

# Net Zero Integrity: Assessment of the Net Zero Pledges of Australian Companies

February 2024

Prepared for Climate Integrity  
by UTS Institute for Sustainable Futures





UTS and ISF acknowledge the Gadigal People of the Eora Nation, the Boorooberongal people of the Dharug Nation, the Bidiagal people and the Gamaygal people upon whose ancestral lands our university stands. We would also like to pay respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for these lands.

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## Citation

Atherton, A., Kobelentz, K., Noble, G., Berry, F., Niklas, S., Feenstra, M. and Teske, S. 2023. *Net Zero Integrity: Assessment of the Net Zero Pledges of Australian Companies, report prepared for Climate Integrity*. University of Technology Sydney, Institute for Sustainable Futures, Sydney, Australia.



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# Executive Summary

Since the Paris Agreement there has been a groundswell of voluntary net zero commitments by nations and non-state actors. Voluntary pledges now cover over 90% of the global economy.<sup>1</sup> However, most of the voluntary commitments made by businesses fall short of emerging global best practice, such as the standards recommended by the UN High Level Expert Group Integrity Matters Report.<sup>2</sup> Despite the large number of net zero pledges being made, it is becoming clear that voluntary action alone is not enough to drive business climate action at the speed required to align with the science of limiting warming to 1.5 degrees.

In the context of an increasing number of Australian companies making net zero pledges, and with growing stakeholder and regulator scrutiny, Climate Integrity commissioned the UTS Institute for Sustainable Futures to assess the net zero pledges of a sample of major Australian listed corporate businesses.

Businesses have a critical role to play in the achievement of the goals of the Paris Agreement to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.”<sup>3</sup> To ensure that businesses are contributing fairly to the achievement of this goal, they need to clearly set out a roadmap for decarbonisation or a ‘Transition Plan’, outlining how they intend to reach net zero on a trajectory that aligns with the latest science.

With the rise of business climate action plans, there is now a plethora of frameworks, assessments, standards and disclosure requirements that address transition plans globally, many of which remain voluntary.

In March 2022, the United Nations established a High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities (UN HLEG) to develop clearer and stronger standards for net-zero emissions pledges by businesses, investors and cities. At COP27, this Expert Group released a report, *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions*, with ten recommendations for what credible net zero pledges should include. These benchmarks provide an important global accountability framework for what a 1.5-degree, science-aligned net-zero pledge needs to be. The recommendations, and companion checklist, cover the setting of a net zero pledge, setting net zero targets, use of voluntary credits, details of transition plans, requirements on phasing out fossil fuels and scaling up renewable energy, aligning lobbying and advocacy with net zero commitments, consideration of nature risks, and contribution to a Just Transition.

The UTS Institute for Sustainable Futures (ISF) developed the UN HLEG checklist criteria into an assessment framework and assessed the publicly available transition plan disclosures of a sample of companies for alignment with the criteria. Additionally, ISF assessed company progress against their emissions reduction targets and alignment of their interim targets to a science-based decarbonisation pathway.

The companies included in the research were selected to provide coverage of major emitters listed on the ASX across a range of sectors but excluding pure fossil fuel companies. The following companies are included in the assessment:

- AGL Energy Ltd
- Origin Energy Ltd

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<sup>1</sup> Net Zero Tracker (2023) Net Zero Stocktake 2023: NewClimate Institute, Oxford Net Zero, Energy and Climate Intelligence Unit and Data-Driven EnviroLab Available at: <https://zerotracker.net/analysis/net-zero-stocktake-2023>

<sup>2</sup> United Nations’ High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities. (2022). *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions*.

<sup>3</sup> <https://unfccc.int/process-and-meetings/the-paris-agreement#:~:text=Its%20overarching%20goal%20is%20to,above%20pre%2Dindustrial%20levels.%E2%80%9D>

- Rio Tinto Ltd
- BlueScope Steel Ltd
- South32 Ltd
- Qantas Airways Ltd
- Woolworths Group Ltd
- Coles Group Ltd
- Cleanaway Waste Management Ltd
- Telstra Corporation Ltd

### Assessment result summary

On the following page a summary of the full company assessments is presented.

#### Key

Criteria fully met	Yes
Criteria not met	No
Criteria partially met	Partial
Not applicable	NA
No or insufficient disclosure to assess	ND

Criteria	AGL	Origin	Rio Tinto	Bluescope	South32	Qantas	Woolworths	Coles	Cleanaway	Telstra
<b>1. Net zero pledge</b>										
Public pledge to achieve net zero emissions	Green									
<b>2. Setting net zero targets</b>										
Short-, medium, long-term targets	Yellow									
Target 50% below 2020 by 2030 and net zero 2050	Green									
Absolute emissions reductions target	Green	Yellow	Green	Red	Green	Red	Green	Red	Green	Green
Targets science aligned and verified	Red	Yellow	Red	Yellow	Red	Green	Yellow	Green	Yellow	Green
Targets cover all scopes and value chain	Yellow									
Targets cover all greenhouse gases	Green									
Separate targets for material non-CO2 greenhouse gas emissions	Red									
Targets cover embedded emissions in fossil fuel reserves	Hatched									
Targets cover land-use emissions	Grey									
<b>3. Using voluntary credits</b>										
Voluntary credits not counted toward emissions reductions	Red									
<b>4. Creating a transition plan</b>										
Publicly disclosed net zero transition plan	Green									
Stated to be updated every 5 years	Green	Red	Red	Green	Red	Red	Red	Red	Red	Green
States concrete actions to be taken to meet targets	Yellow									
Contribution of actions to targets is quantified	Red	Red	Red	Yellow	Red	Red	Red	Red	Red	Red
Disclosure of capex plans aligned with all targets	Red									
Transition governance and linked executive compensation explained	Green									
<b>5. Phasing out fossil fuels and scaling up renewable energy</b>										
Targets to end use/support of fossil fuels	Red									
Target for renewable energy procurement	Green									
Explanation of full phase out of fossil fuels from operations	Red									
<i>If company has operations in coal, oil or gas production:</i>										
Target for 64% reduction in methane by 2023 from 2020	Hatched									
Targets to end coal production for power generation	Red	Green	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched
Target to end coal plants by 2030 in OECD and 2040 elsewhere	Red	Green	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched
Targets to end oil or gas production	Grey	Yellow	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched	Hatched
<b>6. Aligning lobbying and advocacy</b>										
Disclosure of trade associations and positive climate advocacy	Yellow	Green	Yellow	Green	Yellow	Red	Yellow	Yellow	Yellow	Yellow
Outline of specific policies and regulations needed	Yellow									
Disclosure of lobbying consistent with net zero targets	Green	Green	Green	Green	Green	Red	Yellow	Green	Yellow	Yellow
Disclosure of contribution to climate engagement across value chain	Green									
<b>7. &amp; 9. People and nature and investing in just transitions</b>										
If material land-use emissions stated how further loss will be eliminated	Red									
Disclosure of nature risk and dependency in relation to transition	Red									
Disclosure of contribution to Just Transition	Green									
<b>8. Increasing transparency and accountability</b>										
Annual disclosure of ghg data, progress against target & plans	Green									
Disclosure on UNFCCC Global Climate Action Portal	Green	Green	Red	Red	Red	Green	Red	Green	Green	Green
Disclosure of approach to verification of targets, plan and progress	Yellow									
Emissions reductions verified	Green	Red	Red	Green	Red	Green	Red	Red	Green	Green

## Key findings

**The company assessments undertaken found all ten companies to be lagging behind global best practice, with net zero pledges that largely lack scientific rigour. Despite a majority of companies assessed having a public net zero pledge or transition plan, no company has a fully comprehensive, quantified, capital-allocated and independently verified plan for reducing emissions in line with a scientific pathway. Analysis of emissions reductions achieved to date suggests that less than half are fully on track to meet their own targets.**

All ten companies assessed in the sample have made a public net zero pledge, and all have set interim emissions reduction targets, however, full alignment to the UN HLEG requirements is extremely low. Significantly, only three companies have a current interim target that is independently verified as being aligned with a 1.5°C pathway by the Science Based Targets Initiative (SBTi). No companies have disclosed their land-use emissions, despite some companies operating in sectors for which significant land-use emissions could reasonably be expected. Half the companies are using voluntary carbon credits to count towards their emissions reduction targets.

Seven companies have published a standalone transition or climate action plan outlining how they plan to achieve their net zero pledge. Across transition plans and other climate actions plans there is a high degree of variability in the level of detail on actions, quantification of planned emissions reductions and detail on alignment of capital expenditure. No company has set out a fully comprehensive, detailed and quantified plan for how the total target emissions reductions will be achieved in line with a 1.5°C pathway and none has had their transition plan independently verified. No company has disclosed a fully comprehensive, detailed and quantified capital alignment plan directly linked to achievement of the targets.

No companies have fully publicly committed to ending their use of fossil fuels or fully phasing out fossil fuels from their operations. The lack of scientific alignment with the need to rapidly phase out fossil fuels is particularly concerning. Without commitments to phase out fossil fuels, it is difficult to see how net zero pledges can be fulfilled.

Most companies have disclosure on trade association affiliations, statements on the consistency of lobbying activities with net zero targets and engagement on climate change across their value chains. Most companies have no or minimal disclosure on nature-based risk and dependency in relation to transition plans.

All companies have disclosed greenhouse gas (GHG) emissions data in the most recent reporting period. However, disclosure of progress against targets and transition plans is more variable. Most companies have not clearly and transparently reported quantified progress against targets. While the majority of companies have obtained some form of assurance or review on their current year emissions, most have not obtained assurance on other aspects of disclosure including targets, transition plans and progress against these.

Despite the increasing volume of disclosure over a number of years, and years of voluntary disclosure, for all companies in the sample, it is difficult to assess the extent of their current and planned contribution to a Just Transition, that aligns with scientific requirements. A small number of companies consider their contribution to a Just Transition in detail while six have no meaningful disclosure on it. Many fall short of the standard set by the UN HLEG criteria.

Analysis of companies' progress against targets found that less than half are fully on track to achieve their interim targets. This demonstrates that companies are at different stages of decarbonising and there is a need for standard forms of reporting so that all stakeholders including investors and consumers can make judgements on progress to inform their own decisions. Additionally, the comparison of targets to scientific decarbonisation pathways found that only three companies' targets are science-aligned.

There is a fundamental lack of transparency around the basic information needed to assess company pledges and progress. A recurring issue is the absence of clear and concise presentation of progress against core elements of a transition plan. The overall distribution of ratings, split evenly across meeting, partially

meeting and not meeting criteria, reveals that the current level of disclosure is not providing a clear investment signal. The lack of uniform disclosure makes it challenging to assess a company's progress towards net zero transition against other market participants. If not resolved this would impact on asset allocation decisions of investors as they seek to meet their own net zero emissions commitments.

The research provides evidence that, in the absence of clear standards for transition plan disclosure, disclosures across companies are inconsistent, incomplete and often lacking in basic transparency.

## Recommendations

To support meaningful, science-aligned climate action, government reforms, policies and business guidance need to raise the bar on what businesses are required to do to ensure real progress towards global emission reduction goals. As a priority, Australia must improve business transition planning to support achievement of its decarbonisation goals, including prioritising additional regulatory requirements, such as alignment with clear and enforceable integrity standards in the near-term. New regulatory requirements must be supported by robust disclosure frameworks, transparent sharing of information, and well-resourced regulators and verification mechanisms to achieve the outcome of driving business climate action in line with the science.

Australia needs clear, science-based standards to underpin transition plans and disclosures to drive business climate action at the pace needed to do our fair share by 2030 and beyond. The Australian Government has committed to providing recommendations in 2024 to enhance company level transition planning beyond International Sustainability Standards Board (ISSB) disclosure requirements, as well as introducing new legislation and regulations on mandatory climate reporting.

There is an urgency to establish transition plan integrity standards in Australia. There is a window of opportunity to join a global push towards high integrity, science aligned business climate action to avoid the worst effects of climate change. Global emissions must peak by 2025 and developed countries must contribute fairly to the transition. Australia can lead the way by setting credible, ambitious, science-based standard for net zero pledges and transition plans to reduce greenwashing, accelerate climate action, and contribute to a Just Transition. The Australian Government must lead on implementation of high integrity standards without delay.

### Recommendation 1: Regulatory guidance for science-aligned business transition plans

Business transition plans are an essential tool to drive business climate action, and for disclosing and monitoring progress at the company level. To ensure high-integrity transition planning, the Government should:

- Set a clear credibility standard for business transition planning that aligns with the science of 1.5 degrees
- Through the Council of Financial Regulators (CFR), direct ASIC and APRA to issue regulatory guidance on standards for high-integrity transition plans that aligns with the science of 1.5 degrees

### Recommendation 2: Uniform standards for business transition plans

To enhance transparency, consistency, usability, credibility and accountability of transition plans in Australia regulatory guidance should, establish:

- Uniform standards for business transition plans that include:
  - Uniform standards for short-term targets as well as interim and long-term targets and the required nature of the targets in terms of scope and coverage (including targets for phasing out use of and support for fossil fuels)
  - Standards for targets and planned actions to align with a relevant scientific decarbonisation pathway (including coverage of problematic use of offsets). These should align with the UN HLEG where possible, with Australian requirements tailored for consistency with relevant sectoral decarbonisation pathways
  - Uniform standards to disclose presence or absence of material land-use emissions.

### Recommendation 3: Increased transparency and comparability of transition plans

Regulatory guidance should establish:



- Clear, consistent and comparable format for reporting basic data including emissions data, emissions reductions in relation to baseline and target, as well as progress against plans.
- Clear, consistent and comparable format for disclosure of planned, quantified emissions reductions to achieve targets and the allocation of capital to achieve targets.
- Uniform standards for independent verification of targets, plans and reported progress.

**Recommendation 4: Commitment to a just transition and addressing nature-based risk**

Government should work with regulators to develop guidance on disclosure of contribution to a Just Transition and integration of nature risk and dependency in transition plans.

**Recommendation 5: Skills and resources**

To further support transition planning, resources and funding are needed to ensure that:

- The financial and corporate system is equipped with the necessary skills and competencies to prepare and interpret transition plans.
- Relevant government regulators are equipped to review transition plans and enforce standards.

Although this report reviews a selection of major publicly listed Australian corporate emitters, it should be noted that there are major emitters in Australia that are either government-owned or privately held. The provided guidance should apply to all major Australian emitters, not just those listed on the ASX. Financial institutions, including banks, superannuation funds and insurers, have a major role to play in emissions reductions not only for their own emissions, but for those of the businesses they invest in, finance and insure, and should therefore also be subject to guidance.

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## Introduction

### Purpose of the research

Climate Integrity has been established to advocate for increased ambition, accountability and transparency in the net zero pledges of Australian businesses. Climate Integrity commissioned the UTS Institute for Sustainable Futures (ISF) to assess the net zero pledges of major Australian businesses against a high-integrity global benchmark.

The research team investigated how a selection of current company net zero pledges, detailed in company climate transition plans, compare to the framework developed by the United Nations' High-Level Expert Group on Net Zero Emissions Commitments of Non-State Entities (UN HLEG).<sup>4</sup> The research also assessed actual emissions reductions achieved by selected companies compared to their targets, and alignment of interim emissions reductions targets to a 1.5°C decarbonisation pathway. These assessments aim to further inform the Australian net zero policy landscape and the development of standards for disclosure of progress against targets and the basis of target setting. This report presents the research context, methodology and key findings.

### Transition plans, frameworks and assessments

Since the Paris Agreement there has been a groundswell of voluntary net zero commitments by nations and non-state actors. Voluntary pledges now cover over 90% of the global economy.<sup>5</sup> However, most of the voluntary commitments made by businesses fall short of emerging global best practice, such as the standards recommended by the UN HLEG Integrity Matters Report. Despite the large number of net zero pledges being made, it is becoming clear that voluntary action alone is not enough to drive business climate action at the speed required to align with the science of limiting warming to 1.5 degrees.

Businesses have a critical role to play in achieving the overarching goal of the Paris Agreement, “to hold the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels”.<sup>6</sup> Increasingly, companies are committing to achieve net zero greenhouse gas emissions. Recent research found that 61% (121 entities) of the ASX200 have publicly committed to net zero, or 80% of the ASX200 by market capitalisation.<sup>7</sup>

With the increase in net zero pledges has come greater focus on the importance of corporate transition plans. A transition plan sets out the actions an entity intends to take to transition its assets, operations, value chain and business model to a trajectory that aligns with scientific climate recommendations. With the rise of business climate action plans, there is now a plethora of frameworks, assessments, standards and disclosure requirements that address transition plans globally, many of which remain voluntary.

On disclosure, the Taskforce on Climate-Related Financial Disclosures (TCFD) has been pivotal. The TCFD disclosure recommendations have been converted into a Climate-related Disclosure Standard (*IFRS S2 Climate-related Disclosures*) by the International Sustainability Standards Board (ISSB), which includes a framework for disclosing transition plan information. The Australian Government has committed to introduce mandatory climate-related financial disclosure requirements from 1 July 2024 based on the ISSB standards. The ISSB approach to transition plans, adopted by the Australian Government, is to focus on transparency, requiring companies that have transition plans to disclose them, rather than prescribing transition plan activities or levels of ambition, or making it mandatory to have a transition plan (although disclosure

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<sup>4</sup> United Nations' High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities. (2022). *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions*.

<sup>5</sup> Net Zero Tracker (2023) Net Zero Stocktake 2023: NewClimate Institute, Oxford Net Zero, Energy and Climate Intelligence Unit and Data-Driven EnviroLab Available at: <https://zerotracker.net/analysis/net-zero-stocktake-2023>

<sup>6</sup> <https://unfccc.int/process-and-meetings/the-paris-agreement#:~:text=its%20overarching%20goal%20is%20to,above%20pre%2Dindustrial%20levels.%E2%80%9D>

<sup>7</sup> ACSI. (2023). *Promises, Pathways & Performance Climate Change Disclosure in the ASX200*. Available at <https://acsi.org.au/wp-content/uploads/2023/08/Promises-Pathways-Performance-Climate-reporting-in-the-ASX200-August-2023.pdf>

requirements will include elements that would be expected in a transition plan).<sup>8</sup> The disclosure requirements cover information about targets, progress towards targets, mitigation strategies, resource allocation decisions and the use of offsets. The Australian Government *Sustainable Finance Strategy, Consultation Paper* released in November 2023 reiterates this approach and commits to providing further guidance in 2024 to enhance company level transition planning.<sup>9</sup> Following finalisation of disclosure standards, ASIC will provide guidance on its expectations and priorities relating to the disclosure of transition-related targets, plans and claims.

Other governments and stakeholders are developing approaches to enhance the ambition and credibility of transition plans. The UK Transition Plan Taskforce (TPT) has developed, at the request of the UK Government, a transition plan *Disclosure Framework*, setting out good practice for transition plan disclosures.<sup>10</sup> Regulators in the EU are proposing to introduce mandatory transition plans – for example the EU *Corporate Sustainability Reporting Directive* (CSRD) requires the disclosure of plans to ensure that corporate business models and strategies are compatible with the goals of the Paris Agreement.<sup>11</sup> The International Standards Organisation (ISO) launched Net Zero Guidelines in December 2023.

Investors are also scrutinising the climate ambitions of large companies. The Climate Action 100+ (CA100+) group of investors evaluates the net zero performance of some of the world's largest corporate greenhouse gas emitters using its own benchmarking tool that assesses emissions reduction, governance and disclosure. The CA100+ latest results released in October 2023 include two broad assessment categories: Disclosure Framework indicators that assess the adequacy of corporate disclosure; and Alignment Assessments that evaluate the alignment of company actions with the Paris Agreement goals.<sup>12</sup> Other assessment tools include the framework developed by University of Zurich and the Oxford Sustainable Finance Group for WWF Switzerland. The framework provides indicators to assess the ambition and credibility of transition plans, to be implemented using a natural language process (NLP)-based assessment tool.<sup>13</sup>

## UN HLEG Report and Checklist

In November 2022 at the United Nations' Climate Conference (COP27) in Sharm-el Sheikh, Egypt, the UN HLEG launched the report *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions*.<sup>14</sup> The report addresses net zero pledges and commitments from non-state actors including corporations, financial institutions, and cities and regions. The report built on existing frameworks for net zero pledges to develop its findings and recommendations. The UN HLEG recommendations provide an important global accountability framework for what a credible 1.5-degree, science-aligned net-zero pledge needs to be.

The report provides ten recommendations for entities making net zero pledges and definitions of what it means to be net zero and net-zero aligned. It aims to improve integrity, transparency and accountability by establishing clear standards and criteria for net zero pledges to ensure they align with limiting global temperature rise to 1.5°C above pre-industrial levels. Core to the recommendations are that non-state actors should have short-term emissions reductions targets as well as long-term targets, and a clear pathway to

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<sup>8</sup> The Australian Government the Treasury (2023). *Climate-related financial disclosure: Consultation Paper, June 2023*.

<sup>9</sup> The Australian Government the Treasury. (2023). *Sustainable Finance Strategy: Consultation Paper, November 2023*.

<sup>10</sup> [https://transitiontaskforce.net/wp-content/uploads/2023/10/TPT\\_Disclosure-framework-2023.pdf](https://transitiontaskforce.net/wp-content/uploads/2023/10/TPT_Disclosure-framework-2023.pdf)

<sup>11</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022L2464>

<sup>12</sup> Climate Action 100+. (2023). *Net Zero Company Benchmark 2.0: 2023 Results Summary. October 2023*.

<sup>13</sup> Julia Bingler, J., Colesanti Senni, C., Fixler, D., Schimanski, T. (2023). *Net Zero Transition Plans: Red Flag Indicators to Assess Inconsistencies and Greenwashing*. Report prepared for WWF Switzerland by University of Zurich and Oxford Sustainable Finance Group, University of Oxford.

<sup>14</sup> United Nations' High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities. (2022). *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions*.

achieve targets through concrete actions detailed in a transition plan, and alignment of capital expenditure to achieve the targets. The ten UN HLEG recommendations, as they apply to businesses, are briefly described below.

**1. Announcing a Net Zero Pledge:** companies must make a public commitment to achieve net zero emissions.

**2. Setting Net Zero Targets:** companies must set targets in 5-yearly increments, starting at 2025 and targets should be aligned with scientific emissions modelled pathways that limit warming to 1.5°C with no or limited overshoot, covering all scopes, greenhouse gas types, jurisdictions and operations.

**3. Using Voluntary Credits:** high integrity voluntary carbon credits can be used for beyond value chain mitigation but cannot be counted towards achievement of emissions reductions.

**4. Creating a Transition Plan:** transition plans must be publicly disclosed and comprehensive, detailing the concrete actions to achieve targets, with quantified contribution of actions to emissions reductions. Governance and incentive structures and capital expenditure must be aligned.

**5. Phasing out of Fossil Fuels and Scaling Up Renewable Energy:** transition plans must include specific targets aimed at ending the use of and/or support for fossil fuels and targets for transition towards renewable energy. Primary producers of fossil fuels must make specific commitments to end all aspects of fossil fuels.

**6. Aligning Lobbying and Advocacy:** companies must lobby for positive climate action, not against it, working with stakeholders across their value chains, government and trade associations.

**7. People and Nature in the Just Transition<sup>15</sup>:** companies with significant land-use emissions must ensure that their operations do not contribute to deforestation or loss of other important ecosystems. Businesses should also anticipate the final guidance of the Taskforce for Nature-related Financial Disclosures (TNFD) by factoring in nature risks and dependencies to transition plans. Companies should support a Just Transition by giving attention to the rights of marginalised groups and Indigenous People in relation to nature.

**8. Increasing Transparency and Accountability:** Companies must report annually on their progress, including emissions data, in a way that can be compared with their baseline and independently verified.

**9. Investing in Just Transitions:** Companies with operations in developing countries must demonstrate how their transition plans contribute to economic development in the regions where they are operating and support other elements of Just Transition including resilience and equality.

**10. Accelerating the Road to Regulation:** regulators, governments and voluntary standard-setting initiatives should act to establish a level playing field and align global regulation to the goals of the Paris Agreement. As this recommendation is not directed at businesses, it has not been included in the assessment criteria for this research.

Accompanying the report, the UN HLEG published a “checklist” that converts the recommendations of the report into a list of criteria for transition plans. The assessment framework developed for this research is based on this checklist. Some elements of the recommendations have been combined in criteria to avoid repetition – for example, elements of Just Transition that are detailed under Recommendations 4 and 5 in the UN HLEG report have been combined into the assessment criteria on Just Transition and categorised under combined recommendations 7&9 in the framework. The UN HLEG Recommendation 1 includes components in addition to making a net zero pledge, which are included in the assessment framework under other recommendations, for example on targets and transition plans. This report presents the assessed performance for each company against the assessment framework criteria, aligned with the UN HLEG recommendations 1-9.

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<sup>15</sup> UN HLEG refers to Just Transition across a number of recommendations as, a transition that: addresses issues of fairness, inequality and injustice; considers the broader social consequences and impacts of mitigation actions, including on race, gender and intergenerational equity; acknowledges the rights of marginalised groups and Indigenous Peoples; and, in developing regions, addresses economic and other development needs .

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## Assessment methodology

### Assessment framework

The research team developed an assessment framework based on the UN HLEG checklist and the UN HLEG *Integrity Matters* report. The UN HLEG checklist was developed into a set of assessment criteria with the 'scoring' options for alignment with the criteria: Yes, No, Partial or Not Applicable/No Disclosure (not relevant or no/insufficient information to assess).

For reporting purposes, performance against the criteria is presented in alignment with the UN HLEG ten Recommendations. This report presents summary findings and detailed assessments for each company, including a summary rationale for the assessed 'score' for each criterion.

It is important to note that this assessment is primarily an assessment of disclosure in comparison to the UN HLEG checklist. For example, we have not undertaken an assessment of the adequacy of capital allocation or of stated actions to achieve targets, but instead assess whether disclosure of these issues aligns with the points set out in the checklist and report. For notes on how criteria were applied in the assessment, see Appendix 3.

Two additional elements of the assessment that go beyond disclosure are described below.

### Assessment process

The research team reviewed public company disclosures, primarily for the most recently available reporting period, including Climate Action Plans, Sustainability Reports and Data Packs, Annual Reports and where necessary, additional disclosures such as the Carbon Disclosure Project. Based on publicly available information, we assessed disclosure against the assessment framework. Assessments were undertaken and data collected between November-December 2023 with data accessed up to 20 December 2023. Assessment of progress against targets and comparison of targets was undertaken in January 2024.

### Assessment of progress against targets

We undertook an assessment of the progress companies have made against their own interim target/s. This supplements the assessment of integrity of transition plans and aims to help further inform the development of universal standards to communicate progress on targets. The assessment aimed to compare actual company emission reductions against calculated emission reduction pathways based on base years and interim targets set by the company as follows.

STEP 1. assessing the company's actual emissions reductions based on documented data for the most recent reporting period (usually FY23) compared to the company's stated baseline year and the interim target.

STEP 2. compare the company's calculated emissions reductions and percentage reductions with the reductions required to be on track to interim target (using an average annual percentage emissions reduction and cumulative emission reductions considering a linear trend)

STEP 3. assess if the company is on-track or off-track to meet its target based on existing data or if missing, based on calculated reductions.

### Data and assumptions

Existing data

- Actual emission data in absolute emissions or emission intensities (time period covered is base year to most recent available, usually FY23)
- Emission reduction targets: interim target(s) and 2050 targets

Assumptions



This assessment of emission reductions is based on percentage values rather than absolute emissions in respective units (MtCO<sub>2</sub>-e), as a result we define the achievement of Net Zero by 2050 as a percentage value (0% emissions by 2050).

## Assessment of alignment of targets to a science-based decarbonisation pathway

As part of the disclosure assessment, we assessed whether the company states that its targets and net zero pledge are consistent with limiting warming to 1.5°C with no or limited overshoot, and that it states that its pledge, targets and pathway to net zero are generated using a robust methodology aligned to 1.5°C with no or limited overshoot, verified by a third party.

