



ENERGY

# Climate Statements

Z Energy Limited and subsidiaries 2023



These climate statements are structured around the four mandatory sections of NZ CS 1, and also draw from the Task Force on Climate-Related Financial Disclosures (TCFD) framework that Z has reported against in previous years. The order of statements differs from the order as they appear in NZ CS 1 for the purpose of readability. Disclosures within the Strategy section have also been reordered. Users of this document can also use the hyperlinks to navigate directly to any section.

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# About these climate statements

**This is Z Energy Limited's (Z's) first set of climate-related disclosures required by the Aotearoa New Zealand Climate Standards. It follows four years of previous voluntary climate-related disclosures Z chose to make and to publish in Z's Annual Reports from FY20 using the Task Force on Climate-Related Disclosures (TCFD) framework.**

Approved on behalf of the Board on  
10 April 2024

**Gregory David Barnes**  
Chair

**Nigel Lindis Jones**  
Director

## Reporting standards

These climate statements have been prepared in compliance with the Aotearoa New Zealand Climate Standards (NZ CS 1, NZ CS 2 and NZ CS 3) published by the External Reporting Board (XRB) in December 2022.

Z has elected to use the following NZ CS 2 adoption provisions, which are detailed further on page 44:

- 1 Current financial impacts
- 2 Anticipated financial impacts

## Reporting entity

Z is a wholly owned subsidiary of Ampol Holdings NZ Limited, which in turn is a wholly owned subsidiary of Ampol Limited (Ampol Limited and its subsidiaries and controlled entities are referred to in this document as 'Ampol'). These group climate statements include climate-related disclosures for Z and its subsidiaries, including Flick Energy Limited (Flick Electric), as well as controlled entities and Z's interests in joint arrangements where relevant.

The scope of the reporting entity aligns with that used for Z's 2023 Consolidated Financial Statements which are contained in Z's 2023 Annual Report.

Z has disclosed information where it is material as defined in NZ CS 3, namely that "information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that primary users make on the basis of an entity's climate-related disclosures". Primary users are defined as Z's current and future investors, lenders and other creditors.

## Important notice

These statements contain disclosures that rely on early and evolving assessments of current and forward-looking information, incomplete and estimated data, and our related judgements, opinions and assumptions. We have sought to provide accurate information in respect of the year ended 31 December 2023 as at the date of publication 10 April 2024, but we caution reliance being placed on representations that are necessarily subject to significant risks, uncertainties and/or assumptions. Climate change is an evolving challenge, with high levels of uncertainty and significant data challenges, particularly over long-term horizons. Descriptions of the current and anticipated impacts of climate change on Z and its subsidiaries are therefore necessarily estimates only.

In particular, these statements contain forward-looking statements and opinions, such as potential impacts, climate scenario narratives, targets, forecasts, potential global responses to climate change, government policy, regulatory developments, the development of various technologies, the future plans, strategies and objectives of management, and statements of Z's current intentions.

Words such as "likely", "looking forward", "expect", "predict", "will", "may", "intend", "seek", "would", "continue", "plan", "estimate", "potential", "anticipate", "believe", "risk", "aim", "forecast", "assumption", "projection", "target", "goal", "guidance" or other similar words, are used to identify forward-looking statements.

Forward-looking statements and opinions are based on historical experience, internal business data, external sources, and various other factors that Z believes are reasonable in the circumstances and based on its current understanding. These statements and opinions necessarily involve assumptions, forecasts and projections about our present and future strategies and the environment in which we will operate in the future. They reflect Z's current views on future events and are subject to change due to known and unknown risks, uncertainties, assumptions, estimates and other factors which are, in many cases, beyond Z's control, particularly as to inputs, available data and information which is likely to change.

Risks and opportunities described in this report, and Z's strategies to achieve its targets, may not eventuate or may be more or less significant than anticipated. Many factors can affect Z's actual results, performance or achievement of climate-related targets (or other metrics), and these may differ materially from what is described in this report, including due to economic and technological viability, government, consumer, and market factors outside Z's control.

Accordingly, while Z has made every effort to fairly present this climate-related disclosure, it gives no representation, guarantee, warranty or assurance about the future business performance of Z, or that the outcomes expressed or implied in any forward-looking statement made in this document will occur. Actual outcomes may differ materially from those expressed

or implied in this document. Z does not accept any liability whatsoever for any loss arising directly or indirectly from any use of the information contained in this report, whether in respect of Z and/or its subsidiaries.

Z expects that some forward-looking statements made in this document may be amended, updated, recalculated, and restated in future documents as the quality and completeness of its data and methodologies continue to evolve and improve. Z does not:

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

This disclaimer should be read along with the limitations, dependencies, uncertainties, barriers, and risks set out in pages 31-35 (Transition plan aspects of Z's strategy). 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, available on <https://www.z.co.nz/about-z/corporatecentre>.

## Board oversight of climate-related risks and opportunities

Z is now part of Ampol following the acquisition of Z by Ampol in May 2022.

The Z Board of Directors (Z Board) is the governance body responsible for oversight of climate-related risks and opportunities for Z. Its directors are appointed by the Ampol Board.

For much of this reporting period, two of the four directors were on the Ampol Leadership Team (ALT) and the other two sat on the Ampol Board. Following a change effective from 20 December 2023, Z's three directors were all on the ALT.

The Z Board is responsible for managing and reviewing performance against Z's budget, strategy and business plans, including risk management. In the reporting period, the Z Board held five meetings (in February, May, July, August and November 2023). Climate-related risks and/or opportunities were discussed at four of those meetings.<sup>1</sup>

The Z Board Charter provides that the Z Board is involved in making recommendations to the Ampol Board on Z's strategy development, risk appetite settings, and material business risks and opportunities, (including those related to climate change). No specific recommendations relating to climate change were made by the Z Board to the Ampol Board in 2023. The Z Board is responsible for the oversight of control and accountability systems within Z.

From 15 December 2023, Z's subsidiary Flick Electric had a Board composed of Ampol's General Manager for Energy Solutions,<sup>2</sup> a Z Leadership Team (ZLT) member and the Energy Solutions General Manager for Strategy and Growth.

Z and Ampol are in the process of further aligning climate-related functions and processes where appropriate. The Z Board retains responsibility for oversight of Z's climate-related risks and opportunities, including climate-related reporting. This disclosure refers to the Ampol Board, Ampol Committees and the ALT where relevant.

The Ampol Safety and Sustainability Committee, an Ampol Board standing committee, advises and makes recommendations to the Ampol Board, including on Ampol systems, policies, and processes relating to climate-related risks and opportunities for Z. In 2023, key climate-related matters presented at Committee meetings included governance of climate change risk and risks associated with greenwashing.



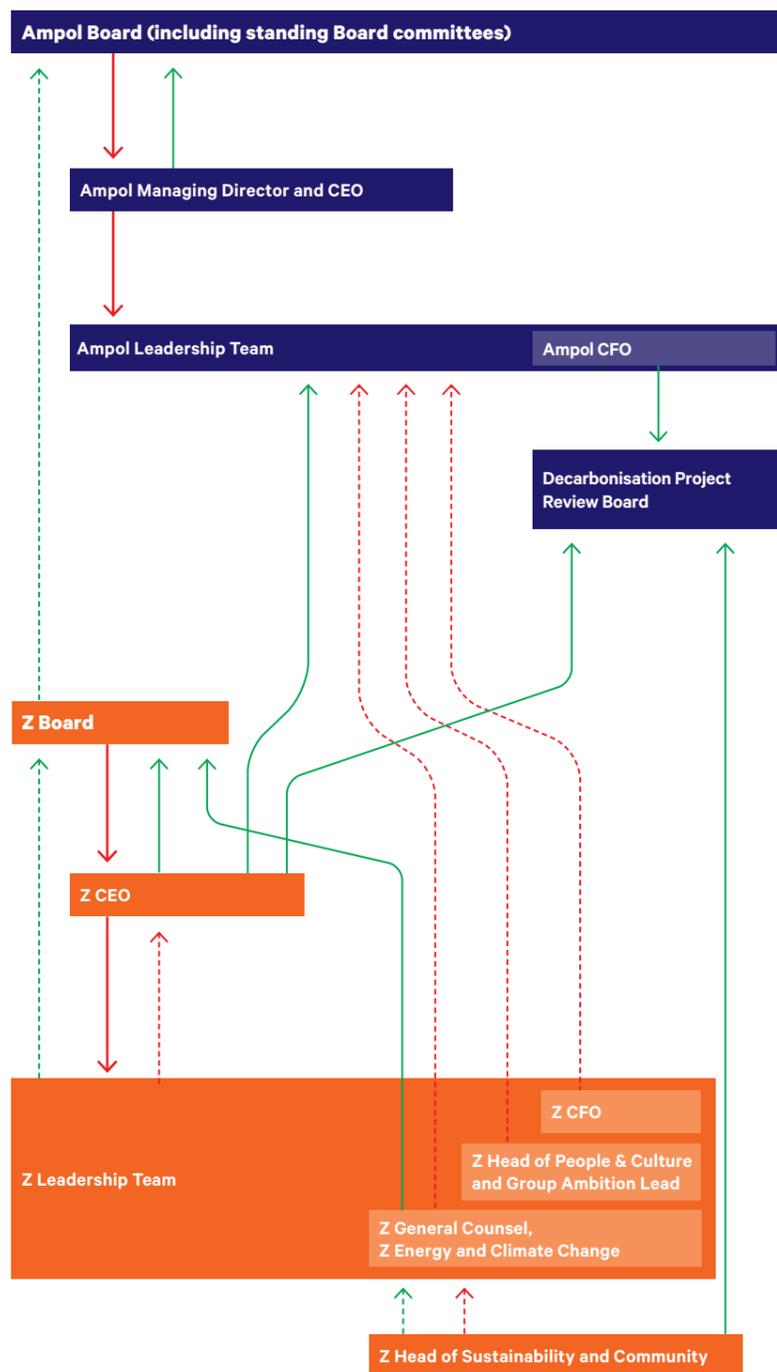
<sup>1</sup> Z's subsidiary Z Energy 2015 Limited's Board mirrors that of the Z Board and meetings are held concurrently.

<sup>2</sup> Z's Low Carbon team and Ampol's Future Energy team have been restructured into one Energy Solutions team for Ampol.



## Governance overview

This table describes Z's oversight of climate-related risks and opportunities. This solely covers key climate-related structures and responsibilities in Ampol as relevant to Z.



- Key**
- delegation and direction
  - reporting line and direction
  - attends as a matter of course
  - recommendations made and direction

### Ampol Board

Meets at least seven times per year.  
Appoints Directors of the Z Board.  
Oversees the performance of Ampol in relation to climate-related risks and opportunities.  
Oversees the Ampol Risk Management Framework, which identifies climate change as one of the 16 most material risks.

### Ampol Managing Director and CEO

Responsible for climate change risk at a management level.  
Member of Ampol Leadership Team.

### Ampol Leadership Team (ALT)

Five ALT members, including Z's CEO, attend the Decarbonisation Project Review Board in addition to Ampol's GM Investor Relations and Sustainability and Z's Head of Sustainability and Community.

### Ampol Safety and Sustainability Committee

Ampol Board standing committee that meets quarterly.  
Responsible for reviewing, advising and making recommendations to the Board on the safety and sustainability related systems, policies, processes and performance of Ampol including climate-related risks and opportunities.

### Decarbonisation Project Review Board

Meets quarterly.  
Monitors and reports internally on progress on decarbonisation projects and operational emissions targets within Ampol.

### Ampol CFO

Chairs the Decarbonisation Project Review Board.

### Z Board

Meets quarterly.  
Governance body responsible for oversight of climate-related risks and opportunities for Z.  
Climate-related risks and/or opportunities are discussed regularly at Z Board meetings.  
Responsible for managing and reviewing performance against Z's business plan, strategy and budget.  
Responsible for oversight of control and accountability systems within Z.  
Responsible for making recommendations to Ampol Board on strategy development, risk appetite settings, material business opportunities and risks.

### Z Chief Executive Officer (CEO)

Director on Z Board effective from 20 December 2023.  
Responsible for day-to-day management and administration of Z, able to delegate this power further to employees, including Z Leadership Team.  
Responsible for development of Z's strategy.  
Attends Z Board meetings.  
Member of the Ampol Leadership Team.  
Member of the Z Leadership Team.

### Z Leadership Team (ZLT)

Generally meets monthly.  
Responsible for providing direction and assurance on Z's Organisational Risk Management System (ZORM).  
Responsible for approving climate-related risks and opportunities identified within Z's business strategy, and the effectiveness of identified controls.  
Provides updates to the Z Board as relevant on climate-related risks and opportunities.

### Z Chief Financial Officer (CFO)

Attends Z Board meetings.  
Responsible for financial statements and climate-related financial metrics.

### Z General Counsel, Z Energy and Climate Change

Responsible for the overarching management of climate-related risk as identified within ZORM after the General Manager of Strategy and Risk left Z in 2023.  
Head of Sustainability and Community reports to General Counsel, Z Energy and Climate Change.



### Skills and competence

Z Board Directors are appointed by the Ampol Board. Appropriate skills and competencies are delivered through a mix of Board appointments and continuous education.

The Z Board Charter makes it clear that all Directors are expected to continuously educate themselves to ensure they have the appropriate expertise and can effectively perform their duties. The Charter also provides that visits to Z's operational sites, briefings from Z management, industry experts and advisers to Z, and educational stakeholder briefings will be arranged for the Z Board. The Board may also seek its own professional external advice. A range of continuous education sessions were provided to the Z Board to foster its climate expertise and oversight of climate-related issues in 2023.

The Z Board has committed to the climate governance principles adopted by the World Economic Forum's Climate Governance Initiative (CGI). The principles are intended to guide the development of good climate governance by boards of directors.

### Development and oversight of strategy

In 2023, the Z Board received updates from members of the ZLT on progress against Z's strategy for 2019-2023, as well as updates on the formulation of Z's new strategy for 2024-2028. This new strategy engages with risks and opportunities presented by climate change and the energy transition. Further detail about Z's strategy can be found in the Strategy section from page 14.

An update on Z's strategy for 2024-2028 was presented to the Ampol Board in August 2023.

