



Task Force on  
Climate-Related  
Financial Disclosures  
Report – 2021



# Letter from the CEO

## Foreword

ASX is pleased to publish our first Task Force on Climate-related Financial Disclosures (TCFD) report. It has been prepared in accordance with the TCFD recommendations and details ASX's approach to understanding and managing climate-related risks and opportunities. The report also includes the scenario analysis we completed during the year with the support of an independent adviser to assess ASX's inherent climate-related risks and opportunities on its physical locations, as well as within its business and strategy.

This report follows ASX's endorsement of the TCFD framework in October 2019 and the coming into effect of the latest edition of the ASX Corporate Governance Council's Principles and Recommendations in January 2020. The Principles encourage listed companies with an exposure to climate change risks to use the TCFD framework to assess and disclose those risks.

It is gratifying to see the growing number of companies world-wide adopting the TCFD's globally recognised, best practice climate change disclosures. ASX is pleased to join their ranks.

For 150 years, ASX has facilitated the exchange of capital and information for the benefit of investors, listed companies and the Australian economy. Operating at the heart of Australia's financial markets, ASX is uniquely positioned to support important economic goals and transitions. We achieve this by providing deep, liquid and transparent markets; reliable and resilient infrastructure; best practice corporate governance guidance; and sound risk management and systemic stability.

As a technology-based infrastructure and services company, ASX does not believe it has a material exposure to physical climate change risks, given our low reliance on energy, physical supply chains, water and raw materials. Nor do we believe that ASX has a material exposure to climate-related transition risks, given the diversified and self-evolving nature of our customer base and our carbon resiliency initiatives.

Climate change offers real business opportunities for ASX. For example, our electricity derivatives products provide valuable risk management tools for those transitioning their electricity infrastructure to renewable sources.

ASX wants to play its part in the transition to a low carbon economy. Accordingly, this year, we announced our intention to achieve Net Zero for our own Scope 1 and 2 emissions by the end of FY25. We have also announced our commitment to using 100% renewable energy from FY23, which is expected to reduce ASX's carbon emissions profile by at least 85%.

From a strategic perspective, we are focused on growing the climate-resilient technology sector among our listed companies and expanding our energy derivatives suite. We are also encouraging all listed companies to embrace appropriate climate change reporting.

Climate change and the need to transition to a low carbon economy are critically important for Australia and the world. ASX is committed to helping the Australian economy make that transition.



**Dominic Stevens**  
Managing Director and Chief Executive Officer



# Governance

As critical national financial infrastructure, ASX has a responsibility to play our part in addressing climate change and support Australia's transition to a low carbon economy.

## The Board's oversight of climate-related risks and opportunities

With the support of ASX's Audit and Risk Committee (ARC), the Board has oversight of ASX's risk strategy and risk appetite. It regularly reviews ASX's risk management frameworks and processes, and key risks. From FY22, this will also include climate risk following its addition to the enterprise risk register in FY21.

ASX's annual review of current, emerging and potential risks uses ASX's Enterprise Risk Management (ERM) framework to assess risk under seven categories:

- Operational
- Technology
- Financial
- Legal and regulatory
- Reputational
- Strategic
- Counterparty (clearing) risks.

Across the relevant risk types, the direct and indirect, physical and transition risks of climate change are considered at a Group and business unit level. Examples of risks considered include the:

- Risk of a systems outage due to energy supply disruptions
- Reputational risk arising from not meeting community expectations
- Risk to clearing energy derivatives if there is a rapid change in government policy and regulation.

ASX's Board and ARC review and approve ASX's sustainability disclosures. They also review all externally conducted reporting reviews and risk assessments.

## THE BOARD'S OVERSIGHT OF STRATEGY

Through an annual strategy planning process each year, management engages with the Board on existing opportunities, evolving trends and threats to ASX's business and strategy. This includes consideration and assessment of mega trends such as climate change. The Board's oversight of ASX's strategy and the evolving risks and opportunities continues throughout the year at regular Board meetings.

