

AIR NEW ZEALAND 

**CLIMATE-RELATED
DISCLOSURES**

TCFD | Taskforce on Climate-related Financial Disclosures

2021



Air New Zealand's Climate-Related Disclosures are published within the 2021 Annual Financial Results and have been reproduced below.

CLIMATE-RELATED DISCLOSURES

Taskforce on Climate-related Financial Disclosures (TCFD)

Air New Zealand committed to supporting the TCFD in 2019. The following disclosures summarise how Air New Zealand aligns with the TCFD recommendations.



Governance of Climate-Related Risks and Opportunities

TCFD Recommendation: Board's oversight of climate-related risks and opportunities

The Board is ultimately responsible for the Company's response to the risks and opportunities presented by climate-related issues. Board oversight is through its Audit and Risk Committee, which oversees key strategic risks including climate change.

This Committee meets quarterly and, amongst other things, considers updates on management of strategic risks. The Board is updated following each Committee meeting. Matters meriting Board-level consideration are highlighted or dealt with as standalone Board agenda items.

Strategic climate-related risks are also considered by the Board as part of the Company's Group Risk Profile which is an output of the Air New Zealand's Enterprise Risk Management Framework (ERMF).

TCFD Recommendation: Management's role in assessing and managing climate-related risks and opportunities

Management has day-to-day responsibility for identifying and managing climate-related risks and opportunities.

Climate-related workstreams are the responsibility of the full Executive team, operational management and the Sustainability Team. Management focus is given to risk identification, promoting consistency in approach, and that the climate-related activities are adequately resourced (for example, a programme of work relating to sustainable aviation fuel (SAF), zero emissions aircraft, carbon offsetting, regulatory compliance). Key issues are reported up to the Audit and Risk Committee as appropriate.

Sustainability is affirmed as a group policy and is reflected in the Company's Code of Conduct and its Supplier Code of Conduct, which set expectations of employees and of those the Company does business with.



Strategy

TCFD Recommendation:

1. Climate-related risks and opportunities identified over the short, medium, and long-term
2. Actual and potential impacts of climate-related risks and opportunities on the Company's strategy and financial planning
3. Resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

In 2020 Air New Zealand set a goal to achieve net zero emissions by 2050. Underlying this was the development, and subsequent implementation, of an updated decarbonisation strategy. This includes advocacy to accelerate the availability and commercial viability of SAF, investment in resource and capability to bring new aircraft technology to market (including hydrogen and battery technology), and ongoing engagement with stakeholders to achieve carbon emissions reductions across the network. The decarbonisation strategy was informed by the risks and opportunities which have been identified by Air New Zealand as part of its TCFD disclosure workstream.

Prior to the Covid-19 outbreak, Air New Zealand engaged third-party experts to undertake scenario modelling to quantify the impact of several physical and transitional climate-related risks, and to assess the resilience of the Air New Zealand's strategy. This engagement has been paused until greater certainty is known as to the recovery of the airline industry post the Covid-19 pandemic, and new regulatory requirements for mandatory climate-related reporting.

Transitional Risks

Transitional risks are risks related to the transition to a lower carbon economy. These include the impact of policy, legal, technological, reputational or market measures associated with climate change and decarbonisation. The transitional risks defined below were used to inform Air New Zealand's strategic response to climate change.



CLIMATE-RELATED DISCLOSURES (CONTINUED)



Strategy (continued)

Transitional Risks (continued)

Key Risk and Opportunity Timeframes: **S** Short-term (0-2 Years) **M** Medium-term (2-5 years) **L** Long-term (+5 years)