The Z Board Charter makes it clear that the Z Board will be responsible for managing and reviewing performance against the strategy.

### Climate risk metrics and targets

The Z Board sets, monitors progress of, and oversees performance against metrics and targets for managing climate-related risks and opportunities, including through oversight of Z's Organisational Risk Management System (ZORM) and management and review of performance against Z's strategy.

The Z Board conducts annual reviews of Z's business plan, strategy, and budget for the coming year and the enterprise assurance plan in relation to all risk categories, including climate risk.

### Remuneration and climate performance

Z's remuneration framework for all its permanent employees is currently indirectly linked to achievement of climate-related performance metrics. Climate-related measures are linked to short-term incentives, particularly a selection of targets aligned to the company objectives of always being safe and reliable, and growing non-fossil fuel income.

Further details on Z's climate risk metrics and targets, including on remuneration, are provided in the Metrics and Targets section, on pages 42-43.

## Management's role in assessing and managing climate-related risks and opportunities

The Z Board can delegate functions and powers to Z's CEO for day-to-day management and leadership of Z. Z's CEO may in turn delegate to staff, including the ZLT.

Z's CEO is responsible for the development of Z's strategy.

The ZLT is responsible for providing direction and assurance on Z's Organisational Risk Management System (ZORM) to the CEO.

Z's General Counsel (who also fulfils the role of General Counsel, Climate Change, for Ampol) is the business owner responsible for the overarching management of climate-related risks as identified within ZORM.

The ZLT reviews and approves climate-related risks and opportunities identified within Z's strategy, and the effectiveness of associated critical controls. This includes Z's climate-related metrics and targets detailed in the Metrics and Targets section on page 43, some of which are included in Z's company performance targets.

The ZLT receives updates from the Z business on climate-related risks and opportunities as needed. In 2023, the ZLT discussed certain matters relating to climate change including greenwashing risks, operational emissions and biodiversity.

The Z Chief Financial Officer (CFO), Head of People and Culture, and General Counsel are on the ZLT and have reporting lines into the equivalent Ampol functions.

The Z CEO, General Counsel, and CFO generally attend meetings of the Z Board. The Z CEO also sits on the Ampol Leadership Team (ALT), to ensure alignment between the most important areas of the business, including between Ampol and Z in relation to climate-related risks and opportunities.

The Ampol Board has assigned the Ampol Managing Director and CEO (the same person) responsibility for climate-change risk at a management level. The ALT oversees identification, quantification and management of climate-related risks across Ampol, including Z.

The Ampol CFO also chairs the Ampol Decarbonisation Project Review Board (PRB), which meets quarterly. The PRB, which is made up of members of the ALT and other representatives from selected business units<sup>3</sup> within Ampol (including Z), is generally attended by Ampol's GM of Investor Relations and Sustainability, Z's CEO and its Head of Sustainability. The PRB monitors decarbonisation project delivery and reports on performance against emission reduction targets across Ampol, including Z.

<sup>3</sup> Retail, Supply, Corporate, Sustainability and Energy Solutions.



**Z’s Organisational Risk Management system (ZORM) is the enterprise risk management framework that supports how Z manages risks and incidents arising from our business activities and operations. It also guides how Z manages the most significant risks to our performance and strategy.**

**Z’s Organisational Risk Management system (ZORM)**

The ZORM system is made up of Z’s standards, approaches, procedures, and tools to help us effectively manage our organisational and operational risks. The ZORM system is certified against ISO 45001:2018 (Occupational Health and Safety Management System) and is re-certified annually. This certification recognises the ZORM system meets global standards for occupational health and safety management and ensures we meet our commitment of having a risk management system that is core to our business, enabled, and continually improved.

Within the ZORM system are a series of standards that help Z to manage and understand its risks. Such risks are present across the range of workplaces, operations and activities at Z, from company offices to company travel, road or marine transport of fuel products conducted by Z’s business partners, to operating Z’s network of terminal facilities and retail sites. One of these standards, ‘ZORM Standard: Managing Risks’, outlines the fundamental requirements for managing risks at Z, including climate-related risks.

The process for identifying, assessing, and managing climate-related risks at Z is undertaken in line with the ZORM system.

Z uses a risk assessment approach to identify, analyse, evaluate, treat, and review. Z’s risk assessment process is cyclical and can be applied specifically, such as for a task or simple activity, or more broadly across an initiative, or a complex operation or activity.

The digital risk management platform we use to support the ZORM system is called ZORM Digitised (ZORMD). This digital solution combines online forms with clear dashboards that help Z’s business teams get risk data and supports them making decisions.

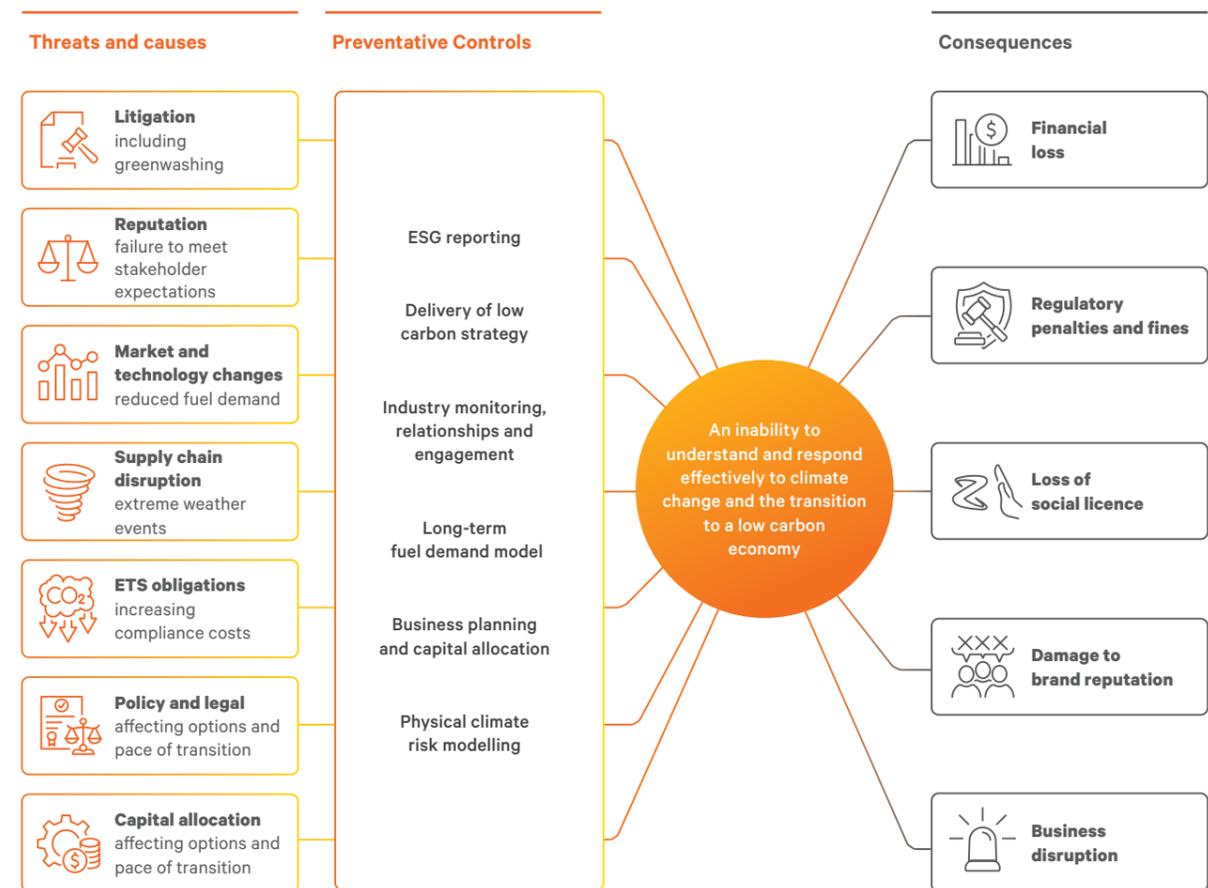
**Climate risk identification**

Climate change has been considered a key enterprise risk for Z since 2020 and sits within the Enterprise Risk Profile (ERP). Risks included within the ERP are those that could have the most material impact on Z’s purpose or strategy. The profile is split into risk categories with a risk owner and risk appetite defined for each risk category. This is monitored by the Z Board and Z Leadership Team (ZLT) and forms the core of Z’s risk management practices.

‘Climate Change’ is a specific risk area within the ‘Strategic’ risk category which requires an annual assessment and review to understand Z’s material climate-related risks and opportunities on how to control, mitigate or adapt to these risks.

Z visualises risk assessments using risk bow ties for each enterprise risk, which are held within ZORMD. Enterprise risks are then assessed at the business unit and site level (where appropriate), and these risk assessments are captured within the same system. See the infographic to the right for a simplified version of the climate-related risk bow tie.

**Simplified version of Z’s climate-related risk bow tie**



Z’s climate-related risks were originally identified in line with the TCFD framework recommendations. This risk assessment was informed by three different climate scenarios: the Business Energy Council (BEC) 2060 scenarios (Kea and Tūi); the United Nations Intergovernmental Panel on Climate Change (IPCC) representative concentration pathways (RCP2.6 and RCP4.5); and the Climate Change Projections for New Zealand, second edition report from the Ministry for the Environment (MfE).

Z’s risk assessment was also supported by regional documentation from the National Institute of Water and Atmospheric Research (NIWA). A series of cross-functional internal workshops and analysis supported by external advisors informed this work. The risk assessment focused on Z’s transport-related operations and excluded the value chain associated with retail electricity or Z’s convenience retail offer including food and drink.

The most material physical and transitional climate-related risks were logged in ZORMD for continued assessment and disclosed in Z’s TCFD disclosures within the 2022 Annual Report.



In 2023, Z used two new tools to assess the scope and impact of climate risks identified:

**Transition risk assessment**

Z updated its scenario analysis process to include a review of the business strategy, risks and opportunities under three different temperature-aligned climate scenarios in the short term (2024–2028), medium term (2029–2035) and long term (2036–2050) (as described in the Strategy section of this statement). Climate risks and opportunities highlighted during this scenario analysis process were reviewed alongside the climate risks logged in ZORMD, with all key risks remaining valid.

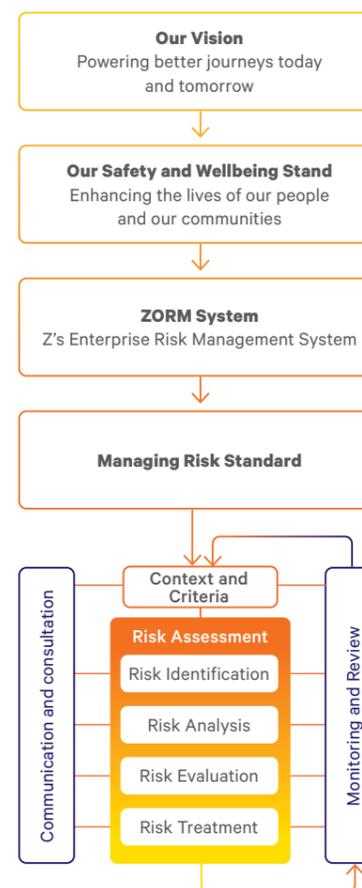
**Physical risk assessment**

In 2022, Z expanded on its previous work to qualitatively assess the exposure of its assets to the physical risks of climate change impacts. A regional high-level assessment of the projected changes in climate indicators (sea-level rise, precipitation, wind and drought) was conducted across Z’s assets from 2025, 2030 and 2040 under three climate scenarios of warming and associated impacts: 1.5 degrees Celsius (RCP 2.6); 2.3 degrees Celsius (RCP 4.5); and 4.5 degrees Celsius (RCP 8.5). These time horizons were chosen to align with Z’s 2022 scenario analysis. It was noted that in most cases the RCP climate impact modelled scenarios do not deviate significantly in terms of effects until after 2040.

This was followed by a financial impact assessment of potential climate-related physical risks, such as potential damage costs as a result of the main climate indicators applied in the physical risk assessment. The costs of extreme weather across Z’s assets was also considered at this point.

Z’s assessment will continue to focus on cascading risks, such as landslips caused by wet weather events, to better understand potential disruptions to the supply of fuel products from ports, terminals, and retail sites. This supply chain disruption is likely to present the more material financial risk to Z.

**Risk review processes**



All risks included in the ERP go through an annual review process, known as the ERP review process, to determine the current materiality of the risk and to ensure adequate controls are in place and effective to manage the risk. The outcome of this process is used by the ZLT to monitor risk management performance, and by the Z Board in a governance capacity.

The ERP review undertaken by Z Management is presented to the Z Board.

Through verification and validation of controls, the ERP review assesses the effectiveness of controls and proposes any risk treatment actions, in order to reduce or minimise risk. This process is done by those who are accountable for the controls in collaboration with the business owners accountable for the risks. The outputs are captured digitally using ZORMD.

The ERP review in relation to Z’s climate-related controls and their effectiveness was last conducted in November 2022, with risks updated by Management and reviewed by the Z Board. These controls are scheduled for review again in 2024 in alignment with the scheduled Ampol Board risk deep dive session and annually thereafter. Notwithstanding this, actions on climate-related controls took place in 2023 including an update to fuel demand modelling, Z’s strategy refresh, implementing a due diligence process for environmental, social and governance (ESG) claims and transparent ESG reporting. Ampol has also set a Climate Risk Appetite statement in relation to Ampol, including Z.

A summary of Z’s climate-related controls is presented in the climate-related risk bow tie on page 11.

**Risk and relativity**

Z uses a Risk Assessment Matrix (RAM) as a visual aid to help define the level of risk by considering the consequence of a risk event occurring and the likelihood of that event occurring (grouped by Z’s risk categories).

It provides a high-level view of where Z’s risks are currently measured and what should be prioritised based on the risk level. It aims to increase the visibility of risks and assist in decision-making. The Risk Assessment Matrix is completed for each enterprise risk and presented to the ZLT and the Z Board as part of the ERP review.

The risk profile examines:

- the nature and level (or priority ranking) of the threats faced by the organisation
- the likelihood of adverse effects occurring, and the level of disruption and costs associated with each identified risk
- the effectiveness of controls in place to manage those risks.