### Management's oversight of climate-related risks and opportunities

The CEO is responsible for, and reports to the Board on, sustainability matters. The CEO approves ASX's sustainability agenda and priorities, which include taking action to mitigate climate-related risks and pursuing identified climate-related opportunities.

ASX's approach to sustainability is driven by the Sustainability Working Group (SWG) which is chaired by the Chief Financial Officer. The SWG comprises a mix of ASX's executive management team and senior employees.

The purpose of the SWG is to consider the current and emerging environmental, social and governance (ESG) issues relevant to ASX's business, to identify and manage any emerging ESG risks and to pursue value-creating ESG opportunities. As part of fulfilling its purpose, the SWG is responsible for the coordination and implementation of ASX's sustainability initiatives across the group.

These include the execution of initiatives to minimise ASX's operational impact on the environment, developing business opportunities related to the transition to a low carbon economy, and identifying ways to support issuers in adopting climate change disclosures.

The SWG provides a quarterly update to the CEO. Topics for discussion include emerging sustainability risks, sustainability developments relevant to ASX and its customers, as well as progress on ASX's sustainability initiatives. The SWG is charged with presenting the CEO its strategic agenda for the short and medium terms, including pathways to achieving ASX's sustainability goals.



# Strategy

ASX's approach to climate change brings together our commitment to being a responsible corporate citizen; our ability to support Australia's transition to a low carbon economy; and our role to encourage transparency from issuers, as a market operator.

By embracing sustainability in our business and operations, and as the premier equity and derivatives market operator in Australia, ASX seeks to lead by example. We recognise we have a part to play in reducing carbon emissions and have set ourselves a goal of Net Zero for our Scope 1 and 2 emissions in FY25.

ASX's approach to climate change has been developed considering both ASX's climate-related risks and opportunities. It focuses on what we can do to:

- Minimise our own operational impact on the environment, including managing our carbon footprint.
- Encourage consistent, comparable and reliable climate change reporting and disclosures.
- Support Australia's transition to a low carbon economy by offering products and services that enhance decision-making, manage risk and meet the growing demand for ESG investments.



## Climate-related risks and opportunities

### PROCESS FOR IDENTIFYING AND ASSESSING ASX'S CLIMATE-RELATED RISKS AND OPPORTUNITIES

In FY21, ASX completed climate scenario analysis to evaluate the exposure of our physical locations to climate hazards; and the possible impacts of climate-related transition risks on our business and strategy.

Two separate time horizons guided our analysis. A shorter time horizon of 2030 was selected to capture those impacts arising from the policy, regulatory and economic changes in the business environment due to the transition to a low carbon economy. A second time horizon of 2050 was selected to assess the longer term physical impacts from climate change, focusing particularly on ASX's locations, physical assets and the indirect impacts from supply chain disruption due to changes in the climate.

Complementing this, two alternate scenarios were specifically developed for ASX to assess climate change risks and opportunities. They were developed with regard to TCFD's requirements that scenario analysis be plausible, distinctive, consistent, relevant and challenging.

The scenarios utilised elements of two globally recognised climate reference frameworks. To assess ASX's transition risks and opportunities, the Network for Greening the Financial System's (NGFS) 'Disorderly' and 'Hot House World' scenarios were predominantly used. They were selected for their relevance to the financial services sector (the sector in which ASX operates).

For the assessment of ASX's physical risks, two of the Inter-governmental Panel on Climate Change's (IPCC) Representative Concentration Pathways (RCPs) were used: RCP 8.5 (High Emissions) and RCP 2.6 (Low Emissions).

The combination of the NGFS and IPCC reference frameworks generated two emissions pathways: a Low Emissions and a High Emissions pathway.