In addition to this, we have separately sought to assess whether the company's interim target/s align with an accepted and relevant scientific decarbonisation pathway. To assess the alignment, we used relevant publicly available results from 1.5 °C aligned pathways from the One Earth Climate Model (OECM)<sup>16</sup>, developed by ISF and the Net-Zero by 2050 pathway from the International Energy Agency (IEA)<sup>17</sup>. The OECM provides detailed energy and emission data for the G20 countries up to 2050 with carbon budgets for individual industrial sectors and the specific Australia 1.5 °C scenario was used. Both the OECM and IEA scenario have been identified by the OECD as key 1.5 °C aligned climate mitigation scenarios commonly used to inform financial sector participants, stakeholders and climate policymakers.<sup>18</sup> The assessment analysed the most relevant and comparable target for each company. In cases where there was not a comparable sectorial pathway, or insufficient company disclosure, this is stated and an alternative assessment measure was used.

## Selection of companies

The companies included in the review were selected in agreement with Climate Integrity. The selection criteria were as follows:

- Top Australian emitters of Scope 1 and 2 greenhouse gases, based on 2022 National Greenhouse and Energy Reporting (NGER) data (ranked by volume of emissions)<sup>19</sup>
- Listed on ASX (eligibility criteria)
- Not a pure fossil fuel company (exclusion criteria) – transition options are limited
- No more than two companies in the same sector – to provide sectoral coverage

Based on these criteria, the companies selected for inclusion, ordered by volume of Scope 1 and 2 emissions are:

- AGL Energy Ltd
- Origin Energy Ltd
- Rio Tinto Ltd
- BlueScope Steel Ltd
- South32 Ltd
- Qantas Airways Ltd
- Woolworths Group Ltd
- Coles Group Ltd
- Cleanaway Waste Management Ltd

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<sup>16</sup> Teske et al., (2023), Net-zero 1.5 °C sectorial pathways for G20 countries: energy and emissions data to inform science-based decarbonization targets, SN Applied Sciences. Online source: <https://link.springer.com/article/10.1007/s42452-023-05481-x>

<sup>17</sup> IEA, (2021), Net zero by 2050, Online source: <https://www.iea.org/reports/net-zero-by-2050>

<sup>18</sup> OECD Environment Working Papers: Climate change mitigation scenarios for financial sector target setting and alignment assessment, (2023), online source: <https://doi.org/10.1787/bcd25b82-en>

<sup>19</sup> Selection was based on scope 1 and 2 emissions only because NGER provides a reliable and comparable inventory of scope 1 and 2 emissions. There is no equivalent source that comprehensively covers total company emissions, including scope 3 and many company scope 3 emissions inventories are still in development

- Telstra Corporation Ltd

## **Limitations and independence**

The purpose of this project is to review the integrity of company net zero pledges and transition plans, to inform the overall net zero policy landscape in Australia. In some instances, there was no clearly identifiable, separate transition plan available. The authors have reviewed the most relevant and recent available public disclosures up to the review cut-off date, and have used all due care and skill to find information relevant to each criterion as a basis for assessment. No warranty is made as to completeness, accuracy or reliability of fact in relation to the information in the documentation reviewed. The sources of the information reviewed are indicated in the report and ISF has not sought to independently verify these sources.

UTS/ISF has undertaken paid work for some of the companies included in the research. The assessment process was structured so that no team member was the primary assessor or reviewer for a company that they have previously undertaken work for.

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## Assessment result summary

On the following page a summary of the full company assessments is presented.

### Key

Criteria fully met	Yes
Criteria not met	No
Criteria partially met	Partial
Not applicable	NA
No or insufficient disclosure to assess	ND

Criteria	AGL	Origin	Rio Tinto	Bluescope	South32	Qantas	Woolworths	Coles	Cleanaway	Telstra
<b>1. Net zero pledge</b>										
Public pledge to achieve net zero emissions	Green									
<b>2. Setting net zero targets</b>										
Short-, medium, long-term targets	Yellow									
Target 50% below 2020 by 2030 and net zero 2050	Green									
Absolute emissions reductions target	Green									
Targets science aligned and verified	Red									
Targets cover all scopes and value chain	Yellow									
Targets cover all greenhouse gases	Green									
Separate targets for material non-CO2 greenhouse gas emissions	Red									
Targets cover embedded emissions in fossil fuel reserves	Hatched									
Targets cover land-use emissions	Grey									
<b>3. Using voluntary credits</b>										
Voluntary credits not counted toward emissions reductions	Red									
<b>4. Creating a transition plan</b>										
Publicly disclosed net zero transition plan	Green									
Stated to be updated every 5 years	Red									
States concrete actions to be taken to meet targets	Yellow									
Contribution of actions to targets is quantified	Red									
Disclosure of capex plans aligned with all targets	Yellow									
Transition governance and linked executive compensation explained	Green									
<b>5. Phasing out fossil fuels and scaling up renewable energy</b>										
Targets to end use/support of fossil fuels	Red									
Target for renewable energy procurement	Green									
Explanation of full phase out of fossil fuels from operations	Red									
<i>If company has operations in coal, oil or gas production:</i>										
Target for 64% reduction in methane by 2023 from 2020	Red									
Targets to end coal production for power generation	Hatched									
Target to end coal plants by 2030 in OECD and 2040 elsewhere	Hatched									
Targets to end oil or gas production	Hatched									
<b>6. Aligning lobbying and advocacy</b>										
Disclosure of trade associations and positive climate advocacy	Yellow									
Outline of specific policies and regulations needed	Red									
Disclosure of lobbying consistent with net zero targets	Green									
Disclosure of contribution to climate engagement across value chain	Green									
<b>7. &amp; 9. People and nature and investing in just transitions</b>										
If material land-use emissions stated how further loss will be eliminated	Grey									
Disclosure of nature risk and dependency in relation to transition	Red									
Disclosure of contribution to Just Transition	Green									
<b>8. Increasing transparency and accountability</b>										
Annual disclosure of ghg data, progress against target & plans	Yellow									
Disclosure on UNFCCC Global Climate Action Portal	Red									
Disclosure of approach to verification of targets, plan and progress	Yellow									
Emissions reductions verified	Green									

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## Key findings and recommendations

### Alignment to UN HLEG recommendations

#### Announcing a net zero pledge

All ten companies in the sample have made a public net zero pledge, worded as a goal, ambition, target or commitment.

#### Setting net zero targets

While all companies have set interim emissions reduction targets, the majority have set only medium-term targets. No companies have set emissions reduction targets in 5-yearly increments.

Although most companies have set net zero by 2050 targets, only Coles has set an interim target that aligns in ambition with the UN HLEG requirement of a 50% reduction below 2020 levels by 2030. Although both Telstra and Rio Tinto have 50% by 2030 reduction targets, different baseline years result in less ambitious reductions than a 2020 baseline.

Only Woolworths, Coles and Telstra have had their current targets verified by the Science Based Targets Initiative (SBTi), (as per UN HLEG recommendation) as being science aligned. Of the companies for which non-CO<sub>2</sub> greenhouse gas emissions are known to be relevant (which is the majority in the sample), only one company, Cleanaway, has set a separate reduction target.

No companies have disclosed material land-use emissions. However, some companies are in sectors or have operations for which significant land-use emissions could reasonably be expected (mining, agriculture in supply chains). Woolworths is the only company to acknowledge the significance of land-use emissions. In the absence of land-use emissions disclosures, companies have been given an ND rating for criteria on targets for land-use emissions. This highlights the need for independent verification of completeness of emissions data.

Overall, full alignment to UN HLEG standard for target setting is low among the companies in the sample.

#### Using voluntary credits

Half the companies are using voluntary credits to count towards their emissions reductions targets, even where mitigation is prioritised above offsetting. Only two companies, Coles and Telstra have disclosed they are purchasing voluntary credits that are not counted towards their emissions targets. While voluntary offsets can play a role in the transition, they cannot be used as an alternative to decarbonisation. The UN HLEG requires that voluntary credits are used only for beyond value chain mitigation as the global economy transitions, not to contribute to achievement of a company's own emission reduction targets.

#### Creating a transition plan

Seven companies have published a standalone transition plan (or document clearly addressing climate action) but most have not clearly specified how frequently the plan will be updated.

All companies received a partial rating on disclosure of actions to meet targets, but the level of detail within plans is variable ranging from high level information to substantial detail on specific initiatives. Some companies have quantified the emissions reductions from specific initiatives or actions while some have estimated emissions reductions for categories of action, while others have provided no quantification of the emissions reduction from planned actions. No company has set out a fully comprehensive, detailed and quantified plan for how the total target emissions reductions will be achieved in line with a 1.5°C pathway and none have had their transition plans independently verified. Several transition plans discuss the need to rely on technology that is not yet technologically or commercially viable and/or the ongoing need to rely on offsets to achieve targets.

Detail on alignment of capital expenditure with all targets is also highly variable across the companies ranging from no information to a high-level description of overall allocated capital, to detail on capital

allocated for specific initiatives. However, as with actions, no company has presented a fully comprehensive, detailed and quantified capital alignment plan directly linked to achievement of the targets.

Most companies have explained governance structures in reasonable detail and most also explain the link of transition targets to executive remuneration.

### **Phasing out of fossil fuels and scaling up renewable energy**

Overall, the phasing out of fossil fuels is one of the least well addressed aspects of the UN HLEG recommendations in the disclosures of the companies in the sample. No companies have fully publicly committed to ending their use of fossil fuels or fully phasing out fossil fuels from their operations, although all have actions that contribute to phase down of fossil fuels.

More than half the companies in the sample have set a target for renewable energy procurement, or in the case of generators, targets for renewable generation. Some companies without targets are nonetheless procuring renewable energy.

The companies in the sample that have operations including primary production of fossil fuels have not set targets to address methane emissions associated with fossil fuel production. Only Origin has committed to end use of coal for power generation in line with the UN HLEG requirements.

### **Aligning lobbying and advocacy**

This is the most consistently well addressed recommendation by the companies in the sample, although it should be noted that the criteria assess disclosure, not alignment of actual practice with stated practice. Most companies have some level of disclosure on trade association affiliations, statements on the consistency of lobbying activities with net zero targets and engagement on climate change across their value chains. A smaller number of companies have clearly stated escalation policies for trade associations whose positions are not consistent with their own.

No companies have detailed disclosure of the specific policies and regulations needed to support achievement of their targets along with quantification of the emissions reductions achievable if such measures were in place. A few companies disclose some detail on policy positions while some have lighter reference to supportive policies and others have none. Most companies have some disclosure on engagement across the value chain, ranging from high level to detailed.

### **People and nature in the Just Transition and investing in Just Transitions**

No companies have disclosed material land-use emissions. As with land-use emissions targets, no disclosure attracted an ND rating for the criteria on action to avoid loss of remaining ecosystem, although for some companies it is likely that land-use and ecosystem loss could be significant currently or in future. Woolworths was given a partial rating because it has set a net zero deforestation by 2025 target for high impact own brand commodities.

Most companies have no or very limited disclosure on nature-based risk and dependency in relation to transition plans. Companies that do disclose nature-based risks, do not clearly relate risk and dependency to their transition plans. This is perhaps unsurprising given the current emergent status of awareness and disclosure on nature-based risk and dependency. The companies that have the most in-depth disclosures on nature are those who have already identified nature risks as material in their consideration of materiality, for example water dependency. Several companies are engaging with TNFD and have stated their intention to more fully explore nature-based risk.

Disclosure on contribution to a Just Transition is highly variable across the companies. A small number of companies consider a Just Transition in detail while six have no meaningful disclosure on it.

### **Increasing transparency and accountability**

All companies have disclosed greenhouse gas emissions data in the most recent reporting period. However, disclosure of progress against targets and transition plans is more variable. Reporting of progress against targets is often not clear. Most companies report to varying degrees of detail on progress on actions during the year, although this is not always clearly linked to progress on targets.

The majority of companies have obtained some form of assurance or review on their current year emissions but only four have had emissions reductions explicitly assured. Most companies have not obtained comprehensive assurance on targets, transition plans and progress against these. There is little consistency on what is assured with differences amongst the companies analysed.

Seven companies have disclosed data on the UNFCCC Global Climate Action Portal.

## **Progress against targets**

Our analysis of company progress against targets found that only four companies are currently on-track to achieve their interim emissions reduction target (refer Appendix 1). Of these, although Qantas is on-track, its emissions have been significantly impacted since 2020 onwards by the impacts of the Covid-19 pandemic and it will be important to monitor emissions once the aviation industry has fully recovered from the pandemic. AGL is also on-track based on the data, but emissions were impacted by power station outages. Coles and Telstra are the two remaining companies on track. BlueScope is on-track to meet its steelmaking target but off-track on its non-steelmaking target. All other companies were assessed as not on-track to achieve targets, although it should be noted that Woolworths is very close to on-track against its ambitious short-term target.

The assessment compared performance to a linear trajectory, which for companies with lumpy decarbonisation (e.g. power generators) may be a less meaningful comparison. In the absence of clear disclosures by companies on their performance against targets, it is difficult for stakeholders to know how well they are tracking towards meeting targets.

## **Scientific alignment of targets**

Our analysis of alignment of company targets to scientific decarbonisation pathways identified only three companies with science-aligned targets – Woolworths, Coles and Telstra (refer Appendix 2). These are the three companies that also have current SBTi verified targets. Cleanaway's 2050 methane target is higher than the OECM 2050 target, but its 2030 target is slightly lower. Due to lack of granularity of targets compared to sectorial decarbonisation pathways, it was not possible to compare overall emissions targets for the diversified mining companies Rio Tinto and South32. Rio Tinto's emissions reductions targets are nonetheless lower than the OECM 2030 targets for heat and energy supply for alumina refining. Targets for the remaining companies were assessed as not aligned to relevant sectorial decarbonisation pathways.

## **Overall alignment with UN HLEG recommendations**

Overall, the level of alignment with the requirements of the UN HLEG recommendations by the selected companies is disappointingly low. Despite increasing volume of disclosure over a number of years, and years of voluntary disclosure standards, for all companies in the sample, it is difficult to assess the extent of their current and planned contribution to a Just Transition, that aligns with scientific requirements. The absence of short-term emissions reductions targets is concerning since, as the UN HLEG report states, global emissions must peak by 2025 and halve by 2030. None of the companies have committed to such deep and comprehensive emissions reductions. Plans, where they exist, do not provide sufficient detail to clearly demonstrate how targets will be fully achieved and how the transition will be fully financed.

The gaps in consideration of nature risk and dependency are perhaps more understandable as nature is an emerging issue for businesses, although some have considered aspects of nature to be material to their operations for some time. Absence of information on land-use emissions makes it difficult to understand whether the issue is not material for these companies or simply omitted.

There is a concerning lack of alignment with the clear scientific requirements to rapidly phase out production and use of fossil fuels. All companies have fossil fuel exposure across their value chains, but obviously this is most challenging for companies and sectors that have significant operations in or direct dependency on fossil fuel use. However, without commitments to phase out fossil fuels, it is difficult to see how net zero commitments will be achieved without reliance on offsets and indeed several companies factor offsets directly into their emissions reduction targets.

It is encouraging to see that most companies disclose that advocacy and engagement activities are undertaken in a manner consistent with their net zero commitments and there are good examples of industry collaboration to tackle decarbonisation challenges.

There is a worrying lack of transparency around basic information needed to assess progress. Frequently, fundamental data such as emissions reductions in relation to targets and baselines is not clearly presented. While many companies obtain some kind of assurance on emissions data, this tends to be limited to specific metrics and current year data only.

A recurring issue is the lack of clear and concise presentation of progress against fundamental elements of a transition plan. Information tends to be dispersed across multiple sources. Disclosure in Sustainability Reports is often voluminous and not well aligned to concise reporting of progress on targets and transition plans. There are examples in the research of critical details being covered in minor footnotes, of emissions reductions being claimed that cannot be easily reconciled to baseline or targets and as noted, very low levels of assurance on much of the data.

The research provides evidence that, in the absence of standards or guidance on transition plan disclosure, disclosures across companies are inconsistent, incomplete and often lacking in basic transparency. Even informed readers will struggle to get a clear picture of a company's true alignment with scientific requirements for decarbonisation. This means that investors do not have access to quality disclosures to inform asset allocation decisions to drive transition to net zero emissions. From an investor perspective clear, consistent and comparable disclosure is the foundation for investment decision making. The overall distribution of ratings, split evenly across meeting, partially meeting and not meeting criteria, reveals that the current level of disclosure is not providing a clear investment signal. The lack of uniform disclosure makes it challenging to assess a company's progress towards net zero transition against other market participants. If not resolved this would impact on asset allocation decisions of investors as they seek to meet their own net zero emissions commitments.

The Integrity Matters report quotes UN Secretary General Antonio Guterres, "We urgently need every business, investor, city, state and region to walk the talk on their net zero promises. We cannot afford slow movers, fake movers or any form of greenwashing."

To support this urgent need, we also need standards for transition plans that will make transparent the slow movers, fake movers and greenwashing and will reveal the true state of progress towards net zero.

## **Recommendations**

To support meaningful, science-aligned climate action, government reforms, policies and business guidance need to raise the bar on what businesses are required to do to ensure real progress towards global emission reduction goals. As a priority, Australia must improve business transition planning to support achievement of its decarbonisation goals, including consideration of mandatory transition planning in the near-term. New regulatory requirements must be supported by robust disclosure frameworks, transparent sharing of information, and well-resourced regulators and verification mechanisms to achieve the outcome of driving business climate action in line with the science.

Australia needs clear, science-based standards to underpin transition plans and disclosures to drive business climate action at the pace needed to do our fair share by 2030 and beyond.

There is an urgency to establish transition plan standards in Australia. There is a window of opportunity to join a global push towards high integrity, science aligned business climate action to avoid the worst effects of climate change. Global emissions must peak by 2025 and developed countries must contribute fairly to the transition. Australia can lead the way by setting credible, ambitious, science-based standard for net zero pledges and transition plans to reduce greenwashing, accelerate climate action, and contribute to a Just Transition. The Australian Government must lead on implementation of high integrity standards without delay.

### **Recommendation 1: Regulatory guidance for science-aligned business transition plans**



Business transition plans are an essential tool to drive business climate action, and for disclosing and monitoring progress at the company level. To ensure high-integrity transition planning, the Government should:

- Set the standard for business transition planning that aligns with the science of 1.5 degrees
- Through the Council of Financial Regulators (CFR), direct ASIC and APRA to issue regulatory guidance on standards for high-integrity transition plans that aligns with the science of 1.5 degrees

### **Recommendation 2: Uniform standards for business transition plans**

To enhance transparency, consistency, usability, credibility and accountability of transition plans in Australia regulatory guidance should, establish:

- Uniform standards for business transition plans that include:
  - Uniform standards for short-term targets as well as interim and long-term targets and the required nature of the targets in terms of scope and coverage (including targets for phasing out use of and support for fossil fuels)
  - Standards for targets and planned actions to align with a relevant scientific decarbonisation pathway (including coverage of problematic use of offsets). These should align with the UN HLEG where possible, with Australian requirements tailored for consistency with relevant sectoral decarbonisation pathways
  - Uniform standards to disclose presence or absence of material land-use emissions.

### **Recommendation 3: Increased transparency and comparability of transition plans**

Regulatory guidance should establish:

- Clear, consistent and comparable format for reporting basic data including emissions data, emissions reductions in relation to baseline and target, as well as progress against plans.
- Clear, consistent and comparable format for disclosure of planned, quantified emissions reductions to achieve targets and the allocation of capital to achieve targets.
- Uniform standards for independent verification of targets, plans and reported progress.

### **Recommendation 4: Commitment to a just transition and addressing nature-based risk**

Government should work with regulators to develop guidance on disclosure of contribution to a Just Transition and integration of nature risk and dependency in transition plans.

### **Recommendation 5: Skills and resources**

To further support transition planning, resources and funding are needed to ensure that:

- The financial and corporate system is equipped with the necessary skills and competencies to prepare and interpret transition plans.
- Relevant government regulators are equipped to review transition plans and enforce standards.

Although this report reviews a selection of major publicly listed Australian corporate emitters, it should be noted that there are major emitters in Australia that are either government-owned or privately held. The provided guidance should apply to all major Australian emitters, not just those listed on the ASX. Financial institutions, including banks, superannuation funds and insurers, have a major role to play in emissions reductions not only for their own emissions, but for those of the businesses they invest in, finance and insure, and should therefore also be subject to guidance.

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## AGL Energy Ltd

### Key points

- AGL has made a 2050 net zero pledge, with achievement of targets primarily based on closing large baseload coal-fired power stations that the company operates in Australia (all to be closed by 2035).
- The targets only partially align with UN HLEG criteria, largely due to the closure of power stations being “lumpy” and needing to be aligned with the broader Australian integrated energy system in which AGL operates. It is also unclear the future role of gas-fired power stations.
- In 2022, AGL released a Climate Transition Action Plan (CTAP), and reports against climate targets via TCFD reporting.
- GHG emissions targets include bringing forward the exits from all coal-fired power generation assets by the end of 2035, which will result in net zero for operated Scope 1 and 2 emissions. This may include offsets for residual emissions. AGL is working on a decarbonisation pathway for Scope 3 emissions.
- The phase out of all fossil fuels is unclear. AGL operates gas-fired power plants (including for peaking power), and it is unclear what the role of these plants will be in AGL’s future energy mix. It is also unclear when the Loy Yang coal mine in Victoria will close.
- AGL has made significant investments in renewable and firming generation since 2003. The company is targeting adding ca. 12 GW of new generation and firming capacity by the end of 2035.
- Broad allocation of capital expenditure plans is described, but not detailed allocation to specific initiatives with a link to expected emissions reductions.
- No information is provided on nature-related risks. Limited assurance in TCFD reporting has been given by Deloitte on CTAP-related disclosures, including Scope 1 and 2 emissions and capital allocation.
- Information provided that is relevant to AGL’s climate transition is not clearly presented in the CTAP and TCFD reporting, especially in relation to the future role of gas in AGL’s energy mix.
- Based on publicly available data, AGL has been assessed as currently on-track against its emissions targets (refer Appendix 1) and its interim target has been assessed as not aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- AGL operates the largest private electricity generation portfolio within the National Electricity Network (NEM) (10.3 GW capacity, ca. 20% of total). AGL is also a large power and gas retailer, supplying energy from owned assets, contracts, partnerships and trading to residential, business and wholesale customers.
- At 40.1 million tonnes of Scope 1 and 2 emissions (CO<sub>2</sub>-e), AGL has the highest level of GHG emissions in Australia (NGER FY22 data). Scope 3 emissions are largely in the gas and electricity retail supply chains to customers and brown coal sales to Loy Yang B.
- Assets comprise large coal-fired baseload power generation plants, gas-fired power generation (including peaking plants), renewable energy sources (wind, hydro and solar), batteries and other firming technology, and gas production and storage assets. AGL has developed plans to ensure a responsible and orderly transition with regards to repurposing the larger scale thermal power sites.
- As AGL operates within the NEM integrated power system, it faces regulatory and other constraints.

## Performance against UN HLEG recommendations

### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Public commitment to achieve net zero by 2050

### 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		Interim emissions reduction targets aligned with closures of coal-fired power stations (Bayswater 2033 and Loy Yang A 2035) 17% in FY24 and 52% by FY35 (FY19 baseline) Loy Yang A closure in TCFD is 10 years ahead of CTAP.
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		Net zero by 2050 target and interim targets (Scope 1 & 2) Interim target of at least 52% by FY35 following closure of all coal-fired power stations Gas-fired power station (Torrens Island A) closed in FY2023, with Torrens Island B to close by FY2026 (as per AGL website). The operating life of some of AGL's gas peaking power stations may extend beyond 2035 to provide firming capacity to the market, with emissions arising from its operation to be offset.
Absolute emissions reduction targets (intensity if relevant)	✓				Emissions reduction targets for Scope 1 and 2 (noting that offsets may be used to help achieve emissions reductions where necessary).
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party		✓			Aligned with below 2°C Paris Agreement goal. Scenario modelling of the NEM undertaken by ACIL Allen (an economics consultancy). Acknowledgement of challenges in NEM of meeting 1.5°C goal, but also importance of broader policy action to limit warming to 1.5°C.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		Operational Scope 1 and 2 targets cover material emissions (and estimates for non-material sources), the most material arising from the combustion of coal and gas to produce electricity. AGL is developing a decarbonisation pathway to meet its ambition of net zero Scope 3 emissions by 2050. AGL estimates Scope 3

					emissions arising from its business with reference to the GHG Protocol: Technical Guidance for Calculating Scope 3 emissions. No estimates provided for staff travel, waste, investments etc. Scope 3 considers value chain - including brown coal, gas supply and electricity supply value chains.
Targets stated to account for all greenhouse gas emissions	✓				Targets relate to reported emissions that are calculated using recognised methodologies (NGER reporting)
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			Relevance is not stated but fossil methane is assumed to be relevant in relation to extraction and production of natural gas in gas supply value chain, including gas-fired power stations and gas retail (Scope 3)
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves		✓			No disclosure embedded emissions in coal reserves owned by AGL (i.e., Loy Yang A).
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No or limited disclosure. No separate targets for sequestration apart from offsets. Unclear whether land-use emissions are material.

### Commentary

The targets only partially align with UN HLEG criteria. AGL targets are aligned with below 2°C Paris Agreement goal (as per independent scenario modelling of the NEM). Scope 1 and 2 net zero targets to 2035 by 52% are aligned with the closure of all operated coal-fired power stations (Liddell, Bayswater and Loy Yang A), and Torrens Island A gas-fired power station closed in 2023 (as per AGL website, Torrens Island B is intended to be closed in 2026). The operating life of some of AGL's gas peaking power stations may extend beyond 2035 to provide firming capacity to the market (as back-up to intermittent renewable energy), with emissions arising from their operation to be offset.

AGL reports Scope 3 emissions as per the GHG Protocol and is developing a decarbonisation pathway to meet the company's ambition of net zero Scope 3 emissions by 2050. The status of Scope 3 emissions from the Loy Yang A coal mine are unclear, as the mine also supplies coal to the adjacent Loy Yang B power station (separately privately-owned by Alinta Energy).

Only limited information is provided in the CTAP and TCFD reporting on AGL's gas-fired power stations (including peaking plants), and no information is provided on fossil methane targets. Note that gas supply to and used by AGL's customers accounts for ca. 30% of AGL's Scope 3 emissions, and AGL is in the process of developing a decarbonisation pathway to meet the ambition of net zero Scope 3 emissions by 2050.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
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Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions		✓			<p>Use of offsets for residual Scope 1 and 2 emissions from renewable and gas-fired generation assets, corporate activities and energy hubs (less than 2% in FY23).</p> <p>AGL offers carbon neutral options for its products and services, and at FY2023, AGL had over 150,000 carbon neutral energy services, with the majority certified by Climate Active. AGL uses offsets that are certified under internationally recognised standards including the Gold Standard, Verified Carbon Standard (VCS) and Australian Carbon Credit Units (ACCU).</p> <p>AGL is developing a company-wide offset policy, guided by the development of carbon markets.</p>
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### Commentary

AGL's use of offsets does not align with UN HLEG criteria. AGL is developing a company-wide offset policy. It currently uses offsets for residual Scope 1 and 2 emissions from assets including gas-fired power plants, corporate activities as well as energy hubs. In FY23, these made up less than 2% of total Scope 1 and 2 emissions. As an energy retailer (power and gas), AGL offers carbon neutral energy products. Scope 3 emissions (for energy retail supply) will likely continue to require the use of offsets until the energy sector is decarbonised. AGL is working on a decarbonisation pathway for these emissions.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan	✓				Climate Transition Action Plan (CTAP) published September 2022.
Transition plan stated to be updated every 5 years	✓				CTAP subject to a non-binding shareholder vote every three years at AGL's AGM.  In the event of material changes to the CTAP within the three-year timeframe, a revised plan will be put to a shareholder vote at the following AGM.
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		Concrete actions are listed, including plans to exit coal-fired power plants to meet Scope 1 and 2 emissions targets, noting that the operating life of some of AGL's existing gas peaking power plants may be extended to provide firming capacity (with emissions offset). AGL also intends to increase renewables and firming capacity by ca 12 GW by 2036. Residual Scope 1 and 2 emissions are stated to be offset.