All controls within ZORMD tagged against an ERP risk are aggregated at a risk level and presented within the Enterprise Risk Dashboard (including Z’s enterprise climate risk). This allows Z to understand the relativity of all of its enterprise risks in a centralised view based on effectiveness of controls, likelihood of occurrence, and the consequences of each risk.



**Over 2023, as one of Aotearoa New Zealand's leading transport energy companies, Z has continued to safely and reliably deliver the energy our customers and our economy need, while supporting the transition to a low carbon future for Aotearoa New Zealand.**

**Between 2019 and 2023, Z delivered against a four-year strategy programme that helped generate a new industry structure, a reconfigured liquid fuel supply chain and an optimised network and customer offer. Over the course of 2023, Z has redeveloped its strategy and planned future delivery against this.**

Z's strategy, and planned delivery against this, is explored in more detail below and in the 'Transition plan aspects of Z's strategy' section on page 31.



## Z's purpose, current business model and strategy

### Te pūtake | Our purpose

Z is purpose- and values-driven. What it stands for, and what it believes in drive the decisions it makes and the way it behaves. Over 2023, Z has revisited its purpose to ensure it is tightly aligned with its operating context and with Ampol, of which Z is now a part.

'Powering better journeys, today and tomorrow' succinctly captures Z's commitment to delivering value for its customers and the economy today, as well as through the transition to a lower carbon energy future.

Z's brand promise has not changed and is simply, 'Z is for Aotearoa New Zealand'.

### Current business model and property assets

As the global and domestic economy moves through the early stages of what is likely to be a decades-long transition towards a low-emissions, climate-resilient future state, Z has the opportunity to deliver an increased range of energy options for its customers.

Z's current business model is focused on providing transport energy in Aotearoa New Zealand including retail and wholesale supply of fuel. Alongside this and leveraging its physical network of 189 retail sites, Z has a significant and growing convenience retail business and has EV charging available at 37 sites, as at 31 December 2023.

Z also operates 82 Z branded truck stops (including 17 private truck stops for business customers only), and licenses the Caltex brand in Aotearoa New Zealand, with a further 130 Caltex retail sites operated by independent Caltex dealers plus 60 Caltex branded

truck stops. Z's customer base spans both businesses and consumers, fuel for passenger and heavy vehicles, as well as the supply of jet fuel for aviation customers. A map of Z's assets and operations is contained in Z's 2023 Annual Report on pages 24-25.

Enabling this supply of fuel throughout Aotearoa New Zealand, Z owns nine bulk fuel terminals and operates a nationwide supply chain.

Z manages around 40 percent of Aotearoa New Zealand's bulk fuel terminal storage by volume. In 2023, Z's market share was approximately 43.6 percent, supported by strong commercial and wholesale volumes. Total market share for Z and its subsidiaries are in respect of retail (Z, Caltex and Foodstuffs) and wholesale channels.

In 2022, Aotearoa New Zealand's sole domestic refinery, Refining NZ, in which Z held 13 percent ownership, was converted to Channel Infrastructure, which saw the end of crude oil refining in Aotearoa New Zealand. Z retains a 12.67 percent ownership stake in Channel Infrastructure, now the country's primary refined fuels import terminal, and in the Refinery to Auckland Pipeline (RAP) that connects Channel Infrastructure with the Wiri Fuel Terminal in South Auckland. Z also holds a 44 percent ownership stake in the Wiri Terminal.

Supply of fuel from Z's bulk fuel terminals to Z's retail sites is via the trucking fleets of Z's logistics partner, MOVE Logistics. In addition to its retail business, Z supplies a number of wholesale customers via this bulk fuel terminal network.

As Z's light passenger customers transition from traditional ICE vehicles into EVs, Z is building a high-quality, strategically located EV charging network at selected retail sites. Through its subsidiary Flick Electric, Z also owns a retail electricity business which sells electricity to residential and small business customers and enables Z to offer EV charging for customers at home.

### Z's Strategy

Z's strategy between 2019 and 2023 provided the platform required for the next phase of the company's growth. Building on the strategy of preparing for the energy transition over the last four years, Z's current strategy provides a clear opportunity to grow the business through providing support for customers transitioning to a low carbon future while continuing to safely and reliably deliver traditional fuels as required by our customers.

Z's current strategy is focused on realising growth opportunities by supporting customers as they move through the energy transition, evolving into adjacent energy markets and continuing to deliver value from an optimised fuel supply chain.



**Redeveloping our strategy**

Z’s strategy is grounded in the belief that Aotearoa New Zealand’s transport fleet has begun the transition to low carbon fuels and that this transition will continue, albeit that the specific trajectory is uncertain.

Z generates a “House View of Demand” for industry petrol and diesel in Aotearoa New Zealand. Forming this view of the future helps us to make decisions in the present.

In 2021 Z commissioned Castalia, a global economics consultancy, to build an economic model to develop its House View on the long-term industry fuel demand of petrol and diesel from on-road transport. This model was updated in 2023.

Z uses the model to inform strategy, investment decisions and planning. It also enables us to compare our assumptions and outputs to other industry forecasts, including those published by He Pou a Rangi Climate Change Commission.

The Z House View of Demand is not a climate scenario and did not draw from the climate scenarios described on pages 20-25, as climate impacts were not quantified in 2023.

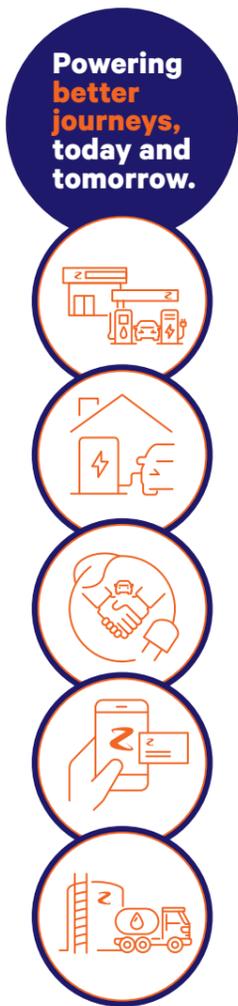
In 2023 Z used its industry fuel demand modelling for petrol and diesel to inform the reset of Z’s strategy.

Z’s strategy encompasses a set of choices that aim to ensure Z remains a market leader in providing the infrastructure and energy needed to keep the Aotearoa New Zealand vehicle fleet and the country’s national and regional economies moving through the transition, regardless of the fuel type.

Z’s fuel import supply chain, terminal network and retail site footprint places the company in a competitive position to supply large commercial and wholesale contracts. Maintaining scale through an integrated supply chain, particularly as part of Ampol, provides unique options to navigate the energy transition on behalf of customers as fuel demand declines over the coming decades. The reconfiguration of Z’s supply chain – both to an import-only model and also through integration with Ampol’s shipping, trading and fuel supply operations – have enabled Z to optimise supply and trading activities to be more resilient and flexible in response to fuel demand.

Work already underway on decarbonisation opportunities is targeted at positioning Z to be able to deliver a wider range of energy solutions for customers in the future and to actively support their decarbonisation journeys.

Z’s strategy is focused on five strategic priorities: Z On-the-go; Z at Home; Z for Business; Z Experience; and Z Fuel Supply. Further information on Z’s Strategy can be found in Z’s Annual Report 2023. The transition plan elements of Z’s strategy are included in this section, following a description of Z’s current and anticipated impacts, and climate scenario analysis.



**Current climate impacts**

For the purposes of this reporting, Z records all extreme weather events as “current climate impacts”. In 2023, Z has experienced extreme weather events, market changes affecting petrol demand and increased uptake of EVs. This section sets out Z’s climate-related physical and transition impacts experienced in 2023. This is a qualitative assessment with the exception of the financial impacts from extreme weather events which have been quantified.

**Transition Impacts**

*Impacts that are related to the transition to a low emission, climate-resilient future such as regulatory, legal, reputational and market and technology change.*

The transition to a low carbon economy touches all elements of the economy and every person, including regulatory bodies, central and local government, businesses, and everyday consumers.

All of these groups must increasingly work together in an integrated and complementary way, supported by clear and stable policy frameworks, in order to decarbonise the economy. In their advice to Government, the Climate Change Commission recommends alignment and coordination across all institutional and regulatory outcomes for government and across all sectors of the economy to effectively implement the second emissions reductions plan, “As outlined in the latest IPCC report, effective climate action is enabled by political commitment, well-aligned multilevel governance, institutional frameworks, laws, policies, and strategies, as well as access to finance and technology.”<sup>4</sup>



**Regulation**

The price of carbon under the New Zealand Emissions Trading Scheme (ETS) fluctuated significantly in 2023. This was the consequence of a number of interrelated central government decisions, including: the Government’s decision not to adopt the Climate Change Commission’s advice in December 2022; successive failed carbon auctions in each quarter of 2023; a legal challenge to the Government’s decision-making processes in relation to the ETS; the pricing of carbon; and consultations around the shape and operation of the ETS. The change in price did not materially impact on Z’s financial performance for the year. Z manages the price recovery risk through its ETS purchase contracts, however an underlying market risk will exist for the New Zealand Units (NZUs) that Z holds. The potential impact of ETS regulation change is significant and therefore Z dedicated time and resource into its submission to the Ministry for the Environment (MfE) on the Review of the New Zealand Emissions Trading Scheme.

The costs of national grid network connections and the time required for associated processes to be undertaken by each of the electricity distribution businesses that Z engaged with materially impacted Z’s rollout of EV chargers in 2022, leading to fewer kilowatts of power delivered to customers than planned in 2023. Severe weather events further delayed the planned rollout of chargers in 2023. Z believes that regulatory streamlining would help address inconsistent processes and reduce excessive costs and delays for the delivery of charging infrastructure to support the electrification of light passenger vehicles.

The previous Government abandoned the biofuels mandate in 2023, the year it would have come into effect. The obligation would have required fuel importers to reduce the emissions intensity of their fuel supply by 1.2 percent in the first year and 2.4 percent in the second year, with further increases in every subsequent year. Z had very low customer demand for biofuels in 2023.



**Litigation**

In 2019, Mike Smith, Chair of the Iwi Leaders Forum, filed a statement of claim in the High Court against seven companies including Z, essentially asserting that they have a common law duty of care in relation to the impact of emissions from their activities. Subsequently, two of three causes of action were struck out by the High Court and all three causes of action were struck out by the Court of Appeal, Smith appealed the strike out decision to the Supreme Court.

In February 2024, the Supreme Court announced its decision that the strike out was not granted. This is a procedural ruling that the relevant threshold for strike out was not met, and does not make any prediction on the merits of the claim itself. The Supreme Court made it clear in its judgment that the strike out decision “is not a commentary on whether or not [the claim] will ultimately succeed”.

In November 2023, Z was served a statement of claim in the High Court by Consumer NZ Inc, Lawyers for Climate Action NZ (LCANZI), and the Environmental Law Initiative. The plaintiffs claim Z made various representations in breach of the Fair Trading Act 1986. Z has been transparent about the challenges and opportunities associated with the energy transition and ambitious about the changes it wants to make as a modern energy company. Z filed its statement of

<sup>4</sup> 2023 Advice on the direction of policy for the Government’s second emissions reduction plan, He Pou a Rangi Climate Change Commission



Credit: Red Phase

defence in response to the plaintiffs' claim in the High Court on 25 January 2024.

Key impacts have been legal costs and resourcing associated with defending both claims.



#### Market and technology change

The growth of EVs in the Aotearoa New Zealand fleet between 2022 and 2023 means that now battery electric vehicles and plug-in hybrid vehicles combined represent just over 2 percent of the light passenger fleet. With the addition of hybrid petrol vehicles, the proportion increases to around 8 percent.

Industry volumes for petrol have declined between 2019-2023 while diesel has increased. Industry volumes for petrol in 2023 were 9 percent / 302 million litres (ML) lower than in 2019 (2019: 3,219 ML, 2023: 2,917ML). Industry volumes for diesel in 2023 were 3 percent / 99 million litres (ML) higher than in 2019 (2019: 3,751 ML, 2023: 3,850 ML).

During 2023 Z had approximately 43.6 percent market share, when including

all retail (Z, Caltex and Foodstuffs) and wholesale fuel volumes.

Ultimately, we expect this trend of fuel demand to continue in the short term and for both fuel markets to contract in the medium to long term. This expectation has been one of the key elements of context behind the evolution of our strategy.



#### Investment in low carbon

Z's investment in EV charging infrastructure provides the opportunity for Z to attract new EV owners to charge their vehicles at those Z retail sites with EV chargers. By the end of 2023, EV charging was available at 37 Z retail sites with 104 charging bays. The rollout of charging bays at 12 of these Z retail sites has been supported by co-funding Z received from the Energy Efficiency and Conservation Authority (EECA).

Z's Low Carbon team expanded to deliver on these low carbon investments and has now, with the Ampol Future Energy team, been restructured into one Energy Solutions Team for Ampol.



#### Partnerships

The following partnerships have enabled the delivery of low carbon solutions projects, products and services in 2023:

- Z's partnership with Red Phase has enabled the installation of four ultra-fast 200kw EV chargers in Waiouru. The technology allows the chargers to manage their power output efficiently and reduce grid load.
- Z's partnership with Evnex has enabled Z to offer EV smart charging beyond its retail network – at home for its residential customers and at business locations for its commercial customers.
- Z has partnered with Zenobê to install a repurposed bus battery to support EV charging at an Auckland retail site. This additional capacity is being tested for future use that may include supporting more EV chargers onsite, moving to another site or ensuring network resilience in remote locations.
- To recognise that not all climate solutions will be technology-driven, and the role of nature in both carbon sequestration and healthy, resilient ecosystems, Z maintains a \$1 million annual biodiversity fund establishing partnerships with The Nature Conservancy Aotearoa, Trees That Count and the Sustainable Business Network (SBN). In 2023, Z's funding supported progress in a number of key project areas:
  - The Nature Conservancy Aotearoa has established seven blue carbon pilot sites following stakeholder engagement as part of its New Zealand Coastal Wetland Programme which aims to enhance, restore and improve Aotearoa New Zealand's coastal wetlands through sustainable

financing mechanisms.

Data collection and monitoring has commenced, coastal resilience modelling is in progress at two sites, and blue carbon policy research is underway working with the MfE.