Climate scenario	Application NGFS scenario	Application IPCC scenario	Scenario characteristics
<b>High Emissions</b>	Hot House World (Current Policies)	RCP8.5	Business as usual approach to climate change; assuming continued growth in greenhouse gas (GHG) emissions, significant physical risks of climate change but potentially less prominent transition impacts. This scenario assumed no change in current government policies
<b>Low Emissions</b>	Disorderly (Immediate 1.5°C with limited CDR)	RCP2.6	Assumes no short-term action, but post 2030 global collaboration efforts then culminate in swift international policy response, resulting in GHG emissions reductions and behavioural change to support the transition to net zero.

A range of physical and transition risks and opportunities were identified and validated through desktop research, and stakeholder and shareholder feedback. These risks and opportunities were then evaluated, assessed and validated by a group of ASX senior executives.

Each risk or opportunity was considered using ASX's ERM risk assessment matrix and allocated an overall rating of low, medium or high as per the table below.

Risk rating	Impact				
	1 - Insignificant	2 - Minor	3 - Moderate	4 - Major	5 - Severe
5. Almost certain	L	M	H	H	H
4. Likely	L	M	M	H	H
3. Possible	L	L	M	M	H
2. Unlikely	L	L	L	M	H
1. Rare	L	L	L	L	M

The different categories of 'likelihood' normally used by our ERM risk assessment matrix were adapted to incorporate longer, climate change appropriate time horizons and are noted in the table below.

Risk likelihood	Standard ERM frequency	Climate change ERM frequency
Almost certain	Once or more every year	1 in 3 years
Likely	Likely to happen every 1 to 3 years	1 in 10 years
Possible	Likely to happen every 3 to 5 years	1 in 20 years
Unlikely	Likely to happen every 5 to 10 years	1 in 50 years
Rare	Likely to happen once every 10 years	1 in 100 years

## PHYSICAL RISKS TO OPERATIONS

ASX assessed physical risks under a High Emissions scenario.

When looking at a long-term time horizon, ASX recognises that the inherent risk from an increase in the frequency and severity of extreme weather events on ASX's physical locations is high. However, having regard to risk mitigation strategies already in place, including:

- pre-existing uninterruptible back-up power generation at ASX's primary data centre reducing the likelihood and impact of system outages due to electricity disruption
- ASX's separately located secondary data centre mitigating the risk of weather damage to the primary data centre leading to systems outages.

ASX assesses that the overall risk is residually low and therefore within appetite.

The greatest physical risk for ASX's operations currently envisaged comes from the impact of an extreme weather event damaging ASX's data centre, the Australian Liquidity Centre (ALC), located in Sydney, Australia. In particular, the risk of flooding at the site, although mitigated by the location of the ALC being deliberately selected for its elevation and location outside of a one-in-a-hundred-year flood zone.

**Table 1: Summary of FY21 inherent physical risks assessment**

Physical risks		Risk mitigation
<b>Acute</b> Risks driven by increased extreme weather-related events	Increased severity and frequency of extreme weather events such as storms and flooding	Damage to ASX's technology infrastructure, predominately located at the ALC has a low risk of flooding because its location was selected for its elevated position.
	Increased severity and frequency of extreme weather events leads to increased frequency of power outages at ASX locations	The reputational, regulatory and financial risks of a system outage caused by a power outage are low because ASX's data centre is equipped with on-site power generation which provides back-up electricity in the event of a power outage.
<b>Chronic</b> Risks due to long-term shifts in climate or weather patterns	Higher average temperatures lead to greater cooling requirements	The financial impact of increased cooling requirements for ASX's data centre on operating costs (either through increased electricity prices or higher volumes of electricity purchased) is low given ASX's own electricity costs are relatively small in the context of its overall cost base, and the electricity costs of the data centre customers is recoverable.
	Increased acute and/or chronic impacts of climate change result in higher insurance premiums	The financial impact of increased insurance premiums on ASX's operating costs are low given its insurance premiums are low relative to its overall cost base. The financial impact on ASX's revenues due to higher insurance premiums for Australian companies leading to reduced financial performance and investment attractiveness is also low as it is unlikely that the increases will be material to companies' cost bases.
	Australian listed companies become less attractive due to reduced financial performance arising from weather induced higher operating costs and/or increased operational risk due to changed weather patterns	The risk of lower ASX revenues due to reduced activity from the diminished investment attractiveness of Australian listed companies because of reduced financial performance from weather-induced increased operating costs and/or increased weather-related operating risks was low. This reflects the inherent diversified nature of the companies listed on ASX and the unique impact on each company.