					AGL is working on a decarbonisation pathway for Scope 3 emissions, including the brown coal, gas supply and electricity supply value chains.
Quantification of the contribution of specific actions to the achievement of the overall target			✓		Quantification provided for Scope 1 and 2 emissions with closure of coal-fired power stations, unclear mention of gas-fired power station in CTAP (Torrens Island A & B). Mentioned in TCFD and website.
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets			✓		AGL outlines elements of capital expenditure plans, including ca 12 GW of renewable and firming capacity requiring a total investment of up to \$10 billion to 2036, with funding from available debt capacity, operating cash flows and offtakes and partnerships. Detailed costings covering all investments to achieve targets are not provided.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Governance structure is explained. CTAP states that executive remuneration is linked to Long Term Incentives (LTI), and LTI plan climate metrics are outlined in the TCFD, including near- and longer-term targets.

## Commentary

AGL published a Climate Transition Action Plan (CTAP) in September 2022 following a strategic review, and reports progress against the CTAP in its TCFD reporting as part of its annual reporting suite. Energy, emissions and other environmental data is reported in the ESG Data Centre on the AGL website. Progress against targets is reported and concrete actions described in the plan (including the closure of coal-fired power stations), but there is limited clarity on gas-fired power stations in the CTAP and TCFD.

AGL is developing a company-wide offset policy and decarbonisation pathway for Scope 3 emissions. Broad allocation of capital expenditure plans is described, but not detailed allocation to specific initiatives with a link to expected emissions reductions. The governance structure and remuneration linked to climate is provided.

## 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			No clear commitment to end fossil fuel use in its operations. AGL intends to phase out coal-fired power stations (including target dates), but it is unclear the future status/exit of the Loy Yang coal mine (which AGL operates and also supplies coal to privately-owned Loy Yang B power station).

					<p>As per AGL website, Camden Gas project will close in 2023 (and there appear to be no other gas/coal seam gas (CSG) assets that remain in the AGL energy asset portfolio). With projected shift to electrification and decline in gas demand, AGL is contracting gas to support AGL and customer requirements. Gas supply contracts have been entered into with third parties (Cooper Energy, Exxon, etc).</p> <p>It is unclear the future role/amount of gas-fired firming capacity (to underpin intermittent renewables) in the future AGL energy mix.</p>
Target for renewable energy procurement (for power generators a generation target is more relevant than a procurement target)	✓				<p>AGL's ambition is to build ca. 12 GW of new renewable generation and firming capacity by end of 2035, with an interim target of ca 5GW by the end of 2030.</p> <p>It is however unclear what constitutes firming capacity (some mention batteries, transformation low carbon energy hubs).</p>
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			<p>CTAP explains how coal-fired power stations will be phased out. Unclear phase-out of Loy Yang A coal mine (supply to Loy Yang B) and gas-fired power stations (including the role of future gas fired firming capacity).</p> <p>Actions contributing to phase down in operations but no plans to fully phase out all fossil fuels.</p>
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels		✓			No information re: methane emissions.
For operations that include primary coal production for power generation, targets to end all aspects of coal production		✓			No plan re: phase out Loy Yang coal mine (for Loy Yang B power station).
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world		✓			Coal-fired power stations to close in 2033 and 2035.
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	Not applicable. AGL appears to no longer own or operate gas production assets. It sources gas supply via offtakes.

## Commentary

AGL does not have a clear commitment to end fossil fuel use in its operations. It intends to phase-out all coal-fired power plants by 2035, but it is unclear the future status and exit plans for both the Loy Yang coal mine (which also supplies coal to the Loy Yang B power station). The phase out of gas-fired plant (including

peaking power) and gas supply for retail customers is unclear from the CTAP and TCFD reporting, although there is some information provided on the AGL website and 2023 Annual Report. It is also unclear the future role/amount of gas-fired firming capacity (to underpin intermittent renewables) in the future AGL energy mix.

It is assumed that AGL no longer owns gas/CSG assets, and AGL has stated that with the projected shift to electrification and decline in gas demand, AGL is contracting gas to support AGL and customer requirements. Gas supply contracts have been entered into with third parties (Cooper Energy, Exxon, etc).

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations			✓		Disclosed affiliations and advocacy positions, including climate policy engagement. Unclear escalation strategy.
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place			✓		Discussion of fragmented nature of energy policy in Australia, no overarching policy that coordinates the earlier closure of thermal power assets, and support for policy action to limit warming to 1.5°C (including working with stakeholders). Carbon pricing assumed in scenario modelling. Scenario analysis includes modelling for various policy scenarios and emissions outcomes, but not directly linked.
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets			✓		Disclosure of climate policy advocacy for a “responsible transition that balances energy reliability and affordability with the need to decarbonise.”
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates	✓				Committed to transparent communication with stakeholders (including investors). Industry engagement through industry associations including Clean Energy Council, Climate Leader’s Coalition, Global Compact Network Australia, Carbon Market Institute, etc.

### Commentary

AGL discloses affiliations and advocacy positions, including climate policy engagement on the AGL website (ESG Data Centre). AGL also discusses the fragmented nature of energy policy in Australia, with no overarching policy that coordinates the earlier closure of thermal power assets and limited support for policy action to limit warming to 1.5°C (including working with stakeholders). Disclosure of climate policy advocacy for a “responsible transition” which balances energy reliability and affordability with the need to decarbonise. AGL appears to be committed to transparent communication with stakeholders, including through industry engagement with leading climate organisations.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions



HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No disclosure. Material land-use emissions not reported. Potentially material given coal mining operations and gas supply (CSG).
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan		✓			Nature-based risks not disclosed.
Disclosure of how the transition plan contributes to a Just Transition	✓				Responsible and orderly transition described, including: <ul style="list-style-type: none"> <li>- repurposing large thermal generation sites into low carbon industrial energy hubs</li> <li>- support communities in which operate before assets close and managing responsible best practice rehab of sites</li> <li>- transition plans for employees of power plant closures</li> </ul>

### Commentary

AGL has outlined its approach to the responsible and orderly transition of its large-scale coal-fired power stations that will be closed in NSW and VIC by 2035 (as well as the Torrens Island gas-fired power station in SA planned to be closed by 2026). This includes repurposing the sites into low carbon industrial energy hubs, supporting communities in the transition as well as transition plans for employees.

No information is provided on nature-based risks, and it is unclear the materiality of land-use emissions.

### 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: <ul style="list-style-type: none"> <li>- GHG data</li> <li>- net zero targets and transition plans and progress towards meeting these</li> </ul>	✓				Annual GHG data reported, net zero targets and transition plans, and progress
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal	✓				AGL reports into UNFCCC portal.
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		Limited assurance provided by Deloitte on CTAP-related disclosures in TCFD (Scope 1 and 2 emissions, portfolio reshape, capital allocation alignment and green revenue).

Emissions reductions are verified by an independent third-party	✓				Assurance provided by Deloitte in TCFD reporting for Scope 1 and 2 emissions reductions in FY23 (and Liddell closure).
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**Commentary**

AGL discloses GHG emissions data in the ESG Data Centre, as well as reporting against targets and transition plans and progress in the TCFD. AGL also reports into the UNFCCC Global Climate Action Portal (although it is unclear to what degree this is standardised or the relevance of this reporting system, as it provides only limited insight). AGL also receives limited assurance from Deloitte regarding Scope 1 and 2 emissions reductions and other CTAP related disclosures such as capital allocation alignment and green revenue.

**Sources** Climate Transition Action Plan 2022, FY23 TCFD Report, FY23 Annual Report, AGL website (including ESG Data Centre)

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## Origin Energy Ltd

### Key points

- Origin has a long-term ambition to achieve net zero Scope 1, 2 and 3 emissions by 2050. Origin's interim target is 40% reduction in Scope 1, 2 and 3 equity emissions intensity and 20 million tonnes absolute emissions against FY2019 baseline by 2030. Origin's targets only partially align with HLEG.
- Origin released a Climate Transition Action Plan in 2022, and reported progress in the 2023 Sustainability Report. There are plans to divest interests in gas development basins, accelerate exiting its coal-fired power station and retire gas-fired power stations as those assets reach the end of their useful lives. It expects its portfolio of gas-fired peaking plants will play a role in Australia's energy transition to support variable renewable output.
- Origin has several solar and large-scale battery projects under development, with a target to grow renewables and storage capacity to 4 GW by 2030.
- Origin supports the principles of a Just Transition, published an Industry Association review in 2023 and has integrated climate into its executive remuneration.
- Based on publicly available data, Origin has been assessed as currently off-track against its emissions targets (refer Appendix 1) and its interim target has been assessed as not aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Origin is an integrated energy company with 4.5 million customer accounts and 5,500 employees. Origin has a 7,800 MW energy generation portfolio including 1,515 MW owned and contracted renewables and storage, and supplies gas and power to business and residential customers primarily in eastern Australia.
- At 15.1 million tonnes of Scope 1 and 2 emissions (CO<sub>2</sub>-e), Origin is the fourth largest Scope 1 and 2 GHG emitter in Australia (NGER FY22 data).
- Origin's energy generation portfolio output in FY23 was coal 63.9%, gas 16.8%, solar 6.5% and wind 11.6%. Origin's coal-fired power generation facility is the Eraring Power station in NSW, which at 2,880 MW is Australia's largest power station (with plans to close in 2025).
- Origin also has a portfolio of gas-fired baseload and peaking power stations assets in eastern Australia, a pumped storage hydropower station in NSW, Virtual Power Plant, an interest in a UK energy retailer as well as other energy related assets. Gas supply is contracted for retail operations.
- Origin has various solar and battery projects under development, including a battery storage system at Eraring and batters at existing gas-fired power stations. It also has initiatives underway to enable retail customers to decarbonise, including GreenPower, residential and business solar installations and EV products.
- Origin holds a 27.5% shareholding in Australia Pacific LNG (APLNG) (a joint venture with ConocoPhillips and Sinopec), which operates Australia's largest CSG to LNG export project (Queensland) and largest CSG reserves. Origin is the operator of the upstream CSG exploration, development and production facilities. APLNG has separate 2025 and 2030 Scope 1 and 2 emissions intensity reduction targets.
- Origin's FY23 Scope 1 emissions account for over 25% of total emissions. 70% of Origin's emissions are Scope 3 emissions from energy markets, integrated gas, domestic gas sales and LNG export.
- As Origin operates within the NEM integrated power system, it faces regulatory and other constraints.

## Performance against UN HLEG recommendations

### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Long-term ambition is to achieve net zero Scope 1, 2 and 3 emissions by 2050.

### 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		Interim targets for Scope 1, 2 and 3 that by 2030 <ul style="list-style-type: none"> <li>- 40% reduction in equity emissions intensity and</li> <li>- 20 million tonnes reduction in absolute equity emissions (against FY2019 baseline)</li> </ul>
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		Net zero by 2050 target. 2030 target of 20 million tonnes reduction is less than 50% of 2020 Scope 1, 2 and 3 actual reductions
Absolute emissions reduction targets (intensity if relevant)	✓				2030 targets include an absolute emission target on an equity basis
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party			✓		SBTi target of well-below 2°C by 2032 approved in 2018. Target has changed but SBTi has not re-verified. New target stated to align with 1.5°C and informed by SBTi guidance (limited assurance by EY)
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		Targets are for Scope 1, 2 and 3 collectively. Unclear if covers all operations along the value chain (i.e., not sure if covers Scope 3 for gas supply for retail operations)
Targets stated to account for all greenhouse gas emissions	✓				Origin report Scope 1 and Scope 2 emissions under the NGER and calculate Scope 3 emissions based on the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and Scope 3 guidance documents.
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			Aim to reduce operational control methane emissions, but no target. Methane gas emissions in APLNG are managed through targeted intercept wells.

Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves		✓			No separate accounting for gas fields.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	Land-use emissions not disclosed. Unknown if material.

### Commentary

Origin's interim targets are for 2030, a 40% equity emissions intensity and 20 million tonnes absolute reduction in Scope 1, 2 and 3 emissions against FY2019 baseline. Targets only partially align with HLEG criteria. Origin intends to close the Eraring coal-fired power station in 2025 and exit its upstream gas exploration portfolio (excluding its interest in APLNG), including divesting the interests in the Beetaloo Basin (sale completed 2022), Canning Basin and Cooper-Eromanga Basins. The transition plan states that Origin's 2030 emission intensity target and methodology has been independently assured on a limited basis for consistency with the IPCC scenarios and the SBTi draft guidance and recommended 1.5°C scenarios, however the new targets have not been verified by SBTi. Targets partially align with UN HLEG criteria.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions		✓			Origin expects that carbon offsets will play a limited role in meeting its 2030 emissions reduction targets for residual emissions that are hard to abate. It is unclear whether offsets are currently purchased or in what amounts.  Origin offers carbon offset products to its retail customers.

### Commentary

Origin disclose that offsets may contribute to 2030 emission reduction targets for residual, hard-to-abate emissions, but does not provide details.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan	✓				Climate Transition Action Plan 2022
Transition plan stated to be updated every 5 years	✓				Climate Transition Action Plan states plan is a three-year plan with reporting against progress annually.

Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		The plan has some specific actions such as closing of Eraring Power Station and accelerating renewable energy portfolio development. The Sustainability Report includes additional measures such as reducing emissions from gas operations, exiting the upstream gas exploration portfolio, increasing the efficiency of gas-fired generation fleet, growing renewables portfolio and enabling customers to decarbonise.
Quantification of the contribution of specific actions to the achievement of the overall target		✓			There is data on Eraring Power Station emissions but not comprehensive quantification of how the targets will be achieved.
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets			✓		Generalised statements. Climate Transition Action Plan states capital expenditure portfolio is consistent with emissions reduction targets however lacking detail. Sustainability Report provides some additional information on capital allocation plans, including decision to divest interest in upstream gas exploration portfolio and committing \$600 million to Eraring battery.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Climate Transition Action Plan details role of Board, Board committees, executive and divisions around climate responsibilities. Executive remuneration linked to climate targets.

## Commentary

Origin released a Climate Transition Action Plan in 2022 that outlines some specific actions to achieve targets but does not provide sufficient detail to fully align with HLEG requirements.

## 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			Origin plans to divest its interests in upstream gas exploration portfolio (Beetaloo sale completed 2022, Canning and Cooper Eromanga basins also to be exited) and Eraring coal-fired power closure. Gas-fired power plants are expected to be retired at the end of their useful lives (but still play a role in Australia's energy transition to back intermittent renewables). No plans to divest interest in APLNG and associated CSG.
Target for renewable energy procurement (for power generators a generation target is more relevant than a procurement target)	✓				Origin has a target to grow renewables and storage capacity within generation portfolio to 4 GW by 2030.

Transition plan explains how fossil fuels will be fully phased out of its operations		✓			Origin plans to divest its interests in its upstream gas exploration portfolio (with the exception of APLNG) and close coal-fired power. Actions contributing to phase down in operations but no plans to fully phase out all fossil fuels.
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels		✓			No overall methane target. Main area of focus is monitoring methane leaks from gas.
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	No coal production disclosed
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world	✓				Origin announced that it will accelerate exit from coal-fired power generation, bringing forward the closure of Eraring Power Station by up to seven years to as early as August 2025.
For operations that include oil or gas production, targets to end all aspects of oil or gas production			✓		Origin has stated that it plans to exit upstream gas exploration portfolio, with the exception of APLNG.

## Commentary

Origin has announced that it will accelerate exit from coal-fired power generation, as well as divesting its interests in its upstream exploration portfolio (with the exception of APLNG). Origin's gas-fired power plants are expected to be retired at the end of their useful lives but play a role in Australia's energy transition to support intermittent renewables. No plans to divest its interest in APLNG and associated gas fields, and unclear phase out of gas supply for retail operations. A renewable energy target has been set.

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations	✓				Publication of Industry Association review in 2023. Origin states its policy for addressing any misalignment.
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place			✓		Government policy engagement discussed in 2023 Sustainability Report, including submissions on Safeguard Mechanism, gas policy to support the energy transition, hydrogen, EV strategy and carbon credits. No direct link to emissions reductions possible.
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets	✓				Disclosure of positive advocacy consistent with net zero targets

Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates	✓				Origin's Sustainability Report 2023 provides disclosure of engagement with investors, communities, consumers and suppliers. Energy affordability, pricing and climate change an area of engagement for customers.
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### Commentary

Origin published an Industry Association review in 2023, discloses government policy engagement as well as engagement with key stakeholders.

### 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No disclosure on material land-use emissions in gas supply chain. Limited disclosure in Sustainability Report 2023 on “landscape emissions” related to APLNG.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan		✓			During FY23, Origin participated in a TNFD pilot study. Building on participation in TNFD, it plans to develop a biodiversity roadmap and action plan during 2024. Some discussion on biodiversity, but nature-based risks are not yet sufficiently addressed.
Disclosure of how the transition plan contributes to a Just Transition	✓				Origin recognises the importance of a Just Transition, and works with stakeholders to develop tailored plans for priority areas and assets, including for the planned closure of the Eraring coal-fired power station. It has developed principles for a just energy transition endorsed by the Origin Board.

### Commentary

Origin supports a Just Transition and developed Board-approved principles to support a just energy transition. It participated in a TNFD pilot study in FY23 and plans to develop a Biodiversity Roadmap in 2024.

### 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data	✓				Origin discloses GHG emissions data over five-year period in sustainability data pack. and progress on the Climate Transition Action Plan in the 2023 Sustainability Report.



- net zero targets and transition plans and progress towards meeting these					
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal	✓				Reported on UNFCCC Global Climate Action Portal
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		Limited assurance by EY on emissions and target but progress not assured
Emissions reductions are verified by an independent third-party		✓			The 2023 Sustainability Report has limited assurance of data including emissions. Emissions reductions not assured.

### Commentary

Origin produced a FY2023 Sustainability Performance Data pack with data on emissions. Assurance by EY is limited.

### Sources

Origin Annual Report 2022, Origin Climate Transition Action Plan 2022, Origin Industry Association Review 2023, Origin 2023 Sustainability Performance Data, Origin 2023 Sustainability Report, Origin website

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## Rio Tinto Ltd

### Key points

- Rio Tinto (Rio) has made a 2050 net zero pledge to achieve net zero emissions from its own operations by 2050 (Scope 1 and 2), including interim targets (15% by 2025 and 50% by 2030 against a 2018 baseline – equity basis). Scope 1 and 2 emissions reduction targets aligned with below 1.5°C Paris Agreement goal.
- The Climate Action Plan (transition plan/decarbonisation strategy) is incorporated within the Climate Change Report 2022 (including Scope 1 and 2 emissions targets, progress and actions) which also includes TCFD reporting. Further climate information is provided on the Rio website and supplementary reports.
- Rio's climate change targets only partially align with UN HLEG criteria. There do not appear to be separate targets for material non-CO<sub>2</sub> emissions (including GHG by-products from aluminium processing, and whether these are material in absolute terms).
- Transition planning for Scope 1 and 2 emissions includes concrete actions including to decarbonise energy intensive metals processing, but it is unclear how all targets will be achieved (other than reliance on new technologies, offsets and nature-based solutions).
- Scope 3 emissions are significant, but more difficult for Rio to control as these are largely via the processing of exported iron ore to steelmaking facilities in Asia. Rio's approach is to engage with customers and work with them to develop and scale up technologies to decarbonise steel and aluminium production.
- Rio has outlined capital allocation aligned with its decarbonisation strategy to invest US\$7.5 billion between 2022 and 2030, including investing in large-scale renewable energy and green hydrogen for aluminium processing.
- Rio's climate policy engagement is aligned with the Paris Agreement goals, including the role of business and government to achieve decarbonisation goals. It provides GHG and other data in the Climate Change Report and Sustainability Factbook, with assurance on progress and emissions data provided by KPMG.
- Based on publicly available data, Rio has been assessed as currently off-track against its emissions targets (refer Appendix 1) and there is insufficient information to determine if its interim target is aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Rio Tinto is a dual-listed (UK/Australia) diversified global mining and metals company that operates in 35 countries with over 52,000 employees.
- At 15.1 million tonnes of Scope 1 and 2 emissions (CO<sub>2</sub>-e), Rio has the fifth highest level of GHG emissions in Australia (NGER FY22 data). Rio produces 30.3 million tonnes of Scope 1 and 2 emissions globally.
- Mining and processing assets are primarily located in Australia and Canada, with additional operations in locations ranging from Mongolia and Madagascar to the US and New Zealand. These include 17 iron ore mines, 3 bauxite mines, iron and titanium dioxide processing, alumina refineries and smelting, diamond and copper mining, and various other mineral and metal mines/operations (including some that are closing and some under development)
- Rio has various other initiatives underway with a focus on decarbonisation and supporting the energy transition (including critical minerals). Rio manages over 90 legacy assets in nine countries, and divested the last of its coal businesses in 2018 (it however retains a contingent royalty from the divestments).
- About 80% of Rio's Scope 1 and 2 emissions are driven by processing and producing metals and minerals (energy-intensive processing in the aluminium business in coal-based power grids), which are hard-to-abate activities, with 20% from mining operations (power at mining sites and diesel fuel for mining fleet).

- Scope 3 emissions are significant (over 1% of the global total) and primarily from exports to customers in Asia that process iron ore into steel and bauxite into aluminium. Rio works in partnerships with customers to try to address these emissions.
- Rio's strategy is to invest in commodities that enable the energy transition and decarbonise its own operations and value chains. Rio plans to invest US\$7.5 billion in capital between 2022 and 2030 to deliver on the decarbonisation strategy. Investments include renewables and nature-based projects.
- As Rio operates in many different jurisdictions, it is subject to various government policies and regulations. It highlights the need for higher carbon prices and other government incentives to drive the production and consumption of low-carbon metals and minerals.

## Performance against UN HLEG recommendations

### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Public commitment to achieve net zero by 2050

### 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		Net zero by 2050 target (Scope 1 and 2) (equity basis) 15% GHG emissions reduction target by 2025 50% GHG emissions reduction target by 2030 (2018 baseline)
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		50% reduction of Scope 1 and 2 by 2030 (2018 baseline) and net zero by 2050. 2018 baseline results in higher end emissions than 2020 baseline.
Absolute emissions reduction targets (intensity if relevant)	✓				GHG emissions targets are to reduce absolute Scope 1 and 2 emissions. Intensity targets for shipping (owned fleet).
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party			✓		Scope 1 and 2 emissions reduction targets are aligned with below 1.5°C Paris Agreement goal. It is unclear what methodology is used in setting targets.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		Targets cover Scope 1 and 2 only. Rio's approach to Scope 3 emissions is to engage with customers and work with them to develop and scale up technologies to decarbonise steel and aluminium production.

Targets stated to account for all greenhouse gas emissions	✓				Targets relate to reported emissions that are calculated using recognised methodologies (NGER reporting, GHG Protocol) Data on non-CO <sub>2</sub> emissions provided in Sustainability Factbook.
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			There do not appear to be separate targets for material non-CO <sub>2</sub> GHG emissions. Perfluorocarbons are a GHG and produced as a byproduct of aluminum production (noted as “other emissions” making up 4% of Rio’s total emissions). Processing of iron ore into steel is the largest contributor to Scope 3 emissions (Rio supplies the iron ore, but does not process it). -Metallurgical coal (and iron ore) is used in the processing of steel using the integrated blast furnace route (99% of Rio’s iron ore is processed using this route). -Natural gas (and iron ore) is used in the processing of steel using electric arc furnace (EAF) route. (Note that Rio divested last of coal businesses in 2018).
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves				NA	Not applicable. Rio no longer directly owns fossil fuel reserves.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No or limited disclosure. No separate targets for sequestration apart from offsets. Rio is undertaking feasibility studies for the development of five carbon offset projects (nature-based solutions). Unclear whether land-use emissions are material (together with perfluorocarbons, these are ca 4% of total Rio emissions).

## Commentary

Rio’s targets only partially align with UN HLEG criteria. Rio has set Scope 1 and 2 targets (equity basis) including net zero by 2050, and interim targets of 15% GHG emissions reductions by 2025 and 50% by 2030 (2018 baseline, no 2035 target). The Scope 1 and 2 targets are aligned with limiting warming to 1.5°C, but it is unclear what methodology is used in setting the targets (methodology for actual emissions using WRI and WBCSD GHG Protocol). Scope 1 and 2 emissions are largely from energy-intensive minerals processing in coal-based power grids in the hard-to-abate aluminium sector in Australia and Canada.

Rio is a major contributor to global Scope 3 emissions (1% of global total), exporting iron ore to customers in Asia that process the iron ore into steel, primarily using metallurgical coal via the energy-intensive integrated blast furnace route in steel production. Rio’s approach to Scope 3 is to engage with customers and work with them to develop and scale up technologies to decarbonise steel and aluminium production.

There do not appear to be separate targets for material non-CO<sub>2</sub> GHG emissions, although perfluorocarbons are a GHG produced as a by-product of aluminium production. Rio is undertaking feasibility studies for the development of carbon offset projects (nature-based solutions).

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions		✓			Carbon offsets and removals expected to play large part of decarbonisation strategy (including nature-based solutions) - due to high cost of emissions reductions and lack of feasible production-scale low carbon technology solutions for parts of business

#### Commentary

Rio's use of voluntary carbon offsets does not align with HLEG criteria. Rio expects that carbon offsets and removals will play a key role in its decarbonisation strategy over the next decade, as there are limited cost-effective and feasible technology options for parts of the business.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan	✓				Climate Action Plan (CAP) incorporated in Climate Change Report 2022 (also referred to as decarbonisation strategy).
Transition plan stated to be updated every 5 years		✓			Not stated. Unclear how often updated or when first CAP put in place.
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		Concrete actions are listed, including: Scope 1 and 2 emissions targets and roadmap with progress in 2022 and actions in 2023 (repower aluminium, renewables, alumina process heat, minerals processing, etc) Scope 3 emissions goals and customer engagement (steel value chain, aluminium value chain, shipping) These concrete actions are for 2022 (actual) and 2023 (planned) – meeting longer term targets are recognised as requiring new technologies and/or use of offsets. Further details on actions and technologies are outlined in the Decarbonising our Australian Alumina Refineries and Decarbonising our Minerals Processing 2023 reports.

Quantification of the contribution of specific actions to the achievement of the overall target			✓		Some quantification in emissions reductions of specific actions for 2030 target.
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets			✓		Capital allocation alignment with decarbonisation strategy (Scope 1 and 2): US\$7.5 billion in capital expenditure between 2022 and 2030. Also, incremental operating expenditures to support the capital expenditure plans (including steel decarbonisation initiatives) - including progress in 2022 and actions in 2023.  Committed to aligning future capital expenditure with 2025 and 2030 Scope 1 and 2 emissions targets, but limited detail provided. No split between new and legacy assets.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Climate governance explained, including short-term incentive plan linked to climate performance objectives - also in TCFD reporting (included in Climate Change Report 2022).  Group internal audit provides assurance to Board.

### Commentary

Rio's transition planning only partially aligns with HLEG criteria. Rio has a Climate Action Plan (CAP) incorporated in its Climate Change Report 2022, which includes Scope 1 and 2 emissions targets and roadmap with progress in 2022 and actions to undertake in 2023. Scope 3 emissions goals and customer engagement across the steel and aluminium sectors are also provided. The quantification of specific actions to meet targets is not provided, and Rio expects to rely on offsets (or new technologies) to meet targets.

Capital allocation alignment with the decarbonisation strategy is provided, with Rio expecting to spend US\$7.5 billion in capital expenditure between 2022 and 2030. Broad allocation of capital expenditure plans is described, but not detailed allocation to specific initiatives with a link to expected emissions reductions. The governance structure and short-term remuneration linked to climate is also provided.

## 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			No fossil fuels in current asset portfolio (Rio sold last of its coal businesses in 2018 and no longer mines coal but retains a contingent royalty from the divestments).  However, no target to end use of fossil fuels in operations.

Target for renewable energy procurement		✓			No renewable energy target. Some plans to support the development of large-scale wind and solar power to supply power to iron ore, aluminium and other operations, including the aluminium operations in Australia and copper mine in Mongolia. Established dedicated energy development team.
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			No direct ownership of fossil fuels in current asset portfolio. Actions contributing to phase down in operations but no plans to fully phase out. Provides information on progress and actions re: repowering aluminium operations (using renewables), renewable power for mining operations, decarbonising alumina refineries and diesel transition (i.e., biofuels for mining operations).
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels				NA	No fossil fuel operations.
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	

## Commentary

Rio does not have a target to end fossil fuels in its operations. It no longer operates coal mines (last of its coal assets were sold in 2018), although it continues to receive a contingent royalty from the divestments. It has plans to support the development of large-scale wind and solar power to supply power to various operations, including aluminium smelters in Australia and the copper mine in Mongolia.