- Trees That Count has commenced a three-year programme of work with its delivery partner Tane's Tree Trust to promote the use of seed islands through practical trials as a way to assist the natural regeneration of native forest and accelerate native afforestation in Aotearoa New Zealand. A network of demonstration trial sites has been identified and is being established in both the North and South Islands. Field work has begun with planting already done at several of the sites.
- The Sustainable Business Network (SBN) has made progress across two different areas: the Nature Systems Change Programme, and the Puhinui Regeneration Project. Z's contribution has part-funded the establishment of the Nature Systems Change Programme and supported the public release of a report titled *Regenerating Nature in Aotearoa New Zealand: The Transformative Role of Business*, aimed at encouraging businesses to increase action and investment in regenerating nature. Support to SBN for the Puhinui Regeneration Project flows through to its delivery partners Te Pu-a-Nga Maara and Makarau Marae Native Nursery, and has created two new roles in the Awa Rangers<sup>5</sup> team contributing to planting and pest control, a new vehicle and infrastructure upgrades at the Makarau Marae Native Nursery.

#### Physical impacts

*Impacts that have been driven by physical climate-related events that are acute (such as floods), and/or chronic (such as sea-level rise).*

For the purposes of this reporting, Z records all extreme weather events as "current climate impacts" and has not assessed whether individual events are climate change related. The Auckland Anniversary Weekend floods and Cyclone Gabrielle in 2023 caused localised flooding, major slips on supply routes and communication outages in the Gisborne and Hawke's Bay regions. Cyclone Gabrielle also devastated a number of communities, destroyed homes and livelihoods, and claimed 11 lives.

The impacts of these events to Z have been categorised for this report into direct damage to assets, business disruption and collective financial impact.



#### Direct damage to assets

The Auckland flooding events caused significant flooding and associated clean-up costs at one Z retail site and minor water damage to twelve other Z retail site buildings across the Auckland region. Safety checks were completed across all sites which verified no loss of fuel, water contamination of fuel or damage to pumps.

Cyclone Gabrielle caused major building damage at one Z retail site and complete inundation of three truck stops in the Hawke's Bay region with a depth of typically over 1.5 metres of water recorded across those sites. Temporary infrastructure was installed to ensure continued operation at two of the truck stops while damaged pumps and switchboards were removed and replaced over a seven-month period. All sites are now fully operational.



#### Business disruption

Site closures in Auckland were brief during the Auckland floods and damage was minimal. Cyclone Gabrielle caused temporary loss of power at all four retail sites in Hastings and Havelock North with business disruption during this period.

The more material impact on business disruption was to Z's supply and logistics teams during Cyclone Gabrielle. Inland delivery routes were limited with slips causing road closures for several months. Lengthy detours around the Coromandel, Gisborne and the Hawke's Bay area at least tripled journey times. This presented significant operational challenges for supplier staffing and vehicle schedules.

All North Island ports were impacted by the weather associated with Cyclone Gabrielle, significantly impacting on vessel scheduling for several weeks. Loss of power in Napier resulted in the Napier Terminal being offline for around 36 hours before a generator could be connected to the site. The supply of fuel was interrupted during this period. Mains power was restored to Port Napier one week later and 24/7 shipping operations resumed in the following days.



#### Financial impact

Z estimates the collective impact of Cyclone Gabrielle and the Auckland Anniversary Floods to be approximately \$7.4 million, with the majority of costs relating to lost revenue, additional shipping costs and the last-minute sale of an import cargo.

<sup>5</sup> The Awa Rangers is a team employed and managed by Te Pu-a-Nga Maara (TPNM) which is a rangatahi-led taiao (environmental) innovation group formed by three local marae in South Auckland. The Awa Rangers' mahi is dedicated to the Puhinui Regeneration Project, see: <https://www.tpnm.co.nz/>



## Climate scenario analysis

Climate scenarios are not forecasts, probabilistic, or predictive views of the future, but are a process for systematically exploring the effects of a range of plausible future events under conditions of uncertainty, and for testing the resilience of strategic decisions as a risk management tool.

Climate scenario analysis supports Z's ongoing understanding of climate risk. In 2023, Z developed three new temperature-aligned climate scenarios to assess its climate-related risks and opportunities and to further understand the resilience of its business model and strategy. This was a qualitative exercise, building on earlier climate scenario analysis done in previous years using the BusinessNZ Energy Council climate scenarios, 'Kea' and 'Tūi', and draws on international scenarios and datasets as described further below.

Z's wider strategy development process included the development of a range of strategic scenarios illustrating different futures that Z may need to plan for. Z's climate scenario analysis was undertaken as a separate standalone process, focused solely on climate-related variables rather than as part of a single integrated set of strategic scenarios. The three climate scenarios Z developed are summarised below and described in full on page 24.

### The three climate scenarios Z has developed are:



## Scenario analysis process steps

Z used the following stand-alone process to undertake its climate scenario analysis



- Step 1** Reviewed Z's previous scenario analysis and completed a gap analysis against the latest standards and guidance.
- Step 2** Identified key internal stakeholders to engage with to develop the climate scenarios and identify climate-related risks to Z's strategy.
- Step 3** Identified the focal question: "How could climate change plausibly affect Z in Aotearoa New Zealand, what should it do, and when?"
- Step 4** Identified driving forces and critical uncertainties. Prioritised them using an influence and uncertainty matrix.
- Step 5** Selected temperature outcomes and pathways for three temperature-aligned climate scenarios.
- Step 6** Developed the scenario architecture and draft narratives drawing on selected international climate scenarios.
- Step 7** Tested and refined climate scenarios through small group interviews and discussions with key internal stakeholders identified in Step 2 and reviewed by ZLT and Z Board.
- Step 8** Conducted qualitative assessment of the resilience of Z's business model and strategy against three climate scenarios. This was a stand-alone process from Z's wider strategy development. Quantitative modeling was not undertaken.



**Selection of international datasets and climate scenarios**

Z engaged Deloitte to help Z select appropriate datasets from international scenarios for undertaking scenario analysis and to quantify transition impacts in future reporting cycles.

Z selected the Network for Greening the Financial System (NGFS) scenarios as the most suitable for drawing on for quantitative analysis. Key considerations for this selection included the availability of regional- or country-level data for Aotearoa New Zealand, whether the data contained the required temperature pathways to comply with NZ CS 1 and whether the models contained metrics and data relevant to transport energy and fuel volumes.

The scenario architecture and narratives were developed internally, drawing on the NGFS narratives for Net Zero 2050, Delayed Transition and Current Policies, and a broader set of climate scenarios produced by the International Energy Agency (IEA), Intergovernmental Panel on Climate Change (IPCC) and the Climate Change Commission (CCC) for qualitative descriptions, population demographics and socio-economic assumptions.

**Alignment with Aotearoa New Zealand transport sector scenarios**

Industry scenarios for the transport sector were still under development at the time of conducting this analysis. Z has been an active contributor and member of the Transport Sector Climate Scenarios Working Group in a process facilitated by the Aotearoa Circle. Z has also participated in integration workshops between the transport and energy sector workstreams to understand interdependencies between the sectors. Z intends to review the Transport and Energy Sector Climate Scenarios once published as final, to inform its entity-level climate scenario analysis in future reporting cycles.

**Scope of scenario analysis**

The climate scenario analysis was focused on Z's domestic operations. International factors were considered where material, such as product supply chain and technology not manufactured in Aotearoa New Zealand, and included in a qualitative sense in narratives and final outputs. The climate scenario analysis also focused primarily on transport. It did not cover the broader energy sector in detail, such as impacts to upstream assets required for the provision of electricity due to the materiality of revenue generated from this sector to the Z business at present compared with transport energy. Z intends to consider the Aotearoa Circle Energy Sector and Retail Sector scenarios for relevance in future climate scenarios.

**Time horizons considered for climate scenarios and climate-related risks and opportunities**

Time horizons	Year	Rationale
Short-term	2024–2028	Aligns with current strategic cycle
Medium-term	2029–2035	Aligns with Z's enterprise strategic scenario analysis done as part of the development of its strategy
Long-term	2036–2050	Aligns with Ampol's target and Aotearoa New Zealand's domestic target under the Climate Change Response Act 2002.

**An overview of the scenario architecture and key assumptions**

Scenario name	Green Road	Road Block	Hothouse
<b>Scenario theme</b>	Orderly	Disorderly	Hothouse
<b>Scenario archetype*</b>	NGFS Net Zero 2050 IEA NZE2050 IPCC RCP2.6 / SSP1 CCC Tailwinds NIWA Climate Change projections for New Zealand	NGFS Delayed Transition IEA APS IPCC RCP4.5 / SSP2 CCC Headwinds NIWA Climate Change projections for New Zealand	NGFS Current Policies IEA STEPS IPCC RCP8.5 / SSP3 NIWA Climate Change projections for New Zealand
<b>Global temperature outcomes</b>	1.5°C	<2°C	>3°C
<b>Regional variation</b>	Medium	High	Low
<b>Severity of physical impact</b>	Lowest	Medium	Highest
<b>Severity of transition impacts</b>	Medium	Highest	Medium
<b>Domestic policy response</b>	Early and strategic	Slow until 2030 then fast	Market-led and focused on adaptation
<b>Carbon price</b>	Steady rise, incentives for native afforestation	High volatility and reliance on forests	Decreasing, no incentives for afforestation
<b>Oil price volatility</b>	Increasing volatility	Increasing volatility	Highest volatility
<b>Technology change</b>	Fast, keeps pace with world	Behind pace of world	Slow worldwide
<b>Customer attitudes and behaviour</b>	Mainstream preference shifts to low carbon transport with limited barriers Climate movement well-funded	Initially slow shift while consumers face barriers to transition Climate movement well-funded and disruptive	Slower shift driven by individual preference Climate movement more radical
<b>Macro-economic factors</b>	Short-term pressure, long-term benefits, green jobs	Economic downturn, gradual recovery	Migration from climate-impacted nations Downward economic pressure from physical impacts
<b>Access to finance and insurance</b>	Favours strong environmental, social, and governance (ESG) ratings	Favours strong ESG ratings, increasing insurance costs	High cost of insurance and risk of un-insurability

\* Archetypes are based on various global climate scenarios and models

Baseline assumptions such as population growth and demographic shifts are assumed to be consistent across the three climate scenarios and in accordance with Statistics New Zealand projections<sup>6</sup>, adopting the approach taken by NGFS and IEA.

Fuel demand was considered as an overall outcome of climate scenario drivers. Quantitative fuel demand projections for each scenario were developed through detailed analysis of energy demand for transport data from the NGFS Global Change Assessment Model (GCAM) (AU and NZ) and using the IEA model for comparative purposes. These were available for reference during the climate scenario analysis to support the qualitative narratives, but transition impacts were not quantified as part of the 2023 process.

<sup>6</sup> Population estimates and projections: Stats NZ Tatauranga Aotearoa.





## Scenario narratives

The following section provides a summarised description of the three scenario narratives developed and used by Z in 2023. The narratives are intended to bring to life the critical uncertainties and assumptions describing how Z's operating context could evolve over time under possible futures. While they are shaped by the scenario architecture which makes specific assumptions about how the context will evolve, they are qualitative and exploratory in nature. Climate scenarios are not predictive, they are not forecasts, nor do they represent any preferred options. They were developed to test a broad range of plausible and challenging outcomes to generate useful insights on potential climate risks, threats and opportunities.



### Green Road – Net Zero 2050

Global collaboration and ongoing commitment to the Paris Agreement goals delivers an ambitious, rapid and just transition pathway, successfully limiting global warming to 1.5°C. Citizens are increasingly concerned about the implications of unmitigated climate change, creating a mandate for intervention. Aotearoa New Zealand adopts strong, effective climate policies, driving down emissions and decarbonising transport by 2050. The New Zealand Emissions Trading Scheme (NZ ETS) settings, aligned to the Government's emissions budgets, create strong incentives to stimulate investment in renewables and build low carbon infrastructure. Exotic forestry continues to play an important role in achieving net zero by 2050, coupled with the establishment of new indigenous forests as long-term carbon sinks. Complementary policies support the widespread adoption

of electric vehicles and equitable access to affordable energy. The physical impacts of climate change are increasingly felt, through an increase in the frequency and severity of extreme weather events causing supply chain disruption and impacts on assets exposed to flooding and sea-level rise. Insurance premiums increase in areas identified as more vulnerable to physical impacts. Oil price volatility means price sensitive consumers shop around for the best price at the pump. Initial economic pressure is alleviated through the creation of green jobs and companies compete for the best talent to win in the low carbon transition. Consumers are increasingly concerned about the implications of unmitigated climate change. Encouraged by improving economics, this leads to a growing willingness to move to low emissions transport options.

Low carbon technology evolves rapidly through innovation, in a market stimulated by investment directed towards companies with strong ESG ratings. New market entrants experiment with smart technology and alternative mobility services. The climate movement gains prominence, placing coordinated pressure on government and industry to address the causes and impacts of climate change. Companies are motivated to decarbonise and improve their sustainability credentials. Rapid change begins with the electrification of the light passenger fleet, followed by heavy transport over a longer period utilising a mix of electrification and low carbon fuels. Hard to abate sectors, such as aviation, prove the most challenging of all transport modes to fully decarbonise, requiring an evolution of fuels and technology.



### Road Block – Delayed Transition

In a world where the pace of transition varies widely between nations, Aotearoa New Zealand is among those falling behind. The efficacy of government is affected by populism and short-term interventions that fail to deliver the transformation needed. Responding to growing public concern and to avoid the potentially high cost of meeting international commitments by buying offshore mitigation, the Government takes a heavily interventionist approach after 2030 to achieve domestic emissions cuts, attempting to recover lost ground and join efforts to limit global warming to below 2°C.

Extreme weather events increase in frequency and severity and further intensify after 2040, causing significant supply chain disruption and damage to assets exposed to high risk of physical

climate impacts such as flooding and sea-level rise. The cost of insurance increases and vulnerable communities are disproportionately affected. A low carbon price places higher reliance on exotic forests to meet international commitments and provides weak incentives for consumers to switch to low carbon transport until after 2030. Climate policies are expedited with limited time for consultation. Consumer confidence in transport electrification takes longer to generate and petrol demand falls only after infrastructure is well established. Price sensitive consumers shop around in response to market volatility. Those least able to transition are also impacted by higher fuel costs on top of cost-of-living pressures compounded by price fluctuations.