Transitional Risk	TCFD Category	Risk Description	Risk Mitigation
Government policy changes	Policy and legal Risk timeframe: S M L	Implementation or expansion of domestic and international policy regulating carbon emitting activities could increase operational and compliance costs. Examples include emissions trading schemes, carbon taxes, passenger levies, biofuel mandates or demand control measures. Differing international standards could also introduce compliance complexity, and risk distorting the competitive composition of the market.	<ul style="list-style-type: none"> Air New Zealand actively engages in government consultations on climate change policy with the goal of advancing aviation decarbonisation. This includes advocating for new policy measures to support the supply of SAF. Public submissions and advocacy documents can be found on the Air New Zealand website¹. Implementation of the airline's decarbonisation strategy to achieve reductions in gross carbon emissions, including improvements to operational efficiency, ongoing fleet renewal, planning for zero emissions aircraft, and advocacy to accelerate the availability and commercial viability of SAF.
Carbon pricing and regulation	Policy and legal Risk timeframe: S M L	Rising costs associated with complying with carbon-related regulation. Current compliance obligations include the New Zealand Emissions Trading Scheme (NZETS) for emissions from domestic aviation fuel, and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) for growth in international emissions from a 2019 baseline.	<ul style="list-style-type: none"> Future carbon pricing assumptions considered in operational and strategic planning. Implementation of the airline's decarbonisation strategy to achieve reductions in gross carbon emissions, including improvements to operational efficiency, ongoing fleet renewal, planning for zero emissions aircraft and advocacy to accelerate the availability and commercial viability of SAF. Air New Zealand is advocating for NZETS auction proceeds to be ring fenced to accelerate the development and deployment of technologies to enable aviation decarbonisation. Air New Zealand's compliance costs for the NZETS were \$14.5 million (calendar year 2020) and \$14.6 million (calendar year 2019).
Changing customer/market behaviour and preferences	Market/ Reputational Risk timeframe: S M	Changing sentiment amongst leisure and business travellers towards lower carbon alternatives to air travel. This could see customers choose to reduce travel, elect to travel on substitute modes of transport, or elect to avoid air travel.	<ul style="list-style-type: none"> Development of, and communication and disclosure relating to Air New Zealand's decarbonisation strategy. Air New Zealand's voluntary customer offsetting programme FlyNeutral allows customers to offset flight emissions with high quality carbon offsets. Surveys to gain insights on customer and wider market sentiment regarding climate change to inform strategic decisions.

Transitional Opportunities

Transitional Opportunity	TCFD Category	Opportunity Description	Strategy to realise Opportunity
Future aircraft technology	Technology Opportunity timeframe: M L	The evolution of existing aircraft technology to improve fuel efficiency and the development of battery or hydrogen powered electric aircraft, will enable a reduction in operating costs, gross carbon emissions and lower Air New Zealand's exposure to carbon pricing and policy changes.	<ul style="list-style-type: none"> Continued investment in fleet renewal programme. Memorandum of Understanding (MOU) with ATR on hybrid and zero emissions aircraft technology. MOU with Wisk Aero exploring how electric vertical takeoff and landing (eVTOL) aircraft could potentially enable zero emissions short range domestic flights.
Sustainable aviation fuel (SAF)	Technology Opportunity timeframe: S M L	SAF has the potential to reduce carbon emissions from Air New Zealand's existing fleet by between 70% and 90%. In addition to a reduction in gross carbon emissions, this will reduce Air New Zealand's exposure to carbon pricing and policy changes.	<ul style="list-style-type: none"> Engagement with Government to advocate for new policies and investment required to enable SAF production and supply in New Zealand. Air New Zealand is collaborating to advance SAF supply in New Zealand including as a founding member of the SAF Consortium (Air New Zealand, Z Energy, Scion, LanzaTech and LanzaJet).

CLIMATE-RELATED DISCLOSURES (CONTINUED)



Strategy (continued)

Physical Risks

Physical risks are risks arising from changes in the regional and global climate and the consequential impacts and events. These may include acute physical damage from variations in weather patterns (for example severe storms, coastal/tidal flooding, drought) or chronic impacts (for example sea level rise and temperature increase).