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations	✓				Industry Association Disclosure 2022 report. Active engagement on climate and energy policy with industry associations, including expectation that positions and advocacy be

					<p>accepting of climate science and advocate for emissions cuts consistent with Paris Agreement goals. Disclosed affiliations and advocacy positions, including climate policy engagement.</p> <p>Rio expects industry associations to align with goals of the Paris Agreement. Where positions are not aligned, Rio works towards better alignment and reviews membership on an annual basis. In 2022, Rio did not renew its membership of the Queensland Resources Council.</p> <p>Rio Tinto has memberships of US National Mining Association and US Chamber of Commerce that do not fully align with Rio Tinto's climate policy. Rio Tinto states that they are 'continuing to work towards better alignment of policy'.</p>
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place			✓		<p>Rio outlines its climate policy engagement in its Climate Report, including the policies that are required to achieve its decarbonisation goals, such as a carbon price, carbon border adjustment mechanisms, and incentives to transform the metals sector.</p> <p>Further policy requirements/measures are outlined in the Decarbonising our Australian Alumina Refineries and Decarbonising our Minerals Processing 2023 reports.</p> <p>No specific disclosure on linkage between policies and regulation and possible reductions.</p>
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets	✓				Rio's climate policy (including working with industry associations) is aligned with Paris Agreement goals.
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates	✓				<p>Working with customers, suppliers and research institutes on decarbonisation options.</p> <p>Code of Conduct to run a transparent, values-based and ethical business - including with investors, suppliers and customers.</p>

## Commentary

Rio provides information on its climate policy engagement in the Climate Report and additional lobbying and advocacy information in its Industry Association Disclosure report. Rio's climate policy is aligned with Paris Agreement goals and recognises the role of government policy and business action in achieving the goals. It provides a summary of policies that are required to achieve its decarbonisation goals, including its positions on a carbon price, carbon border adjustment mechanisms, and incentives to transform the metals sector. Rio expects that industry associations accept climate science and advocate for emissions reductions consistent with Paris Agreement goals, and where these are inconsistent it advocates for change or does not renew membership.



Further policy actions required to achieve transition plans are also provided in the Decarbonising our Australian Alumina Refineries and Decarbonising our Minerals Processing 2023 reports. Rio appears to be committed to a Code of Conducts to run a transparent, values-based and ethical business, including working with customers, suppliers and investors on decarbonisation.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No or limited disclosure. Land-based emissions appear to be immaterial (less than 4% of total emissions in aluminium business) - unclear.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan			✓		<p>Rio recognises the interconnected impacts of climate change and biodiversity loss. It participates in the informal working group on TNFD and WEF's Global Future Council on Nature-based Solutions.</p> <p>Rio provides information (including progress) on environmental stewardship in the Annual Report re: water, biodiversity, land, waste and air quality. It also provides information re: mining and metals practices (including tailings) and legacy assets.</p> <p>Rio has had a Biodiversity protection and natural resource management plan in place since 2017.</p> <p>Additional disclosure on biodiversity in Sustainability Factbook (including performance by asset).</p> <p>Preliminary TNFD reporting provided in Sustainability Factbook, with references to Annual Report disclosure.</p> <p>Nature-based solutions projects tested based on ecological safeguards, including re: biodiversity and regenerative landscape stewardship.</p>
Disclosure of how the transition plan contributes to a Just Transition	✓				<p>Just Transition plans outlined in Climate Change Report, including human rights standards in decarbonisation plans and action (UN Guiding Principles, UN Declaration on the Rights of Indigenous People, etc).</p> <p>Also consider for new mine developments to support energy transition, approach to closure of existing mines, nature-based solutions, renewable energy, and external engagement.</p>

## Commentary

Rio provides information (including progress) on environmental stewardship and nature-related risks in its Annual Report and Sustainability Factbook, including on water, biodiversity, land, waste and air quality. Rio was a participant in the informal working group on TNFD and WEF's Global Future Council on Nature-based Solutions and has provided preliminary information on TNFD disclosure (with references to Annual Report disclosure). Land-based emissions appear to be immaterial. Just Transition plans are outlined in the Climate Change Report.

## 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these	✓				GHG data in Sustainability Fact Book (2022) excel spreadsheet. Climate Action Plan contained in 2021 & 2022 Climate Change Reports, including net zero targets and progress.
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal	✓				UNFCCC disclosure (and case study)
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		KPMG provides limited assurance on Climate Action Plan progress and Scope 3 GHG emissions, and reasonable assurance on Scope 1 and 2 GHG emissions.
Emissions reductions are verified by an independent third-party		✓			KPMG provide reasonable assurance on Scope 1 and 2 GHG emissions, but not reductions

## Commentary

GHG and other data (including progress) is provided in the Sustainability Fact Book (excel spreadsheet) and Climate Change Report. KPMG has provided reasonable assurance on Scope 1 and 2 GHG emissions data, and limited assurance on Climate Action Plan progress and Scope 3 emissions estimates.

**Sources** Climate Change Report 2022, Annual Report 2022, "Scope 1, 2 and 3 Emissions Calculation Methodology 2022" Report, Industry Association Disclosure 2022, Decarbonising our Australian alumina refineries 2023, Decarbonising our minerals processing 2023, Rio Tinto website

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## BlueScope Steel Ltd

### Key points

- BlueScope Steel (BlueScope) has made a 2050 absolute net zero pledge and interim intensity targets of 30% for non-steelmaking and 12% for steelmaking activities by 2030 based on 2018 levels.
- The interim target does not meet UN HLEG criteria for coverage or level of ambition. It is not stated how the target has been calculated but the inability to meet the SBTi sectoral methodology for determining appropriate targets is reported.
- BlueScope has published a Climate Action Report (2021) and progress is reported in the annual Sustainability Report (2023) and Data Supplement (2023). Climate actions are disclosed at a high level in these reports but not quantified and progress against interim targets is reported.
- The Climate Action Report and Sustainability Report do not explicitly commit to phasing out fossil fuels.
- Concrete transition plan actions are reported but are not quantified or linked to targets in detail. Capital allocation is described at a high level, not in detail.
- Targets and transition plans have not been verified.
- The contributions of the transition plan to a Just Transition and nature-based risks are not disclosed.
- Based on publicly available data, BlueScope has been assessed as having made mixed progress against its emissions targets (refer Appendix 1) and its interim target has been assessed as not aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Australia's largest steel manufacturer and in the top 20 Australian emitters of Scope 1 and 2 greenhouse gas emissions based on FY22 NGER data.
- Domestic and international operations in North America, Australia, New Zealand, Pacific Islands and Asia. Operates in partnership with Tata Steel as a 50/50 joint venture (India) and Nippon Steel Corporation (NSC) as a 50/50 joint venture (ASEAN and west coast of North America).
- BlueScope uses the terminology “upstream” to refer to steelmaking activities and “midstream” (cold rolled, metal coating and painting lines and long and hollow products) and “downstream” (roll-forming, pre-engineered building manufacture and other activities to support operations) to refer to non-steelmaking activities. These categories are used to define the activities covered by net zero and decarbonisation targets.
- Emissions arise predominantly from iron steelmaking activities (Scope 1 at 38%) across three sites and iron and purchased steel (Scope 3 at 54%) with a small proportion arising from Scope 2 (8%)
- BlueScope states clearly in its reporting the technology barriers to decarbonisation and key “enablers” that are required for the transition plan

### Performance against UN HLEG recommendations

#### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Public goal of pursuing net zero GHG emissions

## 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		2030 target only in addition to 2050 net zero target
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		Net zero by 2050 goal, interim intensity targets of 30% non-steelmaking and 12% steelmaking activities by 2030 based on 2018 levels (insufficient for 2020 50% target)
Absolute emissions reduction targets (intensity if relevant)			✓		2050 target is an absolute emissions reductions target. 30% GHG emission intensity reduction target across non-steelmaking activities by 2030, based on 2018 levels. 12% Scope 1 and 2 GHG emissions intensity reduction target across our steelmaking activities by 2030, based on 2018 levels.
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party		✓			No methodology for target setting disclosed, not verified by third party, BlueScope has stated it currently cannot commit to SBTi aligned target due to regional spread and diversity of operations and “differing levels of maturity of key enablers for decarbonisation”
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		2050 net zero target applies to Scope 1, 2 only and all operations in all jurisdictions. 2030 targets related to Scopes 1 and 2 emissions only: <ul style="list-style-type: none"> <li>12% target covers steelmaking activities at three specific sites (which represent 92% of scope 1 emissions)</li> <li>30% target covers midstream but not downstream activities</li> </ul> No Scope 3 target.
Targets stated to account for all greenhouse gas emissions	✓				2050 target stated for all GHGs 2030 targets relate to reported emissions that are calculated using recognised methodologies

Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			No specific targets listed. Nitrogen (NO <sub>x</sub> ), sulphur dioxide (SO <sub>2</sub> ) and PM10 recognised as key steelmaking air emission metrics and air quality performance is monitored.
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves				NA	No fossil fuel reserves.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No disclosure of land-use related emissions or targets related to this or sequestration. Unlikely to be material.

### Commentary

BlueScope's targets only partially align with UN HLEG criteria. BlueScope has set a net zero goal for 2050 but intensity targets only for 2030. 2030 targets for steel making and non-steelmaking activities cover only Scope 1 and 2 emissions. The approach to target setting has not been explained and is not stated to be aligned with a robust methodology. Non-CO<sub>2</sub> emissions are stated as material but no separate targets are disclosed.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions				ND	No disclosure that refers to purchase of voluntary carbon credits – but intentions for the use of offsets in the future clearly disclosed

### Commentary

No information is disclosed about purchase of voluntary carbon credits.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan	✓				BlueScope published a Climate Action Report in 2021
Transition plan stated to be updated every 5 years		✓			General statements committing to updating 2021 Climate Action Report (none published since 2021) but no clear timeframe. Sustainability Report updated annually and contains updates on progress towards targets and climate actions.

Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		Specific actions are listed for steelmaking and non-steelmaking activities to 2030. It is clearly noted that future actions are highly dependent on "key enablers" and new technologies for 2050 indicating technology feasibility and economic viability a key barrier for actions.
Quantification of the contribution of specific actions to the achievement of the overall target		✓			Emissions reductions from specific initiatives/actions are not quantified (historical and progress reporting has some quantification).
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets			✓		High level outline capital expenditure and framework aligned to target emissions pathways, but no costings detailed covering investments to achieve all targets.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Governance structure for transition exists and dedicated governance of climate related activities including targets. It is stated that executive remuneration is linked to Short Term Incentives through a climate performance measure and tied to 2030 short term target.

### Commentary

BlueScope published a Climate Action Plan in 2021 and reports annually on inventory and progress to targets in the Sustainability Report. However, disclosure of progress against targets is provided for short term targets and long-term targets are heavily caveated based on technological feasibility and economic viability. Specific actions are described but are linked loosely to near- and long-term emissions reductions targets with high level quantification. Broad allocation of capital is described, but not detailed allocation to specific initiatives with a link to expected emissions reductions. Governance is disclosed in detail and remuneration based on a climate performance measure and short-term target only.

### 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			Targets do not explicitly state ending use and/or support for fossil fuels, however emissions reduction actions implicitly contribute
Target for renewable energy procurement		✓			No specific renewable energy procurement target, but actions include renewable energy purchases
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			No explanation provided for full phase out explicitly. Actions explain shift to lower carbon electricity and energy sources and state technology barriers and need for key "enablers"

If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels				NA	No fossil fuel operations.
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	

### Commentary

BlueScope does not set specific targets or commit explicitly to phasing out of fossil fuels in reports. Key actions seek to reduce emissions from activities that rely on fossil fuels through renewable energy, natural gas transition to green hydrogen in Direct Reduced Iron (DRI) process and Electric Arc Furnace technology. Disclosure clearly states that the transition is dependent on 5 key “enablers”: technology evolution, access to raw materials and firm, renewable energy, hydrogen availability and supportive policies. BlueScope has significant electricity consumption in its operations. Although it has not set a target for renewable electricity procurement and therefore does not meet this criterion, it is taking action to procure renewable energy.

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations			✓		Discloses affiliations and reviews alignment via Industry Association Governance Standard but no escalation strategy other than engagement with industry associations.
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place			✓		Mentions some specific policies and regulations but no specific emissions reductions reported
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets			✓		BlueScope discloses lobbying and policy engagement activities relating to decarbonisation, albeit representing the challenges of decarbonising a hard-to-abate sector. It is unclear how consistent these activities are with net zero targets. Net zero “enablers” include public policy and active participation in government reforms for decarbonisation of steel sector in Australia, NZ and US

Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates	✓				Engagement with partners and peers along value chain to advocate for net zero outcomes for wider sector
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### Commentary

BlueScope discloses affiliations with industry association but not escalation approach. Policy and regulations needed for the transition are outlined and active participation in government reforms that enable targets. Reporting outlines clearly the advocacy with investors, value chain and sector peers via IEA steel sector roadmap, Institutional Investors Group on Climate Change (IIGCC) ResponsibleSteel™, Australian Industry Energy Transitions Initiative (ETI), Net Zero Steel Pathway Methodology Project, SBTi expert advisory group.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	Material land-use emissions not reported. Unlikely to be material.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan		✓			No formal nature-based risk assessment.
Disclosure of how the transition plan contributes to a Just Transition		✓			No disclosure of contribution to Just Transition, only very high-level reference to consideration of Just Transition.

### Commentary

There is no detailed disclosure on nature-based risk or how the transition plan contributes to a Just Transition.

## 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these			✓		Annual GHG emissions data reported Progress against targets reported only at a high level. General progress on actions reported and quantified collectively to 2030 and 2050 goals.
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal	✓				Yes



Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		Only limited assurance of GHG emissions inventory by PWC in 2023 Sustainability Data Supplement. No verification of targets, transition plans or progress.
Emissions reductions are verified by an independent third-party		✓			Emissions reductions are not verified by a third party

### Commentary

BlueScope discloses GHG emissions data and provides information across Climate Action and Sustainability Reports that speaks to progress, but emissions reductions are described at a high level only for short term targets (2030) but rarely quantified and not directly related to long-term targets (2050). Emissions data has been verified but does not include target or transition actions.

**Sources** Climate Action Plan 2021, Sustainability Report 2023 & 2022, Sustainability Data Supplement 2023, Sustainability Metrics and Data Tables 2023

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## South32 Ltd

### Key points

- South32 has made a 2050 net zero pledge and set an interim target of 50% reduction of scope 1 and 2 emissions by 2035 from FY21 levels.
- Although South32 considers its net zero goal to align with a 1.5°C pathway, it does not disclose its methodology for target setting and the targets are not independently verified. The interim target does not cover scope 3 emissions.
- South32 has published a Climate Change Action Plan (CCAP) and progress is reported in the annual Sustainable Development Report and Databook.
- The CCAP does not commit to phasing out fossil fuels from South32's operations and production of metallurgical coal continues to be included in its portfolio. The company does not have separate targets for methane emissions reductions. Fossil fuels continue to be used in alumina refinery.
- The CCAP includes concrete actions and quantified emissions reductions, but these are not related comprehensively to achievement of targets. Detail is provided on capital allocation but again not comprehensively linked to targets.
- Targets and transition plans have not been independently verified.
- South32 provides detail on its planned contributions to a Just Transition.
- Based on publicly available data, South32 has been assessed as currently off-track against its emissions targets (refer Appendix 1) and there is insufficient information to determine if its interim target is aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- South32 is a large diversified mining and metals company with assets in aluminium, alumina, copper, silver, lead, zinc, nickel, metallurgical (coking) coal and manganese across 6 countries including Australia, South Africa and Mozambique. The company ranks in the top 20 of Australian greenhouse gas emitters, based on NGER data.
- Core to South32's transition strategy is aligning its portfolio to production of metals that support the transition to a low-carbon economy.
- The company is focusing on reducing emissions from its four largest sources of emissions: Hillside Aluminium (South Africa), Worsley Alumina (Western Australia), Illawarra Metallurgical Coal (NSW) and Mozal Aluminium (Mozambique)
- South32's decarbonisation strategy incorporates operational efficiency, lower-carbon energy sources and technology solutions in the longer-term
- In FY23, South32 reports that almost 90% of its reported value chain emissions were attributable to the downstream use and processing of its products, particularly alumina processing and use of metallurgical coal to make steel.

### Performance against UN HLEG recommendations

#### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Net zero 2050 goal

## 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		The company has one interim target for operational emissions reductions by 2035
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		50% of scope 1 and 2 by 2035, not 2030, from FY21 levels, net zero by 2050
Absolute emissions reduction targets (intensity if relevant)	✓				Absolute emissions reduction target
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party			✓		South32 states that “we consider that our long-term goal to achieve net zero GHG emissions by 2050 is aligned with the pathway in the IPCC Special Report on 1.5°C”. Methodology for determining targets is not clearly stated and targets are not verified by a third party.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		Scope 1 & 2 emissions in all operations and jurisdictions are covered. Scope 3 emissions are not covered in the interim target
Targets stated to account for all greenhouse gas emissions	✓				Targets relate to reported emissions which are stated to account for all greenhouse gas emissions
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			No separate targets for methane emissions associated with mining operations
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves		✓			No separate targets for embedded emissions within fossil fuel reserves
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No disclosure of material land-use emissions. Unknown whether material.

### Commentary

South32's targets partially align with UN HLEG criteria. The 2050 net zero goal covers all emissions scopes while the interim 2035 target covers only scopes 1 & 2 emissions. No intensity target has been set. South32 states that its targets are science-aligned but the target-setting methodology is not explained and has not been independently verified. There are no separate targets for fossil methane, which are relevant for South32's operations. South32 states that it will not set a near-term reduction target until the company is confident that it can set a target that is credible, viable and just.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions				NA	South32 has surrendered ACCUs to fulfil liabilities under the Australian Safeguard Mechanism but has not purchased additional voluntary offsets. The company states that offsets may be used in future but prioritised mitigation

#### Commentary

Although South32 is not yet purchasing carbon credits to count towards emissions reductions, the company has stated that carbon offsets are likely to be required to address residual 'hard to abate' emissions including process fugitive emissions, to achieve net zero by 2050.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan	✓				South32 has disclosed a Climate Change Action Plan
Transition plan stated to be updated every 5 years	✓				The plan will be put to a non-binding advisory shareholder vote every three years
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		The plan describes detailed and concrete actions but not all are yet technologically or commercially viable (e.g. hydrogen or new processing technologies)
Quantification of the contribution of specific actions to the achievement of the overall target			✓		For scope 1 & 2 expected emissions reductions are provided for specific actions, but not related back to a proportion of total target reductions

Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets			✓		Quantified information on aligned capital allocation is disclosed. However, it is not presented as a comprehensive allocation of capital to achieve all targets.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Governance structure and linkage of long-term incentives to performance against climate change measures is explained. LTI for climate change performance is measured over 4 years

## Commentary

South32 first set a climate target in FY16 and published a Climate Change Action Plan (CCAP) as a section of its 2022 Sustainable Development Report. The company reports progress against the plan in annual Sustainable Development reports. The CCAP details concrete actions to achieve targets but notes that not all options are currently technologically feasible. Estimated emissions reductions from specific actions are quantified but are not presented within the context of achievement of the overall target so it is difficult to see whether the targets are entirely covered by specified actions. Similarly, allocation of capital to the climate change strategy is detailed in relation to specific investments but it is unclear whether overall achievement of targets has been fully covered.

## 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			South32 has not committed to fully phasing out production and use of fossil fuels
Target for renewable energy procurement		✓			South32 is targeting 100% renewable energy supply for a project in development stage (Hermosa), but has not set targets for the majority of its operations, citing difficulties with securing sufficient renewable energy supply in the short-medium term in specific locations including South Africa and Western Australia. South32 is purchasing renewable energy in a number of locations.
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			The company's strategy does not commit to phase out of fossil fuels from operations. Metallurgical coal production is an ongoing part of the portfolio and coal-fired boilers at Worsley Alumina are being converted to natural gas as an interim measure.
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels		✓			South32 does not have a separate methane emission reduction target despite producing metallurgical coal

For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	South32 produces metallurgical coal, not coal for power generation
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	Although South32 uses thermal coal and natural gas to generate high pressure steam and electricity for alumina refinery, this is coal-based power generation for specific industrial use, not wholesale power generation.
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	No primary oil or gas production

### Commentary

South32's CCAP incorporates ongoing reliance on fossil fuels for power and heat and ongoing primary metallurgical coal production. The company states that full electrification and renewable energy supply are envisaged for the future, but these are not included within interim targets due to difficulties accessing sufficient supply. Metallurgical coal is stated to be necessary for steel production and steel will be needed for the energy transition. South32 does not have specific methane reduction targets but outlines plans to reduce methane emissions including capturing fugitive emissions to generate electricity and reducing ventilation air methane through innovative technologies.

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations	✓				Membership of trade associations is disclosed and advocacy for positive climate action is described, including escalation strategy
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place			✓		South32 outlines broad policy areas that are needed, including carbon pricing but does not link these to quantified emissions reductions
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets	✓				The company states that it is committed to conducting its direct advocacy in line with its climate change positions including support for the Paris Agreement objectives.
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates	✓				South32 provides detailed descriptions of its contributions to engagement across the value chain and how the company collaborates to address shared challenges and decarbonise across the value chain

## Commentary

South32 provides detailed information on its advocacy, lobbying, engagement and collaboration activities, including broad areas of policy support.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No material land-use emissions are disclosed. Unknown if material.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan			✓		South32 has undertaken TNFD pilots and discloses information on water and biodiversity as material areas of risk and dependency. The disclosures are not specifically addressed in relation to the CCAP
Disclosure of how the transition plan contributes to a Just Transition	✓				South32 provides a detailed description of how it intends to support a Just Transition, which the company defines as fair, equitable and inclusive social transition towards a low-carbon global economy. This includes Just Transition Principles aligned with the objectives of the Paris Agreement and a current focus on Hillside Aluminium and Worsley Alumina

## Commentary

South32 provides nature-based risk and dependency disclosures on biodiversity and water as these are identified as material risks. However, nature-based risks are not explicitly described in relation to the transition plan. South32 provides detailed information on its commitment to and actions in support of a Just Transition for its employees, communities and other stakeholders in specific locations. The company plans to undertake a risk and opportunity assessment focused on Just Transition as part of its next social impact and opportunity assessment.

## 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these	✓				Emissions reported in the sustainability Databook. Increases in emissions reported and explained. Progress on actions reported in the Sustainable Development Report

Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal		✓			Not found on UNFCCC Global Climate Action Portal
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		Emissions, reductions and progress are assured. Targets and transition plans not stated to be independently verified
Emissions reductions are verified by an independent third-party	✓				Emissions reductions are assured by KPMG (Scopes 1, 2 and 3)

### Commentary

Emissions and changes in emissions are disclosed and explained. South32 obtains independent assurance from KPMG of its sustainability data, including emissions and reductions.

**Sources** Climate Change Action Plan 2022, Sustainable Development Report 2023, Sustainability Data Book 2023



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## Qantas Airways Ltd

### Key points

- Qantas has made a 2050 net zero pledge and an interim target of 25% reduction of net emissions by 2030 from 2019 levels.
- The interim target does not meet UN HLEG criteria for coverage or level of ambition. It is not stated how the target has been calculated and whether it aligns to a robust methodology for determining appropriate targets.
- Qantas has published a Climate Action Plan and progress is reported in the annual Sustainability Report. Emissions reductions are reported year-on-year but are not clearly reported in relation to the target baseline year.
- The Climate Action Plan includes ongoing reliance on offsets and does not commit to phasing out fossil fuels.
- The Climate Action Plan includes concrete actions but these are quantified and linked to targets only at an outline level, not in detail. Capital allocation is described at a high level, not in detail.
- Targets and transition plans have not been independently verified
- Understanding of nature risks is emerging. The contribution of the transition plan to a Just Transition is not explained.
- Based on publicly available data, Qantas has been assessed as currently on-track against its emissions targets (refer Appendix 1) and its interim target has been assessed as not aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Australia's largest domestic and international airline
- Key passenger airline businesses are Qantas and Jetstar
- In addition to the airline business, the Group has operations in loyalty programs, freight and support services
- Operations and consequently emissions were significantly impacted by Covid-19
- Aviation currently relies on fossil-based jet fuel. Qantas states that Sustainable Aviation Fuel (SAF) is currently the only viable technology/decarbonisation option available across all of its flying operations.

### Performance against UN HLEG recommendations

#### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Public commitment to achieve net zero by 2050

## 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		2030 target only in addition to 2050 net zero target
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		Net zero by 2050 target, interim target scope 1 and 2 25% below 2019 levels by 2030
Absolute emissions reduction targets (intensity if relevant)		✓			2030 target is for absolute reductions but is a net emissions reduction target (i.e. net of offsets), not gross. No intensity target disclosed
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party		✓			No methodology for target setting disclosed, not stated to be consistent with 1.5°C with no or limited overshoot, not verified by third party
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		The net zero target covers scopes 1, 2 and material scope 3 but the interim target covers only scopes 1 and 2. Employee/contractor business travel not included in scope 3 emissions because they are offset.
Targets stated to account for all greenhouse gas emissions	✓				Targets relate to reported emissions that are calculated using recognised methodologies (NGER and CORSIA)
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			Relevance is not stated but fossil methane is assumed to be relevant in relation to extraction and production of transport fuel, noted as a material source of scope 3 emissions
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves				NA	No fossil fuel operations.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No disclosure of land-use emissions. Unknown if material in relation to SAF

### Commentary

Qantas' targets largely do not align with UN HLEG criteria. Qantas has set a 2030 target that is significantly less than 50% below 2020 levels and is a 'net' target i.e. net of offsets, rather than a gross absolute target. It covers only Scope 1 and 2 emissions. No intensity target has been set. The approach to target setting has not

been explained and is not stated to be aligned with a robust methodology. There is a single target for emissions, and it is unclear whether there are material emissions for which additional targets should be set, such as fossil methane relating to transport fuel.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions		✓			Use of offsets is a core pillar in achieving the company's interim and net zero emissions reductions targets

#### Commentary

A core pillar of Qantas' climate strategy is ongoing use of offsets. The Group has developed an offsets Integrity Framework and Investment Principles to ensure quality and integrity of offsets and co-benefits. This use of offsets does not align with the UN HLEG. Qantas notes that, for international emissions, the Group complies with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA). *“Commencing in 2021, CORSIA requires airlines to purchase carbon offsets to meet their share of emissions growth from a 2019 baseline.”*

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan	✓				Climate Action Plan published March 2022.
Transition plan stated to be updated every 5 years		✓			Not stated
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		Concrete actions are listed but some reliance on new technology to achieve net zero and reliance on SAF which is not yet fully available
Quantification of the contribution of specific actions to the achievement of the overall target			✓		High level and approximate contribution of the 3 pillars of the plan to achieving net zero. Emissions reductions from specific initiatives/actions are mostly not quantified.
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets			✓		High level outline of elements of capital expenditure plans, not detailed costings covering all investments to achieve targets

Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Governance structure is explained. It is stated that executive remuneration is linked to Short Term Incentives through a climate performance measure
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### Commentary

Qantas published a Climate Action Plan in March 2022. Progress and emissions data are reported annually in the Sustainability Report. However, progress against targets is not clearly reported. Concrete actions are described in the plan but these are not clearly linked to achievement of emissions reductions targets – only the high-level pillars are linked to targets with broad estimates of expected reductions to be achieved from each pillar. Broad allocation of capital is described, but not detailed allocation to specific initiatives with a link to expected emissions reductions.

### 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			Continued reliance on fossil fuels
Target for renewable energy procurement	✓				Target present for all Australian buildings
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			Continued reliance on fossil fuels
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels				NA	No fossil fuel operations
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	

### Commentary

Qantas' Climate Action Plan assumes ongoing reliance on fossil fuels. SAF is currently blended up to 50/50 sustainable jet fuel and fossil jet fuel. The plan incorporates ongoing use of offsets where direct emissions cannot be reduced, up to 30-40% by 2050.