## TRANSITION RISKS

ASX assessed transition risks under a Low Emissions scenario because it was under this scenario that ASX identified the most number of total and transition risks. Transition risks have both direct and indirect ramifications for ASX, given their potential impact on ASX's own business and strategy, and on the business and strategy of ASX's customers.

One of ASX's inherent transition risks relates to the potential impact from changing investor and societal expectations in relation to how a listed company or sector is responding to climate change and the subsequent implications for how investors allocate their capital. This risk has a medium rating because of the role exchanges play in allocating capital from 'old' industries to 'new' ones, and the diversified nature of the companies listed on ASX. While some companies may become less attractive due to a result of climate change, they will be replaced by others seeking capital to fund their solutions that support the transition to a low-carbon economy, or embrace resulting opportunities. Changes from mega trends in the past have often led to larger, more profitable companies emerging.

**Table 2: Summary of FY21 inherent transition risk assessment**

Transition risks	Impact of risks	2030 risk level	2050 risk level	
<b>Risk and legal</b>	Pricing of GHG emissions	• Mandatory GHG pricing may increase ASX's operating cost base.	Low	Low
	The adoption of climate and/or energy policies drive a rapid shift towards decarbonisation	• Increased costs to facilitate necessary adaptation, including financial costs may result in negative implications for the investment attractiveness of impacted companies, and result in reduced trading, clearing and settlement fees.	Low	Low
	Changes in government policy resulting in more stringent reporting requirements and disclosures from listed companies	• Increased reporting requirements may hinder ASX's ability to attract listings and may result in de-listings from companies who want to avoid non-compliance implications.	Low	Low
<b>Technology</b>	Changes in energy technology impact the reliability of the electricity grid and prices increase	• A reduction in the reliability of the electricity grid may impact ASX's reputation with customers and regulators. It may also reduce ASX's financial performance due to lost trading, clearing and settlement fees because of the disruption to ASX's systems. Higher electricity prices may increase ASX's operational cost base.	Low	Low
<b>Markets</b>	Changing investor preferences results in avoidance of companies not aligned to global climate goals	• Changing investor preferences may impact ASX's financial performance as a result of reduced trading, clearing and settlement fees in those companies not aligned to global climate goals.	Medium	Medium
	Stigmatisation of sector or companies who are high-carbon emitters	• These factors may impact ASX's reputation by association and may reduce ASX's financial performance due to a reduction in the trading, clearing and settlement volumes of the stigmatised sector or high-carbon emitting company.	Low	Low
	Increased competition from competitors offering sustainability-linked investment opportunities	• The impact of capital being allocated via another exchange may impact ASX's financial performance due to reduced ASX revenues arising from lost fees.	Medium	Medium
	Global or domestic decarbonisation efforts result in stranded assets	• Stranded assets may result in ASX companies defaulting (credit risk), investors being unable to effectively price equities and other financial assets (market risk) and/or unable to refinance assets (liquidity risk).	Medium	Medium



## TRANSITION OPPORTUNITIES

The scenario analysis confirmed ASX's view that it is well-positioned to develop new products and services that support the transition to a low carbon, climate-resilient economy. While the majority of opportunities identified were considered to be more beneficial under the Low Emissions scenario, they have the potential to deliver financial and strategic benefits to ASX under both a Low and High Emissions scenario.