Frustrated by inaction, the climate movement employs a range of methods to draw attention to the impacts of climate change. Negative sentiment towards heavy emitters grows and companies take a cautious approach to green claims and forward-looking statements. Uptake of electric vehicles is slow to begin with, but picks up after 2030. Business appetite to decarbonise varies, creating a gap between industry leaders and those who can't afford to transition or at least continue to 'wait and see' for the cost of low carbon technology to reduce before committing capital to new assets. Customers are sensitive to upfront costs. Businesses with global interests continue to decarbonise, especially those dependent on access to international markets requiring strong 'green credentials'.



### Hothouse

A fossil fuel recovery transpires as the global commitment to climate action collapses and people put their trust in markets and technological solutions. Geopolitical tension becomes widespread, made worse by the increasingly severe and inequitable impacts of climate change. Extreme weather events increase in frequency and intensity and become exponentially worse after 2040. Supply chain disruption caused by more severe physical impacts of climate change impacts oil price volatility, although liquid fuels continue to be a valuable commodity. Insurance premiums rise and those areas most vulnerable to physical impacts of climate change cannot secure insurance. Communities vulnerable to climate change hazards

such as sea-level rise, extreme weather events, flooding, and drought are forced to relocate. The impact on people generates contentious debate over who pays. Urban areas receive an increase in migrants from climate affected regions. Public investment is focused on adaptation and the pressing issues of immediate concern to voters such as housing, health and stimulating growth to counter the prolonged economic downturn. The Government cuts spending on mitigation and abandons efforts directed at gross emissions reduction. The carbon price plummets and fails to have any material effect on consumer behaviour. High oil price volatility impacts corporate reputation as consumers respond to fluctuating pricing at the pump. Against a backdrop

of general apathy towards addressing the underlying causes of climate change, the climate movement turns to more disruptive, provocative measures to effect change. The transport transition effectively stalls due to policy barriers, a lack of available technology, and consumer preference towards individualistic transport, resulting in more vehicles on the road. Uptake of electric vehicles remains low and driven by personal preference and affordability, and is therefore limited to high-income households and the strongly committed. Kiwi are highly dependent on technology in other ways and increase demand for digital products and services aimed at serving convenience needs and luxury desires.



## Anticipated impacts of climate risks and opportunities

The impacts of climate change are a key enterprise risk for Z. However, climate change also presents opportunities for Z to build an enduring environmentally and financially sustainable lower carbon energy business.

Z's approach to assessing risk and opportunity has evolved from 2020 using the TCFD framework and has been integrated into risk management procedures, as outlined in the Risk Management section.

The following tables provide a summary of Z's climate-related risks and opportunities as well as reasonably anticipated impacts. Z's business response to management of risk and

opportunity is covered in the business model and transition planning sections below. The Metrics and Targets section provides further information on designated metrics and targets that relate to a climate risk or opportunity.

### Transition risks

The majority of Z's climate risks and opportunities relate to climate change mitigation and adaptation requirements for the transition to a low emissions and climate-resilient economy such as changes in markets, technology, policy, regulation or public sentiment.

Z developed modelling in 2021 to monitor and test its thinking on the future of fuel demand against the two BusinessNZ Energy Council 'Kea' and 'Tūi' scenarios and the Climate Change Commission's pathways for the Aotearoa New Zealand transport sector (as reported on in the Z Energy Annual Report for the year ended 31 March 2022). This modelling was updated in 2023.

### Anticipated impacts table

The table following provides a summary of anticipated impacts reasonably expected from transition risks, prior to any management response, and is informed by Z's climate scenario analysis and updated fuel demand modelling, and also builds on a transition risk assessment completed in 2020.

The risks identified are present across all climate scenarios, but the anticipated impacts differ in nature and severity. The anticipated impacts are mapped against the climate scenario that is most likely to generate the greatest impact before consideration of the effect that controls may have to mitigate the impact.



Risk	Scenario where risk is greatest	Anticipated Impacts	Time horizon	Management response
<b>Capital allocation</b> Insufficient capital allocation to support the options and pace Z needs to transition.  <i>2023 climate scenario analysis updates:</i> Capital allocation may be poorly timed (for example too little too late, or too much too early) or invested in the wrong technology (for example EV over hydrogen). Access to capital changes as investor preferences shift towards low carbon activities.		Stranded assets and/or assets with low utilisation and high operating costs.	Long-term (2036-2050)	6. Capital allocation [page 35]
		Reduction in availability of capital.	Medium-term (2029-2035) to long-term (2036-2050)	
		Income from low carbon investment may be low in the short term and in some cases, medium term, compared with high upfront capital investment needed while demand grows over time.	Short-term (2024-2028) to medium-term (2029-2035)	
		Higher insurance costs for vulnerable assets in the medium term and potential for vulnerable assets to be uninsurable in the long term.	Medium-term (2029-2035) to long-term (2036-2050)	
<b>Policy</b> Policy, legal and regulatory instruments can affect the options available and pace at which Z is able or required to transition.  <i>2023 climate scenario analysis updates:</i> Policy uncertainty and significant unpredictable shifts in policy priorities and the design of incentives have the potential to impact Z's ability to transition, both in the short term, and in medium to longer term. Of particular relevance is policy relating to the ETS, regulations for EDBs, the Resource Management Act, and the Government's Emissions Reduction Plans. In the medium to long term increased disruption from extreme weather events may lead to further imposition of new legislative requirements around security of supply of fuels.		Increased resourcing requirements for engaging in policy development processes and public consultation.	Short, medium and long term (2024-2050)	5. Policy and advocacy [page 35] 3. Z Scope 3 emissions and Aotearoa New Zealand's domestic transport targets [page 34]
		Z prevented from exiting fossil fuel markets and infrastructure to ensure security of energy supply. (Note policy changes may also affect capital allocation decisions with anticipated impacts as described above.)	Long-term (2036-2050)	2. Forestry, the ETS and carbon sequestration [page 33]
<b>Litigation</b> Risk of increased climate-related litigation including greenwashing.  <i>2023 climate scenario analysis updates:</i> Z expects the risk of climate-related litigation to increase in the short term, driven by several factors: increased scrutiny by regulators, such as the Commerce Commission and Financial Markets Authority, as well as third-party stakeholders; the ease of prosecution under legislation, including the Fair Trading Act and Financial Markets Conduct Act; international precedent for shareholder activism; and increasing use of regulatory intervention.		Increased legal costs, resourcing requirements and greater need for independent assurance. (Note anticipated impacts on reputation described below.)	Short, medium and long term (2024-2050)	5. Managing litigation and reputational risks [page 35]
		Potential loss of revenue from customers moving away from Z if they perceive Z's actions are insufficient.	Medium-term (2029-2035) to long-term (2036-2050)	5. Managing litigation and reputational risks [page 35]
<b>Reputation</b> Risk of reputational damage due to the perception that Z is not adequately responding to climate change in the eyes of people, customers, communities, and regulators. Risk of demonstrating commitment and action must be balanced and tempered by the increased consumer concern around climate-related greenwashing.  <i>2023 climate scenario analysis updates:</i> Z may face increasing expectation from its people, customers, and regulators to be a responsible business, delivering value and security of supply for the economy while at the same time taking action to reduce the impacts of climate change. Z may face challenges to gain consumer trust due to negative perceptions of the fuel industry.		Negative impacts on workforce planning from decreased ability to attract and retain the best talent.	Medium-term (2029-2035) to long-term (2036-2050)	
		Abuse of frontline staff exacerbated. (Note impacts from litigation described above.)	Short-term (2024-2028)	
		Reduced petrol demand in the medium term and diesel demand in the long term, with the transition away from diesel dependent on new technologies for the heavy vehicle fleet.	Medium-term (2029-2035) to long-term (2036-2050)	1. Strategic priorities [pages 31-32]
<b>Market and technology changes</b> Reduced demand for fossil fuel products due to shifts in technology and customer preferences.  <i>2023 climate scenario analysis updates:</i> Reduced vehicle kilometres travelled and increased demand for low carbon fuels. While the light passenger vehicle fleet is actively in transition, the path for heavy vehicles is less clear, with choices likely to be made between battery electric and hydrogen technologies.		Loss of customers and revenue if alternative products and services are not offered to support customers' decarbonisation journeys.		
		Locked out of certain emerging markets or technologies if too slow to transition.		



**Physical risks**

Z's asset base is geographically spread throughout Aotearoa New Zealand, including nine terminals largely located near ports at sea level, and 189 Z branded retail sites and 82 Z branded truck stops.

Z's assessment of exposure of these assets as a consequence of the physical risks of climate change started in 2020 with a qualitative analysis under two climate scenarios (the NZ Business Energy Council's (BEC) Kea and Tūi), with the outcomes reported as part of the company's TCFD disclosures in 2022.

This initial analysis highlighted three main climate hazards which presented the most material risk to Z in the future: sea-level rise, precipitation and drought. In 2022, Z engaged two independent

third parties – Pattle Delamore Partners and PwC – to conduct a quantitative risk analysis of the exposure of Z's assets to the projected changes in sea-level rise, precipitation, drought and wind<sup>7</sup> across three temperature-aligned climate scenarios and across three time periods: 2025, 2030 and 2040. The year 2040 was used as the long-term time frame to align with Z's previous analysis against BEC's Kea and Tūi scenarios.

Following the analysis of projected climate changes at each site, a financial impact assessment of the potential damage costs to assets caused by climate-related physical risks was completed.

The financial assessment concluded that damage to assets is estimated to be minimal out to 2040, with operational

disruption due to the impacts of climate change likely to be more significant. This assessment is reflected in Z's risk management system and will be the focus of further work to understand and quantify the impact of Z's physical risks.

The risk management section of this statement includes further details on the methodology of this assessment.

**Anticipated impacts table**

The table below provides a summary of the anticipated impacts reasonably expected from physical risks, prior to any management response, and is informed by the above assessment and Z's climate scenario analysis. While physical risks are present in all scenarios, the anticipated impacts are more severe in the Hothouse scenario after 2040.

Risk	Scenario where risk is greatest	Anticipated Impacts	Time horizon	Management response
<b>Supply chain disruption</b> Extreme weather and market disorder causing supply chain disruption.  <i>2023 climate scenario analysis updates:</i> Both Aotearoa New Zealand and its international trading partners face challenges from extreme weather disrupting standard supply routes for transport fuels and convenience retail products. Increased frequency of weather events causing supply chain disruption may drive reactive and rapid policy response from central government, such as changes to onshore fuel stockholding requirements under the Fuel Industry (Improving Fuel Resilience) Amendment Act 2023.		Increase in supply chain disruptions in both frequency and severity over time.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32]
		Additional scrutiny on Z's ability to deliver security of fuel supply, given Z is a lifeline utility providing approximately half of the country's liquid transport fuel requirements.	Short, medium and long term (2024-2050)	
		Business planning may be poorly aligned to unexpected policy changes, diverting focus and spending from transition to crisis response – both at a national- and entity-level for Z and its supply chain.	Long-term (2036-2050)	

<sup>7</sup> Wind was added as a key climate hazard to assess in 2022 following an assessment of historical asset maintenance data and associated physical damages.

**Opportunities**

As one of the leading transport energy companies in Aotearoa New Zealand, Z has opportunities available to transform its business while supporting its customers to decarbonise.

**Anticipated impacts table**

This section briefly outlines Z's reasonably expected climate-related opportunities, informed by Z's strategy and climate scenario analysis. Most of these opportunities are focused on a world that is committed to transitioning to low carbon energy at least in the short-medium term. Whilst the opportunities may arise in any of

the climate scenarios, they are presented below against the scenario where the opportunity is greatest.

Z's response to these opportunities, including how Z's business strategy and transition planning is placed to leverage these impacts, is covered in the 'Transition plan aspects of Z's strategy' section.

Opportunity	Scenario where opportunity is greatest	Anticipated Impacts	Time horizon	Management response
<b>Investment in low carbon</b> Low carbon products and services create new revenue streams.  <i>2023 climate scenario analysis updates:</i> As customers transition from traditional to lower carbon fuels, the demand for hydrocarbon fuels is likely to be steady for petrol and remain strong for diesel in the short term. Demand for petrol and diesel may decline steadily over the medium to long term. Therefore, demand for low carbon fuels, products and services are expected to increase over time.		Increasing revenue gained from investments in low carbon including EV charging on-the-go and at home.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32] 6. Capital allocation [page 35]
<b>Deliver integrated energy systems</b> Supporting customers wherever they are in their transition journey.  <i>2023 climate scenario analysis updates:</i> Retail and business customers are likely to have a range of energy and transport needs and may require a mix of integrated solutions – for example, businesses may need access to on-the-go EV charging fleet solutions, home EV charging for staff, as well as access to a conventional liquid fuel network.		Z provides a mix of energy solutions over the short to long term.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32] 6. Capital allocation [page 35]
<b>Optimise asset base</b> Strategic asset planning and leveraging Z's footprint across Aotearoa New Zealand.  <i>2023 climate scenario analysis updates:</i> As light passenger customers transition from traditional ICE vehicles into EVs, customers may stop for longer when charging 'on-the-go' and need an EV charging network that can support broader convenience and amenity needs. There will likely be a greater reliance on home and depot EV charging that may provide for different customer needs (for example, battery electric vehicles (BEV), battery swap, or hydrogen).		Increased revenue from on-the-go charging and convenience retail, alongside traditional fuel products.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32] 6. Capital allocation [page 35]
		New revenue streams from home and business charging offers.	Short-term (2024-2028) to medium-term (2029-2035)	
		Efficiency gained in Z's supply chain through improved scheduling and load optimisation, which also supports emission reduction in Z's domestic trucking and international shipping.	Short-term (2024-2028) to medium-term (2029-2035)	
		Z's fuel import supply chain, terminal network and retail site network places Z in a competitive position. This, along with Z's strategic asset management capabilities and framework, provides opportunity for Z to continue to deliver safe and reliable operations as fuel demand declines over the coming decades.	Short, medium and long term (2024-2050)	
		Z's supply network, strategic asset management capabilities and framework, provides opportunity for Z to continue to deliver safe and reliable operations if fuel demand continues.	Short, medium and long term (2024-2050)	
<b>Enter and grow in adjacent markets/sectors</b> Developing a leading position as an innovator and disruptor in the electricity markets.  <i>2023 climate scenario analysis updates:</i> With the light passenger vehicle fleet increasing, Z could be well positioned to grow its presence in the adjacent retail electricity market to support the provision of home and business charging solutions.		Z becomes an integrated energy provider through leveraging its ownership of Flick and further development of new and innovative services offers such as home EV charging plans.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32] 6. Capital allocation [page 35]