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations			✓		Disclosed affiliations and advocacy positions. No disclosure of escalation strategy.
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place			✓		Policies for SAF development outlined.
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets	✓				Disclosure of positive advocacy consistent with net zero targets
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates	✓				Industry engagement through partner alliances, Jet Zero Council, customer engagement through Green Tier program and employee engagement

### Commentary

Qantas discloses policy support required for development of a domestic SAF industry but does not quantify the emissions reductions possible. Qantas discloses aviation and other industry partnerships and memberships and some high-level information on advocacy. There is no disclosure on escalation policies where there is non-alignment.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No disclosure of material land-use emissions. Unknown if material for SAF.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan		✓			Assessment of risks undertaken in line with the TNFD beta framework. Not yet stated how these will be addressed in relation to transition other than reference to offset projects. Only high level outline of nature risk

Disclosure of how the transition plan contributes to a Just Transition		✓			Reference to economic benefits of SAF and benefits of offsets only – not sufficient to address UN HLEG Just Transition recommendations.
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### Commentary

There is no detailed disclosure on how the transition plan contributes to a Just Transition, but there is reference to outcomes for regional communities and First Nations people in relation to offsets projects. There is currently high-level reference to nature risks and opportunities. Qantas states that it “acknowledges its significant interaction with nature and its resources.” Nature opportunities are described in the context of offsets, but these are within the value chain, not beyond. Qantas has undertaken a nature risk and opportunity assessment and plans to release a Nature Strategy in FY24 which will include a biodiversity assessment framework for SAF investment.

## 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these			✓		Annual GHG data reported Progress against targets not clearly reported i.e. relating current year data to baseline year and reductions to required reductions to be on track to target General progress on actions reported
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal		✓			No disclosure found on UNFCCC Global Climate Action Portal
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		No verification of targets, transition plans or progress (other than emissions reductions reported in Remuneration Report – link to targets is unclear based on disclosed ghg emissions data). Emissions are assured.
Emissions reductions are verified by an independent third-party		✓			Emissions reductions are not reported or assured in Sustainability Report. Reductions reported in the Remuneration Report which is included in KPMG’s assurance. However, it is unclear how the reductions are calculated and which target they relate to. No assurance of reductions in sustainability data.

### Commentary

Although Qantas discloses greenhouse gas emissions data and year to year changes in emissions in its Sustainability Report, it does not clearly disclose emissions reductions achieved in relation to the baseline target year FY19 and the net target reduction. Emissions reductions are reported in the Remuneration Report but it is

unclear how this relates to the reported emissions or reduction targets. There is no linkage provided between gross emissions reported and progress against the net target. General progress on actions is disclosed, but not clearly linked to emissions reductions achieved. It is therefore difficult to clearly establish how Qantas is tracking against its own targets. Note that 2020-2022 were operationally anomalous years due to the impact of the Covid-19 pandemic. Activity and therefore emissions dropped significantly in FY20, 21 and 22 and rose again in FY23.

**Sources** Climate Action Plan 2022, Sustainability Report 2023 & 2022 (for FY19 emissions data), Annual Report 2023

## Woolworths Group Ltd

### Key points

- Woolworths is aspiring to be a “net positive business” by 2050 – to remove more carbon than it emits from its operations (Scope 1 and 2 emissions)
- Woolworths has short and medium-term targets of
  - 42% Scope 1 and 2 emissions reduction by 2025
  - 63% Scope 1 and 2 emissions reduction by 2030 (SBTi verified commitment in 2020)
  - 19% Scope 3 emissions reduction by 2030
- Woolworths has a renewable energy target of 100% by 2025 and a target of 60% reduction in transport emissions by 2030.
- 2023 Sustainability Report, 2023 Annual Report and 2025 Sustainability Plan outline targets and actions for a transition to net positive.
- Based on publicly available data, Woolworths has been assessed as currently off-track against its current emissions target, although it should be noted that Woolworths is very close to on-track against an ambitious short-term target (refer Appendix 1). The company’s interim target has been assessed as aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Woolworths is an integrated retail business (including beverage, hospitality and clothing), predominately operating as supermarket business, with operations in Australia and New Zealand and a revenue of \$64 billion in 2023.
- Woolworths Scope 1 and 2 emissions come from electricity, fugitive synthetic refrigerants, transport fuel for fleet cars and home delivery trucks and natural gas.
- Scope 3 emissions account for 94% of emissions (15 times scope 1 and 2 emissions combined) and are dominated by purchased goods and services (81%).

### Performance against UN HLEG recommendations

#### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Committed to net positive by 2050

#### 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
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Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		Interim 2025 and 2030 targets for Scope 1 & 2, and 2030 target for Scope 3, a 2025 target for renewable energy, but no 2035 target.
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		Net positive by 2050 or sooner. Interim targets of Scope 1 and 2 42% reduction by 2025 and 63% reduction by 2030 on 2015 baseline, 19% Scope 3 emissions reduction by 2030 compared to a 2015 baseline Note 2015 baseline was adjusted in 2023 to reflect demerger of Endeavour Group (end FY21) and it is not clear what new baseline is so unable to ascertain whether criterion is met for 50% below 2020 baseline by 2030.
Absolute emissions reduction targets (intensity if relevant)	✓				Woolworths targets are for absolute emissions reductions for Scope 1, 2 and 3. Intensity is measured for tCO <sub>2</sub> e/m <sup>2</sup> since 2021 but no target set.
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party	✓				Scope 1 & 2 2030 target verified by SBTi in 2020. Scope 3 not verified, however, stated intention to update scope 3 SBTi target to align with 1.5°C in FY24.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions	✓				Scope 1, 2 targets are for own operations and Scope 3 targets are across value chain. Scope 3 emissions have an increasing focus for measurement and identification of emissions reduction actions
Targets stated to account for all greenhouse gas emissions	✓				Woolworths Scope 1 & 2 target is verified by SBTi in 2020 whose criteria is linked to GHG Protocol Corporate Value which covers six main greenhouse gas.
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			Woolworths is aiming for low GWP refrigerants in suitable locations and "73 low-GWP refrigeration systems and 34 leakage detection systems installed in 2023". However not a specific target for refrigerant gases
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves				NA	No fossil fuel operations. Scope 1 emissions include transport fuel for fleet cars and home delivery trucks and natural gas and a small percentage of Scope 3 is other fuel and energy related activities. Unknown if embedded emissions are material.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No scope 1 and 2 emissions noted in relation to land-use. Recognition of scope 3 land use emissions of suppliers and stated this will be a focus of future mitigation activities, but no disclosure

					of current land-use emissions. 2025 goal of sourcing commodities from net zero deforestation supply chains.
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### Commentary

Woolworths Scope 1 & 2 2030 target is validated by SBTi but does not fully align with UN HLEG criteria. Scope 3 emissions, are by far the most material for Woolworths, but the target for Scope 3 emissions has not yet been verified by SBTi.

Woolworths aims to update Scope 3 targets with SBTi in FY24. No targets are set for non CO<sub>2</sub>- emissions or land-use emissions, however there is a target set for net zero deforestation of sourced commodities by 2023.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions				ND	No disclosure of purchase of voluntary carbon credits. Woolworths has stated 2030 targets will not use offsets but 2050 goal may use offsets.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan		✓			While no specific dedicated net zero transition plan is published, Woolworths has disclosed net zero targets and transition planning in 2023 Sustainability Report, 2025 Sustainability Plan and 2023 Annual Report.
Transition plan stated to be updated every 5 years		✓			Sustainability Plan 2025 reviewed annually since 2020 (missing for 2021).
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		High level lists of actions across “operational emissions trajectory” to 2030 and 2050 targets. Concrete actions to achieve 2030 Scope 1 and 2 emissions reductions are outlined.  Acknowledgement of importance of Scope 3 emissions reductions and actions to adequately measure and focus on reducing Scope 3 emissions sources in FY24.
Quantification of the contribution of specific actions to the achievement of the overall target			✓		Woolworths provides data on historical emission reductions in its Sustainability Report 2023, Annual Report 2023 and Sustainability

					Data Pack 2023. However, there is minimal quantification of actions towards targets.
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets			✓		Some disclosure of investment in low carbon energy consumption and energy efficiency measures. Issuance of sustainability-linked bond linked to emissions reductions.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.			✓		Links between climate targets and executive compensation disclosed. No specific detail in relation to decarbonisation actions or verification.

### Commentary

Woolworths report on net zero targets and transition plans within Sustainability and Annual reporting in 2023, however detail on actions, quantification of emissions reductions from actions, governance and capital expenditure related to the transition plan actions are limited. Woolworths reports annually on progress on emissions reductions in relation to its sustainability-linked bonds.

### 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			No specific statements on ending use of fossil fuels, but targets are set relating to this including: 60% reduction in transport emissions by 2030 100% electric vehicle (EV) home delivery vehicles by 2030
Target for renewable energy procurement	✓				100% renewable electricity by 2025.
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			Woolworths does not disclose a plan to fully phase out fossil fuels, but documents targets specific to transport and renewable electricity, going some way to reducing dependence on fossil fuels. Historical data on renewable energy and clean transportation is disclosed.
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels				NA	No fossil fuel operations
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	

For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	

### Commentary

While no commitment is made on complete phase out of fossil fuels, Woolworths has mid-term targets for eliminating fossil fuels from electricity (100%) and transport (60%).

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations		✓			No clear disclosure on trade association affiliations or escalation strategy.
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place		✓			No detail disclosed on specific policies. No specific link to emissions reductions and one mention of a net zero regulation.
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets		✓			Some mention of advocacy and regulation in relation to climate and nature-based risks (Australian Climate Leaders Coalition), but minimal and not linked to targets
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates			✓		Woolworths discloses some partnerships and engagement activities, particularly with a focus on Scope 3 emissions and targets and value chain. These include Sustainability Consortium, Australian Sustainable Agriculture Initiative Platform, NZ Ministry of Primary Industries' Sustainable Food and Fibres Futures Fund, Australian Climate Leaders Coalition and TNFD framework.

### Commentary

Woolworths has only briefly addressed lobbying and advocacy in relation to net zero targets and climate action. Apart from engagement on scope 3 emissions in the value chain, disclosure focuses on sustainability more generally.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
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If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.			✓		Woolworths has set a net zero deforestation by 2025 target for high impact own brand commodities, but no mention of other ecosystem conversions and land-use emissions not yet included in target coverage.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan			✓		Nature-based risks becoming a focus in 2023-24 and noted as material emerging priority. Climate and Nature Strategy in Annual Report. Participated in the Department of Climate Change, Energy, the Environment and Water's pilot of the TNFD framework, applied across five sectors of national significance, including the food value chain (pilot focused on beef and salmon). Sustainable Cotton Policy in place (Big W) and actively sustainably sourcing products through third party verification (100% in some categories such as tea and coffee).
Disclosure of how the transition plan contributes to a Just Transition		✓			No detail on Just Transition disclosed.

### Commentary

Woolworths states a clear intention to prioritise nature-based risks and climate in the coming year and discloses detail on sustainable sourcing activities. Just Transition is not addressed in transition planning.

### 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these			✓		Annual GHG data reported (market and location-based) Scope 1 & 2 emissions reductions reported (for FY21, 22 and 23) against 2015 baseline (baseline adjusted to reflect demerger and revised baseline not reported with sustainability data) Progress against Scope 3 target not reported
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal	✓				Woolworths report to UNFCCC Global Climate Action Portal
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		Independent assurance of Sustainability Report 2023 by Deloitte. Assurance of emissions but not transition plans. SBTi verified Scope 1 & 2 2030 targets but not Scope 3 or 2050 net positive target.

Emissions reductions are verified by an independent third-party	✓				Scope 1 & 2 emissions reductions have reasonable assurance by Deloitte. Scope 3 reductions not reported or assured.
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**Commentary**

Deloitte provides assurance of Sustainability Report 2023 on GHG emissions data and reductions. There is no assurance on scope 3 reductions.

**Sources** 2023 Sustainability Report, 2023 Sustainability Report Data Pack, 2023 Annual Report, 2025 Sustainability Plan, 2020 Sustainability Report, 2015 Corporate Responsibility Report

## Coles Group Ltd

### Key points

- Coles has committed to deliver net zero GHG emissions by 2050.
- Coles targets are to reduce absolute Scope 1 and 2 GHG emissions by 75% by FY30 from a FY20 base year. This target has been validated by SBTi.
- Scope 3 emissions make up over 90% of Coles overall emissions profile. Coles has an engagement target that 75% of its suppliers will have science-based targets by FY27. Coles has a renewable energy target to source 100% renewable electricity by 2025.
- In FY23 Coles commenced the development of a Climate Action Roadmap which it anticipates will include key actions for Coles to manage climate-related risks and opportunities effectively and respond to stakeholder expectations. Coles also intends to develop a Climate Transition Plan.
- Coles targets are partially aligned with UN HLEG criteria.
- Based on publicly available data, Coles has been assessed as currently on-track against its emissions targets (refer Appendix 1) and its interim target has been assessed as aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Coles is an integrated retail business whose core business is a network of supermarkets, including 1,800 retail outlets. In FY23 supermarket sales generated revenue of \$36.7 billion.
- Coles is diversifying into e-commerce with \$2.8 billion sales in FY23. Coles sold its Coles Express (petrol station stores) business during FY23
- Coles is increasingly developing its own products. In FY23 it launched 1,400 'Exclusive to Coles' products.
- Coles main sources of Scope 1 and 2 emissions come from electricity (70%), refrigerant gases (24%), natural gas and transport fuel, with stationary LPG and diesel for onsite back-up generators.
- The main source of Scope 3 emissions is purchased goods and services (82.2%).

### Performance against UN HLEG recommendations

#### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Committed to deliver net zero greenhouse gas emissions by 2050

#### 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		Coles has an interim 2030 target, a 2025 target for renewable energy, but no 2035 target.
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner	✓				75% target by 2030 from 2020 baseline for Scope 1 and 2, not Scope 3. Net zero by 2050.
Absolute emissions reduction targets (intensity if relevant)	✓				Coles targets are for absolute emissions reductions for Scope 1 and 2.
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party	✓				In July 2023 the Scope 1 and 2 target was validated by SBTi and endorsed for being ambitious and classified as 1.5°C aligned.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		Coles has set a Scope 3 supplier engagement target, committing that 75% of its suppliers (by spend, covering purchased goods and services, and upstream transportation and distribution) will have science-based targets by FY27. This Scope 3 target was validated by SBTi but is not an emissions reduction target.
Targets stated to account for all greenhouse gas emissions	✓				Coles Scope 1 and 2 target has been certified by SBTi whose criteria is linked to GHG Protocol Corporate Value which covers six main greenhouse gases.
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions		✓			No separate target for refrigerants which are material, although actions to reduce refrigerant emissions are disclosed.
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves				NA	No fossil fuel operations.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No land-based emissions disclosed. Unclear whether land-use emissions may be material scope 3.

## Commentary

Coles is aligned or partially aligned with a number of HLEG criteria for targets. As a supermarket Coles has thousands of products which account for the bulk of Scope 3 emissions which in turn account for more than 90% of the company's overall emissions profile. Purchased goods and services (82.2%) and end of life treatment of sold products (7.1%) account for almost 90% of Scope 3 emissions.

While the Coles Scope 3 supplier engagement target has been validated by SBTi, and aligns with the SBTi corporate standard, this does not align with UN HLEG scope 3 requirements and it is uncertain as to how this actually translates in terms of emission reduction.



### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions	✓				Coles uses carbon offsets for some of its product range to demonstrate carbon neutrality. Coles states that it does not purchase carbon offsets to decarbonise its operations.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan		✓			In 2023 Coles commenced the development of a Climate Action Roadmap which it anticipates will include key actions for Coles to manage climate-related risks and opportunities effectively and respond to stakeholder expectations. Coles also plans to develop a Climate Transition Plan.
Transition plan stated to be updated every 5 years		✓			Climate Transition Plan not yet completed.
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		Although there is no specific transition plan, actions to address emissions targets are outlined in the Coles Sustainability Report, including renewable energy, energy efficiency/HVAC management, carbon neutral beef and electric vehicles for online deliveries. For Scope 3 emissions, Coles' focus is on high emitting categories, where it aims to work with suppliers to reduce emissions.
Quantification of the contribution of specific actions to the achievement of the overall target		✓			Coles provides data on emission reductions and information on initiatives in its 2023 Sustainability Report. Very limited quantification of expected emissions reductions from initiatives.
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets		✓			There is some discussion in the 2023 Sustainability Report on capital expenditure on renewable energy, but this is focused on historical and not planned expenditure.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.			✓		Coles discloses governance structure for sustainability including climate risk and performance reporting. Coles uses a sustainability customer perception metric as part of executive remuneration.

## Commentary

Coles has commenced the development of a Climate Action Roadmap which it anticipates will include key actions for Coles to manage climate-related risks and opportunities effectively and respond to stakeholder expectations. It also intends to develop a Climate Transition Plan in future.

### 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			No specific targets to end use of fossil fuels
Target for renewable energy procurement	✓				Target to source 100% renewable electricity for operations by the end of FY25.
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			Coles does not detail plans to phase out use of fossil fuels but does provide narrative reporting on initiatives it is taking that will contribute to phase down.
If the company has operations in coal, oil or gas production:					
Target of minimum 63% reduction in methane emissions by 2030 from 2020 levels				NA	No fossil fuel operations.
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	

## Commentary

Coles has a target to source 100% renewable electricity for its operations by 2025. It does not have a detailed transition plan to phase out fossil fuels from its operations.

### 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations			✓		2023 Sustainability Report provides some disclosure of industry associations including Climate Leaders Coalition, Carbon Market Institute, etc, with limited disclosure on climate advocacy. Where values or policy positions misalign, Coles review the divergence and assess impact.
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place		✓			Detail of policy positions not provided.
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets			✓		Limited information regarding lobbying and policy engagement to support Paris Agreement goals provided. CEO is member of the Australian Climate Leaders Coalition. Involved in pilot of Corporate Emissions Reduction Transparency with Clean Energy Regulator, to help promote emissions reductions in Australia.
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates			✓		Coles provide statements on stakeholder engagement and industry association involvement, including engagement with investors, suppliers and the community on sustainability issues, including climate change.

### Commentary

Coles provide limited statements on lobbying and advocacy and engagement activities linked to sustainability and climate.

### 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No disclosure of land-use emissions. Potentially material in supply chain.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan			✓		Some disclosure relating to nature in Sustainability Report in regards to sustainable products in supply chain, with connection to climate made in Annual Report. Coles is preparing for TNFD.

Disclosure of how the transition plan contributes to a Just Transition		✓			No disclosure of contribution to Just Transition
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### Commentary

Just Transition has not been integrated into climate actions, with nature-based risks emerging, including preparing for TNFD.

### 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these			✓		Annual GHG data reported for Scope 1 & 2, with progress reported against targets.
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal		✓			Not found on UNFCCC Global Climate Action Portal
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		Reasonable assurance provided by EY in 2023 Sustainability Report on Scope 1 and 2 GHG emissions. Limited assurance on Scope 3 GHG emissions. Scope 1, 2 and 3 targets have been verified by SBTi.
Emissions reductions are verified by an independent third-party		✓			No assurance on emissions reductions.

### Commentary

EY provides reasonable assurance in Coles' 2023 Sustainability Report on Scope 1 and 2 GHG emissions data, and limited assurance on Scope 3 GHG emissions. Scope 1, 2 and 3 targets have been verified by SBTi. There is no assurance on progress against targets or emissions reductions.

### Sources

Coles Group Annual Report 2023, Climate Change Position Statement 2021, Coles Sustainability Report 2023, Coles Group Sustainability Data Pack 2023, Coles website

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## Cleanaway Waste Management Ltd

### Key points

- In 2022 Cleanaway set an interim 2030 target and a net zero target for Scope 1 and 2 carbon dioxide emissions reductions and 2030 and 2050 target for methane emissions reductions
- The interim target does not meet UN HLEG criteria for coverage or level of ambition. It is not stated how the target has been calculated although it is stated to align with 1.5°C pathway.
- Cleanaway has not published a standalone transition plan. Emissions data and progress is reported in the annual Sustainability Report and ESG data book.
- Cleanaway includes carbon credits and offsets in its reporting of progress against targets and measures progress against targets on net rather than gross emissions.
- Cleanaway has not committed to phasing out fossil fuels.
- Actions are described at a high level, not linked to quantified emissions reductions. Capital allocation is described for limited initiatives, not linked to overall achievement of targets.
- Targets and transition actions have not been verified.
- Nature risks are not disclosed. Contribution to a Just Transition is not explained.
- Based on publicly available data, Cleanaway has been assessed as currently off-track against its emissions targets (refer Appendix 1) and its interim target has been assessed as partially aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Cleanaway is Australia's largest waste management company and has three operating segments: solid waste services, liquid waste & health services, industrial and waste services.
- Cleanaway's landfills are within the scope of Australia's Safeguard Mechanism and are required to surrender carbon credits to offset any exceedance of threshold emissions.
- The largest source of emissions is fugitive landfill methane gas emissions, accounting for over 73% of Scope 1 and 2 emissions
- Secondary source of emissions is carbon dioxide from combustion of fossil fuels accounting for close to 26% of Scope 1 and 2 emissions

### Performance against UN HLEG recommendations

#### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
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Public pledge to achieve net zero emissions	✓				Cleanaway has set a net zero target (noting that net zero target applies only to carbon dioxide emissions)
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Cleanaway has not committed to net zero by 2050 for its most material emissions.

## 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		Medium (2030) and long-term targets (2050), not a short-term target
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		Methane reduction target Scope 1 and 2 of 34% by 2030, 57% by 2050. Carbon dioxide reduction target Scope 1 and 2 of 43% by 2030, net zero by 2050 compared to 2022 baseline
Absolute emissions reduction targets (intensity if relevant)		✓			Target is for absolute emissions reductions but net of credits and offsets, not gross
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party			✓		Cleanaway states that its targets are aligned with 1.5°C scenarios presented in the sixth assessment report of the Intergovernmental Panel on Climate Change, and are consistent with limiting global warming to 1.5°C. The methodology for generating the targets is not stated and targets are not verified by a third party.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		Coverage of all operations but only Scope 1 and 2 emissions
Targets stated to account for all greenhouse gas emissions			✓		Targets cover methane and carbon dioxide, not nitrous oxide
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions	✓				Separate targets for biogenic methane emissions
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves				NA	No fossil fuel operations.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No material land-use related emissions reported. Unknown if material.

### Commentary

The targets largely do not align with UN HLEG criteria. Cleanaway's 2030 methane and carbon dioxide targets are lower than 50% below 2020 levels and targets are 'net' i.e. net of carbon credits, rather than gross absolute reductions. Targets cover only Scope 1 and 2 emissions. The methodology for target setting is not described and has not been independently verified. However, it is notable that Cleanaway has set a separate target for methane emissions reductions, The Global Methane Pledge, a global pledge to reduce methane emissions, calls for at least 30% global reduction from 2020 levels by 2030 and Cleanaway's target is for a 34% reduction on 2022 levels by 2030. Land-use emissions are not disclosed and it is unknown whether the company has material land-use emissions.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions		✓			Offsets are used to contribute to achievement of emissions targets

#### Commentary

Cleanaway tracks progress against its targets on a net basis i.e. after deducting surrendered Australian Carbon Credit Units and third-party purchased offsets. This use of offsets does not align with the UN HLEG. The company states that its purchased offsets are Gold Standard carbon credits.

### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan		✓			Cleanaway has not published a separate transition plan. Targets are presented in the company's Sustainability Report.
Transition plan stated to be updated every 5 years		✓			No separate plan
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		Actions to meet targets are outlined only at a high level and some are stated to not be currently viable
Quantification of the contribution of specific actions to the achievement of the overall target		✓			Contributions of actions to the achievement of targets are not quantified
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets		✓			Very limited disclosure on capital expenditure plans to achieve targets.

Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Governance structure for managing climate performance and risk is explained. Explanation is provided of executive remuneration linked to achievement of short-term methane emissions reductions.
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### Commentary

Cleanaway has not published a separate transition plan and there is only very limited disclosure of plans to achieve targets in other published sources. Allocation of capital to achieve targets is not fully described. Executive remuneration is linked to short-term emissions reductions.

## 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			No target aimed at ending the use of fossil fuels
Target for renewable energy procurement		✓			No renewable energy procurement target but the company generates renewable electricity from captured methane
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			No commitment to phase out diesel fuel use
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels				NA	No operations in coal, oil or gas production. This target relates to methane emissions from the energy sector not biogenic emissions
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	

### Commentary

Cleanaway has not committed to phasing out fossil fuel use. Cleanaway's fleet is mostly powered by diesel, making it the company's second largest source of greenhouse gas emissions. Green hydrogen is identified as a potential low-carbon fuel source to replace diesel but is not considered currently to be commercially viable. Although the company does not have a renewable energy procurement target, it generates and uses renewable energy from landfill methane.



## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations			✓		Trade associations disclosed and stated to be aligned. Escalation strategy not stated
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place		✓			Not stated
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets	✓				The company states that its engagement on specific policies aligns with the goals of the Paris Agreement
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates		✓			Cleanaway's education and engagement activities focus on the benefits of waste reduction and recycling, and circular economy not specifically stated as linked to achievement of sectoral decarbonisation

### Commentary

Cleanaway discloses its trade association affiliations and states that the positions of the material associations align with Paris Agreement goals. The company outlines engagement on relevant policy issues consistent with achievement of the Paris Agreement goals.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No material land-use emissions disclosed. Unknown if material.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan		✓			No disclosure of nature-based risk and dependency or how the company plans to address these in relation to decarbonisation. Disclosure of environmental issues focuses on avoidance of pollution from waste.

Disclosure of how the transition plan contributes to a Just Transition		✓			Not addressed.
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### Commentary

Cleanaway has not addressed nature-based risks or dependency or contributions to a Just Transition.

## 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these			✓		Scope 1 and 2 emissions data reported, not scope 3 Emissions reductions are reported but not clearly reconciled to emissions reduction targets
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal	✓				Cleanaway has submitted data to the UNFCCC Global Climate Action Portal
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these			✓		In 2023, a third-party review of emissions data was conducted for the first time by EY. Targets, progress and actions are not included in the review.
Emissions reductions are verified by an independent third-party		✓			Only current year emissions data is included in the assurance review, not reductions.

### Commentary

Although Cleanaway discloses greenhouse gas emissions data in its Sustainability Report and ESG Databook, it does not clearly disclose how emissions reductions relate to its targets (which are for methane and carbon dioxide reductions). It is difficult to track progress against targets based on the reported data as Cleanaway claims a reduction in gross and net total Scope 1 and 2 emissions based on adjusted data, but adjusted data has not been provided for methane or carbon dioxide. Gross unadjusted methane and carbon dioxide increased between 2022-23. Since the HLEG baseline year of 2020, gross unadjusted Scope 1 and 2 emissions increased by almost 50%. General progress on actions is disclosed, but not clearly linked to emissions reductions achieved. It is therefore difficult to clearly establish how Cleanaway is tracking against its own targets.

**Sources** 2023 Sustainability Report, 2023 ESG Databook, 2023 Annual Report

## Telstra Corporation Ltd

### Key points

- Telstra has a target to reduce absolute Scope 1, 2 and 3 emissions by 50% from FY19 by 2030 and achieve net zero emissions by 2050 in line with the Paris Agreement.
- Targets cover Scope 1, 2, and 3 but do not currently cover Digicel Pacific which was acquired in FY23.
- Telstra has a target to enable renewable energy generation equivalent to 100% of consumption by 2024 in Climate Change Report 2022.
- Targets validated by the SBTi as consistent with the level of decarbonisation required to keep global temperature increase below 1.5°C compared to pre-industrial levels.
- Overall Telstra's targets largely align with UN HLEG criteria.
- Based on publicly available data, Telstra has been assessed as currently on-track against its emissions targets (refer Appendix 1) and its interim target has been assessed as aligned to a scientific decarbonisation pathway (refer Appendix 2).

### Company overview

- Telstra is a telecommunications and technology provider, offering a full range of communications services and competing in all telecommunications markets.
- Telstra has 31,000 employees, servicing 22.5 million retail mobile services and 3.4 million retail bundle and data services in Australia. Income in GY23 was 23.2 billion.
- 32% of Telstra's emissions are Scope 2 and 67% are Scope 3. Combined, purchased goods and services and capital goods account for 72% of Telstra's Scope 3 emissions

### Performance against UN HLEG recommendations

#### 1. Announcing a Net Zero Pledge

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Public pledge to achieve net zero emissions	✓				Telstra has committed to achieving net zero greenhouse gas emissions by 2050, aligned with the Paris Agreement.

