website here. Ekos cancels NZUs on behalf of its clients quarterly and has its unit cancellation independently audited. The VCUs cancelled by Ekos on CIAL's behalf in FY24 were sourced from an avoided deforestation project in the New Ireland province, Papua New Guinea. These offsets are certified to the Plan Vivo Standard and retired in the Market Environmental Registry. We intend to cancel NZUs and VCUs equivalent to our FY24 remaining emissions.

^[1] These NZUs were voluntarily cancelled on 24 Sept 2024.

^[2] We are awaiting the retirement of these VCUs through Ekos.

^[3] Extended Scope 3 emissions were deemed to include upstream transport and distribution of goods, business travel (flights, accommodation etc), staff working from home, waste generated in operations (solid waste to landfill and wastewater to water treatment plants), transmission and distribution losses for electricity and natural gas, well to tank emissions for fuel, emissions from purchased goods, downstream leased assets, and tenant de-icing substances.



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