Opportunity	Scenario where opportunity is greatest	Anticipated Impacts	Time horizon	Management response
<p><b>Develop new products</b> Develop new fuel/refuelling technologies and provide at scale.</p> <p><i>2023 climate scenario analysis updates:</i> Z may partner with others in the potential development of Sustainable Aviation Fuel (SAF) and on the supply of hydrogen for heavy vehicles providing potential new business opportunities.</p>		With Z's scale, including regionally within Ampol, developing a SAF solution with partners that is able to be produced at scale could lead to a unique position as a key supplier to Australasia.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32] 6. Capital allocation [page 35]
<p><b>Talent growth</b> Attract and retain talent through proactive low carbon transition.</p> <p><i>2023 climate scenario analysis updates:</i> As the impacts of climate change are increasingly experienced by Kiwi, Z's response could become more material in determining employee choice. There is opportunity to build capability to retain existing talent and where required attract external talent that may enable Z to deliver in the transition.</p>		Improve ability to attract and retain talent.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32] 6. Capital allocation [page 35]
<p><b>Partnerships</b> Partnering with others enables efficient delivery of low carbon solutions, including in mitigation and adaptation.</p> <p><i>2023 climate scenario analysis updates:</i> Opportunities to partner are likely to increase as technology and new products develop over time.</p>		Improve Z's ability to offer new low carbon products and services.	Short, medium and long term (2024-2050)	4. Policy and advocacy [page 35] 3. Z Scope 3 emissions and Aotearoa New Zealand's domestic transport targets [page 34]
<p><b>Trusted low carbon brand</b> Become a leader in a disrupted and emerging market with a trusted brand in low carbon technologies (both transport and non transport).</p> <p><i>2023 climate scenario analysis updates:</i> As one of the country's leading transport energy companies, Z may have a distinctive opportunity to stand out from other market participants, to safely deliver the energy Z customers and the economy need, while enabling the solutions that may power a low carbon future for Aotearoa New Zealand.</p>		Improve on Z's existing brand reputation as a reliable transport energy provider.	Short, medium and long term (2024-2050)	1. Strategic priorities [pages 31-32] 5. Managing litigation and reputation risks [page 35]



## Transition plan aspects of Z's strategy

This section provides details on the transition plan aspects of Z's strategy, and considers what may change to address climate-related risks and opportunities identified. This section covers the following areas:

1. Strategic priorities
2. Forestry, the ETS and carbon sequestration
3. Emissions reductions targets – Aotearoa New Zealand's domestic transport targets and Z's operational emissions
4. Policy and advocacy
5. Managing litigation and reputation risks
6. Capital allocation

### 1. Strategic priorities



#### Z On-the-go

Fuel, convenience, and EV charging across the retail network

#### Building Electric Vehicle charging infrastructure

Over 2023, Z installed 82 more EV charging bays at its retail sites, taking the total to 104 bays across 37 of its retail sites. Z aims to provide options for the increasing number of light passenger EV owners, particularly along key transport routes.

Z's strategy is to continue growing its 'on-the-go' EV charging infrastructure for light passenger vehicles in the years ahead. This will see Z focusing on the existing Z network where it can offer a high-quality charging experience with fast (up to 200kW+) chargers, dry, well-lit bays alongside a high-quality convenience retail offer and other amenities such as toilets.



#### Z at Home

Smart electricity solutions and at-home EV charging

#### Driving innovation in electricity

Z acknowledges that while half of all light vehicle charging value sits in on-the-go, a considerable amount of EV charging will happen at home. Over 2023, Z bought out the remaining shares in Flick Electric and is now the 100 percent owner.

The investment in Flick provides an opportunity for Z to expand offers in electricity, spanning residential, commercial and transportation. Through Flick, Z has launched a new home electricity offer targeted at EV owners. Z is also partnering with hardware provider Evnex to offer home charger installation for safer, faster charging at home.

Through Flick, Z believes there are opportunities to deliver both growth and unique customer value from a different approach to customer service and a new range of products and services. Flick is exploring new customer offers that provide home electricity customers with greater control over their energy consumption/usage.

#### Investing in innovation for EV charging

While Z continues to invest in EV charging infrastructure across its retail network, the company is also supporting innovation in EV charging.

Z's partnership with Red Phase is currently piloting four 200kW chargers at Z's Waiouru site. These chargers are innovative, enabling fast EV charging without placing unnecessary strain or undue load on the grid. This pilot is supported by electricity distribution business Powerco and co-funding from EECA.

By offering fast, convenient and reliable EV charging experiences at key sites on major transport routes, Z aims to help make long-distance journeys easier for EV drivers, helping to reduce range anxiety, one of the barriers to increased adoption of EVs.



### Z for Business

Meeting business customers' energy needs and supporting their decarbonisation journeys

#### Being the partner of choice in the business energy transition

Z aspires to be the energy services partner of choice for businesses wherever they are in their transition journey. Z's engagement with business customers has shown many want to decarbonise – and recognise the broad benefits of doing so – but struggle with much of the decision-making, planning and understanding of the available options.

Z has started to support its customers' transition through the provision of workplace charging products and services. Z is also working on how it can provide more support and advice to its customers as they consider future energy and decarbonisation options for their fleets.

#### Identifying decarbonisation paths for heavy vehicles

The path to decarbonisation for heavy vehicles is less clear than light and medium vehicles and there is no clear 'one size fits all' for the fleet, with multiple technology options (including battery electric, hydrogen and biofuels) and slower deployment from both vehicle manufacturers and infrastructure providers. Optimal technology choices are likely to be shaped by differing needs between heavy vehicle use cases, relative technology costs, and the availability of vehicles and infrastructure (in particular electricity supply) to enable refuelling and/or charging.

Z is monitoring opportunities for heavy vehicle decarbonisation including electric charging, renewable diesel, and hydrogen.

#### Identifying decarbonisation paths for aviation

Aviation is proving one of the most challenging sectors to decarbonise.

The development and sale of Sustainable Aviation Fuel (SAF) will very likely play a valuable role in the transition to decarbonise air travel, particularly long-haul. In June 2023, the then Minister for Tourism announced that Government, in conjunction with Air New Zealand, was co-funding two feasibility studies to test the viability of establishing and operating a domestic Sustainable Aviation Fuel (SAF) facility in Aotearoa New Zealand. In one of these feasibility studies, Z is partnering directly with LanzaTech and LanzaJet, focusing on the potential to use forestry residue as a feedstock in the production of SAF.



### Z Fuel Supply

Value through scale, efficiency and integration of supply operations

#### Asset management and fuel supply

Aotearoa New Zealand's economy needs a safe, reliable supply of energy.

Z has a Crisis Management Plan (CMP), site-specific emergency response plans and Business Continuity Plans (BCPs) to bring affected operations – for example, through floods, power cuts, disrupted traffic routes, earthquakes – back to business as usual.

Z's CMP includes information on the use of satellite phones, which proved vital in maintaining communications during Cyclone Gabrielle.

Z has conducted a physical risk assessment across its assets to determine the level of risk and vulnerability to climate change across three temperature-aligned scenarios out to 2040, as covered previously in this report.

The two most significant opportunities for emissions reduction in the supply chain are in shipping and trucking. Z looks to minimise port calls, and reduce demurrage and discharge time through scheduling optimisation and working with others where it makes sense.

Z recently renewed its Secondary Fuel Haulage Services agreement for a further five years. Sustainability key performance indicators (KPIs) are incorporated into this agreement. Initiatives include a fleet replacement programme focused on high productivity units, weight-based optimisation of fleet loads, and exploring use of renewable diesel and hydrogen trucks. Z reports KPIs on total CO<sub>2</sub>, average load size, fuel consumption and freight tonne efficiency.

## 2. Forestry, the ETS and carbon sequestration

As the country's largest ETS participant, Z has the highest single entity surrender obligation within the ETS. Through Ampol, Z maintains a market presence in direct and secondary carbon markets to ensure access to units.

Z is a foundation partner in the Drylandcarbon and Forest Partners forestry funds. The purpose of both funds is to acquire and plant steeper, more economically marginal country in exotic forest for both emissions units and timber. Drylandcarbon ceased seeking land for acquisition in early 2022 but continues to manage its existing forestry portfolio on an ongoing basis.

Recognising the interconnection between biodiversity loss and climate change, in 2022 Z established an annual \$1 million biodiversity fund.

Aotearoa New Zealand's indigenous biodiversity is under increasing threat from a range of pressures, including introduced pests and predators, land use change, pollution and a changing climate.

This fund is committed to:

- innovation to accelerate nature restoration
- improving financial incentives for restoration of important ecosystems vulnerable to climate change
- restoration that delivers important co-benefits such as education, training and employment opportunities.

Against these objectives, Z has formed three partnerships with environmental not-for-profit organisations: The Nature Conservancy (Aotearoa New Zealand), Trees That Count and The Sustainable Business Network. Z agrees funding with these organisations on an annual basis to support multi-year work programmes from a minimum annual pool of \$1 million.

*Tahuna, Te Waipounamu; Trees That Count and Z revisiting the Welcome Forest which was planted with the community in October 2020.*





### 3. Z Scope 3 emissions and Aotearoa New Zealand's domestic transport targets

Z's transition planning considers how it responds to climate change risks, how it can lower its impact on domestic emissions over time, and how it can support the goals of the Paris Climate Agreement.

Approximately 99 percent of Z's carbon footprint comes from emissions created indirectly, often referred to as Scope 3 emissions in carbon accounting language. This includes emissions from products sold to and then used by its customers. Sold fuel is the largest single source of Z's indirect emissions (Scope 3). There is currently no corporate standard for oil, gas and integrated energy companies to set science-based emission reduction targets, although the Science Based Targets initiative (SBTi) is leading a project to develop a target setting standard for companies in the sector.

There are a range of factors that determine Z's Scope 3 emissions, over which Z has varying degrees of influence. Examples include the overall size of Aotearoa New Zealand's transport fleet, the type of fuel needed, pace of mode shift to lower carbon transport options, kilometres travelled by each vehicle and the regulatory landscape. Z focuses on policy advocacy and partnerships to influence change and address barriers where system levers sit outside Z's control. These activities are described in more detail on the following page. Recognising this complexity, a key pillar of Z's strategy is to support customers

to transition away from fossil fuel. We see this approach as a meaningful and effective way to achieve entity level Scope 3 emissions reductions and to help the wider transport sector to decarbonise, contributing to Aotearoa New Zealand's domestic and international climate commitments.

Government, industry and consumers each have an important role to play in the transport sector's transition, be it with differing avenues for influence and control. In 2022, the Government has set four transport sector sub-targets in Aotearoa New Zealand's first emissions reduction plan:

- Target 1 – Reduce total kilometres travelled by the light fleet by 20 percent by 2035 through improved urban form and providing better travel options, particularly in Aotearoa New Zealand's largest cities.
- Target 2 – Increase zero-emissions vehicles to 30 percent of the light fleet by 2035.
- Target 3 – Reduce emissions from freight transport by 35 percent by 2035.
- Target 4 – Reduce the emissions intensity of transport fuel by 10 percent by 2035.

Z's direct contribution to these targets varies. For example, Z's ability to make a meaningful contribution to Target 1 is limited, due to the considerable mode shift required and improvements needed in urban design, public transport, walking

and cycling infrastructure to achieve this target, which is largely a function of local and central government planning and investment. However, Z's strategy to continue expanding its network of fast charging EV infrastructure is likely to serve as an enabler for achieving Target 2 by helping to encourage the adoption of EVs to transition the light passenger fleet.

#### Entity level target – Z's operational emissions

Since 2017, Z has had a target for reducing its operational emissions – those Scope 1, 2 and 3 emissions Z has the most control or influence over and can therefore take meaningful action to reduce. For example, this includes Scope 3 emissions from fuel deliveries within Aotearoa New Zealand, over which Z has a degree of influence, but excludes emissions from fuels sold to and used by customers. With 47 percent of reductions in these operational emissions as at the end of 2023 against a base year of 2019, Z's trajectory is aligned with achieving its target of reducing operational emissions by 42 percent, off a 2019 baseline, by 2029. Further detail is provided in the Metrics and Targets section.

### 4. Policy and advocacy

A successful transition for Aotearoa New Zealand depends on successful partnerships and Z must work with central government and other industry leaders to ensure that effective, stable policies are in place to support decarbonisation. As set out above, Z's ability to lower its carbon footprint and reduce its Scope 3 emissions is dependent on collective action.

Z continues to advocate for legal, regulatory and policy measures aimed at enabling Aotearoa New Zealand's low carbon transition through public consultation, and through industry

advocacy groups such as Drive Electric, the Sustainable Business Council and the Climate Leaders' Coalition (CLC).

Z has submitted on a range of public consultations in 2023, including the National EV Charging Strategy, the Climate Change Commission's draft advice to Government on the Second Emissions Reduction Plan, proposed changes to the ETS, and submissions in relation to the regulation of electricity distribution businesses as a member of Drive Electric.

Z is a founding member of the New Zealand Climate Leaders Coalition and Z's CEO is a member of the Steering Group. The Coalition celebrated five years of business-led climate action in November 2023 with 88 signatories. It has raised the bar three times since its inception through the Statement of Ambition. Z transitioned from the 2019 Statement to the 2022 Statement of Ambition in September 2023 having met the minimum requirements, <https://climateleaderscoalition.org.nz/about/statement-of-ambition/>.

### 5. Managing litigation and reputation risks

Z has developed internal processes to help ensure it does not mislead customers, communities or stakeholders through the statements it makes. Z has implemented an internal due diligence process for all green claims including verification and legal review of Z's climate statements. Z has disclosed the

transition plan aspects of its strategy in these climate statements.