**Table 3: Summary of FY21 transition opportunities assessment**

Transition opportunities		Opportunities	2030 rating	2050 rating
<b>Products and services</b>	Increased demand for sustainability-linked investments across various asset classes, products and services	Increasing ASX's offering of sustainability-linked products is likely to benefit ASX's financial performance through additional revenue.	High	High
	Increasing demand for transparent, efficient, liquid carbon-related trading platforms and service offerings	Developing a new carbon market and trading activity is likely to benefit ASX's financial performance.	Medium	Medium
	Changes in Australia's electricity generation infrastructure	Changes to Australia's electricity infrastructure may lead to increased demand for ASX's energy derivatives which is likely to benefit ASX's financial performance.	Medium	Medium
<b>Reputation</b>	Climate change leadership in own operations and memberships	Showing leadership by achieving of ASX's Net Zero target and continually evolving ASX's own climate change reporting may enhance ASX's reputation, supporting its ability to attract investors and talent, as well as meeting customers' expectations.	Low	Low
<b>Resilience</b>	Encourage climate change reporting within listed market	Encouraging listed companies and customers to adopt appropriate climate change reporting may increase the attractiveness of the Australian listed market and in doing so benefit ASX's financial performance through increased trading, clearing and settlement fees, and ability to attract listings.	Low	Low
<b>Energy source</b>	Use of lower emissions energy	Using 100% renewable electricity may reduce ASX's exposure to possible future fossil fuel price increases or emissions taxes.	Low	Low

## Impact on business, strategy and financial planning

ASX assessed a range of climate risks and opportunities that could have cost, revenue, reputational and strategic implications for ASX. Overall, the FY21 analysis affirmed the Board and management's view that climate change risks pose a low level risk to ASX. It confirmed that those risks rated inherently medium or high are mitigated and have a residual low risk rating. It also affirmed ASX's view that the pursuit of transition opportunities will have strategic, financial and reputational benefits for ASX.

As a provider of critical, national, financial infrastructure, mitigating physical risks to ASX's operations is an important and long-standing element of ASX's business and strategic planning. Accordingly, there are a range of existing defences, business continuity plans and other measures already in place to mitigate weather-related risks. While ASX understands that climate change may increase the likelihood and severity of these physical risks, planning for these weather-related risks, through our commitment to system resilience and reliability, is embedded in ASX's management processes as well as our business continuity framework.

We are seeking to mitigate the impact of direct transition risks on ASX by addressing the cost and reputational risks that could arise if ASX did not address its own operational climate resiliency.

While ASX's carbon emissions footprint is relatively small, ASX is taking action to reduce it. We believe every bit helps – be it setting an example for our people, partners or across the market. For example, since 2016, ASX has used carbon neutral paper and has been investing in contemporary technology that is more energy efficient. So while ASX's technology infrastructure has grown over the same period, the energy intensity of its technology has declined.

In FY21, ASX committed to using 100% renewable electricity from FY23; the cost of which will be included in our routine financial planning processes. This will reduce ASX's carbon emissions by over 85%, and is an important step towards enhancing ASX's operational climate resiliency. We have also set ourselves a goal of being Net Zero for our Scope 1 and 2 emissions by the end of FY25 and plan to have our pathway to Net Zero validated by the Science Based Targets initiative (SBTi).

In FY22, climate change risk will be elevated from a risk for consideration to a standalone risk on ASX's enterprise risk register. This will ensure that current, emerging and potential climate change risks are reviewed by ASX at least annually.

In parallel, ASX is prioritising efforts to understand and develop sustainability-linked products and services, particularly in relation to energy trading and derivatives. For example, over the past three years, ASX has been expanding its capacity and expertise in carbon trading, and our dedicated energy derivatives team are pursuing their Board approved 'harnessing decarbonisation' strategy.