#### 2. Setting Net Zero Targets

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
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Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.			✓		Interim target to reduce absolute emissions from FY19 by at least 50% by 2030.
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner			✓		Interim target to reduce absolute emissions from FY19 by at least 50% by 2030. Although it is a 50% target, the FY19 baseline is higher than the FY20 baseline and a 50% reduction on FY19 results in higher overall emissions than a 50% reduction on FY20 baseline.
Absolute emissions reduction targets (intensity if relevant)	✓				2030 target is an absolute emissions target.
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party	✓				2030 target validated by the SBTi as consistent with the level of decarbonisation required to keep global temperature increase below 1.5°C compared to pre-industrial levels.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions			✓		Targets cover Scope 1, 2 and 3 but do not currently cover Digicel Pacific which was acquired in FY23. Annual Report 2023 states "At present we are undertaking a gap analysis to determine the necessary actions to incorporate Digicel Pacific into our existing climate scenario analysis, climate risk financial quantification, adaptation planning and emissions reduction plans."
Targets stated to account for all greenhouse gas emissions	✓				Targets validated by SBTi which uses GHG Protocol covering six main greenhouse gases.
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions				NA	non-CO <sub>2</sub> GHG emissions not disclosed and not likely to be material.
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves				NA	No fossil fuel operations.
Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands				ND	No material land-use emissions disclosed and unlikely to be material although Telstra refers to its approach to minimising harm to habitat when planning new or upgraded infrastructure.

### Commentary

Telstra has an interim target to reduce absolute emissions from FY19 by at least 50% by 2030. Targets cover Scope 1, 2 and 3 emissions. Digicel Pacific acquisition in FY23 yet to be integrated into targets.

### 3. Using Voluntary Credits

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions	✓				In July 2020 Telstra committed to maintaining carbon neutral status for its business operations under the Climate Active Organisation Standard. The commitment to being carbon neutral is separate from targets and offsets are not considered as emissions reductions when tracking progress against targets.

#### 4. Creating a Transition Plan

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Publicly disclosed net zero transition plan	✓				Climate Change Report 2022 mostly reports on historical activity and contains only a high-level overview of decarbonisation plan focus areas and some future actions
Transition plan stated to be updated every 5 years		✓			Telstra's Climate Change Report 2022 states that it reviews its environmental strategy every year. Climate targets are part of its environmental strategy. However, this is not a full transition plan update.
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable			✓		Telstra discloses an overview of focus areas, some general narrative reporting around initiatives, some specific ongoing actions, mostly historical reporting, and details on climate scenarios but not detailed concrete actions to achieve targets.
Quantification of the contribution of specific actions to the achievement of the overall target		✓			Some forward general narrative reporting around initiatives but no detailed quantification of actions to achieve targets.
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets		✓			Telstra discloses in Climate Report that it invested \$13.7 million in energy reduction projects, saving 13,494 t CO <sub>2</sub> e. But overall no reporting of plans.
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	✓				Telstra explains its environmental governance structure in its Climate Change Report 2022, including climate risk management and targets. Climate is linked in executive remuneration. Annual Report Remuneration Report incorporates GHG emissions as part of Responsible Business KPI. .

#### Commentary

Telstra discloses information on targets, general narrative reporting around initiatives and details on climate scenarios but not detailed concrete actions to achieve its targets nor capital expenditure alignment.

## 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Targets aimed at ending the use of and/or support for fossil fuels		✓			Climate Change Report 2022 has discussion on initiatives including renewable energy and hydrogen, but no concrete targets or discussion on how fossil fuels will be phased out.
Target for renewable energy procurement	✓				Target to enable renewable energy generation equivalent to 100% of consumption by 2024
Transition plan explains how fossil fuels will be fully phased out of its operations		✓			Climate Change Report 2022 has discussion on initiatives including renewable energy and hydrogen, but no concrete discussion on how fossil fuels will be fully phased out.
If the company has operations in coal, oil or gas production:					
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels				NA	No operations in coal, oil or gas production
For operations that include primary coal production for power generation, targets to end all aspects of coal production				NA	
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world				NA	
For operations that include oil or gas production, targets to end all aspects of oil or gas production				NA	

### Commentary

Climate Change Report 2022 has discussion on initiatives including renewable energy and hydrogen, but no concrete discussion on how fossil fuels will be phased out. Target to enable renewable energy generation equivalent to 100% of consumption by 2024 in Climate Change Report 2022

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Disclosure of trade association affiliations and advocacy for positive climate action with associations			✓		Some disclosure in Climate Change Report. Telstra discloses in 2023 Sustainability Report the initiatives it is a signatory to, or participant in.
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place		✓			There is some general narrative discussion in the Climate Change Report 2022 but not specific.
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets			✓		Telstra discloses in 2023 Sustainability Report the initiatives it is a signatory to, or participant in.
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates			✓		Telstra discusses its approach to stakeholder partnerships, its engagement with suppliers and its approach to supporting customer transition.

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.				ND	No disclosure of material land-use emissions but unlikely to be material.
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan		✓			Nature risks are not integrated into Climate Change Report 2022. Telstra states in Sustainability Report 2023 that in FY24, the company will assess the nature-related risks and opportunities across business operations, value chain and assets, with a view to including the most material risks and opportunities in our FY24 disclosures. Limited current disclosure. No specific link to climate.
Disclosure of how the transition plan contributes to a Just Transition		✓			No specific disclosure of Just Transition. Employees are a focus with general disclosures in sustainability report.

### Commentary

Telstra has not yet integrated nature-based risks into its climate transition plan and does not specifically focus on a Just Transition.

## 8. Increasing Transparency and Accountability

HLEG Criteria	Yes	No	Partial	NA/ND	Rationale
Annual disclosure of: - GHG data - net zero targets and transition plans and progress towards meeting these	✓				Telstra Data Pack released as part of Telstra Sustainability Report 2023 provides emissions data going back to baseline year FY19 with reporting of progress.
Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal	✓				Telstra reporting on the UNFCCC Portal
Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these	✓				Emissions data is assured, targets validated by SBTi, progress against emissions targets and renewable energy target assured.
Emissions reductions are verified by an independent third-party	✓				Telstra has obtained limited assurance on its emissions reductions (Scopes 1, 2 and 3)

### Commentary

Telstra Data Pack released as part of Telstra Sustainability Report 2023 provides emissions data going back to baseline year F19 with some reporting of progress. on specific initiatives. Sustainability Report 2023 provides reporting on progress.

### Sources

Telstra Annual Report 2023, Telstra Bigger Picture Sustainability Report 2023, Telstra Climate Change Report 2022, Telstra Bigger Picture Sustainability Data Pack 2023, SBTi Monitoring Report 2022 Target Progress Data.



## Appendix 1: Comparison of actual emissions reduction to company targets

### Summary of performance



#### Key



### AGL Energy Ltd

AGL has set Scope 1 and 2 short, medium and long-term CO<sub>2</sub>-e emission reduction targets to achieve Net Zero by 2050. Table 1 below shows company targets and actual emissions reductions required by FY23 compared to reductions required to be on track to targets.

Table 1 AGL – company targets and actual emissions reductions compared to required reductions in FY23

	Company targets based on FY19 levels			
	FY23	FY24	FY35	2050
CO <sub>2</sub> -e emission reduction required relative to FY19 levels (Scope 1 and 2)	-13.6%	-17%	-52%	-100%
CO <sub>2</sub> -e emission reduction (Scope 1 and 2) – actual company data, calculated relative to FY19 levels	-18.5% (on track)	n.d.	n.d.	n.d.

\*Note: Emissions reductions in FY23 due primarily to extended outage at Loy Yang A, outages at Bayswater, Liddell closure and Torrens unit A closure.

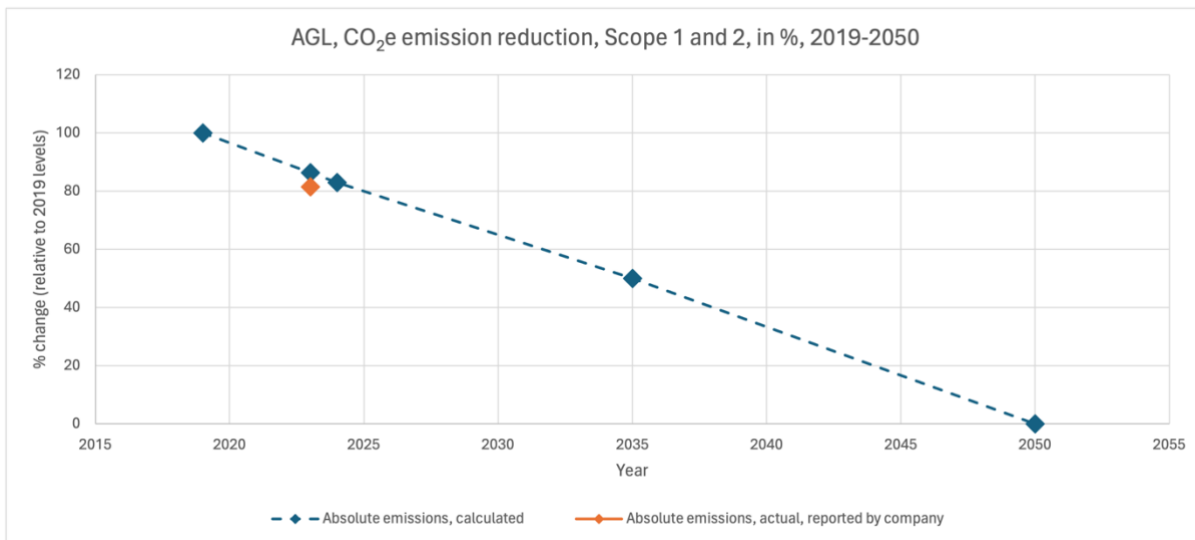


Figure 1 AGL CO<sub>2</sub>e emission reduction trajectory

AGL CO<sub>2</sub>e emission reduction trajectory in %, 2019-2050, based on interim target to reduce 17% Scope 1 and 2 by FY24 and 52% by FY35 relative to FY19, and actual company emission reductions in FY23 (orange).

#### Actual emission reductions

- AGL’s short-term emission reduction target is 17% of Scope 1 and 2 by FY24 relative to the base year FY19.
- Based on company data provided for the years FY19 and FY23, actual emission reductions show AGL has reduced emissions by 18.5% between FY19 and FY23 and is on track (Figure 1).
- The emissions reductions in FY23 are however largely due to outages at existing coal-fired power plants as well as the closure of power plants.

#### Requirements to meet the 2050 net zero target

- The medium-term emission reduction target of 52% by FY35, is a half-way mark, the calculated emission reduction pathway shows a linear curve. Assuming a linear reduction pathway, the annual average reduction relative to FY19 is 3.3%. After 2035, based on its long-term target, AGL’s annual average reduction relative to FY19 would be 3.2%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.
- AGL meeting its FY35 target is conditional on the planned phase out of fossil fuel assets, including two large coal-fired power stations: Bayswater (planned for 2033) and Loy Yang A (planned for 2035), in addition to the phase out and closure of its major gas-fired power stations before 2030, closure of Torrens Island A is expected in 2023 and Torrens Island B in 2026.

## Origin Energy Ltd

Origin has set medium and long-term CO<sub>2</sub>e emission reduction targets to achieve Net Zero by 2050.

Origin has an interim target to reduce Scope 1, 2 and 3 absolute equity emissions by 20Mt by 2030 against FY2019 baseline (Mt CO<sub>2</sub>e) (Table 2).

Table 2 Origin – Company absolute CO<sub>2</sub>e emission reduction targets

Company targets relative to FY2019 levels	unit	2019	2030	2050
CO <sub>2</sub> e emission reduction – targets, set by company, relative to FY2019 levels	Mt	53Mt	33Mt	0Mt
CO <sub>2</sub> e emission reduction – targets, set by company, relative to FY2019 levels	%	0%	-38%	-100%

## Actual emission reductions

- Based on company data, Origin reduced 5.7% of its total Scope 1, 2 and 3 absolute emissions (equity basis) between FY2019 (53Mt) and FY2023 (50Mt) (data source: Origin 2023 Sustainability Report, p. 24), see Table 3.
- According to calculations of the emission reduction curve, cumulative emission reduction by FY2023 relative to FY2019 levels, required to meet the medium-term interim target for 2030 relative to FY2019 levels, are 13.8%, as a result Origin is off-track, see Table 3.

Table 3 Origin - Actual company emission reductions (scope 1, 2 and 3) relative to target

Actual emission reductions relative to FY2019 levels	2023	2030	2050
CO <sub>2</sub> -e emission reduction, required based on interim target relative to FY2019 levels	-13.8%	-38%	-100%
CO <sub>2</sub> -e emission reduction – actual company data, calculated relative to FY2019 levels	-5.7% (off track)	n.d.	n.d.

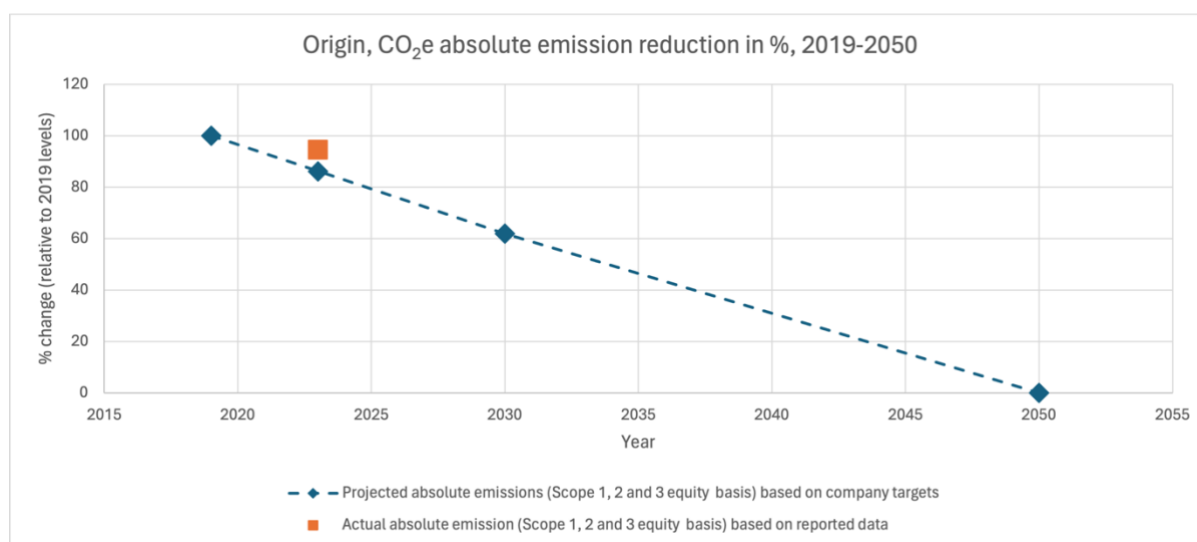


Figure 2 Origin CO<sub>2</sub>-e emission reduction trajectory in %, 2019-2050

Origin CO<sub>2</sub>-e emission reduction Scope 1,2 and 3 (equity basis) trajectory in %, 2019-2050, based on interim target to reduce 38% by 2030 (-20Mt by 2030) relative to 2019 levels (blue), and actual absolute emission reductions in 2023 reported by company (orange).

### Requirements to meet the 2050 target

- The medium-term emission reduction target of 20Mt by 2030 (equivalent to -38%), is below the half-way mark, the calculated emission reduction pathway shows a linear curve, which bends in 2030. Assuming a linear reduction pathway, the annual average reduction between 2019-2030 relative to FY2019 is 3.5%. After 2030, based on its long-term target, Origin's annual average reduction relative to FY2019 would be 3.1%. Note that, although the absolute reduction compared to the base year FY2019 is constant (under the assumed linear pathway), the year-to-year reduction increases over time.
- Origin's performance is strongly dependent on the phase out of fossil fuel power plants and its use. The phase out of coal-fired Eraring Power Station and decision to divest their interests in upstream gas development projects are important, but the phase-out of Origin's interests in relation to APLNG is unclear.

## Rio Tinto Ltd

Rio has set short, medium and long-term CO<sub>2</sub> emission reduction targets to achieve Net Zero by 2050.

Rio has set an interim target to reduce Scope 1 and 2 emissions by 15% in 2025 and 50% by 2030 relative to 2018 levels (equity basis) (Table 4).

Table 4 Rio Tinto – Company emission reduction targets

Company targets relative to 2018 levels	2025	2030	2050
CO <sub>2</sub> -e emission reduction – targets, set by company, relative to 2018 levels	-15%	-50%	-100%

### Actual CO<sub>2</sub>-e emission reductions

- Based on absolute emission data provided by the company, Rio Tinto CO<sub>2</sub>-e emissions for 2022 were 30.3 million tonnes CO<sub>2</sub>-e. This is a reduction of 6.8% relative to 2018 levels in total Scope 1 and 2 emissions (adjusted, equity basis), see Table 5.
- According to calculations of the emission reduction curve, cumulative emission reductions by 2022 relative to 2018 levels, which are required to meet the short-term interim target of -15% by 2025, are 8.6%. As a result, Rio Tinto is off-track, see Table 5.

Table 5 Rio Tinto - actual company emissions reductions compared to target

Actual CO <sub>2</sub> -e emission reductions relative to 2018 levels	2022	2025	2030	2050
CO <sub>2</sub> -e emission reductions required based on interim target relative to 2018 levels	-8.6%	-15%	-50%	-100%
CO <sub>2</sub> -e emission reduction – actual company data, calculated relative to 2018 levels	-6.8% (off track)	n.d.	n.d.	n.d.

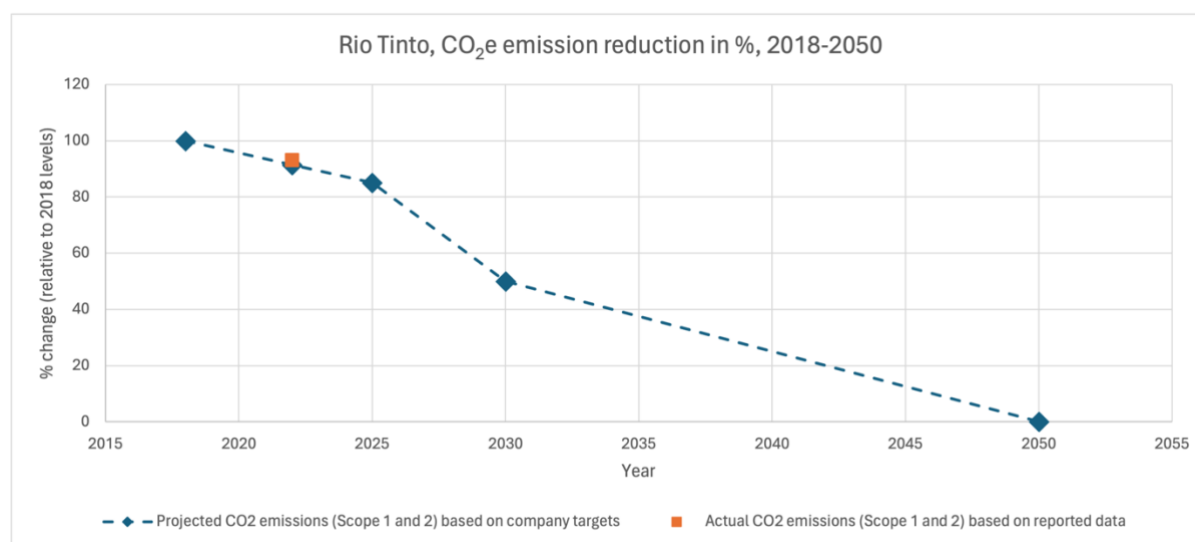


Figure 3 Rio Tinto CO<sub>2</sub>e emission reduction trajectory in %, 2018-2050

Rio Tinto CO<sub>2</sub>-e emission reduction trajectory in %, 2018-2050, based on interim targets to reduce 15% by 2025 and 50% by 2030 relative to 2018 levels (blue), and actual company emission reductions in 2022 (orange) is presented in Figure 3.

Note on emission intensity: Rio Tinto reports on the company's emission intensity and data is available for the period 2018-2022. In 2021, Rio Tinto set a target to reduce emission intensity (for its shipping fleet only) by 40% until 2025. However, information about the base year for energy intensity data and the share of

shipping emission intensity to overall emission intensity data is unclear, as a result data has not been included in this assessment.

#### Requirements to meet the 2050 target

- The short-term emission reduction target of 15% by 2030, assuming a linear reduction pathway, the annual average reduction between 2018-2025 based on 2018 levels is 2.1% for the period 2025-2030, Rio Tinto’s annual average reduction relative to the base year 2018 increases to 4.2%. After 2030, based on its long-term target, Rio Tinto’s annual average reduction relative to the base year 2018 falls to 2.5%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

## BlueScope Steel Ltd

BlueScope Steel Limited is a steel producer in Australia. The company has set medium and long-term CO<sub>2</sub>-e emission intensity reduction targets for steelmaking and non-steelmaking activities to achieve Net Zero by 2050.

BlueScope Steel has set an interim target to reduce CO<sub>2</sub>-e emissions for its steelmaking activities (Scope 1 and 2) by 12% by 2030 relative to 2018 levels and to reduce CO<sub>2</sub>-e emissions for its non-steelmaking activities by 30% by 2030 relative to 2018 levels (Table 6).

Table 6 BlueScope Steel Limited – Company emission intensity reduction targets

Company targets relative to 2018 levels	2030	2050
Steelmaking CO <sub>2</sub> -e emission intensity reduction– targets, set by company, relative to 2018 levels	-12%	-100% Absolute target
Non-steelmaking CO <sub>2</sub> -e emission intensity reduction – targets, set by company, relative to 2018 levels	-30%	-100% Absolute target

#### Actual emission intensity reductions

- Steelmaking activities
  - For steelmaking activities, based on company data, BlueScope Steel’s CO<sub>2</sub>-e emission intensity for 2023 was 1.504 tCO<sub>2</sub>-e per tonne raw steel. Compared to 2018 this is a reduction of 8% relative to 2018 levels in total Scope 1 and 2 emissions intensity, see Table 7
  - According to calculations of the emission reduction curve for steelmaking activities, cumulative emission intensity reduction by 2023 relative to 2018 levels, which are required to meet the medium-term interim target for 2030 are 5%, as a result BlueScope Steel is on-track for steelmaking activities, see Table 7.
- Non-steelmaking activities
  - For non-steelmaking activities, based on company data, BlueScope Steel’s CO<sub>2</sub>-e emission intensity for 2023 was 0.228 tCO<sub>2</sub>-e per tonne raw steel. Compared to 2018 this is a decrease of 8.8% relative to 2018 levels in total Scope 1 and 2 emissions intensity, see Table 7.
  - According to calculations of the emission intensity reduction curve for non-steelmaking activities, cumulative emission intensity reduction by 2023 relative to 2018 levels, which are required to meet the medium-term interim target for 2030 are 12.5 %, as a result BlueScope Steel is off-track for non-steelmaking activities, see Table 7.

Table 7 BlueScope actual emissions intensity reductions compared to target

Actual emission intensity reductions relative to 2018 levels	2023	2030	2050
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Steelmaking CO <sub>2</sub> -e emission intensity reduction in %, required based on interim target relative to 2018 levels	-5.0%	-12%	-100%
Steelmaking CO <sub>2</sub> -e emission intensity reduction in % – actual company data, calculated as cumulative values, relative to 2018 levels	-8.0% (on track)	n.d.	n.d.
Non-steelmaking CO <sub>2</sub> -e emission intensity reduction in %, required based on interim target relative to 2018 levels	-12.5%	-30%	-100%
Non-steelmaking CO <sub>2</sub> -e emission intensity increase in %– actual company data, relative to 2018 levels	-8.8% (off track)	n.d.	n.d.

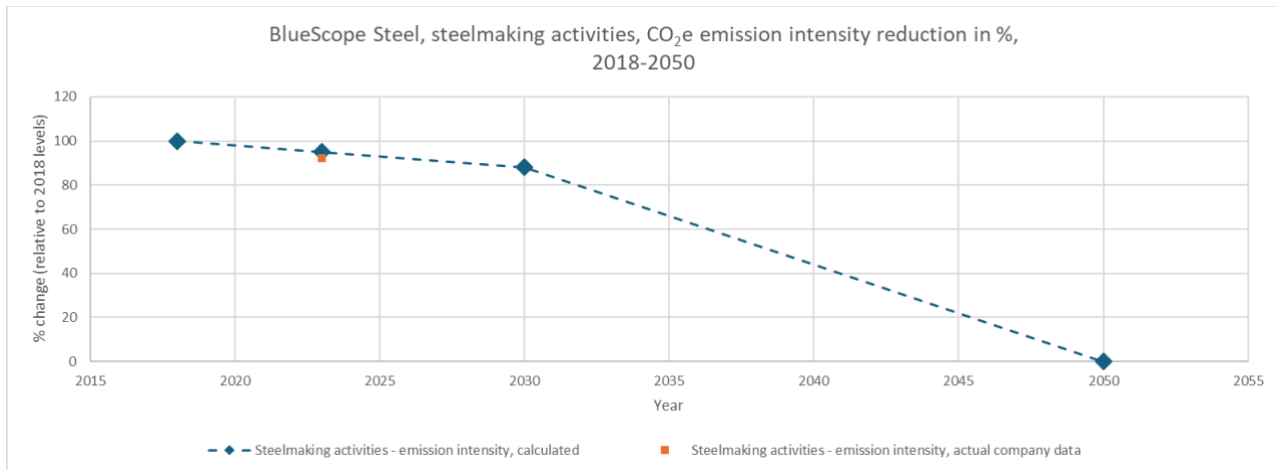


Figure 4 BlueScope Steel, steelmaking activities, CO<sub>2</sub>-e emission intensity reduction trajectory in % (blue) based on interim target to reduce 12% by 2030 and actual company emission reductions in FY2023 (orange).

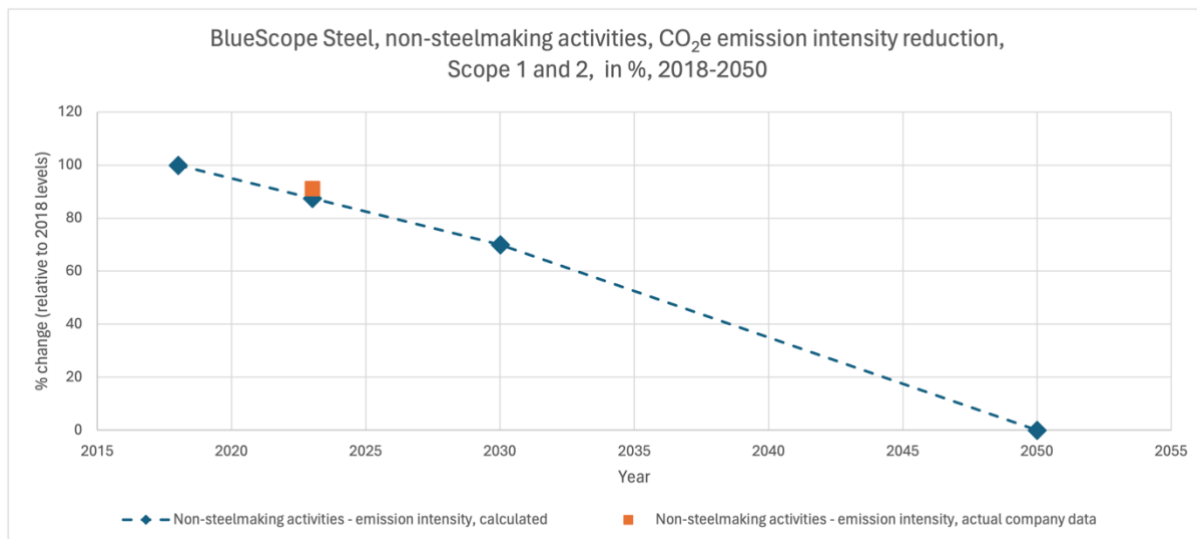


Figure 5 BlueScope Steel, non-steelmaking activities, CO<sub>2</sub>-e emission intensity reduction trajectory in % (blue) based on interim target to reduce 30% by 2030, relative to 2018 levels over 2018-2050 period, and actual company emission reductions in FY2023 (orange)

#### Requirements to meet the 2050 target

- Steelmaking CO<sub>2</sub>-e emission reduction intensity
  - The interim CO<sub>2</sub>-e emission intensity reduction target of -12% by 2030, appears relatively low as a medium-term target. The calculated emission intensity reduction pathway shows a linear curve, which bends in 2030. Assuming a linear reduction pathway, the annual average reduction between 2018-2030 relative to 2018 levels is 1.0%. After 2030, based on its long-term target, BlueScope's annual average reduction relative to 2018 would increase to 4.4%.

Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

- Non-steelmaking CO<sub>2</sub>-e emission intensity
  - The interim CO<sub>2</sub>-e emission intensity reduction target of -30% by 2030, is close to the halfway mark. The calculated emission reduction pathway shows a linear curve, which bends in 2030. Assuming a linear reduction pathway, the annual average reduction between 2018-2030 relative to 2018 levels is 2.5%. After 2030, based on its long-term target, BlueScope’s annual average reduction relative to 2018 would increase to 3.5%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

## South32 Ltd

South32 has set a long-term CO<sub>2</sub>-e emission reduction targets to achieve Net Zero by 2050 and an interim target to reduce Scope 1 and 2 emissions by 50% by 2035 relative to 2021 levels (Table 8).

Table 8 South32 – Company emission reduction targets

Company targets relative to 2021 levels	2035	2050
CO <sub>2</sub> -e emission reduction in %– targets, set by company, relative to 2021 levels	-50%	-100%

### Actual emission reductions

- Based on company data, South32’s total Scope 1 and 2 emissions increased by 1.4% between 2021 and 2023 relative to 2021 levels, see Table 9.
- According to calculations of the emission reduction curve, cumulative emission reductions by 2023 relative to 2021 levels, required to meet the medium-term interim target for 2035, are 7.1%. As a result, South32 is assessed as off-track, see Table 9.

Table 9 South32 actual emissions reductions compared to target

Actual emission reductions relative to 2021 levels	2023	2035	2050
CO <sub>2</sub> -e emission reduction in %, required based on interim target relative to 2021 levels	-7.1%	-50%	-100%
CO <sub>2</sub> -e emission increase in % – actual company data relative to 2021 levels	+1.4% (off track)	n.d.	n.d.

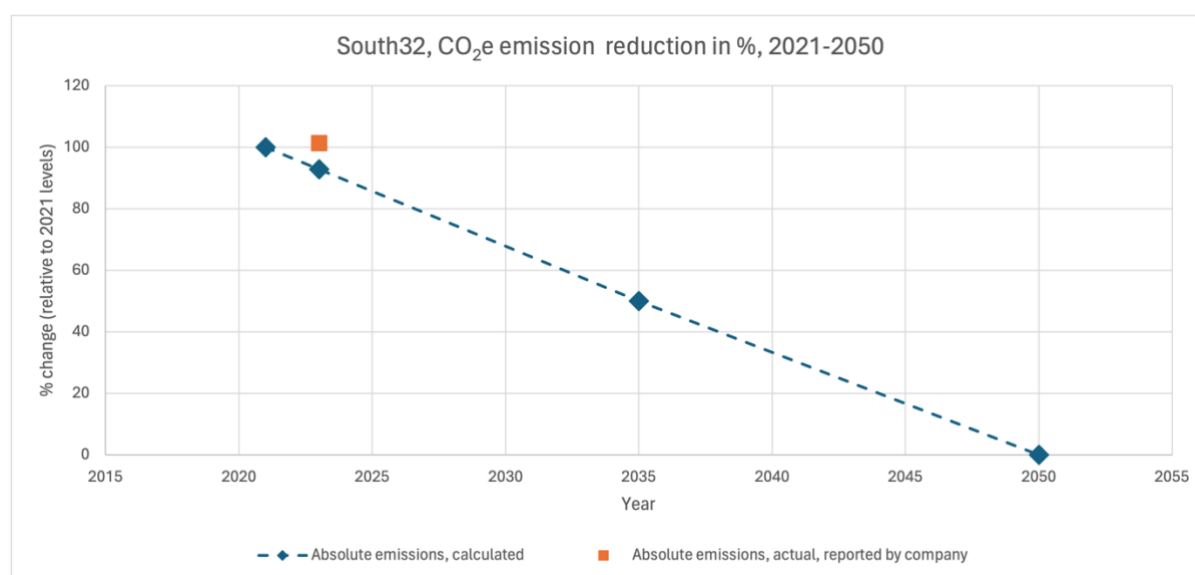


Figure 6 South32, CO<sub>2</sub>-e emission reduction trajectory in %, 2021-2050, based on interim target to reduce 50% by 2035 relative to 2021 levels, and actual emission reductions reported by company in FY2023 (orange).

## Requirements to meet the 2050 target

- The medium-term emission reduction target of 50% by 2035, shows a half-way mark, the calculated emission reduction pathway shows a linear curve, which bends in 2035. Assuming a linear reduction pathway, the annual average reduction between 2021-2035 relative to 2021 is 4.0%. After 2035, based on its long-term target, South32's annual average reduction relative to 2021 would decrease to 3.0%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

## Qantas Airways Ltd

Qantas is an Australian-owned internationally operational aviation company and Australia's largest domestic and international airline. The company has set an interim CO<sub>2</sub>-e emission reduction target to achieve Net Zero by 2050. Qantas set a medium-term target to reduce CO<sub>2</sub>-e emission in Scope 1 and 2 by 25% by 2030 relative to 2019 levels (Table 10).

Table 10 Qantas – Company emission reduction targets

Company targets relative to 2019 levels	2030	2050
CO <sub>2</sub> -e emission reduction in % – targets, set by company, relative to 2019 levels	-25%	-100%

## Actual emission reductions

Passenger air travel was at record low levels during the COVID-19 global pandemic, the company's CO<sub>2</sub>-e emissions in 2020-2022 show strong reductions of emissions from aviation. Qantas' base year 2019 shows the company's BAU CO<sub>2</sub>-e emissions prior to the global shut down. As a result, data shows that CO<sub>2</sub>-e emissions in 2022 have not recovered to pre-pandemic levels. Although, CO<sub>2</sub>-e emissions in 2023 are significantly higher than in 2021, they are lower than 2019 pre-pandemic levels, see Table 11

Table 11 Qantas CO<sub>2</sub>-e emission data, impact of COVID and CO<sub>2</sub>-e emission reductions relative to 2019 levels

Actual company CO <sub>2</sub> -e emission data	unit	2019	2020	2021	2022	2023
Actual emissions in million tonnes CO <sub>2</sub> equivalents	MtCO <sub>2</sub> -e	12.5	9.4	3.3	4.8	9.8
Actual emission reductions in % relative to 2019 levels	%		-24.6%	-73.6%	-61.6%	-21.6%
CO <sub>2</sub> -e emission reduction in %, calculated, required to meet interim target relative to 2019 levels	%				-6.8%	-9.1%
CO <sub>2</sub> -e emission reduction in % – actual company data, relative to 2019 levels	%				61.6%	-21.6% on track

- Based on company data, Qantas reduced 21.6% of its total Scope 1 and 2 between 2019 and 2023 relative to 2019 levels (emissions reductions are calculated on emissions as reported in Qantas Sustainability Report 2023 (FY23, 22, 21, 20) and 2022 (FY19))
- According to calculations of the emission reduction curve, cumulative emission reductions by 2023 relative to 2019 levels, required to meet the medium-term interim target for 2030, are 9.1%. As a result, Qantas is considered on-track. However, it will be important to review emissions trends in future years as aviation recovers from the impacts of the pandemic.
- Note that the Qantas target is a 'net' emissions target (assumed, net of offsets), whereas greenhouse gas emissions are reported as gross emissions, not net of offsets.



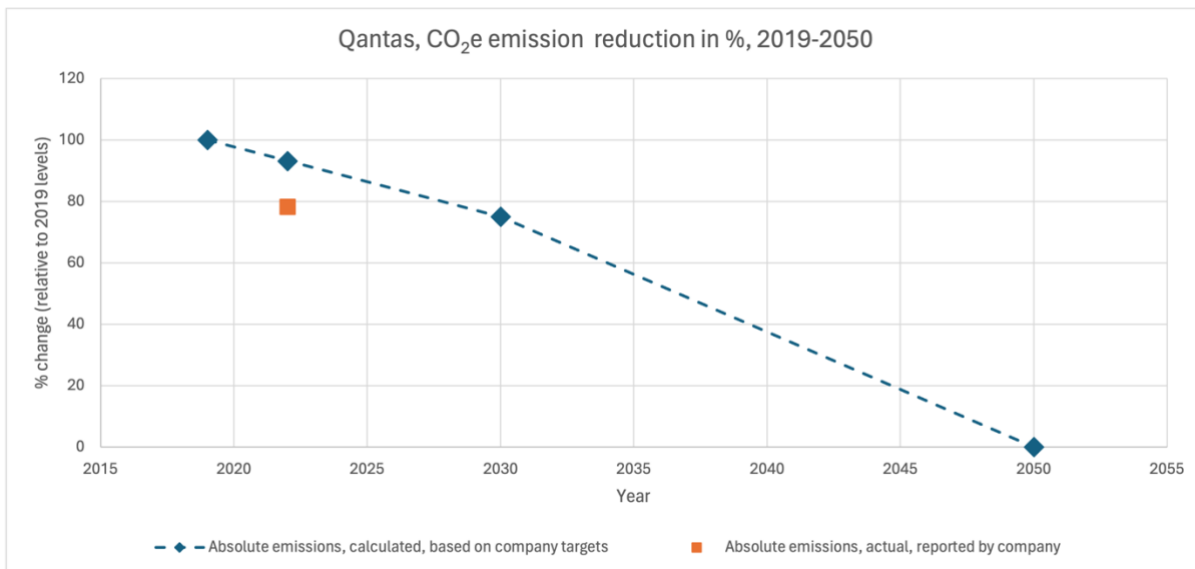


Figure 7 Qantas CO<sub>2</sub>-e emission reduction trajectory in %, 2019-2050, based on interim target to reduce 40% by 2030 relative to 2019 levels (blue), and actual emission reductions reported by company in FY2022 (orange).

#### Requirements to meet the 2050 target

- The medium-term emission reduction target of 50% by 2030, shows a half-way mark, the calculated emission reduction pathway shows a linear curve, which bends in 2030. Assuming a linear reduction pathway, the annual average reduction between 2019-2030 relative to 2019 is 2.3%. After 2035, based on its long-term target, Qantas annual average reduction relative to 2019 would increase to 3.8%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.
- Qantas relies on a fuel switch from fossil fuel to synthetic fuels.

### Woolworths Group Ltd

Woolworths Group Limited has set short and medium-term CO<sub>2</sub>-e emission reductions targets and long-term targets to achieve net zero by 2050.

Woolworths Group Limited has set a short-term target for 2025 to reduce CO<sub>2</sub>-e emission in Scope 1 and 2 by 42% and a medium-term target to reduce CO<sub>2</sub>-e emission in Scope 1 and 2 by 63% by 2030 relative to 2015 levels (Table 12).

Table 12 Woolworths Group Limited – Company emission reduction targets

Company targets relative to 2015 levels	2025	2030	2050
CO <sub>2</sub> -e emission reduction in % – targets, set by company, relative to 2015 levels	-42%	-63%	-100%

#### Actual emission reductions

- Based on company data, by 2023, Woolworths has reduced 32.4% of its total Scope 1 and 2 CO<sub>2</sub>-e emissions relative to 2015 levels, see
- 
- 
- Table 13.
- According to calculations based on the emission reduction curve, the short-term emission reduction target of -42% by 2025, requires Woolworth to reduce emissions by 33.6% in 2025. The company has come close to its calculated target, but is slightly off-track with reported actual emission reductions being slightly below the required amount. Noting that Woolworths has set an ambitious short-term target.

Table 13 Woolworths actual CO<sub>2</sub>-e emission reductions relative to 2015 levels compared to target

Actual emission reductions relative to 2015 levels	FY23	FY25	FY30	FY50
CO <sub>2</sub> -e emission reduction in %, required based on interim target relative to 2015 levels	-33.6%	-42%	-63%	-100%
CO <sub>2</sub> e emission reduction in % – actual company data, relative to 2021 levels	-32.4% (off track)	n.d.	n.d.	n.d.

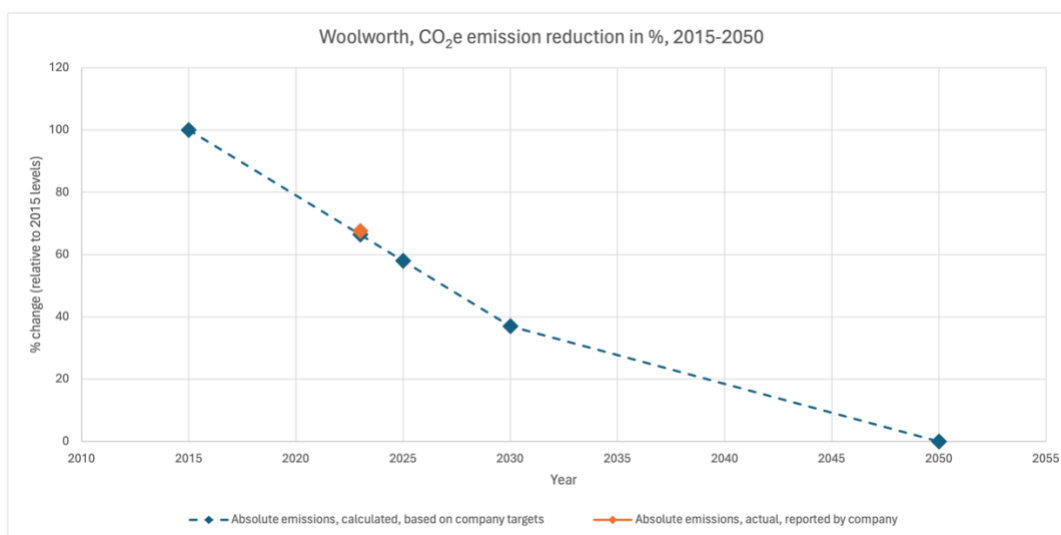


Figure 8 Woolworth CO<sub>2</sub>-e emission reduction trajectory in %, 2015-2050, based on short and medium-term targets to reduce 42% by 2025 and 63% by 2030 relative to 2015 levels (blue), and actual emission reductions reported by company in FY23 (orange).

### Requirements to meet the 2050 target

- Assuming a linear reduction pathway, the annual average reduction required between 2015-2025 relative to 2015 is 4.2%. Between 2025 and 2030, based on its medium-term target to reduce emissions by 63% by 2030 relative to 2015, Woolworths’ annual average reduction remains at 4.2%. After 2030, based on its long-term net zero target, Woolworths’ annual average reduction relative to 2015 would decrease to 1.9%, as more than half of total CO<sub>2</sub>-e emissions have been reduced by 2030 (Figure 8)
- It is worthwhile to note that Woolworths Group largely relies on decarbonising electricity and transport.

### Coles Group Ltd

Coles has set a target to achieve Net Zero by 2050. Coles’ interim target is to reduce 75% of CO<sub>2</sub>-e emission (Scope 1 and 2) by 2030 relative to 2020 levels (Table 14).

Table 14 Coles – Company CO<sub>2</sub>-e emission reduction target

Company targets relative to 2020 levels	2030	2050
CO <sub>2</sub> -e emission reduction in % – targets, set by company, relative to 2020 levels	-75%	-100%

- Based on company data, by 2023, Coles has reduced 34% of its total Scope 1 and 2 CO<sub>2</sub>-e emissions relative to 2020 levels, see Table 15.

- According to calculations based on the emission reduction curve, the 2023 cumulated CO<sub>2</sub>-e emission reduction relative to 2020 levels, which is required to meet the 2030 target, is 22.5%. As a result, Coles is on-track to meet its 2030 target, see Table 15.
- Coles' actual CO<sub>2</sub>-e emission reductions by 2023 are 11% higher than required, exceeding the target for 2024 (-30.0% emission reduction relative to 2020).

Table 15 Coles actual CO<sub>2</sub>-e emission reductions relative to 2020 levels

Actual emission reductions relative to 2020 levels	2023	2030	2050
CO <sub>2</sub> -e emission reduction in %, required based on interim target (2025) relative to 2020 levels	-22.5%	-75%	-100%
CO <sub>2</sub> -e emission reduction in % – actual company data, calculated, relative to 2020 levels	-33.5% (on track)	n.d.	n.d.

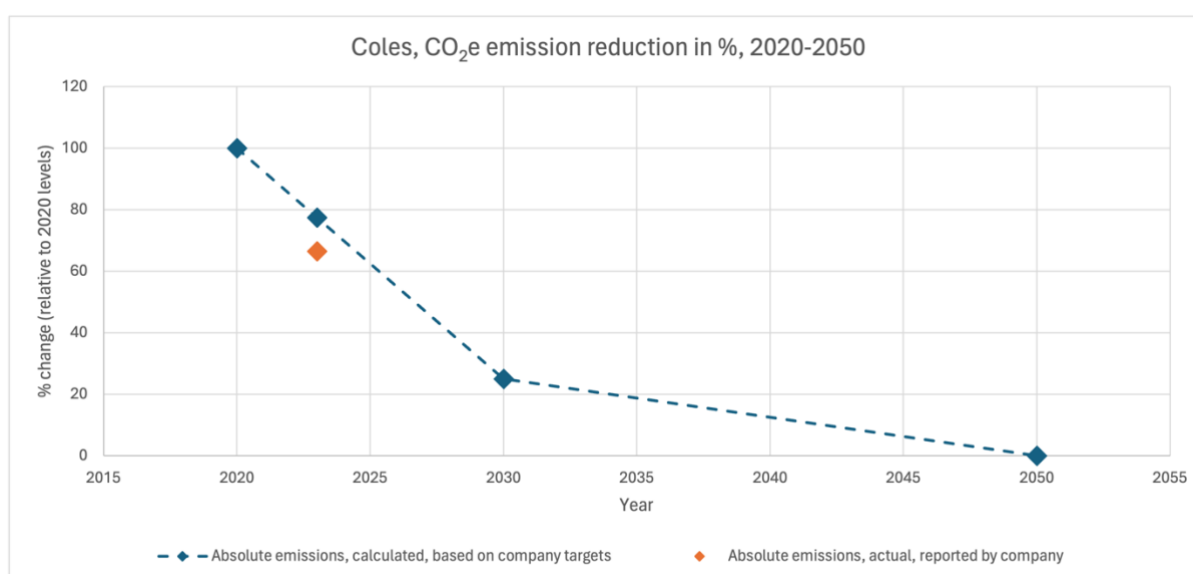


Figure 9 Coles CO<sub>2</sub>-e emission reduction trajectory in %, 2020-2050, based on interim target to reduce 75% by 2030 relative to 2020 levels (blue), and actual emission reductions reported by company in FY2023 (orange).

#### Requirements to meet the 2050 target

- The 2023 CO<sub>2</sub>-e emission reduction requirement of 22.5% by 2023, has been met by Coles. The medium-term emission reduction target of 75% by 2030, is beyond the half-way mark. Assuming a linear reduction pathway, the annual average reduction between 2020-2030 relative to 2020 is 7.5%. After 2030, based on the 2050 target, Coles' annual average reduction relative to 2020 would decrease to 1.3%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

Coles largely relies on decarbonising electricity and transport options.

### Cleanaway Waste Management Ltd

Cleanaway Waste Management is an Australian waste management company. The company generates carbon dioxide (CO<sub>2</sub>) emissions and methane (CH<sub>4</sub>) emissions.

**CO<sub>2</sub> emission reductions:** Cleanaway has set a medium-term CO<sub>2</sub> emission reduction target to achieve Net Zero by 2050. The interim target is to reduce 43% of CO<sub>2</sub> emissions (Scope 1 and 2) by 2030 relative to 2022 levels (Table 16).

**Methane (CH<sub>4</sub>) emission reductions:** Cleanaway has set a medium-term and a long-term CH<sub>4</sub> emission reduction target. The medium-term target aims to reduce 34% of CH<sub>4</sub> emissions (Scope 1 and 2) by 2030 relative to 2022 levels and reduce emissions to 57% by 2050, relative to 2022 levels (Table 16).

Table 16 Cleanaway Waste Management – Company CO<sub>2</sub> and CH<sub>4</sub> emission reduction targets

<b>Company targets relative to 2022 levels</b>	<b>2030</b>	<b>2050</b>
CO <sub>2</sub> emission reduction in % – targets, set by company, relative to 2022 levels	-43%	-100%
CH <sub>4</sub> emission reduction in % – targets, set by company, relative to 2022 levels	-34%	-57%

### Actual emission reductions

#### CO<sub>2</sub> emissions:

- Cleanaway Waste Management provided CO<sub>2</sub> emission data for years 2022 and 2023. Based on this data, the company increased its CO<sub>2</sub> emissions by 9% between 2022 and 2023 relative to 2022 levels see Table 17
- According to calculations of the emission reduction curve, cumulated emission reduction by 2023 relative to 2022 levels, required to meet the medium-term interim target for 2030, are 5.4%. As a result, Cleanaway Waste Management is off-track, see Table 17. Note, this assessment is based on limited data for years 2022 and 2023.

#### CH<sub>4</sub> emissions:

- Cleanaway Waste Management provided CH<sub>4</sub> emission data for years 2022 and 2023. Based on this data, the company increased its CH<sub>4</sub> emissions by 5.4% between 2022 and 2023 relative to 2022 levels, see Table 17.
- According to calculations of the emission reduction curve, cumulated emission reduction by 2023 relative to 2022 levels, required to meet the medium-term interim target for 2030, are 4.3%. As a result, Cleanaway Waste Management is off-track, see Table 17. Note, this assessment is based on limited data for years 2022 and 2023.

Noting that we have calculated emissions increases from FY22-23 based on disclosed gross methane and carbon dioxide emissions. However, Cleanaway reported a reduction overall in net scope 1 and 2 greenhouse gas emissions (net of surrendered carbon credits) and reports, “We remain on track to meet our net 2030 greenhouse gas emissions reduction targets for methane and carbon dioxide.” Methane and carbon dioxide emissions were not reported net of credits.

Table 17 Cleanaway Waste Management actual CO<sub>2</sub> and CH<sub>4</sub> emission changes relative to 2022 levels

<b>Actual emission reductions relative to 2022 levels</b>	<b>2023</b>	<b>2030</b>	<b>2050</b>
CO <sub>2</sub> emission reduction in %, required based on 2030 target relative to 2022 levels	-5.4%	-43%	-100%
CO <sub>2</sub> emission increase in % – actual company data, calculated, relative to 2022 levels	+9% off track	n.d.	n.d.
CH <sub>4</sub> reduction in %, required based on interim target (2030) relative to 2022 levels	-4.3%	-34%	-57%
CH <sub>4</sub> emission increase in % – actual company data, calculated as cumulative values, relative to 2022 levels	+5.4% off track	n.d.	n.d.

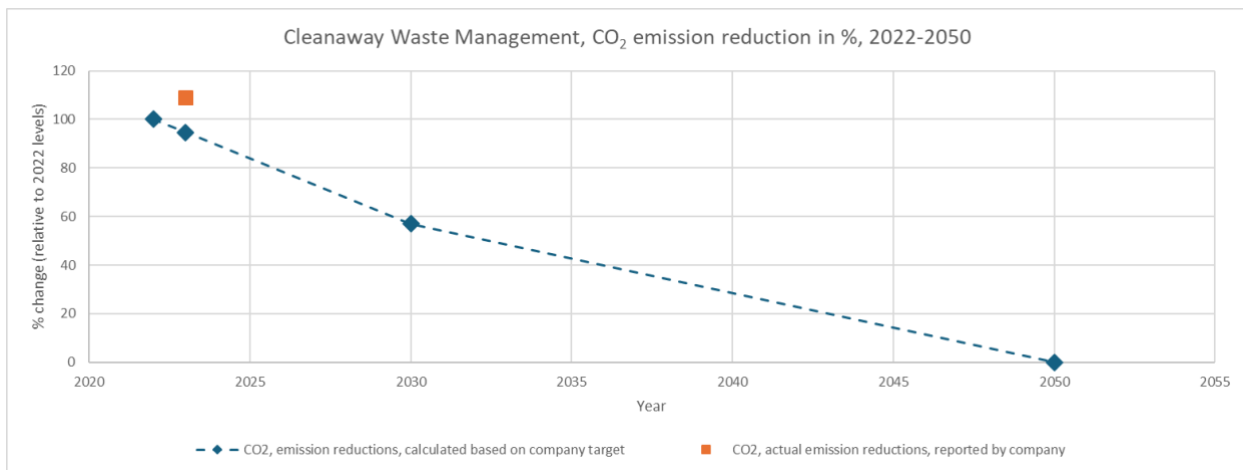


Figure 10 Cleanaway Waste Management CO<sub>2</sub> emission reduction trajectories in %, 2022-2050, methane reduction targets 43% reduction by 2030 and 57% by 2050 relative to 2022 levels (blue), and actual CO<sub>2</sub> emission increases reported by company in FY2023 (orange).

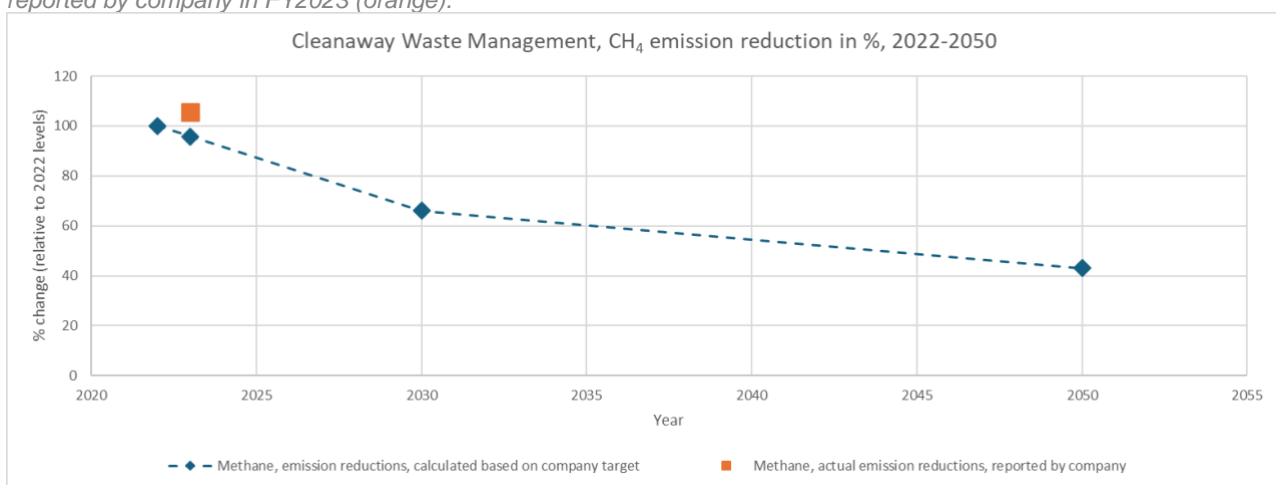


Figure 11 Cleanaway Waste Management methane emission reduction trajectories in %, 2022-2050, methane reduction targets 43% reduction by 2030 and 57% by 2050 relative to 2022 levels, and actual methane emission increases reported by company in FY2023 (orange).

### Requirements to meet the 2050 target

#### For CO<sub>2</sub> emissions:

- The medium-term emission reduction target of 43% by 2030, is close to the half-way mark. Assuming a linear reduction pathway, the annual average reduction between 2022-2030 relative to 2022 is 5.4%. After 2030, based on the 2050 target, the company's annual average CO<sub>2</sub> reduction relative to 2022 would decrease to 2.9%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

#### For CH<sub>4</sub> emissions:

- The medium-term emission reduction target of 34% by 2030 and long-term target for 2050 of 57% reduction can be achieved with, assuming a linear reduction pathway, an annual average reduction between 2022-2030 relative to 2022 of 4.3%. After 2030, based on the 2050 target, the company's annual average CH<sub>4</sub> reduction relative to 2022 would decrease to 1.2% until 2050. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

## Telstra Corporation Ltd

Telstra is an Australian telecommunication company, with operations in Australia and New Zealand. The company has set medium CO<sub>2</sub> emission reduction targets for Scope 1 and 2 from FY19 baseline, in addition to Scope 3 to achieve Net Zero by 2050.