Z aims to engage openly and honestly with the media, the public and its people on the challenges and opportunities of climate change. This includes in annual reporting of Z's Greenhouse Gas

Inventory including Scope 3 emissions, Z's emissions reduction targets and progress made against them, and climate-related disclosures.

### 6. Capital allocation

Z's strategy is to support the energy transition by prudently investing in low carbon initiatives ahead of customer demand. This will require capital and further spend of growth capital on low carbon investments by 2028.

Z expects to spend 45 percent of growth capital on low carbon investments in 2024 in anticipation of changes in customer behaviour during the transition. As part of this investment Z's target is to have at least 150 charging bays available at Z retail sites by the end of 2024. Z's convenience retail store refresh

growth capital spend, which is a key part of its transition strategy, accounts for a further 31 percent of total growth capital.

As part of the commitments made during the acquisition of Z, Ampol has committed to a minimum NZ\$50 million capital investment in Aotearoa New Zealand to support future energy initiatives by 2029.

Capital is currently invested across a number of low carbon solutions to enable Z to respond to the uncertain pace and scale of transition, for example, across

the rollout of EV charging infrastructure and other low carbon customer offers including home charging. The combined use of Z retail sites as traditional fuel providers, as well as convenience retail and EV charging destinations, presents multiple sources of revenue, which should enable re-investment in the energy transition.



**Z uses a range of financial and non-financial metrics and targets to measure and manage the climate-related risks and opportunities discussed above. These metrics both help to inform and are informed by Z's governance, strategy and risk management processes. They include industry-related metrics on Z's greenhouse gas emissions and entity-specific metrics, some of which are linked to Z's company performance targets.**

Transition risks, physical risks, and opportunities metrics relate to point-in-time disclosure of climate-related risks and opportunities for the current reporting period. Capital deployment covers investment made now to address these risks and opportunities in the future, while the last two metrics, remuneration and key entity performance metrics, relate to incorporation of climate considerations into management practices.

## Greenhouse gas emissions

Z has measured and publicly reported on the greenhouse gas emissions (GHG) resulting from business operations and sold product since the first annual report in financial year 2012.

Z's 2023 Greenhouse Gas Inventory is published alongside the Annual Report on Z's website. This is Z's first full-year (12 month) report following the 2022 change to Z's financial year to start 1 January and end 31 December in order to align with Ampol. It is also Z's first report following a base year re-calculation from FY20 (1 April 2019 to 31 March 2020) to CY19 (1 January 2019 to 31 December 2019). The inventory includes a full description of the changes to Z's base year emissions due to acquisitions, divestments, changes in calculation methodology and improvements in the accuracy of emissions factors or activity data. It also includes a breakdown of Z's emissions sources, the source of emissions factors and a description of specific exclusions.

The result of these changes amount to an increase of 2.8 percent or 326,624 tCO<sub>2</sub>-e of Z's total Scope 1, 2 and 3 emissions from FY20 to CY19. Whilst this increase is largely driven by the amount of sold fuels during the respective periods and is below the five percent significance threshold set in Z's recalculation policy, Z decided to recalculate the baseline to CY19 and all years in between due to the number of changes that have occurred, coupled with the need to align Z's GHG Inventory with the new financial year end. This decision was made to ensure that Z's GHG Inventory remains relevant, complete, consistent, transparent and accurate in line with the GHG Protocol.

Z's 2023 GHG emissions have been independently verified to a reasonable assurance standard in accordance with the Greenhouse Gas Protocol's Corporate Standard requirements. Z has used an operational control consolidation approach to account for emissions.

Z continues to strive to improve the quality and completeness of its emissions data, particularly in understanding Scope 3 supply chains. Updates to the inventory this year have included a re-assessment of upstream emissions in light of Z's integration with Ampol supply chain and an additional inclusion of Scope 3 data for Flick Electric and Z's sales of diesel exhaust fluid.

## Emissions target

In 2021 Z set a target to reduce its operational emissions by 42 percent from an FY20 baseline by 2030, a ten-year period, using the Science Based Targets initiative (SBTi) draft guidance for setting and verifying targets for the Oil and Gas sector. The SBTi tool was used to guide the target parameters using the Absolute Contraction Approach (ACA) required to limit global warming to 1.5 degrees Celsius. The ACA is a method that helps achieve linear absolute reduction in GHG emissions in a target year, relative to a base year aligned with global decarbonisation pathways. The ACA method was applied to Scopes 1 and 2, and then extended to Scope 3 for emissions sources within Z's operational control boundary, including Scope 3 emission sources from the delivery of fuels in Aotearoa. Z has defined its operational emissions as those domestic emissions that Z has the most control and/or influence over and can therefore take meaningful action to reduce. This includes all Scope 1 and 2 emissions, and Scope 3 emissions from air travel, rental cars and taxis, waste to landfill, bunker fuel for coastal shipping and diesel for trucking deliveries. The same approach, including the ten-year time period, has been applied following the re-baselining of Z's GHG Inventory from FY20 (1 April 2019 to 31 March 2020) to CY19 (1 January 2019 to 31 December 2019), so that the target is a 42 percent reduction in operational emissions from CY19 to 2029.

At 31 December 2023 Z's operational emissions were calculated to be 47 percent below the baseline year of CY19, five percent beyond the target of 42 percent, six years ahead of the target year – see greenhouse gas emissions table on the next page. Z's strategy choices have led to divestments and changes in the way it transports fuel around Aotearoa New Zealand, which have significantly reduced Z's share of Scope 3 operational emissions. Z's focus is now to remain below the 42 percent threshold and to assess opportunities to achieve further permanent reductions.

To monitor progress, an annual operational emissions target is included in Z's Company Performance Target and reported to the organisation on a monthly basis by the CFO. Z does not currently use a greenhouse gas emissions intensity metric to measure or monitor progress on emissions reduction, nor an internal emissions price.

Z voluntarily finances climate change mitigation actions resulting in emissions reductions equivalent to its residual annual operational emissions (those operational emissions that have not otherwise been reduced via the measures outlined in this statement). These carbon credits are not included in the emissions reductions reported against Z's operational emissions target. Z procures carbon credits from emissions reduction or removal projects that are verified by independent standards endorsed by the International Carbon Reduction and Offset Alliance (ICROA). A total of 18,550 emissions units (equivalent to tonnes of reduced/removed CO<sub>2</sub>-e emissions) were permanently cancelled to offset our residual operational emissions for the 12 months to 31 December 2023.

The table on the next page provides a summary of Z's greenhouse gas inventory and progress made against Z's emissions reduction target. Z's full 'Greenhouse Gas Inventory Report CY23' is published on Z's website under 'Climate and sustainability reporting' at: <https://www.z.co.nz/about-z/corporate-centre/>



**Greenhouse gas emissions – tonnes CO<sub>2</sub>-e**

Scope	Category	Calendar Year 2019	Calendar Year 2020	Calendar Year 2021	Calendar Year 2022	Calendar Year 2023
S1	Direct emissions	1,127	784	490	462	315
S2	Electricity consumption	3,888	3,913	3,589	2,349	2,417
S3C1	Purchased goods and services	1,562,214	1,351,056	1,278,952	1,171,303	1,411,034
S3C3	Fuel and energy related activities	1,120	941	1,143	488	321
S3C4	Upstream transportation	12,948	12,402	13,032	295,485	376,431
S3C5	Waste generated in operations	2,333	1,816	1,692	993	1,127
S3C6	Business travel	1,504	403	380	791	984
S3C11	Use of sold products	10,311,412	8,341,615	8,776,344	9,847,166	11,147,010
S3C15	Investments	13,291	16,593	16,180	3,978	324
<b>Total Scope 1</b>		1,127	784	490	462	315
<b>Total Scope 2</b>		3,888	3,913	3,589	2,349	2,417
<b>Total Scope 3</b>		11,904,821	9,724,826	10,087,723	11,320,204	12,937,231
<b>Total Scope 1, 2 and 3</b>		11,909,835	9,729,523	10,091,802	11,323,015	12,939,963
<b>Operational emissions<sup>1</sup></b>		34,889	35,737	35,151	21,799	18,539
<b>% change from Calendar Year 2019</b>			2%	1%	-38%	-47%
<b>Greenhouse gas emissions intensity (tCO<sub>2</sub>e per PJ of energy sold)<sup>2</sup></b>						228

<sup>1</sup> Operational emissions are those domestic emissions that Z has the most control and/or influence over and can therefore take meaningful action to reduce. Z's operational emissions are all of its Scope 1 and 2 emissions and the following sources of Scope 3 emissions: business travel, waste and fuel distribution as detailed on page 37.

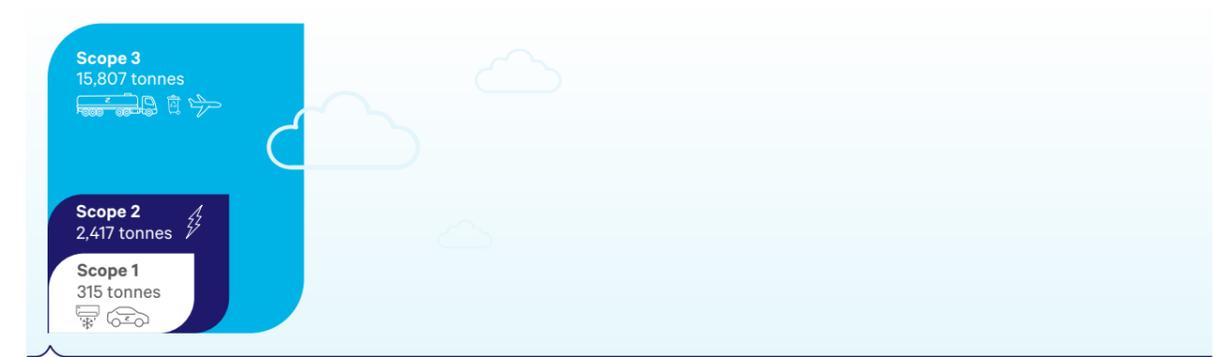
<sup>2</sup> Greenhouse gas emissions intensity is calculated from Z's total Scope 1, 2 and 3 emissions per petajoule (PJ) of energy sold which includes all liquid fuels and electricity. All numbers are subject to rounding.

KPMG has provided an unmodified reasonable assurance opinion as to whether Z's Greenhouse Gas statement has, in all material respects, been prepared in accordance with the Greenhouse Gas Protocol's Corporate Standard requirements. Z's full 'Greenhouse Gas Inventory Report CY23' is available on Z's website under 'Climate and sustainability reporting': <https://www.z.co.nz/about-z/corporate-centre/>

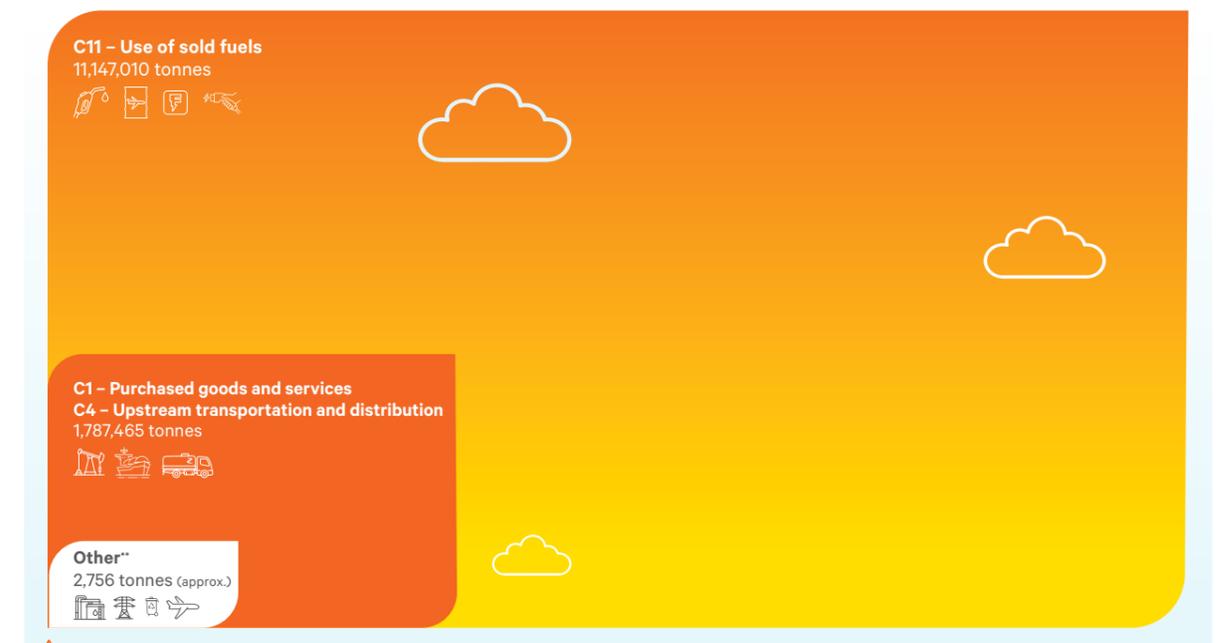


**Greenhouse gas emissions (tCO<sub>2</sub>-e)**

(not shown to scale)



**Operational emissions\***



**Value chain Scope 3 emissions\*\*\***

\* The Operational emissions infographic shows all of Z's Scope 1 and 2 emissions and the following sources of Scope 3 emissions: business travel (C6), waste (C5) and fuel distribution (C4 – domestic distribution).

\*\* 'Other' includes all other reported Scope 3 categories, including C3, C5, C6 and C15.

\*\*\* The Value chain infographic includes all of Z's Scope 3 emissions, including those in the Operational emissions infographic above.

## Exposure to transition and physical risks

### Transition risks

The metrics below relate to the proportion of assets and business activities that are vulnerable to climate transition risks.

Transition risks are those risks identified on page 27, which includes the risk of insufficient capital allocation, the impact of policy, legal and regulatory instruments, potential reputational damage, and shifts in technology and customer preferences. Collectively, these risks are assumed to cause a decline in the demand for hydrocarbons or the pace at which Z can transition.

### Asset vulnerability

Due to the materiality of hydrocarbon sales as a portion of total revenue, Z considers all assets directly associated with the storage, distribution and sale of hydrocarbons could be vulnerable to climate change.