Key Risk and Opportunity Timeframes: **S** Short-term (0-2 Years) **M** Medium-term (2-5 years) **L** Long-term (+5 years)

Physical Risk	TCFD Category	Risk Description	Risk Mitigation
Extreme weather events	Acute Physical Risk Risk timeframe: S M L	Increasing frequency of extreme weather events resulting in greater disruption to flights and the wider network.	<ul style="list-style-type: none"> Implementation of flight planning software using advanced data analytics to optimise flight paths both in planning and dynamically once aircraft are airborne. Investment in advanced operations control thunderstorm detection in Auckland enabling proactive direct-to-aircraft -crew notification. Air New Zealand is a member of New Zealand's New Southern Sky Programme which has been established to future proof New Zealand's airspace with the deployment of advanced technology adoption.
Sea level rise and coastal intrusion	Chronic Physical Risk Risk timeframe: L	Sea level rise and coastal intrusion causing network disruption, loss of access to airports, other aviation support facilities, critical infrastructure and supply chains.	<ul style="list-style-type: none"> Spatial master planning process identifies infrastructure risks and these are reflected in master planning. Ensuring maintenance is fit for purpose and current to legislation and regulation for building resilience.



Risk Management

TCFD Recommendation:

1. Processes for identifying and assessing climate-related risks
2. Processes for managing climate-related risks
3. Processes for identifying, assessing and managing climate-related risks and integrating them into overall risk management

Risks are identified at various levels of the organisation, including a "bottom up" review involving the identification of key risks by business units, review of top Divisional risks by each Executive in respect of their portfolio of functions, a collective review by the Executive team of the top risks for the Company and periodic workshops with the Board to seek "top down" input. These processes are supplemented with specialist input from functional experts, including from the Sustainability, Corporate Finance, Legal and Risk teams, to promote consistency and completeness. Key climate-related risks and opportunities are also identified, assessed, and managed by each business unit in accordance with this process.

Risk activity is driven by a Risk Operating Rhythm which sets a cadence for the review of risks. Key risks identified are entered into Risk Registers and a formal assessment process determines the materiality of the risk.

Risks identified through the ERMF are assigned to a responsible manager (Risk Owner). Key mitigations for identified risks are determined and assessed for effectiveness and action plans developed where required to reduce the risks to an acceptable level.

Significant climate-related risks are brought to the attention of the Executive team and/or the Audit and Risk Committee as part of the process of reporting to those bodies, and where appropriate are escalated to the Board.



CLIMATE-RELATED DISCLOSURES (CONTINUED)



Metrics and Targets

TCFD Recommendation:

1. Metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process
2. Reporting greenhouse gas emissions
3. Targets used by the organisation to manage climate-related risks and opportunities and performance against targets

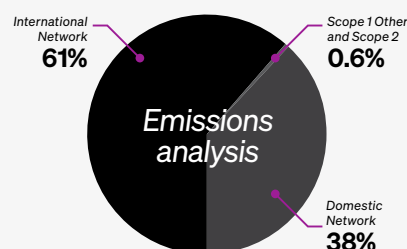
Air New Zealand uses a range of carbon metrics in its internal reporting, strategy formation and decision making. This includes metrics related to assessing the impact of gross carbon emissions, emissions intensity values and the value of New Zealand's carbon compliance obligations. Key metrics are reported below.

The impact of Covid-19 has had a significant impact on Air New Zealand's operations and network as well as the key metrics that Air New Zealand reports on. As a consequence, it is difficult to meaningfully compare the key metrics with prior years.