## Resilience of ASX's strategy

The completion of the climate-related scenario analysis has helped deepen ASX's understanding of the climate risks it faces and validate the resilience of ASX's business and strategy. With our low exposure to both physical and transitional risks, climate resiliency efforts and focus on pursuing those opportunities that will help support Australia's transition to a low carbon economy, ASX is well-positioned to navigate a range of possible climate outcomes.

ASX's climate change response is aligned to a Low Emissions scenario. However, we recognise the importance of continually monitoring and assessing current, emerging and potential climate change risks and opportunities. Accordingly, we will continue to stress test the resiliency of our strategy against both Low and High Emissions scenarios.

ASX's strategic climate resiliency has been strengthened in recent years, particularly in relation to the risks associated with changing investor preferences that may influence their perceptions about companies and/or sectors. Both Australia's and the global technology sector is growing. ASX has been focused on growing the listed technology sector, attracting both domestic and international listings from this climate-resilient industry.

When considering potential indirect transition risks arising from changing investor and consumer expectations about carbon emissions and action on climate change, it's important to recognise ASX's inherent role in transitioning markets from one state to the next, as it has done throughout its history.

Having a marketplace with a framework that requires companies to consider and disclose their material risks, including climate change risks, allows investors to make informed decisions about where to allocate their investment funds. Companies perceived to have a poor approach to climate change will diminish their ability to attract capital. Equally, those companies that manage their climate change risks and pursue their climate-related opportunities, will be attractive to capital.

ASX's view is that we are well-positioned to develop new products and services that support the transition to a low carbon, climate-resilient economy. The transition to renewable energy is underway, and through ASX's energy derivatives business, companies directly involved in reshaping Australia's electricity supply are able to utilise a valuable risk management tool.

Opportunities will continue to present themselves as Australia transitions to a climate-resilient economy. For example, in FY21, ASX made a submission to the Australian Clean Energy Regulator (CER) to operate an online exchange-traded market for emissions offsets. ASX expects to hear if it has made the short list of potential operators towards the end of 2021. ASX's Board and management believe that our trusted independence, enterprise grade technology infrastructure and experience running market oversight activities has ASX well placed to pursue these evolving opportunities.



# Risk management

## Process for risk identification and assessment

Risk management is central to ASX's ability to deliver trusted, resilient financial markets infrastructure and services.

We understand that risks evolve and change over time. Reviews and assessments of potential, emerging and current business-unit and Group-wide risks are performed regularly as part of ASX's risk management framework.

ASX defines its 'key' risks as those that could have a significant impact on business or operational objectives and/or on ASX's reputation, leading to damage to, or loss of business and/or revenue. In this context, what is determined to be 'significant' is relative to the size of the Group or business unit, depending on the risk being assessed.

Physical climate risks are incorporated in the operational management of ASX's data centre, the ALC. Regular consideration and assessment of the ALC's physical environment is undertaken in managing the energy, cooling and security requirements of the site and building.

In FY22, ASX will elevate climate change to being a standalone Group risk in its enterprise risk register. Its elevation reflects the growing importance of continually monitoring and assessing climate risk in the management of ASX's long-term risk profile. It will ensure that relevant climate change risks and associated controls, as well as climate-related opportunities and associated strategies are considered on an annual basis .

As a market operator, ASX recognises the importance of all companies undertaking long-term risk management practices. Equally, we believe we have a responsibility to support our economy transition to a low carbon economy. Climate change reporting is a key step in managing the risk of climate change and driving a transition to a low carbon economy. ASX encourages companies to undertake TCFD reporting through the ASX Corporate Governance Council's Principles and Recommendations. We plan to offer TCFD reporting training and release a TCFD best practice reporting guide in the future.

## Risk management integration

As a critical component of Australia's financial services industry, ASX faces numerous and varied risks and opportunities in providing its infrastructure, services and products. Climate change is one of the risks considered by ASX amongst a broad and comprehensive range of existing and potential long-term risks.