Z has assessed 33 percent of property, plant and equipment (PP&E) assets as being vulnerable to transition risks. This includes terminal infrastructure and certain plant and machinery assets as a percentage of total PP&E.

Z chose to include only PP&E assets in its assessment, as the majority of other asset classes consist of current assets and intangibles. Z considered these other asset classes to be of significantly lower risk in assessing vulnerability associated with the supply of hydrocarbon fuels.

### Business activity vulnerability

Z assessed the percentage of revenue (excluding duties and taxes) derived in 2023 from the sale of hydrocarbon fuels as representative of business activities vulnerable to transition risks.

In 2023, 97.4 percent of revenue was assessed as vulnerable to reduced customer demand as a result of identified transition risks. This metric was calculated based on the proportion of revenue derived from the sale of hydrocarbon fuels relative to total revenue derived from all business activities in 2023.

### Physical risks

Z assessed the number of assets exposed to physical risks to understand the potential impact on all Z's assets (including retail sites, terminals and joint operations, truck stops and corporate offices) across Aotearoa New Zealand. The process, as described in the Risk Management section, assessed physical risks from drought, precipitation, flooding and wind across 288 asset locations. The assessment identified assets that have a higher exposure to climate change impacts from physical risks.

Increased precipitation is likely at over 80 percent of Z assets from 2025 onwards. Fluvial and tidal flooding and impacts from extreme precipitation intensity are expected to pose the most significant physical risks to Z, though localised studies are required to determine to what extent. The proportion of Z's assets exposed to these flooding risks by 2040 are presented by region in the map overleaf.

### Physical Risks – Flooding

This map presents the proportion of Z assets exposed to increased flood risk by region by 2040 through three main indicators:

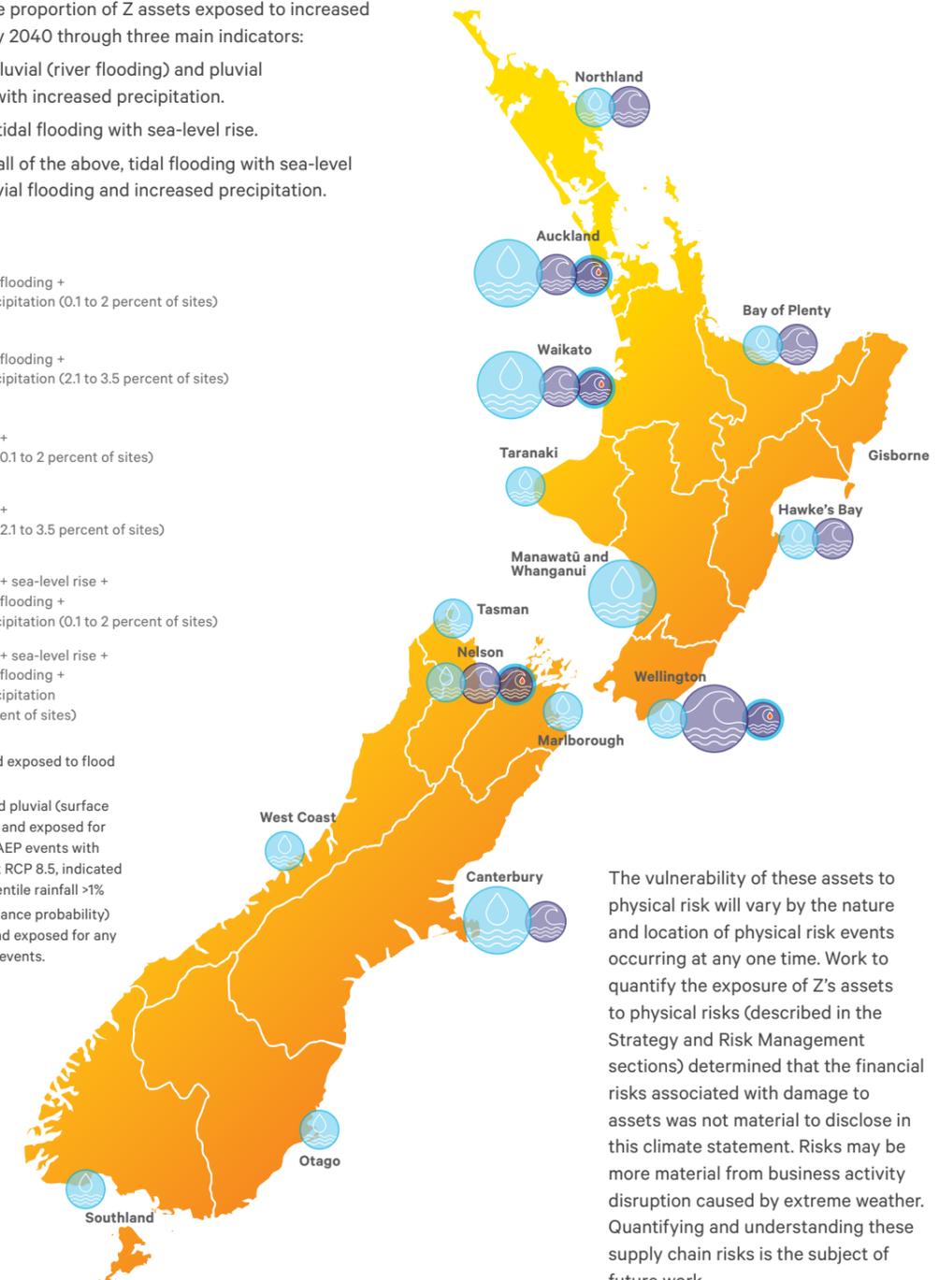
1. Assets exposed to fluvial (river flooding) and pluvial (surface flooding) with increased precipitation.
2. Assets exposed to tidal flooding with sea-level rise.
3. Assets exposed to all of the above, tidal flooding with sea-level rise, fluvial and pluvial flooding and increased precipitation.

#### Key

-  Fluvial/pluvial flooding + increased precipitation (0.1 to 2 percent of sites)
-  Fluvial/pluvial flooding + increased precipitation (2.1 to 3.5 percent of sites)
-  Tidal flooding + sea-level rise (0.1 to 2 percent of sites)
-  Tidal flooding + sea-level rise (2.1 to 3.5 percent of sites)
-  Tidal flooding + sea-level rise + Fluvial/pluvial flooding + increased precipitation (0.1 to 2 percent of sites)
-  Tidal flooding + sea-level rise + Fluvial/pluvial flooding + increased precipitation (2.1 to 3.5 percent of sites)

Note: Assets are considered exposed to flood risks where:

1. Fluvial (river flooding) and pluvial (surface flooding) depths are >0m and exposed for any of 100, 200 and 500 AEP events with increased precipitation at RCP 8.5, indicated by a change in 99th percentile rainfall >1%
2. Tidal AEP (annual exceedance probability) with sea-level rise >0m and exposed for any of 100, 200 and 500 AEP events.



The vulnerability of these assets to physical risk will vary by the nature and location of physical risk events occurring at any one time. Work to quantify the exposure of Z's assets to physical risks (described in the Strategy and Risk Management sections) determined that the financial risks associated with damage to assets was not material to disclose in this climate statement. Risks may be more material from business activity disruption caused by extreme weather. Quantifying and understanding these supply chain risks is the subject of future work.



## Opportunities

The metrics below relate to the proportion of assets and business activities that are aligned with climate-related opportunities. Opportunities, unless otherwise specified, relate to status in 2023.

Opportunity	Impact
Investment in low carbon	In 2023, 18.6 percent of total capital spending was aligned to climate-related opportunities. In 2024 this is expected to be 18.5 percent.
Optimise asset base	104 EV charging bays are located across 37 Z retail sites.
Develop new products and grow in adjacent markets	0.9 percent of total revenues earned by Z related to climate-related opportunities, excluding convenience retail. 1.9 percent of total revenues earned by Z related to climate-related opportunities, including convenience retail.

## Capital deployment

### Expenditure against future energy solutions commitments under Overseas Investment Act

In 2022, a commitment was made as part of Ampol's application for consent under the Overseas Investment Act 2005 to acquire Z to spend at least \$50 million toward low carbon investments by 30 April 2029 to support future energy solutions in New Zealand. At the end of 2023, \$47.8 million (which includes \$17.5m for taking the Group's holding in Flick Energy to 100 per cent) has been spent aligned with this commitment.

### 2023 total capital expenditure on climate-related risks and opportunities

Total capital expenditure, financing and investment deployed towards climate-related risks and opportunities in 2023 was \$32.6 million, and included investment in the following climate-related risks and opportunities:

Description	Associated risk/opportunity	Approach and assumptions
EV charging rollout	Reputation Market and technology changes Investment in low carbon Optimise asset base	Installation of additional 82 EV charging bays at Z retail sites
Additional capital investment in Flick	Reputation Market and technology changes Invest in low carbon	Additional capital investment in Flick Electric to bring Z's ownership up to 100%
Investment in Red Phase	Reputation Market and technology changes Investment in low carbon Optimise asset base	Investment in Red Phase
Forest Partners	Emissions Trading Scheme (ETS) Obligations	Investment in the Forest Partners forestry joint venture to help meet Z's future carbon credit obligations

## Remuneration

Z believes in rewarding people for extraordinary performance, and this is reflected in staff remuneration packages. Z's Short-term Incentive (STI) model is focused on setting clear performance goals for Z overall, and rewarding all staff for working together to deliver these. Management remuneration linked to climate-related risks and opportunities is currently structured as follows:

- Z's Executive management (ZLT) have a target for Z meeting expectations for both company and individual performance which is based on a balanced STI scorecard for Z Energy. Five of the sixteen KPIs on this scorecard are related to Z's decarbonisation programme or transition activities.
- Z's CEO has a separate target for meeting expectations which is based on a weighted STI scorecard

for Ampol (65 percent based on company scorecard, and 35 percent on individual scorecard). Of the company scorecard, 10 percent is for progress against climate goals, including delivery of Z's decarbonisation programme, including energy efficiency, supply chain optimisation, renewable energy and behaviour change initiatives to progress Z's 2029 carbon target.

## Key performance indicators

Z has identified a number of metrics and targets that are used to manage the climate-related risks and opportunities detailed earlier in these climate statements. The majority of these metrics are entity-specific with targets set in the short to medium term. These are outlined in the table below. Industry-based metrics include those on Z's greenhouse gas emissions detailed on page 38.

Risk or Opportunity	Description of metric	2023 Metric	2023 Target	Target base year	Description of performance against target	2024 Target
<b>Market and technology changes</b>	Number of EV charging bays <sup>1</sup> across the retail network (cumulative)	104	N/A	2023	N/A	150
<b>Reputation</b>	Number of EV charging sites <sup>2</sup> (cumulative)	37	39	2023	At the end of 2023 Z had expanded its charging network to 104 charging bays across 37 sites, two sites short of the target.	45
<b>Capital allocation</b>	EV charging energy delivered in megawatt hours (MWh)	645 MWh	850 MWh	2023	Z's performance was 205 MWh below target.	1,500 MWh
<b>Market and technology changes</b>	Number of EV charging bays at commercial sites (that is, charging bays provided for private business use and not publicly available)	21 charging bays 5 commercial sites	N/A	N/A	N/A	N/A
<b>Market and technology changes</b>	Convenience retail sales	\$442m	\$472m	2023	There was a \$30m shortfall to plan.	\$500m
<b>Market and technology changes</b>	Electricity supplied to Flick and Z customers in kilowatt hours (kWh)	272,162,096 kWh	268,012,979 kWh	2023	Electricity sales exceeded our 2023 target by 4,149,117 kWh.	366,080,588 kWh
<b>Reputation</b>	Capital spend on future energy initiatives under the Overseas Investment Act <sup>3</sup>	\$19.2m	\$50m by 2029	2022	At the end of 2023, \$47.8 million (which includes \$17.5m for taking the Group's holding in Flick Energy to 100 per cent) has been spent aligned with this commitment.	Ampol committed to a minimum \$50m capital spend by 30 April 2029 to support future energy initiatives in Aotearoa New Zealand.
<b>Regulation</b>	Number of ETS units required to settle Z's annual obligation	7m	N/A	N/A	N/A	N/A
<b>Litigation</b>	Operational Emissions reduction target (tonnes carbon dioxide equivalent (tCO <sub>2</sub> -e))	18,539 tCO <sub>2</sub> -e	18,600 tCO <sub>2</sub> -e (re-baselined)	2019	Z has a target to reduce operational emissions by 42 percent by 2029, from 2019. An annual company performance target aims to keep Z on track towards meeting this target. Z met the 2023 target of below 18,600 tCO <sub>2</sub> -e, and is currently 47 percent below its 2019 baseline of 34,889 tCO <sub>2</sub> -e.	18,030 tCO <sub>2</sub> -e
<b>Litigation</b>	Spend on biodiversity, voluntary carbon offsetting and climate resilience	\$1.5m	N/A	N/A	N/A	N/A

<sup>1</sup> An EV charging bay is a parking spot in which a customer can charge their EV. The number of EV charging bays represents the total number of EVs that can charge across the network at a point in time, which reflects the breadth of network coverage.

<sup>2</sup> An EV charging site is a location at which Z EV charging is available.

<sup>3</sup> In 2022, a commitment was made as part of Ampol's application for consent under the Overseas Investment Act 2005 to acquire Z, to spend at least \$50 million toward low carbon investments by 30 April 2029 to support future energy solutions in New Zealand.

## NZCS2 Adoption provisions used in this report

In recognition that it may take time to develop the capability to produce high-quality climate-related disclosures, and that some disclosure requirements, by their nature, may require an exemption, NZ CS 2 provides a limited number of adoption provisions from the disclosure requirements in Aotearoa New Zealand Climate Standards.

The table below outlines the adoption provisions which have been used by Z.

#	NZ CS 2 Adoption Provision
1	Current financial impacts – of physical and transition impacts identified.
2	Anticipated financial impacts – of climate-related risks and opportunities reasonably expected by the entity.
6	Comparatives for metrics – comparative information for the immediately preceding two reporting periods.
7	Analysis of trends – analysis of the main trends evident from a comparison of each metric from previous reporting periods to the current reporting period.



ENERGY

# Climate Statements

Z Energy Limited and subsidiaries 2023