Carbon Emissions Data ¹	2019	2020	2021
Scope 1 International Network Emissions (Tonnes of CO ₂ -e) ² (Jet Fuel)	3,286,502	2,649,922	817,078
Scope 1 Domestic Network Emissions (Tonnes of CO ₂ -e) (Jet Fuel)	629,876	518,607	508,737
Scope 1 Other Emissions ³ (Tonnes of CO ₂ -e)	9,273	8,106	7,376
Scope 2 Emissions (Tonnes of CO ₂ -e) (Electricity)	3,098	2,832	2,720

Commentary on Carbon Emissions Data

Total Scope 1 and 2 emissions reduced by 58% in 2021. This reduction is due to the reduction in Scope 1 emissions from the international network which reduced by 69%, compared to a 2% reduction in Scope 1 emissions from the domestic network.



Carbon Intensity Data

Carbon intensity data below provides a measure of emissions generated for each kilogram of payload flown.

This is the prominent metric for benchmarking airline carbon intensity. Air New Zealand aims to improve carbon intensity by reducing emissions and maximising total payload carriage (RTK)⁴.

		2019	2020	2021
International Network	Grams of CO ₂ -e per Revenue Tonne Kilometre (RTK)	726	747	972
Domestic Network	Grams of CO ₂ -e per Revenue Tonne Kilometre (RTK)	1,028	1,112	1,168

1. Air New Zealand discloses its emissions within its Greenhouse Gas (GHG) Inventory report, full definitions of emission scopes can be found within that report, extracts from that report are duplicated here within. Deloitte was engaged to provide reasonable assurance over the 2021 GHG Inventory Report. Refer to the reporting and communications page on Air New Zealand's website for the full GHG Inventory and Assurance Report.

2. Gases included in the carbon dioxide equivalents (CO₂-e) factor are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O).

3. Scope 1 other emissions include the combustion of jet fuel from ground operations, LPG, natural gas, diesel, petrol, and wood pellets.

4. Revenue Tonne Kilometre (RTK) is a measure of the weight that has been paid for on the aircraft (freight and passengers) multiplied by the number of kilometres transported. Freight values are from Air New Zealand records, and passenger weights are estimated at 100kg per passenger (including checked and carry-on baggage) as recommended by IATA for generating a fuel efficiency target. CO₂-e emissions are from Air New Zealand's use of aviation fuel over the same time period.

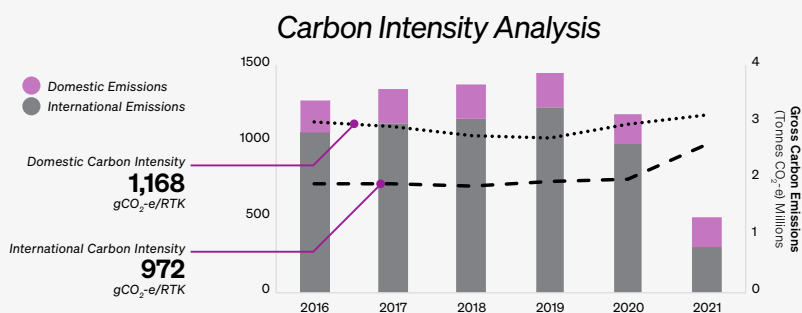
CLIMATE-RELATED DISCLOSURES (CONTINUED)



Metrics and Targets (continued)

Commentary on Carbon Intensity Data

Air New Zealand's carbon intensity (measured in gCO₂-e/RTK) increased 31% compared to 2020. This increase was largely due to New Zealand border restrictions leading to lower than usual load factors on the international network and multiple national lock downs impacting load factors on the domestic network.



Targets

Air New Zealand is a participant on a technical working group established by the Science Based Targets Initiative (SBTi), to provide input on the development of a target-setting tool for the aviation sector. The tool will enable airline's to set a science-based carbon reduction target aligned to the ambition of limiting global warming in line with the ambitions of the Paris Climate Agreement.

Summary of Climate Targets

- Commitment to net zero emissions by 2050.
- A cap on net CO₂ emissions from international aviation from 2020 (carbon-neutral growth). Achieved through the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

Air New Zealand is also committed to meeting the International Air Transport Association (IATA)'s carbon reduction targets.