Risk management is a key element of decision-making at ASX. It is integral to our structure, operations and processes. By addressing the full spectrum of risks across the business, including climate change, ASX has the greatest ability to pursue its opportunities and achieve its objectives. The actual risk taken on across the business is consistent with the Board's view of acceptable risk levels.

Annually a review of major current, emerging and potential risks faced by ASX is completed as part of the ERM framework. This review is completed across the Group ensuring that within the context of ASX's risk appetite boundaries, key risks are being identified, assessed and managed across the business units and functional support areas. Accountability for such key risks reside with ASX's executive management team. They include consideration of climate-related risks and opportunities, the related control environment, and the potential impact on ASX strategic goals and objectives.

# Targets and metrics

## Targeting Net Zero in FY25

In August 2021, ASX announced it is targeting Net Zero emissions for its Scope 1 and 2 emissions by the end of FY25. As a marker of our progress to achieving this outcome, ASX has committed to using 100% renewable electricity from FY23 onwards; this will reduce ASX's carbon emissions by over 85%.

Having made this commitment, ASX will have its pathway verified by the SBTi.

Adopting this medium-term goal builds on ASX's efforts over the past few years to reduce emissions including using carbon neutral paper since 2015 and investing in contemporary, more energy efficient technology hardware.

## Metrics

Electricity and paper usage	FY20	FY21	% change from prior year
Electricity GHG <sup>1</sup> emission (excluding ASX's data centre hosting) per \$1,000 of revenue generated (in t CO <sub>2</sub> -e <sup>2</sup> )	0.0087	0.0077	(11)%
Paper usage (excluding CHESSE statements and notifications) by headcount (tonnes)	0.0077	0.0033	(57)%

<sup>1</sup> Greenhouse gas (GHG) emissions.  
<sup>2</sup> Tonnes of carbon dioxide equivalent.

Greenhouse gas (GHG) emissions	Unit	2019	2020	2021	% change from prior year
Scope 1 – diesel and gas <sup>1</sup>	t CO <sub>2</sub> -e	29.56	30.12	22.14	(27)%
Scope 2 – electricity	t CO <sub>2</sub> -e	15,065	14,762	15,091	2%

GHG emissions by activity	Unit	2019	2020	2021	% change from prior year
Scope 1 – Combustion of diesel and gas <sup>1</sup>	t CO <sub>2</sub> -e	30	30	22	(27)%
Scope 2 – electricity (Data centre customers)	t CO <sub>2</sub> -e	10,546	10,334	11,317	10%
– electricity (ASX direct usage)	t CO <sub>2</sub> -e	4,520	4,429	3,775	(15)%
Scope 3 – travel (business travel and commuting)	t CO <sub>2</sub> -e	758	514	253	(51)%
– paper usage (office)	t CO <sub>2</sub> -e	0	0.12	0.01	(92)%
– paper usage (CHESSE statements and notifications) <sup>2</sup>	t CO <sub>2</sub> -e	0	0	0	-

Paper usage	Unit	2019	2020	2021	% change from prior year
Office use	tonnes	8.12	5.46	2.45	(55)%
CHESSE statements and notifications	tonnes	77	103	135	31%

<sup>1</sup> In FY20 this calculation has been updated to more accurately reflect actual emissions during the period. Past years have also been updated for consistency.  
<sup>2</sup> GHG emissions reported are inclusive of carbon offset. ASX commenced using 100% carbon neutral paper in 2015.



## Next steps

Our plans to increase ASX's own climate-resiliency and support Australia's transition to a low carbon economy include:



Add climate change to ASX's enterprise risk register as a standalone risk, ensuring monitoring and assessment of existing, emerging and potential climate change risks and opportunities



Develop a detailed pathway to Net Zero in FY25 and seek verification of that pathway from the SBTi



Garner a better understanding of ASX's e-waste profile and the opportunities to reduce it



Explore additional and relevant metrics and targets that ASX can use to measure its progress



Advocate for companies to report using the TCFD framework and support their ability to do so through education and tools