Table 18 Telstra – company emission reduction targets

Company targets	2030	2050
CO <sub>2</sub> -e emission reduction Scope 1 and 2 targets from FY19 baseline (later incorporated Scope 3), set by company	-50%	-100%

However, this assessment focuses on **reductions from Scope 1 and 2 emissions only**, as Scope 3 emissions were added by Telstra in 2021 and are outside the assessment period considering the base year is FY19 (Telstra Annual Report 2023, p. 42).

### Actual CO<sub>2</sub>-e emission reductions

- Based on company data, by 2023, Telstra has reduced 30.3% of its total Scope 1 and 2 CO<sub>2</sub>-e emissions relative to 2019 levels (Table 19).
- Based on the calculated emission pathway to meet the 2030 interim target, required emission reductions (accumulated) in 2023 are showing a value of -18.2% relative to 2019. As a result, Telstra is on-track to meet its 2030 target, see Table 19.

Table 19 Telstra actual CO<sub>2</sub>-e emission reductions compared to target

Actual emission reductions	FY23	2030	2050
CO <sub>2</sub> -e emission reduction in %, required based on 2030 target relative to 2019 levels	-18.2%	-50%	-100%
CO <sub>2</sub> -e emission reduction in % – actual company data, calculated as cumulative values, relative to 2019 levels	-30.3% on track	n.d.	n.d.

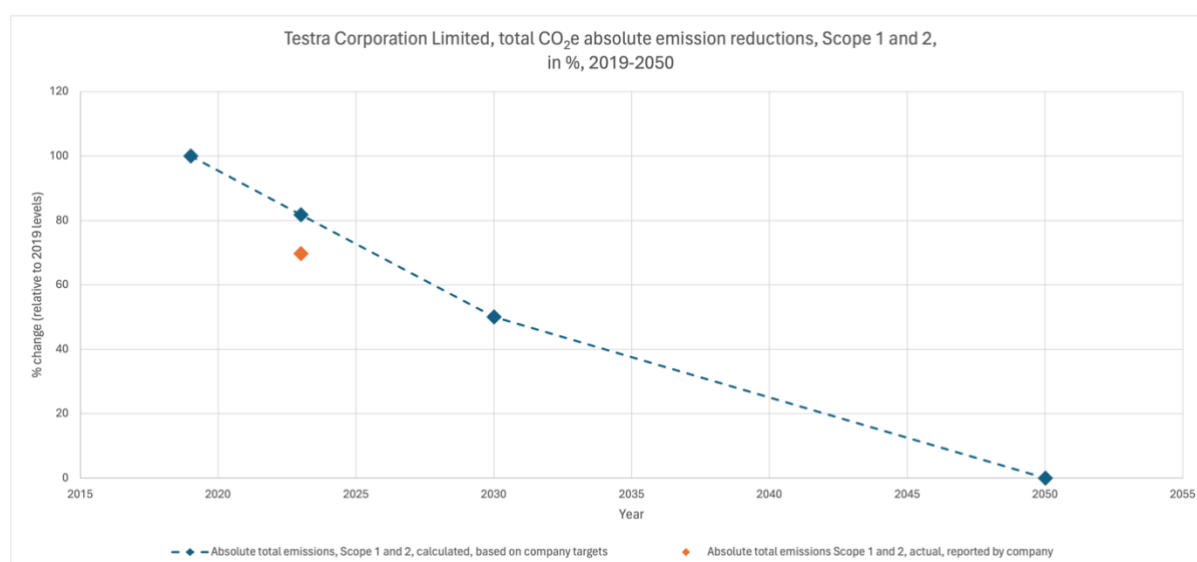


Figure 12 Telstra CO<sub>2</sub>-e emission reduction trajectory for Scope 1 and 2, in %, 2019-2050, based on interim target to reduce 50% by 2030 relative to 2019, and actual CO<sub>2</sub>-e emission reductions reported by company in FY2023 (orange).

### Requirements to meet the 2050 target

- The medium-term emission reduction target of 50% by 2030, is a half-way mark, assuming a linear reduction pathway for the period 2019-30, the annual average reduction relative to 2019 is 4.5%. After 2030, based on the 2050- long-term target, Telstra's annual average reduction relative to 2019 would decrease to 2.5%. Note that, although the absolute reduction is constant (under the assumed linear pathway), the year-to-year reduction increases over time.

- Decarbonisation of electricity supply and update of renewable energy is crucial for Telstra to achieve Net Zero by 2050.

## Appendix 2: Comparison of targets to scientific decarbonisation pathway

### Summary of alignment

AGL	Not aligned
Origin	Insufficient information to assess
Rio Tinto	Insufficient information to assess
BlueScope	Not aligned
South32	Insufficient information to assess
Qantas	Not aligned
Woolworths	Aligned
Coles	Aligned
Cleanaway	Partially aligned
Telstra	Aligned

#### Key

Aligned
Not aligned
Partially aligned
Insufficient information to assess

### AGL Energy Ltd

AGL Energy is a major energy company, with a large portfolio of energy generating assets. Therefore, AGL's company targets can be assessed against sectorial pathways for the power sector from science-based decarbonisation pathways. The 1.5 °C pathway from the OECM from ISF and the Net-zero by 2050 pathway from the IEA contain key milestones. In Australia's OECM 1.5 °C scenario, coal, oil and diesel are completely phased out by 2035 and natural gas is phased out by 2045. In comparison, IEA's global 1.5 °C scenario contains a key milestone for achieving net-zero electricity in advanced economies by 2035.

AGL Energy's target of a 52% emission reduction by FY2035 is not sufficiently ambitious to align with the science-based decarbonisation pathways, which state either complete elimination of coal/oil/diesel or net-zero electricity generation by 2035. Net-zero electricity should be achieved earlier and fossil fuel energy sources should be phased out earlier.

### Origin Energy Ltd

Origin Energy is a major energy company, with a large portfolio of energy generating assets. Therefore, Origin's company targets can be assessed against sectorial pathways for the power sector from science-based decarbonisation pathways. Here, the 1.5 °C pathway from the OECM from ISF and the Net-zero by 2050 pathway from the IEA contain key milestones. In Australia's OECM 1.5 °C scenario, coal, oil and diesel are completely phased out by 2035 and natural gas is phased out by 2045. In comparison, IEA's global 1.5 °C scenario contains a key milestone for achieving net-zero electricity in advanced economies by 2035.

Therefore, the emission intensity target set by Origin of 40% reduction against FY19 in 2030 is not sufficiently ambitious to be aligned with the science-based decarbonisation pathways. The pathways state complete elimination of coal/oil/diesel or net-zero electricity generation by 2035, or alternatively achieving net-zero electricity generation by 2035. This would require a much larger emission reduction than 40% for Origin in 2030. There could be a slight difference in the formulation of science-based decarbonisation pathways for the power sector (focused on Scope 1 and 2) and Origin's targets (focused on Scope 1, 2 and 3), however there is a need for clear timelines for phasing out of fossil fuels used by Origin.



## Rio Tinto Ltd

Rio Tinto is a high emitting mining company which owns and operates iron ore mines, bauxite mines, alumina refineries, alumina smelting, diamond mining and uranium mines. Around 80% of Rio's Scope 1 & 2 emissions originate directly from producing metals and minerals (largely from energy-intensive processing in the aluminium business in coal-based power grids).

Therefore, Rio Tinto's company targets can be compared against sectorial pathways for mining and alumina production. A limitation is that Rio Tinto does not directly report mining or alumina production emission intensities, which means we can only perform a superficial comparison.

The OECM sectorial pathway includes an emission reduction of 56% for the heat supply of alumina refining and a 79% reduction in overall energy supply by 2030, compared to 2019. This can be compared (on a very superficial level) to Rio Tinto's goal of a 50% emission reduction by 2030, considering a large part of Rio Tinto's emissions come from aluminium processing.

Rio Tinto's emission profile and targets lack the granularity required for a direct assessment of alignment with 1.5°C aligned science-based decarbonisation pathways. For a more complete assessment in the future, energy intensity metrics for mining activities, alumina refining and alumina smelting would be required.

## BlueScope Steel Ltd

BlueScope Steel is Australia's largest steel manufacturer. Steelmaking activities account for the largest source of the company's emissions and BlueScope's emission targets can be compared to sectorial pathways for the steel industry from the OECM and the IEA. According to Australia's 1.5°C aligned OECM pathway, steelmaking intensity emissions (tonne CO<sub>2-e</sub>/ tonne crude steel) should decrease by 43% in 2030 compared to 2018. In addition, overall Scope 1, 2 and 3 emissions from the industry should decrease by 52% in 2030 compared to 2018. The IEA pathway contains a target with a decrease in CO<sub>2-e</sub> emissions of 26% in 2030 compared to 2018.<sup>20</sup>

This should be compared to BlueScope's company emission reduction targets, which is a combination of the 30% (non-steelmaking) and 12% (steelmaking) reductions for the year 2030. The majority of BlueScope's emissions is related to the 12% target and therefore the overall emission target is not aligned with IEA's or the OECM's targets, which are considerably more ambitious.

## South32 Ltd

As South32 is a large, diversified mining and metals company, the company's targets could potentially be compared to 1.5 °C aligned science-based pathways for mining.

However, South32 only has a company-wide target for its total Scope 1 and 2 emissions, with a 50% emission reduction in 2035 and a net-zero target by 2050. For a full assessment of the alignment with specific mining sectors, more granular company emission targets and comparative reported emissions would be required. It is worth noting that South32 still had plans for a coal mine expansion in 2022.<sup>21</sup> While these plans were abandoned, it is still problematic that a planned expansion for an existing coal mine was being considered. This is not aligned with 1.5°C pathways where key milestones include no new coal mines and mine expansions from 2021 onwards.<sup>22</sup>

## Qantas Airways Ltd

Qantas' company targets can be compared to the aviation industry targets in 1.5 °C aligned science-based pathways from the OECM and IEA. The IEA Net Zero by 2050 pathway includes a target for 10-15% sustainable aviation fuels (SAF) in 2030 (different IEA resources present contradicting targets for 2030), 50%

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<sup>20</sup> IEA, Steel, (2023), Source: <https://www.iea.org/energy-system/industry/steel>

<sup>21</sup> Mining Technology, (2022), Source online: <https://www.mining-technology.com/news/south32-abandons-dendrobium-expansion/?cf-view>

<sup>22</sup> IEA, Net Zero by 2050, (2021), Source: <https://www.iea.org/reports/net-zero-by-2050>

low-emission aviation fuels by 2040 and a 75% SAF target in 2050.<sup>23,24</sup> The Australian OECM pathways includes a target for 9% share of SAF by 2030 and 100% by 2050. Qantas has a 10% SAF target for 2030 and a 60% target for 2050. Qantas' target meets the lower range target of the IEA pathway for 2030, but does not align with the IEA pathway for 2040 and 2050. Qantas' 10% SAF share in 2030 would align with the OECM pathway, however the 60% share in 2050 would fall short of alignment with the OECM 1.5 °C pathway.

In addition, the Australian OECM aviation pathway has a higher yearly resolution and has a target for 29% emission reduction for 2030 compared to 2019 for the aviation sector, for scope 1,2 and 3. Qantas' 2030 25% Scope 1 and 2 emissions reduction target falls short of the OECM 1.5°C aligned pathway. In addition, there will not be alignment with the OECM pathway, without a commitment to phasing out fossil fuel-based aviation fuels entirely by 2050.

## Woolworths Group Ltd

Woolworths is an integrated retail business (including beverage, hospitality and clothing), predominately operating as supermarket business. Woolworths' Scope 1 and 2 emissions come from electricity, fugitive synthetic refrigerants, transport fuel for fleet cars and home delivery trucks and natural gas. The company's targets can be compared to targets for the power and transport sectors in 1.5 °C aligned science-based pathways from the OECM and IEA. The 1.5 °C pathway from the OECM from ISF and the Net-zero by 2050 pathway from the IEA contain key milestones for the power sector. In Australia's OECM 1.5 °C scenario, coal, oil and diesel are completely phased out by 2035 and natural gas is phased out by 2045. In comparison, IEA's global 1.5 °C scenario contains a key milestone for achieving net-zero electricity in advanced economies by 2035. Woolworths has a renewable energy target of 100% by 2025. By targeting 100% renewable energy by 2025, Woolworths aligns with the IEA and the OECM 1.5 °C power sector trajectories.

In addition, Woolworths has a target of 60% reduction in transport emissions by 2030. The IEA Net Zero pathway for the transport sector, requires transport emissions to reduce with roughly 25% by 2030<sup>25</sup>. Moreover, the Australian OECM scenario includes an emission reduction target for road transport of 33%, an emission reduction for shipping of 9% and an aviation emission reduction of 31% and overall transport emission reduction of 30% in 2030. Woolworth's target of a 60% reduction in transport emissions aligns with both the OECM and the IEA 2030 targets. Overall, Woolworths aligns with both power and transport sector 1.5 °C science-based decarbonisation pathway targets. It is not possible to comment on scope 3 emissions in relation to sectorial pathways as emission sources are highly diversified.

## Coles Group Ltd

Coles is an integrated retail business whose core business is a network of supermarkets. The company's targets include a 75% emission reduction in 2030 for Scope 1 and 2, a net zero commitment for 2050 and a target for 100% renewable electricity by the end of FY25. The company targets can be compared to targets for the power and transport sectors in 1.5 °C aligned science-based pathways from the OECM and IEA. The 1.5 °C pathway from the OECM from ISF and the Net-zero by 2050 pathway from the IEA contain key milestones for the power sector. In Australia's OECM 1.5 °C scenario, coal, oil and diesel are completely phased out by 2035 and natural gas is phased out by 2045. In comparison, IEA's global 1.5 °C scenario contains a key milestone for achieving net-zero electricity in advanced economies by 2035. The IEA Net Zero pathway for the transport sector, requires transport emissions to reduce with roughly 25% by 2030<sup>26</sup>. Moreover, the Australian OECM scenario includes an emission reduction target for road transport of 33%, an emission reduction for shipping of 9% and an aviation emission reduction of 31% and overall transport emission reduction of 30% in 2030. Overall Coles' targets seem to be aligned with the development of the renewable energy share for the power sector and the reduction in transport emissions as calculated in the OECM and IEA pathways. It is not possible to comment on scope 3 emissions in relation to sectorial pathways as emission sources are highly diversified

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<sup>23</sup> IEA, (2023), Aviation, Online source: <https://www.iea.org/energy-system/transport/aviation#tracking>

<sup>24</sup> IEA, (2021), Net Zero by 2050, page 137, Online source: <https://www.iea.org/reports/net-zero-by-2050>

<sup>25</sup> IEA, (2023), Transport, online source: <https://www.iea.org/energy-system/transport>

<sup>26</sup> IEA, (2023), Transport, online source: <https://www.iea.org/energy-system/transport>

## Cleanaway Waste Management Ltd

Cleanaway is Australia's largest waste management company and has three operating segments: solid waste services, liquid waste & health services, industrial and waste services. Cleanaway's company target of 34% methane emission reduction by 2030 aligns with the Global Methane Pledge target of 30% reduction from 2020 levels by 2030.<sup>[1]</sup> It also has a target methane reduction of 57% by 2050. The OECM 1.5 °C has a 39% methane emission reduction target for 2030 and a 49% emission reduction target for 2050. Therefore, Cleanaway's 2030 target falls short of the OECM pathway but its 2050 is higher than the OECM pathway. Cleanaway's methane target is more readily comparable to decarbonisation pathways than the CO<sub>2</sub> target.

## Telstra Corporation Ltd

Telstra is a telecommunications and technology provider, offering a full range of communications services and competing in all telecommunications markets. Telstra's targets include 50% Scope 1, 2 and 3 emissions reduction by 2030 and net-zero emissions by 2050. The target can be compared to targets for the power and transport sectors in 1.5 °C aligned science-based pathways from the OECM and IEA (Scope 1 and 2 for Telstra). The IEA Net Zero pathway for the transport sector, requires transport emissions to reduce with roughly 25% by 2030<sup>27</sup>. Moreover, the Australian OECM scenario includes an emission reduction target for road transport of 33%, an emission reduction for shipping of 9% and an aviation emission reduction of 31% and overall transport emission reduction of 30% in 2030.

In addition, the IEA Net Zero pathway for the power sector requires net-zero electricity by 2035 in developed countries. In Australia's OECM 1.5 °C scenario, coal, oil and diesel are completely phased out by 2035 and natural gas is phased out by 2045. Overall, this results in an emission reduction for the power sector of 83%. Telstra has a target to enable renewable energy generation equivalent to 100% of consumption by 2024, reported in their Climate Change Report 2022.

Overall, a 50% reduction in emissions for 2030 in combination with 100% renewable energy generation in 2024 would align with the science-based decarbonisation pathways for transport and power. It is not possible to comment on Scope 3 emissions as there is no specific sectorial pathway for the telecommunications sector.

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<sup>[1]</sup> Global methane pledge, (2021), Source online: <https://www.globalmethanepledge.org/>

<sup>27</sup> IEA, (2023), Transport, online source: <https://www.iea.org/energy-system/transport>

## Appendix 3: Assessment notes

### 1. Announcing a Net Zero Pledge

HLEG Criteria	Notes on application of criteria
Public pledge to achieve net zero emissions	A public net zero target, pledge, ambition, commitment or goal was accepted. This criterion assesses only the public commitment to net zero.

### 2. Setting Net Zero Targets

HLEG Criteria	Notes on application of criteria
Short-, medium- and long-term interim emissions reduction targets in a minimum of 5 yearly increments. First target 2025.	Yes rating awarded for targets in at least 5 yearly increments. Partial awarded if there was one or more interim target in less than 5 yearly increments.
Target of at least 50% reduction below 2020 levels by 2030 and net zero by 2050 or sooner	Yes rating awarded if a net zero by 2050 target was present and a 50% or higher by 2030 target (or equivalent from a different baseline year). This criterion was applied regardless of scope of coverage which is assessed in separate criteria.  Partial if only one present or interim target not equivalent to or higher than 50% by 2030 from 2020 baseline.
Absolute emissions reduction targets (intensity if relevant)	Yes if the targets were presented as absolute emissions reductions targets i.e. not only intensity targets or not only targets 'net' of offsets.
Targets stated to be based on a robust methodology consistent with limiting warming to 1.5°C with no or limited overshoot, verified by third party	Yes if the target was stated to be consistent with limiting warming to 1.5°C with no or limited overshoot and the methodology for calculating the target was stated and the target has been verified by a third party (verification of scopes 1 and 2 was accepted)  Partial if some but not all of the above were met.
Targets stated to cover all scope emissions and all operations along the value chain in all jurisdictions	Yes if the target was stated to cover Scopes 1, 2 and 3 emissions (material Scope 3 accepted) and all operations in all jurisdiction.  Partial if some but not all of the above were met.
Targets stated to account for all greenhouse gas emissions	Yes if either it was explicitly stated that all greenhouse gases were included in the target, OR if the target was based on an emissions inventory that was compiled using a methodology that requires coverage of all greenhouse gas emissions (e.g. NGER)
Where relevant, separate targets for material non-CO <sub>2</sub> greenhouse gas emissions	Yes if material non-CO <sub>2</sub> greenhouse gas emissions were disclosed and a separate target was disclosed.  No if material non-CO <sub>2</sub> greenhouse gas emissions are relevant and no separate target was disclosed.  ND if there was no disclosure of material non-CO <sub>2</sub> greenhouse gases and relevance is unknown
Where relevant, targets cover and separately account for embedded emissions within fossil fuel reserves	This criterion was applied only to companies with fossil fuel operations  Yes if a separate target for embedded emissions within fossil fuel reserves was disclosed  No if no separate target disclosed

Where relevant, targets cover and separately account for any land-use related emissions and risk adjusted sequestration in biomass, such as forests, peatlands and wetlands	Yes if material land-use emissions were disclosed and a separate target was present ND if there was no disclosure of material land-use emissions (meaning it was not possible to assess relevance)
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### 3. Using Voluntary Credits

HLEG Criteria	Notes on application of criteria
Where the company has purchased voluntary carbon credits, they are stated to be used for beyond value chain mitigation and are not counted toward the company's interim emissions reductions	Yes if voluntary carbon credit purchases were disclosed and stated to be not counted towards interim emission reduction targets No if voluntary carbon credit purchases were disclosed and stated to be counted towards interim emission reduction targets ND if there was no disclosure on voluntary carbon credit purchases NA if it was disclosed that voluntary carbon credits are not currently purchased

### 4. Creating a Transition Plan

HLEG Criteria	Notes on application of criteria
Publicly disclosed net zero transition plan	Yes if an identifiable standalone transition plan, such as a Climate Action Plan was published (for other criteria, evidence was accepted from other publications such as Sustainability Reports)
Transition plan stated to be updated every 5 years	Yes if a clear statement was present relating to frequency of review and update of the standalone plan within 5 years, including frequency of putting to a shareholder vote
Transition plan states the actions it will take to meet targets - concrete and specific actions, stated to be technologically feasible and economically viable	Yes if there was a high level of detail on specific and concrete actions to be taken to achieve the target, with direct reference to comprehensive achievement of targets and where the plan did not rely on actions that are not yet technologically feasible or economically viable Partial if there was some disclosure of concrete actions that would contribute to achievement of targets No if there was no or very little disclosure of concrete actions
Quantification of the contribution of specific actions to the achievement of the overall target	Yes if the contribution of specific actions was quantified comprehensively in direct relation to achievement of the total emissions reductions required to achieve the target Partial if there was some but not comprehensive quantification of targets or if quantification was not directly linked to proportionate contribution to the overall target No if there was no or very little quantification of specific actions
Disclosure of how capital expenditure plans, research and development plans and investments are aligned with all targets	Yes if there was disclosure of a comprehensive capital expenditure plan detailing expenditure on actions required to achieve the overall target Partial if there was some but not comprehensive disclosure of capital expenditure plans

	No if there was no or very little disclosure of capital expenditure plans
Explanation of governance structure for transition and verification. Description of how near- and long-term emission reduction targets are linked with executive compensation.	Yes if there was detailed disclosure of governance structure for managing the transition and a direct connection to executive compensation Partial if some but not all of the above was disclosed No if there was no or very little disclosure

## 5. Phasing out of Fossil Fuels and Scaling up Renewable Energy

HLEG Criteria	Notes on application of criteria
Targets aimed at ending the use of and/or support for fossil fuels	Yes if there were specific targets aimed at explicitly ending the use of and/or support for fossil fuels in line with IPCC and IEA net zero greenhouse gas emissions modelled pathways that limit warming to 1.5°C with no or limited overshoot No if there were no targets explicitly aimed at ending the use of/and or support for fossil fuels (targets contributing to phase down of fossil fuels were not sufficient)
Target for renewable energy procurement	Renewable energy was defined as stationary energy, does not include transport fuels Yes if a renewable energy target was present, no if it was not Note: this criterion did not assess the quality of the renewable energy target
Transition plan explains how fossil fuels will be fully phased out of its operations	Yes if there was a clear commitment to and explanation of full phase out of fossil fuels from operations No if there was no clear commitment to and explanation of full phase out of fossil fuel from operations (actions contributing to phase down/partial phase out of fossil fuels were not sufficient and are assessed under transition plan criteria)
<b>The following criteria were applied only to companies that have operations in coal, oil or gas production</b>	
Target of minimum 64% reduction in methane emissions by 2030 from 2020 levels	Yes if a target of, equivalent to, or greater than, 64% reduction in methane emissions by 2030 from 2020 levels was present. This applied only to energy-related methane emissions, not biogenic methane. No if 64% or greater target not present
For operations that include primary coal production for power generation, targets to end all aspects of coal production	Yes if targets to end all aspects of coal production were present
For operations that include coal-based power generation, a target to end coal plants by 2030 in OECD countries and 2040 in the rest of the world	Yes if a target was present to end coal plants (coal-fired power plants) by 2030 in OECD countries and 2040 in the rest of the world
For operations that include oil or gas production, targets to end all aspects of oil or gas production	Yes if targets to end all aspects of oil or gas production were present

## 6. Aligning Lobbying and Advocacy

HLEG Criteria	Notes on application of criteria
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Disclosure of trade association affiliations and advocacy for positive climate action with associations	<p>Yes if company trade association affiliations were disclosed and it was stated that the company encourages its associations to advocate for positive climate action and had disclosed an escalation strategy if they do not, including the option of leaving the association if the necessary changes are not made.</p> <p>Partial if some but not all of the above were present.</p> <p>No if no or very little disclosure on the above.</p>
Outline of specific policies and regulations needed to facilitate its transition plan, including the emissions reductions possible if the listed policies and regulation were in place	<p>Yes if there was disclosure of specific policies and regulations, including carbon pricing, needed to facilitate the company's transition plan and including disclosure of the emissions reductions possible if the listed policies and regulation by authorities and jurisdictions were in place</p> <p>Partial if some but not all of the above were present.</p> <p>No if no or very little disclosure on the above.</p>
Disclosure of how lobbying and policy engagement policies and activities are consistent with net zero targets	<p>Yes if there was a reasonable level of disclosure of how the company's lobbying and policy engagement policies and activities are consistent with its net zero targets</p> <p>Partial for limited disclosure of the above</p> <p>No if there was no or very little disclosure</p>
Disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates	<p>Yes if there was a reasonable level of disclosure of how the company contributes to investor, supplier, consumer and employee engagement and how it works with peers to transform the economic sectors in which it operates</p> <p>Partial for limited disclosure of the above</p> <p>No if there was no or very little disclosure</p>

## 7. People and Nature in the Just Transition & 9. Investing in Just Transitions

HLEG Criteria	Notes on application of criteria
If material land-use emissions, it is stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.	<p>Yes if material land-use emissions were disclosed and it was stated how operations and supply chains will be achieved and maintained that avoid the conversion of remaining natural ecosystems— eliminating deforestation and peatland loss by 2025 at the latest, and the conversion of other remaining natural ecosystems by 2030.</p> <p>Partial if there was some but not full disclosure of the above</p> <p>ND if there was no disclosure of material land-use emissions (meaning it was not possible to assess relevance)</p>
Disclosure of how nature-based risks and dependency are addressed in relation to the transition plan	<p>Yes if there was disclosure of nature-based risks and dependency and these were addressed in relation to the transition plan</p> <p>Partial for some but not detailed disclosure, or not related to the transition plan</p> <p>No if there was no or very limited disclosure (because disclosure of nature-based risks is a UN HLEG requirement)</p>

<p>Disclosure of how the transition plan contributes to a Just Transition</p>	<p>Yes if there was disclosure of the company's contribution to a Just Transition in its transition plan i.e. how it will deliver its net zero pledge in a way that delivers fairness and tackles inequality and injustice</p> <p>Partial for limited disclosure</p> <p>No if there was no or very limited disclosure (because disclosure of contribution to Just Transition is a UN HLEG requirement)</p> <p>Note: this criterion did not assess the quality of Just Transition contributions, only the extent of disclosure</p>
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## 8. Increasing Transparency and Accountability

HLEG Criteria	Notes on application of criteria
<p>Annual disclosure of:</p> <ul style="list-style-type: none"> <li>- GHG data</li> <li>- net zero targets and transition plans and progress towards meeting these</li> </ul>	<p>Yes if there was annual disclosure (at least in the last two years) of greenhouse gas emissions data and progress against net zero targets and transition plans (with clear disclosure of progress against targets)</p> <p>Partial if there was disclosure of some but not all of the above</p>
<p>Disclosure in a standardised, open format feeding into the UNFCCC Global Climate Action Portal</p>	<p>Yes if the company was found on a search of the UNFCCC Global Climate Action Portal web database: <a href="https://climateaction.unfccc.int/">https://climateaction.unfccc.int/</a></p>
<p>Disclosure of detail of approach to verification and assurance of emissions, targets and transition plan and progress against these</p>	<p>Yes if there was disclosure of verification of emissions, targets, transition plan and progress reporting</p> <p>Partial if there was disclosure of some but not all of the above</p> <p>No if there was no disclosure of verification or assurance</p>
<p>Emissions reductions are verified by an independent third-party</p>	<p>Yes if there was explicit disclosure of year-on-year emissions reductions (for the most recent reporting period) and the emissions reductions were verified or assured by an independent third-party</p>





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